

CITY OF CAMBRIDGE

BOARD OF ZONING APPEAL

831 Massachusetts Avenue, Cambridge MA 02139

617-349-6100

2023 OCT 31 PM 2:23

NOTICE OF THE CITY CLERK
CITY OF CAMBRIDGE, MASSACHUSETTS

BZA Application Form

BZA Number: 246750

General Information

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

Special Permit: X

Variance:

Appeal:

PETITIONER: Mt. Auburn Hospital

PETITIONER'S ADDRESS: 1997 Annapolis Exchange Parkway, Annapolis, MD 21401

LOCATION OF PROPERTY: 330 Mt Auburn St., Cambridge, MA

TYPE OF OCCUPANCY: Hospital / Cell Site

ZONING DISTRICT: Residence C-1/C-3 Zone

REASON FOR PETITION:

/Telecommunication Facility (antenna)/

DESCRIPTION OF PETITIONER'S PROPOSAL:

AT&T proposes to make minor modifications to it's existing cell site at this location as part of nationwide upgrades. The proposed scope of work is to replace (3) panel antennas with (6) new panel antennas and associated equipment at this site.

SECTIONS OF ZONING ORDINANCE CITED:

- Article: 4.000 Section: 4.32.G.1 (Telecommunications Facility).
- Article: 4.000 Section: 4.40 (footnote 49) (Telecommunications Facility).
- Article: 10.000 Section: 10.40 (Special Permit).
- Article: 6409 Section: Middle Class Tax Relief and Job Creation Act

Original
Signature(s):

Kristina Robinson

(Petitioner (s) / Owner)

Kristina Robinson, AT&T Agent
(Print Name)

Address:

1997 Annapolis Exchange Pkwy, Annapolis, MD 21401

Tel. No.

978-551-8627

E-Mail Address:

kristina.robinson@smartlinkgroup.com

Date: 10/20/2023

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 Mount Auburn Hospital
(OWNER)

Address: 330 Mt. Auburn Street, Cambridge, MA 02138

State that I/We own the property located at 330 Mt. Auburn Street, Cambridge, MA 02138, which is the subject of this zoning application.

The record title of this property is in the name of Mount Auburn Hospital

*Pursuant to a deed of duly recorded in the date 12/15/2006, Middlesex South County Registry of Deeds at Book 48678, Page 280; or Middlesex Registry District of Land Court, Certificate No. _____ Book _____ Page _____.

[Signature]
SIGNATURE BY LAND OWNER OR AUTHORIZED TRUSTEE, OFFICER OR AGENT*

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

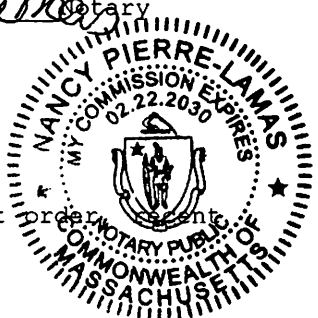
Commonwealth of Massachusetts, County of Middlesex

The above-name Arnon Fishman personally appeared before me, this 06 of July, 2003 and made oath that the above statement is true.

Nancy Pierre-Lamas Notary

My commission expires 2/22/2030 (Notary Seal).

- If ownership is not shown in recorded deed, e.g. if by court order, 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.

Granting the Special Permit requested for 330 Mt Auburn St., Cambridge, MA (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 provided above, AT&T's proposed modifications comply with the requirements set forth in Section 4.32(g), Footnote 49 of the Ordinance, the Spectrum Act and the eligible facilities request criteria set forth in 47 CFR § 1.40001. Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

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 proposed modifications to AT&T's existing Facility will not result in any change to the existing traffic on or near the Property. The Facility will continue to be unmanned and only require infrequent visits by a technician (typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency), there will be no material increase in traffic or disruption to patterns of access or egress that will cause congestion, hazards or a substantial change in the established neighborhood character. AT&T's maintenance personnel will make use of the existing access roads and parking at the building. Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

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:

As described above and illustrated on the attached photographs and photosimulations (see Exhibit 5) the proposed modifications to the existing Facility will result in a de minimis change in the appearance of the building. As a result, the Facility as a whole either will be hidden from view or will visually blend with existing characteristics of the building and the surrounding neighborhood. Because the proposed installation will not generate any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater, it will not adversely affect residential uses on neighboring streets. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communications services. Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

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:

Because the proposed modifications to the existing Facility will not cause the Facility to generate any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater, no nuisance or hazard will be created to the detriment of the health, safety, or welfare of the occupants of the building or the residents of the City of Cambridge. To the contrary, the proposed Facility will benefit the City and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data

services that will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations. The Facility, as modified, will continue to comply with all federal, state and local safety requirements including the standards established by the FCC and Federal Aviation Administration (FAA). (See Exhibit 8 Maximum Permissible Exposure Study, Theoretical Report). Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

- 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 purpose of the Ordinance is multifaceted, the relevant aspects of which relating to wireless telecommunications facilities include the lessening of congestion in the streets, conserving health, securing safety from fire, flood, panic and other danger, conserving the value of land and buildings and natural resources, preventing blight and pollution, encouraging the most rational use of land throughout the city, including encouraging appropriate economic development, and protecting residential neighborhoods from incompatible activities.

As noted above, the proposed modifications to the existing Facility directly accord with the purposes of the Ordinance because the modifications will not result in any traffic, smoke, dust, heat or glare, discharge noxious substances, nor pollute waterways or groundwater. As the Facility will improve the ability of residents, businesses, travelers and drivers in the area to access state-of-the-art

wireless technology, the City's ability to provide emergency services will be improved, as will the economic development of the City as more people will be able to conduct commerce by virtue of a mobile platform. Because the proposed modifications to the existing Facility will be installed on an existing building that includes the Facility, and the proposed modifications are consistent with the existing concealment elements, the proposed modifications to the existing Facility are in consistent with the building's character and will not affect the value of the building or the natural resources of the City. Because the proposed modifications to the existing Facility are designed to

be consistent with the existing concealment elements of the Facility and characteristics of the Property, the visual impact on the underlying and adjacent zoning districts will be de minimis. As a result, the proposed modifications to the existing Facility are consistent with the Ordinance's purpose to allow for less intrusive wireless telecommunications facilities in all districts (other than Open Space) including the applicable overlay districts, and the underlying PUD-2 & Residence C-3A district. Granting the special permit would not be a detriment to the public interest and is consistent with the Board's obligations pursuant to the Spectrum Act and FCC Order.

***If you have any questions as to whether you can establish all of the applicable legal requirements, you should consult with an attorney.**

BZA Application Form

DIMENSIONAL INFORMATION

Applicant: Mt. Auburn Hospital
Location: 330 Mt Auburn St., Cambridge, MA
Phone: 978-551-8627

Present Use/Occupancy: Hospital / Cell Site
Zone: Residence C-1/C-3 Zone
Requested Use/Occupancy: Hospital / Cell Site

		<u>Existing Conditions</u>	<u>Requested Conditions</u>	<u>Ordinance Requirements</u>
<u>TOTAL GROSS FLOOR AREA:</u>		0	0	0 (max.)
<u>LOT AREA:</u>		0	0	0 (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA: ²</u>		0	0	0
<u>LOT AREA OF EACH DWELLING UNIT</u>		0	0	0
<u>SIZE OF LOT:</u>	<u>WIDTH</u>	0	0	0
	<u>DEPTH</u>	0	0	0
<u>SETBACKS IN FEET:</u>	<u>FRONT</u>	0	0	0
	<u>REAR</u>	0	0	0
	<u>LEFT SIDE</u>	0	0	0
	<u>RIGHT SIDE</u>	0	0	0
<u>SIZE OF BUILDING:</u>	<u>HEIGHT</u>	0	0	0
	<u>WIDTH</u>	0	0	0
	<u>LENGTH</u>	0	0	0
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:</u>		0	0	0
<u>NO. OF DWELLING UNITS:</u>		0	0	0
<u>NO. OF PARKING SPACES:</u>		0	0	0
<u>NO. OF LOADING AREAS:</u>		0	0	0
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT</u>		0	0	0

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

N/A

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'.

PROJECT INFORMATION

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

- INSTALL ANTENNA (AIR 6419 B77G) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- INSTALL ANTENNA (AIR 6449 B77D) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- RECOATED EXISTING ANTENNA (DMP65R-BU4DA) @ POS. 1 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 4)
- RECOATED EXISTING ANTENNA (800-10964) @ POS. 2 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 3)
- RECOATED EXISTING ANTENNA (SBNHH-1D65A) @ POS. 3 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 2)
- INSTALL Y-CABLES FOR RRUS 4449 B5/B12 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- PROPOSED ANTENNA MOUNTS (TOTAL OF 5)

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- INSTALL BATTERY CABINET W/ (2) STRINGS OF 190AH BATTERIES
- ADD 1x6651+XCEDE TO EXISTING LTE PURCELL CABINET
- FINAL = 1X5216+XMU/1X6630+IDLE/1X6651+XCEDE CABLE
- ADD (3) -48V RECTIFIERS INSIDE EXISTING DC POWER PLANT
- REMOVE & REPLACE EXISTING (3) STRINGS OF 190AH BATTERIES INSIDE EXISTING DC POWER PLANT

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNA (SBNHH-1D65A) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING RRUS 11 B2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING RRUS 11 B5 (TYP. OF 1 PER SECTOR, TOTAL OF 3).

ITEMS TO REMAIN:

- (9) ANTENNAS, (15) RRHs, (6) SURGE ARRESTORS, (12) DC POWER & (3) FIBER.

RFDS: FINAL APPROVED V6 RFDS 08/17/23

SITE ADDRESS: 330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

LATITUDE: 42.3744000° N, 42° 22' 27.84" N

LONGITUDE: -71.1341940, 71° 8' 3.10" W

TYPE OF SITE: ROOFTOP / OUTDOOR EQUIPMENT

STRUCTURE HEIGHT: 102'-0"±

RAD CENTER: 99'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

NOTE TO GENERAL CONTRACTOR: (PRIOR/DURING CONSTRUCTION)

CONTRACTOR TO CONTACT E.O.R. (TEP NORTHEAST, TEP OPCO,LLC) PRIOR TO ROOF/WALL OPENINGS TO COORDINATE/SCHEDULE THE FOLLOWING:

- INSPECTION OF EXISTING CONDITIONS AND LOCATIONS WHERE CONNECTIONS ARE BEING PROPOSED, INCLUDING INSPECTIONS OF STUB-UP ANCHORS AND/OR WALL ANCHORS PRIOR TO CONCEALING.



SITE NUMBER: MAL02850

SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

FA CODE: 10546806

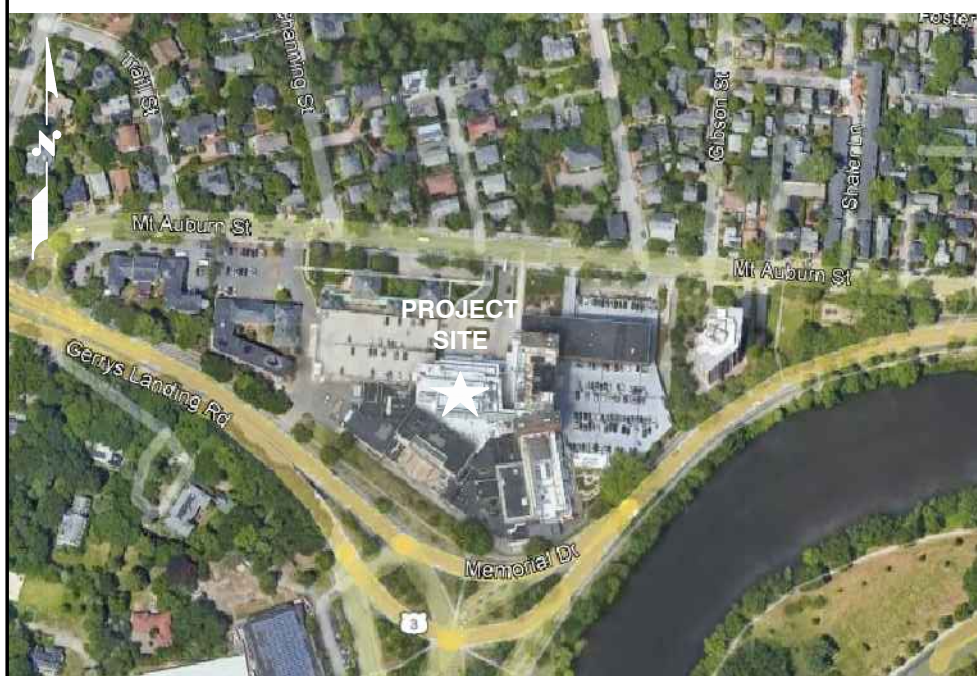
PACE ID: MRCTB058145, MRCTB057739, MRCTB052283, MRCTB051545, MRCTB051702

PROJECT: 5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, BBU RECONFIGURATION, 5G NR 1SR CBAND 2023 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE: (FROM AT&T ADDRESS)

HEAD SOUTHWEST, TURN RIGHT TOWARD LEGGATT MCCALL CONN, TURN LEFT ONTO LEGGATT MCCALL CONN, CONTINUE ONTO BURR ST, TURN LEFT ONTO MA-30 E, USE THE RIGHT LANE TO TAKE THE I-90 E/MASS PIKE RAMP TO BOSTON, MERGE ONTO I-90 E, TAKE EXIT 127 TO MERGE ONTO CENTRE AVE/WASHINGTON ST MERGE ONTO CENTRE AVE/WASHINGTON ST, CONTINUE TO FOLLOW WASHINGTON ST, CONTINUE ONTO ST JAMES ST, TURN LEFT TO STAY ON ST JAMES ST, TURN RIGHT ONTO CHARLESBANK RD, KEEP RIGHT TO CONTINUE ON NONANTUM RD, SLIGHT RIGHT ONTO N BEACON ST, KEEP LEFT TO CONTINUE ON SOLDIERS FIELD RD, KEEP LEFT TO CONTINUE ON ELIOT BRIDGE, FOLLOW SIGNS FOR ARLINGTON/MA-2/U.S. 3/FRESH POND PKWY, CONTINUE STRAIGHT TO STAY ON ELIOT BRIDGE, SLIGHT RIGHT TOWARD GERRYS LANDING RD, CONTINUE STRAIGHT ONTO GERRYS LANDING RD, CONTINUE STRAIGHT TO STAY ON GERRYS LANDING RD, SHARP RIGHT ONTO MT AUBURN ST, TURN RIGHT, TURN LEFT, DESTINATION WILL BE ON THE RIGHT



GENERAL NOTES

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

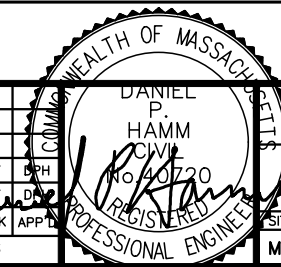
DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
GN-1	GENERAL NOTES	1
A-1	ROOF & EQUIPMENT PLAN	1
A-2	EXISTING ANTENNA LAYOUT	1
A-3	PROPOSED ANTENNA LAYOUT	1
A-4	ELEVATION	1
A-5	DETAILS	1
SN-1	STRUCTURAL NOTES	1
S-1	STRUCTURAL DETAILS	1
S-2	STRUCTURAL DETAILS	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

UNDERGROUND SERVICE ALERT



**WWW.DIGSAFE.COM
72 HOURS PRIOR**



SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.		DATE	REVISIONS	BY	CHK	APP	SITE NUMBER	DRAWING NUMBER	REV
1	10/04/23		ISSUED FOR CONSTRUCTION	JS	AT	DPH			
0	09/11/23		ISSUED FOR REVIEW	JS	AT	DPH			
SCALE:		AS SHOWN		DESIGNED BY:		AT	DRAWN BY:		JS
							MAL02850	T-1	1

AT&T

TITLE SHEET
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, BBU RECONFIGURATION, 5G NR 1SR CBAND

GROUNDING NOTES

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

GENERAL NOTES

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

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

**BUILDING CODE: IBC 2015 & MA STATE BUILDING CODE 780 CMR 9TH EDITION
 ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70, 2020)**

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

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

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

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

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

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



TEP
NORTHEAST
TEP OP&CO, LLC.
45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
TEL: (978) 557-5553



SMARTLINK
1997 ANNAPOLIS EXCHANGE PKWY SUITE 200
ANNAPOLIS, MD 21401

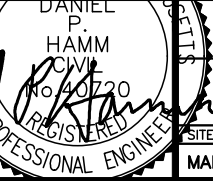
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138
 MIDDLESEX COUNTY



550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701

1	10/04/23	ISSUED FOR CONSTRUCTION	AS	AT	SPH
0	09/11/23	ISSUED FOR REVIEW	JS	AT	DSP
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: JS		



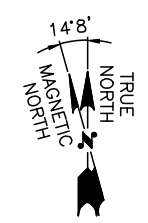
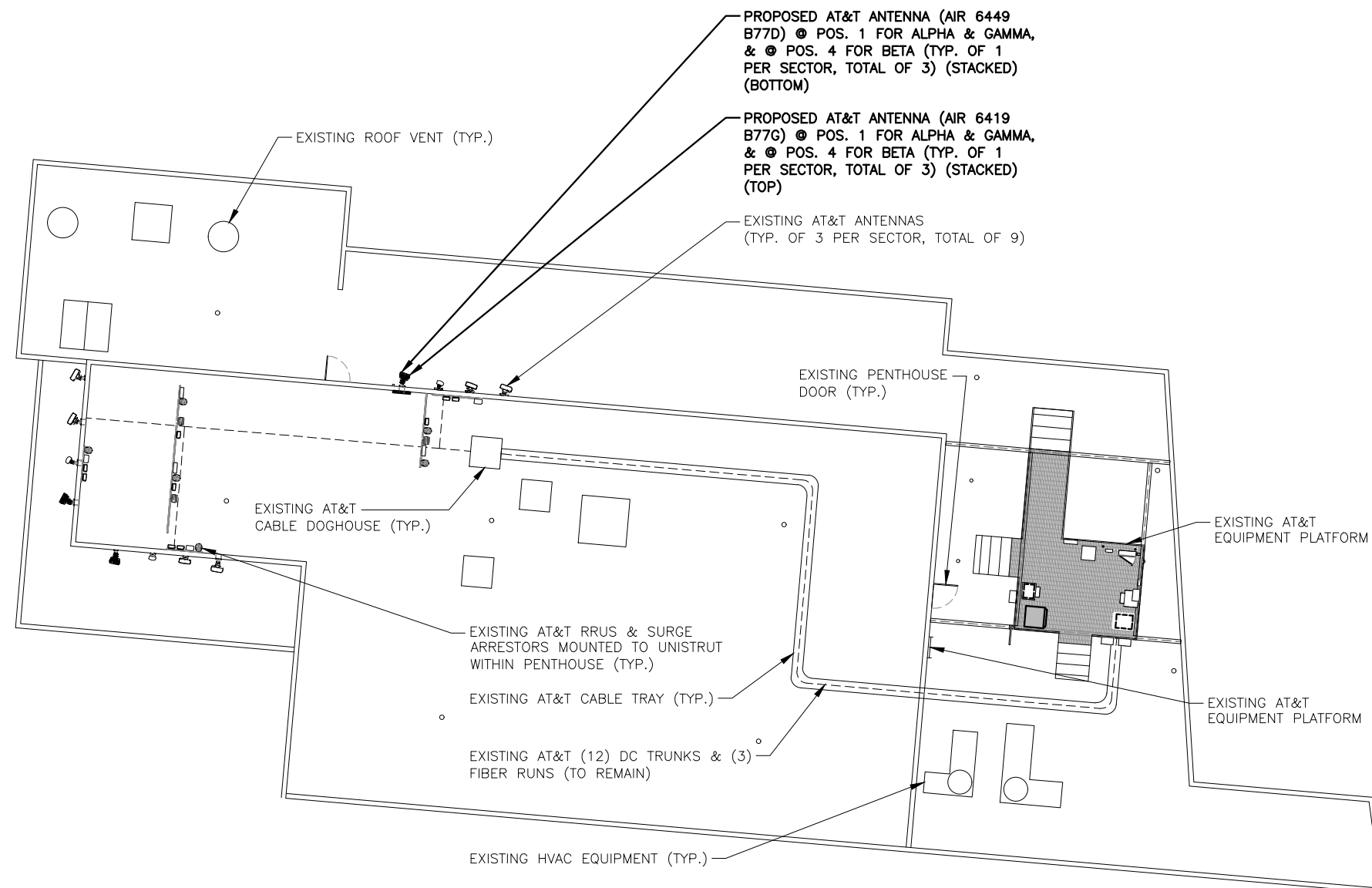
AT&T

GENERAL NOTES
 5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, BBU RECONFIGURATION, 5G NR 1SR CRAND

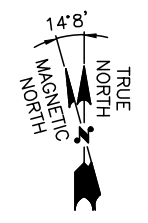
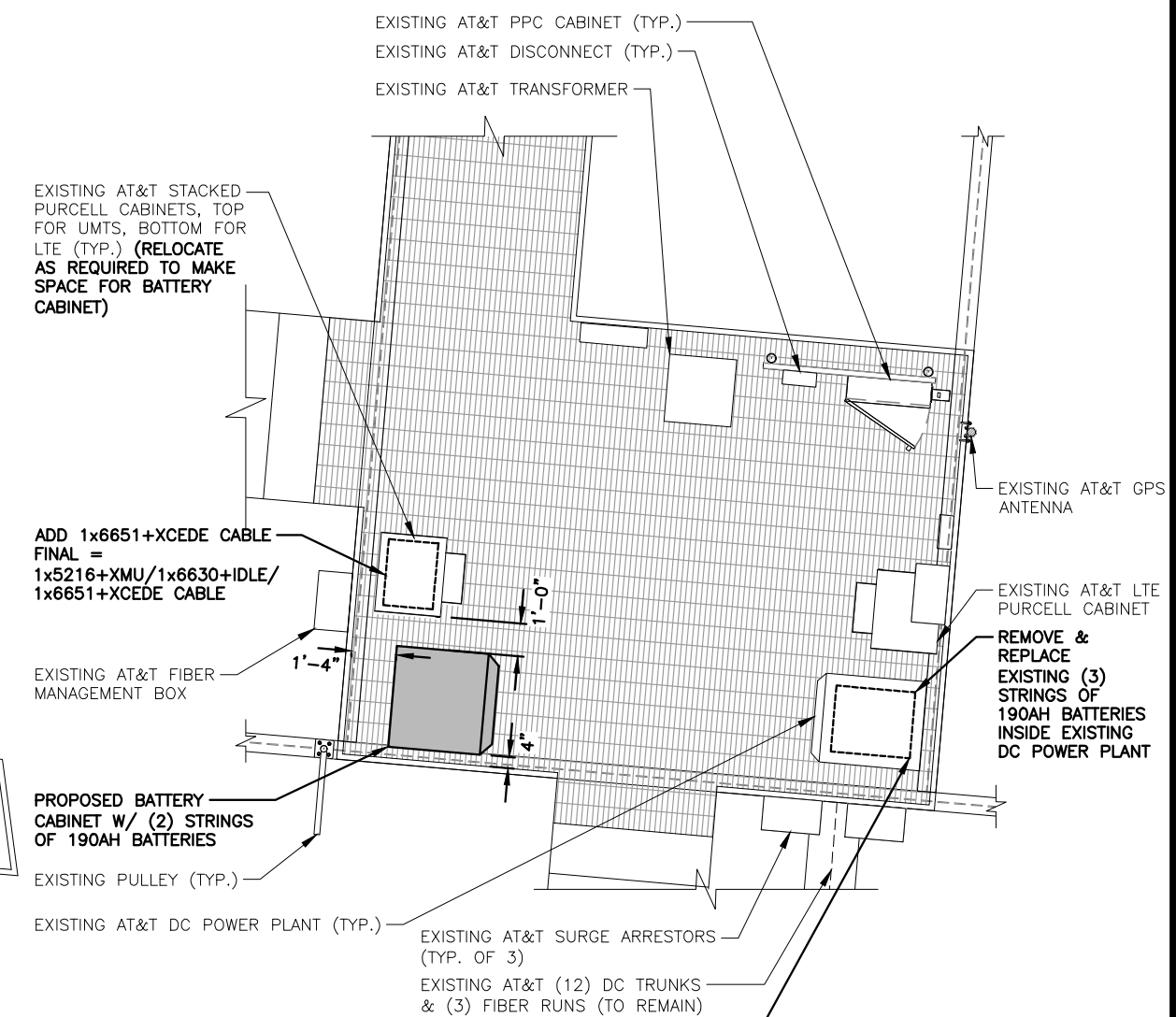
SITE NUMBER	DRAWING NUMBER	REV
MAL02850	GN-1	1

NOTE:
REFER TO FINAL APPROVED V6 RFDS
08/17/23

NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: TEP NORTHEAST (TEP OPCO, LLC)
DATED: SEPTEMBER 19, 2023,
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



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



EQUIPMENT PLAN
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
2 A-1



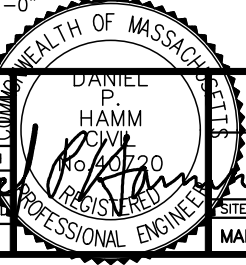
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP
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0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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

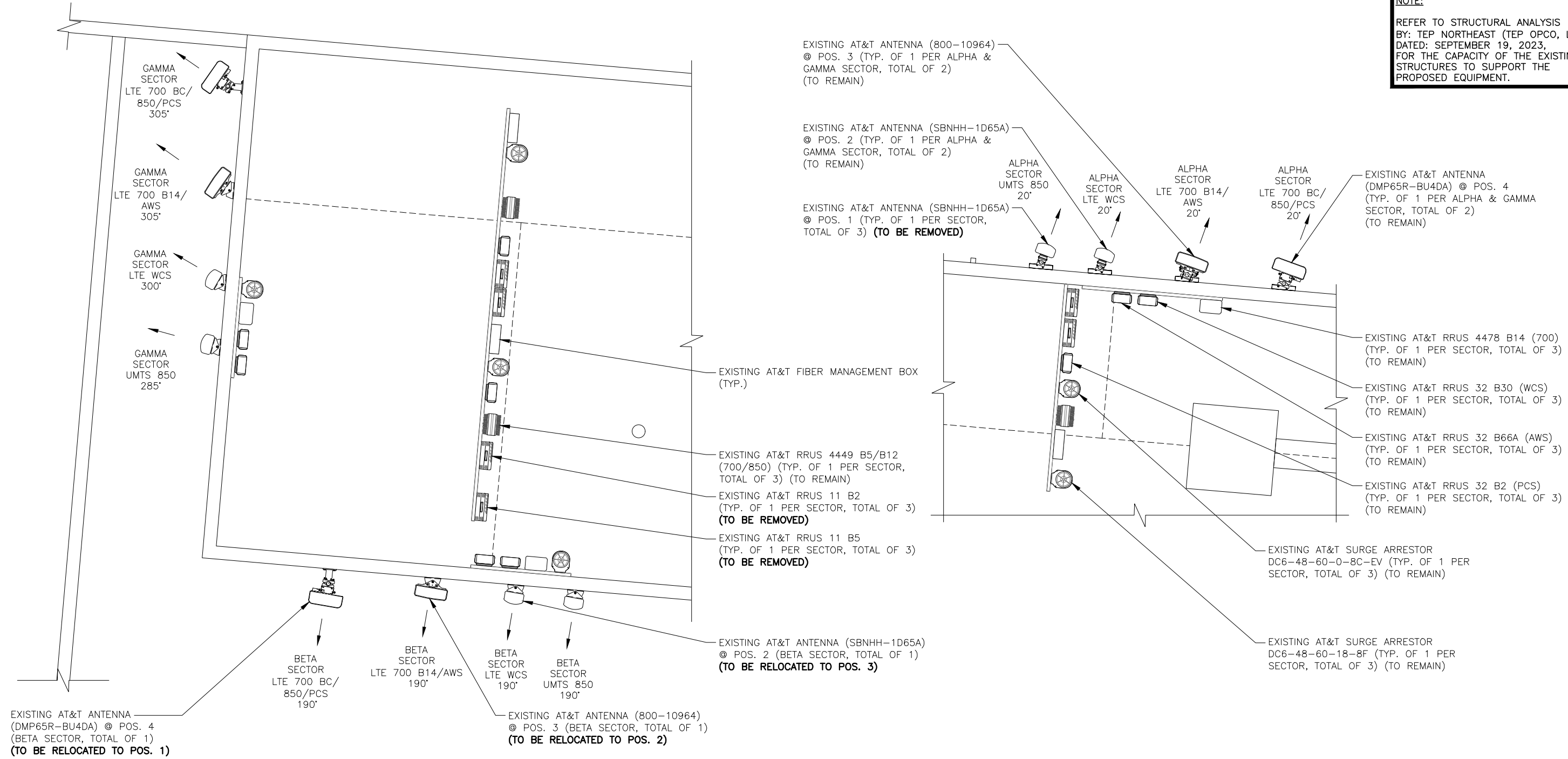


AT&T	
ROOF & EQUIPMENT PLANS	
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, BBU RECONFIGURATION, 5G NR 1SR CRAND	
SITE NUMBER	DRAWING NUMBER
MAL02850	A-1
REV	1

NOTE:
EXISTING GAMMA SECTOR ANTENNAS TO BE
RE-ADJUSTED TO ACHIEVE AZIMUTH OF 300°.

NOTE:
REFER TO FINAL APPROVED V6 RFDS
08/17/23

NOTE:
REFER TO STRUCTURAL ANALYSIS
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DATED: SEPTEMBER 19, 2023,
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EXISTING ANTENNA LAYOUT 1
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"



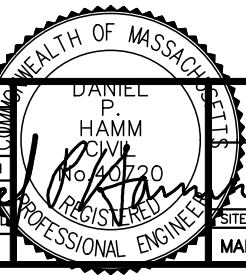
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP
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0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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



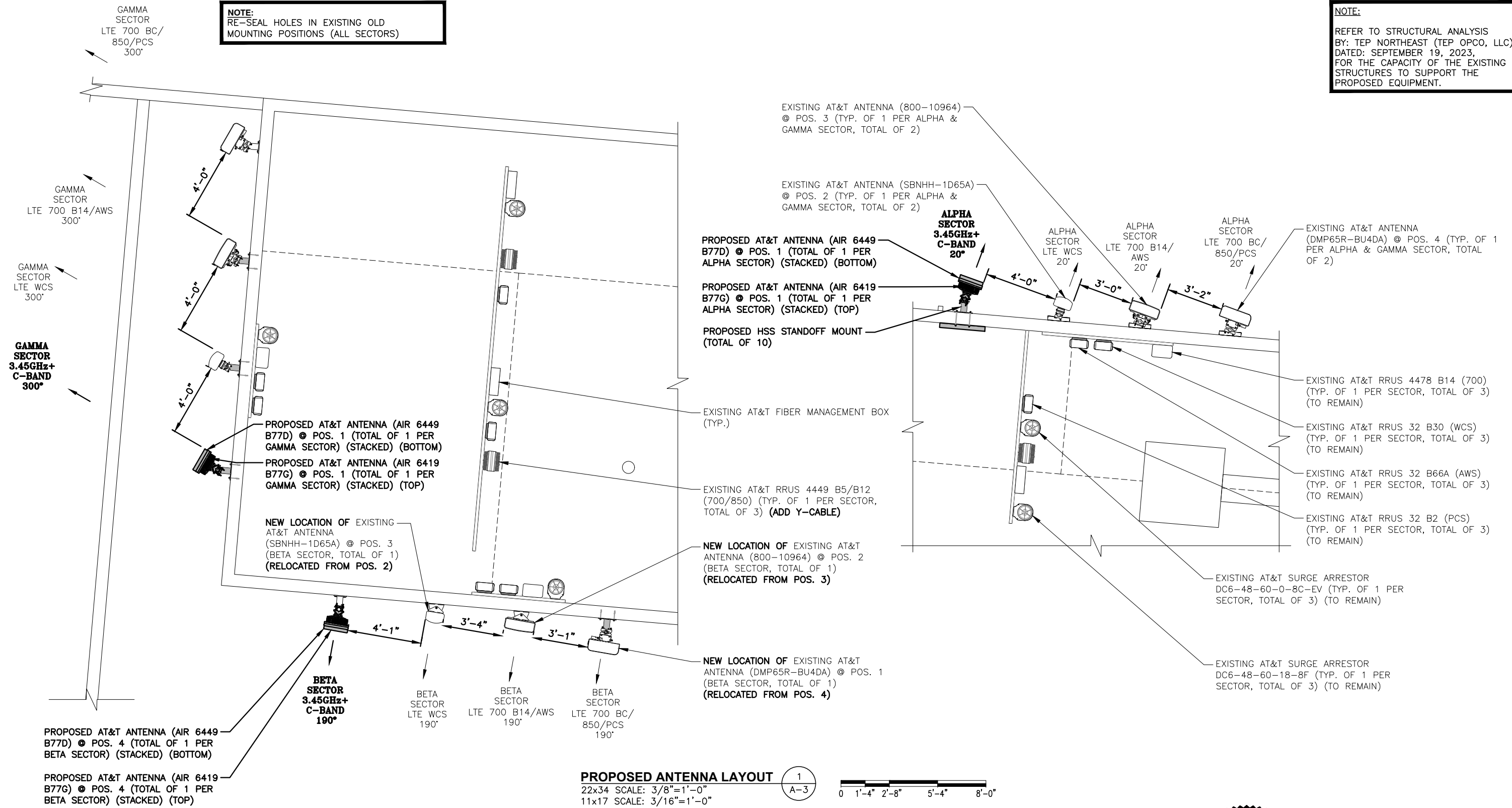
AT&T	
EXISTING ANTENNA LAYOUT 5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CRAND	
SITE NUMBER MAL02850	DRAWING NUMBER A-2
REV	1

NOTE:
EXISTING GAMMA SECTOR ANTENNAS TO BE RE-ADJUSTED TO ACHIEVE AZIMUTH OF 300°.

NOTE:
RE-SEAL HOLES IN EXISTING OLD MOUNTING POSITIONS (ALL SECTORS)

NOTE:
REFER TO FINAL APPROVED V6 RFDS 08/17/23

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: TEP NORTHEAST (TEP OPCO, LLC) DATED: SEPTEMBER 19, 2023, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



PROPOSED ANTENNA LAYOUT 1
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"

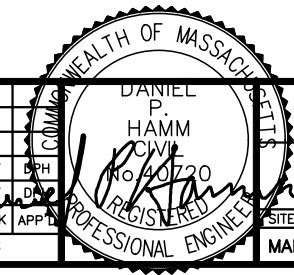


SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

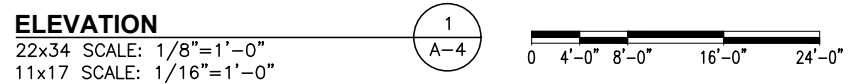
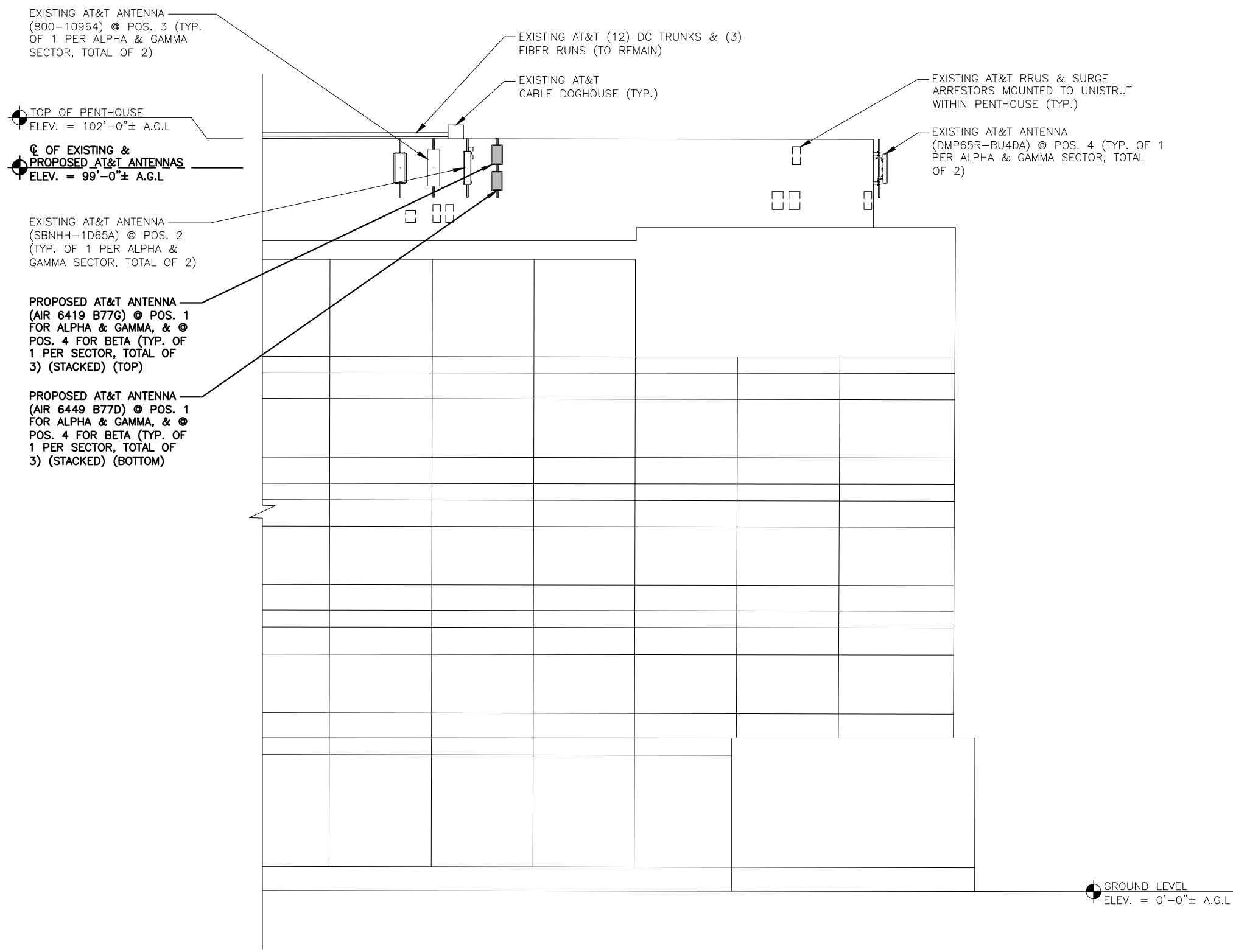


										AT&T	
										PROPOSED ANTENNA LAYOUT	
										5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CRAND	
NO.	DATE	REVISIONS	BY	CHK	APP	SITE NUMBER	DRAWING NUMBER	REV			
1	10/04/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH	MAL02850	A-3	1			
0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH						
SCALE: AS SHOWN		DESIGNED BY: AT		DRAWN BY: JS							



NOTE:
REFER TO FINAL APPROVED V6 RFDS
08/17/23

NOTE:
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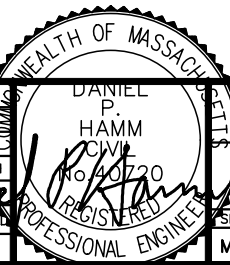
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP
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0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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



AT&T

ELEVATION
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR
RADIO, RRU RECONFIGURATION, 5G NR 1SR CRAND

SITE NUMBER: MAL02850 DRAWING NUMBER: A-4 REV: 1

ANTENNA SCHEDULE

FINAL APPROVED V6 RFDS 08/17/23

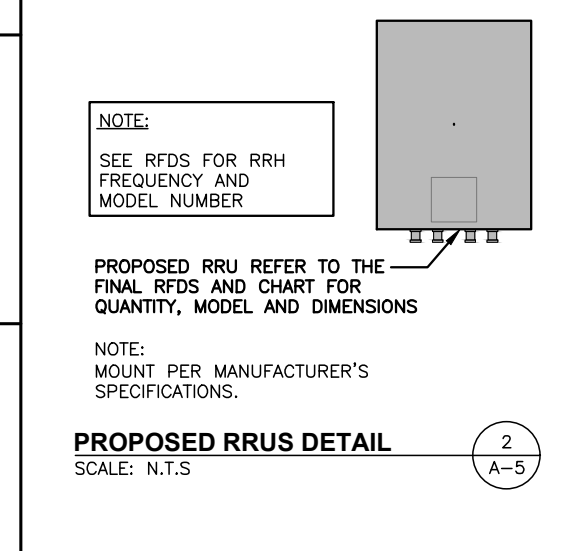
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ϕ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	PROPOSED	3.45GHz+ C-BAND	AIR 6419 B77G AIR 6449 B77D	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	99'-0"±	20°	-	-	-	(E)(4) DC TRUNKS & (1) FIBER RUN	(E)(1) RAYCAP DC6-48-60-18-8F
A2	EXISTING	LTE WCS	SBNHH-1D65A	55"x11.9"x7.1"	99'-0"±	20°	-	(E)(1) RRUS-32 B30 (WCS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
A3	EXISTING	LTE 700 B14/AWS	800-10964	55.2"x11.8"x6"	99'-0"±	20°	-	(E)(1) 4478 B14 (700) (E)(1) RRUS 32 B66A (AWS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
A4	EXISTING	LTE 700 BC/850/PCS	DMP65R-BU4DA	48"x20.7"x7.7"	99'-0"±	20°	-	(E)(1) 4449 B5/B12 (700/850) (E)(1) RRUS 32 B2 (PCS)	(P)(1) Y-CABLE	-	(E)(1) RAYCAP DC6-48-60-18-8F
B1	EXISTING	LTE 700 BC/850/PCS	DMP65R-BU4DA	48"x20.7"x7.7"	99'-0"±	190°	-	(E)(1) 4449 B5/B12 (700/850) (E)(1) RRUS 32 B2 (PCS)	(P)(1) Y-CABLE	-	(E)(1) RAYCAP DC6-48-60-18-8F
B2	EXISTING	LTE 700 B14/AWS	800-10964	55.2"x11.8"x6"	99'-0"±	190°	-	(E)(1) 4478 B14 (700) (E)(1) RRUS 32 B66A (AWS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
B3	EXISTING	LTE WCS	SBNHH-1D65A	55"x11.9"x7.1"	99'-0"±	190°	-	(E)(1) RRUS-32 B30 (WCS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
B4	PROPOSED	3.45GHz+ C-BAND	AIR 6419 B77G AIR 6449 B77D	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	99'-0"±	190°	-	-	(E)(4) DC TRUNKS & (1) FIBER RUN	-	(E)(1) RAYCAP DC6-48-60-18-8F
C1	PROPOSED	3.45GHz+ C-BAND	AIR 6419 B77G AIR 6449 B77D	31.1"x16.1"x7.3" 30.4"x15.9"x8.1"	99'-0"±	300°	-	-	(E)(4) DC TRUNKS & (1) FIBER RUN	-	(E)(1) RAYCAP DC6-48-60-18-8F
C2	EXISTING	LTE WCS	SBNHH-1D65A	55"x11.9"x7.1"	99'-0"±	300°	-	(E)(1) RRUS-32 B30 (WCS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
C3	EXISTING	LTE 700 B14/AWS	800-10964	55.2"x11.8"x6"	99'-0"±	300°	-	(E)(1) 4478 B14 (700) (E)(1) RRUS 32 B66A (AWS)	-	-	(E)(1) RAYCAP DC6-48-60-18-8F
C4	EXISTING	LTE 700 BC/850/PCS	DMP65R-BU4DA	48"x20.7"x7.7"	99'-0"±	300°	-	(E)(1) 4449 B5/B12 (700/850) (E)(1) RRUS 32 B2 (PCS)	(P)(1) Y-CABLE	-	(E)(1) RAYCAP DC6-48-60-18-8F

RRU CHART

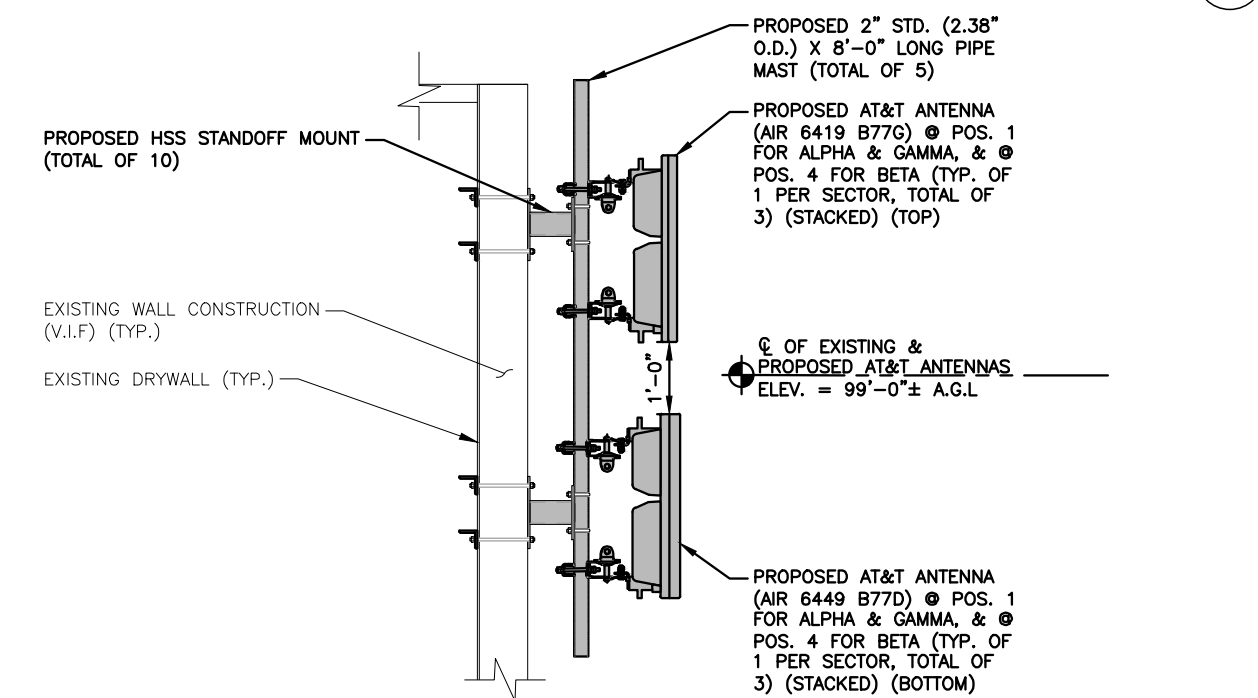
QUANTITY	MODEL	SIZE (L x W x D)
(E)(3)	4449 B5/B12 (700/850)	17.9"x13.2"x10.4"
(E)(3)	4478 B14 (700)	18.1"x13.4"x8.3"
(E)(3)	RRUS-32 B2 (1900)	27.2"x12.1"x7.0"
(E)(3)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"
(E)(3)	RRUS-32 B66A (AWS)	27.2"x12.1"x7.0"

NOTE:
REFER TO FINAL APPROVED V6 RFDS 08/17/23

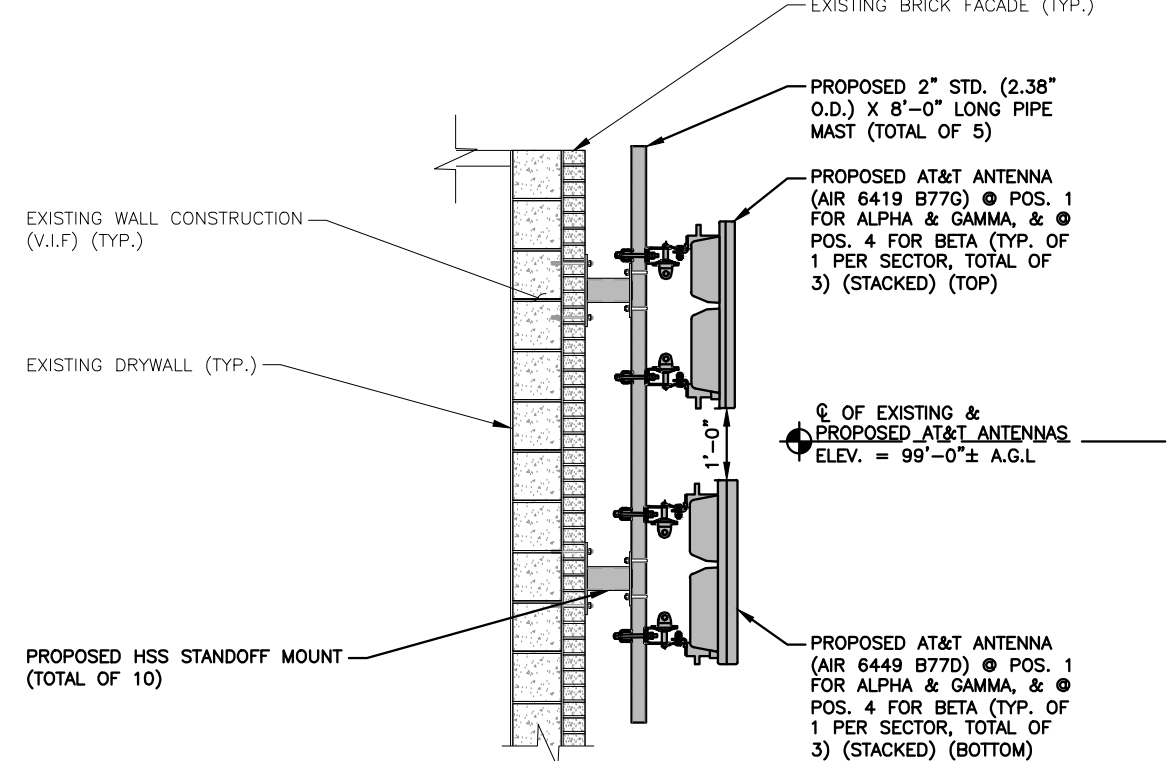
NOTE:
REFER TO STRUCTURAL ANALYSIS BY: TEP NORTHEAST (TEP OPCO, LLC) DATED: SEPTEMBER 19, 2023, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



FINAL ANTENNA CONFIGURATION 1
SCALE: N.T.S. A-5



PROPOSED ANTENNA MOUNTING DETAIL (ALPHA SECTOR) 3
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0" A-5



PROPOSED ANTENNA MOUNTING DETAIL (BETA & GAMMA SECTOR) 4
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0" A-5



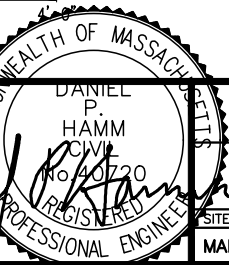
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP
1	10/04/23	ISSUED FOR CONSTRUCTION	AS	AT	DPH
0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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



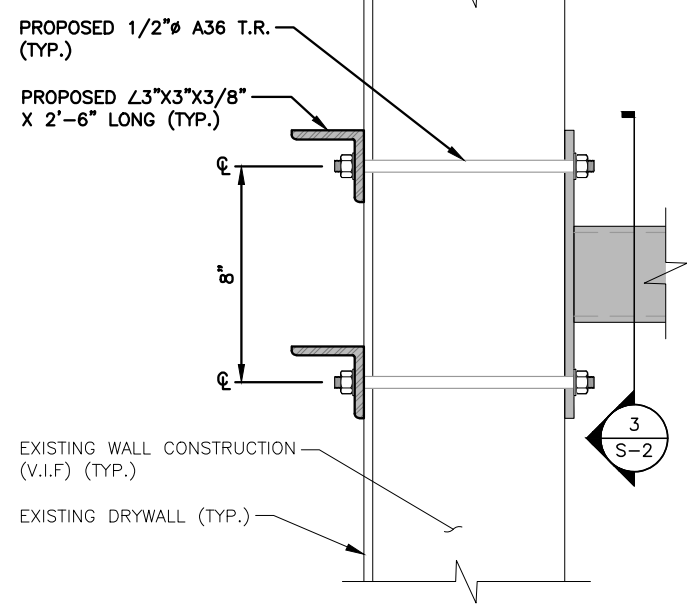
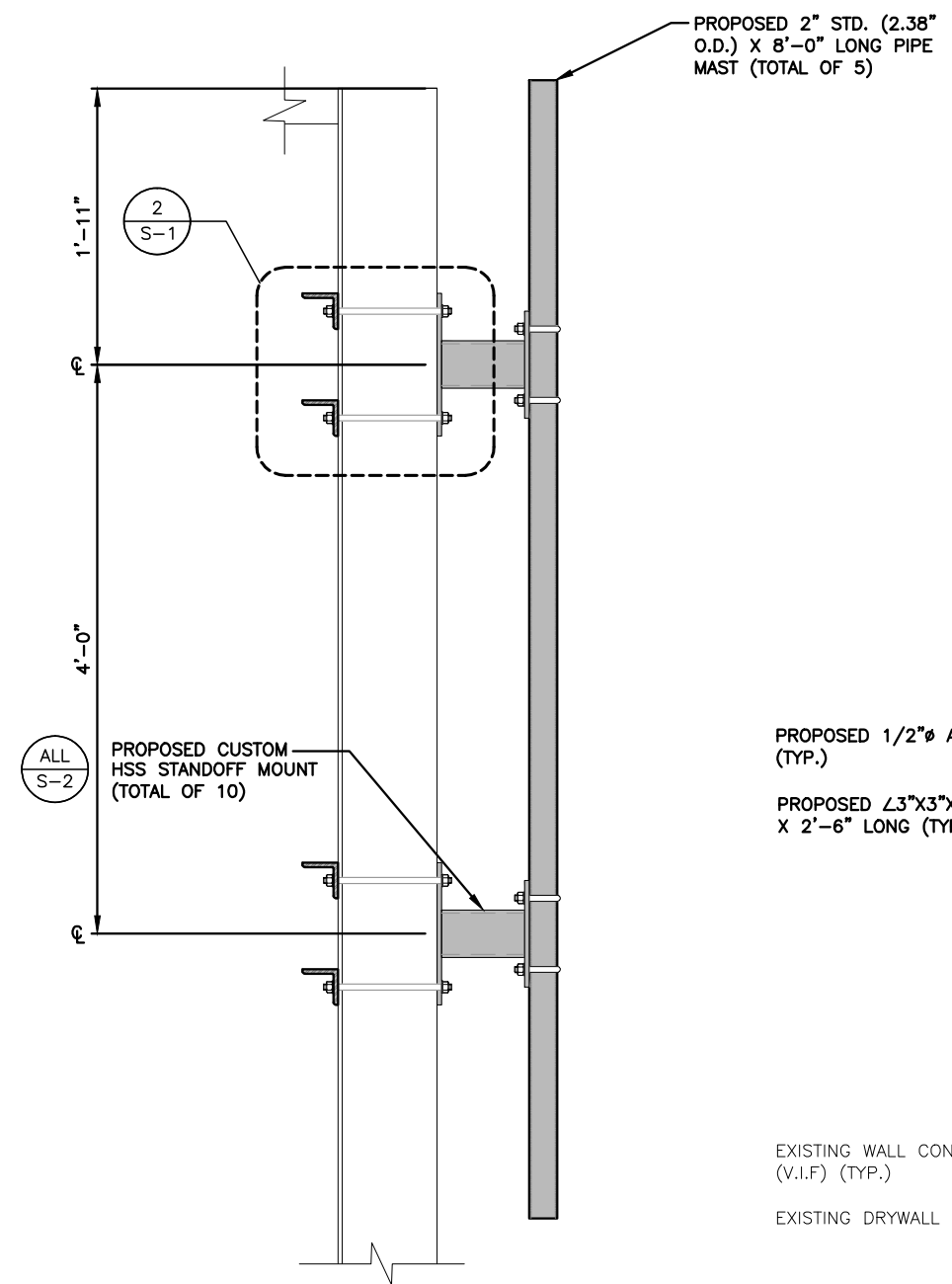
AT&T

DETAILS
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CBAND

SITE NUMBER: MAL02850
DRAWING NUMBER: A-5
REV: 1

NOTE:
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08/17/23

NOTE:
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BY: TEP NORTHEAST (TEP OPCO, LLC)
DATED: SEPTEMBER 19, 2023,
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PROPOSED EQUIPMENT.



PROPOSED ANTENNA MOUNTING DETAIL (ALPHA SECTOR)

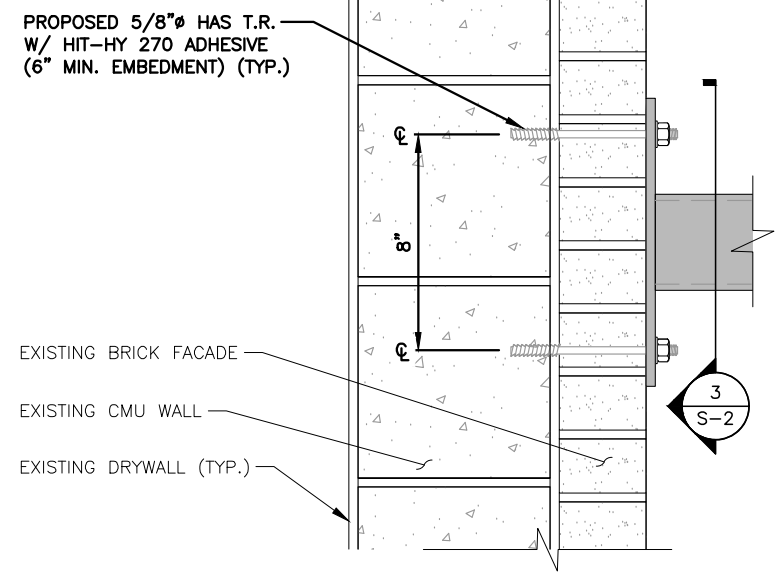
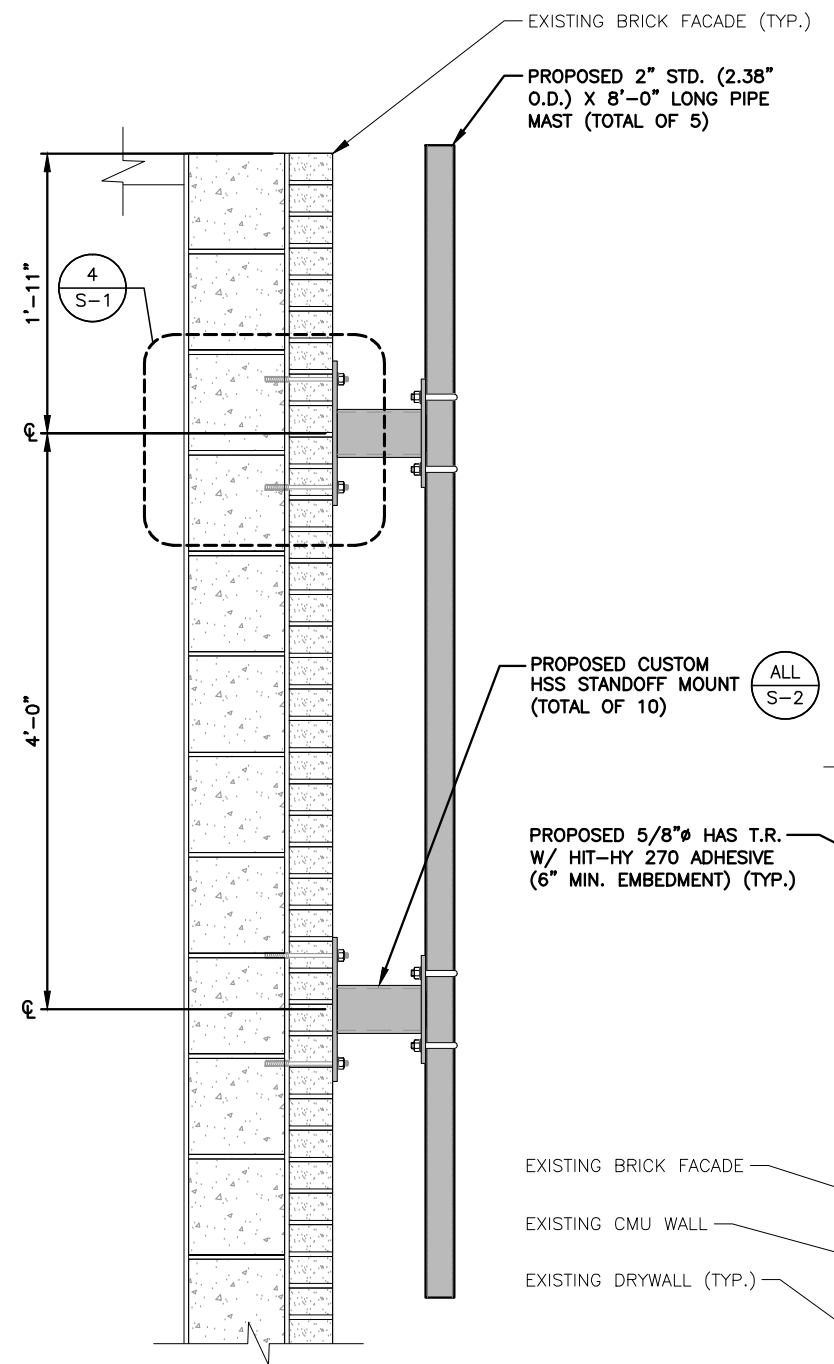
22x34 SCALE: 1-1/2"=1'-0"
11x17 SCALE: 3/4"=1'-0"

1 S-1

CONNECTION DETAIL

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

2 S-1



PROPOSED ANTENNA MOUNTING DETAIL (BETA & GAMMA SECTOR)

22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

3 S-1

CONNECTION DETAIL

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

4 S-1



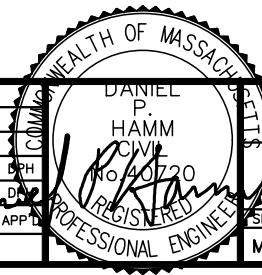
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP
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0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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



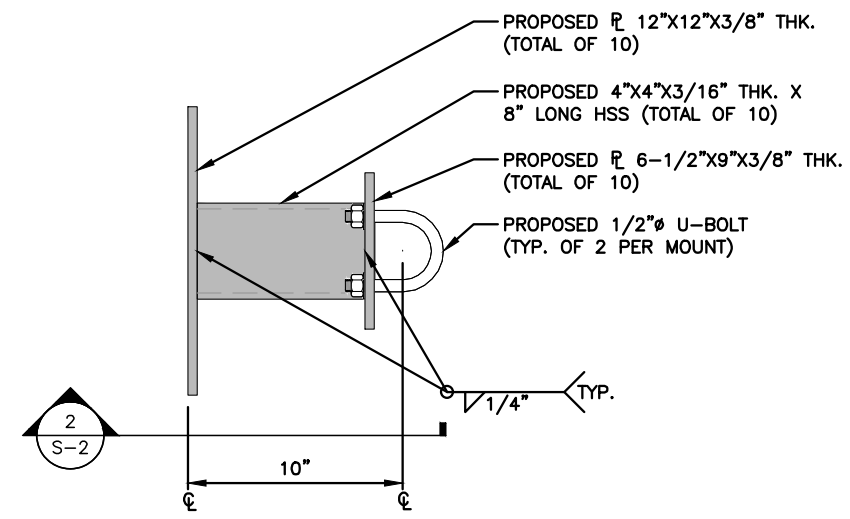
AT&T

DETAILS
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CRAND

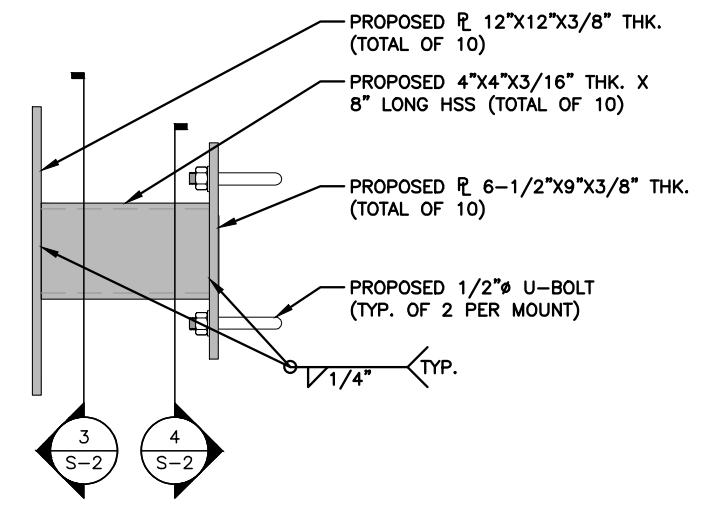
SITE NUMBER: MAL02850
DRAWING NUMBER: S-1
REV: 1

NOTE:
REFER TO FINAL APPROVED V6 RFDS
08/17/23

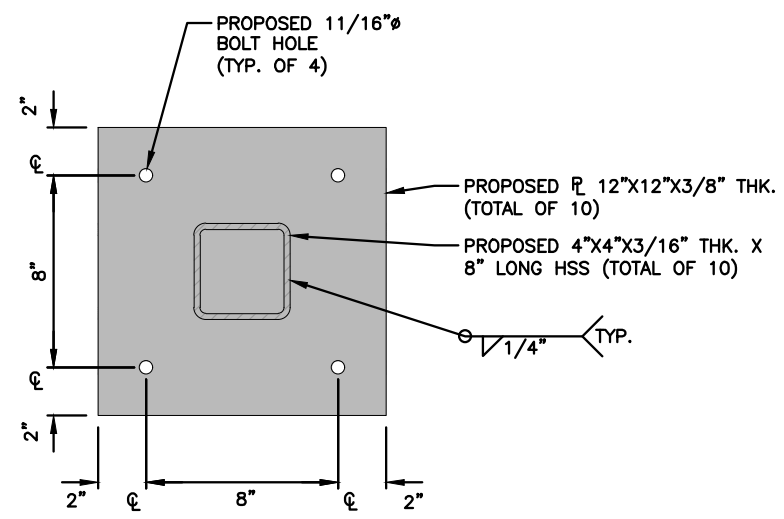
NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: TEP NORTHEAST (TEP OPCO, LLC)
DATED: SEPTEMBER 19, 2023,
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STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.



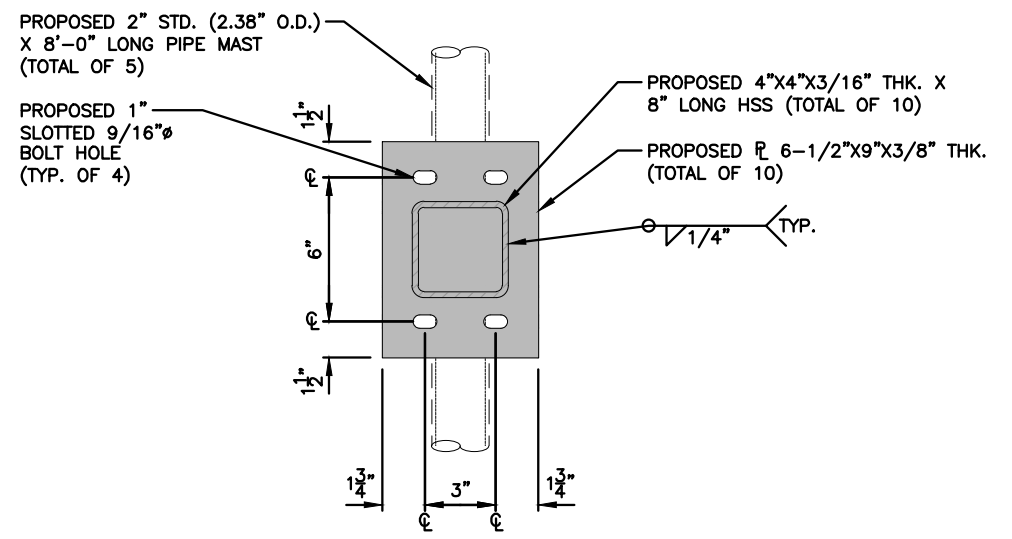
PROPOSED HSS STANDOFF PLAN DETAIL
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"
1
S-2



PROPOSED HSS STANDOFF SIDE DETAIL
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"
2
S-2



PROPOSED HSS STANDOFF BACK PLATE ELEVATION DETAIL
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"
3
S-2



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



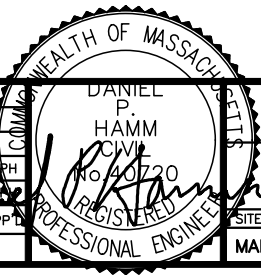
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY

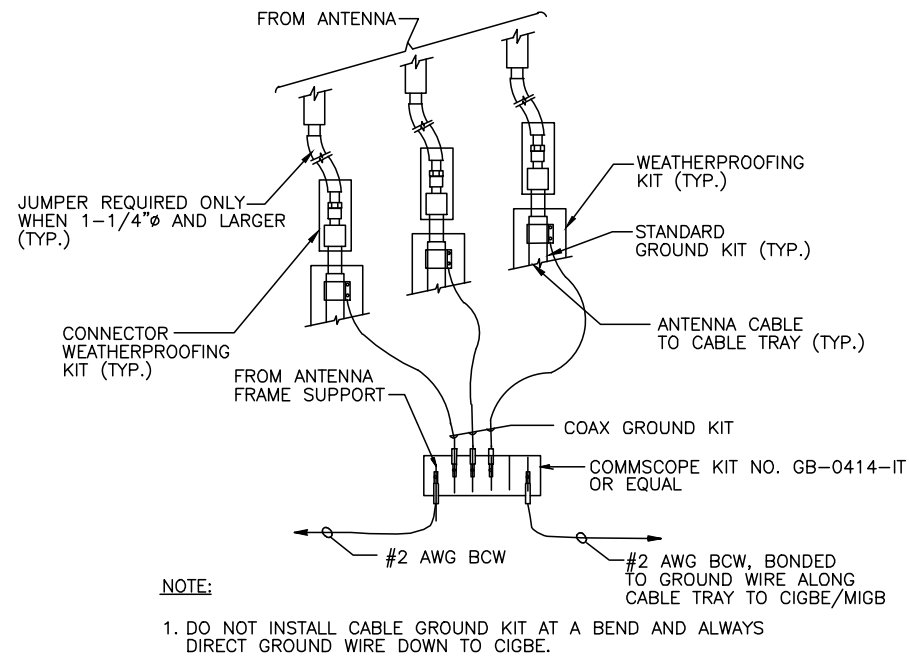


NO.	DATE	REVISIONS	BY	CHK	APP
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0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

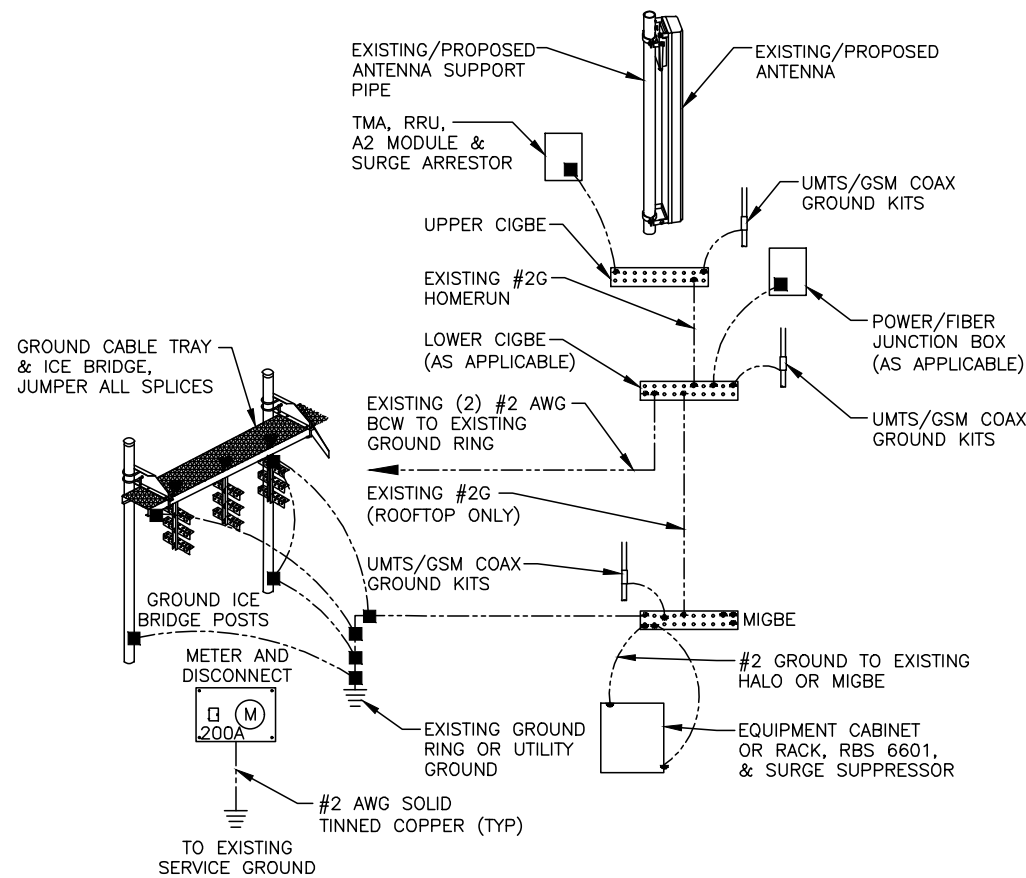
SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: JS



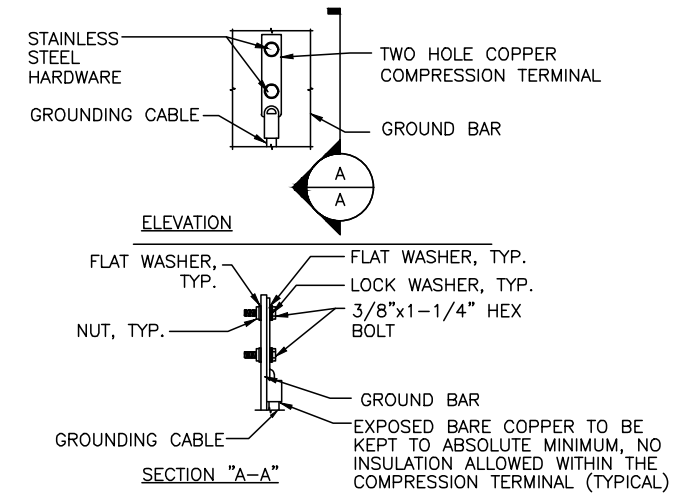
AT&T
DETAILS
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CRAND
SITE NUMBER: MAL02850 DRAWING NUMBER: S-2 REV: 1



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



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



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

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

AT&T GROUNDING STANDARDS TO BE FOLLOWED:
ATT-TP-76416
ATT-TP-76300
ATT-CEM-18002
ATT-002-290-531
ATT-002-290-701
ATT-CEM-23001

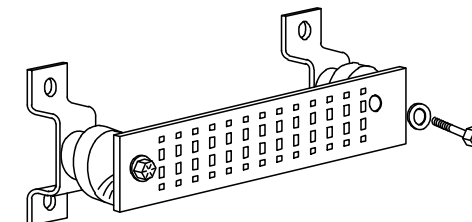
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED) 4
SCALE: N.T.S.



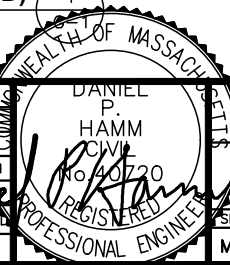
SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



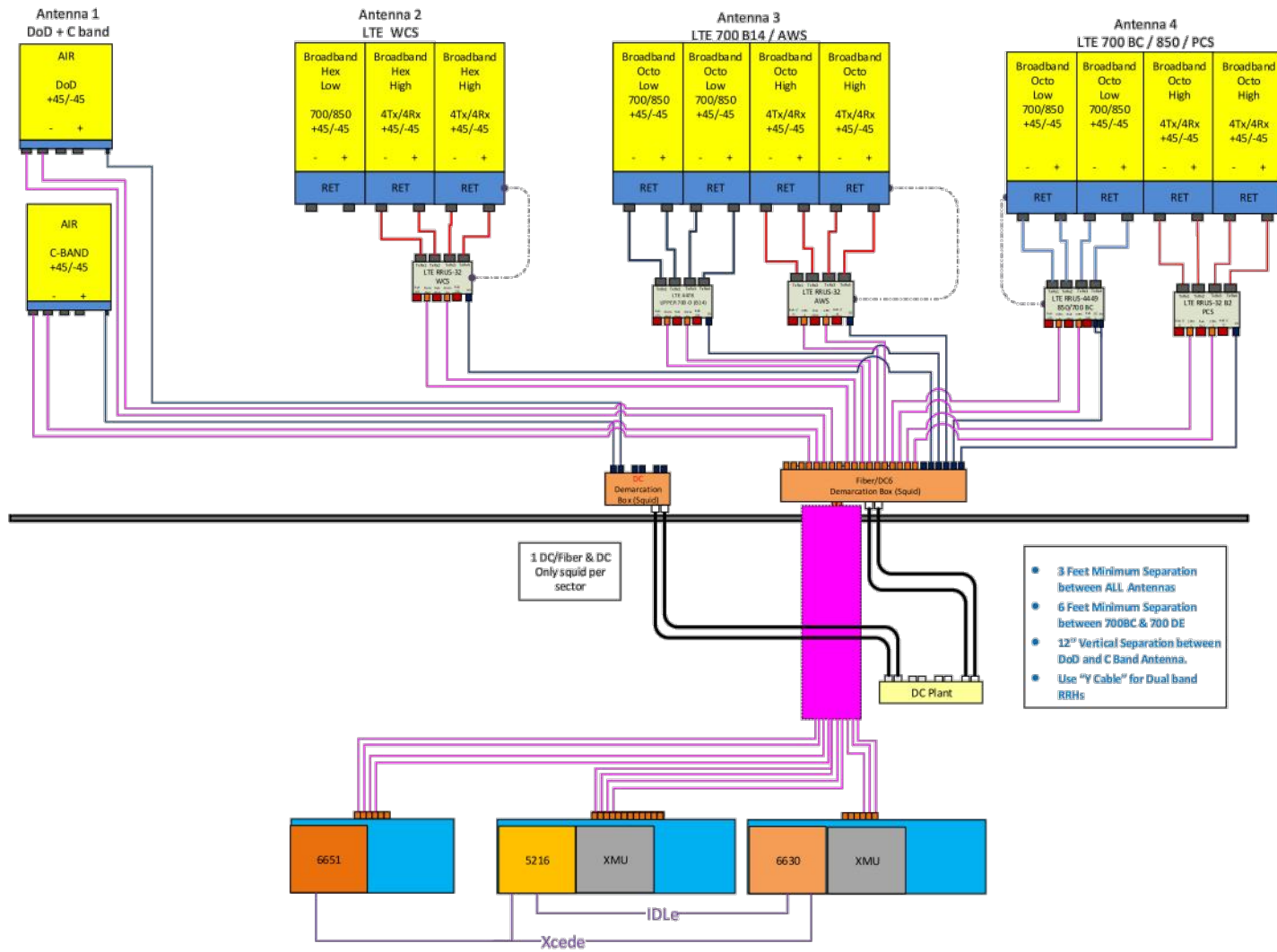
NO.	DATE	REVISIONS	BY	CHK	APP
1	10/04/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH

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

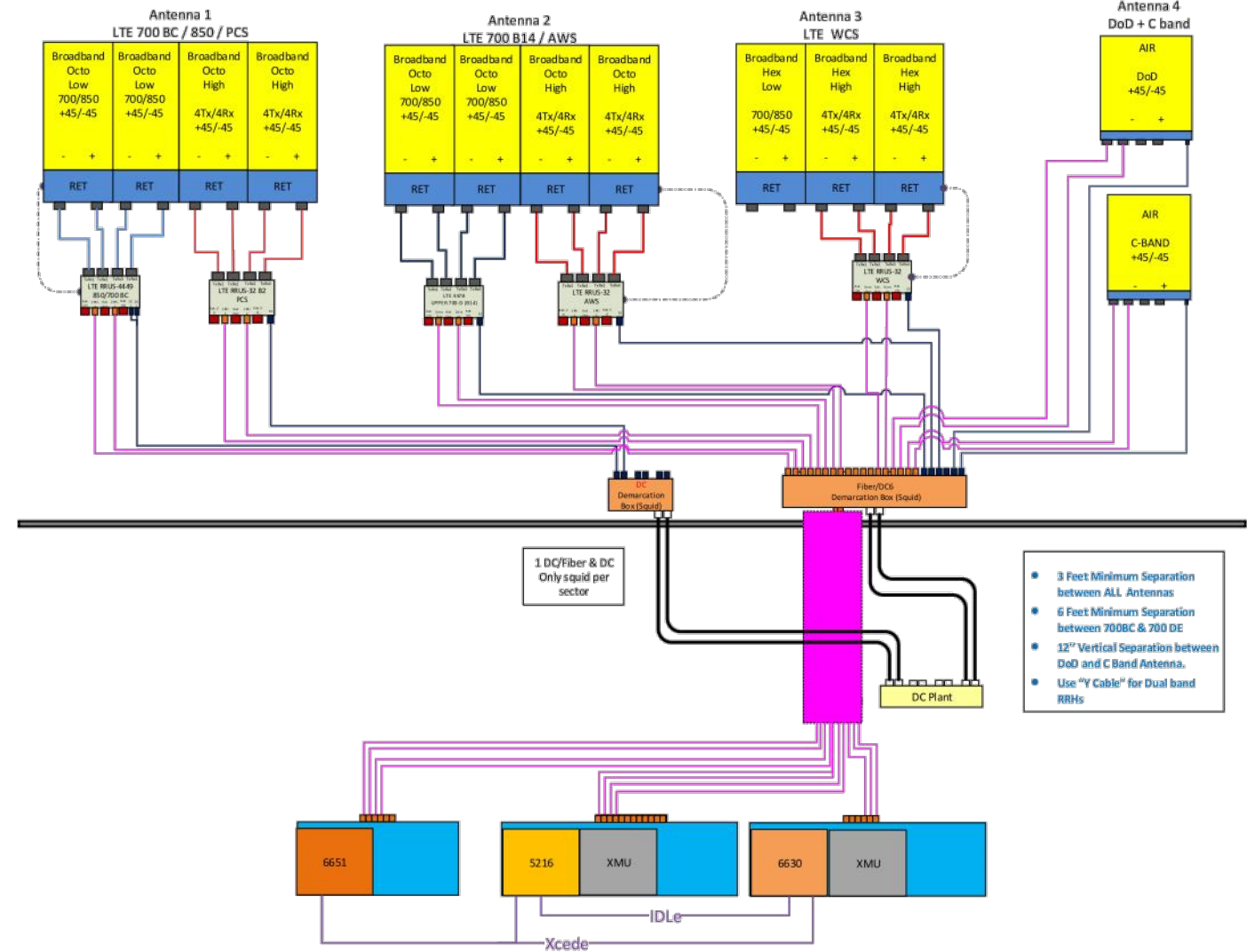


SITE NUMBER	DRAWING NUMBER	REV
MAL02850	G-1	1

FINAL APPROVED V6 RFDS 08/17/23



ALPHA & GAMMA SECTOR



BETA SECTOR

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

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

NOTE:
REFER TO FINAL APPROVED V6 RFDS 08/17/23



SITE NUMBER: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET

330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138
MIDDLESEX COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/04/23	ISSUED FOR CONSTRUCTION	SG	AT	DPH
0	09/11/23	ISSUED FOR REVIEW	JS	AT	DPH
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: JS		

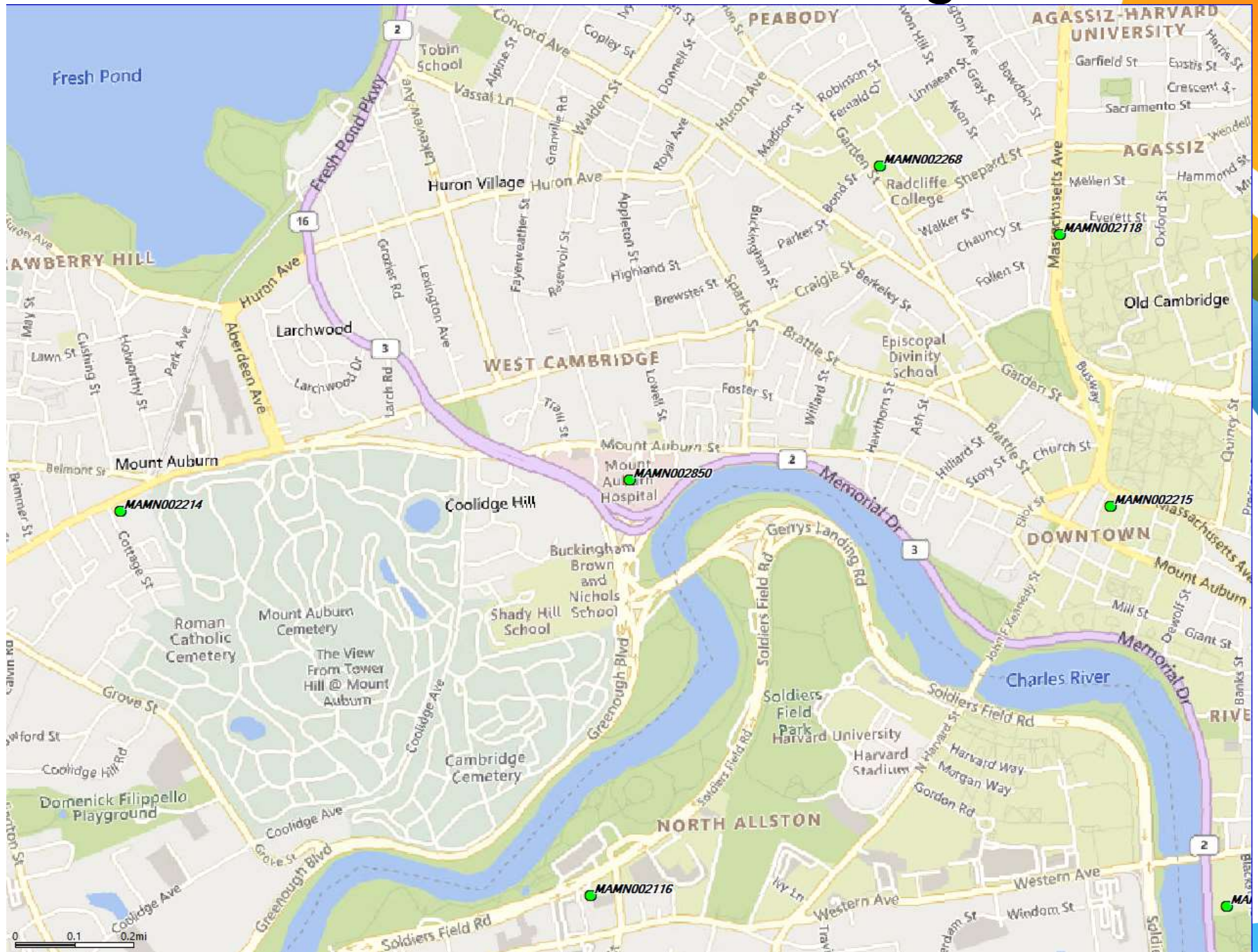
AT&T		
RF PLUMBING DIAGRAM		
5G NR SOFTWARE RADIO, 5G NR ACTIVATION, 5G NR RADIO, RRU RECONFIGURATION, 5G NR 1SR CBAND		
SITE NUMBER	DRAWING NUMBER	REV
MAL02850	RF-1	1

MAL02850 5G NR Coverage PI

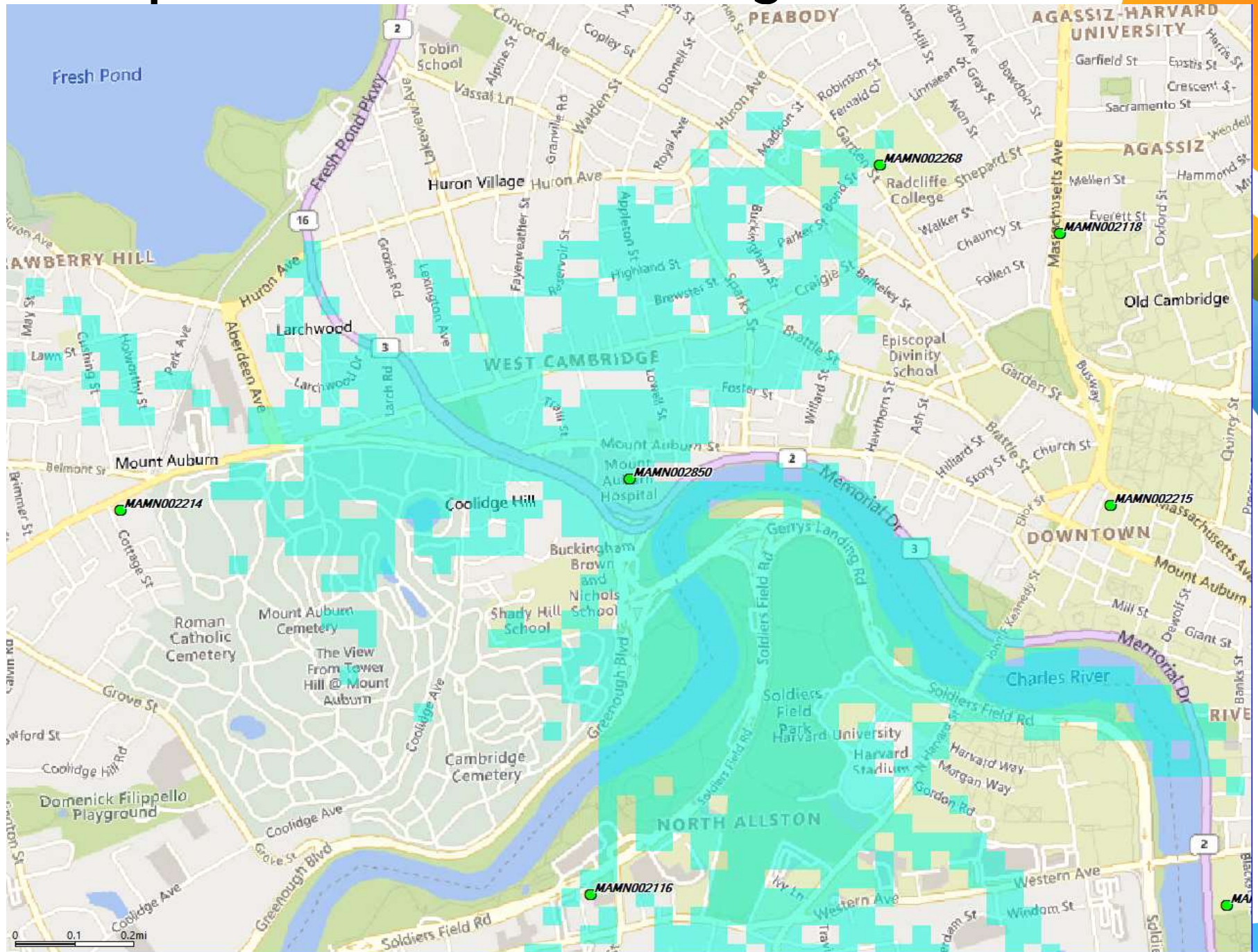
- Zoning Proposed 5G NR C Band Project Plots
- RF plots prepared by Deepak Rathore – AT&T RF Design



Current 5G C-Band Coverage



Proposed 5G C-Band Coverage - MAMN002850



STRUCTURAL ANALYSIS REPORT

For

AT&T Site Number: MA2850 (C-BAND)

TEP Project Number: 329609.876666

AT&T Site Name: CAMBRIDGE MOUNT AUBURN STREET

330 Mount Auburn Street
Cambridge, MA 02138

**Antennas Mounted on the Penthouse Façade;
Equipment Cabinets on Steel Platform on the Roof**



Prepared for:



Dated: September 19, 2023

Prepared by:



(TEP OPCO, LLC)
45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553
www.tepgroup.net





SCOPE OF WORK:

TEP Northeast (TEP NE) has been authorized by AT&T to conduct a structural evaluation of the structure supporting the proposed equipment located in the areas depicted in the latest TEP NE construction drawings.

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

This office conducted an on-site visual survey of the above site on September 19, 2023. Attendees included Kyle Madden (TEP NE – Engineer Associate I).

The following documents were used for our reference:

- Construction Drawings prepared by Dewberry Engineers dated October 11, 2013.
- Structural Analysis Report prepared by Infinigy Engineering dated April 23, 2020.
- Mount Mapping Report prepared by Hightower Solutions dated December 8, 2021.
- Construction Drawings prepared by Ramaker & Associates Inc. dated March 24, 2022.

CONCLUSION SUMMARY:

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

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Equipment Platform	2	LC10	84%	PASS

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

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Antenna Mount	12	LC2	9%	PASS

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

	Member	Stress Ratio	Pass/Fail
Alpha Sector Proposed Connection	1/2" Thru Bolt	12%	PASS
Beta Sector Existing Connection	3/8" Epoxy Anchor	68%	PASS
Gamma Sector Proposed Connection	5/8" Epoxy Anchor	70%	PASS
Equipment Platform Existing Connection	3/4" Epoxy Anchor	75%	PASS

TEP NE did not perform a condition assessment of the entire roof but did perform an inspection of the existing roof members and structural bearing walls below the area where the equipment is proposed to be located.

*Reference documents attached.



APPURTENANCE CONFIGURATION (BASED ON RFDS V6.00 DATED 08/17/2023):

Appurtenances	Dimensions	Weight	**Elevation	Mount
(3) SBNHH-1D65A Antennas	55.6"x11.9"x7.1"	34 lbs	99'-0"	Pipe Mast
(3) 800-10964 Antennas	59.0"x20.0"x6.9	95 lbs	99'-0"	Pipe Mast
(3) DMP65R-BU4DA Antennas	48.0"x20.7"x7.7"	68 lbs	99'-0"	Pipe Mast
(3) RRUS-32 B30 RRH's	27.2"x12.1"x7.0"	60 lbs	-	Unistruts
(3) 4478 B14 RRH's	18.1"x13.4"x8.3"	60 lbs	-	Unistruts
(3) RRUS-32 B66A RRH's	27.2"x12.1"x7.0"	60 lbs	-	Unistruts
(3) B5/B12 4449 RRH's	17.9"x13.2"x9.4"	73 lbs	-	Unistruts
(3) RRUS-32 B2 RRH's	27.2"x12.1"x7.0"	60 lbs	-	Unistruts
(3) DC6-48-60-18-8F Surge Arrestors	31.4"x10.2" Ø	29 lbs	-	Unistruts
(3) DC6-48-60-0-8C-EV Surge Arrestors	31.4"x10.2" Ø	29 lbs	-	Unistruts
(3) AIR6419 Antennas	31.2"x16.1"x9.1"	66 lbs	99'-0"	Pipe Mast
(3) AIR6449 Antennas	30.6"x15.9"x10.6"	84 lbs	99'-0"	Pipe Mast
(1) Transformer	36.0"x24.0"x24.0"	410 lbs	-	Equipment Platform
(1) Purcell Cabinet	30.0"x24.0"x24.0"	200 lbs	-	Equipment Platform
(1) PPC Cabinet	64.0"x30.0"x12.0"	200 lbs	-	Equipment Platform
(1) DC Power Plant	72.0"x30.0"x24.0"	2100 lbs	-	Equipment Platform
(1) Stacked Purcell Cabinets	60.0"x24.0"x24.0"	400 lbs	-	Equipment Platform
(1) Telco Cabinet	30.0"x24.0"x8.0"	100 lbs	-	Equipment Platform
(1) Disconnect Switch	18.0"x8.0"x8.0"	25 lbs	-	Equipment Platform
(3) Surge Arrestors	24.0"x24.0"x8.0"	60 lbs	-	Equipment Platform
(2) Fiber Management Boxes	12.0"x12.0"x8.0"	25 lbs	-	Equipment Platform
(1) Battery Cabinet w/ (8) Batteries	72.0"x36.0"x37.0"	2000 lbs	-	Equipment Platform

* Proposed equipment shown in bold.

** Elevation to antenna centerline.



DESIGN CRITERIA:

International Building Code (IBC) 2015 with Massachusetts State Building Code 9th Edition, and ASCE 7-10 (Minimum Design Loads for Buildings and Other Structures).		
Wind		
Reference Wind Speed:	139 mph	(780 CMR Table 1604.11)
Exposure Category:	C	(ASCE 7-10 Chapter 26)
Risk Category:	IV	(ASCE 7-10 Table 1.5-1)
Snow		
Ground Snow, P_g :	40 psf	(780 CMR Table 1604.11)
Importance Factor (I_s):	1.2	(ASCE 7-10 Table 1.5-2)
Exposure Factor (C_e):	1.0	(Partially Exposed, Table 7-2)
Thermal Factor (C_t):	1.0	(ASCE 7-10 Table 7-3)
Flat Roof Snow Load:	33.6 psf	(ASCE 7-10 Equation 7.3-1)
EIA/TIA-222-H Structural Standards for Steel Antenna Towers and Antenna Supporting Structures		
Wind		
City/Town:	Cambridge	
County:	Middlesex	
Wind Load:	139 mph	(TIA-222-H Figure B-2)
Ice		
Design Ice Thickness (t_i):	1.0 in	(TIA-222-H Figure B-9)
Structure Class:	IV	(TIA-222-H Table 2-1)
Importance Factor (I_i):	1.25	(TIA-222-H Table 2-3)
Factored Thickness of Radial Ice (t_{iz}):	1.40 in	(TIA-222-H Sec. 2.6.10)

EXISTING ROOF CONSTRUCTION:

The existing roof construction consists of a roofing membrane over rigid insulation over reinforced concrete over metal decking supported by existing steel beams and columns.

EXISTING PENTHOUSE WALL CONSTRUCTION:

- The existing penthouse wall construction at Alpha sector is assumed to consist of metal panels over masonry brick.
- The existing penthouse wall construction at Beta & Gamma sector consists of masonry brick.

ANTENNA SUPPORT RECOMMENDATIONS:

- The proposed Alpha sector antennas are to be mounted on a proposed pipe mast installed on proposed standoff mounts secured to the penthouse façade with thru bolts and backer plates.
- The proposed Beta and Gamma sector antennas are to be mounted on existing and proposed pipe masts installed on existing and proposed standoff mounts secured to the penthouse façade with epoxy anchors.

EQUIPMENT RECOMMENDATIONS:

The proposed AT&T equipment is to be installed on the existing steel platform located on the roof of the existing building supported on existing steel columns.

Limitations and Assumptions:

1. Reference the latest TEP NE construction drawings for all the equipment locations and details.
2. All detail requirements will be designed and furnished in the construction drawings.
3. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
4. TEP NE is not responsible for any modifications completed prior to and hereafter which TEP NE was not directly involved.
5. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
6. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

FIELD PHOTOS:



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

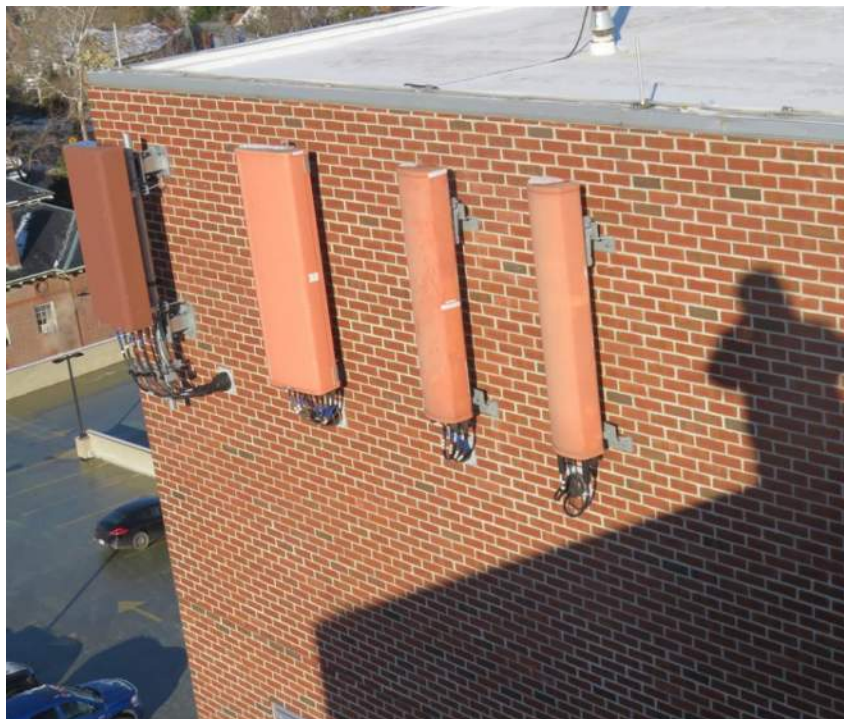


Photo 2: Sample photo illustrating the existing Beta sector antennas.

FIELD PHOTOS (CONT.):



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



Photo 4: Sample photo illustrating the existing RRH's and surge arrestors.

FIELD PHOTOS (CONT.):



Photo 5: Sample photo illustrating the existing RRH's and surge arrestors.



Photo 6: Sample photo illustrating the existing equipment platform.

**Wind & Ice
Calculations**

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

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

$z = 99$ (ft)
 $z_g = 900$ (ft)
 $\alpha = 9.5$

$K_z = 1.263$

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

Table 2-4

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

2.6.6.2 Topographic Factor:

Table 2-5

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

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

$K_h = e^{(fz/H)}$

$K_{zt} = 1$

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

Category = 1

$K_h = 1$
 $K_c = 1.0$ (from Table 2-4)
 $K_t = 0$ (from Table 2-5)
 $f = 0$ (from Table 2-5)
 $z = 99$
 $z_s = 22$ (Mean elevation of base of structure above sea level)
 $H = 0$ (Ht. of the crest above surrounding terrain)
 $K_{zt} = 1.00$ (from 2.6.6.2.1)
 $K_e = 1.00$ (from 2.6.8)

2.6.10 Design Ice Thickness

Max Ice Thickness = $t_i = 1.00$ in
 Importance Factor = $I = 1.25$ (from Table 2-3)
 $K_{iz} = 1.12$ (from Sec. 2.6.10)

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

$t_{iz} = 1.40$ in

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

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

$h =$ ht. of structure

$h =$ 102

$G_h =$ 0.85

2.6.9.2 Guyed Masts

$G_h =$ 0.85

2.6.9.3 Pole Structures

$G_h =$ 1.1

2.6.9 Appurtenances

$G_h =$ 1.0

2.6.9.4 Structures Supported on Other Structures

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

$G_h =$ 1.35

$G_h =$ 1.00

2.6.11.2 Design Wind Force on Appurtenances

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

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

$q_z =$	59.30
q_z (ice) =	7.67
q_z (30) =	2.76

$K_z =$	1.263 (from 2.6.5.2)
$K_{zt} =$	1.0 (from 2.6.6.2.1)
$K_s =$	1.0 (from 2.6.7)
$K_e =$	1.00 (from 2.6.8)
$K_d =$	0.95 (from Table 2-2)
$V_{max} =$	139 mph (Ultimate Wind Speed)
V_{max} (ice) =	50 mph
$V_{30} =$	30 mph

Table 2-2

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

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



Determine Ca:

Table 2-9

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

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

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

Ice Thickness = **1.40 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)
AIR6419 Antenna	31.2	16.1	9.1	3.49	1.94	1.20	248	41
AIR6419 Antenna (Side)	31.2	9.1	16.1	1.97	3.43	1.24	145	27
AIR6449 Antenna	30.6	15.9	10.6	3.38	1.92	1.20	240	40
AIR6449 Antenna (Side)	30.6	10.6	15.9	2.25	2.89	1.22	163	29
SBNHH-1D65A Antenna	55.6	11.9	7.1	4.59	4.67	1.30	353	59
SBNHH-1D65A Antenna (Side)	55.6	7.1	11.9	2.74	7.83	1.43	232	44
800-10964 Antenna	59.0	20.0	6.9	8.19	2.95	1.22	593	92
800-10964 Antenna (Side)	59.0	6.9	20.0	2.83	8.55	1.45	243	46
DMP65R-BU4DA Antenna	48.0	20.7	7.7	6.90	2.32	1.20	491	76
DMP65R-BU4DA Antenna (Side)	48.0	7.7	20.7	2.57	6.23	1.37	208	39
HSS 4x4	4.0	12.0	-	0.33	0.33	1.25	25	
2" Pipe	2.4	12.0	-	0.20	0.20	1.20	14	

Date: 9/13/2023

Project Name: CAMBRIDGE MOUNT AUBURN STREET

Project No.: MA2850

Designed By: KM Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.40 in.

Density of ice: 56 pcf

AIR6419 Antenna

Weight of ice based on total radial SF area:

Height (in): 31.2

Width (in): 16.1

Depth (in): 9.1

Total weight of ice on object: 88 lbs

Weight of object: 66.0 lbs

Combined weight of ice and object: 154 lbs

AIR6449 Antenna

Weight of ice based on total radial SF area:

Height (in): 30.6

Width (in): 15.9

Depth (in): 10.6

Total weight of ice on object: 89 lbs

Weight of object: 84.0 lbs

Combined weight of ice and object: 173 lbs

SBNHH-1D65A Antenna

Weight of ice based on total radial SF area:

Height (in): 55.6

Width (in): 11.9

Depth (in): 7.1

Total weight of ice on object: 121 lbs

Weight of object: 34.0 lbs

Combined weight of ice and object: 155 lbs

800-10964 Antenna

Weight of ice based on total radial SF area:

Height (in): 59.0

Width (in): 20.0

Depth (in): 6.9

Total weight of ice on object: 190 lbs

Weight of object: 95.0 lbs

Combined weight of ice and object: 285 lbs

DMP65R-BU4DA Antenna

Weight of ice based on total radial SF area:

Height (in): 48.0

Width (in): 20.7

Depth (in): 7.7

Total weight of ice on object: 161 lbs

Weight of object: 68.0 lbs

Combined weight of ice and object: 229 lbs

HSS 4x4

Weight of ice based on total radial SF area:

Height (in): 4

Width (in): 4

Per foot weight of ice on object: 12 plf

2" Pipe

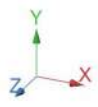
Per foot weight of ice:

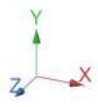
diameter (in): 2.38

Per foot weight of ice on object: 6 plf



Antenna Mount Calculations

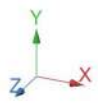
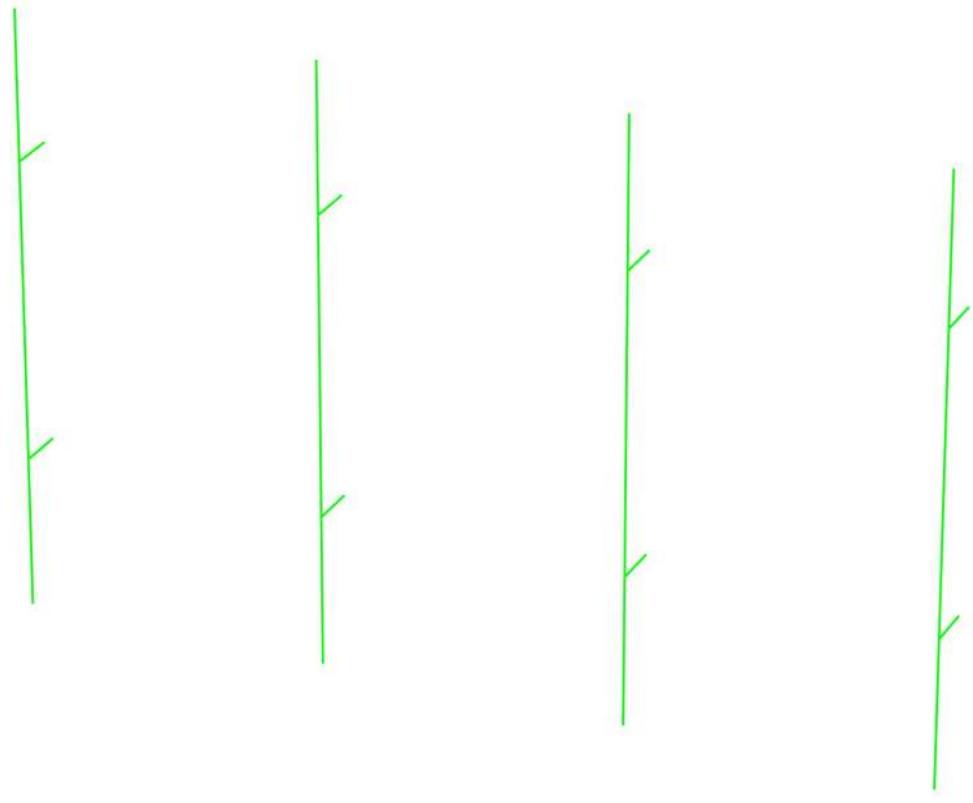


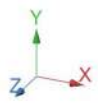




Design status

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





Load data

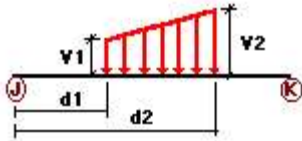
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

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

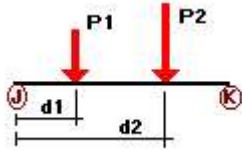
Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wf	3	z	-0.014	-0.014	80.00	Yes	100.00	Yes
		z	-0.014	-0.014	0.00	No	20.00	Yes
	6	z	-0.014	-0.014	80.00	Yes	100.00	Yes
		z	-0.014	-0.014	0.00	No	10.00	Yes
	9	z	-0.014	-0.014	80.00	Yes	100.00	Yes
		z	-0.014	-0.014	0.00	No	10.00	Yes
Ws	1	x	-0.025	-0.025	0.00	No	100.00	Yes
	2	x	-0.025	-0.025	0.00	No	100.00	Yes
	3	x	-0.014	-0.014	0.00	No	100.00	Yes
	4	x	-0.025	-0.025	0.00	No	100.00	Yes
	5	x	-0.025	-0.025	0.00	No	100.00	Yes
	6	x	-0.014	-0.014	0.00	No	100.00	Yes
	7	x	-0.025	-0.025	0.00	No	100.00	Yes
	8	x	-0.025	-0.025	0.00	No	100.00	Yes
	9	x	-0.014	-0.014	0.00	No	100.00	Yes
	10	x	-0.025	-0.025	0.00	No	100.00	Yes
	11	x	-0.025	-0.025	0.00	No	100.00	Yes
	12	x	-0.014	-0.014	0.00	No	100.00	Yes
Di	1	y	-0.012	-0.012	0.00	No	100.00	Yes
	2	y	-0.012	-0.012	0.00	No	100.00	Yes
	3	y	-0.006	-0.006	0.00	No	100.00	Yes
	4	y	-0.012	-0.012	0.00	No	100.00	Yes
	5	y	-0.012	-0.012	0.00	No	100.00	Yes
	6	y	-0.006	-0.006	0.00	No	100.00	Yes

7	y	-0.012	-0.012	0.00	No	100.00	Yes
8	y	-0.012	-0.012	0.00	No	100.00	Yes
9	y	-0.006	-0.006	0.00	No	100.00	Yes
10	y	-0.012	-0.012	0.00	No	100.00	Yes
11	y	-0.012	-0.012	0.00	No	100.00	Yes
12	y	-0.006	-0.006	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	3	y	-0.034	2.25	No
		y	-0.034	5.25	No
	6	y	-0.048	1.50	No
		y	-0.048	5.50	No
	9	y	-0.017	1.50	No
		y	-0.017	5.50	No
	12	y	-0.033	1.00	No
		y	-0.033	3.00	No
		y	-0.042	5.00	No
		y	-0.042	7.00	No
Wf	3	z	-0.246	2.25	No
		z	-0.246	5.25	No
	6	z	-0.297	1.50	No
		z	-0.297	5.50	No
	9	z	-0.177	1.50	No
		z	-0.177	5.50	No
	12	z	-0.124	1.00	No
		z	-0.124	3.00	No
z		-0.12	5.00	No	
Ws	3	x	-0.104	2.25	No
		x	-0.104	5.25	No
		x	-0.122	1.50	No
	6	x	-0.122	5.50	No
		x	-0.116	1.50	No
	9	x	-0.116	5.50	No
		12	x	-0.073	1.00
	x		-0.073	3.00	No
	x		-0.082	5.00	No
	Wfice	3	z	-0.038	2.25
z			-0.038	5.25	No
6		z	-0.046	1.50	No
		z	-0.046	5.50	No
9		z	-0.03	1.50	No
		z	-0.03	5.50	No
12		z	-0.021	1.00	No
		z	-0.021	3.00	No
		z	-0.02	5.00	No

Wsice	3	z	-0.02	7.00	No
		x	-0.02	2.25	No
	6	x	-0.02	5.25	No
		x	-0.023	1.50	No
	9	x	-0.023	5.50	No
		x	-0.022	1.50	No
	12	x	-0.022	5.50	No
		x	-0.014	1.00	No
		x	-0.014	3.00	No
		x	-0.015	5.00	No
Di	3	x	-0.015	7.00	No
		y	-0.081	2.25	No
	6	y	-0.081	5.25	No
		y	-0.095	1.50	No
	9	y	-0.095	5.50	No
		y	-0.061	1.50	No
	12	y	-0.061	5.50	No
		y	-0.044	1.00	No
		y	-0.044	3.00	No
		y	-0.045	5.00	No
		y	-0.045	7.00	No

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
Wf	Wind Load (FRONT)	No	0.00	0.00	0.00
Ws	Wind Load (SIDE)	No	0.00	0.00	0.00
Wfice	Wind ICE (FRONT)	No	0.00	0.00	0.00
Wsice	Wind ICE (SIDE)	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00

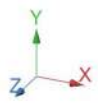
Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

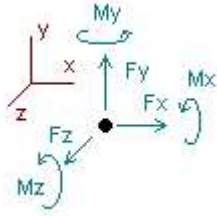
- LC1=1.2DL+Wf
- LC2=1.2DL+Ws
- LC3=0.9DL+Wf
- LC4=0.9DL+Ws
- LC5=1.2DL+Wfice+Di
- LC6=1.2DL+Wsice+Di
- LC7=1.4DL
- LC8=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X3_16	1	LC2 at 0.00%	0.01	OK	
		2	LC1 at 100.00%	0.01	OK	
		4	LC2 at 0.00%	0.01	OK	
		5	LC5 at 100.00%	0.01	OK	
		7	LC2 at 0.00%	0.01	OK	
		8	LC2 at 0.00%	0.01	OK	
		10	LC2 at 0.00%	0.01	OK	
		11	LC2 at 0.00%	0.01	OK	
	PIPE 2x0.154	3	LC1 at 72.92%	0.06	OK	
		6	LC2 at 25.00%	0.08	OK	
		9	LC2 at 25.00%	0.06	OK	
		12	LC2 at 25.00%	0.09	OK	



Analysis result

Reactions



Direction of positive forces and moments

Node	Forces [Kip]			Moments [Kip*ft]		
	FX	FY	FZ	MX	MY	MZ
Condition LC1=1.2DL+Wf						
1	0.00000	0.17628	0.25783	0.00000	0.00000	0.00000
2	0.00000	-0.04826	0.27897	0.00000	0.00000	0.00000
7	0.00000	0.03444	0.27312	0.00000	0.00000	0.00000
8	0.00000	0.12718	0.35448	0.00000	0.00000	0.00000
13	0.00000	0.00278	0.17075	0.00000	0.00000	0.00000
14	0.00000	0.08444	0.21685	0.00000	0.00000	0.00000
19	0.00000	0.06877	0.27659	0.00000	0.00000	0.00000
20	0.00000	0.15766	0.21141	0.00000	0.00000	0.00000
SUM	0.00000	0.60329	2.04000	0.00000	0.00000	0.00000
Condition LC2=1.2DL+Ws						
1	0.16367	0.06396	0.02017	0.00000	0.10367	0.00000
2	0.18966	0.06406	-0.02017	0.00000	0.12078	0.00000
7	0.16416	0.08074	0.02578	0.00000	0.10414	0.00000
8	0.22517	0.08088	-0.02578	0.00000	0.14430	0.00000
13	0.15966	0.04359	0.01337	0.00000	0.10113	0.00000
14	0.21767	0.04363	-0.01337	0.00000	0.13931	0.00000
19	0.23664	0.11330	0.03657	0.00000	0.15213	0.00000
20	0.21869	0.11312	-0.03657	0.00000	0.14031	0.00000
SUM	1.57533	0.60329	0.00000	0.00000	1.00578	0.00000
Condition LC3=0.9DL+Wf						
1	0.00000	0.16029	0.25278	0.00000	0.00000	0.00000
2	0.00000	-0.06427	0.28402	0.00000	0.00000	0.00000
7	0.00000	0.01425	0.26667	0.00000	0.00000	0.00000
8	0.00000	0.10696	0.36093	0.00000	0.00000	0.00000
13	0.00000	-0.00811	0.16740	0.00000	0.00000	0.00000
14	0.00000	0.07353	0.22020	0.00000	0.00000	0.00000
19	0.00000	0.04044	0.26745	0.00000	0.00000	0.00000
20	0.00000	0.12938	0.22055	0.00000	0.00000	0.00000
SUM	0.00000	0.45247	2.04000	0.00000	0.00000	0.00000

Condition **LC4=0.9DL+W_s**

1	0.16367	0.04797	0.01513	0.00000	0.10367	0.00000
2	0.18967	0.04805	-0.01513	0.00000	0.12078	0.00000
7	0.16416	0.06056	0.01933	0.00000	0.10414	0.00000
8	0.22517	0.06066	-0.01933	0.00000	0.14430	0.00000
13	0.15966	0.03269	0.01003	0.00000	0.10113	0.00000
14	0.21767	0.03273	-0.01003	0.00000	0.13931	0.00000
19	0.23665	0.08497	0.02743	0.00000	0.15214	0.00000
20	0.21868	0.08484	-0.02743	0.00000	0.14031	0.00000

SUM 1.57533 0.45247 0.00000 0.00000 1.00578 0.00000

Condition **LC5=1.2DL+W_{fice}+D_i**

1	0.00000	0.17626	0.08176	0.00000	0.00000	0.00000
2	0.00000	0.12976	-0.00576	0.00000	0.00000	0.00000
7	0.00000	0.18154	0.09329	0.00000	0.00000	0.00000
8	0.00000	0.18609	-0.00129	0.00000	0.00000	0.00000
13	0.00000	0.11115	0.05755	0.00000	0.00000	0.00000
14	0.00000	0.11407	0.00245	0.00000	0.00000	0.00000
19	0.00000	0.20286	0.10758	0.00000	0.00000	0.00000
20	0.00000	0.21756	-0.02558	0.00000	0.00000	0.00000

SUM 0.00000 1.31929 0.31000 0.00000 0.00000 0.00000

Condition **LC6=1.2DL+W_{sice}+D_i**

1	0.01750	0.15285	0.04851	0.00000	0.01169	0.00000
2	0.02250	0.15318	-0.04851	0.00000	0.01498	0.00000
7	0.01725	0.18363	0.05879	0.00000	0.01155	0.00000
8	0.02875	0.18399	-0.05879	0.00000	0.01912	0.00000
13	0.01650	0.11252	0.03504	0.00000	0.01105	0.00000
14	0.02750	0.11271	-0.03504	0.00000	0.01829	0.00000
19	0.02999	0.21035	0.06757	0.00000	0.01999	0.00000
20	0.02801	0.21007	-0.06757	0.00000	0.01868	0.00000

SUM 0.18800 1.31929 0.00000 0.00000 0.12533 0.00000

Condition **LC7=1.4DL**

1	0.00000	0.07462	0.02354	0.00000	0.00000	0.00000
2	0.00000	0.07474	-0.02354	0.00000	0.00000	0.00000
7	0.00000	0.09420	0.03007	0.00000	0.00000	0.00000
8	0.00000	0.09436	-0.03007	0.00000	0.00000	0.00000
13	0.00000	0.05085	0.01560	0.00000	0.00000	0.00000
14	0.00000	0.05091	-0.01560	0.00000	0.00000	0.00000
19	0.00000	0.13219	0.04267	0.00000	0.00000	0.00000
20	0.00000	0.13197	-0.04267	0.00000	0.00000	0.00000

SUM 0.00000 0.70383 0.00000 0.00000 0.00000 0.00000

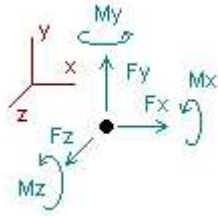
Condition **LC8=0.9DL**

1	0.00000	0.04797	0.01513	0.00000	0.00000	0.00000
2	0.00000	0.04805	-0.01513	0.00000	0.00000	0.00000
7	0.00000	0.06056	0.01933	0.00000	0.00000	0.00000
8	0.00000	0.06066	-0.01933	0.00000	0.00000	0.00000
13	0.00000	0.03269	0.01003	0.00000	0.00000	0.00000
14	0.00000	0.03273	-0.01003	0.00000	0.00000	0.00000
19	0.00000	0.08497	0.02743	0.00000	0.00000	0.00000
20	0.00000	0.08484	-0.02743	0.00000	0.00000	0.00000

SUM 0.00000 0.45247 0.00000 0.00000 0.00000 0.00000

Envelope for nodal reactions

Note.- I_c is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

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

Node		Forces						Moments					
		Fx	I_c	Fy	I_c	Fz	I_c	Mx	I_c	My	I_c	Mz	I_c
		[Kip]		[Kip]		[Kip]		[Kip*ft]		[Kip*ft]		[Kip*ft]	
1	Max	0.164	LC2	0.176	LC1	0.258	LC1	0.00000	LC1	0.10367	LC2	0.00000	LC1
	Min	0.000	LC1	0.048	LC4	0.015	LC4	0.00000	LC1	0.00000	LC1	0.00000	LC1
2	Max	0.190	LC4	0.153	LC6	0.284	LC3	0.00000	LC1	0.12078	LC4	0.00000	LC1
	Min	0.000	LC1	-0.064	LC3	-0.049	LC6	0.00000	LC1	0.00000	LC1	0.00000	LC1
7	Max	0.164	LC4	0.184	LC6	0.273	LC1	0.00000	LC1	0.10414	LC4	0.00000	LC1
	Min	0.000	LC1	0.014	LC3	0.019	LC4	0.00000	LC1	0.00000	LC1	0.00000	LC1
8	Max	0.225	LC2	0.186	LC5	0.361	LC3	0.00000	LC1	0.14430	LC2	0.00000	LC1
	Min	0.000	LC1	0.061	LC4	-0.059	LC6	0.00000	LC1	0.00000	LC1	0.00000	LC1
13	Max	0.160	LC4	0.113	LC6	0.171	LC1	0.00000	LC1	0.10113	LC4	0.00000	LC1
	Min	0.000	LC1	-0.008	LC3	0.010	LC4	0.00000	LC1	0.00000	LC1	0.00000	LC1
14	Max	0.218	LC2	0.114	LC5	0.220	LC3	0.00000	LC1	0.13931	LC2	0.00000	LC1
	Min	0.000	LC1	0.033	LC4	-0.035	LC6	0.00000	LC1	0.00000	LC1	0.00000	LC1
19	Max	0.237	LC4	0.210	LC6	0.277	LC1	0.00000	LC1	0.15214	LC4	0.00000	LC1
	Min	0.000	LC1	0.040	LC3	0.027	LC4	0.00000	LC1	0.00000	LC1	0.00000	LC1
20	Max	0.219	LC2	0.218	LC5	0.221	LC3	0.00000	LC1	0.14031	LC2	0.00000	LC1
	Min	0.000	LC1	0.085	LC4	-0.068	LC6	0.00000	LC1	0.00000	LC1	0.00000	LC1

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



CHECK THRU BOLT CONNECTION CAPACITY → PROPOSED ANCHORS AT ALPHA SECTOR

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

Bolt Type = A36 1/2" Thru Bolt

Allowable Tensile Load =

$F_{Tall} = 4271$ lbs.

Allowable Shear Load =

$F_{vall} = 2562$ lbs.

CONNECTION PLATE CONFIGURATION (4-BOLTS)

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

TENSILE FORCES

Moment in X axis: 0 lb-ft. (See Bentley Output)
Couple Reaction from M_x : 0 lbs.
Moment in Y axis: 152 lb-ft. (See Bentley Output)
Couple Reaction from M_y : 608 lbs.
Reaction in Z direction: 277 lbs. (See Bentley Output)
Resultant per bolt: 373 lbs.

SHEAR FORCES

Moment in Z axis: 0 lb-ft. (See Bentley Output)
Couple Reaction from M_z : 0 lbs.
Reaction in X direction: 237 lbs. (See Bentley Output)
Reaction in Y direction: 210 lbs. (See Bentley Output)
Resultant per bolt: 79 lbs.

Tension Design Load /Bolts =

$f_t = 373.25$ lbs. < 4270.6 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

$f_v = 79.16$ lbs. < 2562.4 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

$f_t / F_T + f_v / F_v \leq 1.0$
 0.087 + 0.031 = 0.118 < 1.0 **Therefore, OK !**

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



CHECK EPOXY ANCHOR CONNECTION CAPACITY → EXISTING ANCHORS AT BETA SECTOR

Reference: Hilti North American Product Technical Guide, 19th Edition

Epoxy Type = HIT-HY20
 Anchor Diameter = 1/2 in. (HAS-E Threaded Rod)
 Embedment Depth = 6 in. (Assumed)

	Allowable Loads (lbs)	Spacing Reduct. Factor	Edge Reduct. Factor	Reduced Loads (lbs)
Tensile Load	745	1.0	1.0	745.0
Shear Load	930	1.0	1.0	930.0

TENSILE FORCES

Reaction F = 297 lbs. (See Wind Loading Calculations)

SHEAR FORCES

Reactions in X direction: 297 lbs. (See Wind Loading Calculations)
 Reactions in Y direction: 143 lbs. (See Ice Loading Calculations)

Resultant: 329 lbs.

No. of Supports = 1
 No. of Anchors / Support = 2

Tension Design Load / Anchor =

$$f_t = 148.25 \text{ lbs.} < 745 \text{ lbs.} \text{ Therefore, OK!}$$

Shear Design Load / Anchor=

$$f_v = 164.48 \text{ lbs.} < 930 \text{ lbs.} \text{ Therefore, OK!}$$

CHECK COMBINED TENSION AND SHEAR

$$f_t / F_T + f_v / F_v \leq 1.0$$

$$0.199 + 0.177 = 0.376 < 1.0 \text{ Therefore, OK!}$$

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



CHECK EPOXY ANCHOR CONNECTION CAPACITY → EXISTING STANDOFF ANCHORS AT BETA & GAMMA SECTOR

Reference: Hilti North American Product Technical Guide, 19th Edition

Epoxy Type = HIT-HY20
 Anchor Diameter = 3/8 in. (HAS-E Threaded Rod)
 Embedment Depth = 6 in.

	Allowable Loads (lbs)	Spacing Reduct. Factor	Edge Reduct. Factor	Reduced Loads (lbs)
Tensile Load	685	1.0	1.0	685.0
Shear Load	590	1.0	1.0	590.0

CONNECTION PLATE CONFIGURATION (4-BOLTS)

N_{BOLT ROWS} = 2 rows d_y = 6 in (Min.)
 N_{BOLTS} = 2 bolts/row d_x = 6 in (Min.)

TENSILE FORCES

Moment in X axis: 0 lb-ft. (See Bentley Output)
 Couple Reaction from M_x: 0 lbs.
 Moment in Y axis: 152 lb-ft. (See Bentley Output)
 Couple Reaction from M_y: 608 lbs.
 Reaction in Z direction: 277 lbs. (See Bentley Output)
 Resultant: 373 lbs. < 685 lbs. Therefore, OK !

SHEAR FORCES

Moment in Z axis: 0 lb-ft. (See Bentley Output)
 Couple Reaction from M_z: 0 lbs.
 Reaction in X direction: 237 lbs. (See Bentley Output)
 Reaction in Y direction: 210 lbs. (See Bentley Output)
 Resultant: 79 lbs. < 590 lbs. Therefore, OK !

CHECK COMBINED TENSION AND SHEAR

$$f_t / F_T + f_v / F_v \leq 1.0$$

$$0.545 + 0.134 = 0.679 < 1.0 \text{ Therefore, OK !}$$

Date: 9/13/2023
 Project Name: CAMBRIDGE MOUNT AUBURN STREET
 Project No.: MA2850
 Designed By: KM Checked By: MSC



CHECK EPOXY ANCHOR CONNECTION CAPACITY → PROPOSED STANDOFF ANCHORS AT GAMMA SECTOR

Reference: Hilti North American Product Technical Guide, 22nd Edition

Epoxy Type = HIT-HY270
 Anchor Diameter = 5/8 in. (HAS-E Threaded Rod)
 Embedment Depth = 6 in.

	Allowable Loads (lbs)	Spacing Reduct. Factor	Edge Reduct. Factor	Reduced Loads (lbs)
Tensile Load	1025	0.5	1.0	512.5
Shear Load	1405	0.5	1.0	702.5

CONNECTION PLATE CONFIGURATION (4-BOLTS)

N_{BOLT ROWS} = 2 rows d_y = 8 in (Min.)
 N_{BOLTS} = 2 bolts/row d_x = 8 in (Min.)

TENSILE FORCES

Moment in X axis: 0 lb-ft. (See Bentley Output)
 Couple Reaction from M_X: 0 lbs.
 Moment in Y axis: 144 lb-ft. (See Bentley Output)
 Couple Reaction from M_Y: 432 lbs.
 Reaction in Z direction: 361 lbs. (See Bentley Output)
 Resultant per bolt: 306 lbs. < 512.5 lbs. **Therefore, OK !**

SHEAR FORCES

Moment in Z axis: 0 lb-ft. (See Bentley Output)
 Couple Reaction from M_Z: 0 lbs.
 Reaction in X direction: 225 lbs. (See Bentley Output)
 Reaction in Y direction: 186 lbs. (See Bentley Output)
 Resultant per bolt: 73 lbs. < 702.5 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

$$f_t / F_T + f_v / F_v \leq 1.0$$

0.598 + 0.104 = 0.701 < 1.0 **Therefore, OK !**

Equipment Platform Calculations

Date: 9/13/2023
Project Name: CAMBRIDGE MOUNT AUBURN STREET
Project No.: MA2850
Designed By: KM **Checked By:** MSC



Wind Analysis → Equipment Platform

Reference Codes:

-Massachusetts State Building Code, 9th Edition

-International Building Code 2015 (IBC 2015)

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

Structure Classification	IV	(ASCE 7-10 Table 1.5-1)
Basic Wind Speed, V	139 mph	(MA Building Code Table 1604.11)
Importance Factor, I	1	(ASCE 7-10 Table 1.5-2)
Exposure Category	C	(ASCE 7-10 Section 26.7)
Height Above Ground Level, z	96 ft	(Top of Cabinet)
Exposure Coefficient, K _z	1.25	(ASCE 7-10 Table 29-3.1)
Wind Directionality Coef., K _d	0.90	(ASCE 7-10 Table 26.6-1)
Topographic Factor, K _{zt}	1.00	(ASCE 7-10 Section 26.8.2)
Velocity Pressure, q_z	= 0.00256K _z K _{zt} K _d V ²	(ASCE 7-10 Equation 29.3-1)
	= 55.73 psf	
Gust Factor, G	0.85	(ASCE 7-10 Section 26.9)
Enclosure Shape:	Square	
Net Force Coefficient, C _f	1.32	(ASCE 7-10 Figure 29.5-1)
Area Wind Force, F	= q _z GC _f	(ASCE 7-10 Equation 29.5-2)
	= 62.38 psf	

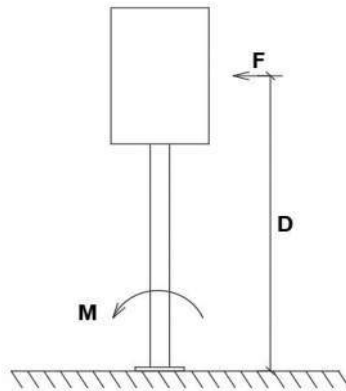
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Fiber Box (Front)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Fiber Box	2.00	0.67	2.50

Calculate Overturning Moment



Wind Force, $F =$ **318.71 lbs**

Moment Arm, $D =$ **2.50 ft**

Moment, $M =$ $F \times D$
 $=$ **796.78 lb-ft**

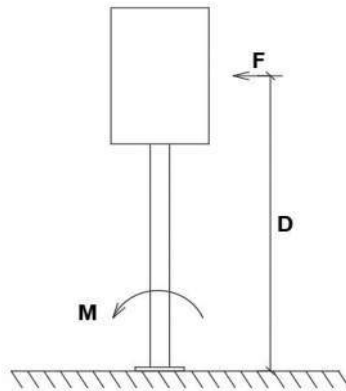
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Fiber Box (Side)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Fiber Box	0.67	2.00	2.50

Calculate Overturning Moment



Wind Force, F = **103.49 lbs**

Moment Arm, D = **2.50 ft**

Moment, M = $F \times D$
= **258.72 lb-ft**

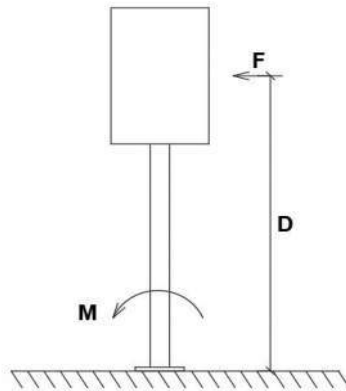
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Surge Arrestor (Front)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Surge Arrestor	2.00	0.67	2.50

Calculate Overturning Moment



Wind Force, F = **318.71 lbs**

Moment Arm, D = **2.50 ft**

Moment, M = $F \times D$
= **796.78 lb-ft**

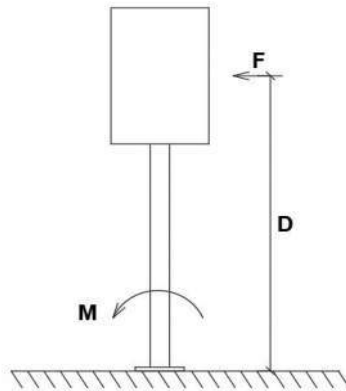
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Surge Arrestor (Side)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Surge Arrestor	0.67	2.00	2.50

Calculate Overturning Moment



Wind Force, F = **103.49 lbs**

Moment Arm, D = **2.50 ft**

Moment, M = $F \times D$
= **258.72 lb-ft**

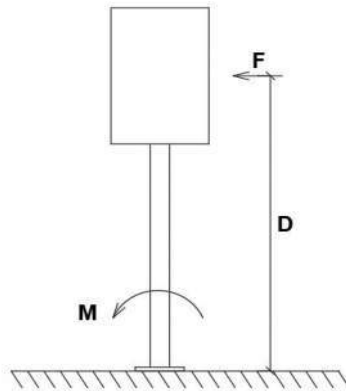
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Telco Cabinet (Front)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Telco Cabinet	2.00	0.67	2.50

Calculate Overturning Moment



Wind Force, F = **318.71 lbs**

Moment Arm, D = **3.50 ft**

Moment, M = $F \times D$
= **1115.49 lb-ft**

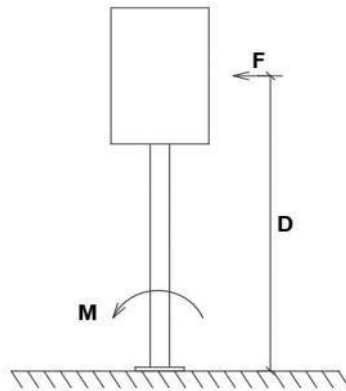
Date: 9/13/2023
Project Name: CAMBRIDGE MT AUBURN HOSPITAL
Project No.: MA2850
Designed By: KM Checked By: MSC



Calculate Overturning Moment from Telco Cabinet (Side)

Dimensions (ft)	Wide, w	Depth, d	Height, h
Telco Cabinet	0.67	2.00	2.50

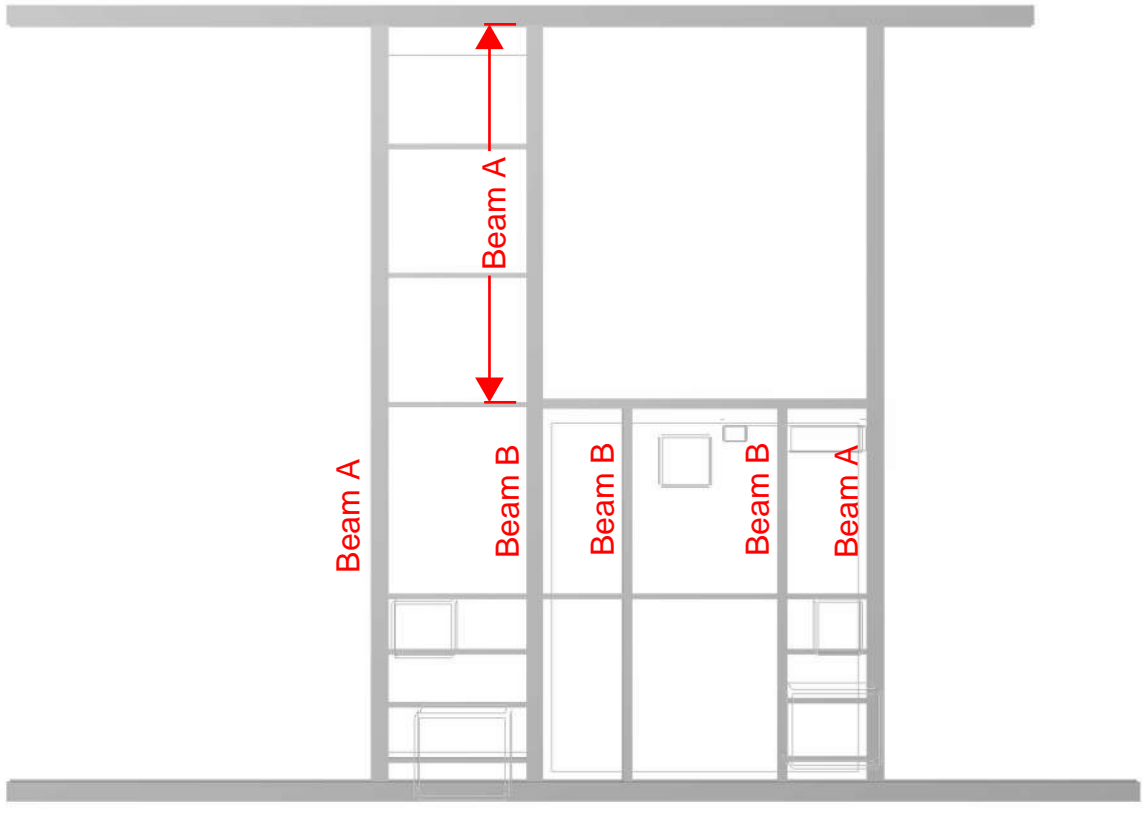
Calculate Overturning Moment



Wind Force, F = **103.49 lbs**

Moment Arm, D = **2.50 ft**

Moment, M = $F \times D$
= **258.72 lb-ft**



Date: 9/13/2023
Project Name: CAMBRIDGE MOUNT AUBURN STREET
Project No.: MA2850
Designed By: KM Checked By: MSC



Load Breakdown at Existing Steel Platform

Dead Loads:

Grating 15 psf
Handrail 10 plf

Live Loads:

Service 25 psf
Handrail 50 plf

● **Beam A**

Dead Load

→ Grating 15 psf x 2.50 ft. (Tributary Width)
37.5 plf
→ Handrail 10 plf

Live Load

→ Service 25 psf x 2.50 ft. (Tributary Width)
= 62.5 plf
→ Handrail 50 plf

Date: 9/13/2023
Project Name: CAMBRIDGE MOUNT AUBURN STREET
Project No.: MA2850
Designed By: KM Checked By: MSC



Load Breakdown at Existing Steel Platform (cont.)

- Beam B

Dead Load

→ Grating **15** psf x 4.00 ft. (Tributary Width)
60.0 plf

Live Load

→ Service **25** psf x 4.00 ft. (Tributary Width)
= 100.0 plf

- Beam C

Dead Load

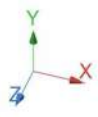
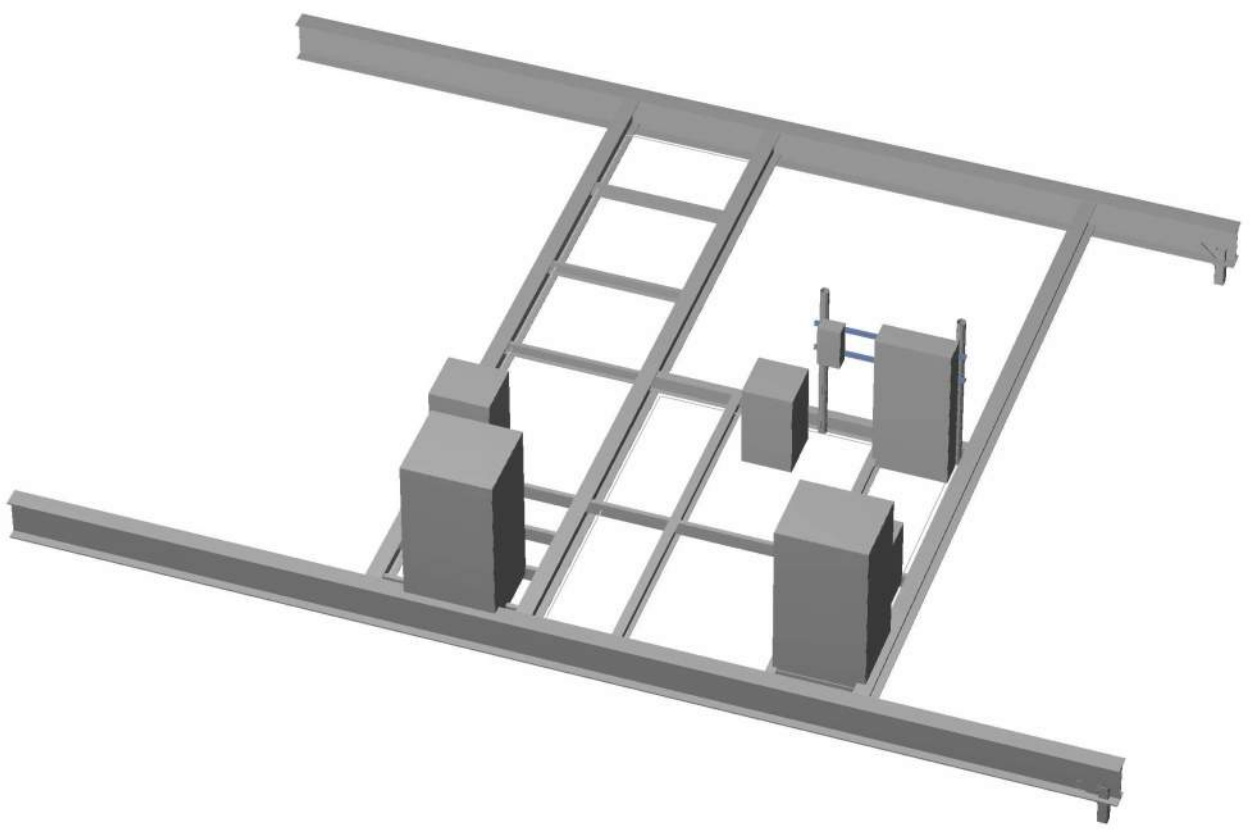
→ Grating **15** psf x 1.50 ft. (Tributary Width)
22.5 plf

→ Handrail **10** plf

Live Load

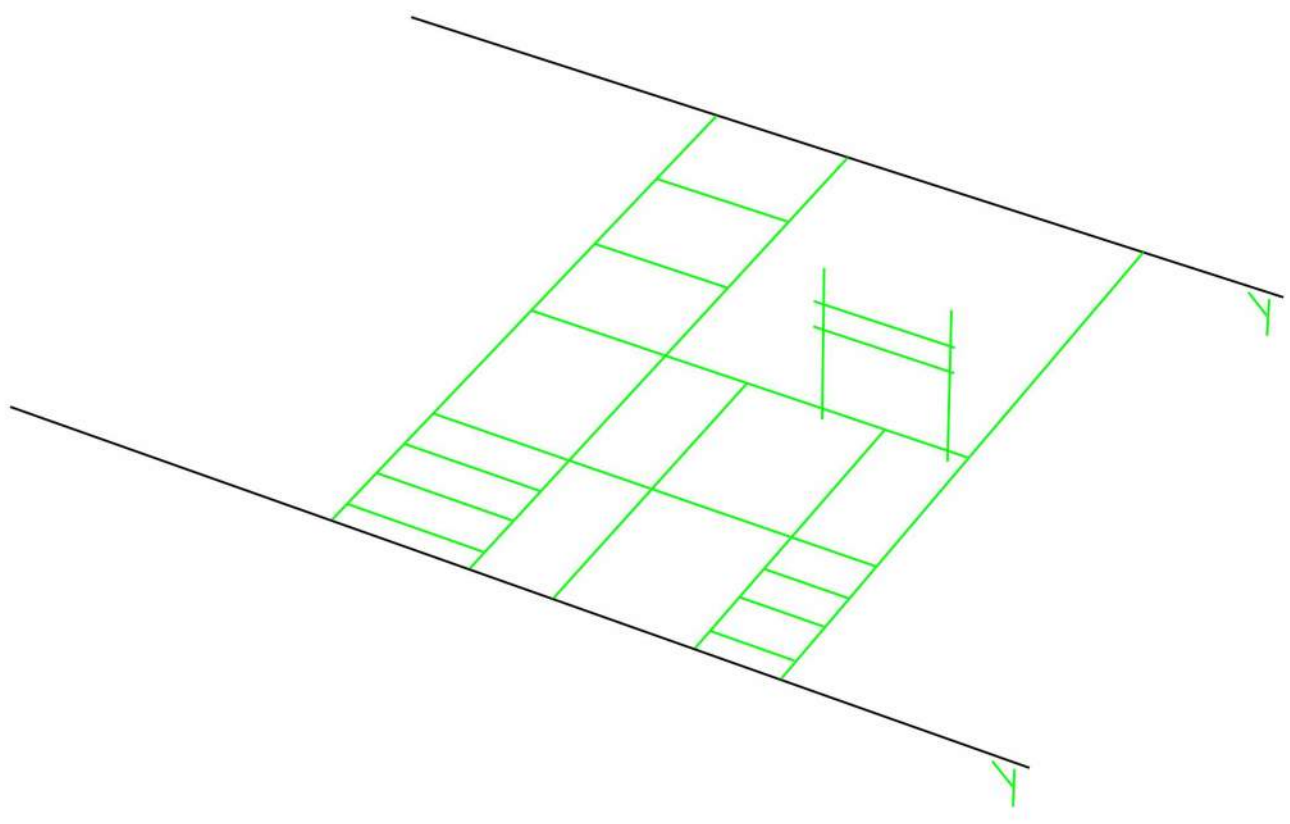
→ Service **25** psf x 1.50 ft. (Tributary Width)
= 37.5 plf

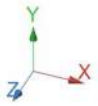
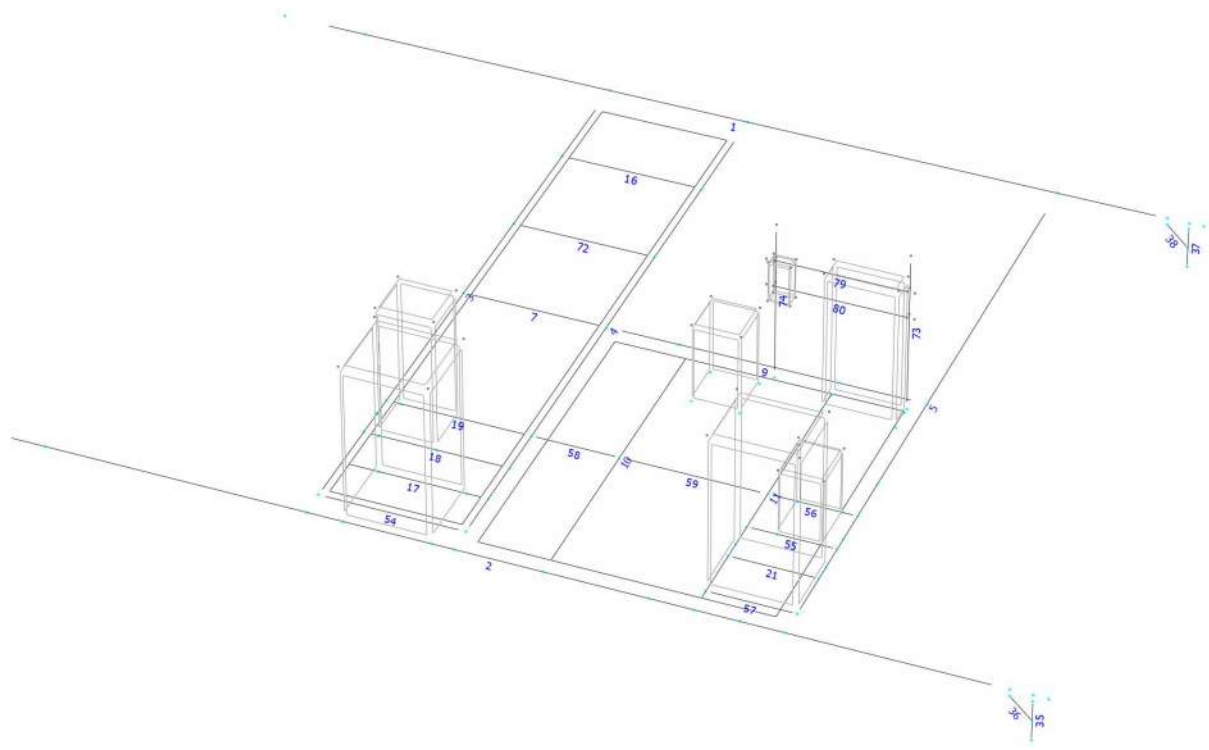
→ Handrail **50** plf



Design status

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





Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

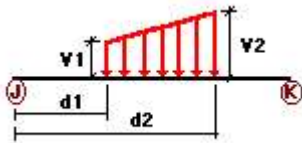
Condition	Description	Comb.	Category
DL	Dead Load	No	DL
LL	Live Load	No	LL
WL1	Wind Load Side 1	No	WIND
WL2	Wind Load Side 2	No	WIND
WL3	Wind Load Side 3	No	WIND
WL4	Wind Load Side 4	No	WIND

Load on nodes

Condition	Node	FX [Kip]	FY [Kip]	FZ [Kip]	MX [Kip*ft]	MY [Kip*ft]	MZ [Kip*ft]
DL	69	0.00	-0.05	0.00	0.00	0.00	0.00
	70	0.00	-0.05	0.00	0.00	0.00	0.00
	71	0.00	-0.05	0.00	0.00	0.00	0.00
	72	0.00	-0.05	0.00	0.00	0.00	0.00
	77	0.00	-0.525	0.00	0.00	0.00	0.00
	78	0.00	-0.525	0.00	0.00	0.00	0.00
	79	0.00	-0.525	0.00	0.00	0.00	0.00
	80	0.00	-0.525	0.00	0.00	0.00	0.00
	85	0.00	-0.50	0.00	0.00	0.00	0.00
	86	0.00	-0.50	0.00	0.00	0.00	0.00
	87	0.00	-0.50	0.00	0.00	0.00	0.00
	88	0.00	-0.50	0.00	0.00	0.00	0.00
	93	0.00	-0.10	0.00	0.00	0.00	0.00
	94	0.00	-0.10	0.00	0.00	0.00	0.00
	95	0.00	-0.10	0.00	0.00	0.00	0.00
	96	0.00	-0.10	0.00	0.00	0.00	0.00
	115	0.00	-0.10	0.00	0.00	0.00	0.00
	116	0.00	-0.06	0.00	0.00	0.00	0.00
	117	0.00	-0.025	0.00	0.00	0.00	0.00
	118	0.00	-0.06	0.00	0.00	0.00	0.00
119	0.00	-0.06	0.00	0.00	0.00	0.00	
120	0.00	-0.025	0.00	0.00	0.00	0.00	
148	0.00	-0.103	0.00	0.00	0.00	0.00	
149	0.00	-0.103	0.00	0.00	0.00	0.00	
150	0.00	-0.103	0.00	0.00	0.00	0.00	
151	0.00	-0.103	0.00	0.00	0.00	0.00	
157	0.00	-0.038	0.00	0.00	0.00	0.00	
165	0.00	-0.038	0.00	0.00	0.00	0.00	
166	0.00	-0.038	0.00	0.00	0.00	0.00	
167	0.00	-0.038	0.00	0.00	0.00	0.00	
171	0.00	-0.007	0.00	0.00	0.00	0.00	

	172	0.00	-0.007	0.00	0.00	0.00	0.00	0.00
	173	0.00	-0.007	0.00	0.00	0.00	0.00	0.00
	174	0.00	-0.007	0.00	0.00	0.00	0.00	0.00
WL1	115	0.00	0.00	0.00	-1.115	0.00	0.00	0.00
	116	0.00	0.00	0.00	-0.259	0.00	0.00	0.00
	117	0.00	0.00	0.00	-0.259	0.00	0.00	0.00
	118	0.00	0.00	0.00	-0.797	0.00	0.00	0.00
	119	0.00	0.00	0.00	-0.797	0.00	0.00	0.00
	120	0.00	0.00	0.00	-0.259	0.00	0.00	0.00
WL2	115	0.00	0.00	0.00	0.00	0.00	0.00	0.259
	116	0.00	0.00	0.00	0.00	0.00	0.00	0.797
	117	0.00	0.00	0.00	0.00	0.00	0.00	0.767
	118	0.00	0.00	0.00	0.00	0.00	0.00	0.259
	120	0.00	0.00	0.00	0.00	0.00	0.00	0.767
WL3	115	0.00	0.00	0.00	1.115	0.00	0.00	0.00
	116	0.00	0.00	0.00	0.259	0.00	0.00	0.00
	117	0.00	0.00	0.00	0.259	0.00	0.00	0.00
	118	0.00	0.00	0.00	0.797	0.00	0.00	0.00
	119	0.00	0.00	0.00	0.797	0.00	0.00	0.00
	120	0.00	0.00	0.00	0.259	0.00	0.00	0.00
WL4	115	0.00	0.00	0.00	0.00	0.00	0.00	-0.259
	116	0.00	0.00	0.00	0.00	0.00	0.00	-0.797
	117	0.00	0.00	0.00	0.00	0.00	0.00	-0.767
	119	0.00	0.00	0.00	0.00	0.00	0.00	-0.259
	120	0.00	0.00	0.00	0.00	0.00	0.00	-0.767

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
DL	1	y	-0.01	-0.01	36.50	Yes	51.50	Yes
	2	y	-0.01	-0.01	33.75	Yes	79.00	Yes
	3	y	-0.048	-0.048	0.00	No	100.00	Yes
	4	y	-0.048	-0.048	0.00	No	50.00	Yes
		y	-0.06	-0.06	50.00	Yes	100.00	Yes
	5	y	-0.033	-0.033	0.00	Yes	50.00	Yes
	9	y	-0.01	-0.01	0.00	No	100.00	Yes
	10	y	-0.06	-0.06	0.00	No	100.00	Yes
	11	y	-0.06	-0.06	0.00	No	100.00	Yes
LL	1	y	-0.05	-0.05	36.50	Yes	51.50	Yes
	2	y	-0.05	-0.05	33.75	Yes	79.00	Yes
	3	y	-0.113	-0.113	0.00	No	100.00	Yes
	4	y	-0.113	-0.113	0.00	No	50.00	Yes
		y	-0.10	-0.10	50.00	Yes	100.00	Yes
	5	y	-0.088	-0.088	0.00	Yes	50.00	Yes
	9	y	-0.05	-0.05	0.00	No	100.00	Yes
	10	y	-0.10	-0.10	0.00	No	100.00	Yes
	11	y	-0.10	-0.10	0.00	No	100.00	Yes

Load on shells

Condition	Shell	Pressure	Temp.
		[Kip/ft ²]	[F]
WL1	6	0.062	0.00
	11	0.062	0.00
	16	0.062	0.00
	24	0.062	0.00
	39	0.062	0.00
	44	0.062	0.00
	49	0.062	0.00
WL2	7	0.062	0.00
	12	0.062	0.00
	17	0.062	0.00
	21	0.062	0.00
	40	0.062	0.00
	45	0.062	0.00
WL3	8	0.062	0.00
	13	0.062	0.00
	18	0.062	0.00
	22	0.062	0.00
	41	0.062	0.00
	46	0.062	0.00
WL4	9	0.062	0.00
	14	0.062	0.00
	19	0.062	0.00
	23	0.062	0.00
	52	0.062	0.00

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
LL	Live Load	No	0.00	0.00	0.00
WL1	Wind Load Side 1	No	0.00	0.00	0.00
WL2	Wind Load Side 2	No	0.00	0.00	0.00
WL3	Wind Load Side 3	No	0.00	0.00	0.00
WL4	Wind Load Side 4	No	0.00	0.00	0.00

Steel Code Check

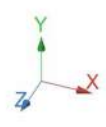
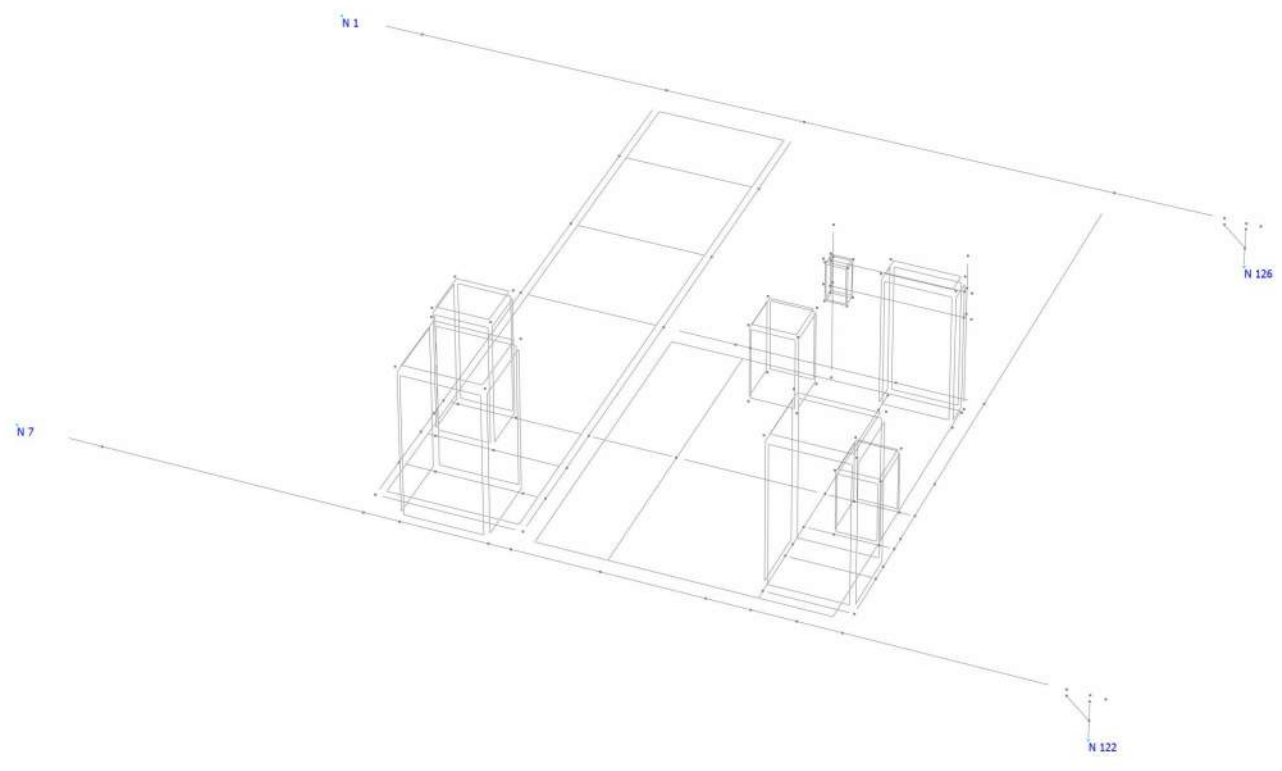
Report: Summary - Group by member

Load conditions to be included in design :

- LC1=1.4DL
- LC2=1.2DL+1.6LL
- LC3=1.2DL+LL
- LC4=1.2DL+0.5WL1
- LC5=1.2DL+0.5WL2
- LC6=1.2DL+0.5WL3
- LC7=1.2DL+0.5WL4
- LC8=1.2DL+LL+WL1
- LC9=1.2DL+LL+WL2
- LC10=1.2DL+LL+WL3
- LC11=1.2DL+LL+WL4
- LC12=1.2DL+LL
- LC13=0.9DL+WL1
- LC14=0.9DL+WL2
- LC15=0.9DL+WL3
- LC16=0.9DL+WL4
- LC17=0.9DL

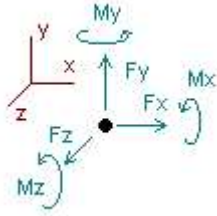
Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	C 6X8.2	7	LC8 at 50.00%	0.01	OK	
		16	LC10 at 0.00%	0.02	OK	
		17	LC8 at 75.00%	0.20	OK	
		18	LC11 at 48.96%	0.08	OK	
		19	LC11 at 100.00%	0.09	OK	
		21	LC10 at 50.00%	0.00	OK	
		54	LC10 at 75.00%	0.17	OK	
		55	LC9 at 66.67%	0.06	OK	
		56	LC9 at 0.00%	0.11	OK	
		57	LC2 at 50.00%	0.01	OK	
		58	LC10 at 50.00%	0.01	OK	
		59	LC10 at 50.00%	0.01	OK	
		72	LC10 at 46.88%	0.01	OK	
	HSS_SQR 4X4X1_4	35	LC2 at 50.00%	0.74	OK	
		37	LC8 at 50.00%	0.34	OK	
	L 3X3X5_16	36	LC2 at 37.50%	0.66	OK	
		38	LC2 at 37.50%	0.30	OK	
	P1000 Unistrut	79	LC10 at 44.64%	0.23	OK	Eq. H1.2-1
		80	LC10 at 44.64%	0.31	OK	Eq. H1.2-1
	PIPE 3x0.216	73	LC11 at 0.00%	0.01	OK	
		74	LC10 at 100.00%	0.04	OK	
	W 12X26	3	LC10 at 100.00%	0.63	OK	
		4	LC2 at 50.00%	0.26	OK	
		5	LC2 at 49.63%	0.24	OK	
	W 18X55	1	LC8 at 35.94%	0.55	With warnings	
		2	LC10 at 32.74%	0.84	With warnings	

W 8X10	9	LC2 at 50.00%	0.49	OK
	10	LC2 at 48.44%	0.16	OK
	11	LC10 at 12.11%	0.15	OK



Analysis result

Reactions



Direction of positive forces and moments

Node	Forces [Kip]			Moments [Kip*ft]		
	FX	FY	FZ	MX	MY	MZ
Condition LC1=1.4DL						
1	3.62281	3.34044	-0.01328	0.00000	0.00000	0.00000
7	9.62586	6.70527	-0.01815	0.00000	0.00000	0.00000
122	-9.58729	9.30256	-0.01850	0.00000	0.00000	0.00000
126	-3.66138	4.63306	0.04993	0.00000	0.00000	0.00000
SUM	0.00000	23.98133	0.00000	0.00000	0.00000	0.00000
Condition LC2=1.2DL+1.6LL						
1	6.54674	5.88230	-0.02563	0.00000	0.00000	0.00000
7	14.93830	10.16794	-0.03272	0.00000	0.00000	0.00000
122	-14.86535	13.95975	-0.02577	0.00000	0.00000	0.00000
126	-6.61968	7.68373	0.08412	0.00000	0.00000	0.00000
SUM	0.00000	37.69373	0.00000	0.00000	0.00000	0.00000
Condition LC3=1.2DL+LL						
1	5.25808	4.75022	-0.01911	0.00000	0.00000	0.00000
7	12.42075	8.51063	-0.02530	0.00000	0.00000	0.00000
122	-12.36587	11.71438	-0.02371	0.00000	0.00000	0.00000
126	-5.31296	6.29164	0.06811	0.00000	0.00000	0.00000
SUM	0.00000	31.26687	0.00000	0.00000	0.00000	0.00000
Condition LC4=1.2DL+0.5WL1						
1	4.58146	2.96774	0.87844	0.00000	0.00000	0.00000
7	6.67966	5.62490	0.86889	0.00000	0.00000	0.00000
122	-7.98007	7.74324	0.00467	0.00000	0.00000	0.00000
126	-3.28105	4.21954	0.39346	0.00000	0.00000	0.00000
SUM	0.00000	20.55543	2.14546	0.00000	0.00000	0.00000
Condition LC5=1.2DL+0.5WL2						
1	3.40367	2.88136	-0.00939	0.00000	0.00000	0.00000
7	9.62882	5.89500	-0.01662	0.00000	0.00000	0.00000
122	-8.18663	7.82589	-0.01582	0.00000	0.00000	0.00000
126	-3.13677	3.95318	0.04184	0.00000	0.00000	0.00000
SUM	1.70910	20.55543	0.00000	0.00000	0.00000	0.00000

Condition LC6=1.2DL+0.5WL3						
1	1.62945	2.75847	-0.91874	0.00000	0.00000	0.00000
7	9.81017	5.87069	-0.87960	0.00000	0.00000	0.00000
122	-8.44526	8.20347	-0.02153	0.00000	0.00000	0.00000
126	-2.99435	3.72279	-0.32559	0.00000	0.00000	0.00000
SUM	0.00000	20.55543	-2.14546	0.00000	0.00000	0.00000
Condition LC7=1.2DL+0.5WL4						
1	2.80899	2.84517	-0.01218	0.00000	0.00000	0.00000
7	6.86204	5.60023	-0.01347	0.00000	0.00000	0.00000
122	-8.24130	8.12070	-0.01763	0.00000	0.00000	0.00000
126	-3.13883	3.98933	0.04327	0.00000	0.00000	0.00000
SUM	-1.70910	20.55543	0.00000	0.00000	0.00000	0.00000
Condition LC8=1.2DL+LL+WL1						
1	8.77438	4.95663	1.94612	0.00000	0.00000	0.00000
7	8.72532	8.26715	1.95618	0.00000	0.00000	0.00000
122	-11.90437	11.24095	-0.26924	0.00000	0.00000	0.00000
126	-5.59533	6.80214	0.65786	0.00000	0.00000	0.00000
SUM	0.00000	31.26687	4.29092	0.00000	0.00000	0.00000
Condition LC9=1.2DL+LL+WL2						
1	5.85368	4.78617	-0.01618	0.00000	0.00000	0.00000
7	15.19359	8.80303	-0.02808	0.00000	0.00000	0.00000
122	-12.31788	11.42201	-0.02229	0.00000	0.00000	0.00000
126	-5.31120	6.25565	0.06655	0.00000	0.00000	0.00000
SUM	3.41819	31.26687	0.00000	0.00000	0.00000	0.00000
Condition LC10=1.2DL+LL+WL3						
1	1.72808	4.54234	-2.08801	0.00000	0.00000	0.00000
7	16.12839	8.75506	-1.90377	0.00000	0.00000	0.00000
122	-12.82660	12.18895	0.30474	0.00000	0.00000	0.00000
126	-5.02987	5.78052	-0.60389	0.00000	0.00000	0.00000
SUM	0.00000	31.26687	-4.29092	0.00000	0.00000	0.00000
Condition LC11=1.2DL+LL+WL4						
1	4.66241	4.71426	-0.02211	0.00000	0.00000	0.00000
7	9.65314	8.21782	-0.02250	0.00000	0.00000	0.00000
122	-12.41898	12.00713	-0.02505	0.00000	0.00000	0.00000
126	-5.31475	6.32766	0.06966	0.00000	0.00000	0.00000
SUM	-3.41819	31.26687	0.00000	0.00000	0.00000	0.00000
Condition LC12=1.2DL+LL						
1	5.25808	4.75022	-0.01911	0.00000	0.00000	0.00000
7	12.42075	8.51063	-0.02530	0.00000	0.00000	0.00000
122	-12.36587	11.71438	-0.02371	0.00000	0.00000	0.00000
126	-5.31296	6.29164	0.06811	0.00000	0.00000	0.00000
SUM	0.00000	31.26687	0.00000	0.00000	0.00000	0.00000

Condition **LC13=0.9DL+WL1**

1	5.05392	2.35638	1.66856	0.00000	0.00000	0.00000
7	3.27375	4.06550	1.70221	0.00000	0.00000	0.00000
122	-5.68706	5.52533	0.17512	0.00000	0.00000	0.00000
126	-2.64061	3.46937	0.74503	0.00000	0.00000	0.00000

SUM 0.00000 15.41657 4.29092 0.00000 0.00000 0.00000

Condition **LC14=0.9DL+WL2**

1	2.92505	2.18373	-0.00478	0.00000	0.00000	0.00000
7	8.94363	4.60677	-0.01408	0.00000	0.00000	0.00000
122	-6.09989	5.68375	-0.01141	0.00000	0.00000	0.00000
126	-2.35060	2.94231	0.03026	0.00000	0.00000	0.00000

SUM 3.41819 15.41657 0.00000 0.00000 0.00000 0.00000

Condition **LC15=0.9DL+WL3**

1	-0.39711	1.93738	-1.74843	0.00000	0.00000	0.00000
7	9.08194	4.55757	-1.65516	0.00000	0.00000	0.00000
122	-6.62069	6.43469	-0.14167	0.00000	0.00000	0.00000
126	-2.06414	2.48694	-0.74566	0.00000	0.00000	0.00000

SUM 0.00000 15.41657 -4.29092 0.00000 0.00000 0.00000

Condition **LC16=0.9DL+WL4**

1	1.73646	2.11122	-0.01020	0.00000	0.00000	0.00000
7	3.41346	4.01507	-0.00745	0.00000	0.00000	0.00000
122	-6.21318	6.27555	-0.01540	0.00000	0.00000	0.00000
126	-2.35492	3.01472	0.03305	0.00000	0.00000	0.00000

SUM -3.41819 15.41657 0.00000 0.00000 0.00000 0.00000

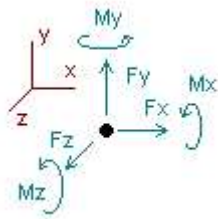
Condition **LC17=0.9DL**

1	2.33077	2.14748	-0.00746	0.00000	0.00000	0.00000
7	6.17598	4.31112	-0.01078	0.00000	0.00000	0.00000
122	-6.15400	5.97947	-0.01343	0.00000	0.00000	0.00000
126	-2.35275	2.97850	0.03166	0.00000	0.00000	0.00000

SUM 0.00000 15.41657 0.00000 0.00000 0.00000 0.00000

Envelope for nodal reactions

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



Direction of positive forces and moments

Envelope of nodal reactions for :

- LC1=1.4DL
- LC2=1.2DL+1.6LL
- LC3=1.2DL+LL
- LC4=1.2DL+0.5WL1
- LC5=1.2DL+0.5WL2
- LC6=1.2DL+0.5WL3
- LC7=1.2DL+0.5WL4
- LC8=1.2DL+LL+WL1
- LC9=1.2DL+LL+WL2
- LC10=1.2DL+LL+WL3
- LC11=1.2DL+LL+WL4
- LC12=1.2DL+LL
- LC13=0.9DL+WL1
- LC14=0.9DL+WL2
- LC15=0.9DL+WL3
- LC16=0.9DL+WL4
- LC17=0.9DL

Node		Forces						Moments					
		Fx [Kip]	lc	Fy [Kip]	lc	Fz [Kip]	lc	Mx [Kip*ft]	lc	My [Kip*ft]	lc	Mz [Kip*ft]	lc
1	Max	8.774	LC8	5.882	LC2	1.946	LC8	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-0.397	LC15	1.937	LC15	-2.088	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
7	Max	16.128	LC10	10.168	LC2	1.956	LC8	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	3.274	LC13	4.015	LC16	-1.904	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
122	Max	-5.687	LC13	13.960	LC2	0.305	LC10	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-14.865	LC2	5.525	LC13	-0.269	LC8	0.00000	LC1	0.00000	LC1	0.00000	LC1
126	Max	-2.064	LC15	7.684	LC2	0.745	LC13	0.00000	LC1	0.00000	LC1	0.00000	LC1
	Min	-6.620	LC2	2.487	LC15	-0.746	LC15	0.00000	LC1	0.00000	LC1	0.00000	LC1

Date: 9/19/2023
Project Name: CAMBRIDGE MOUNT AUBURN STREET
Project No.: MA2850
Designed By: KM Checked By: MSC



CHECK CONNECTION CAPACITY (Worst Case) → EXISTING PLATFORM ANCHORS

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

Bolt Type = A325 3/4" Thru Bolt

Allowable Tensile Load =

$F_{Tall} = 19880$ lbs.

Allowable Shear Load =

$F_{vall} = 11928$ lbs.

TENSILE FORCES

Reaction $F = 16128$ lbs. (See Bentley Output)

SHEAR FORCES

Reactions in Z direction: 1956 lbs. (See Bentley Output)

Reactions in Y direction: 10168 lbs. (See Bentley Output)

Resultant: 10354 lbs.

No. of Supports = 1

No. of Bolts / Support = 8

Tension Design Load /Bolts =

$f_t = 2016.00$ lbs. < 19880 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

$f_v = 1294.30$ lbs. < 11928 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

f_t / F_T	+	f_v / F_v	\leq	1.0
0.101	+	0.109	=	0.210 < 1.0 Therefore, OK !

Date: 10/8/2019
Project Name: CAMBRIDGE MOUNT AUBURN STREET
Project No.: MA2850
Designed By: KM **Checked By:** MSC



CHECK EPOXY ANCHOR CONNECTION CAPACITY → EXISTING PLATFORM ANCHORS

Reference: Hilti North American Product Technical Guide, 19th Edition

Epoxy Type = HIT-HY150
Anchor Diameter = 3/4 in. (HAS-E Threaded Rod)
Embedment Depth = 4 in.

	Allowable Loads (lbs)	Spacing Reduct. Factor	Edge Reduct. Factor	Conc. Thickness Reduct. Factor	Reduced Loads (lbs)
Tensile Load	3925	0.91	0.87	1.00	3107.42
Shear Load	7680	0.91	0.71	1.00	4962.05

TENSILE FORCES

Reaction **F =** 0 lbs. (Gravity Load Supported by Building Column)

SHEAR FORCES

Reactions in X direction: 14865 lbs. (See Bentley Output)
Reactions in Z direction: 305 lbs. (See Bentley Output)

Resultant: 14868 lbs.

No. of Supports = 1
No. of Anchors / Support = 4

Tension Design Load / Anchor =

$$f_t = 0.00 \text{ lbs.} < 3107.4 \text{ lbs.} \text{ Therefore, OK!}$$

Shear Design Load / Anchor =

$$f_v = 3717.03 \text{ lbs.} < 4962 \text{ lbs.} \text{ Therefore, OK!}$$

CHECK COMBINED TENSION AND SHEAR

$$\begin{array}{rclclcl}
 f_t / F_T & + & f_v / F_v & \leq & 1.0 & \\
 0.000 & + & 0.749 & = & 0.749 & < 1.0 \text{ Therefore, OK!}
 \end{array}$$

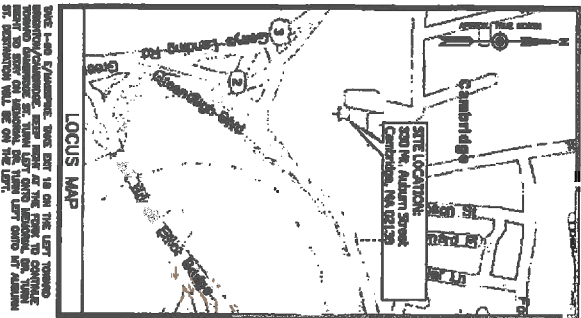
Reference Documents

RED LINE DRAWING
 INDUSTRIAL COMMUNICATIONS, LLC
 DATE: _____ BY: _____



at&t
 Mobility

MT. AUBURN HOSPITAL
SITE NO.: MA2850
330 MT. AUBURN STREET
CAMBRIDGE, MA 02138



CONSULTANT TEAM

DESIGNER:
 200 VINTAGE STREET
 BOSTON, MA 02116
 PHONE: (617) 552-3100
 FAX: (617) 552-3104
 CONTACT: ROYALMAH WINTER, P.E.

SITE ARCHITECT:
 200 VINTAGE STREET
 BOSTON, MA 02116
 PHONE: (617) 552-3100
 FAX: (617) 552-3104
 CONTACT: TONY BLAKE

CONSULTANTS:
 200 VINTAGE STREET
 BOSTON, MA 02116
 PHONE: (617) 552-3100
 FAX: (617) 552-3104
 CONTACT: TONY BLAKE

PROJECT SUMMARY

SITE NAME:
 MT. AUBURN HOSPITAL
 330 MT. AUBURN STREET
 CAMBRIDGE, MA 02138

PROPERTY OWNER:
 MT. AUBURN HOSPITAL
 330 MT. AUBURN STREET
 CAMBRIDGE, MA 02138

ARCHITECT/ENGINEER:
 ROYALMAH WINTER, P.E.
 200 VINTAGE STREET
 BOSTON, MA 02116

ELECTRIC UTILITIES:
 (617) 552-3100

TELEPHONE UTILITIES:
 (617) 552-3100

CONTRACTOR:
 LANTIERO, DE LUCA & SULLIVAN
 1000 WASHINGTON ST., SUITE 100
 BOSTON, MA 02118

PROJECT DIRECTORY

SITE ADDRESS:
 330 MT. AUBURN STREET
 CAMBRIDGE, MA 02138

PROJECT DESCRIPTION:
 THE PROJECT WILL CONSIST OF A PROPOSED RE-ENTRY OF THE EXISTING TELEPHONE AND CABLE NETWORK TO THE HOSPITAL BUILDING. THE PROJECT WILL ALSO INCLUDE THE INSTALLATION OF NEW TELEPHONE AND CABLE RACKS AND THE INSTALLATION OF NEW TELEPHONE AND CABLE RACKS.

PROJECT DESCRIPTION

SIT NO.	DATE
0-1	DATE
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99-1	DATE
100-1	DATE

SHEET INDEX

SIT. NO.	DESCRIPTION
0-1	GENERAL NOTES
1-1	NEW RACK
2-1	NEW RACK
3-1	NEW RACK
4-1	NEW RACK
5-1	NEW RACK
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97-1	NEW RACK
98-1	NEW RACK
99-1	NEW RACK
100-1	NEW RACK

CONSTRUCTION DRAWINGS

01/07/13	FOR SUBMITTAL
01/07/13	FOR COMMENT
01/07/13	FOR COMMENT
01/07/13	FOR COMMENT

541
 27 NORTHWEST BONE
 SUITE 13 & 14
 FRAMINGHAM, MA 01701

MT. AUBURN HOSPITAL SITE NO.: MA2850

Dowberry
 Dowberry Engineers Inc.
 200 VINTAGE STREET
 BOSTON, MA 02116
 PHONE: (617) 552-3100
 FAX: (617) 552-3104

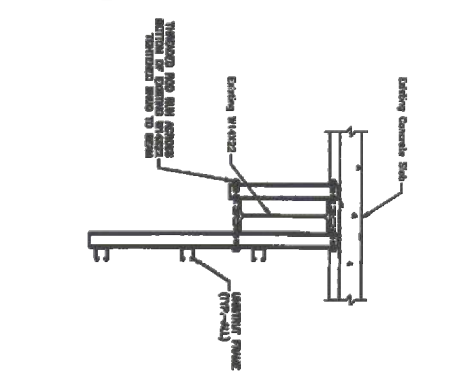
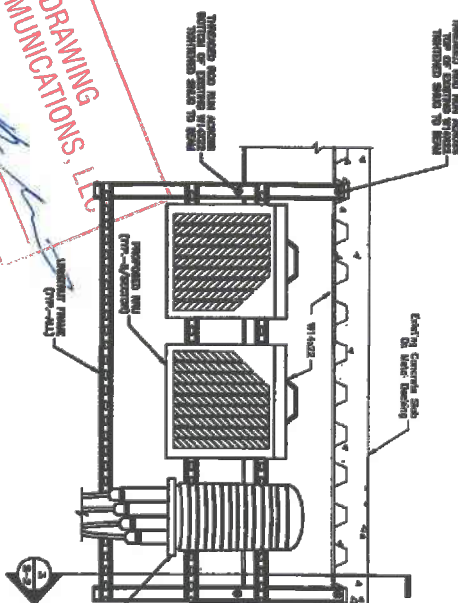
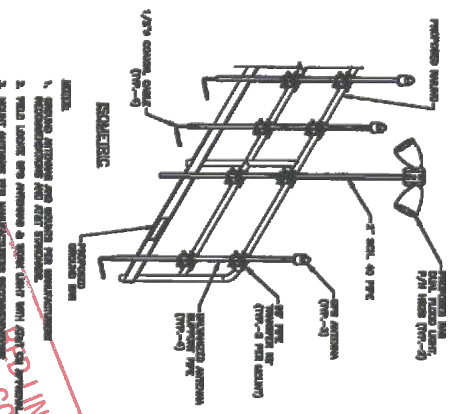
RECEIVED
 CAMBRIDGE
 01/07/13

330 MT. AUBURN ST
 CAMBRIDGE, MA 02138

TITLE PAGE

SHEET NUMBER

T-1



DATE: _____ BY: _____
 INDUSTRIAL COMMUNICATIONS, LLC

RF SCHEDULE & ROW

SECTION	ANTENNA	AMOUNT (PER SECTION)	AND CENTER	ORANGE	TYPE	INDICATED ELECTRICAL REQUIREMENT	MIN	PER CHANNEL	FINISH	DC WAYS	SLABS
1A	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS				
1B	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1C	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1D	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1E	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1F	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1G	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1H	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1I	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1J	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1K	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1L	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1M	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1N	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1O	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1P	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1Q	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1R	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1S	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1T	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1U	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1V	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1W	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1X	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1Y	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)
1Z	AA1-A-02-1-1-02-021-027	02	02'-0"	-	1P		02 00A LOTS	(1) LINE (CON-5)	(1) THINB (CON-5)	(3) 25 GALLES (CON-5)	04 00A (CON-5)

RF SCHEDULE BASED ON ROW SPACING PER 5/12/2015. CONSTRUCTION TO VERIFY ROW, SPACING AND DRIFT CLEARING PER TO CONSTRUCTION.

RF SCHEDULE
SCALE: N/A

RF SCHEDULE
SCALE: N/A

RF SCHEDULE
SCALE: N/A

A-5



500 OGDENHURST ROAD
SHELTON, NH 03077

27 NORTHWEST CORNER
SHELTON, NH 03077

**MT. AUBURN
HOSPITAL SITE NO.:
MASS0**

CONSTRUCTION DRAWINGS

0/0/17/13	FOR SUBMITTAL
0/0/0/17/13	FOR CONSENT
0/0/17/13	FOR CONSENT
A/07/12/13	FOR CONSENT

Dewberry.

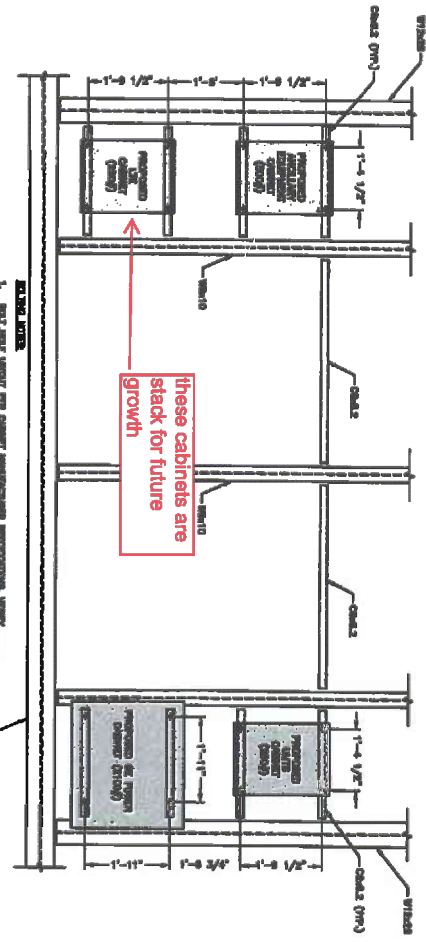
Dewberry Engineers Inc.
200 WATER STREET
SHELTON, NH 03077
TEL: 603.883.1100
WWW.DEBERRY.COM



OWNER: MT. AUBURN HOSPITAL
PROJECT: HOSPITAL RENOVATION
JOB NUMBER: 00000000
SHEET NUMBER: 00000000
SHEET TITLE: CONSTRUCTION DETAILS II

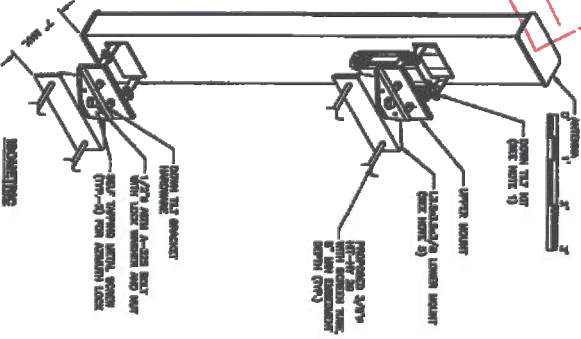
330 MT. AUBURN ST
CAMBRIDGE, MA 02138

RED LINE DRAWING
 INDUSTRIAL COMMUNICATIONS, LLC
 BY _____
 DATE _____

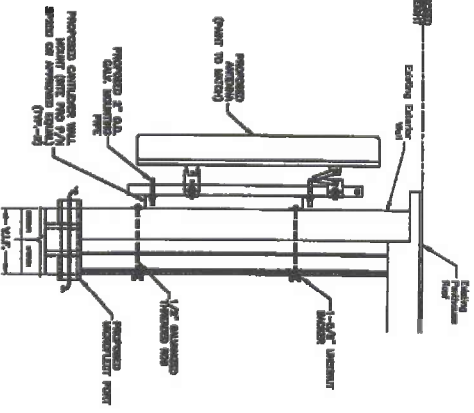


- NOTES:**
1. ALL JOINTS SHALL BE PROTECTED AGAINST CORROSION BY AN ANTI-OXIDANT COMPOUND, VENTED FROM THE SYSTEM.
 2. ALL HOLES SHALL BE SAFELY SEALED WITH 1/2\"/>

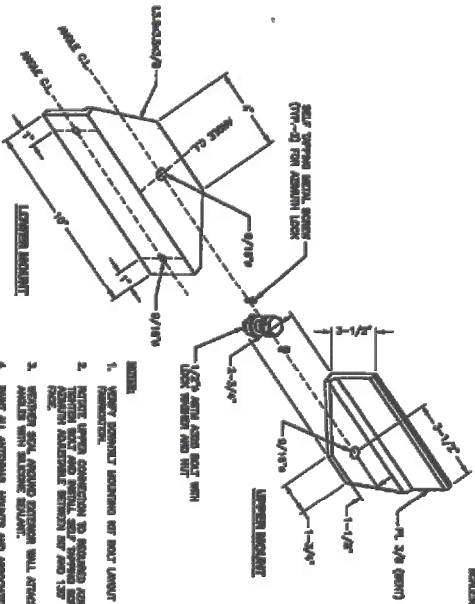
1
 CABLE RACK
 ELEVATION



3
 ISOMETRIC



2
 ALPHA SECTOR ANTENNA
 MOUNTING DETAIL



3
 LOW PROFILE FACADE MOUNT
 (BETA/GAMMA SECTION)
 ELEVATION

- NOTES:**
1. VERIFY EXISTING MOUNTING OF RACK LAYOUT PRIOR TO PROCEEDING.
 2. VERIFY WIRING CONNECTIONS TO ANTENNA COMPONENTS. ANTENNA MOUNTING SHALL BE PERFORMED IN ACCORDANCE WITH THE ANTENNA MANUFACTURER'S INSTRUCTIONS.
 3. VERIFY WIRING ROUTING THROUGH WALL ATTACHMENT.
 4. VERIFY ALL ANTENNA, MOUNTS AND ASSOCIATED EQUIPMENT TO MATCH QUOTE'S SPECIFIC.
 5. ALL CABINETS TO BE HEAVY GAUGE AND MOUNTED TO MATCH THE BUILDING PROFILE.



27 NORTHWESTER DRIVE
 SALEM, NH 03079

**MT. AUBURN
 HOSPITAL SITE NO.:
 MA8550**

CONSTRUCTION DRAWINGS

01/07/13/13 FOR SIGHTING
01/07/02/13/13 FOR CON. SET
01/07/17/13 FOR COMMENT
01/07/19/13 FOR COMMENT

Dewberry
 Dewberry Engineers Inc.
 1000 RIVER STREET
 FARMINGTON, NH 03825
 TEL: 603.853.4400
 FAX: 603.853.4401
 WWW.DEBERRY.COM

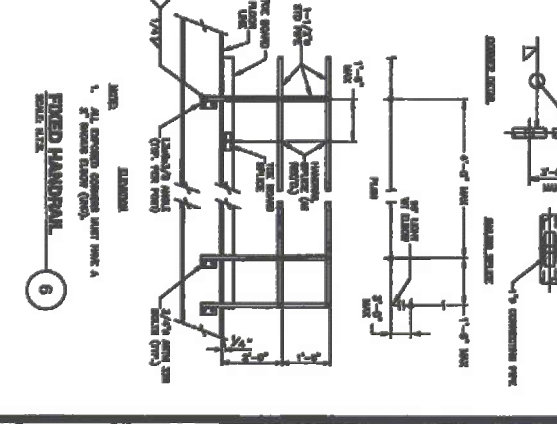
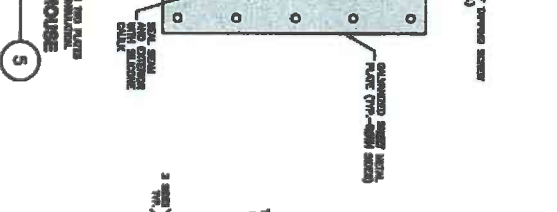
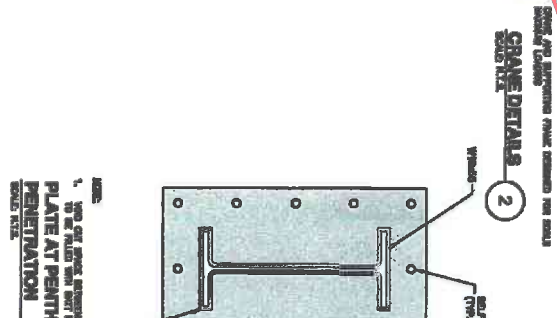
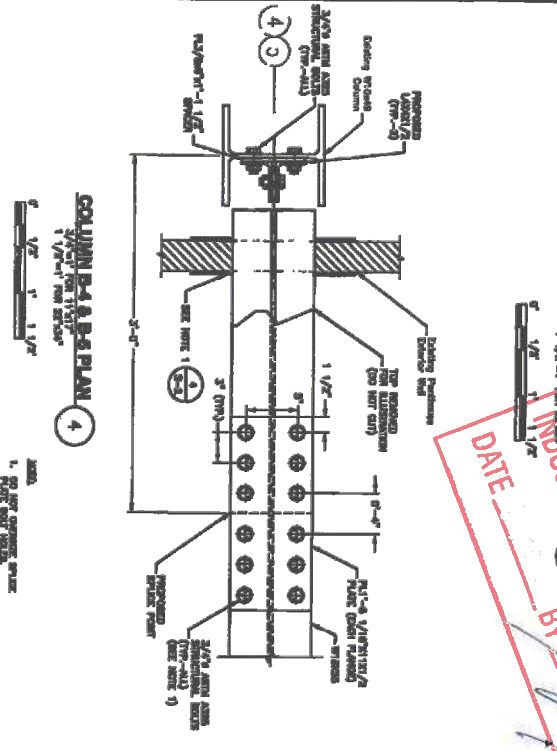
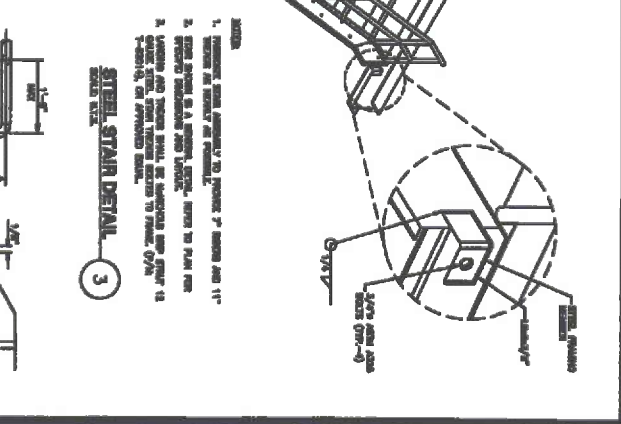
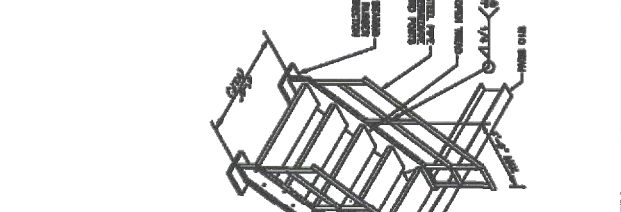
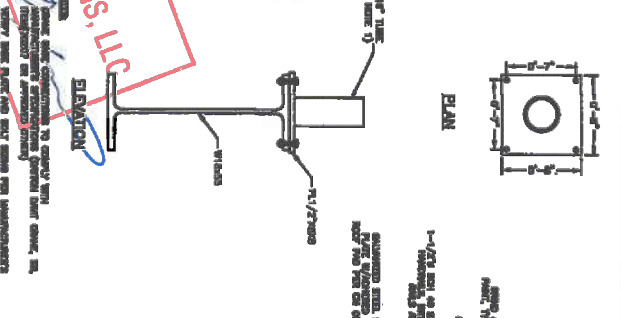
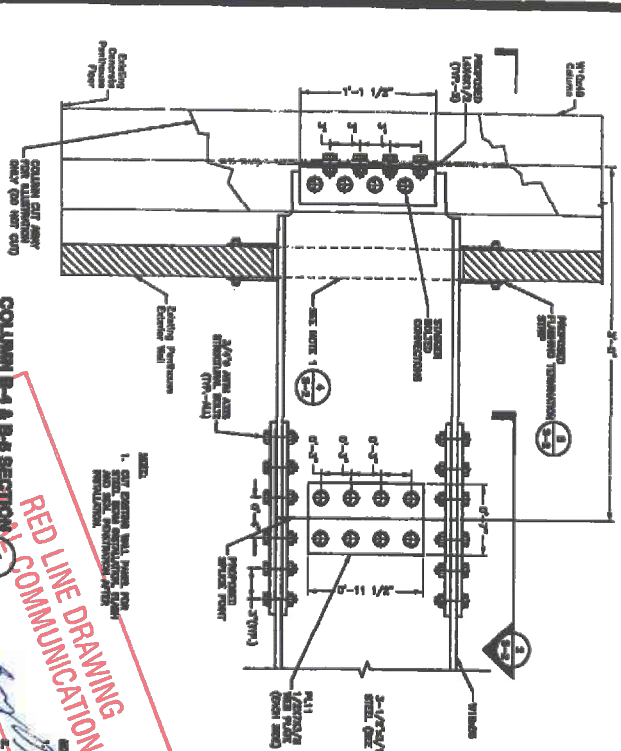


DRAWN BY:	SK
CHECKED BY:	SK
PROJECT NUMBER:	MA8550
JOB NUMBER:	27000000
REV. NUMBER:	


330 MT. AUBURN ST
 CAMBRIDGE, MA 02136

CABINET LAYOUT AND
 ANTENNA MOUNTING DETAIL

SHEET NUMBER



RED LINE DRAWING
 BY INDUSTRIES, LLC
 DATE




500 COOPERATE ROAD
SUITE 13 & 14
FRANKLIN, MA 01701

27 NORTHWESTER DRIVE
SHELTON, NH 03076

**MT. AUBURN
HOSPITAL SITE NO.:**
MA2880

CONSTRUCTION DRAWINGS

01/07/13	FOR SUBMITTAL
01/07/13	FOR COMMENT
07/15/13	FOR COMMENT
07/15/13	FOR COMMENT



Dewberry
Dewberry Engineers Inc.
1000 WASHINGTON STREET
SUITE 200
FRANKLIN, MA 01701

**330 MT. AUBURN ST
CAMBRIDGE, MA 02138**

PROJECT NAME: _____

DATE: _____

PROJECT NUMBER: _____

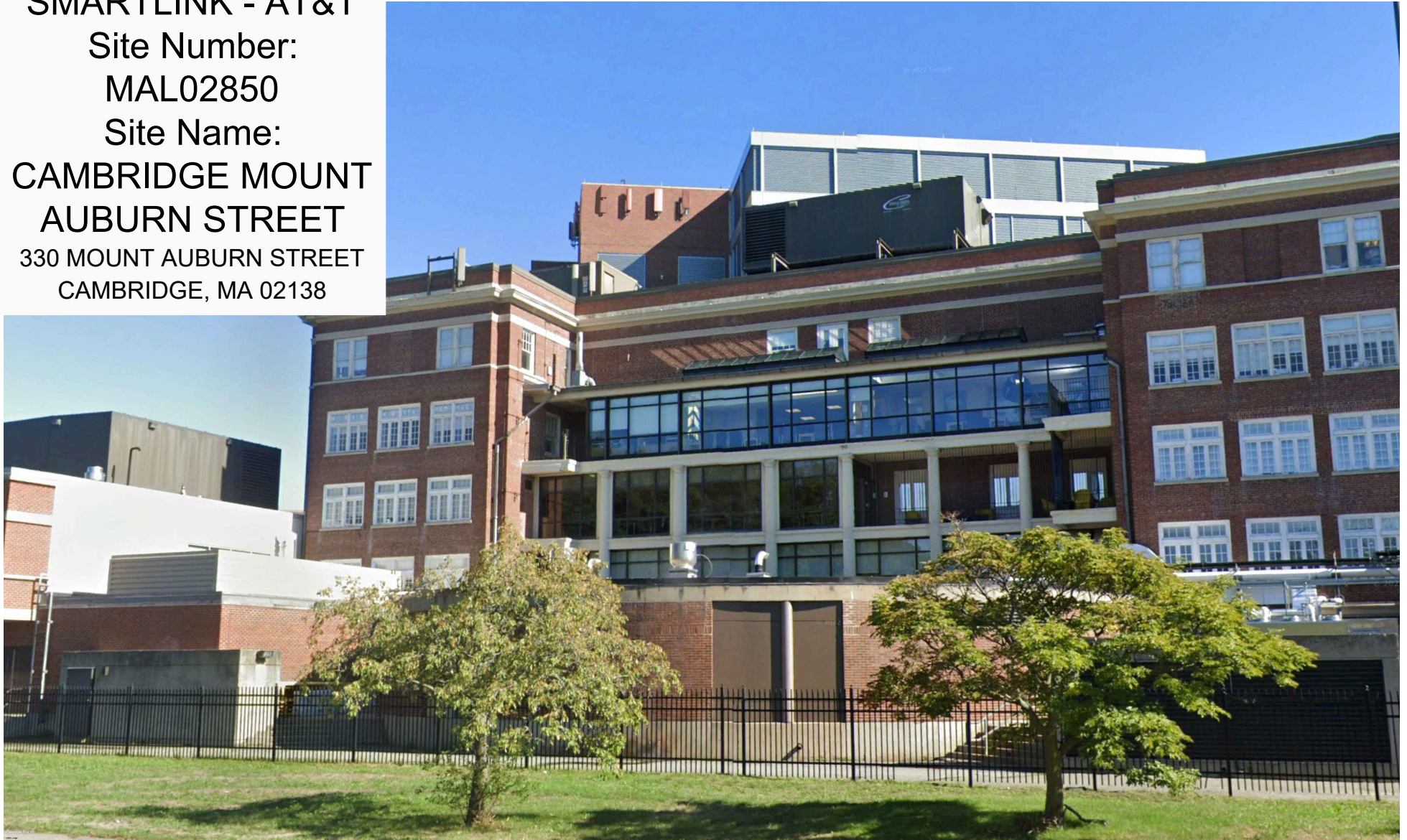
DATE: _____

PROJECT NUMBER: _____

Prepared For:
SMARTLINK - AT&T

Site Number:
MAL02850

Site Name:
CAMBRIDGE MOUNT
AUBURN STREET
330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138



SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138



SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

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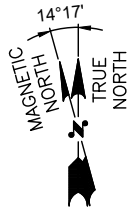
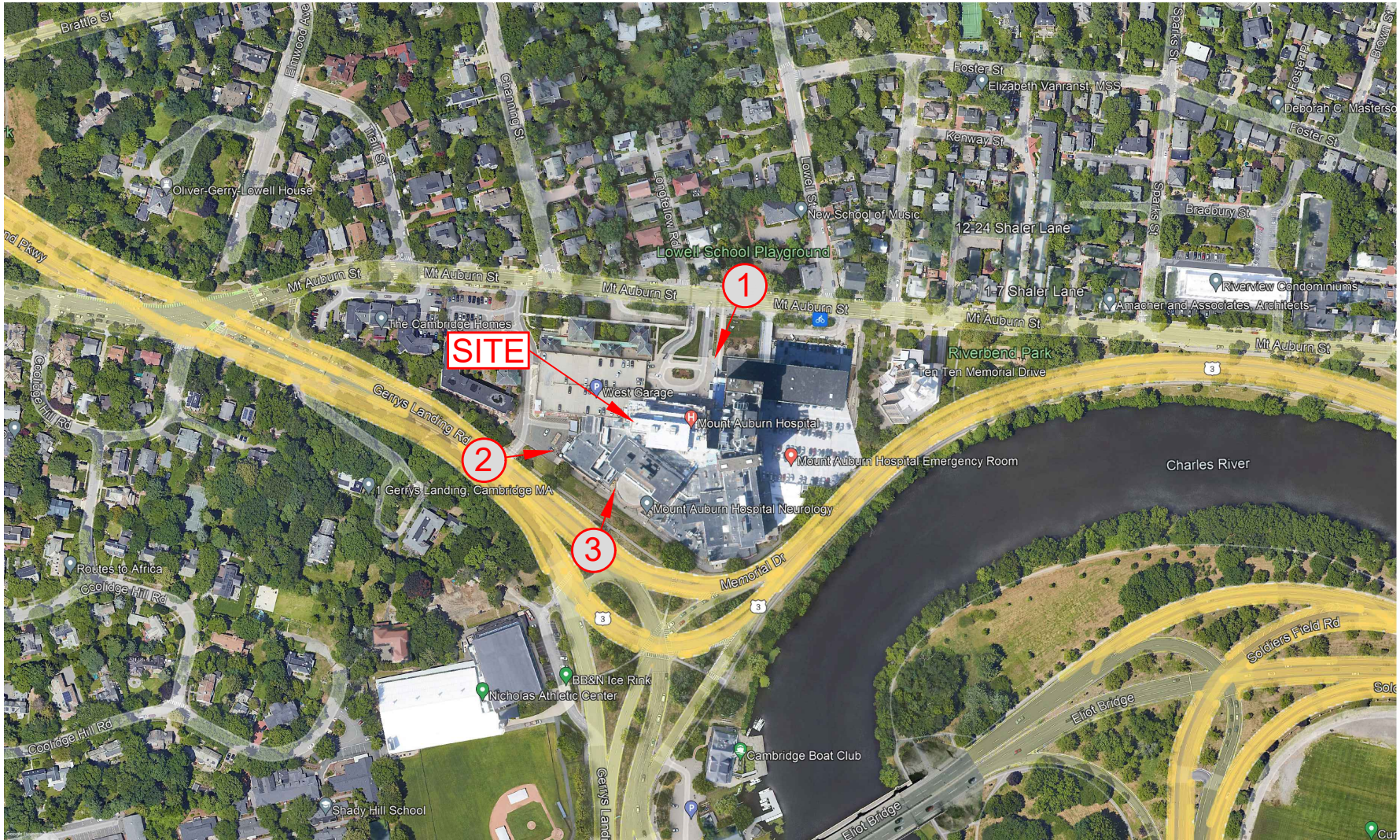


PHOTO LOCATION

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138



550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701



1997 ANNAPOLIS EXCHANGE PKWY
 SUITE 200
 ANNAPOLIS, MD 21401



TEP OP CO, LLC.
 45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553

SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
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SCALE: N.T.S.

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EXISTING CONDITIONS

LOCATION # 1

DATE OF PHOTO: 09/02/2022



EXISTING AT&T ANTENNA (800-10964)
@ POS. 3 (TYP. OF 1 PER ALPHA &
GAMMA SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA
(DMP65R-BU4DA) @ POS. 4
(TYP. OF 1 PER ALPHA & GAMMA
SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
@ POS. 2 (TYP. OF 1 PER ALPHA &
GAMMA SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
@ POS. 1 (TYP. OF 1 PER SECTOR,
TOTAL OF 3) **(TO BE REMOVED)**

VIEW SOUTH FROM MT. AUBURN STREET

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

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SUITE 200
ANNAPOLIS, MD 21401

TEP OP/CO, LLC.
45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
TEL: (978) 557-5553

SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

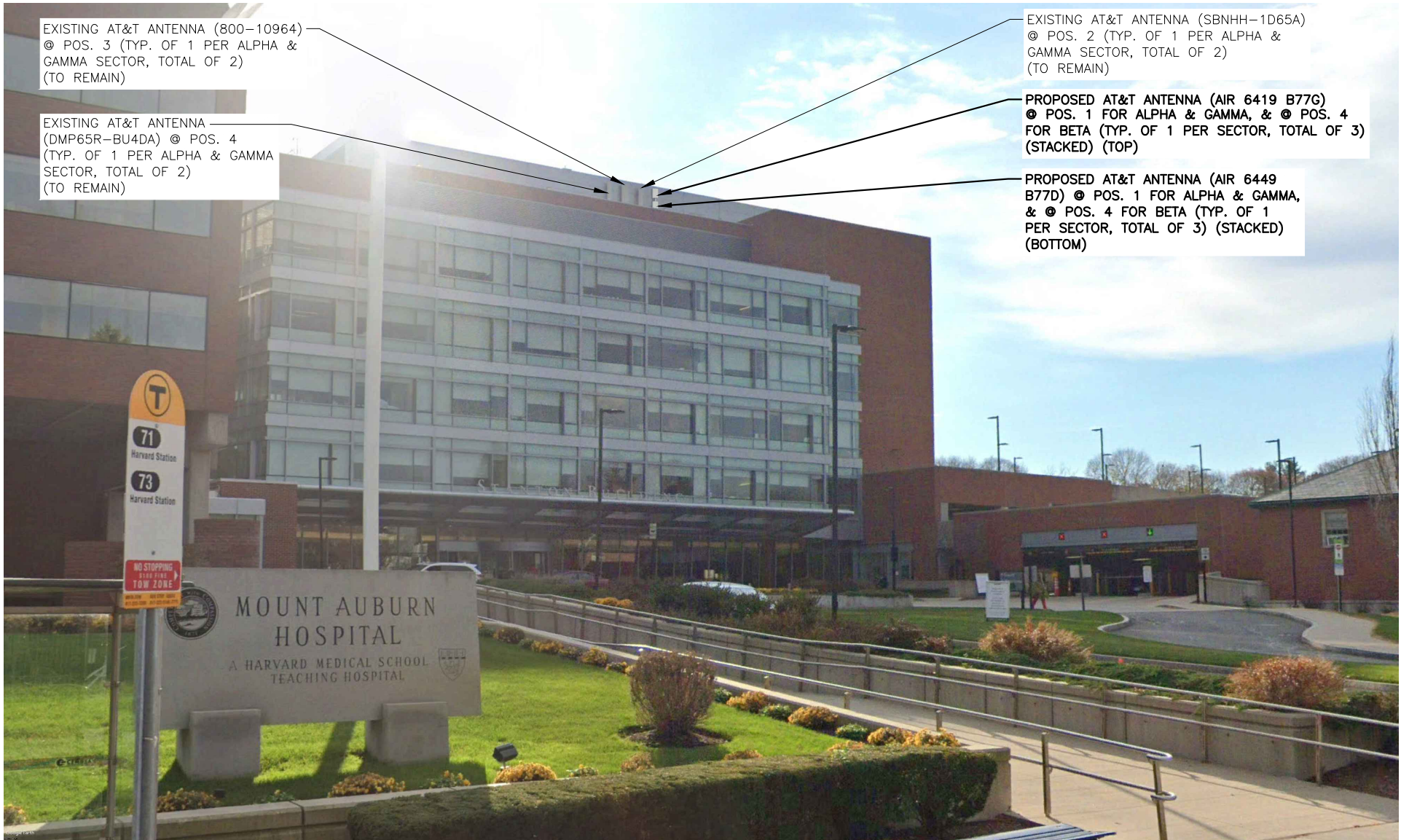
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BASED UPON THE BEST INFORMATION FOR
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LOCATIONS AVAILABLE TO DATE.

PAGE 3 OF 8

PROPOSED CONDITIONS

LOCATION # 1

DATE OF PHOTO: 09/02/2022



EXISTING AT&T ANTENNA (800-10964)
 @ POS. 3 (TYP. OF 1 PER ALPHA &
 GAMMA SECTOR, TOTAL OF 2)
 (TO REMAIN)

EXISTING AT&T ANTENNA
 (DMP65R-BU4DA) @ POS. 4
 (TYP. OF 1 PER ALPHA & GAMMA
 SECTOR, TOTAL OF 2)
 (TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
 @ POS. 2 (TYP. OF 1 PER ALPHA &
 GAMMA SECTOR, TOTAL OF 2)
 (TO REMAIN)

PROPOSED AT&T ANTENNA (AIR 6419 B77G)
 @ POS. 1 FOR ALPHA & GAMMA, & @ POS. 4
 FOR BETA (TYP. OF 1 PER SECTOR, TOTAL OF 3)
 (STACKED) (TOP)

PROPOSED AT&T ANTENNA (AIR 6449
 B77D) @ POS. 1 FOR ALPHA & GAMMA,
 & @ POS. 4 FOR BETA (TYP. OF 1
 PER SECTOR, TOTAL OF 3) (STACKED)
 (BOTTOM)



VIEW SOUTH FROM MT. AUBURN STREET

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
 AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138



550 COCHITUATE ROAD
 FRAMINGHAM, MA 01701



1997 ANNAPOLIS EXCHANGE PKWY
 SUITE 200
 ANNAPOLIS, MD 21401



TEP OP/CO, LLC.
 45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553

SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

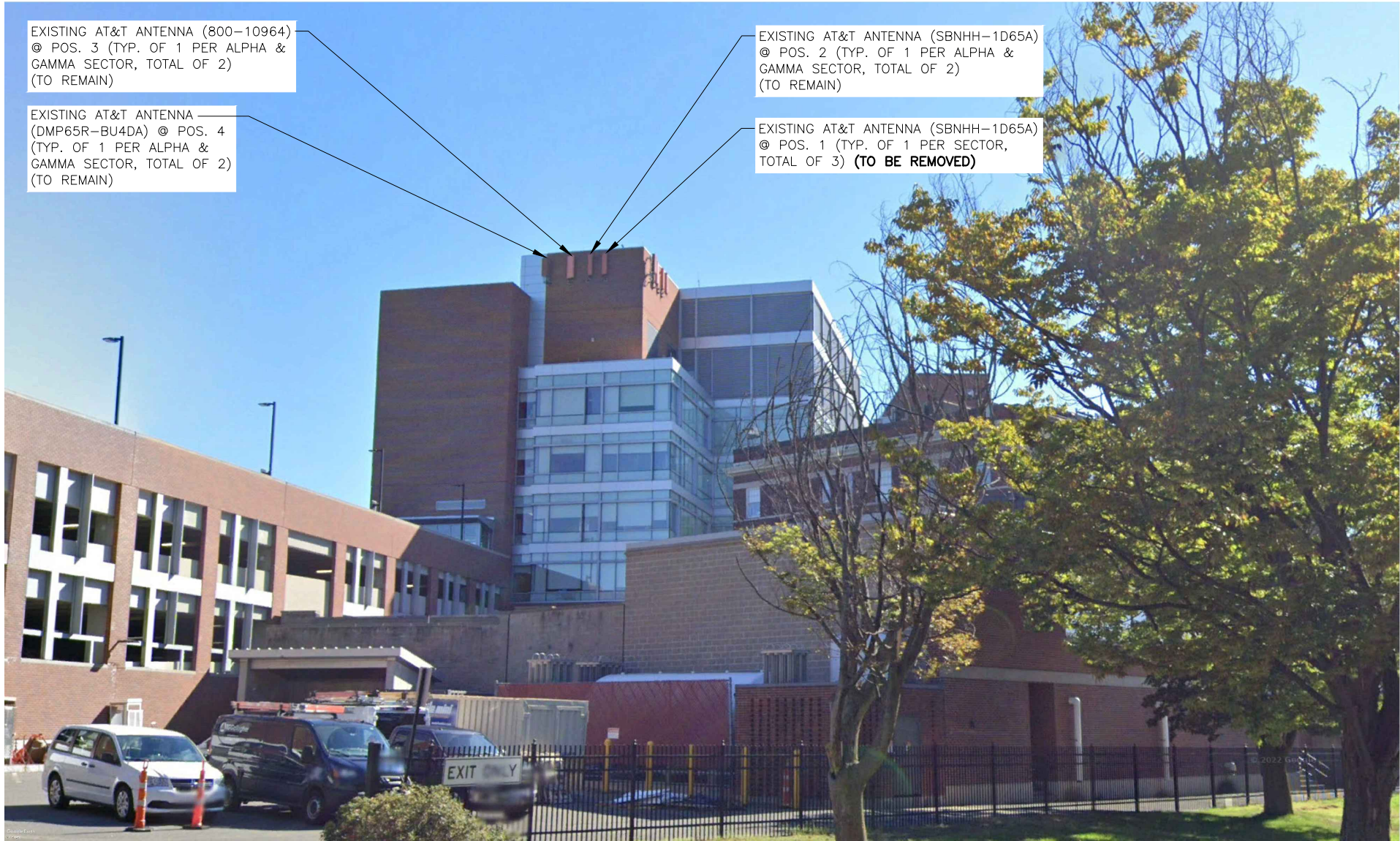
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 LOCATIONS AVAILABLE TO DATE.

PAGE 4 OF 8

EXISTING CONDITIONS

LOCATION # 2

DATE OF PHOTO: 09/02/2022



EXISTING AT&T ANTENNA (800-10964)
@ POS. 3 (TYP. OF 1 PER ALPHA &
GAMMA SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA
(DMP65R-BU4DA) @ POS. 4
(TYP. OF 1 PER ALPHA &
GAMMA SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
@ POS. 2 (TYP. OF 1 PER ALPHA &
GAMMA SECTOR, TOTAL OF 2)
(TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
@ POS. 1 (TYP. OF 1 PER SECTOR,
TOTAL OF 3) **(TO BE REMOVED)**

VIEW EAST FROM GERRYS LANDING RD

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138



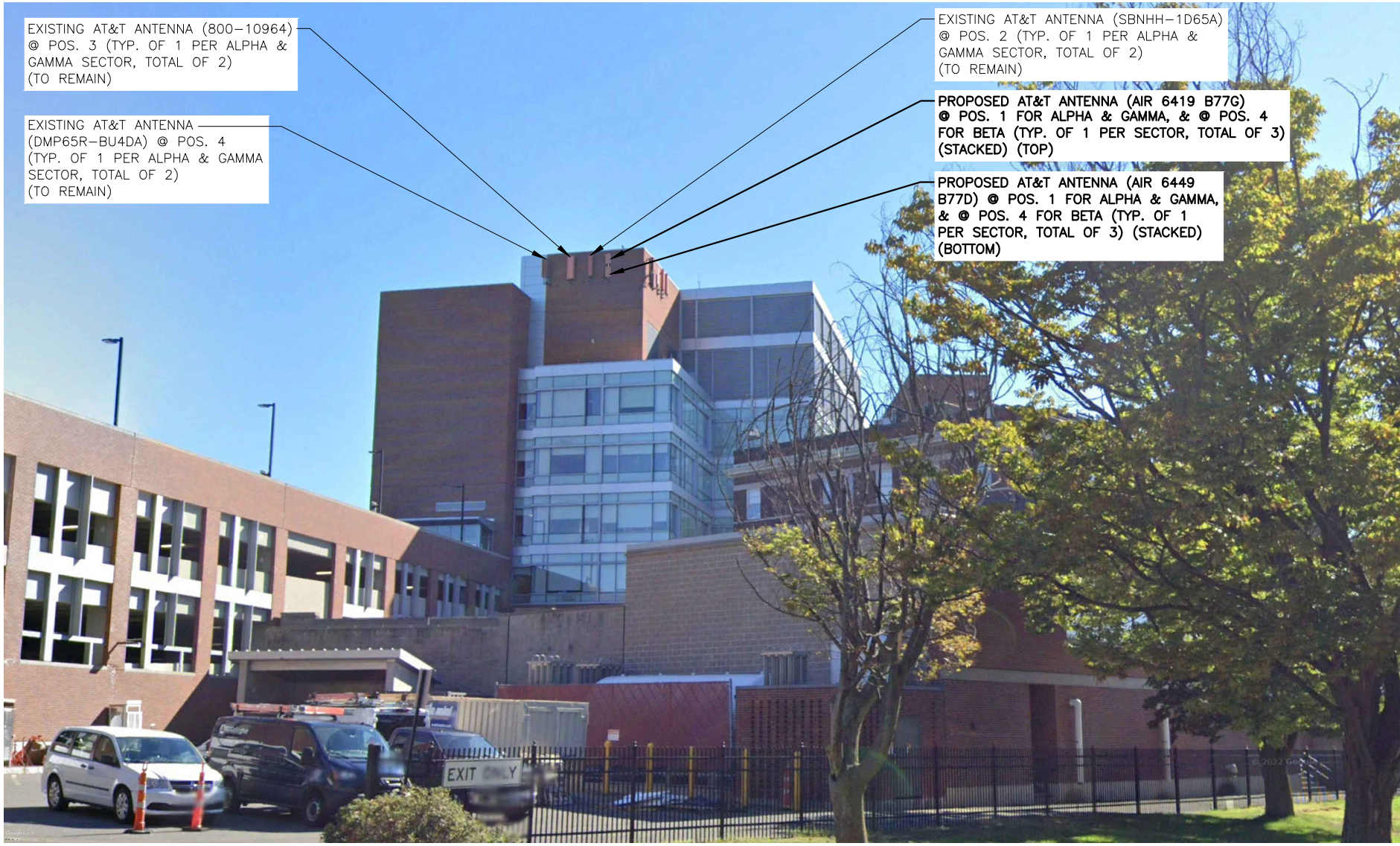
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DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

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PROPOSED CONDITIONS

LOCATION # 2

DATE OF PHOTO: 09/02/2022



EXISTING AT&T ANTENNA (800-10964)
 @ POS. 3 (TYP. OF 1 PER ALPHA &
 GAMMA SECTOR, TOTAL OF 2)
 (TO REMAIN)

EXISTING AT&T ANTENNA
 (DMP65R-BU4DA) @ POS. 4
 (TYP. OF 1 PER ALPHA & GAMMA
 SECTOR, TOTAL OF 2)
 (TO REMAIN)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
 @ POS. 2 (TYP. OF 1 PER ALPHA &
 GAMMA SECTOR, TOTAL OF 2)
 (TO REMAIN)

PROPOSED AT&T ANTENNA (AIR 6419 B77G)
 @ POS. 1 FOR ALPHA & GAMMA, & @ POS. 4
 FOR BETA (TYP. OF 1 PER SECTOR, TOTAL OF 3)
 (STACKED) (TOP)

PROPOSED AT&T ANTENNA (AIR 6449
 B77D) @ POS. 1 FOR ALPHA & GAMMA,
 & @ POS. 4 FOR BETA (TYP. OF 1
 PER SECTOR, TOTAL OF 3) (STACKED)
 (BOTTOM)

VIEW EAST FROM GERRYS LANDING RD

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
 AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138



SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

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 BASED UPON THE BEST INFORMATION FOR
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 LOCATIONS AVAILABLE TO DATE.



EXISTING AT&T ANTENNA (800-10964)
 @ POS. 3 (BETA SECTOR, TOTAL OF 1)
 (TO BE RELOCATED TO POS. 2)

EXISTING AT&T ANTENNA (DMP65R-BU4DA)
 @ POS. 4 (BETA SECTOR, TOTAL OF 1)
 (TO BE RELOCATED TO POS. 1)

EXISTING AT&T ANTENNA (SBNHH-1D65A)
 @ POS. 2 (BETA SECTOR, TOTAL OF 1)
 (TO BE RELOCATED TO POS. 3)

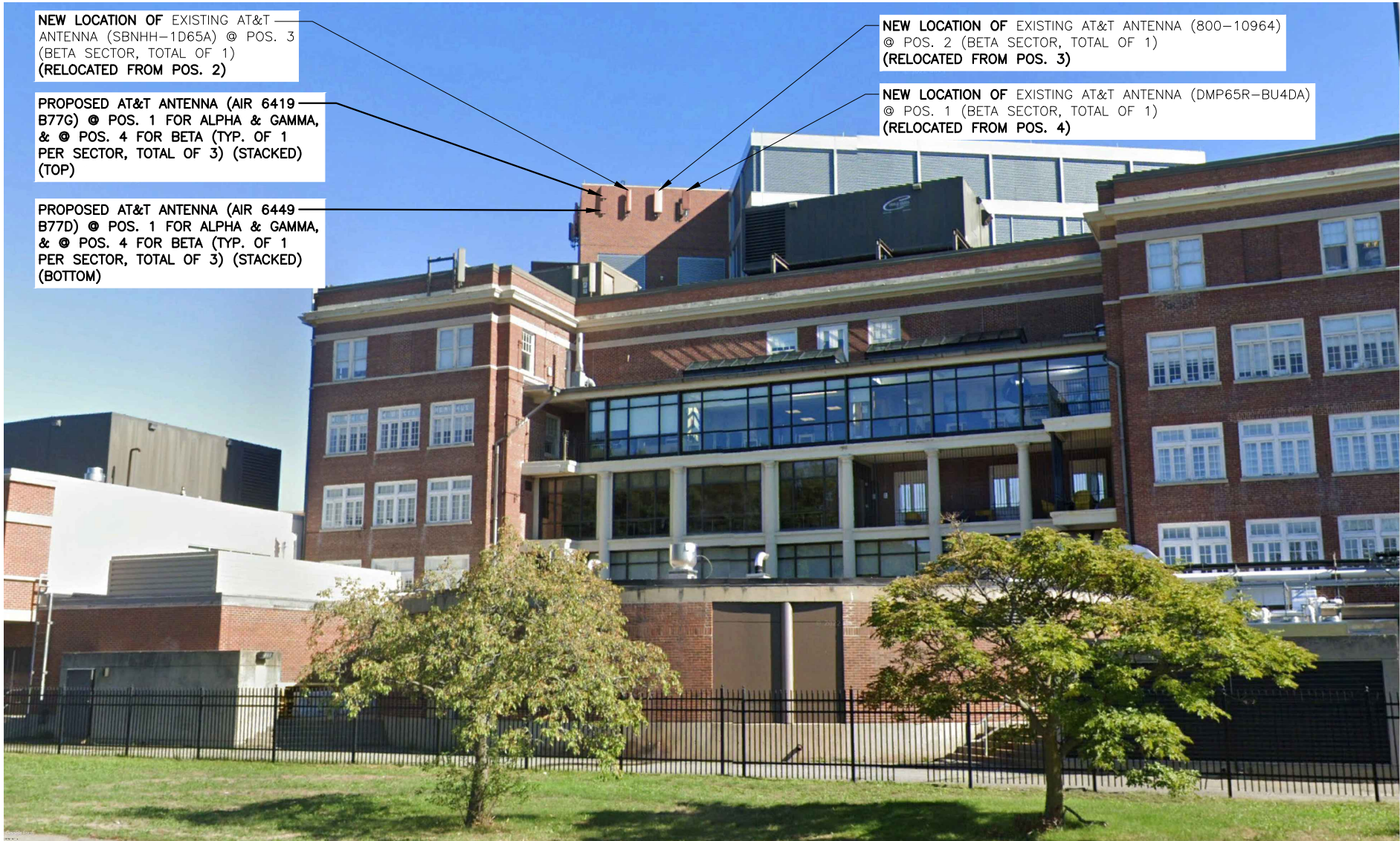
VIEW NORTH FROM GERRYS LANDING RD

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
 AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138



SITE TYPE: ROOFTOP
DATE: 09/08/2023 **REV:** 0
DRAWN BY: AM
SCALE: N.T.S.

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NEW LOCATION OF EXISTING AT&T ANTENNA (SBNHH-1D65A) @ POS. 3 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 2)

PROPOSED AT&T ANTENNA (AIR 6419 B77G) @ POS. 1 FOR ALPHA & GAMMA, & @ POS. 4 FOR BETA (TYP. OF 1 PER SECTOR, TOTAL OF 3) (STACKED) (TOP)

PROPOSED AT&T ANTENNA (AIR 6449 B77D) @ POS. 1 FOR ALPHA & GAMMA, & @ POS. 4 FOR BETA (TYP. OF 1 PER SECTOR, TOTAL OF 3) (STACKED) (BOTTOM)

NEW LOCATION OF EXISTING AT&T ANTENNA (800-10964) @ POS. 2 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 3)

NEW LOCATION OF EXISTING AT&T ANTENNA (DMP65R-BU4DA) @ POS. 1 (BETA SECTOR, TOTAL OF 1) (RELOCATED FROM POS. 4)

VIEW NORTH FROM GERRYS LANDING RD

SITE NO: MAL02850
SITE NAME: CAMBRIDGE MOUNT
 AUBURN STREET
ADDRESS: 330 MOUNT AUBURN STREET
 CAMBRIDGE, MA 02138



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27^H



2006 00238941

Bk: 48678 Pg: 259 Doc: MD
Page: 1 of 27 12/15/2006 03:51 PM

MASTER DEED

OF

THE MT. AUBURN HOSPITAL CONDOMINIUM

**330 MT. AUBURN STREET
CAMBRIDGE, MASSACHUSETTS**

DATE: December 6, 2006

Plan No# 1600 of 2006

Prepared by and upon recording please return to:
Goulston & Storrs, P.C.
400 Atlantic Avenue
Boston, Massachusetts 02110-3333
Deborah S. Horwitz

LandAmerica
265 FRANKLIN STREET 8th FLOOR
BOSTON, MA 02110

**MASTER DEED
OF
THE MT. AUBURN HOSPITAL CONDOMINIUM**

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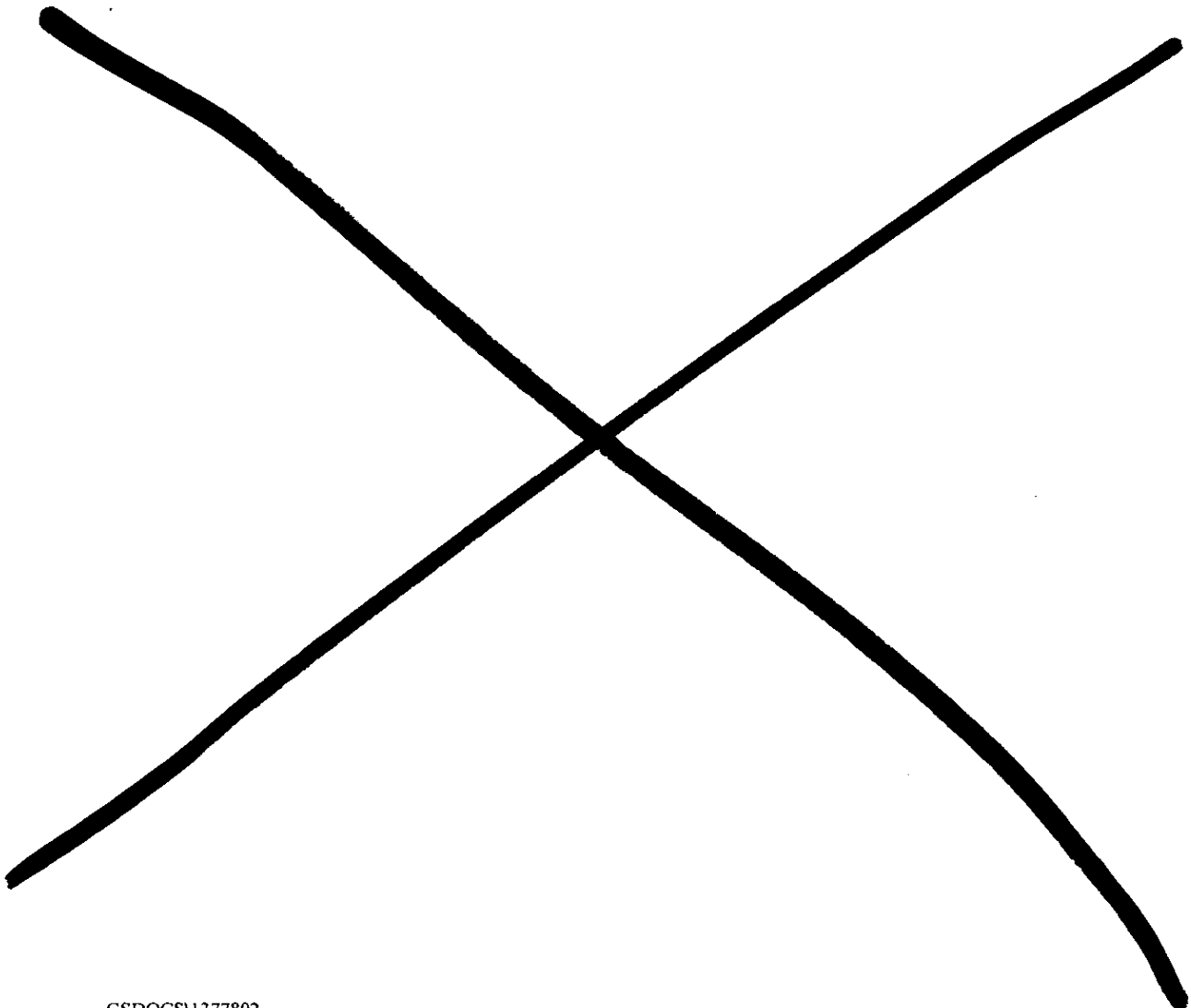
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TABLE OF EXHIBITS

<u>Exhibit</u>	<u>Subject Matter</u>	<u>Section First Mentioned</u>
"A"	Legal Description of the Land	Article 4
"B"	Condominium Units and Percentage Interest in Common Elements and Shared Facilities	Article 6
"C"	Plan	Article 4 Article 6



**MASTER DEED
OF
MT. AUBURN HOSPITAL CONDOMINIUM

CAMBRIDGE, MASSACHUSETTS**

This **MASTER DEED** of **THE MT. AUBURN HOSPITAL CONDOMINIUM**, made as of this 22 day of November, 2006.

ARTICLE 1 - SUBMISSION TO CONDOMINIUM REGIME

Mt. Auburn Hospital, a Massachusetts non-profit corporation having its principal office at 330 Mt. Auburn Street, Cambridge, Massachusetts (the "Declarant"), being the sole owner of certain premises located in the City of Cambridge, Middlesex County, Commonwealth of Massachusetts, by duly executing and recording this Master Deed, does hereby submit such premises to the provisions of Chapter 183A of the Massachusetts General Laws and hereby states that it proposes to create and does hereby create a condominium, as a commercial condominium under Chapter 183A, Section 21, to be governed by and subject to the provisions of Chapter 183A, and to that end hereby declares and provides as follows:

ARTICLE 2 - DEFINITIONS

The terms used in this Master Deed shall generally be given their natural, commonly accepted definitions unless otherwise specified. Capitalized terms shall be defined as set forth below.

"Building": As described in Article 5.

"Chapter 183A": Chapter 183A of the Massachusetts General Laws, Condominiums, as the same may be amended from time to time.

"Common Elements": Individually or collectively as the context appropriately would admit or require, those areas and facilities of the Condominium that are for the common use of all of the Units, as described in Section 7.1.1.

"Common Element Charges": The charges assessed by the Trustees to any Unit Owner in accordance with Article VII.

"Condominium": The condominium more commonly known as The Mt. Auburn Hospital Condominium, commonly known and numbered as 330 Mt. Auburn Street, in Cambridge, Massachusetts, established by this Master Deed.

"Condominium Documents": This Master Deed and the Condominium Trust.

"Condominium Trust" or "Trust": The Declaration of Trust of the Mt. Auburn Hospital Condominium Trust, including the By-Laws and Rules and Regulations thereof, of even date and record herewith, as it may be amended from time to time.

"Declarant": As defined in Article 1.

"Indemnified Party" and collectively, "Indemnified Parties": As described in Section 9.6.

"Land": As described in Article 4 and in Exhibit A.

“Legal Requirements”: As described in Section 9.6.

“Mortgagee”: Any holder of a mortgage of record on a Unit.

“Parking Areas”: All areas designated for parking spaces within a garage or as surface parking on the Plan, as the same may be modified from time to time as permitted hereunder.

“Plan”: The site and floor plan depicting the Condominium, as more particularly described in Article 8 and on Exhibit C, as the same may be amended from time to time as permitted herein.

“Shared Facilities”: Individually or collectively as the context appropriately would admit or require, those areas and facilities located within a Unit but which are used in common for the benefit of all of the Units and in which each Unit Owner is granted easements rights as set forth in Section 7.1.A.

“Trustees” or “Board of Trustees”: The Trustees of the Condominium.

“Unit Owner(s)”: The record owner(s) of any Unit.

“Registry”: The Middlesex County South Registry of Deeds. If and so long as any portion of the Condominium property is registered land, all references to recording of a document in the Registry shall also include the filing of such document with the Middlesex County South Registry District of the Land Court.

“Rules and Regulations”: The Rules and Regulations adopted or amended pursuant to the provisions of Section 6.7 of the Trust.

ARTICLE 3 - NAME AND GENERAL DESCRIPTION

The name of the Condominium shall be “The Mt. Auburn Hospital Condominium.”

The Condominium consists of the “Land” and “Building” as described in Articles 4 and 5, which are divided into: (a) five (5) commercial condominium units; and (b) certain common elements appurtenant to all of the Units (collectively, the “Common Elements”), described in Section 7.1.A and certain shared facilities used by all of the Unit Owners (collectively, the “Shared Facilities”), described in Section 7.1.B.

ARTICLE 4 - DESCRIPTION OF LAND

The land (collectively, the “Land”) included in the Condominium consists of the premises described in Exhibit A situated in the City of Cambridge, Middlesex County, Massachusetts on Mt. Auburn, Street and more commonly known and numbered as 330 Mt. Auburn Street. The Land is shown on the Plan. The Land and all improvements now or hereafter situated thereon are subject to the rights, reservations, and restrictions set forth on Exhibit A.

ARTICLE 5 - DESCRIPTION OF BUILDING

The buildings (collectively, the “Building”) included in the Condominium, as set forth more fully below, currently consists of several connected structures including: (a) a 1-5-story stucco and brick building known as the “South Building” which forms a portion of Unit 3 of the Condominium; (b) an 8-story brick building known as the “Needham Building” which forms Unit 1 of the Condominium; (c) a 3-

story elevated brick building known as the "Medical Office Building" which forms a portion of Unit 3 of the Condominium; (d) a 1-3 story brick building known as the "Parsons Building" which forms a portion of Unit 3 of the Condominium; (e) a 2-3 story brick building known as the "Clark Building" which forms a portion of Unit 3 of the Condominium; (f) a 1-story concrete building known as the "Radiation Oncology Building" which forms Unit 4 of the Condominium; and (g) a 5-story brick building known as the "Wyman Building" which forms Unit 2 and Unit 5 of the Condominium. The Building may be modified from time to time as permitted hereunder. Each Unit has the benefit of various rights and easements in the other Units as more particularly described herein.

ARTICLE 6 - DESCRIPTION OF UNITS

As more fully described in this Article 6 and as depicted on the Plan, the Condominium is currently comprised of the following 5 Units:

Unit 1	Needham Building
Unit 2	Wyman Building (portion)
Unit 3	South Building, Medical Office Building, Parsons Building, and Clark Building
Unit 4	Radiation Oncology Building
Unit 5	Wyman Building (portion)

ARTICLE 7 - DESCRIPTION OF THE COMMON ELEMENTS AND COMMON ELEMENT CHARGES

Section 7.1.A. Description of Common Elements.

The Common Elements are the common areas and facilities of the Condominium that are for the common use of all of the Unit Owners. Each Unit Owner shall be entitled to an undivided interest in the Common Elements in the percentages set forth on Exhibit B, as the same may be adjusted from time to time as permitted herein. As of the date of this Master Deed, the Common Elements include the following:

(1) Land: The Land, including without limitation the air space above and around the Building, all surface parking areas, the ground below the garages and the rights of the Declarant, if any, in and to the streets or sidewalk areas bordering the Land, pathways and open areas as exist from time to time between and around the various portions of the Building and any amenities located thereon, together with the benefit of and subject to all other rights and easements referred to herein and in Exhibit A.

(2) Structure and Exterior: The foundations, structural columns, girders, beams, supports and exterior walls to the extent the same are shared by more than one Unit, the structured parking garages located on the Land, street lighting and exterior lighting (except exterior lighting attached to the exterior of a single Unit), interior structural or bearing walls, roof drains and stormwater system, rooftop equipment and rooftop equipment screening, and roofs and flashing to the extent the same are shared by more than one Unit.

(3) All other elements and features of the Condominium property, however designated or described, excepting only the Units themselves and the Shared Facilities.

Section 7.1.B. Description of Shared Facilities.

The Shared Facilities are the areas and facilities of the Condominium that are located within a Unit but which are used in common by all of the United Owners in accordance with each Unit's undivided interest in the Common Elements and Shared Facilities as set forth in Exhibit B. As of the date of this Master Deed, the Shared Facilities include the following:

- (1) Access Areas and Corridors: Those areas within and about the Land and the Building which provide access into and throughout the Condominium, including, without limitation, corridors, lobbies, foyers, basements, sub-basements, underground tunnels, vault areas, loading areas, pedestrian and vehicular entrances and exits, elevators, elevator lobbies, escalators, stairways, passageways and walkways within and about each of the Units and the Common Elements, as and to the extent reasonably necessary in order for the Condominium to continue to be utilized as an integrated functioning acute care hospital and medical service facility.
- (2) Loading Dock Area/Shipping and Receiving: All of the loading dock area in the Needham Building, as shown the Plan (including without limitation the portion of the driveway extending from Mt. Auburn Street to the loading dock area, as shown on said Plan).
- (3) Cafeteria/Coffee Shop: The Cafeteria and Coffee Shop currently located on the first floor of the Needham Building (Unit 1).
- (4) Gift Shop: The Gift Shop currently located on the first floor of the Needham Building (Unit 1).
- (5) Main Lobby/Admitting: The lobby area inside the main entrance to the Condominium located on the first floor of the Needham Building (Unit 1) in which are located admitting, informational and other customer services and administrative functions.
- (6) Pharmacy: The Pharmacy serving the current Hospital Use of the Condominium currently located on the first floor of the Needham Building (Unit 1).
- (7) Materials Distribution/Medical Records/ Environmental Services/Biomedical Engineering: The storage areas, filing cabinets, closets and other areas currently used for purposes such as materials distribution, medical records, environmental services, biomedical engineering, janitorial supplies and other uses which currently serve multiple portions of the Condominium and not solely one Unit.
- (8) The fire alarm and electrical systems for the Building.
- (9) All conduits, ducts, pipes, plumbing, wiring, chimneys, flues, equipment, fixtures, machinery, furnishings, landscaping, and other facilities for the furnishing of utilities or services to the Units and/or the Common Elements, except for any of the foregoing which are part of the Units themselves and exclusively serve such Unit.

The Declarant and each Unit Owner hereby grants to each other Unit Owner, for the benefit of such grantee Unit Owner in common with others entitled thereto, the perpetual right and easement to use the Shared Facilities.

The foregoing provisions shall not constitute any grant of easement rights to the public, and shall be subject to amendment as permitted in this Master Deed.

Section 7.2 Common Element Charges; Income.

The Common Elements and Shared Facilities shall be maintained, operated, repaired and replaced by the Trustees as necessary, in accordance with all applicable Legal Requirements and consistent with the standards and quality of a first-class hospital and medical services operation and all costs and expenses thereof (including any and all management, employee and services costs and expenses) shall be allocated and assessed among the Unit Owners in accordance with the percentages of interests in Common Elements and Shared Facilities set forth on Exhibit B, as the same may be adjusted from time to time as permitted hereunder, except to the extent that the same are necessitated by the negligence, misuse, abuse or neglect of a Unit Owner, its agents or invitees, in which event such expense shall be charged to such Unit Owner individually and the Unit Owner shall be personally liable therefor. Notwithstanding any other provision hereof to the contrary, as long as the Declarant is the owner of all the Units, all costs and expenses related to any portion of the Condominium shall be treated as a Common Element Charge.

Any income from the Common Elements and Shared Facilities shall be allocated among the Unit Owners in accordance with the percentages of interest in Common Elements set forth on Exhibit B, as the same may be adjusted from time to time as permitted hereunder.

Section 7.3 General Provisions.

7.3.1 Determination of Percentage Interest: The percentage interest of each Unit in the Common Elements as set forth on Exhibit B is the approximate relation that the fair value of such Unit bears to the aggregate fair value of the Units having rights in the Common Elements as of the date of this Master Deed.

7.3.2 Common Elements and Shared Facilities to Remain Undivided: The Common Elements and Shared Facilities shall remain undivided as set forth herein and no Unit Owner or other person shall bring or shall have the right to bring any action for partition or division thereof, except as may be specifically provided in this Master Deed or the Trust.

7.3.3 Exercise of Easement Rights to Use the Common Elements and Shared Facilities: Each Unit Owner shall exercise its easement rights to use the Common Elements and Shared Facilities, subject to all applicable provisions of the Condominium Documents and in a manner which does not interfere unreasonably with the use of other Units for their permitted purposes. Such easements shall be subject to the rights of the Trustees to adopt reasonable Rules and Regulations governing the use of the Common Elements.

7.3.4 Rights in Common Elements and Shared Facilities Subject to Master Deed Etc.: Notwithstanding anything to the contrary contained herein, the rights of the Unit Owners with respect to the Common Elements and Shared Facilities are subject to: (i) any rights, easements and limitations on use contained in other portions of this Master Deed and the Trust, as the same may be amended from time to time, and (ii) the rights, easements and other restrictions set forth in Exhibit A.

7.3.5 Trustees' Rights of Access, Maintenance, Repair and Replacement of Common Elements and Shared Facilities: The Trustees shall have the exclusive rights to maintain, repair, replace, add to and alter the Common Elements and Shared Facilities, including without limitation the maintenance and repair of the exterior portions of the Units and to make excavations for such purposes. The Trustees shall have the right at any time and from time to time to move, alter or improve the then

current use of any portion of the Common Elements and Shared Facilities; provided that no such alteration, move, improvement or termination shall affect the ability of the Units to continue to be operated as an integrated hospital and medical care facility without the consent of any adversely impacted Unit Owner. Notwithstanding any other provision in the Condominium Documents, the Trustees further shall have the right of access at all reasonable times and upon not less than two (2) days' prior notice (except in emergencies) to each Unit for purposes of operating, inspecting, protecting, maintaining, repairing and replacing any Common Element or Shared Facility, and correcting, terminating and removing acts or things which interfere with each Unit Owner's use and enjoyment of its own Unit or any Common Element or Shared Facility or are otherwise contrary to or in violation of provisions of the Condominium Documents or any Legal Requirements. The Trustees shall have the right to assess such Unit Owner for the costs incurred by the Trustees in performing any of the foregoing work, for which such Unit Owner shall be liable in addition to and as part of such Unit Owner's share of the Common Element Charges, and until such charges are paid by such Unit Owner, the same shall constitute a lien against such Unit pursuant to the provisions of this paragraph, Section 7.3.8 below, and Section 6.16 of the Trust, and the provisions of Chapter 183A, Section 6. Further, in addition to any late charges which may be imposed by the Trustees on account of any delinquency by a Unit Owner in the payment of charges assessed to such Unit under this Master Deed and/or the Trust, the amount of any such charge shall bear interest from the date on which such charge was first due until paid at the rate of eighteen percent (18%) per annum. Such accrued interest, together with the reasonable cost of collection of any such charges (including reasonable attorneys' fees) shall be added to the amount of such charge and shall constitute a lien on such Unit under the terms of Chapter 183A, Section 6.

7.3.6 Encroachments: If any portion of the Common Elements encroaches upon any Unit or any Unit encroaches upon any other Unit or any portion of any Common Element as a result of (a) settling or shifting to the Building, (b) any alteration, repair or restoration of the Shared Facilities or the Common Elements made by or with the consent of the Trustees, when and as required or permitted in this Master Deed or in the Trust, or made by Declarant, as provided herein or in the Trust, or (c) any alteration, repair or restoration of any portion of the Condominium after damage by fire or other casualty or as a result of eminent domain proceeding, a valid easement shall exist for such encroachment and for the maintenance of the same to the extent of and for the duration of the encroachment, without the necessity for execution of any documentation by any Unit Owner or by the Trust.

7.3.7 Additional Utility Easements: The Declarant, for so long as it or an entity controlled by Declarant holds title to any Unit, and thereafter the Trustees, but in all events subject to Chapter 183A Section 5, shall have the right to grant such additional electric, gas, steam, chilled water, telecommunications, cable television, internet services, ventilation or other easements or licenses, whether for utilities or otherwise, or to relocate, or otherwise modify or amend, any existing utility easements or licenses (wherever located), as the Declarant or the Trustees shall deem necessary or desirable. The grant of such easements or licenses for such additional utilities or the relocation of existing utilities shall not prevent or unreasonably interfere with the peaceful and lawful use and enjoyment of the Common Elements and Shared Facilities by the Unit Owners and shall not result in the imposition of any mechanics', materialmen's and/or laborers' liens against any of the Units. Any utility company and its employees and agents shall have the right of access to any Unit and to the Common Elements and Shared Facilities in furtherance of such easement or license, provided such right of access shall be exercised in a manner so as to not unreasonably interfere with the normal business operations of tenants and occupants of the Units for their permitted purposes. The Declarant or the Trustees may grant revocable licenses in designated Common Elements to Unit Owner(s) at no charge or at a reasonable charge therefor. Any such grant will not be construed as a sale or disposition of the Common Elements.

7.3.8 Liens: If any Unit Owner shall fail to pay or reimburse the Trust for such Unit Owner's share of Common Element Charges, such Common Element Charges shall constitute a lien against such

Unit pursuant to the provisions of this Master Deed and Chapter 183A Section 6, until such share is paid by such Unit Owner. Further, in addition to any late charges which may be imposed by the Trustees on account of any delinquency by a Unit Owner in the payment of charges assessed to such Unit under this Master Deed and/or the Trust, the amount of any such charge shall bear interest from the date on which such charge was first due until paid at the rate of eighteen percent (18%) per annum. Such accrued interest, together with the reasonable cost of collection of any such charges (including reasonable attorneys' fees) shall be added to the amount of such charge and shall constitute a lien on such Unit under the terms of Chapter 183A, Section 6. Each Unit Owner, by acceptance of its Unit Deed (whether or not it is so expressed in any such Deed) or its occupancy of its Unit shall irrevocably be deemed to covenant and agree with the Declarant, the Trustees and all other Unit Owners, to pay such Common Element Charges (including late charges, accrued interest and collection charges, if any) as are assessed upon any such Unit and, if not otherwise provided by Chapter 183A Section 6, to suffer a lien upon such Unit on account of any such Common Element Charge until so paid, which lien shall have the same priority as a lien under Section 6.16 of the Trust and shall, to the maximum extent possible under law, be enforced in the manner of lien under Chapter 183A, Section 6(d).

7.3.9 Additional Development: The Trustees shall have the right to extend, revive or grant rights to develop the Condominium, including the right to add additional units or land to the Condominium ("Additional Development"), with the consent of the Unit Owners holding at least sixty percent (60%) of the beneficial interest in the Common Elements and the consent of all Mortgagees listed with the Trustees as provided in the Trust.

ARTICLE 8 - PLAN

The Plan described in Exhibit C attached hereto and incorporated herein by reference (the "Plan") shows the currently existing Land, the Building and related site improvements, and adjacent public and private ways, the floor plans of the Building, the layout, location, Unit designations and dimensions of the Units, and the elevations and floor numbering of the Building, bearing the verified statement of a registered land surveyor, engineer or architect certifying that the Plan fully and accurately depicts the same, as built, in accordance with the provisions of Chapter 183A, are recorded herewith. In the event of a conflict between the Plan and Section 6 (description of the Units), the terms and provisions of Section 6 shall control; in the event of a conflict between the Plan and Section 7 (description of Common Elements), the terms and provisions of Section 7 shall control.

ARTICLE 9 - USE OF UNITS

Section 9.1 Uses of Units.

9.1.1 Generally: Except as provided in this Article 9, the Units may not be used for any purpose, even if otherwise permitted by the terms and provisions of this Master Deed, the Trust, or any document affecting title to the Land. Any use of a Unit permitted in this Article 9 is permitted subject to the receipt of all necessary governmental permits and approvals and compliance with any and all applicable Legal Requirements and provisions of the Condominium Documents. Any amendment of this Master Deed that changes any provision herein pertaining to permitted and/or prohibited uses, that permits a use prohibited hereunder or prohibits a use permitted hereunder, shall only be legally valid and effective if evidenced by an amendment instrument signed by the Unit Owners entitled to sixty percent (60%) or more of the undivided interests in the Common Elements and consented to by all Mortgagees listed with the Trustees as provided in the Trust.

9.1.2 Use: The Units and Common Elements shall be used and operated together to form a licensed full service acute care hospital facility and physicians' office space.

9.2 Maintenance of Units.

9.2.1 Generally: The Unit Owners shall be individually responsible for the proper maintenance and repair of their respective Unit, ordinary or extraordinary, excluding any Common Elements and Shared Facilities (except as otherwise specifically provided herein or in the Trust). If the Trustees shall at any time in their reasonable judgment determine that any part of any Unit, including, without limitation, mains and pipes for water and sewerage and electrical conduits, is in such need of maintenance or repair that the condition of a Unit or fixtures, furnishings, facilities, or equipment therein may be injurious to any other Unit or the occupants or invitees thereof, the Trustees shall by written notice to the Unit Owner (and to the Mortgagee of such Unit) require the Unit Owner to perform the needed maintenance, repair, or replacement or to correct the condition, and in case such work shall not have been commenced within thirty (30) days (or such reasonable shorter period in case of emergency as the Trustees shall determine) of such request and thereafter diligently brought to completion, the Trustees shall be entitled to have the work performed for the account of such Unit Owner and to enter upon and have access to such Unit for that purpose. The Trustees shall have the right to assess such Unit Owner for the reasonable costs incurred by the Trustees in performing any of the foregoing work on any such portion of a Unit, for which such Unit Owner shall be personally liable in addition to and as part of such Unit Owner's share of the Common Element Charges, and until such charges are paid by such Unit Owner, the same shall constitute a lien against such Unit pursuant to the provisions of this paragraph, Section 7.3.8 above, Section 6.16 of the Trust, and the provisions of Chapter 183A, Section 6. Further, in addition to any late charges which may be imposed by the Trustees on account of any delinquency by a Unit Owner in the payment of charges assessed to such Unit under this Master Deed and/or the Unit, the amount of any such charge shall bear interest from the date on which such charge was first due until paid at the rate of eighteen percent (18%) per annum. Such accrued interest, together with the reasonable cost of collection of any such charges (including reasonable attorneys' fees) shall be added to the amount of such charge and shall, as in the case of such charge, constitute a lien on such Unit under the terms of Chapter 183A, Section 6.

9.2.2 Parts of Unit Located Outside the Boundaries of Such Unit: Notwithstanding any other provision of this Master Deed or the Trust, the following maintenance and access rights and/or obligations apply respectively to Unit Owners, as applicable, and the Trustees with respect to any utility services and building systems, facilities and/or elements that serve exclusively one Unit and that, although located within another Unit or within a Common Element, are designated in this Master Deed as part of such benefited Unit or part of the Common Elements in which such Unit has a percentage interest.

(1) **Unit Owner's Right of Access to Such Parts of Unit:** The owner of a Unit shall have a non-exclusive right and easement through any other Unit or any portion of the Common Elements and Shared Facilities, at such times, and in such manner, as will ensure that no significant adverse impacts occur to the operations of such affected Unit(s) (and/or Common Element(s)) and Shared Facilities, to access for maintenance, repair, and emergency purposes and to use those utility services and building systems, facilities and/or elements that are part of such benefited Unit and are located within such affected Unit(s) and/or Common Element(s), as shown on the Plan.

(2) **Trustees' Right of Access to Such Parts of Unit.** Notwithstanding any other provision in the Condominium Documents, with respect to any portion of a Unit that, as described above, is located within another Unit or within a Common Element or Shared Facility, the Trustees shall have the right of access at all reasonable times to each Unit for purposes of operating, inspecting, protecting, maintaining, repairing and replacing any such portion of a Unit, and correcting, terminating and removing acts or things which interfere with each Unit Owner's use and enjoyment of its own Unit or

any Common Element or Shared Facility or are otherwise contrary to or in violation of provisions of the Condominium Documents or any Legal Requirements. The Trustees shall have the right to assess such Unit Owner for the costs incurred by the Trustees in performing any of the foregoing work on any such portion or a Unit, for which such Unit Owner shall be personally liable in addition to and as part of such Unit Owner's share of the Common Element Charges, and until such charges are paid by such Unit Owner, the same shall constitute a lien against such Unit pursuant to the provisions of this paragraph, Section 7.3.8 above and Section 6.16 of the Trust, and the provisions of Chapter 183A, Section 6. Further, in addition to any late charges which may be imposed by the Trustees on account of any delinquency by a Unit Owner in the payment of charges assessed to such Unit under this Master Deed and/or the Unit, the amount of any such charge shall bear interest from the date on which such charge was first due until paid at the rate of eighteen percent (18%) per annum. Such accrued interest, together with the reasonable cost of collection of any such charges (including reasonable attorneys' fees) shall be added to the amount of such charge and shall, as in the case of such charge, constitute a lien on such Unit under the terms of Chapter 183A, Section 6.

Section 9.3 Intentionally Omitted.

Section 9.4. Leasing of Units.

Except as provided in this Article 9, any lease of a Unit or portion thereof shall be in writing and shall provide that the tenancy shall be in compliance with the Condominium Documents, including the Rules and Regulations, a copy of which shall be attached to such lease. No right to lease by any Unit Owner shall be exercised so as to restrict use or occupancy of a Unit or portion thereof because of race, creed, sex, color or national origin. In addition, Unit Owners must give written notice to the Trustees of the names of any tenants or other occupants of the Unit of such Unit Owner who are in occupancy in excess of thirty (30) days, as provided in Chapter 183A, Section 4(6).

Section 9.5. Intentionally Omitted.

Section 9.6. Compliance with Condominium Documents and Legal Requirements.

Each Unit and the Common Elements and Shared Facilities shall be used only in accordance with the provisions of the Condominium Documents, and in accordance with any applicable law, order, rule, regulation, code, ordinance, permit or approval of, or agreement with, any court or governmental entity of competent jurisdiction, including without limitation any so-called Notice of Activity and Use Limitation as defined in the Massachusetts Contingency Plan at 310 CMR 40.0000 (collectively, "Legal Requirements"). Each Unit Owner shall give prompt notice to the Trustees of any written notice it receives of any violation of any Legal Requirements affecting its Unit or the Common Elements.

Each Unit Owner, by acceptance of its Unit Deed (whether or not it is so expressed in any such Deed), shall be deemed to have covenanted and agreed to and to release, waive, indemnify and hold harmless the Declarant, the Trustees and all other Unit Owners, and their respective affiliates, successors, assigns, directors, managers, members, employees, and mortgagees (each, an "Indemnified Party" and collectively, "Indemnified Parties") from and against any claim, loss, damage, cost, expense, or liability (collectively, the "Claims") arising out of each Unit Owner's failure to properly use, operate, maintain, repair and replace their respective Unit and/or the Common Elements and Shared Facilities in accordance with the applicable provisions of the Condominium Documents and any applicable Legal Requirements, except, as to any particular Indemnified Party, in the event that such Claim results from negligence or willful act of such Indemnified Party and/or for the breach by such Indemnified Party of any obligation under this Master Deed.

Section 9.7. Nuisance Uses Prohibited.

In keeping with the operation of the Condominium as a first-class hospital and medical service facility, no Unit Owner shall cause or permit in any portion of its Unit or the Condominium (i) any act or omission that would be a violation of any Legal Requirement, or (ii) any nuisance, offensive noise, odor or fumes, or any condition in violation of Legal Requirements. For the purpose of this Section 9.7, the Trustees' decision as to what constitutes a nuisance shall be binding on the Unit Owners.

Section 9.8 Rights of Declarant.

The Declarant may, for its own account: (i) license or lease Units (or portions thereof) which are owned by it or any parking spaces and storage rooms appurtenant thereto; and (ii) notwithstanding any provisions of Sections 9.1 and 9.2, proceed, together with its contractors and other appropriate personnel, to complete any construction, landscaping or the like in or to any of the Common Elements and/or any renovations, finishing work or the like in or to any Units which is the responsibility of the Declarant, and exercise all rights related thereto or reserved to or conferred upon the Declarant in accordance with the provisions of this Master Deed.

Section 9.9. Benefit of Restrictions; Enforcement.

The foregoing restrictions on the permitted uses of the Units shall be for the benefit of all Unit Owners, and shall be enforceable by the Trustees and any Unit Owner. Such restrictions are intended to be perpetual, and, to that end, may be extended by the Trustees as permitted or required by law for the continued enforceability thereof.

ARTICLE 10 - ALTERATION, SUBDIVISION AND COMBINATION OF UNITS

Section 10.1. Alteration of Unit(s).

No Unit Owner shall make any alterations, additions, improvements or repairs in or to its Unit which materially adversely affects the structure of the Building and/or any building system serving any other Unit Owners (including, without limitation, the soundproofing, mechanical, electrical, plumbing, heating, ventilating and/or air-conditioning systems) without obtaining the prior written consent of the Trustees, which consent may not be unreasonably withheld or delayed. Prior to, and as a condition of, the granting of its consent to the making of any alteration, addition, improvement or repair in or to a Unit, the Trustees may, at their option, require the Unit Owner desiring to make such alteration, addition, improvement or repair to execute an agreement, in form and substance reasonably satisfactory to the Trustees, setting forth the terms and conditions under which such alteration, addition, improvement or repair may be made. Unit Owners shall pay all laborers, materialmen and mechanics in a timely fashion so as to avoid any mechanics', materialmen's or other liens. All alterations, additions, improvements or repairs in or to a Unit that do not affect the structure of the Building and/or any building system serving any other Unit Owners, including without limitation, any interior reconfiguration of the unit layout and relocation of non-bearing walls and associated building systems (that does not affect the structure of the Building and/or any building system serving any other Unit Owners), may be accomplished at the discretion of the Unit Owner without review of or consent by the Trustees.

The Unit Owner making any such alterations, additions, improvements or repairs shall, if required by the Trustees, pay the cost of: (a) any necessary amendment of the Condominium Documents required by such alterations, additions, improvements or repairs and review of such amendment; (b) obtaining all necessary governmental permits, authorizations, certificates and licenses for the commencement and

completion of any such alterations, additions, improvements or repairs; and (c) any reasonable architectural, engineering and legal fees incurred by the Trustees in connection with any such alterations, additions, improvements or repairs.

Section 10.2. Subdivision and Combination of Unit(s).

At any time, and from time to time, subject to consent of the Trustees, which consent shall not be unreasonably withheld, a Unit Owner, with the consent of any Mortgagee holding a Mortgage on such Unit, may, subject to Chapter 183A, (i) subdivide its Unit into two or more separate Units, and in connection therewith, to create from portions of the original Unit, limited common elements to be shared exclusively among the owner(s) of the newly created Unit(s), or to relocate existing Common Elements or Shared Facilities located within the original Unit (provided any such relocation does not materially and adversely affect any other Unit Owner's use and enjoyment of its Unit or the Common Elements or Shared Facilities being relocated), or (ii) combine two or more Units into one or more larger Unit(s), and in connection therewith, to relocate (or in the case of hallways or similar Common Elements or Shared Facilities discontinue) Common Elements or Shared Facilities located within the original Units, provided such relocation (or discontinuance) does not materially and adversely affect any other Unit Owner's use and enjoyment of its Unit or the Common Elements or Shared Facilities being relocated; or (iii) reconfigure a portion of a Unit to remove such portion from the original Unit and combine such portion with a different Unit to create one smaller Unit and one larger Unit, and in connection therewith, to relocate (or in the case of hallways or similar Common Elements or Shared Facilities discontinue) Common Elements or Shared Facilities located within the original Units, provided such relocation (or discontinuance) does not materially and adversely affect any other Unit Owner's use and enjoyment of its Unit or the Common Elements or Shared Facilities being relocated.

Any subdivision, combination or reconfiguration of Units shall not result in any increase or decrease to the percentage interest of any Unit Owner in the Common Elements or any change in any Unit Owner's rights in and to any Common Elements or Shared Facilities, or otherwise affect the obligations of any other Unit Owner, other than the Unit Owners undertaking such subdivision or combination or reallocation. In the case of any combination of Units, the percentage interests in the Common Elements of the resulting Unit shall equal the total percentage interests in the Common Elements of the Units so combined.

No subdivision, combination or reconfiguration of Units shall become effective until notice thereof is delivered to the Trustees, and an amendment to this Master Deed is recorded by the Unit Owner(s) causing such division or combination. Such amendment shall be in a form reasonably satisfactory to the Trustees, shall be in accordance with Chapter 183A, and shall contain (i) a description of the newly created Unit(s), (ii) amended floor plans showing the Unit(s) created thereby, (iii) a revised Exhibit B to the Master Deed setting forth the new percentage interest(s) of each Unit, provided that in the case of any subdivision of a Unit, the Trustees shall be entitled to approve the reallocation of the percentage interests of the original Unit among the owners of the newly created Units, which approval shall not be unreasonably withheld, conditioned or delayed, (iv) a description of any changes to the Common Elements or Shared Facilities resulting from such subdivision or combination, and (v) a description of any new limited common elements created in connection with such subdivision or combination. The costs and expenses of recording, preparing and reviewing the foregoing amendment (including attorneys' fees) shall be borne by the Unit Owner(s) undertaking the subdivision, combination or reconfiguration.

By the acceptance of a Unit deed (whether such deed is from the Declarant as grantor or from any other party), each Unit Owner hereby expressly and irrevocably authorizes and constitutes as such owner's attorney-in-fact, the Unit Owner(s) electing to subdivide, combine or reconfigure such Unit(s) to

make any and all such amendments and, to the extent such execution may be required by applicable law, to execute any such amendment on such Unit Owner's behalf. This power of attorney is coupled with an interest, and hence shall be irrevocable and shall be binding upon each and every present and future owner of a Unit.

Section 10.3. Insurance Requirements.

Any Unit Owner(s) undertaking construction in its Unit shall maintain additional insurance in full force and effect throughout the construction period, as may be required by the Trustees. The Unit Owner(s) further agree that (i) any construction shall be performed in a good and workmanlike manner and otherwise be made in compliance with this Master Deed, the Trust and all Legal Requirements; and (ii) all construction activities shall be performed in such a manner as not to interfere unreasonably with any other Unit Owner's use or enjoyment of its Unit or the Common Elements or Shared Facilities. Any Unit Owner performing such work shall be responsible for any damage to other Units or any Common Elements or Shared Facilities caused by or attributable to such work and the Trustees shall have no liability therefor.

ARTICLE 11 – INTENTIONALLY OMITTED

ARTICLE 12 - AMENDMENT AND MORTGAGEE PROVISIONS

12.1 Except as otherwise provided in this Master Deed, this Master Deed may be amended only by an instrument in writing (i) signed by the Unit Owners entitled to sixty percent (60%) or more of the undivided interests in the Common Elements; (ii) duly recorded with the Registry; and (iii) which meets the following requirements:

(1) The date on which any such instrument of amendment is first signed by a Unit Owner shall be indicated on the instrument as the date thereof. No such instrument shall be of any force or effect unless it has been so recorded within six (6) months after such date;

(2) No instrument of amendment which alters the dimensions or percentage of the undivided interest in the Common Elements or Shared Facilities of any Unit or materially adversely affects a Unit Owner's other appurtenant rights or easements shall be of any force or effect unless signed by the Unit Owner whose rights are so affected;

(3) No instrument of amendment affecting any Unit in a manner which impairs the security of a Mortgage held by a Mortgagee listed with the Trustees as provided in the Trust shall be of any force or effect unless the same has been consented to by such Mortgagee. No amendment of this Master Deed pursuant to the specific provisions hereof relative to subdivisions, partitions and/or combination of Units, shall be treated as an instrument impairing the security of any mortgage other than the Mortgage(s) securing such Units. Any consent of Mortgagees required under this Article 12 or under any other provision of this Master Deed shall not be unreasonably withheld, conditioned or delayed, and no consent of Mortgagees required under Chapter 183A shall be withheld unless the interests of the Mortgagee would be impaired by the proposed action, and failure of any such holder who receives a written request for such consent to deliver or mail a response thereto within thirty (30) days, unless otherwise specified in Chapter 183A, shall be deemed to be the giving of such consent by such holder. The consent of such holder(s) shall be recited in any instrument of amendment requiring the same;

(4) Nothing in this Article 12 shall be deemed to impair the right of the Declarant, until the Declarant or an entity controlled by Declarant no longer holds title to any Unit, or the Trustees thereafter, to amend, alter, add to or change this Master Deed without the consent of any other Unit

Owner(s) (or any Mortgagee thereof), the Trustees, or any other person or entity, by an instrument in writing signed and acknowledged by the Declarant or the Trustees, as applicable, and duly recorded with the Registry, for the specific purposes of: (i) making minor, clerical or factual corrections to the provisions of this Master Deed or any Plan; or (ii) complying with requirements of the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Home Loan Mortgage Corporation, or any other governmental agency or any other public or private entity which performs (or may in the future perform) functions similar to those currently performed by such entities in order to induce any of such agencies or entities to make, purchase, sell, insure or guarantee mortgages covering Unit ownerships; or (iii) bringing this Master Deed into compliance with Chapter 183A, to the extent of any non-compliance, in each case to the extent that the amendment does not materially and adversely affect any Unit Owner's use and enjoyment of its Unit or any portion of the Common Elements or Shared Facilities and other rights appurtenant thereto;

(5) No instrument of amendment which affects the Declarant's rights hereunder, including its rights under Sections 9.8, 10.1, 10.2 and 12.4, shall be effective unless, in addition to the voting requirements specified above, such amendment is signed by the Declarant; and

(6) No instrument of amendment which alters this Master Deed in any manner which would render it contrary to or inconsistent with any requirements or provisions of Chapter 183A shall be of any force or effect.

12.2 Notwithstanding any provision of this Master Deed to the contrary, no instrument of amendment which alters this Master Deed in any manner or any other action requiring the consent of Unit Owners, which amendment or other action would adversely impact Unit 1 or Unit 2 or said Units' rights or percentage interest in the Common Elements or Shared Facilities shall be effective unless such amendment is approved in writing by the Unit Owners entitled to sixty percent (60%) or more of the undivided interests in the Common Elements.

ARTICLE 13 - ORGANIZATION OF UNIT OWNERS

The Unit Owners will manage and regulate the Condominium through the Trust. The Trust establishes a membership organization of which all Unit Owners shall be members and in which such Unit Owners shall have beneficial interests in proportions equal to the percentages of undivided interests respectively in Common Elements set forth in Exhibit B.

The trustees of the Trust shall be appointed in the manner and in the timeframe provided for in the Trust.

ARTICLE 14 - TERMINATION OF CONDOMINIUM

The Condominium shall continue and shall not be subject to an action for partition (unless terminated by casualty, loss, condemnation, or eminent domain, as more particularly described in the Trust) until such time as its withdrawal from the provisions of Chapter 183A is authorized by unanimous vote of the Unit Owners. No such vote shall be effective, however, without the written consent (which consent shall not be unreasonably withheld, conditioned or delayed) of any Mortgagee of a Unit, and failure of any such Mortgagee who receives a written request for such consent to deliver or mail a response thereto within thirty (30) days, unless otherwise specified in Chapter 183A, shall be deemed to be the giving of such consent by such Mortgagee. In the event such withdrawal is authorized, the Condominium shall be subject to an action for partition by any Unit Owner as if owned in common, in which event the net proceeds of sale shall be divided among all Unit Owners in proportion to their respective percentage interests in the Common Elements; provided, however, that no payment shall be made to a Unit Owner until all liens on its Unit have been satisfied in full in the order of priority of the liens.

ARTICLE 15 - MISCELLANEOUS

Section 15.1. Chapter 183A. This Master Deed is intended to comply with the requirements of Chapter 183A. In all respects not specified in this Master Deed and the Trust, the relationship of the Units, the Common Elements, the Unit Owners and the Trustees to each other and the Condominium shall be governed by provisions of Chapter 183A, including, without limitation, provisions with respect to common expenses, funds and profits, improvement and rebuilding of common areas and facilities, and removal of the Condominium or any portion thereof from the provisions of Chapter 183A. In case any of the provisions of this Master Deed conflict with the provisions of Chapter 183A, the provisions of Chapter 183A shall control.

Section 15.2. Covenants Running with the Land. All provisions of this Master Deed and the Trust shall, to the extent applicable, and unless otherwise expressly herein or therein provided to the contrary, be perpetual and be construed to be covenants running with the Land and with every part thereof and interest therein, and all of the provisions hereof and thereof shall be binding upon and inure to the benefit of the owners of all or any part thereof, or interest therein, and their heirs, executors, administrators, legal representatives, successors and assigns, but the same are not intended to create, nor shall they be construed as creating, any rights in or for the benefit of the general public. All present and future owners, tenants, subtenants, licensees, and other occupants of Units shall be subject to and shall comply with the provisions of this Master Deed and the Trust, as the same may be amended from time to time. The acceptance of a deed or the execution of a lease or the entering into occupancy of any Unit shall constitute an agreement that the provisions of this Master Deed and the Trust, as the same may be amended from time to time, are accepted and ratified by such owner, tenant or occupant, and all such provisions shall be deemed and taken to be covenants running with the Land and shall bind any person

having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every deed, lease or use and occupancy agreement thereof.

Section 15.3. Trustees' Right to Cure. If any Unit Owner shall fail to perform any work or take any action required to be done or taken by such Unit Owner pursuant to this Master Deed or the Trust, the Trustees, after given written notice to the Mortgagee of such Unit of such failure to perform or take action and allowing such Mortgagee not less than thirty (30) days (or such reasonable shorter period in case of emergency as the Trustees shall determine) to cure any such failure may, but shall not be required to, perform such work or take such action and so assess such Unit Owner for the costs thereof, for which such Unit Owner shall be personally liable for in addition to and as part of such Unit Owner's share of the Common Elements, and until such charges are paid by such Unit Owner, the same shall constitute a lien against such Unit pursuant to the provisions of this paragraph and the provisions of Chapter 183A, Section 6. Further, in addition to any late charges which may be imposed by the Trustees on account of any delinquency by a Unit Owner in the payment of charges assessed to such Unit under this Master Deed and/or the Trust, the amount of any such charge shall bear interest from the date on which such charge was first due until paid at the rate of eighteen percent (18%) per annum. Such accrued interest, together with the reasonable cost of collection of any such charges (including reasonable attorneys' fees) shall be added to the amount of such charge and shall, as in the case of such charge, constitute a lien on such Unit under the terms of Chapter 183A, Section 6.

Section 15.4. Construction. Words used in the singular or in the plural, respectively, include both the plural and the singular, words denoting males include females, and words denoting persons include individuals, firms, associations, companies (joint stock or otherwise), trusts, and corporations unless a contrary intention is to be inferred from or required by the subject matter or context. Any cover, captions, and table of contents are inserted only for convenience of reference and are not to control or affect the meaning, construction, interpretation, or effect of this Master Deed. Unless the context otherwise indicates, words defined in Chapter 183A shall have the same meaning herein as defined in such statute. References in the descriptions contained in this Master Deed or the Plan which include terms like "storage area or room," and the like are made only for the sake of convenience and shall not imply any limitation on the use of such areas .

Section 15.5. Declarant. In the event there are any unsold Units, the Declarant shall have the same rights and obligations as other Unit Owners with respect to such unsold Units. The Declarant's rights as declarant are assignable to a successor declarant, provided that any such assignee of the Declarant assumes and agrees to be bound by all of the obligations of the Declarant set forth in this Master Deed.

Section 15.6. Severability. The invalidity of any provision of this Master Deed shall not impair or affect the validity of the remainder of this Master Deed. In such event, all of the other provisions of this Master Deed shall continue in full force and effect as if such invalid provisions had never been included herein.

Section 15.7. Waiver. No provision of this Master Deed shall be deemed to have been abrogated or waived by reason of any failure to enforce such provision, irrespective of the number of violations or breaches which may occur.

Section 15.8. Counterparts. This instrument may be executed in any number of duplicate counterparts, each of which shall be deemed an original for all purposes.

Section 15.9. Dispute Resolution.

(a) Mediation. The Trustees, Unit Owners and the Declarant (collectively, the "Parties") shall cooperate with each other to assure that all disputes and controversies which arise in connection with the Parties' respective rights and obligations pursuant to this Master Deed and/or the Declaration of Trust and/or the Declaration of Trust are resolved as expeditiously as possible. If the Parties are unable to resolve any dispute arising hereunder the matter shall be submitted to non-binding mediation as follows. Within five (5) business days after any Party has given written notice to another Party that a dispute has arisen under the Master Deed and/or the Declaration of Trust which the Parties cannot after good faith efforts resolve and which the Party giving such notice wants to submit to mediation pursuant to this Section, each Party shall select an independent mediator with at least ten years of experience in the matter under dispute in the City of Boston. Within five (5) business days thereafter, the mediators selected by the Parties shall select a third, neutral mediator (the "Mediator") who shall mediate the dispute in question. If the mediators selected by the Parties cannot agree upon a third, neutral mediator within the time period specified herein, the matter shall be submitted to Endispute, Inc., 73 Tremont Street, Boston, Massachusetts or another mutually agreeable mediation service, for resolution.

(b) Authority and Fees and Costs of Mediator. The Mediator selected through the procedures outlined above shall have the authority to retain such experts as the Mediator deems necessary or desirable to render findings of fact and a decision. Such findings of fact and decision shall be rendered within sixty (60) days after the Mediator's engagement. The fees and costs of the Mediator (and experts, as applicable) shall be borne equally by the Parties involved in such mediation.

(c) Rights of Parties during Pendency of Mediation. During the pendency of any of the foregoing dispute resolution procedures, the Parties shall continue to perform their respective obligations and may continue to exercise their respective rights pursuant to this Master Deed and/or the Declaration of Trust, except if the performance of such obligations or the exercise of such rights are the subject of such dispute resolution procedures.

(d) Non-Action by Mediator. Should the Mediator fail to render the findings of fact and decision within such sixty (60) day period any Party may thereafter submit such matter to a court of competent jurisdiction.

(e) Further Remedies. The Parties agree that no claim, dispute or controversy arising pursuant to this Master Deed and/or the Declaration of Trust shall be brought before any court without first having been submitted to the dispute resolution procedures outlined above, except (A) for claims concerning any failure by any Party to fulfill any payment obligation of such Party under this Master Deed and/or the Declaration of Trust, (B) for claims that would otherwise be barred by reason of any applicable statute of limitations and (C) for claims seeking injunctive relief brought in accordance with and subject to the terms and conditions of the immediately following grammatical sentence. In the event that any Party determines in its good faith business judgment that any action or non-action on the part of another Party is in violation of the terms of this Master Deed and/or the Declaration of Trust and will have an immediate and material adverse effect on any substantive, material right, easement or license of such Party under this Master Deed and/or the Declaration of Trust, then such Party shall have the right to seek injunctive relief in a court of competent jurisdiction without first submitting such claim or controversy to the dispute resolution procedures herein provided. The Parties hereby agree that such disputes or controversies as cannot be resolved through the dispute resolution procedures outlined herein or otherwise may be submitted to a court of competent jurisdiction and each of the Parties hereby waives its right to a jury trial with respect to any claim or action arising out of any dispute or controversy in connection with this Master Deed and/or the Declaration of Trust, any rights or obligations hereunder or

the performance of any such rights or obligations. The Parties hereby agree that the mediator's findings of fact and decision shall be non-binding with respect to such litigation.

IN WITNESS HEREOF, the undersigned Declarant has caused this Master Deed to be executed under seal, as of the day and year first above written.

MT. AUBURN HOSPITAL

By: Peter Semenza
Name: PETER SEMENZA
Title: CFO.
Hereunto duly authorized

COMMONWEALTH OF MASSACHUSETTS)

COUNTY OF Middlesex) ss

November 22, 2006

On this 22nd day of November, 2006, before me, the undersigned notary public, personally appeared Peter Semenza, proved to me through satisfactory evidence of identification which was (Unknown to me) to be the person whose name is signed on the preceding document and acknowledged to me that he/she signed it voluntarily for its stated purpose as the CFO of Mt. Auburn Hospital.

Susan Kaufman
Notary Public [signature and seal of notary] Susan Kaufman
My Commission expires: 2/20/09

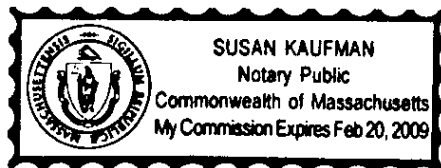


EXHIBIT A

**LEGAL DESCRIPTION OF FEE AREA
AND EXISTING ENCUMBRANCES**

[Attached behind]

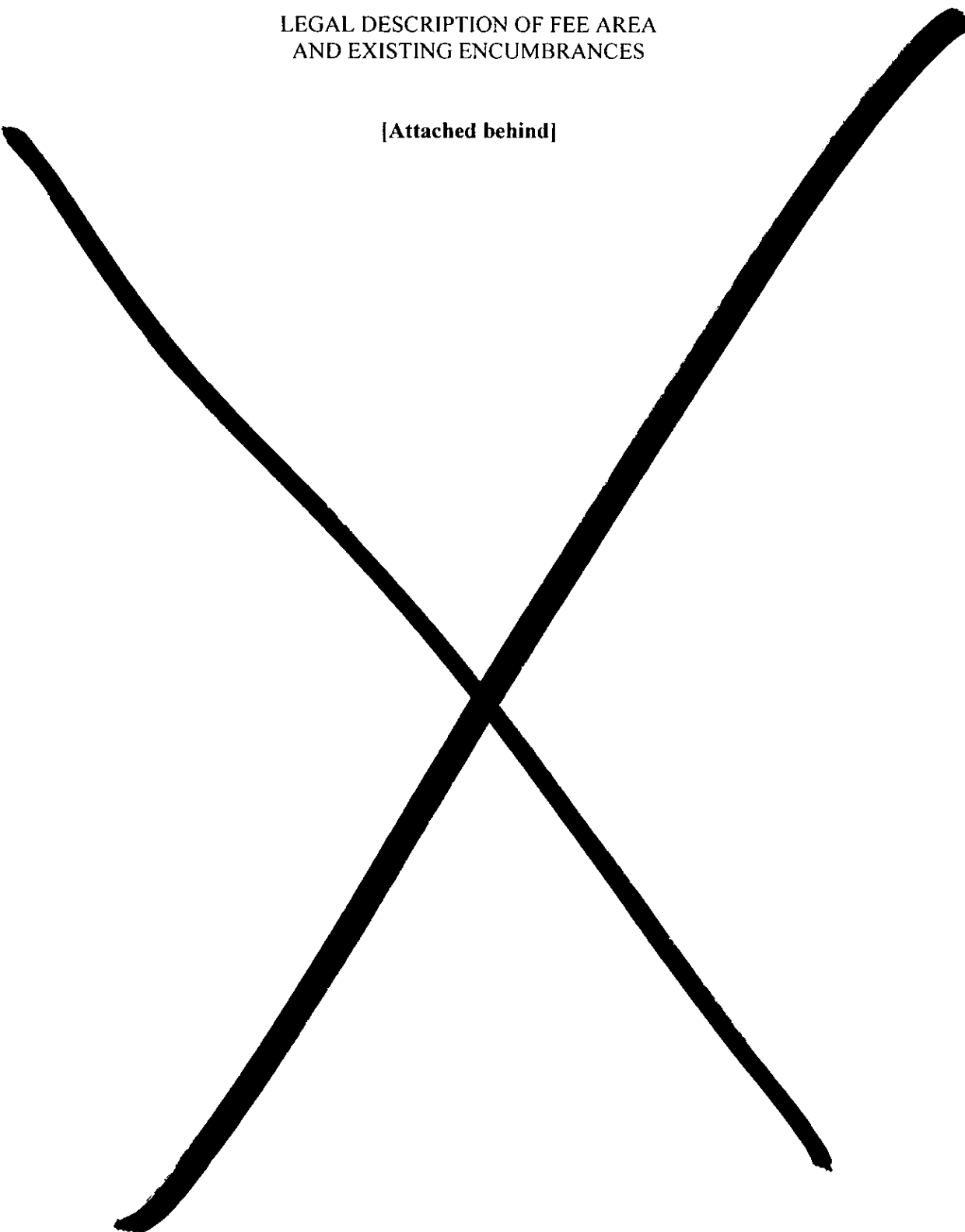


EXHIBIT "A"

A certain parcel of land with the buildings, facilities and improvements now and hereafter thereon situated on Mount Auburn Street, Memorial Drive, and the Charles River Reservation in Cambridge, Middlesex County, Massachusetts, shown on a plan entitled "Plan of Land in Cambridge, Mass. Property of Mount Auburn Hospital" dated August 1, 1958 by Schofield Brothers, Registered Civil Eng'rs. and filed with Middlesex South District Deeds as Plan No. 279 of 1963 at the end of Book 10226, and bounded and described as follows:

Beginning at the northwesterly corner of said premises on the southerly side of Mount Auburn Street; thence running

S 85°12'50" E	by Mount Auburn Street, 902.93 feet; thence
S 4°47'10" W	by land formerly of President and Fellows of Harvard College, 166.44 feet; thence
S 16°23'00" E	by said Harvard College land, 102.31 feet; thence
SOUTHWESTERLY	by Memorial Drive by a curve to the left with a radius of 777.50 feet and a length of 84.35 feet; thence
S 43°47'38" W	by Memorial Drive, 200 feet; thence
SOUTHWESTERLY	
and WESTERLY	by Memorial Drive by a curve to the right with a radius of 200 feet and a length of 175.39 feet; thence
N 52°07'27" W	by the Charles River Reservation, 122.37 feet; thence
N 55°22'46" W	by the Reservation, 462.90 feet; thence
N 4°49'20" W	by the Reservation, 4.04 feet; thence NORTHWESTERLY by the Reservation by a curve to the left with a radius of 572.51 feet and a length of 57.72 feet; thence
NORTHWESTERLY	by the Reservation by a curve to the left with a radius of 3574.39 feet and a length of 47.42 feet; and thence
N 4°47'10" E	by land now or formerly of the Cambridge Homes for Aged People 220.25 feet to the point of beginning.

Containing, according to the plan, 8 acres and 18,248 square feet.

Existing Encumbrances

1. Title to and rights of the public and others entitled thereto in and to those portions of the premises lying within the bounds of Mount Auburn Street and any adjacent streets and ways.

2. Rights to slope and easements granted by Cambridge Hospital to the City of Cambridge by deed of land now within Memorial Drive dated May 26, 1900 and recorded in Book 2836, Page 204.

3. Rights and restrictive covenants as set forth in Deed from the Commonwealth of Massachusetts dated June 15, 1898, recorded in Book 2667, Page 201; as modified at Book 5306, Page 394.

4. Rights and easements for a main drain and common sewer as set forth in Indenture by and between Mount Auburn Hospital and the City of Cambridge recorded in Book 11796, Page 55.

5. Rights and restrictions as contained in Notice of Activity and Use Limitation by Mount Auburn Hospital, dated July 20, 1995 and recorded in Book 25628, Page 13.

6. Terms and provisions of a Decision granting Variance by the City of Cambridge Board of Zoning Appeal, Notice of which is recorded in Book 34834, Page 148.

7. Terms and provisions of lease agreement with Mount Auburn Hospital, as Landlord and Sprint Spectrum, L.P., notice of which is provided by Memorandum of PCS Site Agreement, dated April 29, 2002 and recorded in Book 35613, Page 413; as affected by terms and provisions of Decision granting Variance by the City of Cambridge Board of Zoning Appeal, Notice of which is recorded in Book 36252, Page 436.

8. Terms and provisions of Decision granting Variance by the City of Cambridge Board of Zoning Appeal, Notice of which is recorded in Book 43024, Page 442.

EXHIBIT B

**CONDOMINIUM UNITS AND
PERCENTAGE INTEREST IN COMMON ELEMENTS**

<u>Unit</u>	<u>% Interest in Common Elements</u>
1	22.1%
2	8.4%
3	64.1%
4	2.4%
5	3.0%

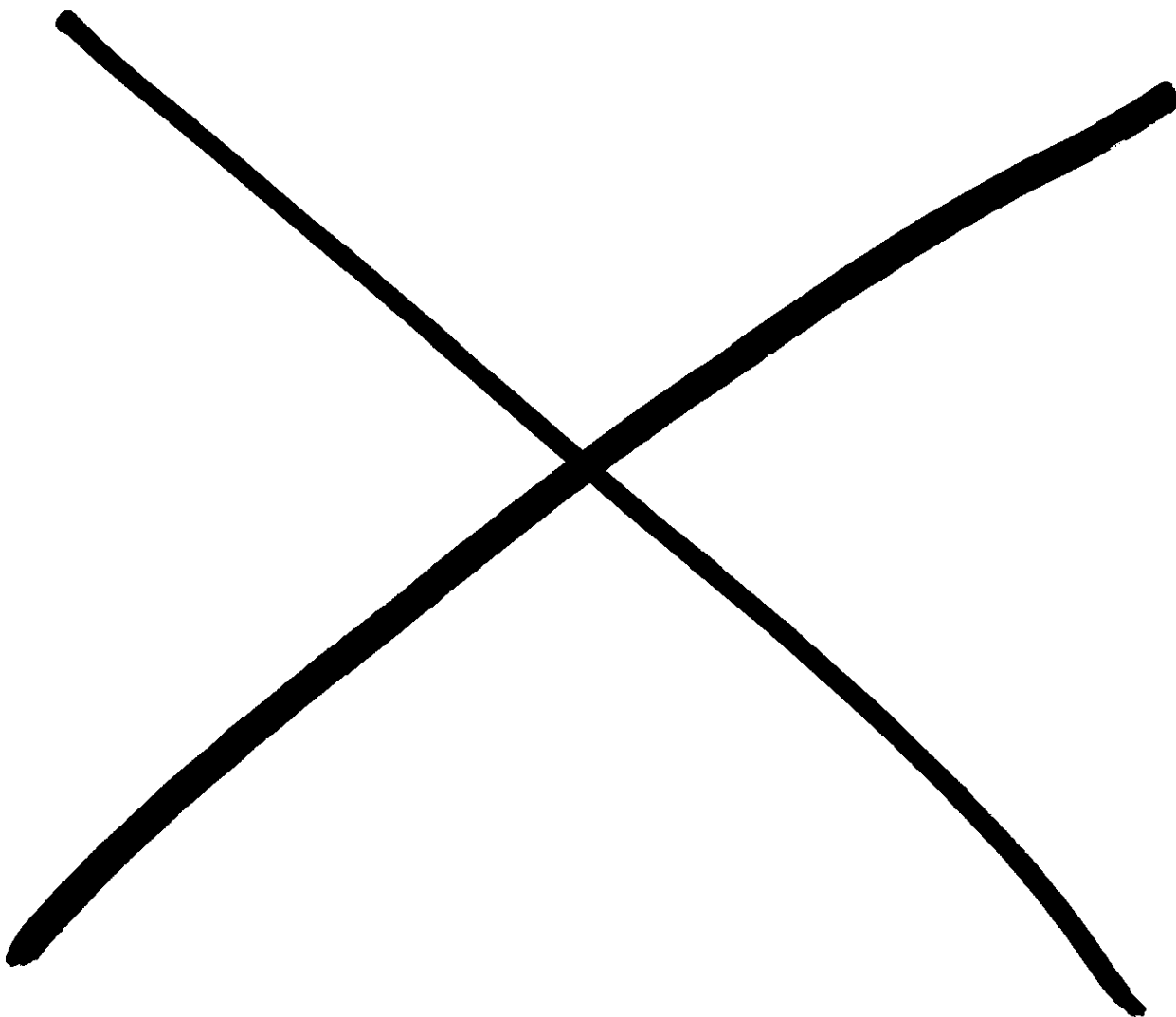
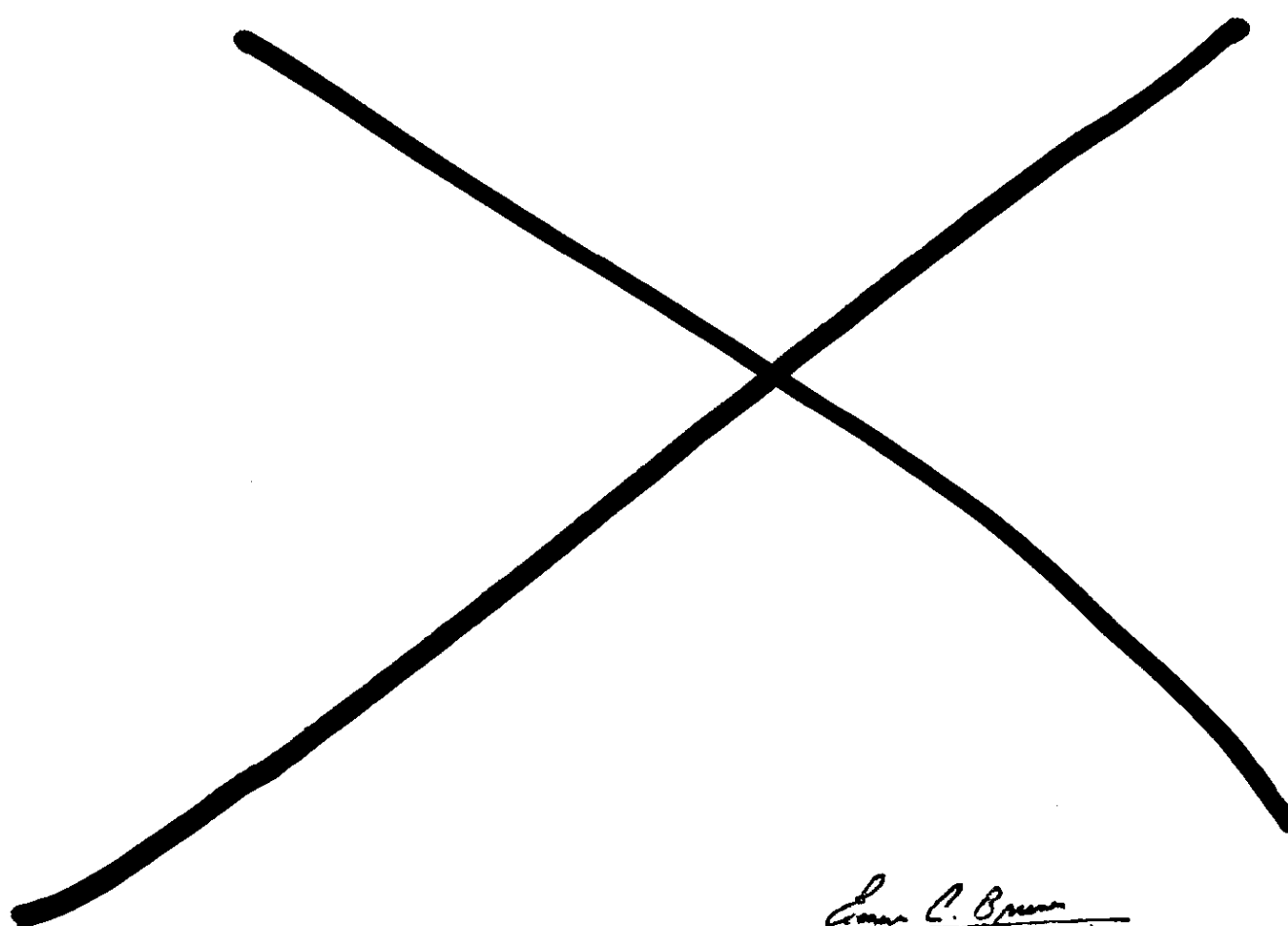


EXHIBIT C

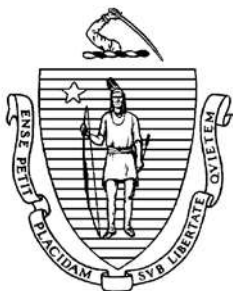
PLAN

Plan entitled "Mount Auburn Hospital Mount Auburn Street in Cambridge Massachusetts Middlesex County Condominium Master Plan," dated January 25, 2005 and certified by BSC Group on December 6, 2006.



James C. Brown
Attest. Middlesex S. Register

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MARTHA COAKLEY
ATTORNEY GENERAL

THE COMMONWEALTH OF MASSACHUSETTS OFFICE OF THE ATTORNEY GENERAL

CENTRAL MASSACHUSETTS DIVISION
10 MECHANIC STREET, SUITE 301
WORCESTER, MA 01608

(508) 792-7600
(508) 795-1991 fax
www.mass.gov/ago

June 12, 2013

Gail Garrett, Town Clerk
Town of Mount Washington
118 East Street
Mount Washington, MA 01258

**RE: Mount Washington Special Town Meeting of April 1, 2013 - Case # 6642
Warrant Articles # 1, 2, and 3 (Zoning)**

Dear Ms. Garrett:

Articles 1, 2, and 3 - We approve the amendments to the Town by-laws adopted under Articles 1, 2, and 3 on the warrant for the Mount Washington Special Town Meeting that convened on April 1, 2013, and the map pertaining to Article 3. Our comments on Articles 1 and 2 are provided below.

Article 1 - The amendments adopted under Article 1 add a new Section 215-27 to the zoning by-laws entitled "Wireless Telecommunication Facility Zoning Bylaw." We approve the new Section 215-27, but offer the following comments.

I. Applicable Law

The federal Telecommunications Act of 1996, 47 U.S.C. § 332 (7) preserves state and municipal zoning authority to regulate personal wireless service facilities, subject to the following limitations:

1. Zoning regulations "shall not unreasonably discriminate among providers of functionally equivalent services." 47 U.S.C. §332(7) (B) (i) (I)
2. Zoning regulations "shall not prohibit or have the effect of prohibiting the provisions of personal wireless services." 47 U.S.C. § 332 (7) (B) (i) (II).
3. The Zoning Authority "shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time." 47 U.S.C.

§ 332 (7) (B) (ii).

4. Any decision “to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.” 47 U.S.C. § 332 (7) (B) (iii).
5. “No state or local government or instrumentality thereof may regulate the placement, construction and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [Federal Communications] Commission’s regulations concerning emissions.” 47 U.S.C. § 332(7) (B) (iv).

Federal courts have construed the limitations listed under 47 U.S.C. § 332(7) as follows. First, even a facially neutral by-law may have the effect of prohibiting the provision of wireless coverage if its application suggests that no service provider is likely to obtain approval. “If the criteria or their administration effectively preclude towers no matter what the carrier does, they may amount to a ban ‘in effect’...” Town of Amherst, N.H. v. Omnipoint Communications Enters, Inc., 173 F.3d 9, 14 (1st Cir. 1999).

Second, local zoning decisions and by-laws that prevent the closing of significant gaps in wireless coverage have been found to effectively prohibit the provision of personal wireless services in violation of 47 U.S.C. § 332(7). See, e.g., Nat’l Tower, LLC v. Plainville Zoning Bd. of Appeals, 297 F.3d 14, 20 (1st Cir. 2002) (“local zoning decisions and ordinances that prevent the closing of significant gaps in the availability of wireless services violate the statute”); Omnipoint Communications MB Operations, LLC v. Town of Lincoln, 107 F. Supp. 2d 108, 117 (D. Mass. 2000) (by-law resulting in significant gaps in coverage within town had effect of prohibiting wireless services).

Third, whether the denial of a permit has the effect of prohibiting the provision of personal wireless services depends in part upon the availability of reasonable alternatives. See 360 Degrees Communications Co. v. Bd. of Supervisors, 211 F.3d 79, 85 (4th Cir. 2000). Zoning regulations must allow cellular towers to exist somewhere. Towns may not effectively ban towers throughout the municipality, even under the application of objective criteria. See Virginia Metronet, Inc. v. Bd. of Supervisors, 984 F. Supp. 966, 971 (E.D. Va. 1998).

State law also establishes certain limitations on a municipality’s authority to regulate wireless communications facilities and service providers. Under General Laws Chapter 40A, Section 3, wireless service providers may apply to the Department of Telecommunications and Cable for an exemption from local zoning requirements. If a telecommunication provider does not apply for or is not granted an exemption under c. 40A, § 3, it remains subject to local zoning requirements pertaining to cellular towers. See Building Comm’r of Franklin v. Dispatch Communications of New England, Inc., 48 Mass. App. Ct. 709, 722 (2000). Also, G.L. c. 40J, § 6B, charges the Massachusetts Broadband Institute with the task of promoting broadband access throughout the state. Municipal regulation of broadband service providers must not frustrate the achievement of this statewide policy.

In addition, Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012

requires 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.” (emphasis added). The Act defines “eligible facilities request” as any request for modification of an existing wireless tower or base station that involves: 1) collocation of new transmission equipment; 2) removal of transmission equipment; or 3) replacement of transmission equipment. The Act applies “[n]otwithstanding section 704 of the Telecommunications Act of 1996.” The Act’s requirement that a local government “may not deny, and shall approve, any eligible facilities request” means that a request for modification to an existing facility that does not substantially change the physical dimensions of the tower or base station must be approved. Such qualifying requests also cannot be subject to a discretionary special permit.

We approve the new Section 215-27. However, the Town must apply the by-law in a manner consistent with the applicable law outlined above. In particular, Section IV of the new by-law requires that Wireless Telecommunication Facilities are only allowed by special permit in the Wireless Telecommunication Overlay District. This requirement cannot be applied to eligible facilities requests for modification to existing facilities which qualify for required approval under Section 6409 of the Act, as described above. We urge the Town to consult closely with Town Counsel regarding the appropriate response to applications for collocation in light of these recent amendments.

II. Analysis of Mount Washington’s Wireless Telecommunication Facility By-Law

A. Section VIII “Criteria For Approval and Conditions”.

This section provides as follows:

5. The applicant will remove the Facility, should the Facility be abandoned or cease to operate. The Planning Board may require the applicant to provide a bond, or other form of financial guarantee acceptable to the Planning Board to cover the cost of removal of the Facility, should the Facility be abandoned or cease to operate, and ensure other compliance hereunder.

The Town must apply any bond or other financial guarantee proceeds in a manner consistent with state law. Bond proceeds do not become Town funds unless and until the applicant defaults on the obligation under the proposed by-law. Moreover, if the Town must use the bond to pay for removal of a wireless communication facility or the repair and/or restoration of the premises, an appropriation is required before expenditure is made to do the work. General Laws Chapter 44, Section 53, provides that “[a]ll moneys received by a city, town or district officer or department, except as otherwise provided by special acts and except fees provided for by statute, shall be paid by such officers or department upon their receipt into the city, town or district treasury.” Under Section 53 all moneys received by the Town become a part of the general fund, unless the Legislature has expressly made other provisions that are applicable to such receipt. In the absence of any general or special law to the contrary, performance security funds of the sort contemplated here must be deposited with the Town Treasurer and made part of the Town’s general fund, pursuant to G.L. c. 44, § 53. The Town must then appropriate the money for the specific purpose of completing the work required for removal and/or restoration.

B. Section X “Permit Revocation For Non-Performance”.

Section X authorizes the Planning Board to revoke a special permit for failure to comply with certain conditions. We approve Section X. However, before the Planning Board revokes a permit for failure to comply with certain conditions provided in Section X, the Planning Board should discuss with Town Counsel what due process, including notice and hearing requirements, are required. We suggest that the Town discuss this issue in more detail with Town Counsel.

Finally, the word “ordinance” is used in the by-law. Towns enact “by-laws” and cities enact “ordinances.” The Town may wish delete the word “ordinance” from the new Section 215-27 and insert the word “by-law” at a future Town Meeting.

Article 2 - The amendments adopted under Article 2 add a new Section 215-28, “Solar Photovoltaic Installation Moratorium Bylaw,” to the Town’s zoning by-laws. The temporary moratorium (through one year from the date of enactment of Section 215-28) on solar photovoltaic installation other than those mounted on an existing structure provides as follows:

Whereas, the Town of Mount Washington is undertaking a comprehensive study with respect to regulating the use of land for Solar Photovoltaic Installations, and

Whereas, there have been significant changes in law regarding Solar Photovoltaic Installations; and,

Whereas, the Town wishes to act carefully in a field with evolving law and technology, to investigate ways to preserve the character of the community while serving the needs of its people, and to devise an orderly process for granting permits by drafting an amendment to the Bylaw which is comprehensive, practical, equitable, and addresses the concerns of the Town on number, size, appearance, site standards, and location of Solar Photovoltaic Installations; and,

Whereas, it is desired to protect the Town from ill-advised and inappropriate development of Solar Photovoltaic Installations pending a thorough review and the formulation of such a zoning amendment; and,

Whereas, the Planning Board has determined that one year is necessary for such a comprehensive review and development of a Bylaw Subsection on Solar Photovoltaic Installations.

Now, therefore, no Solar Photovoltaic Installations other than those mounted on an existing structure, in the usual manner, shall be permitted for one year from the date of enactment of this Bylaw.

We approve the temporary moratorium adopted under Article 2 because the Town has the authority to “impose reasonable time limitations on development, at least where those restrictions are temporary and adopted to provide controlled development while the municipality engages in comprehensive planning studies.” Sturges v. Chilmark, 380 Mass. 246, 252-253 (1980). Such a temporary moratorium is within the Town’s zoning power where there is a stated need for “study, reflection and decision on a subject matter of [some] complexity...” W.R.

Grace v. Cambridge City Council, 56 Mass. App. Ct. 559, 569 (2002) (City’s temporary moratorium on building permits in two districts was within city’s authority to zone for public purposes.) The time limit Mount Washington has selected for its temporary moratorium (one year from the date of enactment of the by-law) appears to be reasonable in the circumstances. The moratorium is limited in time period and scope (to the use of land and structures for solar photovoltaic installations), and thus does not present the problem of a rate-of-development bylaw of unlimited duration which the Zuckerman court determined was unconstitutional. Zuckerman v. Hadley, 442 Mass. 511, 512 (2004) (“[A]bsent exceptional circumstances not present here, restrictions of unlimited duration on a municipality’s rate of development are in derogation of the general welfare and thus are unconstitutional.”)

While we approve the temporary one year moratorium on solar photovoltaic installations, we note that G.L. c. 40A, § 3, protects solar energy systems and the building of structures that facilitate the collection of solar energy from certain local zoning requirements. General Laws Chapter 40A, Section 3, provides in pertinent part as follows:

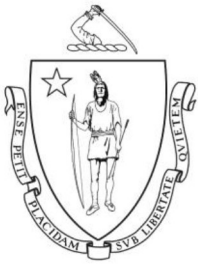
No zoning ordinance or by-law shall prohibit or unreasonably regulate the installation of solar energy systems or the building of structures that facilitate the collection of solar energy, except where necessary to protect the public health, safety or welfare.

General Laws Chapter 40A, Section 3, prohibits towns from adopting zoning by-laws that prohibit or *unreasonably regulate* the installation of solar energy systems or the building of structures that facilitate the collection of solar energy, except where necessary to protect the public health, safety or welfare. A temporary moratorium longer than one year may be vulnerable to a challenge in court that it is an unreasonable regulation of solar energy systems under G.L. c. 40A, § 3. We suggest the Town consult closely with Town Counsel on this issue.

Note: Pursuant to G.L. c. 40, § 32, neither general nor zoning by-laws take effect unless the Town has first satisfied the posting/publishing requirements of that statute. Once this statutory duty is fulfilled, (1) general by-laws and amendments take effect on the date these posting and publishing requirements are satisfied unless a later effective date is prescribed in the by-law, and (2) zoning by-laws and amendments are deemed to have taken effect from the date they were approved by the Town Meeting, unless a later effective date is prescribed in the by-law.

Very truly yours,
MARTHA COAKLEY
ATTORNEY GENERAL
Kelli E. Gunagan
By: Kelli E. Gunagan
Assistant Attorney General
Municipal Law Unit
10 Mechanic Street, Suite 301
Worcester, MA 01608
(508) 792-7600

cc: Town Counsel Joel Bard (via electronic mail)



THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL

CENTRAL MASSACHUSETTS DIVISION
10 MECHANIC STREET, SUITE 301
WORCESTER, MA 01608

MAURA HEALEY
ATTORNEY GENERAL

(508) 792-7600
(508) 795-1991 fax
www.mass.gov/ago

February 23, 2015

Debra A. Bourbeau, Town Clerk
Town of Montague
1 Avenue A
Montague, MA 01376

**RE: Montague Special Town Meeting of October 29, 2014 - Case # 7451
Warrant Article # 17 (Zoning)**

Dear Ms. Bourbeau:

Article 17 - We approve Article 17 from the October 29, 2014 Montague Special Town Meeting. Article 17 amends several portions of the Town's zoning by-laws pertaining to site plan review.

1. Section 5.2 (d), Permitted Uses and Special Permits - Procedures

Section 5.2 (d) was deleted in its entirety and replaced with new text that provides as follows (with emphasis added):

All applications for Special Permits and Site Plan Review from the Board of Appeals or the Planning Board shall be subject to the procedural requirements established by the respective Board. The Board of Appeals or Planning Board may determine that the assistance of outside professional expertise is required due to the size, scale, or complexity of a given project or its potential impact on the health, safety, and welfare of the Town. When outside review is determined to be necessary, the Board may require the applicant pay all reasonable expenses for this purpose, in accordance with the Board's regulations and M.G.L. Chapter 44 Section 53G.

General Laws Chapter 44, Section 53G, authorizes zoning boards, planning boards, boards of health, and conservation commissions, acting under authority conferred by G.L. c. 40A, § 9 and 12, c. 41, § 81Q, c. 40B, § 21, c. 111; and c. 40, § 8C, to impose consultant review fees, to disburse the funds collected, and to return unused portions to the applicant. However, the Legislature did not include Boards acting under the authority conferred solely by a local law within the small class of local boards that enjoy the benefits of G.L. c. 44, § 53G. When the Board is reviewing a site plan application based solely on the authority granted under local law, it cannot avail itself of the provisions of G.L. c. 44, § 53G. We suggest that the Town discuss this issue in more detail with Town Counsel.

2. Section 7.5.2, Telecommunication Facilities - General Provisions

Section 7.5.2, was deleted in its entirety and replaced with new text that provides as follows:

Telecommunication Facilities may be allowed by Special Permit from the Board of Appeals pursuant to Sections 5.2 and Section 7.5. Conditions shall maximize the shared use of any new or existing structures to minimize the required number of such facilities; and shall minimize[e] adverse visual impacts through careful design, siting, and screening. No facility shall be located in a (RS) Residential District. (see: Section 2, Definitions).

Section 7.5.2 must be applied in a manner consistent with Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012, which requires 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.” (emphasis added). The Act defines “eligible facilities request” as any request for modification of an existing wireless tower or base station that involves: 1) collocation of new transmission equipment; 2) removal of transmission equipment; or 3) replacement of transmission equipment. The Act applies “[n]otwithstanding section 704 of the Telecommunications Act of 1996.” The Act’s requirement that a local government “may not deny, and shall approve, any eligible facilities request” means that a request for modification to an existing facility that does not substantially change the physical dimensions of the tower or base station must be approved. Such qualifying requests also cannot be subject to a discretionary special permit.

The Town must apply Section 7.5.2 in a manner consistent with the applicable law outlined above. We also urge the Town to consult closely with Town Counsel regarding the appropriate response to applications for collocation in light of these recent amendments.

Note: Pursuant to G.L. c. 40, § 32, neither general nor zoning by-laws take effect unless the Town has first satisfied the posting/publishing requirements of that statute. Once this statutory duty is fulfilled, (1) general by-laws and amendments take effect on the date these posting and publishing requirements are satisfied unless a later effective date is prescribed in the by-law, and (2) zoning by-laws and amendments are deemed to have taken effect from the

date they were approved by the Town Meeting, unless a later effective date is prescribed in the by-law.

Very truly yours,

MAURA HEALEY
ATTORNEY GENERAL

Nicole B. Caprioli

By: Nicole B. Caprioli
Assistant Attorney General
Municipal Law Unit
10 Mechanic Street, Suite 301
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nicole.caprioli@state.ma.us

cc: Town Counsel Gregg J. Corbo



THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL

CENTRAL MASSACHUSETTS DIVISION
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(508) 795-1991 fax
www.mass.gov/ago

February 10, 2015

Trudy L. Reid, Town Clerk
Town of Lynnfield
55 Summer Street
Lynnfield, MA 01940

**RE: Lynnfield Fall Annual Town Meeting of October 20, 2014 - Case # 7408
Warrant Articles # 12, 13 and 14 (Zoning)
Warrant Articles # 16 and 17 (General)**

Dear Ms. Reid:

Articles 12, 13, 14, 16 and 17 - We approve Articles 12, 13, 14, 16 and 17 from the October 20, 2014 Lynnfield Fall Annual Town Meeting. Our comments regarding Article 14 are provided below.

Article 14 - Article 14 makes a number of changes to the Town's zoning by-laws pertaining to Radio Telecommunication Facilities (RTF) and Personal Wireless Service Facilities (PWSF) including adding new definitions to Section 2, amending Section 7.4, "Site Plan" to add a new sub-section 7.4A "Additional Requirements for Personal Wireless Service Facilities"; and amending Section 8, "Special Permits" to add a new sub-section 8.7, "Siting of Radio Telecommunications Facilities."

I. Applicable Law

The federal Telecommunications Act of 1996, 47 U.S.C. § 332 (7) preserves state and municipal zoning authority to regulate personal wireless service facilities, subject to the following limitations:

1. Zoning regulations "shall not unreasonably discriminate among providers of functionally equivalent services." 47 U.S.C. §332(7) (B) (i) (I)
2. Zoning regulations "shall not prohibit or have the effect of prohibiting the provisions of personal wireless services." 47 U.S.C. § 332 (7) (B) (i) (II).
3. The Zoning Authority "shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time." 47 U.S.C. § 332 (7) (B) (ii).

4. Any decision “to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.” 47 U.S.C. § 332 (7) (B) (iii).
5. “No state or local government or instrumentality thereof may regulate the placement, construction and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [Federal Communications] Commission’s regulations concerning emissions.” 47 U.S.C. § 332(7) (B) (iv).

Federal courts have construed the limitations listed under 47 U.S.C. § 332(7) as follows. First, even a facially neutral by-law may have the effect of prohibiting the provision of wireless coverage if its application suggests that no service provider is likely to obtain approval. “If the criteria or their administration effectively preclude towers no matter what the carrier does, they may amount to a ban ‘in effect’....” Town of Amherst, N.H. v. Omnipoint Communications Enters, Inc., 173 F.3d 9, 14 (1st Cir. 1999).

Second, local zoning decisions and by-laws that prevent the closing of significant gaps in wireless coverage have been found to effectively prohibit the provision of personal wireless services in violation of 47 U.S.C. § 332(7). See, e.g., Nat’l Tower, LLC v. Plainville Zoning Bd. of Appeals, 297 F.3d 14, 20 (1st Cir. 2002) (“local zoning decisions and ordinances that prevent the closing of significant gaps in the availability of wireless services violate the statute”); Omnipoint Communications MB Operations, LLC v. Town of Lincoln, 107 F. Supp. 2d 108, 117 (D. Mass. 2000) (by-law resulting in significant gaps in coverage within town had effect of prohibiting wireless services).

Third, whether the denial of a permit has the effect of prohibiting the provision of personal wireless services depends in part upon the availability of reasonable alternatives. See 360 Degrees Communications Co. v. Bd. of Supervisors, 211 F.3d 79, 85 (4th Cir. 2000). Zoning regulations must allow cellular towers to exist somewhere. Towns may not effectively ban towers throughout the municipality, even under the application of objective criteria. See Virginia Metronet, Inc. v. Bd. of Supervisors, 984 F. Supp. 966, 971 (E.D. Va. 1998).

State law also establishes certain limitations on a municipality’s authority to regulate wireless communications facilities and service providers. Under General Laws Chapter 40A, Section 3, wireless service providers may apply to the Department of Telecommunications and Cable for an exemption from local zoning requirements. If a telecommunication provider does not apply for or is not granted an exemption under c. 40A, § 3, it remains subject to local zoning requirements pertaining to cellular towers. See Building Comm’r of Franklin v. Dispatch Communications of New England, Inc., 48 Mass. App. Ct. 709, 722 (2000). Also, G.L. c. 40J, § 6B, charges the Massachusetts Broadband Institute with the task of promoting broadband access throughout the state. Municipal regulation of broadband service providers must not frustrate the achievement of this statewide policy.

In addition, Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 requires 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.” (emphasis added). The Act defines “eligible facilities request” as any request for modification of an existing wireless tower or base station that involves: 1) collocation of new transmission equipment; 2) removal of transmission equipment; or 3) replacement of transmission equipment. The Act applies “[n]otwithstanding section 704 of the Telecommunications Act of 1996.” The Act’s requirement that a local government “may not deny, and shall approve, any eligible facilities request” means that a request for modification to an existing facility that does not substantially change the physical dimensions of the tower or base station must be approved. Such qualifying requests also cannot be subject to a discretionary special permit.

The Town must apply Article 14 in a manner consistent with the applicable law outlined above. In particular, Section 8.7.5.1 requires that PWSF may only be erected upon the grant of a special permit. The Town cannot apply this requirement to eligible facilities requests for modification to existing facilities that qualify for required approval under Section 6409 of the Act. We also urge the Town to consult closely with Town Counsel regarding the appropriate response to applications for collocation in light of these recent amendments.

II. Section 8.7, Siting of Radio Telecommunications Facilities

A. Section 8.7.2, Purpose

Section 8.7.2 provides that the purpose of the by-law is to establish general guidelines for the siting of RTFs. Section 8.7.2 (4) establishes one of the by-law’s goals as “[t]o make all RTF locations available for municipal agencies use where feasible.”

It is unclear whether Section 8.7.2 (4) would require the Town’s use of the RTF, and whether such use would be compensated or uncompensated. When applying the by-law, the Town cannot require an applicant to transfer property to the public without fair compensation. “The Fifth Amendment to the United States Constitution, made applicable to the States through the Fourteenth Amendment, provides that private property shall not ‘be taken for public use, without just compensation.’” This protection is “designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole.” Giovanella v. Conservation Commission of Ashland, 447 Mass. 720, 724 (2006) (*quoting* Armstrong v. United States, 364 U.S. 40, 49 (1960)). More recently, the court in Collins v. Stow, 79 Mass. App. Ct. 447 (2011) ruled that a town cannot condition subdivision approval on the dedication of open space for public use and actual conveyance of the land to the Town in exchange for waivers. “Although a planning board’s authority under the subdivision control law certainly encompasses, in appropriate circumstances, requiring open space, it does not extend to requiring the transfer of that open space to the public for reasons unrelated to adequate access and safety of the subdivision without providing just compensation.” *Id.* at 453. We suggest that the Town consult with Town Counsel regarding the proper application of Section 8.7.2 (4).

B. Section 8.7.5.4, General

Section 8.7.5.4.1 provides in relevant part that:

An undertaking shall be required, secured by a BOND appropriate in form and amount for removal of the PWSF within 6 months of cessation of operation of said facility or such other activity which may be appropriate to prevent the structures from becoming a nuisance or aesthetic blights.

The Town must apply any bond proceeds in a manner consistent with state law. Bond proceeds do not become Town funds unless and until the applicant defaults on the obligation under the by-law. Moreover, if the Town must use the bond to pay for removal of a PWSF or for other activity to prevent nuisance or blight, an appropriation is required before expenditure is made to do the work. General Laws Chapter 44, Section 53, provides that “[a]ll moneys received by a city, town or district officer or department, except as otherwise provided by special acts and except fees provided for by statute, shall be paid by such officers or department upon their receipt into the city, town or district treasury.” Under Section 53 all moneys received by the Town become a part of the general fund, unless the Legislature has expressly made other provisions that are applicable to such receipt. In the absence of any general or special law to the contrary, performance security funds of the sort contemplated here must be deposited with the Town Treasurer and made part of the Town’s general fund, pursuant to G.L. c. 44, § 53. The Town must then appropriate the money for the specific purpose of completing the work required for removal and/or other activities. The Town should consult with Town Counsel regarding the proper application of Section 8.7.5.4.

C. Section 8.7.5.5, Application Procedures

Section 8.7.5.5 pertaining to the Special Permit application provides in relevant part, that:

The Application Phase of the process begins with the receipt by the SPGA of a complete application including all materials required by the Zoning Bylaw and any applicable regulations.

Within 30 days of receipt, the SPGA or its designee shall review the application for consistency and completeness with respect to the Application Requirements in the bylaw and any applicable regulations and shall notify the Applicant in writing of any deficiency in the completeness of the application.

The SPGA shall take regulatory notice of the Federal Communications Commission (FCC) presumption that the final action of the SPGA on a new Antenna Tower should take no more than 150 days from the date of receipt of the completed application, and that final action on a Collocation or Site Sharing application should take no more than 90 days from the date of receipt of the completed application except upon written

extension of these timelines by mutual agreement between the SPGA and the Applicant.

Section 8.7.5.5 must be applied in a manner consistent with the time limits established in G.L. c. 40A, § 9. General Laws Chapter 40A, Section 9, requires that the special permit granting authority “shall hold a public hearing for which notice has been given as provided in section eleven, on any application for a special permit within sixty-five days from the date of filing of such application. . . . The decision of the special permit granting authority shall be made within ninety days following the date of such public hearing. . . . Failure by the special permit granting authority to take final action within . . . ninety days . . . shall be deemed to be a grant of the special permit.” (emphasis added).

Pursuant to G.L. c. 40A, § 9, the filing of a special permit application “starts the clock” on the time period within which the special permitting authority must act. Section 8.7.5.5 cannot be applied in a manner that “starts the clock” only when a *completed* application is filed. The Town must apply Section 8.7.5.5 consistent with G.L. c. 40A, § 9. *See Massachusetts Broken Stone Co. v. Town of Weston*, 430 Mass. 637, 642 (2000). The Town should consult with Town Counsel regarding the proper application of Section 8.7.5.5.

Note: Pursuant to G.L. c. 40, § 32, neither general nor zoning by-laws take effect unless the Town has first satisfied the posting/publishing requirements of that statute. Once this statutory duty is fulfilled, (1) general by-laws and amendments take effect on the date these posting and publishing requirements are satisfied unless a later effective date is prescribed in the by-law, and (2) zoning by-laws and amendments are deemed to have taken effect from the date they were approved by the Town Meeting, unless a later effective date is prescribed in the by-law.

Very truly yours,

MAURA HEALEY
ATTORNEY GENERAL

Nicole B. Caprioli

By: Nicole B. Caprioli
Assistant Attorney General
Municipal Law Unit
10 Mechanic Street, Suite 301
Worcester, MA 01608
(508) 792-7600 ext. 4418
nicole.caprioli@state.ma.us

cc: Town Counsel Thomas Mullen



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.
(617) 349-6100



2013 00231979

Bk: 62872 Pg: 5 Doc: DECIS
Page: 1 of 6 11/01/2013 09:24 AM

NOTICE OF DECISION

DECISION FILED WITH THE OFFICE OF THE CITY CLERK ON OCT 11 2013

Any person aggrieved by a decision of the Board of Zoning Appeal may appeal to the Superior Court or Land Court. Appeals, if any, shall be made pursuant to Section 17, Chapter 40A, Massachusetts General Laws and shall be filed within twenty calendar days from the above date, and a copy thereof shall be filed with the Cambridge City Clerk's office by that same date.

PREMISES: 330 (a/k/a 300) Mount Auburn Street ^{Owner:} Mount Auburn Hospital
Cambridge, MA

PETITIONER: New Cingular Wireless PCS, LLC ("AT&T")
C/o David Ford, Centerline Communications

PETITION: Special Permit: To install twelve (12) antennas which will be façade mounted to the existing hospital building painted to match the building color. Fifteen (15) remote radio-heads units (RRU's) will be mounted inside of the existing penthouse on the rooftop. An equipment shelter will be installed on the rooftop of house ancillary equipment associated with the antenna facility. Cabling and associated trays and conduits also will be placed on the rooftop, along with GPS antennas which will be mounted on the shelter.

DECISION:  **GRANTED**

48678-259

CASE NO: 10480

*For full details, please refer to the decision available at Inspectional Services Dept.



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.
(617) 349-6100

OCT 11 2013

Centerline Communications, LLC
C/o David Ford
95 Ryan Drive, Suite 1
Raynham, MA 02767

Case No. 10480

Dear: Mr. Ford,

We enclose the decision of the Board of Zoning Appeal as it pertains to the premises located at 330 (a/k/a 300) Mt. Auburn Street, Cambridge, Mass.

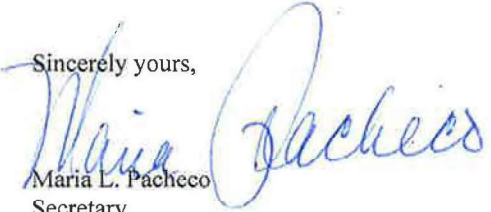
A copy of this decision has been filed with office of the City Clerk, this date. When twenty days have passed you **MUST**:

1. HAVE THIS DECISION COMPLETED AND SIGNED BY THE CITY CLERK, CITY HALL – 795 Mass Avenue, Cambridge, Ma. (In the space provided on the decision)
 2. FILE THE DECISION WITH THE REGISTRY OF DEEDS
Middlesex County Courthouse, 208 Cambridge Street, Cambridge, MA. (There is usually a fee, payable to the Registry of Deeds and the book and page number is required by the Registry).
 3. SUPPLY THE BOARD OF ZONING APPEAL WITH DOCUMENTATION OF SUCH FILING – (with the Registry of Deeds).
- THE DIVISION OF INSPECTIONAL SERVICES WILL NOT ISSUE BUILDING PERMITS
 - UNLESS THE ABOVE ITEMS HAVE BEEN COMPLETED.

Any person aggrieved by a decision of the Board of Zoning Appeal may appeal to the Superior Court or Land Court. Appeals, if any, shall be made pursuant to Section 17, Chapter 40A, Massachusetts General Laws and shall be filed within twenty days of the above date, and a copy thereof shall be filed with the Cambridge City Clerk's office by that same date.

If you have any questions, please phone me at 349-6100.

Sincerely yours,


Maria L. Pacheco
Secretary

Section 10.35 of the Zoning Ordinances:

If the rights authorized by a variance are not exercised within one year of the date of granting of such variance (two years for a special permit), they shall lapse and may be reestablished only after notice and new hearing pursuant to this Section 10.30.



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.

(617) 349-6100

2013 OCT 11 AM 10 50

OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

CASE NO: 10480

LOCATION: 330 (a/k/a 300) Mt. Auburn St. Residence C-1/C-3 Zone
Cambridge, MA

PETITIONER: NEW CINGULAR WIRELESS PCS, LLC ("AT&T")
C/o DAVID FORD, CENTERLINE COMMUNICATIONS

PETITION: Special Permit: To install twelve (12) antennas which will be façade mounted to the existing hospital building painted to match the building color. Fifteen (15) remote radio-head unit (RRU's) will be mounted inside of the existing penthouse on the rooftop. An equipment shelter will be installed on the rooftop of house ancillary equipment associated with the antenna facility. Cabling and associated trays and conduits also will be placed on the rooftop, along GPS antennas which will be mounted on the shelter.

VIOLATION: Art. 4.000, Sec. 4.32.G.1 (Footnote 49) (Telecommunication Facility).
Art. 10.000, Sec. 10.40 (Special Permit).

DATE OF PUBLIC NOTICE: August 1 & 8, 2013

DATE OF PUBLIC HEARING: August 15, 2013

MEMBERS OF THE BOARD:

CONSTANTINE ALEXANDER – CHAIR
TIMOTHY HUGHES – VICE-CHAIR
BRENDAN SULLIVAN
THOMAS SCOTT
JANET O. GREEN

ASSOCIATE MEMBERS:

DOUGLAS MYERS
SLATER W. ANDERSON
LINDSEY T. THORNE-BINGHAM
ANDREA A. HICKEY

Members of the Board of Zoning Appeal heard testimony and viewed materials submitted regarding the above request for relief from the requirements of the Cambridge Zoning Ordinance. The Board is familiar with the location of the petitioner's property, the layout and other characteristics as well as the surrounding district.

Case No. 10480
Location: 330 (300) Mt. Auburn Street
Petitioner: New Singular Wireless PCS (AT&T) c/o David Ford

On September 12, 2013, Petitioner David Ford appeared before the Board of Zoning Appeal with his attorney Susan Roberts requesting a special permit in order to install twelve antennas façade mounted to the existing hospital building and painted to match, to install fifteen remote radio-head units mounted inside the existing penthouse, to install an equipment shelter on the roof, to install cabling, associated trays and conduits on the rooftop, and to install GPS antennas on the shelter. The Petitioner requested relief from Article 4, Section 4.32.G.1 of the Cambridge Zoning Ordinance (“Ordinance”). The Petitioner submitted application materials including information about the project, plans, and photographs.

Ms. Roberts stated that the design had been modified in order to reduce visual impacts. She stated that the equipment shelter had been moved out of view and that the antennas had been mounted parallel to each other on low profile mounts and painted to match the building. She stated that the property was in a residential zone, but that residential uses did not predominate in the area, which was largely hospital grounds and the highway. She stated that the Petitioner was FCC licensed and that the installation was needed to fill gaps in coverage.

The Chair asked if anyone wished to be heard on the matter, no one indicated such.

After discussion, the Chair moved that the Board grant the special permit for relief in order to install twelve antennas façade mounted to the existing hospital building and painted to match, to install fifteen remote radio-head units mounted inside the existing penthouse, to install an equipment shelter on the roof, to install cabling, associated trays and conduits on the rooftop, and to install GPS antennas on the shelter based on the finding that the Petitioner was a duly licensed federal telecommunications carrier in good standing. The Chair moved that the Board find that the Petitioner had taken steps to minimize the visual impact of the various elements of the proposed facility. The Chair moved that the Board find that the plans had been revised and went a long way toward minimizing visual impacts. The Chair moved that the Board find that there was a public need for the facility at the proposed location due to lapses in coverage, which would be corrected with the proposed antennas. The Chair moved that the Board find that there were no alternative functionally suitable sites in nonresidential locations. The Chair moved that the Board find that the property was not in an area where there were many large buildings that could support the installation of the equipment. The Chair moved that the Board find that nonresidential uses predominated in the vicinity of the proposed location and that the telecommunication facility was not inconsistent with the character that did prevail in the surrounding neighborhood. The Chair moved that the Board find that the proposed use would not cause congestion, hazard, or substantial change in established neighborhood

The Board of Zoning Appeal is empowered to waive local zoning regulations only. This decision therefore does not relieve the petitioner in any way from the duty to comply with local ordinances and regulations of the other local agencies, including, but not limited to the Historical Commission, License Commission and/or compliance with requirements pursuant to the Building Code and other applicable codes.



Constantine Alexander, Chair

Attest: A true and correct copy of decision filed with the offices of the City Clerk and Planning Board on 10/11/13 by Marie Jackson, Clerk.

Twenty days have elapsed since the filing of this decision.

No appeal has been filed

Appeal has been filed and dismissed or denied.

Date: Nov. 1, 2013 Donna P. Lopez City Clerk.

330 Mt. Auburn St.



330 Mt. Auburn St.

Petitioner

239-48
NOLLMAN, JORDAN & LARISSA BOUTIQUE
321 MT AUBURN ST. UNIT#2
CAMBRIDGE, MA 02138

240-39
STOHLMAN, THOMAS J. JR. &
KATHARINE M. STOHLMAN
19 CHANNING ST
CAMBRIDGE, MA 02138-4713

SMARTLINK
C/O KRISTINA ROBINSON, AGENT
1997 ANNAPOLIS EXCHANGE PARKWAY
ANNAPOLIS, MD 21401

241-12
CAMBRIDGE HOME FOR THE AGED PEOPLE
C/O SENIOR LIVING RESIDENCES / CAMBRIDGE
45 BRAINTREE HILL OFFICE PARK -SUITE 306
BRAintree, MA 02184

239-19
SAFIZADEH, FEREDOUN & ARLENE DALLALFAR
18 CHANNING STREET
CAMBRIDGE, MA 02138

240-31
GALPAROLI MARIA VIVIANA COUSIN MATHIAS
361 MOUNT AUBURN ST - UNIT 2
CAMBRIDGE, MA 02138

240-31
MOSELEY, EVA S.
361 MT AUBURN ST #1
CAMBRIDGE, MA 02138

240-38
KALAVREZOU, IOLI
341 MT. AUBURN ST.
CAMBRIDGE, MA 02138

241-10
1010 MEMORIAL DRIVE TENANTS
CORPORATION
1010 MEMORIAL DRIVE
CAMBRIDGE, MA 02138-4853

241-13 / 242B-1000
MASSACHUSETTS COMMONWEALTH OF
STATE HOUSE
BOSTON, MA 02133

221-10
CATALANO, ADRIAN & ALEJANDRINA CATALANO
TRUSTEES OF THE CATALANO REALTY TRUST
341 HARVARD STREET
CAMBRIDGE, MA 02138

221-79
MESERVEY, DIANA & SARAH MESERVEY
57 FRANCIS AVE
CAMBRIDGE, MA 02138

242B-998
CAMBRIDGE BOAT CLUB
% GAIL CROMWELL
2 GERRY'S LANDING
CAMBRIDGE, MA 02138

242B-52
REIMANN, WILLIAM P. & HELEN S. REIMANN
1 GERRYS LANDING
CAMBRIDGE, MA 02138-5714

242B-56-53
BUCKINGHAM BROWNE AND NICHOLS SCHOO
80 GERRYS LANDING ROAD
CAMBRIDGE, MA 02138

239-40
STILES, KATHERINE M.
2 LONGFELLOW RD. UNIT#1
CAMBRIDGE, MA 02138

241-14
MT. AUBURN HOSPITAL
C/O NICHOLAS DILESO, CHIEF OPER. OFFICER
300 MT AUBURN ST
CAMBRIDGE, MA 02138-5502

239-54
BARRY, PAULA
11553 28TH ST CIR E
PARRISH, FL 34219

239-21
CITY OF CAMBRIDGE
C/O YI-AN HUANG
CITY MANAGER

239-21
CITY OF CAMBRIDGE
C/O MEGAN BAYER
CITY SOLICITOR

239-29
WANG, HAO
1-3 LONGFELLOW RD - UNIT 2
CAMBRIDGE, MA 02138

240-52
SALTER, MALCOLM S & BARBARA NORR
18 TRAILL ST - UNIT 1
CAMBRIDGE, MA 02138

242B-49
3 GERRY'S LANDING LLC
155 FEDERAL ST - STE 700
BOSTON, MA 02110

240-53
SANBORN, JOSEPH S.,
TRUSTEE THE REX REALTY TRUST
20 TRAILL ST
CAMBRIDGE, MA 02138

240-52
ORFAO, DAVID & MARY ELIZABETH ORFAO
18 TRAILL ST UNIT 2
CAMBRIDGE, MA 02138

239-29
WANG HAO
1-3 LONGFELLOW RD - UNIT 2
CAMBRIDGE, MA 02138

239-48
NOLLMAN JORDAN & LARISSA BOUTIQUE
321 MT AUBURN ST - UNIT 2
CAMBRIDGE, MA 02138

239-40
TORRA, MICHAEL
4 LONGFELLOW RD UNIT 2
CAMBRIDGE, MA 02138

DEPARTMENT OF CONSERVATION &
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