

53 State Street, 32nd Floor
Boston, MA 02109
Main (617) 557-5900
Fax (617) 557-5999
mgiaimo@rc.com
Direct (617) 557-5959

February 12, 2026

Ms. Kimberly Wells
City of Somerville City Clerk
Somerville City Hall
93 Highland Ave., 1st Floor
Somerville, MA 02143

City of Somerville Zoning Board of Appeals
c/o Mr. Dan Bartman, Director of Planning, Preservation & Zoning
167 Holland Street
Somerville, MA 02144

Re: Application for Special Permit
Applicants: Cellco Partnership d/b/a Verizon Wireless
Owner: Somerville Housing Authority
Property: 75 Myrtle Street
Map/Parcel: 91-F-4
Zoning: UR – Urban Residential District and Affordable Housing Overlay
Proposed Use: Wireless Communications Facility

Dear Ms. Wells and Mr. Bartman:

Please accept for filing the enclosed application to the City of Somerville Zoning Board of Appeals (“Board”) on behalf of Cellco Partnership d/b/a Verizon Wireless (“Applicant”). The application is for a special permit pursuant to §§ 10.10.3 and 15.2.1 of the City of Somerville Zoning Ordinance (“Zoning Ordinance”) for the installation of a building-mounted wireless communications facility at the existing multi-unit residential building owned by the Somerville Housing Authority at 75 Myrtle Street.

The following materials are enclosed in support of this application:

- Statement in support of a Special Permit for a Wireless Communications Facility

Robinson+Cole

Ms. Kimberly Wells

Mr. Dan Bartman

February 12, 2026

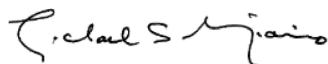
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- Exhibit A: Site plans entitled “Somerville East MA, 75 Myrtle St., Somerville, MA 02145,” prepared by Dewberry Engineers, Inc., dated January 23, 2026
- Exhibit B: Affidavit of Radio Frequency Engineer, prepared by C-Squared, dated November 4, 2025
- Exhibit C: Photosimulations
- Exhibit D: Radio Frequency Exposure FCC Compliance Assessment, prepared by EBI Consulting, updated 07.01.2025
- Exhibit E: Structural Analysis, prepared by Dewberry Engineers, Inc., dated May 22, 2025
- Exhibit F: Property Owner Authorization
- Exhibit G: Copy of Deed

Also, enclosed is a list of abutters as obtained from the City Assessor’s office. The Applicant will pay the required filing fee when requested to do so by City staff. This application concerns a personal wireless services facility within the meaning of the Federal Telecommunications Act (“TCA”), 47 U.S.C. § 332(c)(7)(C)(ii), and it is submitted with a full reservation of the Applicant’s rights under federal, state and local law.

Thank you for your attention to this matter.

Sincerely,



Michael S. Giaimo

Enclosures

**CITY OF SOMERVILLE
ZONING BOARD OF APPEALS**

**STATEMENT IN SUPPORT
OF A SPECIAL PERMIT FOR A
WIRELESS COMMUNICATIONS FACILITY**

Applicant: Cellco Partnership d/b/a Verizon Wireless

**Subject
Property:** 75 Myrtle Street, Somerville, MA 02145 (Parcel ID 91-F-4)

**Zoning
Districts:** UR – Urban Residential District
Affordable Housing Overlay

Proposed Use: Wireless Communications Facility (WCF)

**Relief
Requested:** Special Permit under Somerville Zoning Ordinance (“SZO”) §§ 10.10.3 and 15.2.1

BACKGROUND

Applicant Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless”) is licensed by the Federal Communications Commission (“FCC”) to provide personal wireless services within the market area that includes the City of Somerville. Verizon Wireless proposes to install a building-mounted wireless communications facility (“WCF”) at the existing multi-unit residential building at 75 Myrtle Street, which is owned by the Somerville Housing Authority (the “Subject Property”).

The proposed WCF is a personal wireless services facility within the meaning of the Federal Telecommunications Act (“TCA”), 47 U.S.C. § 332(c)(7)(C)(ii). This application is submitted with full reservation of the Applicant’s rights under federal, state, and local law.

DESCRIPTION OF THE PROPOSED WIRELESS COMMUNICATIONS FACILITY

As shown on the plans submitted with this application (**Exhibit A**) and as will be further described at the hearing, the proposed WCF will consist of three sectors (Alpha, Beta and Gamma) each with four antennas (a total of 12 antennas) and related radio and power equipment mounted to the existing building at the Subject Property. The Alpha sector will be located in the corner of the roof facing north along Myrtle Street. The Beta sector will be located in the corner of the roof facing south at the intersection of Florence Street and Pearl Street. The Gamma sector will be located in the corner of the roof facing west/southwest at the intersection of Myrtle Street and Pearl Street. Each antenna array will be concealed within, and mounted to, an 8’-6” x 3’-6” x 8’-3” tall RF-friendly screen wall enclosure that will blend in with the existing façade of the building. The screen wall will extend 10 feet above the roofline, to a total height of approximately 56’-8” (AGL).

The screen wall enclosure will be attached to a 12' x 12' ballast frame. Each sector will also include two remote radio heads and two overvoltage protection units mounted to the ballast frame. An equipment cabinet and a battery cabinet will be placed on a 9'-9" x 14'-1" steel frame platform near the existing HVAC equipment on the south part of the roof. A transformer, power panel, hoffman box and power disconnect switch will also be mounted on the platform and a small gps antenna and a worklight will be mounted to the safety railing around the platform. Power, telco and ground conduits will run inside the building from the basement through the stacked electrical rooms to the roof where they will be mounted on roof sleepers running into the equipment area. The WCF has no on-site employees and will operate 24 hours a day, 365 days a year to provide wireless services on the Verizon Wireless network to the surrounding area.

SATISFACTION OF ZONING ORDINANCE REQUIREMENTS

Pursuant to SZO §§ 10.10.3.b and 10.10.3.c, the proposed WCF will require a special permit from the Zoning Board of Appeals. The criteria for the grant of a special permit are located in SZO §§ 10.10.3.e and 15.2.1.e. Additional standards are in SZO §§ 10.10.5 (Wireless Communications Antennas), 10.10.6 (Ancillary Structures) and 10.10.7 (Design Guidelines). The Applicant's proposal meets these standards as follows:

Section 10.10.3.e. The Zoning Board of Appeals shall make findings considering the following in its discretion to approve or deny a special permit authorizing a wireless communication antenna:

i. Suitability of nearby, existing sites and/or the feasibility of alternative technologies.

The Applicant has proposed a “macro” site with three sectors, each having four antennas, mounted on the roof of an existing building in order to properly address its signal coverage and capacity needs in the area of east Somerville generally encompassed by Broadway, Route 28 (Mcgrath Highway) and Washington Street, includig the Inner Belt District. See RF Affidavit attached as Exhibit B. The existing building at the Subject Property is ideally situated from the standpoint of its location, ground elevation and height and the available space on its rooftop.

ii. Height and design of proposed tower or antenna, with particular concern for design solutions that reduce or eliminate visual impact.

The rooftop antennas will be behind signal-transparent screen walls that will minimize their visual impact. The screen walls will be colored to match the existing façade of the building as shown on the photosimulations filed with this application (Exhibit C). The screenwalls and the antennas will not exceed 10 feet in height above the building roof and will be set back at least 10 feet from the edge of the roof.

iii. Compatibility with the uses associated with surrounding properties and proximity of the proposed tower or antenna to properties in residential use.

The WCF will be on the roof of a multi-unit residential building owned by the Somerville Housing Authority. Surrounding properties appear to be predominantly in residential use. The proposed facility will be compatible with the neighborhood in that the antennas in each of the sectors will be hidden behind screen walls colored to

match the existing building. The WCF will have no employees, and will not generate traffic, noise, odor or glare. The availability of reliable wireless communications service for both voice and data communications benefits area residents, businesses and people traveling on the area road network, all of whom rely on these services for a wide variety of purposes. Reliable wireless service also enhances community safety because it is used by first responders and other public safety officials as well as the public in times of crisis, natural disaster, inclement weather, and similar circumstances.

iv. Topography, on-site vegetation, and the prominence of proposed facility.

The proposed WCF is a roof-mounted facility that has been designed in compliance with the height and setback requirements in the SZO for facilities of this type. Antennas will be behind screen walls colored to match the existing building.

v. Proposed ingress and egress for maintenance.

Access to the rooftop antennas and equipment for maintenance purposes will be through the building using the existing roof access.

Section 10.10.5.a Wireless Communication Antennas – Development Standards:

i. Roof mounted antennas:

a). Are not permitted to exceed 10 feet in height.

The WCF complies with this standard. The antennas will be less than 10 feet in height above the roof.

b). Must be set back at least 10 feet from the edge of the roof.

The WCF complies with this standard. All three antenna sectors are set back more than 10 feet from the closest edge of the roof.

c). Are not permitted to project above a plane inclined at a 45° angle from vertical, beginning at edge of the roof.

The WCF complies with this standard. The antennas will not project above a plane inclined at a 45° angle from vertical, beginning at the edge of the roof.

...

iii. Lighting is prohibited, except as required by the Federal Aviation Administration.

No lighting is proposed except a worklight that will be in use only on the very rare occasions when a technician needs to visit the Site during the evening or at night.

iv. Signs are prohibited, except as follows:

a). Signs required by the FAA, FCC, or other applicable authority;

b). No trespassing signs or other notifications that alert the public to potential safety concerns; or

c). A nameplate or sign identifying the name and phone number of the owner or operator.

No signage is proposed with the WCF other than small warning signs required by the FCC which will be on the roof and will not be visible from the street or other properties.

Section 10.10.6 Ancillary Structures:

...

- c. Any buildings, cabinets, or shelters may house only equipment and supplies for operation of the wireless communication tower or antenna.

The WCF complies with this standard. No equipment shelter is proposed. Battery and equipment cabinets necessary for the operation of the WCF will be installed on the rooftop equipment platform.

- d. Any equipment not used in direct support of such operation must not be stored on the site.

The WCF complies with this standard. The building-mounted equipment will be used to directly support the operation of the WCF.

- e. The structure must be un-staffed.

The WCF complies with this standard. It will have no on-site employees.

- f. Signs are prohibited, except as follows:

- i. signs required by the FAA, FCC, or other applicable authority;
- ii. no trespassing signs or other notifications that alert the public to potential safety concerns; or
- iii. a nameplate or sign identifying the name and phone number of the owner or operator.

No signage is proposed with the WCF other than small warning signs required by the FCC which will be on the roof and will not be visible from the street or other properties.

10.10.7 Design Guidelines:

- a. Towers should only be used in circumstances where no alternative building-mounted options are available.

Not applicable – a tower is not proposed.

- b. Towers facilities should be designed to structurally accommodate the maximum number of foreseeable users. Not applicable.

Not applicable – a tower is not proposed.

- c. Towers and antennas should be located as follows:

- i. on properties owned or managed by the City of Somerville or the Somerville Housing Authority;

The WCF complies with this standard. The Somerville Housing Authority owns the building on which the WCF will be located.

- ii. on properties located in the Fabrication, Commercial Industry, or any mixed-use district.

Not applicable.

d. When antennas for multiple service providers are located on a single site, the antennas should be co-located to reduce visual impact.

Not applicable – Verizon is the only wireless service provider proposing to install a WCF at the Subject Property. The installation of Verizon’s facility would not preclude other carriers from installing their antennas at the Site in the future.

e. Antennas should be interior-mounted so that they are concealed from public view (e.g., inside church steeples, cupolas, bell-towers, or penthouses), or side-mounting onto existing structures in the least obtrusive location feasible, preferably with limited visibility from abutting streets.

The WCF complies with this standard. The rooftop antennas will be screened behind signal-transparent screen walls that will minimize their visual impact from surrounding neighborhoods and streets. The screen walls will be colored to match the existing façade of the building as shown on the photosimulations filed with this application (Exhibit C).

f. Where existing antennas have been installed in stealth enclosures, new equipment should be installed in stealth enclosures designed to match those already on the site.

Not applicable – Verizon is the first service provider proposing to install a WCF at the Subject Property.

g. Locations should be chosen with a sensitivity to the surrounding topography and predominant view corridors.

The WCF complies with this standard. The photosimulations demonstrate that the visual impact of the proposed WCF will be minimal.

h. Antenna technology should be chosen to minimize the visual effect of “massing” panels on a rooftop.

The WCF is a building-mounted facility that has been designed to limit its visual impact on the surrounding neighborhood by placing antennas behind screen walls that will be painted to match the building. Each of the three antenna sectors will be positioned in a different corner of the building.

i. To every extent possible, new co-located equipment should meet the same conditions applied to any original special permit authorizing the wireless communication tower or antenna on the site.

Not applicable – the proposed Verizon WCF would be the first one on the Subject Property.

j. Existing on-site vegetation should be preserved to the maximum extent practical.

The WCF complies with this standard. The WCF will be located on the roof of the existing building at the Subject Property and therefore, will have no impacts to existing vegetation.

- k. All network interconnections from the communications site should be via underground lines.

The WCF complies with this standard. Power and telco interconnections will be made within the building's existing utility room.

Section 15.2.1(e)(i) In its discretion to approve or deny a special permit, the Zoning Board of Appeals shall make findings considering, at least, each of the following:

- a). The Comprehensive Plan and existing policy plans and standards established by the City.

The purpose of the proposed facility is to improve service on the Verizon Wireless network for people who live or work in, visit or travel through this area of Somerville. The availability of reliable wireless communications service for both voice and data communications benefits area residents, businesses and people travelling on the City's roads, all of whom rely on these services for a wide variety of purposes. Reliable wireless service also enhances community safety because it allows the public to quickly report emergencies and call for help and first responders and other public safety officials rely on it in responding to emergencies, natural disasters, inclement weather, and similar circumstances. An increasing share of households have discontinued their landline service and rely exclusively on their mobile devices for making calls. People rely on wireless data services for countless purposes in their jobs and their personal lives, including navigation on the public roads, contacting ride-share providers, staying in touch with children and other family members and various other applications.

By improving wireless services that are used by local businesses and their customers, the proposed WCF is consistent with SomerVision 2040's Commercial Development objectives. Ensuring that the City has reliable and robust wireless service is also consistent with the plan's stated goals of supporting small businesses and promoting the City as a forward-thinking place to do business. The proposed WCF also is consistent with SomerVision 2040's Community goal of strengthening community ties. The City's residents count on having reliable wireless service to connect and communicate by voice and text when circumstances prevent them doing so in-person. They also use wireless networks to access information of all types, including directions to and the details of community meetings and events.

- b). The intent of the zoning district where the property is located.

The WCF is consistent with the intent of the UR district "to create, maintain, and enhance areas appropriate for multi-unit residential buildings." It will not occupy land that would otherwise be appropriate for multi-unit residential development. It will enhance the surrounding neighborhoods by providing needed improvements in service on the Verizon network in this area of Somerville. It will not create traffic, noise, odor, or glare and has minimal visual impacts.

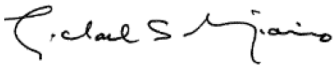
- c). Considerations indicated elsewhere in this Ordinance for the required Special Permit.

As discussed above, the WCF is consistent with the development standards for wireless communications facilities under Section 10.10 of the SZO.

The proposed rooftop WCF at 75 Myrtle Street, Somerville, MA, satisfies all applicable zoning requirements for facilities of this type, as well as the special permit standards and is in harmony with the purpose and intent of the SZO. It will improve wireless service in the City, with minimal visual impact and no other impacts on the neighborhood.

For all of the foregoing reasons and as will further be presented at the hearing on this application, and with full reservation of its rights under federal, state and local law, the Applicant respectfully requests that the Zoning Board of Appeals grant the requested special permit and any other relief required for the construction of the proposed wireless communications facility at the Subject Property.

Respectfully Submitted,

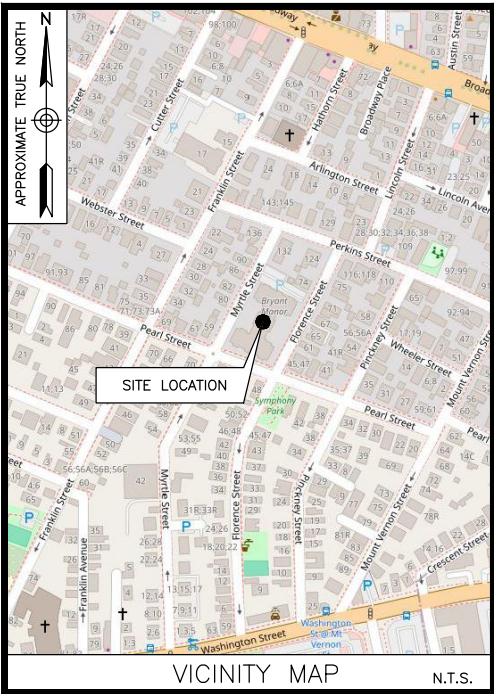


Michael S. Giaimo, Esq.
Robinson & Cole LLP
One Boston Place, 25th Floor
Boston, MA 02108
(617) 557-5959
mgiaimo@rc.com



SOMERVILLE EAST MA

75 MYRTLE ST.
SOMERVILLE, MA 02145



ENGINEER
DEWBERRY ENGINEERS INC.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110
PHONE # (617) 531-0813
FAX # (617) 695-3310
CONTACT: BENJAMIN B. REVETTE

CONSTRUCTION
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053
CONTACT: ERIC WAINWRIGHT

TEAM

SITE NAME:
SOMERVILLE EAST MA
PROPERTY OWNER:
SOMERVILLE HOUSING AUTH
30 MEMORIAL RD
SOMERVILLE, MA 02145

APPLICANT:
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

PARCEL ID:
91 F 4

ELECTRIC UTILITY:
EVERSOURCE
(800) 340-9822

TELEPHONE UTILITY:
VERIZON
(800) 827-4966

COORDINATES*:
LATITUDE: 42° 23' 04.51" (42.384586°) N (NAD83)
LONGITUDE: 71° 04' 58.04" (71.082789°) W (NAD83)

GROUND ELEVATION*:
43'-1" (NAV88)

*PER FAA-2C

PROJECT SUMMARY

SITE ADDRESS:
75 MYRTLE ST.
SOMERVILLE, MA 02145

ZONING DISTRICT:
URBAN RESIDENTIAL (UR)

PROJECT DIRECTORY

THE SITE WILL CONSIST OF INSTALLING (12) ANTENNAS WITHIN RF FRIENDLY ENCLOSURES & ASSOCIATED EQUIPMENT MOUNTED TO UNISTRUT FRAMES TO BALLAST MOUNTS ON THE ROOF OF THE EXISTING BUILDING. EQUIPMENT CABINETS & ASSOCIATED ANTENNA EQUIPMENT WILL BE INSTALLED ON EXISTING/PROPOSED STEEL FRAME.

PROJECT DESCRIPTION

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES-I
GN-2	GENERAL NOTES-II
C-1	PROPOSED ROOF PLAN
C-2	PROPOSED EQUIPMENT LAYOUT
C-3	SOUTH ELEVATION
C-4	CONSTRUCTION DETAILS-I
C-5	CONSTRUCTION DETAILS-II
C-6	FINAL EQUIPMENT CONFIGURATION TABLE & DETAILS
RF-1	EME BARRIER PLAN
S-1	ENCLOSURE & BALLAST DETAILS
S-2	PROPOSED STEEL FRAME PLANS
S-3	EQUIPMENT STEEL FRAME DETAILS
S-4	STRUCTURAL DETAILS
E-1	ELECTRICAL ONE-LINE DIAGRAM
E-2	ELECTRICAL SCHEDULES
E-3	GROUNDING DIAGRAMS
E-4	GROUNDING DETAILS
SHEET INDEX	



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT



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



DRAWN BY: 01/23/2026 JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

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

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
MASSACHUSETTS STATE BUILDING CODE, 10TH EDITION, CONSISTENT WITH THE FOLLOWING CODES:
2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
2021 INTERNATIONAL BUILDING CODE (IBC)
2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2023 NATIONAL ELECTRICAL CODE (NEC)

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 14TH EDITION (AISC 16TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

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

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

<u>ASTM A-992, GRADE 50</u>	ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
<u>ASTM A-36</u>	ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
<u>ASTM A-500, GRADE B</u>	HSS SECTION (SQUARE, RECTANGULAR, ROUND)
<u>ASTM A-325, TYPE SC OR N</u>	ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
<u>F1554, GRADE 36</u>	ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
<u>ASTM A-53, GRADE B</u>	STEEL PIPE
3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.
12. STEEL SHOP DRAWINGS AND FABRICATION SHALL CONFORM TO THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
13. STRUCTURAL STEEL FABRICATION SHALL BE PERFORMED BY AN ORGANIZATION EXPERIENCED IN STRUCTURAL FABRICATION OF EQUIVALENT MAGNITUDE TO THIS PROJECT, AND HAS AN AISC CERTIFICATION FOR STRUCTURAL STEELWORK, PROVIDE, WITH THE BID, A COPY OF THE AISC CERTIFICATE INDICATING THAT THE FABRICATION PLANT MEETS AISC CATEGORY STD CERTIFICATION. IN LIEU OF AN AISC CERTIFICATION, THE FABRICATOR MAY SUBMIT DOCUMENTATION OF EQUIVALENT EXPERIENCE IN THE FABRICATION OF THE ITEM OR ITEMS IN QUESTION.
14. SPLICING OF STRUCTURAL STEEL SECTIONS, NOT INDICATED ON CONTRACT DOCUMENTS, IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
15. ORIENT MILL CAMBER UPWARD DURING FABRICATION AND ERECTION.
16. ALUMINUM AND STEEL MEMBERS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
17. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
18. GROUT TO BE COMMERCIAL GRADE AND REACH 5000 PSI MINIMUM. USE COMMERCIAL GRADE QUIKRETE OR EQUAL. HAND MIXED CEMENT IS NOT TO BE USED.

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
8. ALL CONDUIT INSTALLED MAY BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES & O.S.H.A.
10. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES
11. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
12. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
13. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
14. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
15. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
16. ALL BUILDING WIRE #12 TO # 6 SHALL BE STRANDED COPPER TYPE THWN-THHN. CONDUCTORS #4 AND LARGER SHALL BE COPPER TYPE XHHW.
17. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED AND A MINIMUM OF 25,000 A.I.C. UNLESS OTHERWISE INDICATED.
18. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES
19. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
20. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
21. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
22. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH FIRESTOP DETAILS.
23. WIRE AND CABLE CONDUCTORS SHALL BE STRANDED COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY STATED OTHERWISE ON DRAWINGS.
24. VERIFY ALL CONDUIT ROUTING W/OWNER REP. & VERIZON WIRELESS C.M. NO OTHER SURFACE MOUNTED CONDUITS WILL BE ALLOWED OTHER THAN IN CHASES AND ABOVE CEILINGS.
25. ALL MATERIALS SHALL BE U.L. LISTED.
26. CONDUIT:
 - a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PRODUCT NO. 3.
 - b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
 - c. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.
 - d. CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.
27. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
28. COORDINATE THE ELECTRICAL SERVICE WITH BUILDING OWNER.
29. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
30. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
31. ALL WALL AND FLOOR PENETRATIONS SHALL BE FIRE STOPPED WITH FS-ONE HIGH PERFORMANCE INTUMESCENT FIRE STOP BY HILTI OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



POST-INSTALLED HILTI ANCHORS NOTES:

1.

EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE ICC-ES REPORT AND MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS:
- | APPLICATION | ANCHORING SYSTEM | ICC-ES REPORT |
|--|---|--------------------|
| ANCHORAGE TO CONCRETE | HILTI HY 200 ADHESIVE | ESR-3814 |
| | HILTI RE 500 V3 ADHESIVE | ESR-4266 |
| | HILTI KWIK BOLT TZ2 | ESR-3027 |
| | HILTI KWIK HUS EZ | ESR-1545 |
| | HILTI HSL-3 | ESR-1546 |
| | HILTI HDA | ESR-3814 |
| REBAR DOWELING | HILTI RE 500 V3 ADHESIVE W/ SAFE SET INSTALLATION | ESR-3187 |
| | HILTI HY 200 V3 ADHESIVE W/ SAFE SET INSTALLATION | ESR-4143 |
| ANCHORAGE TO SOLID GROUTED MASONRY | HILTI HY 270 ADHESIVE | ESR-4561 |
| | HILTI KWIK BOLT TZ2 | ESR-4561 |
| ANCHORAGE TO HOLLOW/ MULTI-WYTHE MASONRY | HILTI HY 270 ADHESIVE WITH SCREEN TUBE | ESR-4143, ESR-4144 |
2.

ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT INCLUDING AN ICC-ES REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE, SEISMIC USE, LOAD RESISTANCE, INSTALLATION CATEGORY, IN-SERVICE TEMPERATURE, INSTALLATION TEMPERATURE, ETC.
3.

ADHESIVE ANCHORS INSTALLED IN A HORIZONTALLY OR UPWARDLY INCLINED ORIENTATION INTO CONCRETE AND SUPPORTING A SUSTAINED TENSION LOAD SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER. INSTALLER SHALL BE CERTIFIED THROUGH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUAL.
4.

CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE ANCHOR INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. CONTRACTOR SHALL SUBMIT DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL INSTALLING ANCHORS HAVE RECEIVED THE REQUIRED TRAINING PRIOR TO THE COMMENCEMENT OF WORK.
5.

ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
6.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION FOR POST INSTALLED ANCHORS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 4.3/4.4 OF THE ICC-ES REPORT FOR THE INDIVIDUAL ANCHOR. SPECIAL INSPECTOR SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK TO COORDINATE INSPECTION EFFORTS.
7.

POST INSTALLED ADHESIVE ANCHORS ARE NOT PERMITTED TO BE INSTALLED IN MORTAR JOINTS. ALL ANCHORS TO BE INSTALLED WITHIN THE FACE OF MASONRY UNIT.

FIBERGLASS NOTES:

1.

FRP (FIBERGLASS REINFORCED POLYMER) STRUCTURAL SHAPES SHALL BE MANUFACTURED USING THE PULTRUSION PROCESS.
2.

IF PRE-FABRICATED MEMBERS DO NOT ASSEMBLE ACCORDING TO PLAN, CONTACT THE FIBERGLASS MANUFACTURER BEFORE CUTTING OR ALTERING FABRICATED MEMBERS.
3.

FRP MEMBERS SHALL BE FABRICATED AND ASSEMBLED AS INDICATED ON THE DRAWINGS.
4.

THE CONTRACTOR SHALL PROTECT THE FRP STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BREAKAGE, NICKS, GOUGES, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.
5.

FRP BOLTS SHOULD BE TIGHTENED 1/2 TURN PAST SNUG AND LOCKED WITH EPOXY.
6.

FIBERGLASS TO MEET ALL VERIZON WIRELESS STANDARDS FOR RF PROPAGATION. PROVIDE TEST REPORTS TO VERIZON WIRELESS FOR REVIEW & APPROVAL.
7.

STRUCTURAL FRP SHALL HAVE THE MINIMUM MECHANICAL PROPERTIES:
E=2800KSI
TENSILE STRENGTH(LW): 33KSI
COMPRESSIVE STRENGTH(LW): 33 KSI
FLEXURAL STRENGTH(LW): 33KSI
DENSITY: 104PCF
8.

FIBERGLASS PANEL DESIGN & CONNECTION DESIGN TO BE BY OTHERS.
9.

PROVIDE FRP SHOP DRAWINGS TO DEWBERRY ENGINEERS INC. FOR REVIEW & APPROVAL PRIOR TO FRP FABRICATION.



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT



Dewberry Engineers Inc.

99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



DRAWN BY: 01/23/2026 JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

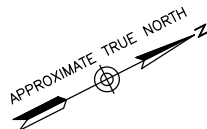
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

GENERAL NOTES-II

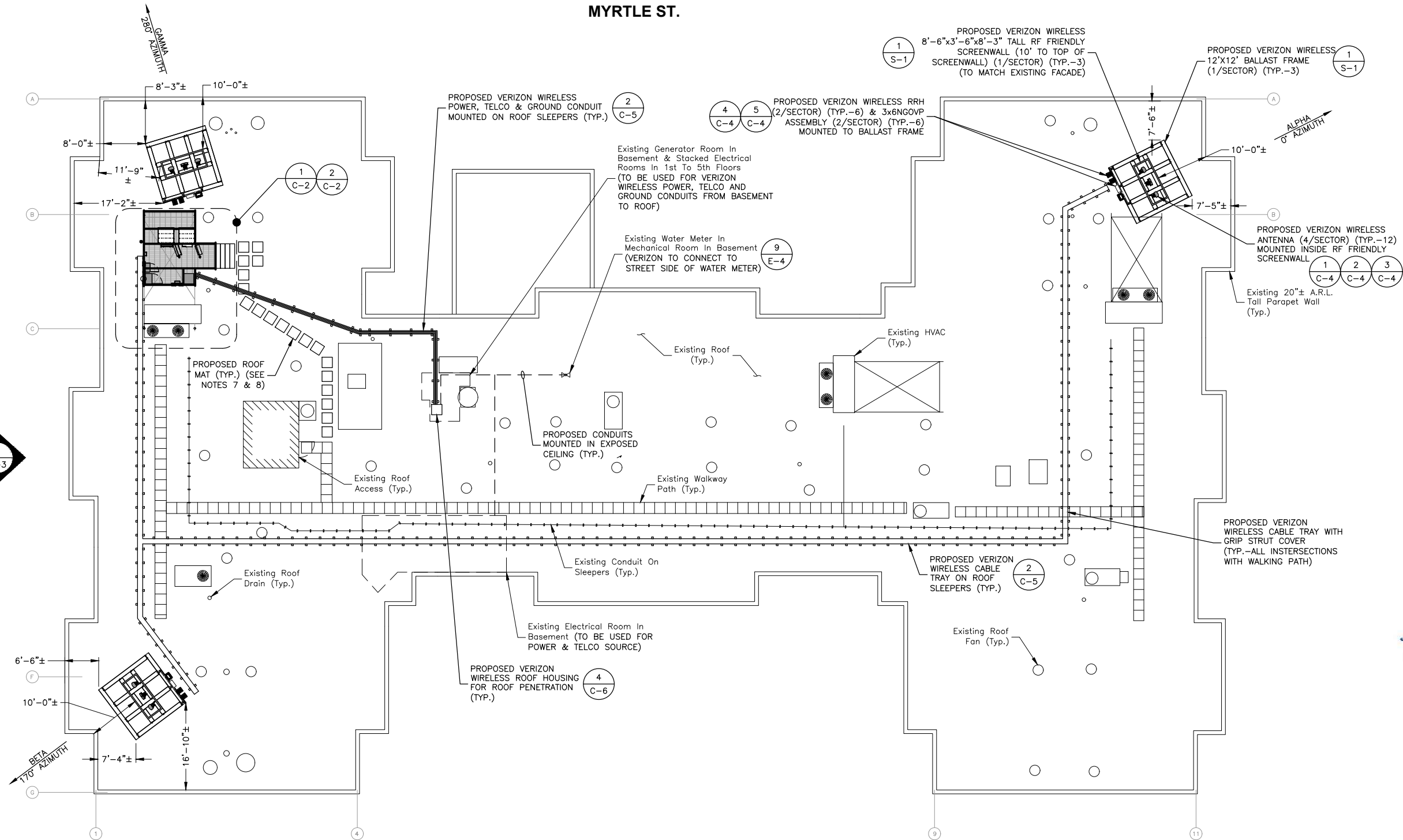
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GN-2



MYRTLE ST.

PEARL ST.



NOTES:

- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- NORTH ARROW SHOWN AS APPROXIMATE.
- DRAWINGS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10/10/24 & EXISTING DRAWINGS TITLED STATE-AIDED HOUSING FOR THE ELDERLY BY REINHARDT ASSOCIATES INC. DATED 10/08/76.
- EQUIPMENT LOCATION & ORIENTATION BASED ON STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC DATED 05/22/25.
- ANTENNA AZIMUTHS, EQUIPMENT COUNT/TYPE AND ORIENTATION BASED ON RFDS BY VERIZON WIRELESS DATED 06/26/25 & 07/18/25.
- CONTRACTOR TO INSPECT/DOCUMENT ROOF CONDITIONS PRIOR TO INSTALLATION. ANY EXISTING DAMAGE TO ROOF, NOTIFY BUILDING OWNER & VERIZON WIRELESS CM PRIOR TO EQUIPMENT INSTALLATION.
- CONTRACTOR TO USE OWNER'S APPROVED ROOFER AND SHALL NOT VOID ANY EXISTING WARRANTIES.
- ALL PROPOSED ROOF PADS SHALL BE INSTALLED PER ROOF WARRANTIES.
- NONE OF THE ANTENNAS WILL PROJECT ABOVE A PLANE INCLINED AT A FORTY-FIVE DEGREE (45°) ANGLE FROM VERTICAL, BEGINNING AT THE EDGE OF THE ROOF.

PROPOSED ROOF PLAN

SCALE: 3/64"=1' FOR 11"x17"
3/32"=1' FOR 22"x34"



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

NO.	DATE	DESCRIPTION
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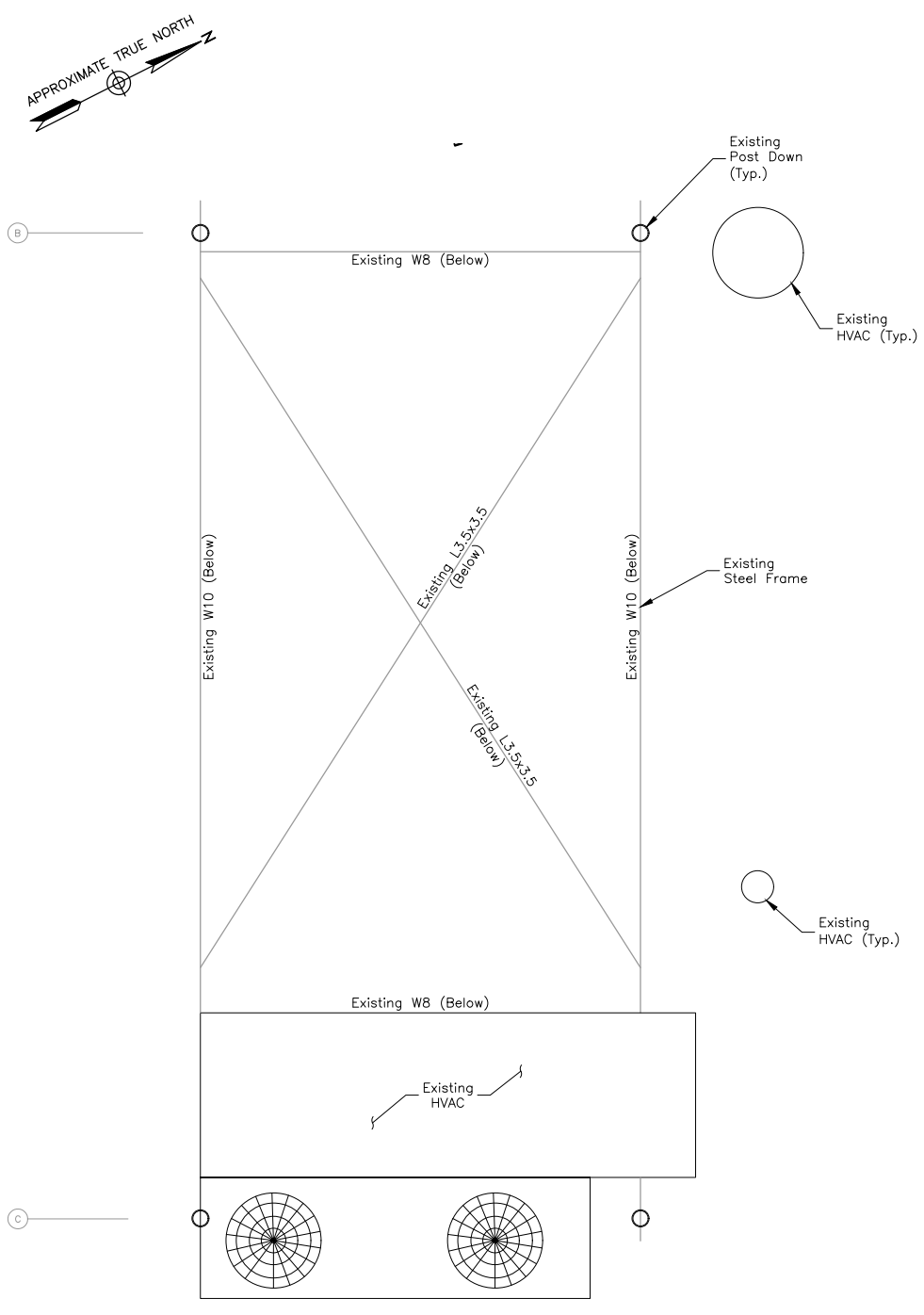
75 MYRTLE ST.
SOMERVILLE, MA 02145

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PROPOSED
ROOF PLAN

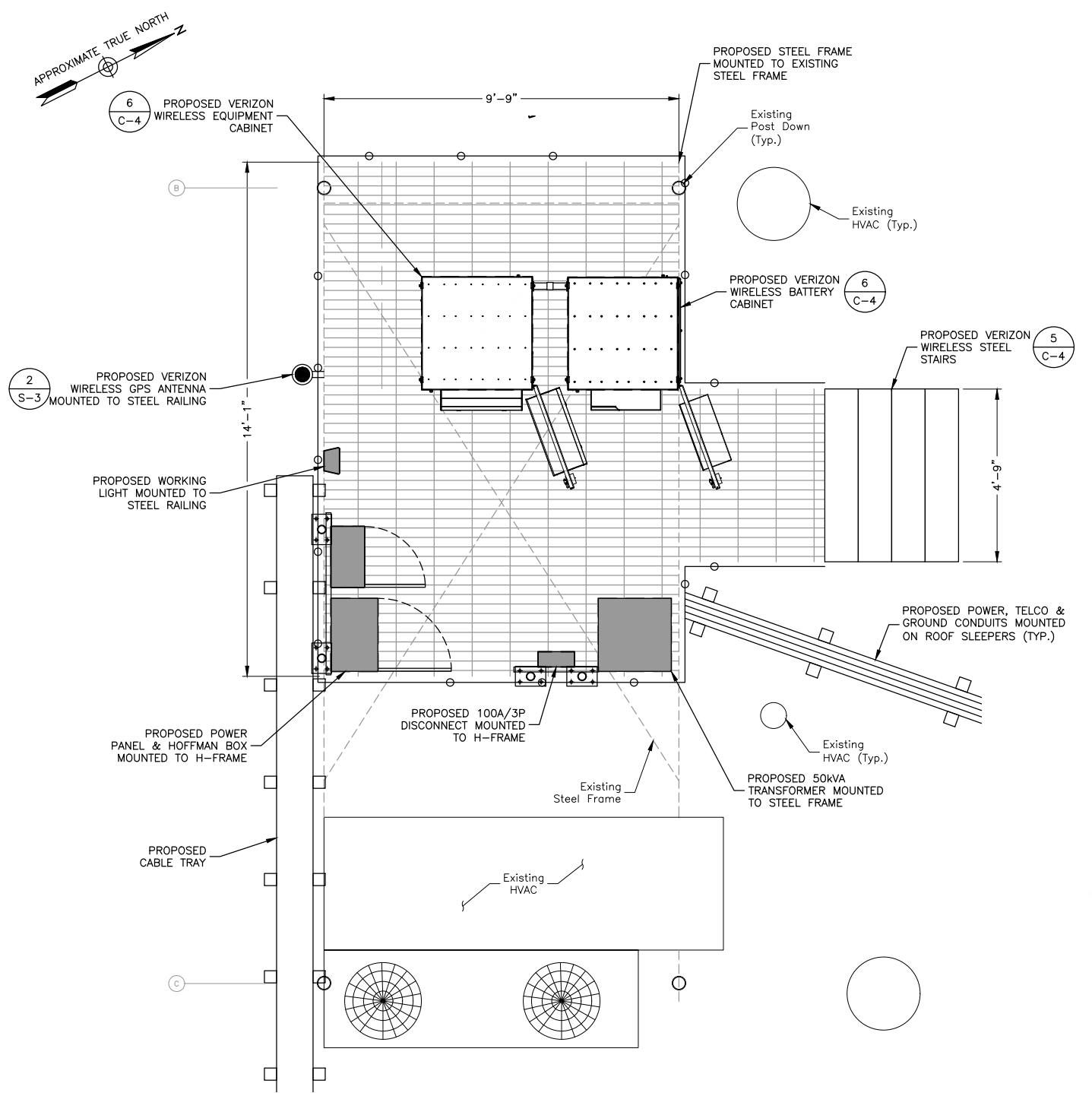
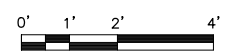
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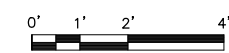
EXISTING STEEL FRAME LAYOUT

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"



PROPOSED EQUIPMENT LAYOUT

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"



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 - CONTRACTOR TO USE OWNER'S APPROVED ROOFER AND SHALL NOT VOID ANY EXISTING WARRANTIES.
 - ALL PROPOSED ROOF PADS SHALL BE INSTALLED PER ROOF WARRANTIES.
 - A.G.L. = ABOVE GROUND LEVEL
A.R.L. = ABOVE ROOF LEVEL
C.L. = CENTERLINE



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

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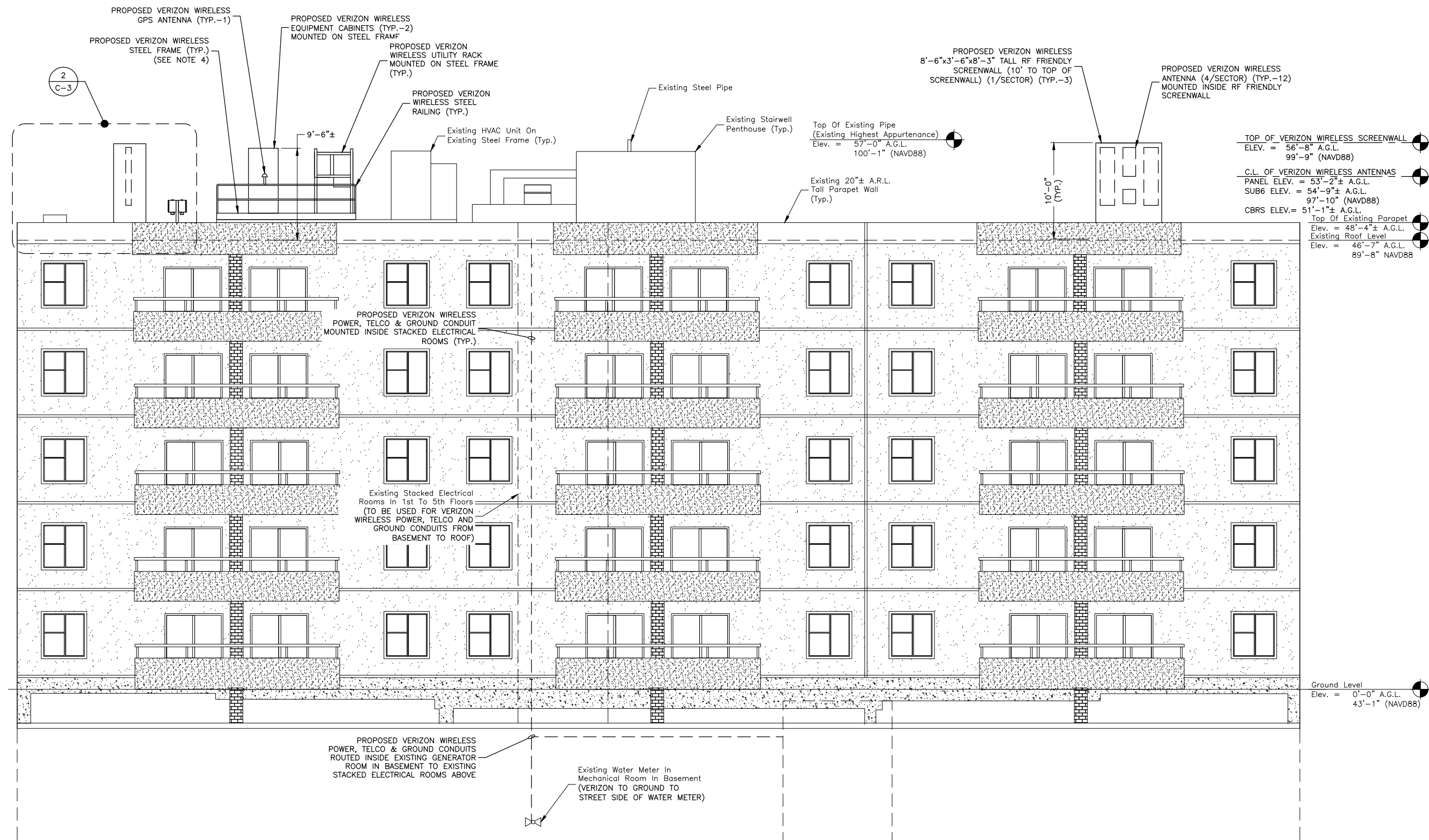
75 MYRTLE ST.
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SHEET TITLE

PROPOSED EQUIPMENT
LAYOUT

SHEET NUMBER

C-2



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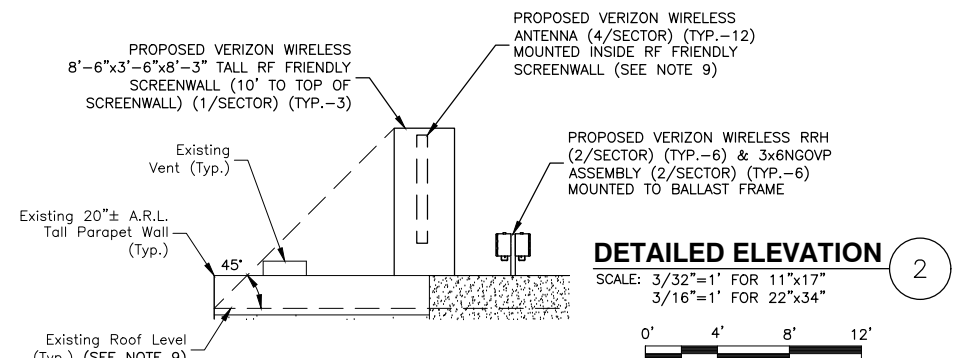
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- ELEVATION SHOWN AS APPROXIMATE.
- DRAWINGS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10/10/24 & EXISTING DRAWINGS TITLED STATE-AIDED HOUSING FOR THE ELDERLY BY REINHARDT ASSOCIATES INC. DATED 10/08/76.
- EQUIPMENT LOCATION & ORIENTATION BASED ON STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC DATED 05/22/25.
- ANTENNA AZIMUTHS, EQUIPMENT COUNT/TYPE AND ORIENTATION BASED ON RFDS BY VERIZON WIRELESS DATED 06/26/25 & 07/18/25.
- CONTRACTOR TO INSPECT/DOCUMENT ROOF CONDITIONS PRIOR TO INSTALLATION. ANY EXISTING DAMAGE TO ROOF, NOTIFY BUILDING OWNER & VERIZON WIRELESS CM PRIOR TO EQUIPMENT INSTALLATION.
- CONTRACTOR TO USE OWNER'S APPROVED ROOFER AND SHALL NOT VOID ANY EXISTING WARRANTIES.
- ALL PROPOSED ROOF PADS SHALL BE INSTALLED PER ROOF WARRANTIES.
- A.G.L. = ABOVE GROUND LEVEL
A.R.L. = ABOVE ROOF LEVEL
C.L. = CENTERLINE
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
- NONE OF THE ANTENNAS WILL PROJECT ABOVE A PLANE INCLINED AT A FORTY-FIVE DEGREE (45°) ANGLE FROM VERTICAL, BEGINNING AT THE EDGE OF THE ROOF.

SOUTH ELEVATION

SCALE: 3/32"=1' FOR 11"x17"
3/16"=1' FOR 22"x34"



1



DETAILED ELEVATION

SCALE: 3/32"=1' FOR 11"x17"
3/16"=1' FOR 22"x34"



2



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

**SOMERVILLE EAST
MA**

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT



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



DRAWN BY:	01/23/2026 JG
REVIEWED BY:	OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50183479
SITE LOCATION CODE (PSLC)	

783472

SITE ADDRESS

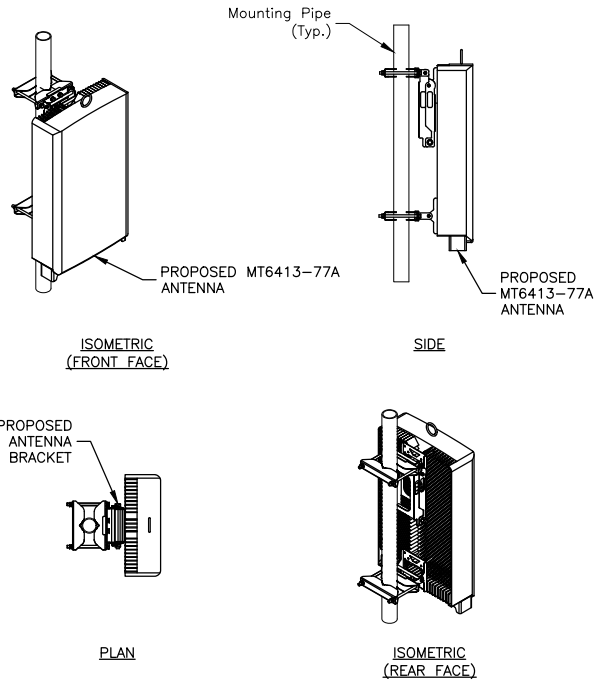
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

SOUTH ELEVATION

SHEET NUMBER

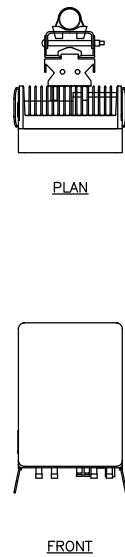
C-3



MODEL: MT6413-77A
DIMENSIONS: 28.90"H X 15.75"W X 5.51"D
WEIGHT: 57.3 LBS

MT6413-77A ANTENNA DETAILS
SCALE: N.T.S.

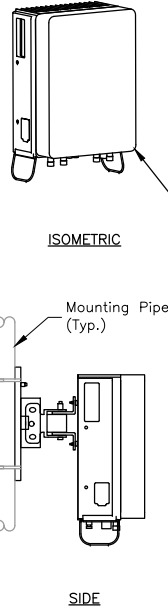
1



MODEL: R0440CC - CLIP ON ANTENNA FOR RT4423
DIMENSIONS: 14.25"H X 8.66"W X 5.02D
WEIGHT: 15.4 LBS

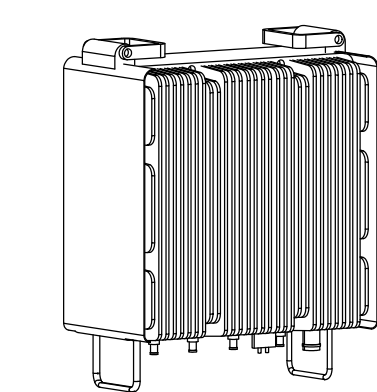
CBRS RRH WITH CLIP ANTENNA DETAIL
SCALE: N.T.S.

- ANTENNA NOTES:
1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. USE APPROPRIATE MOUNTING HARDWARE FOR CONSTRUCTION TYPE.
 2. ALL FEEDERS ARE TO BE NEATLY BUNDLED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
 3. ALL STEEL TO BE GALVANIZED.
 4. CONTRACTOR TO GROUND PROPOSED PIPE MOUNTS WITH GROUNDING LEADS. CONNECT LEADS TO THE SECTOR GROUNDING BAR.
 5. MAINTAIN REQUIRED CLEARANCE PER MANUFACTURER SPECIFICATIONS.



MANUFACTURER: COMMSCOPE
PART NUMBER: NHH-65A-R2B
DIMENSIONS: 55.6"H X 11.8"W X 7.0"D
WEIGHT: 35.1 LBS (W/OUT MOUNTING KIT)

PIPE PANEL ANTENNA DETAIL
SCALE: N.T.S.



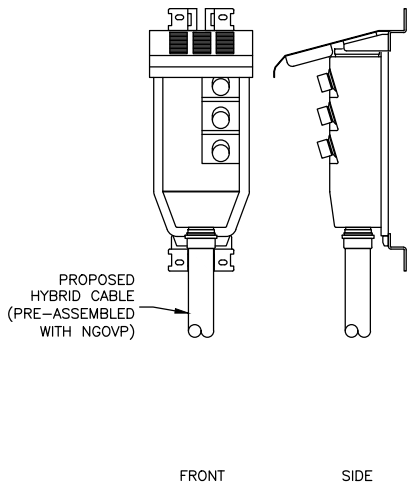
PROPOSED LTE AWS/PCS
MANUFACTURER: SAMSUNG
MODEL: AWS/PCS RF4801d-25A
DIMENSIONS: 21.8"H X 17.3"W X 7.2"D
WEIGHT: 87.9 LBS

PROPOSED LTE 700/850
MANUFACTURER: SAMSUNG
MODEL: 700/850 RF4461d-13A
DIMENSIONS: 14.9"H X 14.9"W X 10.2"D
WEIGHT: 79.2 LBS

- NOTES:
1. CONTRACTOR TO VERIFY WITH CONSTRUCTION MANAGER FOR FINAL MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
 2. MAINTAIN REQUIRED CLEARANCE PER MANUFACTURER SPECIFICATIONS.

REMOTE UNIT DETAIL
SCALE: N.T.S.

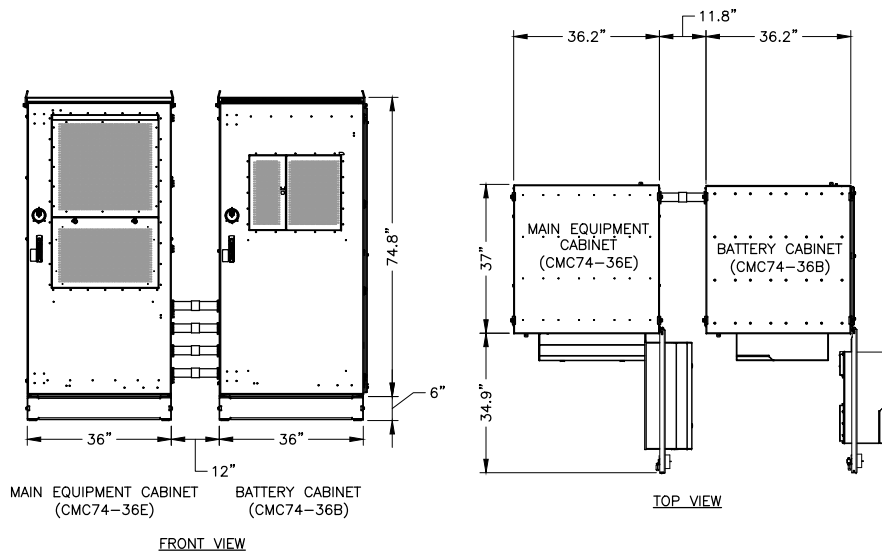
4



PROPOSED 3x6 NGOVP
MANUFACTURER: HUBER + SUHNER /RAYCAP
MODEL: MLRH36 / RTH-0306-PFC
DIMENSIONS: 12.43"H X 9.65"W X 5.43"D
WEIGHT: 15.87 LBS

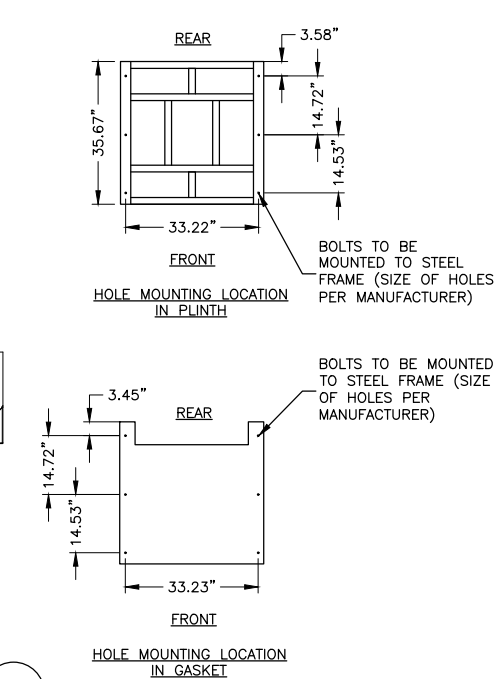
OVP UNIT DETAIL
SCALE: N.T.S.

5



- NOTE:
1. CONTRACTOR TO VERIFY WITH C.M. FOR FINAL MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.

COMMSCOPE EQUIPMENT CABINETS
SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"



6

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT

Dewberry®

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



DRAWN BY: 01/23/2026 JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

CONTRUCTION DETAILS - I

SHEET NUMBER

C-4

**SOMERVILLE EAST
MA**

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT

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



DRAWN BY: 01/23/2026 JG

REVIEWED BY: OAS

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JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

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SITE ADDRESS

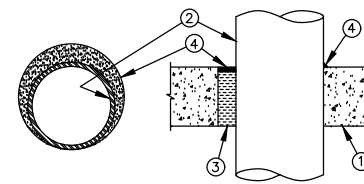
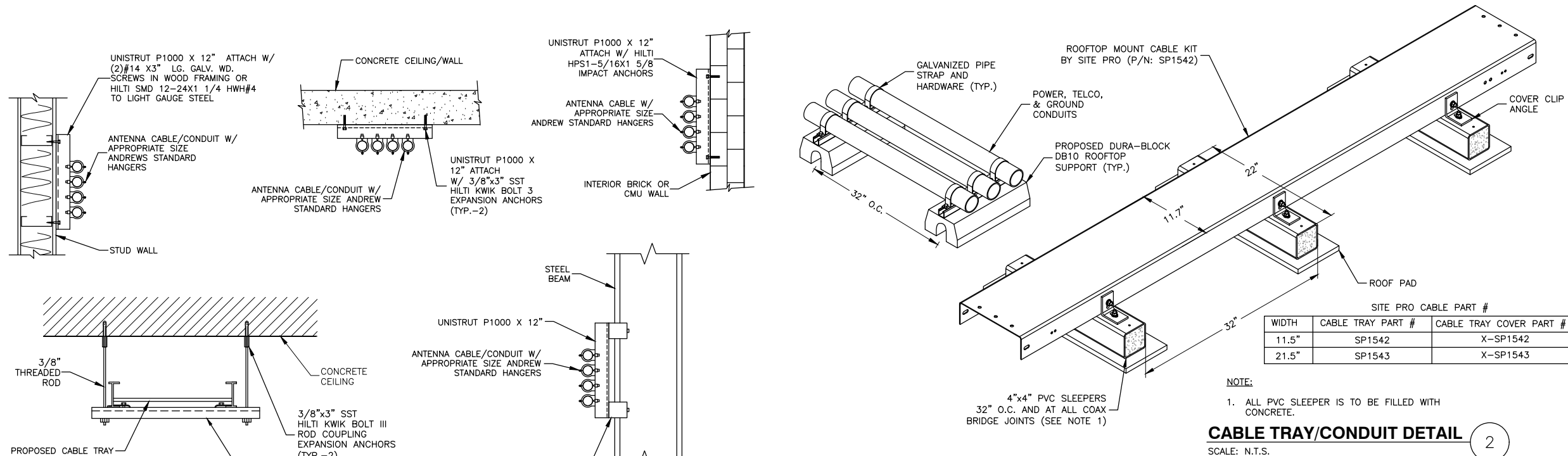
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

CONSTRUCTION DETAILS - II

SHEET NUMBER

C-5



F RATING - 2 HR
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400°F - 4 CFM/SQ FT
W RATING - CLASS I (SEE ITEM 4)

1. FLOOR OR WALL ASSEMBLY - MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS *. MAX DIAM OF OPENING IS 12 IN.

SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE 0 IN. (POINT CONTACT) TO MAX 1-1/4 IN. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:

- STEEL PIPE - NOM 10 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
- IRON PIPE - NOM 10 IN. DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
- CONDUIT - NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
- COPPER TUBING - NOM 4 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
- COPPER PIPE - NOM 4 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

3. PACKING MATERIAL - MIN 3 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FOR NOM 4 IN. DIAM (AND SMALLER) PIPES, CONDUITS OR TUBINGS AND A MIN 4 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FOR PIPE GREATER THAN NOM 4 IN. DIAM, FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

4. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL. AT THE POINT OF CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. W RATING APPLIES ONLY WHEN CP601S OR CP604 SEALANT IS USED.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC - CP601S, CP604, CP606 OR FS-ONE SEALANT

*BEARING THE UL CLASSIFICATION MARK.
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THE APPEARANCE OF A COMPANY'S NAME OR PRODUCT IN THIS DATABASE DOES NOT IN ITSELF ASSURE THAT PRODUCTS SO IDENTIFIED HAVE BEEN MANUFACTURED UNDER UL'S FOLLOW-UP SERVICE. ONLY THOSE PRODUCTS BEARING THE UL MARK SHOULD BE CONSIDERED TO BE LISTED AND COVERED UNDER UL'S FOLLOW-UP SERVICE. ALWAYS LOOK FOR THE MARK ON THE PRODUCT.

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5. SEE CONCRETE CORING NOTES ON SHEET G-1.

FIRE STOP DETAIL

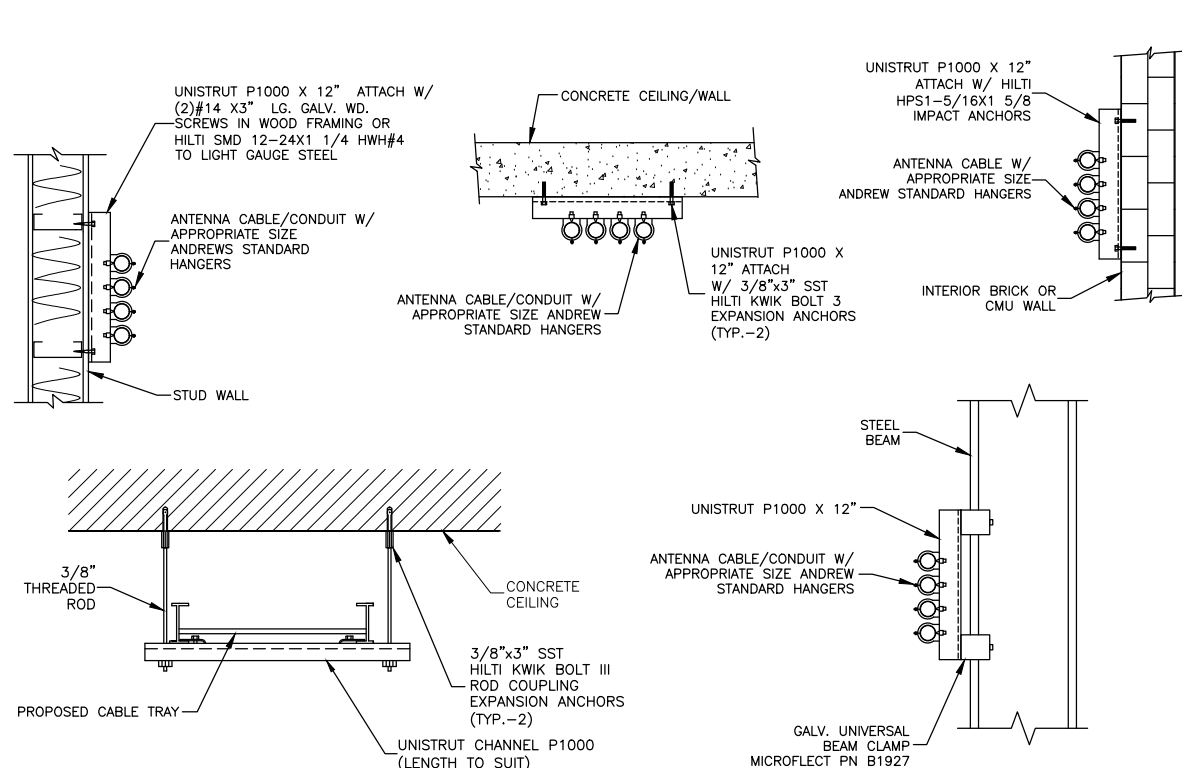
SCALE: N.T.S.

5

**SECTION - THROUGH
PENETRATION FIRESTOP SYSTEM**

SCALE: N.T.S.

4



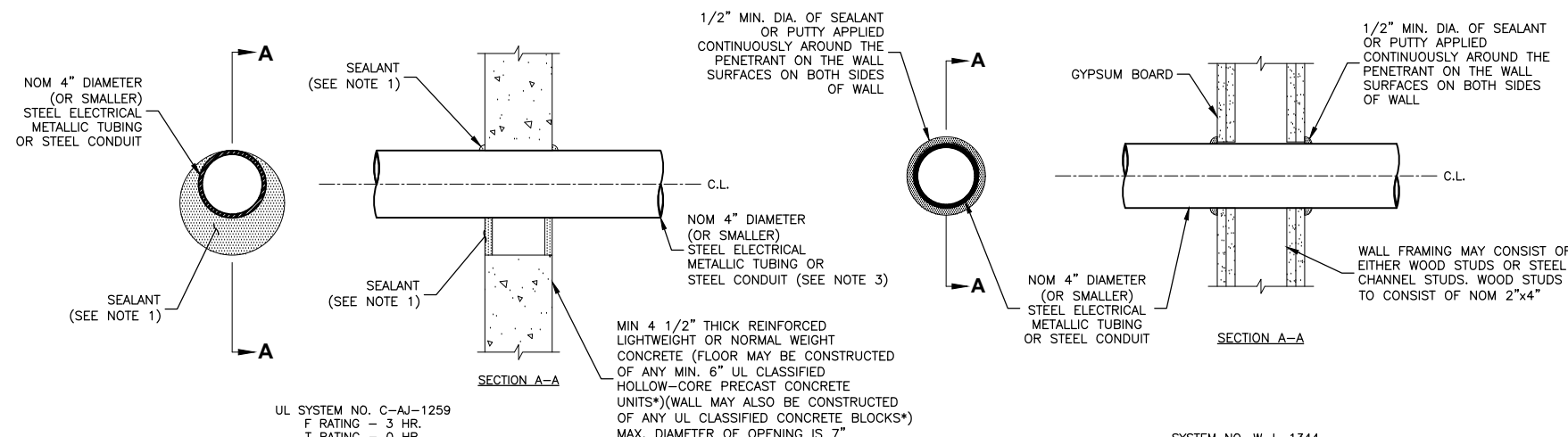
NOTES:

- ALL COAX SUPPORT SPACING: 4'-0" MAX.
- ALL CONDUIT SUPPORT SPACING: 10'-0" MAX.

CABLE/CONDUIT SUPPORT

SCALE: N.T.S.

1



UL SYSTEM NO. C-AJ-1259
F RATING - 3 HR.
T RATING - 0 HR.

NOTES:

- FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN. 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF FLOOR OR WALL. AT THE POINT CONTACT LOCATION BETWEEN PENETRATING ITEM AND CONCRETE, A MIN. 1/4" THICK BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/ PENETRATING ITEM INTERFACE ON BOTH SIDES OF FLOOR OR WALL.
- FORMING MATERIAL - (OPTIONAL, NOT SHOWN) - MINERAL WOOL BATT PACKING MATERIAL OR POLYURETHANE BACKER ROD FRITION FITTED INTO OPENING AND RECESSED FROM FLOOR OR WALL SURFACES AS REQUIRED TO ACCOMMODATE THICKNESS OF FILL MATERIAL.
- ONE CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE CONDUIT AND THE PERIPHERY OF THE OPENING SHALL BE A MIN. OF 0" (POINT OF CONTACT) TO A MAX. OF 3". CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

* BEARING THE UL CLASSIFICATION MARK.

CORING DETAIL

SCALE: N.T.S.

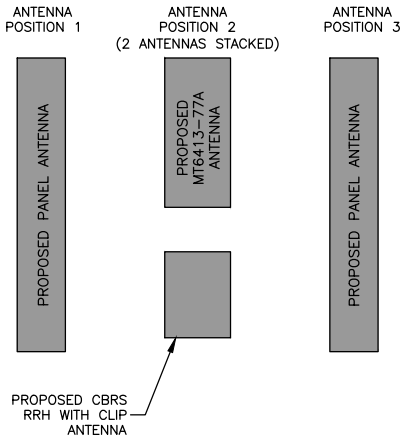
3

FINAL EQUIPMENT CONFIGURATION									
SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	CENTERLINE (A.G.L.)	AZIMUTH	OVP – HYBRID CABLE (ASSEMBLY)	FEED LINE LENGTH*
ALPHA	A1	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4461d-13A) (SHARED WITH OTHER ANTENNA)	53'-2"±	0°	(2) (P) 3x6 NGOVP / HYBRID CABLE ASSEMBLY	380'±
	A2	5G CBAND	(P) MT6413-77A	SAMSUNG	–	54'-9"±	0°		
	A3	CBRS LTE	(P) R0440CC – CLIP ON ANTENNA FOR RT4423	SAMSUNG	–	51'-1"±	0°		
	A4	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4801d-25A) (SHARED WITH OTHER ANTENNA)	53'-2"±	0°		
BETA	B1	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4461d-13A) (SHARED WITH OTHER ANTENNA)	53'-2"±	170°	(2) (P) 3x6 NGOVP / HYBRID CABLE ASSEMBLY	130'±
	B2	5G CBAND	(P) MT6413-77A	SAMSUNG	–	54'-9"±	170°		
	B3	CBRS LTE	(P) R0440CC – CLIP ON ANTENNA FOR RT4423	SAMSUNG	–	51'-1"±	170°		
	B4	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4801d-25A) (SHARED WITH OTHER ANTENNA)	53'-2"±	170°		
GAMMA	C1	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4461d-13A) (SHARED WITH OTHER ANTENNA)	53'-2"±	280°	(2) (P) 3x6 NGOVP / HYBRID CABLE ASSEMBLY	35'±
	C2	5G CBAND	(P) MT6413-77A	SAMSUNG	–	54'-9"±	280°		
	C3	CBRS LTE	(P) R0440CC – CLIP ON ANTENNA FOR RT4423	SAMSUNG	–	51'-1"±	280°		
	C4	LTE 700/850/1900/AWS	(P) NHH-65A-R2B	COMMSCOPE	(1) (P) (RF4801d-25A) (SHARED WITH OTHER ANTENNA)	53'-2"±	280°		
*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP WITH 15% BUFFER. FINAL EQUIPMENT CONFIGURATION TABLE BASED ON RFDS PROVIDED BY VERIZON WIRELESS DATED 06/26/25 & 07/18/25.									
(P) = PROPOSED									

FINAL EQUIPMENT CONFIGURATION

SCALE: N.T.S.

1



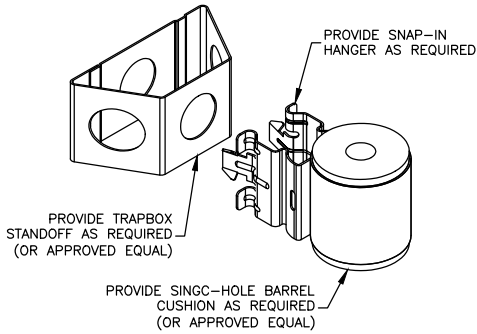
NOTES:

- AS VIEWED STANDING BEHIND THE ANTENNAS.
- CONTRACTOR TO VERIFY FINAL ANTENNA DESIGN PRIOR TO CONSTRUCTION.
- DETAIL TYPICAL FOR ALL SECTORS.

ANTENNA CONFIGURATION

SCALE: N.T.S.

2



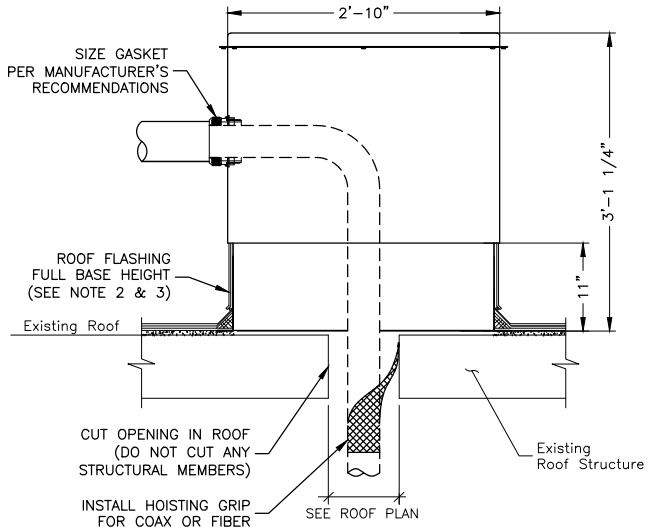
NOTE:

- PROVIDE C-CLAMP SUPPORTS & STAINLESS STEEL HOSE CLAMPS AS REQUIRED BY SITE CONDITIONS.

JUMPER MOUNT

SCALE: N.T.S.

3



NOTES:

- INSTALL RPH-ROOF PENETRATION HOUSINGS LLC ASSEMBLY PER MANUFACTURER'S SPECIFICATIONS BY FISKIO INC. (800) 288-6816 (IN NEW ENGLAND) (800) 994-0945 (OUTSIDE NEW ENGLAND).
- FLASHING & SEALANTS TO MATCH EXISTING ROOFING SYSTEM. WEATHERPROOF ALL EDGES WITH EXTERIOR GRADE SILICON.
- CONTRACTOR TO USE LANDLORD'S APPROVED ROOFER AND SHALL NOT VOID ANY EXISTING WARRANTY. CONTRACTOR TO SEAL ALL UNUSED PORTS WITH PROPER SEALANT CAPS.
- NO STRUCTURAL JOISTS ARE TO BE CUT DURING INSTALLATION.

RPH-ROOF PENETRATION HOUSING

SCALE: N.T.S.

4



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT



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



DRAWN BY: 01/23/2026 JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

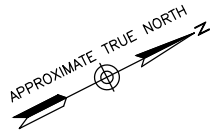
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

FINAL EQUIPMENT
CONFIGURATION TABLE &
DETAILS

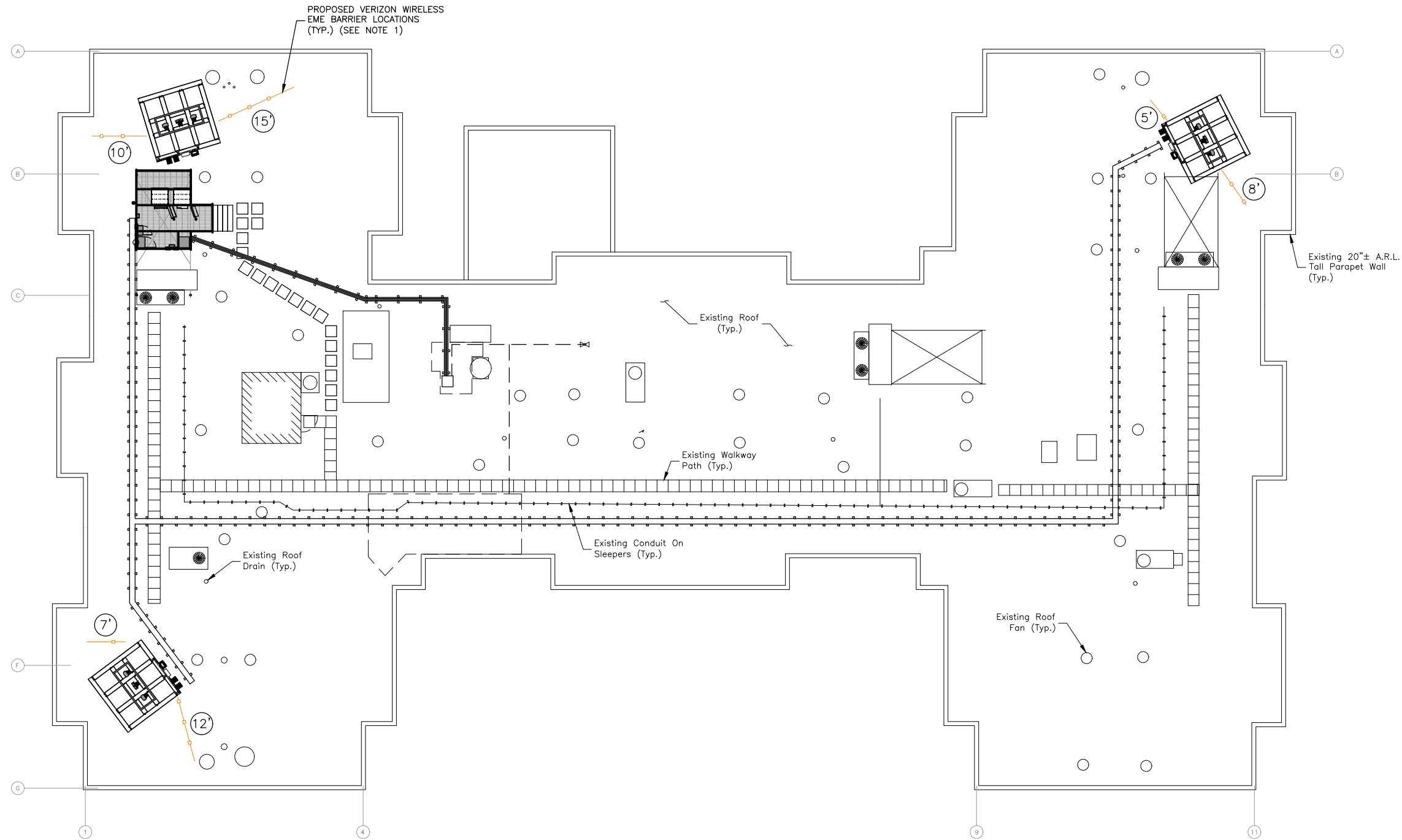
SHEET NUMBER

C-6



MYRTLE ST.

PEARL ST.



LEGEND

- (X') = PROPOSED EME BARRIER LENGTH (FT)
—○— = PROPOSED EME BARRIER LOCATION

EME BARRIER PLAN

SCALE: 3/64"=1' FOR 11"x17"
3/32"=1' FOR 22"x34"



1

NOTES:

- APPROXIMATE BARRIER LOCATIONS BASED ON 'RADIO FREQUENCY EXPOSURE - FCC COMPLIANCE REPORT', SITE NAME SOMERVILLE_EAST_MA BY VERIZON DATED 10/31/25. SEE FULL REPORT FOR SIGNAGE AND BARRIER DETAILS.



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST MA

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
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1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT



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SUITE 700
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PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

EME BARRIER PLAN

SHEET NUMBER

RF-1

NUMBER	ITEM	QUANTITY PER ENCLOSURE	MANUFACTURER/ MODEL #	COMMENTS/NOTES
1	2-7/8" O.D. (MIN.) STD PIPE-GALV.	3	N/A	CONNECTED TO FIBERGLASS ANGLES (TYP.-3).
2	SELF TAPPING SCREW OR FIBERGLASS ATTACHMENT MANUFACTURER. INSTALL FIBERGLASS BOLTS IN FRONT OF ANTENNAS.			
3	3/4" ASTM A325 BOLT	TBD	N/A	TYP. FOR ALL STEEL/STEEL & FIBERGLASS/STEEL CONNECTIONS.
4	GALVANIZED C10X15.3	9	N/A	DRILL WEEP HOLES AS NEEDED.
5	GALVANIZED L2.5X2.5X1/4X6"	14	N/A	WELD TO ITEM 4 AND BOLT TO ADJACENT ITEM 4.
6	MT6413-77A	1	SAMSUNG	INSTALL PER MANUFACTURER RECOMMENDATIONS. MAINTAIN 16" SIDE & FRONT CLEARANCE.
7	RT4423-48A WITH CLIP ON ANTENNA	1	SAMSUNG	INSTALL PER MANUFACTURER RECOMMENDATIONS.
8	-	-	-	NOT USED
9	CMU BALLAST	SEE BALLAST TABLE		

- NOTES:
- INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
 - ALL EQUIPMENT SHALL BE GROUNDED PER VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
 - DETAIL IS SCHEMATIC.
 - ALL MOUNTING HARDWARE TO BE GALVANIZED.
 - REMOVE ALL ROCK BALLAST AT BALLAST MOUNT LOCATION. INSPECT/DOCUMENT ROOF CONDITIONS PRIOR TO INSTALLATION. ANY EXISTING DAMAGE TO ROOF, NOTIFY BUILDING OWNER & VERIZON WIRELESS CM.
 - BOND FRAME & ANTENNAS TO THE SECTOR GROUND BAR.
 - CLEAN AND INSPECT ROOF PRIOR TO PLACEMENT OF PROPOSED BALLAST FRAME. INSTALL VZT APPROVED ROOFING MATS. FINAL ENCLOSURE SPECIFICATIONS AND ATTACHMENT TO BE MADE BY FIBERGLASS MANUFACTURER.
 - ENCLOSURES SHALL MATCH COLORS & TEXTURE OF THE BUILDING FACADE. SUBMIT SAMPLES TO BUILDING OWNER & VERIZON WIRELESS FOR APPROVAL.
 - INSTALL SHIMS AS REQUIRED TO LEVEL BALLAST MOUNT ON ROOF.
 - BALLAST MOUNT LOCATIONS ON ROOF BASED ON STRUCTURAL ANALYSIS DATED 05/22/25.

BALLAST FRAME	
TOTAL WEIGHT CMU ON BALLAST	(0) BLOCKS OF CMU 0 LBS EA 0 LBS TOTAL

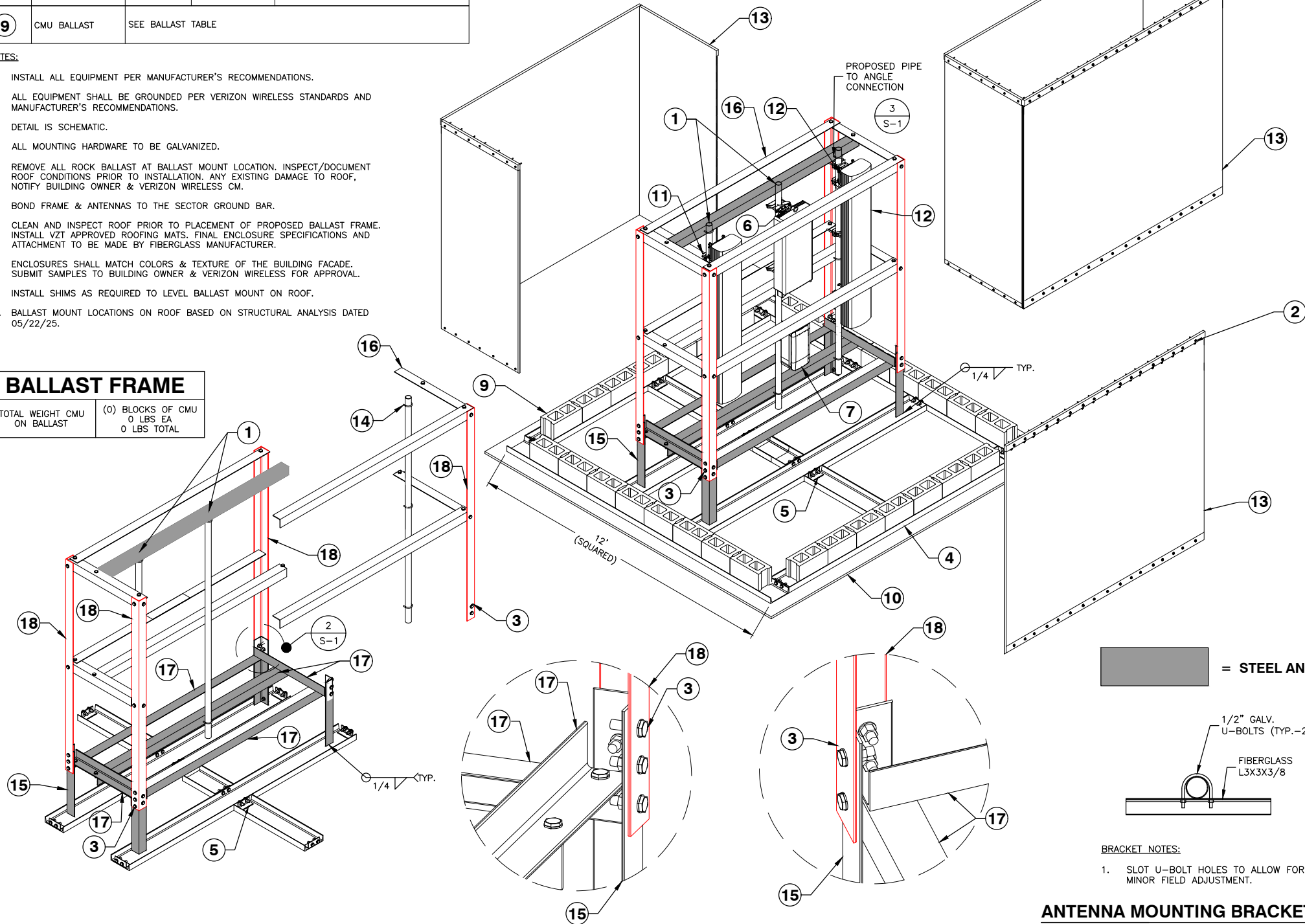
10	RUBBER ROOFING MAT	120 SF	COMMScope MT-F1637	INSTALL PER MANUFACTURERS RECOMMENDATIONS.
11	MOUNTING BRACKET	5	N/A	INSTALL PER MANUFACTURERS RECOMMENDATIONS.
12	PANEL ANTENNA	2	INSTALL PER MANUFACTURERS RECOMMENDATIONS. IF SIDE BY SIDE ANTENNA MOUNT REQUIRED, UTILIZE DETAIL 2/C-7.	
13	FIBERGLASS ENCLOSURE	1	N/A	SEE FIBERGLASS NOTES THIS SHEET.
14	1/2" U-BOLT	9	N/A	BOLT TO ITEM 16
15	GALVANIZED L6X6X3/8	4	N/A	WELD TO ITEM 4 & BOLT TO ITEM 16 WITH 3/4" A325 STRUCTURAL BOLTS
16	FIBERGLASS L3X3X3/8	10	N/A	BOLT TO 15 & 7
17	GALVANIZED L3X3X3/8	5	N/A	BOLT TO 15, 17 & 18
18	FIBERGLASS COLUMNS L6X6X3/8	4	N/A	BOLTED AS SHOWN ON DETAIL

WINDLOAD DESIGN CRITERIA:

IN ACCORDANCE WITH 780 CMR MASSACHUSETTS AMENDMENTS TO THE INTERNATIONAL BUILDING CODE (IBC):

- ULTIMATE WIND SPEED	119 MPH
- RISK CATEGORY	II
- EXPOSURE CATEGORY	B
- DESIGN WIND LOAD: QZ	25.2 PSF

PROPOSED VERIZON WIRELESS 8'-6"x3'-6" RF FRIENDLY ENCLOSURE (1/SECTOR) (TYP.-3) (SEE FIBERGLASS NOTE 6)



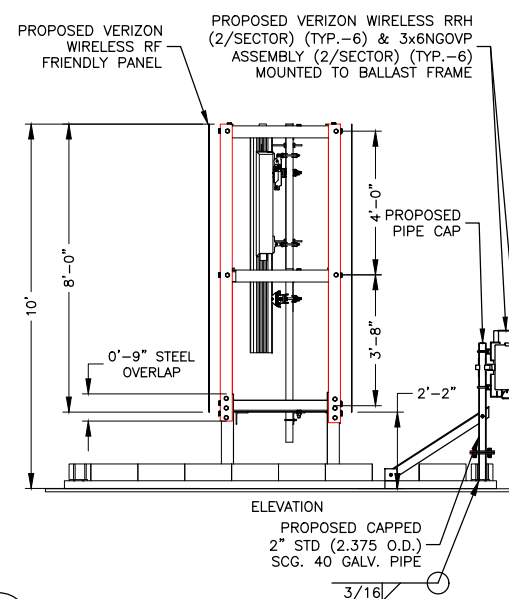
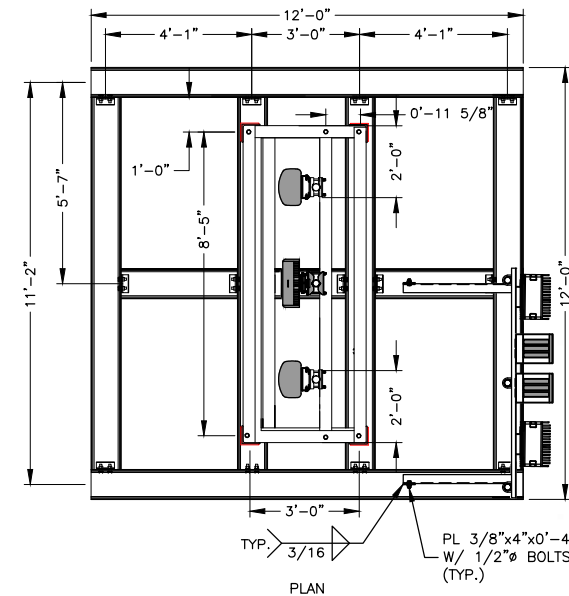
ANTENNA ENCLOSURE DETAIL (ISO.)
SCALE: N.T.S.

CONNECTION ISOMETRIC DETAILS
SCALE: N.T.S.

ANTENNA MOUNTING BRACKET
SCALE: N.T.S.

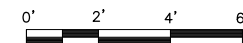
FIBERGLASS NOTES:

- FRP (FIBERGLASS REINFORCED POLYMER) STRUCTURAL SHAPES SHALL BE MANUFACTURED USING THE PULTRUSION PROCESS.
- IF PRE-FABRICATED MEMBERS DO NOT ASSEMBLE ACCORDING TO PLAN, CONTACT THE FIBERGLASS MANUFACTURER BEFORE CUTTING OR ALTERING FABRICATED MEMBERS.
- FRP MEMBERS SHALL BE FABRICATED AND ASSEMBLED AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROTECT THE FRP STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BREAKAGE, NICKS, GOUGES, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.
- FRP BOLTS SHOULD BE TIGHTENED 1/2 TURN PAST SNUG AND LOCKED WITH EPOXY.
- FIBERGLASS TO MEET ALL VERIZON WIRELESS STANDARDS FOR RF PROPAGATION. PROVIDE TEST REPORTS TO VERIZON WIRELESS FOR REVIEW & APPROVAL.
- STRUCTURAL FRP SHALL HAVE THE MINIMUM MECHANICAL PROPERTIES:
E=2800KSI
TENSILE STRENGTH(LW): 33KSI
COMPRESSIVE STRENGTH(LW): 33 KSI
FLEXURAL STRENGTH(LW): 33KSI
DENSITY: 104PCF
- FIBERGLASS PANEL DESIGN & CONNECTION DESIGN TO BE BY OTHERS.
- PROVIDE FRP SHOP DRAWINGS TO DEWBERRY ENGINEERS INC. FOR REVIEW & APPROVAL PRIOR TO FRP FABRICATION.



PLAN & ELEVATION DETAIL

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"



verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

**SOMERVILLE EAST
MA**

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT

Dewberry®

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



01/22/2026

DRAWN BY:	JG
REVIEWED BY:	OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50183479
SITE LOCATION CODE (PSLC)	

783472

SITE ADDRESS

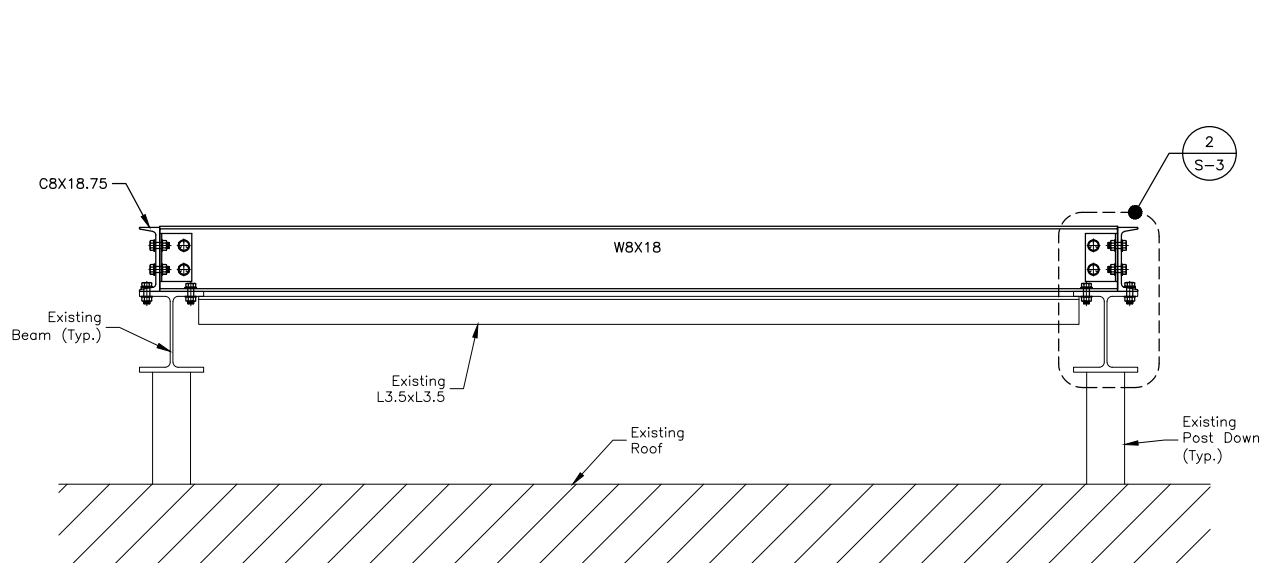
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

ENCLOSURE &
BALLAST DETAILS

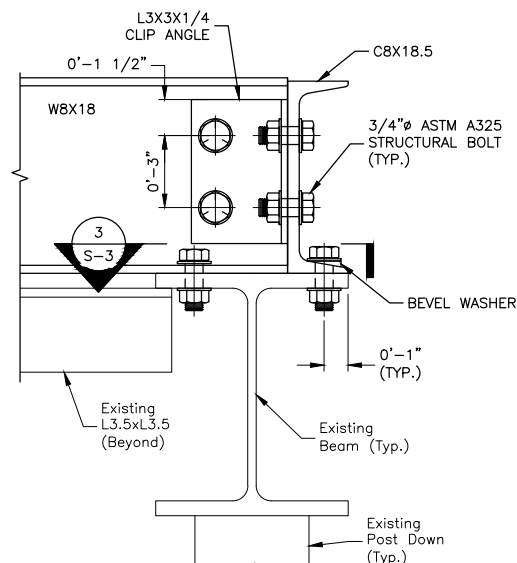
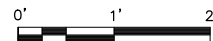
SHEET NUMBER

S-1



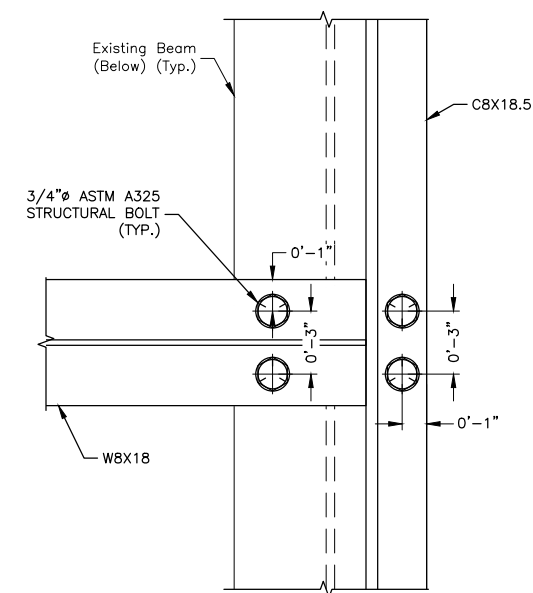
STEEL FRAME SECTION

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



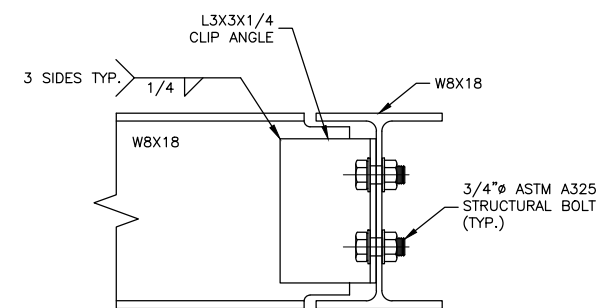
W8 TO C8 CONNECTION

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



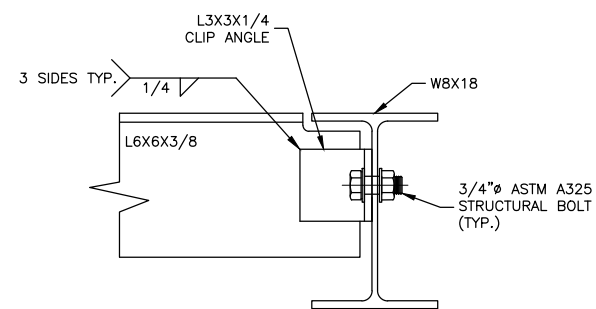
W8 TO C8 CONNECTION (PLAN)

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



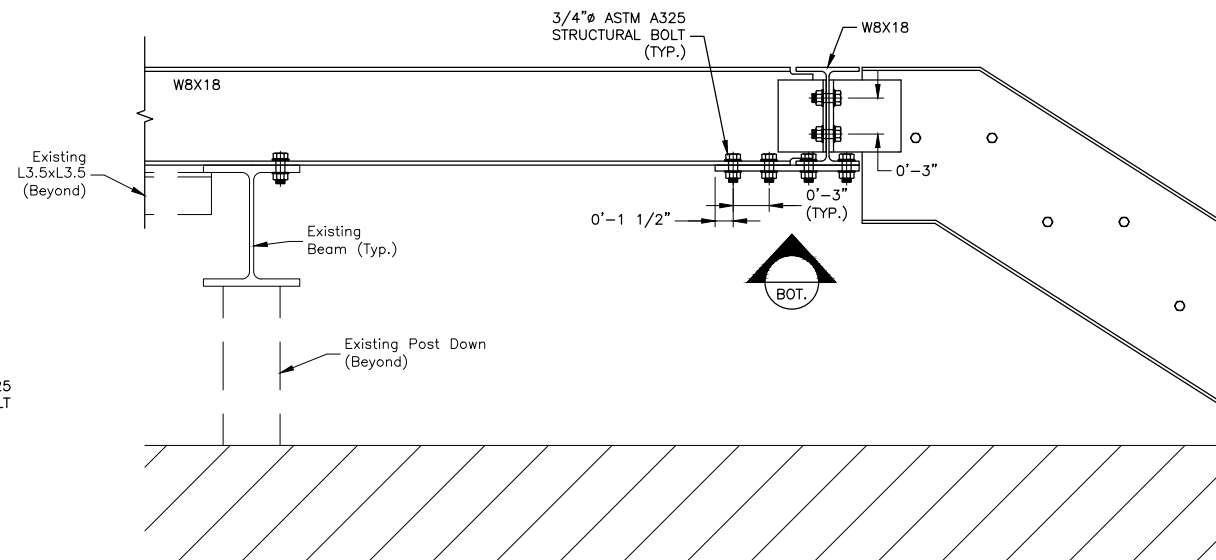
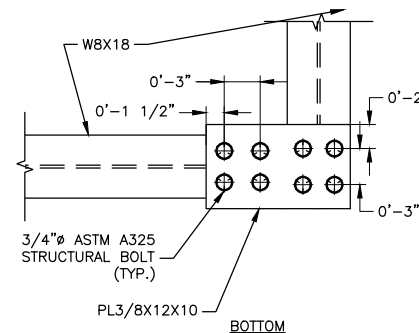
W8 TO W8 CONNECTION

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



W8 TO ANGLE CONNECTION

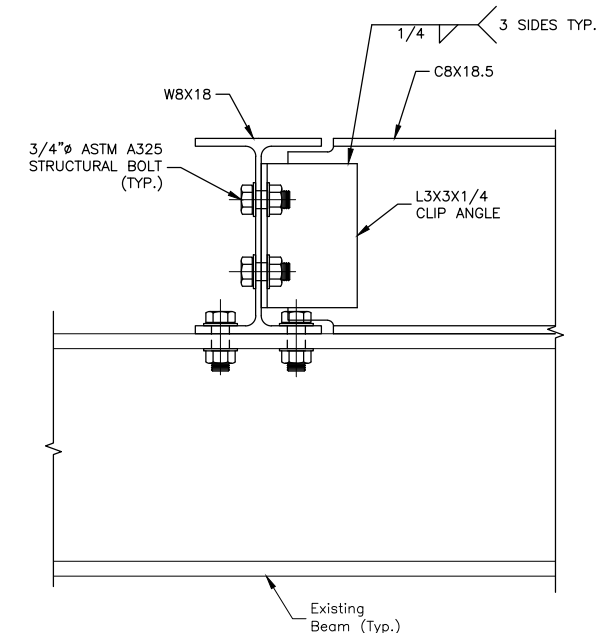
SCALE: 1 1/2"=1' FOR 11"x17"
3"=1' FOR 22"x34"



SECTION

STAIR SECTION DETAIL

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



W8-C8 TO EXISTING BEAM CONNECTION

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



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

**SOMERVILLE EAST
MA**

CONSTRUCTION DRAWINGS

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A	06/03/25	FOR COMMENT



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



01/22/2026

DRAWN BY: JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

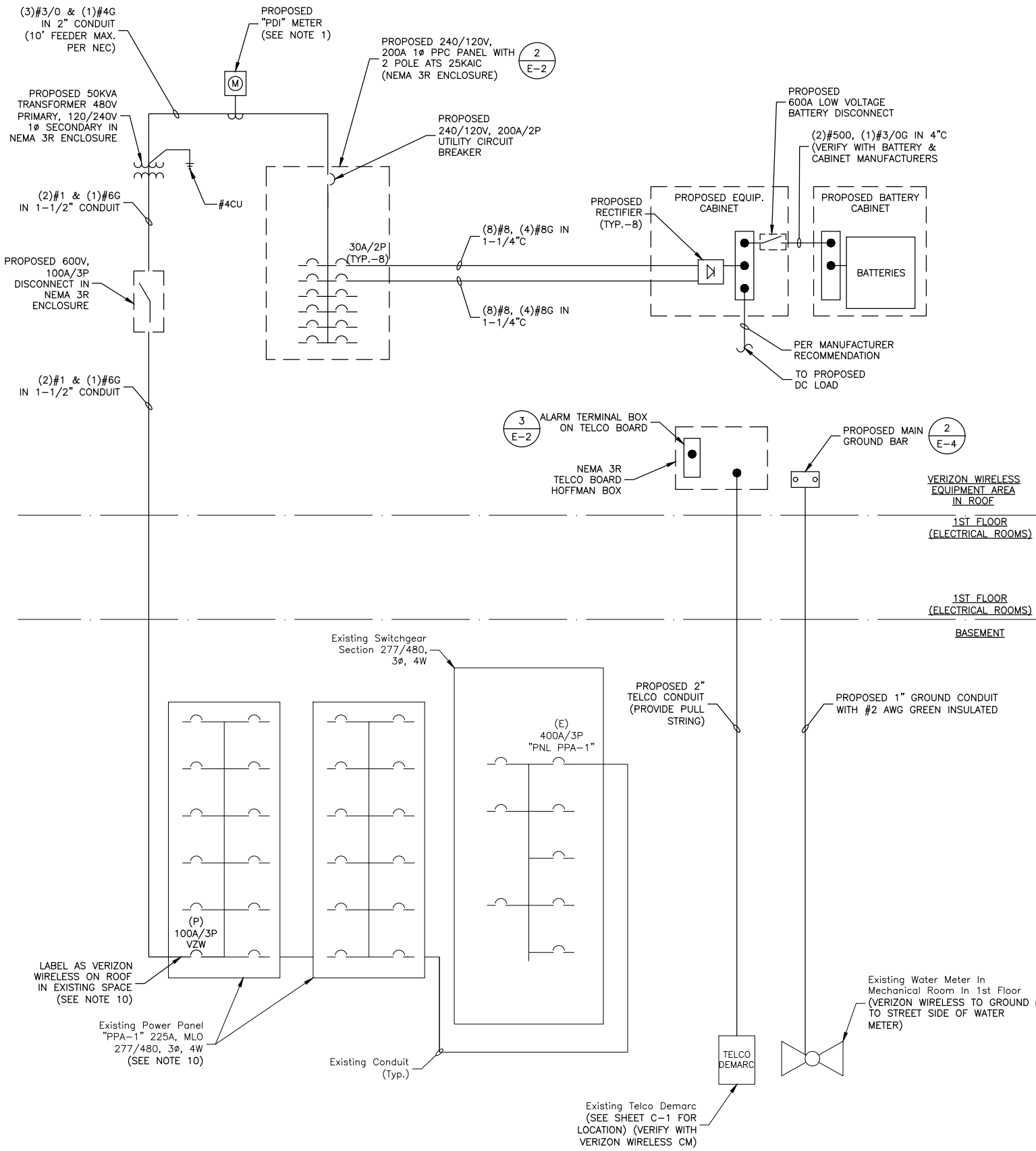
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

EQUIPMENT
STEEL FRAME DETAILS

SHEET NUMBER

S-3



ELECTRICAL ONE-LINE DIAGRAM

SCALE: N.T.S.

1

UTILITY	CONDUIT*		START	TERMINATE	APPROX. DISTANCE	NOTES
	SIZE	TYPE				
POWER	1-1/2"	SEE NOTE 1	1st FLOOR	VERIZON WIRELESS EQUIPMENT PLATFORM ON THE ROOF	240'±	VERIFY ROUTE WITH BUILDING OWNER
TELCO	(1) 2"Ø WITH PULL STRING	SEE NOTE 1	1st FLOOR	VERIZON WIRELESS EQUIPMENT PLATFORM ON THE ROOF	240'±	VERIFY ROUTE WITH BUILDING OWNER & DEMARC LOCATION WITH UTILITY CO. PROVIDER
GROUND	1"Ø	SEE NOTE 1	1st FLOOR	VERIZON WIRELESS EQUIPMENT PLATFORM ON THE ROOF	200'±	VERIFY ROUTE & CONNECTION WITH BUILDING OWNER.

CONDUIT NOTES:

- SEE GENERAL ELECTRICAL NOTE #26 ON SHEET G-1 FOR CONDUIT SPECIFICATIONS.
- CONDUIT LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY CONDUIT LENGTH & ROUTE PRIOR TO CONSTRUCTION. OWNER & VERIZON WIRELESS C.M. TO APPROVE FINAL ROUTINGS.
- CONTRACTOR TO IDENTIFY ALL CONDUIT PENETRATIONS, TURNS, PULL BOXES, EXPANSION JOINTS & VERIFY ROUTE WITH VERIZON WIRELESS CM & BUILDING OWNER PRIOR TO CONSTRUCTION.
- PAINT CONDUIT TO MATCH EXISTING SURROUNDINGS AS REQUIRED BY BUILDING OWNER & PROVIDE LABELS PER VERIZON WIRELESS REQUIREMENTS.
- CONTRACTOR TO VERIFY LOCATION OF REINFORCEMENT IN EXISTING CONCRETE USING GROUND PENETRATING RADAR PRIOR TO ANY CORE DRILL OR ANCHORING. MAINTAIN PROPER CLEARANCES FROM EXISTING REINFORCEMENT.
- FIRE STOP ALL INTERIOR WALL PENETRATIONS. WEATHER SEAL ALL EXTERIOR WALL PENETRATIONS.

CONDUIT CHART

SCALE: N.T.S.

2

LEGEND

	CIRCUIT BREAKER		GROUND BAR
	CHECK METER		GROUND
	EXISTING WATER METER		

NOTES:

- COORDINATE THE INSTALLATION OF NEW CHECK METER WITH BUILDING OWNER. PERMANENTLY LABEL METER AND BREAKER AS "VERIZON WIRELESS ON ROOF".
- COORDINATE ROUTING OF CONDUITS WITH BUILDING OWNER REPRESENTATIVES.
- COORDINATE POWER SHUT-DOWN WITH UTILITY COMPANY, BUILDING OWNER, & TENANTS.
- PROVIDE PULL BOXES AND EXPANSION JOINTS AS REQUIRED BY CODE AND JOB CONDITIONS.
- INSTALL ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.
- ALL GROUNDING SHALL COMPLY WITH NEC ARTICLE 250.
- SEE SHEET S-1 FOR EQUIPMENT LAYOUT.
- POWER FEEDS FROM DISTRIBUTION PANEL.
- INSTALL 1" LIQUID TIGHT DROPS FROM JUNCTION BOX (PROVIDED BY CONTRACTOR) TO RECTIFIER CONNECTOR.
- CONTRACTOR TO PERFORM AN ELECTRICAL LOAD STUDY PRIOR TO CONSTRUCTION TO VERIFY EXISTING POWER PANEL ADEQUACY TO ADD VERIZON WIRELESS ELECTRICAL LOAD. COORDINATE WITH DEWBERRY ENGINEERS, BUILDING OWNER AND VERIZON WIRELESS CM.



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

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



01/23/26

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REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

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SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

ELECTRICAL ONE-LINE
DIAGRAM

SHEET NUMBER

E-1

SINGLE PHASE 2 WIRE
CIRCUIT & WIRE SCHEDULE

COPPER CONDUCTORS SIZE		
CONDUCTORS	SIZE CONDUIT	CIRCUIT OR OVERCURRENT RATING
2#12 & 1#12G.	3/4"	15A
2#12 & 1#12G.	3/4"	20A
2#10 & 1#10G.	3/4"	30A
2#8 & 1#10G.	3/4"	40A
2#6 & 1#10G.	3/4"	50A
2#6 & 1#10G.	3/4"	60A

SINGLE PHASE 3 WIRE
CIRCUIT & WIRE SCHEDULE

COPPER CONDUCTORS SIZE		
CONDUCTORS	SIZE CONDUIT	CIRCUIT OR OVERCURRENT RATING
2#12, 1#12N & 1#12G	3/4"	15A
2#12, 1#12N & 1#12G	3/4"	20A
2#10, 1#10N & 1#10G	3/4"	30A
2#8, 1#8N & 1#10G	1"	40A
2#6, 1#6N & 1#10G	1"	50A
2#6, 1#6N & 1#10G	1"	60A

WIRE SCHEDULE

SCALE: N.T.S.

1

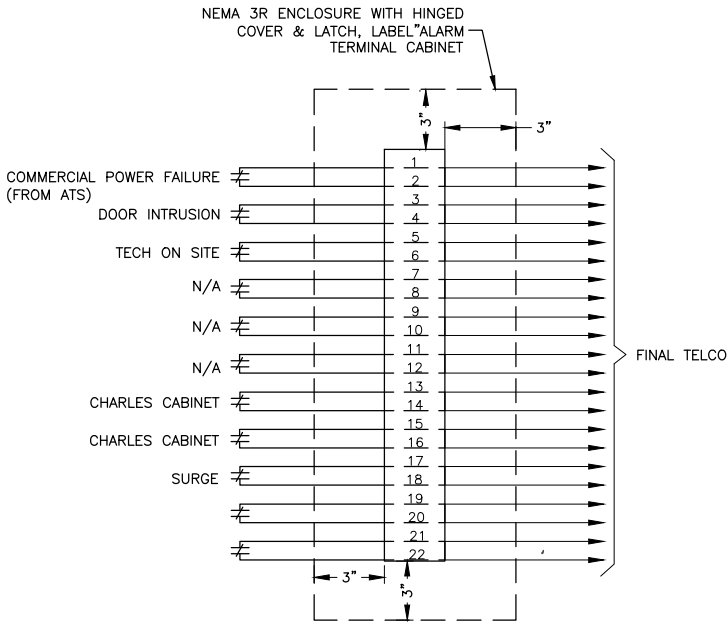
NEMA 3R PANEL SCHEDULE - ILC							V.I.F. A.I.C.
W/200A MAIN C/B							
CKT #	DESCRIPTION	KVA	AMP	AMP	KVA	DESCRIPTION	CKT #
1	RECTIFIER #1	3.1	30	30	3.1	RECTIFIER #2	2
3							4
5	RECTIFIER #3	3.1	30	30	3.1	RECTIFIER #4	6
7							8
9	RECTIFIER #5	3.1	30	30	3.1	RECTIFIER #6	10
11							12
13	RECTIFIER #7	3.1	30	30	3.1	RECTIFIER #8	14
15							16
17	SPACE		-	-		SPACE	18
19							20
21	TELCO CABINET	0.5	20	-	.24	LIGHTING	22
23	SPACE		-	-		SPACE	24
25	SPACE		-	-		SPACE	26
27	SPACE		-	-		SPACE	28
29	SPACE		-	-		SPACE	30
TOTAL KVA: 25.54							

*VERIFY ALL BREAKER SIZES WITH THE CABINET MANUFACTURER AND VERIZON WIRELESS PRIOR TO CONSTRUCTION.

PANEL SCHEDULE

SCALE: N.T.S.

2



CIRCUIT TERMINALS	ALARM DESIGNATION	ALARM GENERATED BY:
1-2	COMMERCIAL POWER FAILURE	TRANSFER SWITCH
3-4	DOOR INTRUSION	EITHER CABINET DOOR
5-6	TECH ON SITE	EITHER CABINET DOOR
7-8	N/A	N/A
9-10	N/A	N/A
11-12	N/A	N/A
13-14	CHARLES CABINET	TELCO CABINET AC FAIL
15-16	CHARLES CABINET	TELCO CABINET SURGE
17-18	SURGE	SURGE
19-20		
21-22		

ALARM TERMINAL NOTES:

- TERMINATIONS: TERMINATIONS TO THE ALARM STRIP WILL HAVE CRIMP ON BLOCK SPADE.
- LABELING: ALL ALARMS WILL BE LABELED WITH WHITE LAMINATED TAPE LABELS AT THE ALARM BLOCK.
- ALL ALARMS WILL BE BROUGHT TO THE TELCO BOARD AND CONNECTED TO THE TERMINAL STRIP.
- TERMINAL STRIP WILL BE LOCATED INSIDE A HOFFMAN BOX MOUNTED TO THE TELCO BOARD.
- USE A MINIMUM 18AWG WIRE TO BRING ALARMS TO THE ALARM BOARD.
- ALARM CONTACTS ARE NORMALLY CLOSED. OPENING OF CONTACTS INDICATES AN ALARM CONDITION.

ALARM DETAILS/SCHEDULE

SCALE: N.T.S.

3

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST
MA

CONSTRUCTION DRAWINGS

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99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



01/23/26

DRAWN BY: JG

REVIEWED BY: OAS

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JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

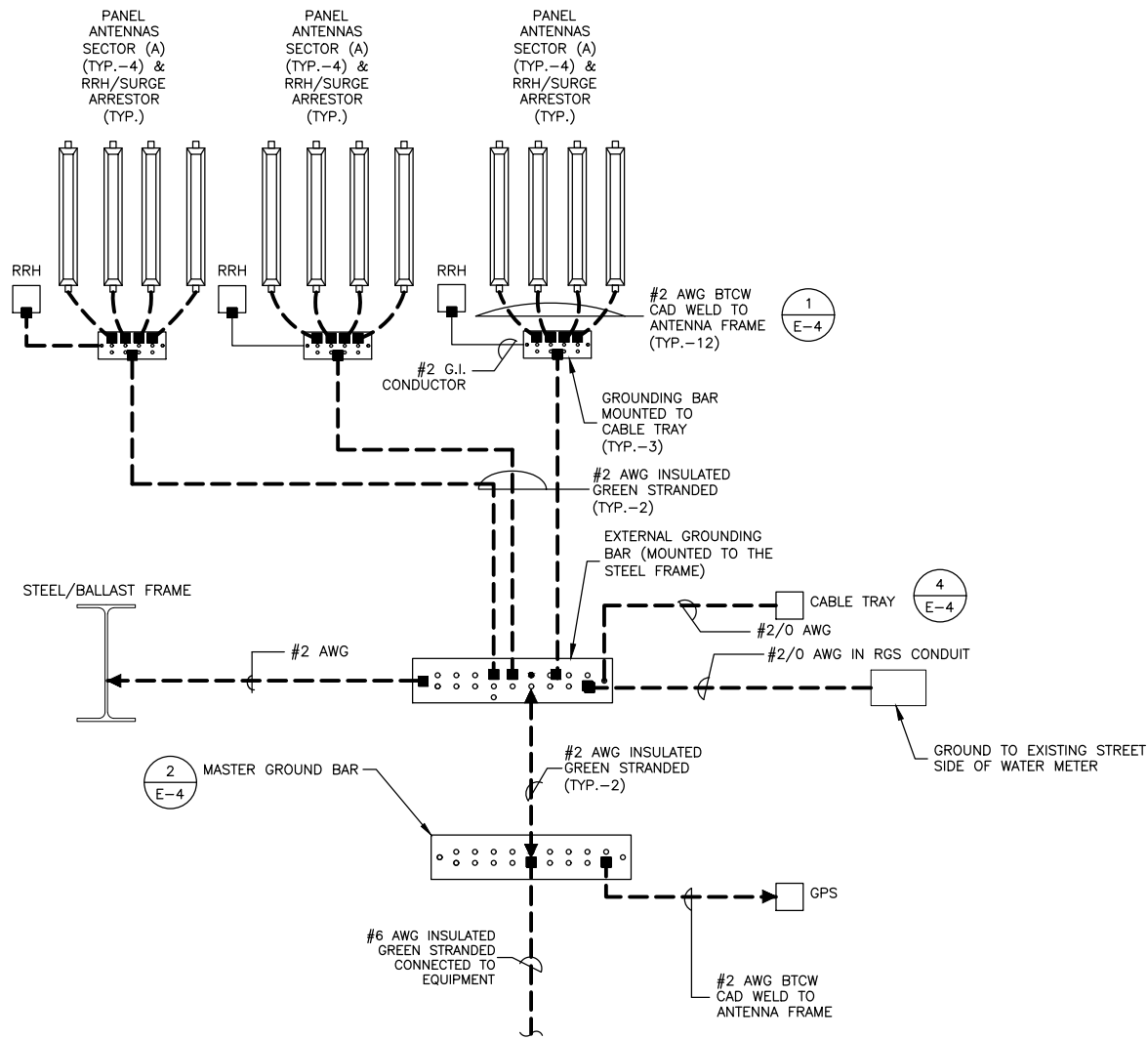
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

ELECTRICAL SCHEDULES

SHEET NUMBER

E-2



WIRE SIZE	LUG #	BOLT SIZE
#2	53207	1/4" - 20 NC x 1/2" S.S. BOLT & NUT W/LOCK WASHERS
#6	53205	

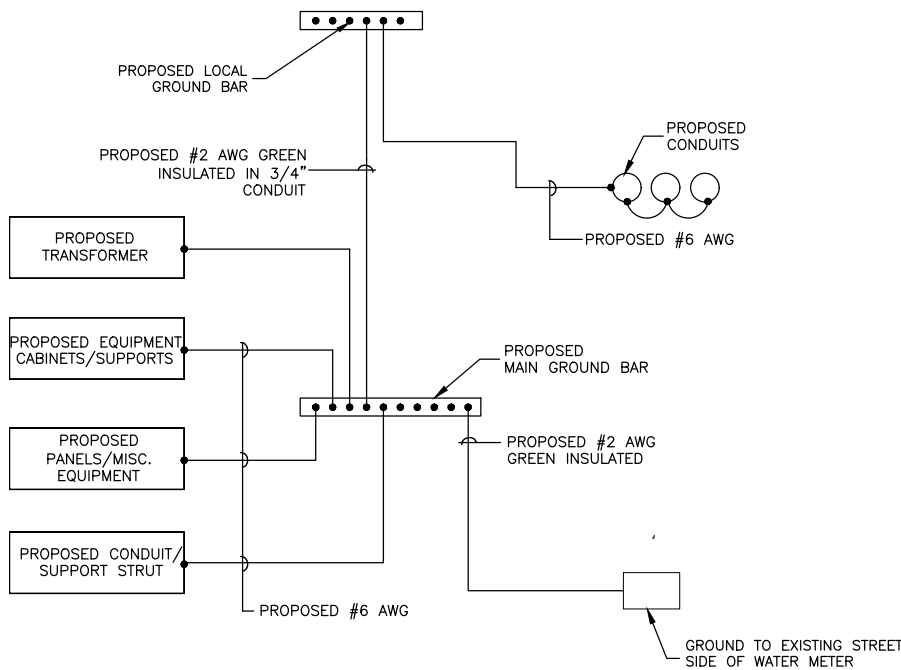
* USE WHERE EXOTHERMIC WELD IS NOT CALLED FOR.

GROUNDING LEGEND	
SYMBOL	DESCRIPTION
▶	EXOTHERMIC WELD
■	MECHANICAL CONNECTION
---	GROUND CONDUCTOR
G.I.	GREEN INSULATED

GROUNDING SCHEMATIC

SCALE: N.T.S.

1



GROUNDING DIAGRAM

SCALE: N.T.S.

2

GROUNDING NOTES:

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



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

SOMERVILLE EAST MA

CONSTRUCTION DRAWINGS

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



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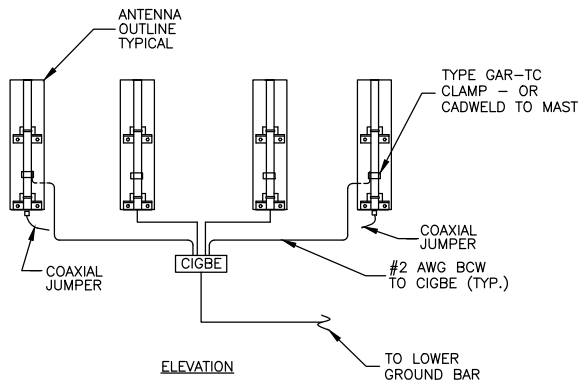
75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

GROUNDING DIAGRAMS

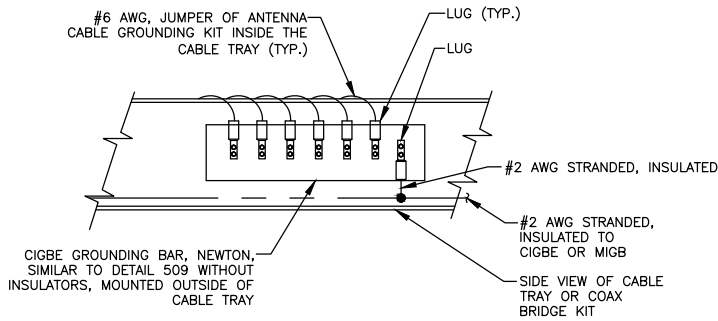
SHEET NUMBER

E-3



ANTENNA MOUNT GROUNDING DETAIL
SCALE: N.T.S.

1

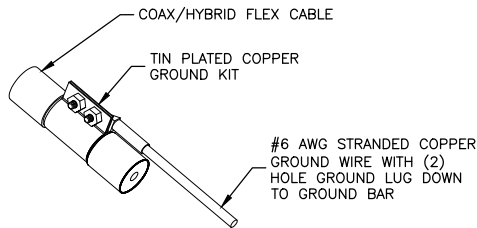


GROUND BAR DETAIL
SCALE: N.T.S.

2

GROUNDING BAR MOUNTED ON CABLE TRAY
SCALE: N.T.S.

4

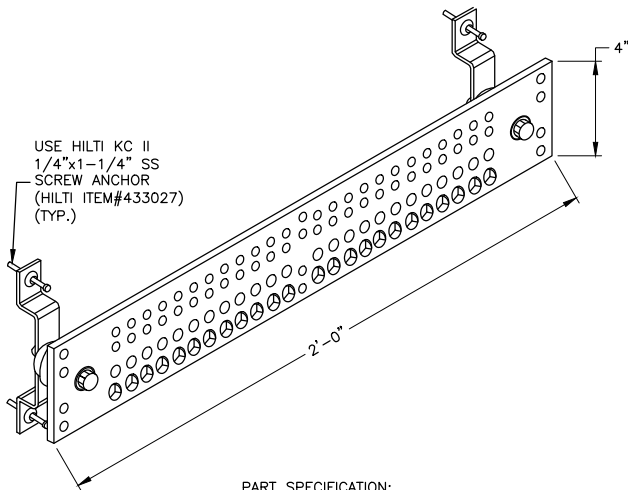


NOTES:

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

COAX/HYBRID FLEX GROUNDING DETAIL
SCALE: N.T.S.

6

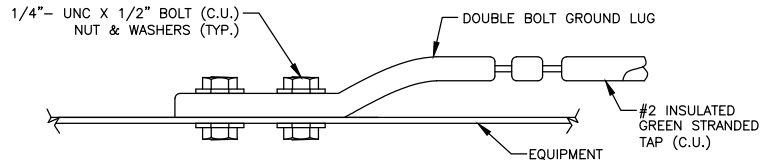


PART SPECIFICATION:

MBG 1/4"x4"x24" GALVANIZED STEEL GROUND BAR, 26 PAIRS_1/4" PREDRILLED LUG HOLES & 26 PAIRS_7/16" UNIVERSAL LUG HOLES WITH MOUNTING HARDWARE.

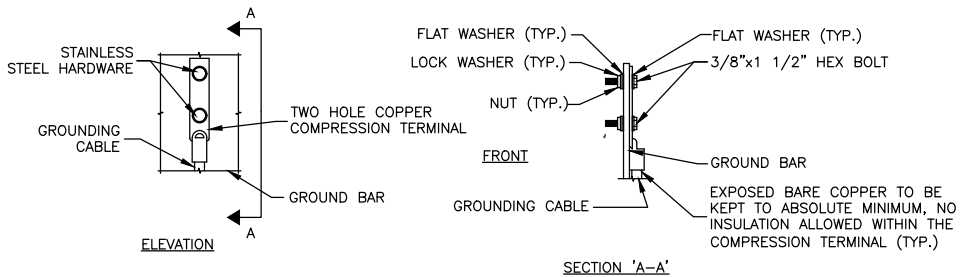
GROUND BAR DETAIL
SCALE: N.T.S.

2



CONNECTION TO EQUIPMENT DETAIL
SCALE: N.T.S.

3

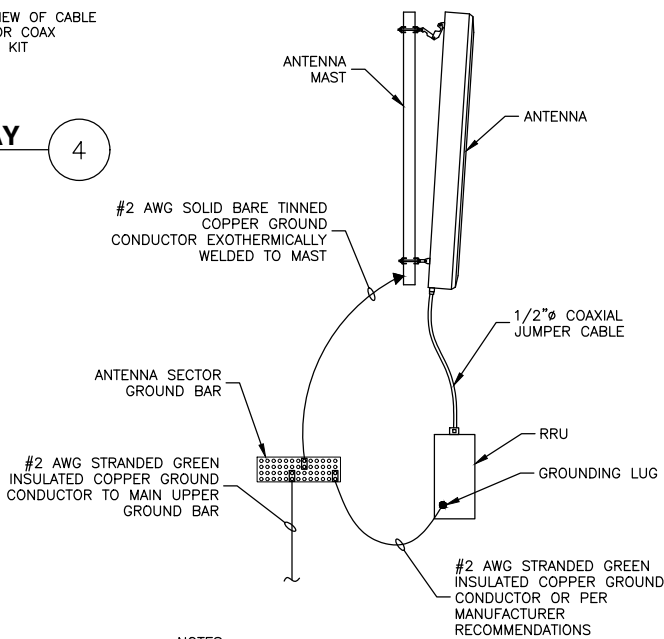


NOTES:

- DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL
SCALE: N.T.S.

5

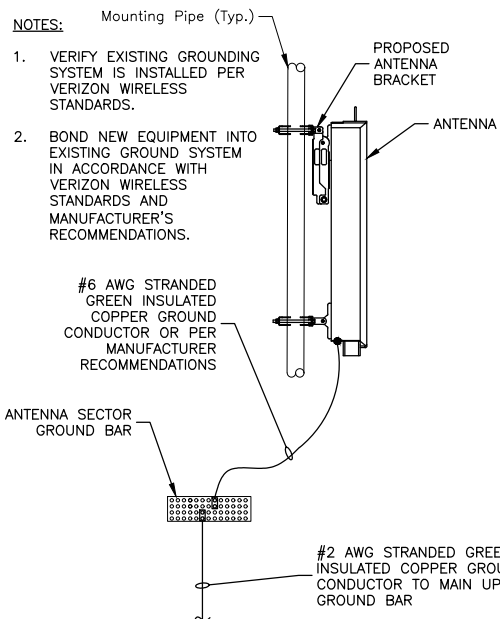


NOTES:

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

TYPICAL ANTENNA/RRU GROUNDING DETAIL
SCALE: N.T.S.

7

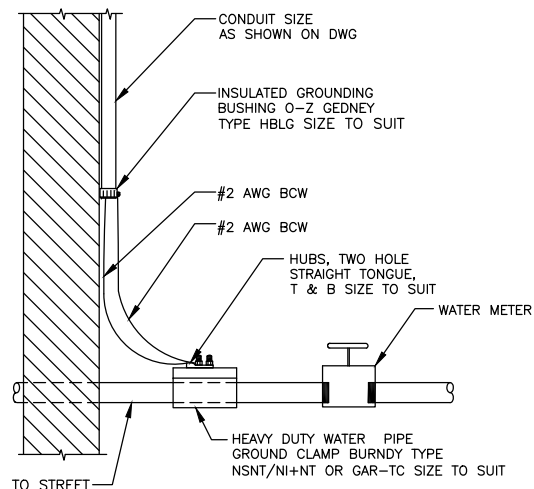


NOTES:

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

TYPICAL ANTENNA GROUNDING DETAIL
SCALE: N.T.S.

8



NOTE:

- BURNDY TYPE GROUND CLAMP SHOULD BE ATTACHED ON STREET SIDE OF WATER CUT-OFF. VALVE IS INSULATED BETWEEN WATER METER & STREET GROUNDING CLAMP SHOULD BE ATTACHED TO STREET SIDE.

WATER METER GROUNDING
SCALE: N.T.S.

9

verizon

VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

**SOMERVILLE EAST
MA**

CONSTRUCTION DRAWINGS

3	01/23/25	FOR SUBMITTAL
2	11/06/25	FOR SUBMITTAL
1	08/07/25	FOR SUBMITTAL
0	07/16/25	FOR SUBMITTAL
A	06/03/25	FOR COMMENT

Dewberry®

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



01/23/26

DRAWN BY: JG

REVIEWED BY: OAS

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50183479

SITE LOCATION CODE (PSLC)

783472

SITE ADDRESS

75 MYRTLE ST.
SOMERVILLE, MA 02145

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

E-4



AFFIDAVIT OF RADIO FREQUENCY ENGINEER

The undersigned, in support of Verizon's intent to install and operate a wireless communications facility at 75 Myrtle Street in Somerville, Massachusetts states the following:

1. My name is Keith Vellante. I hold a Bachelor of Science degree in Electrical Engineering from the University of New Hampshire and I am employed as a Radio Frequency (RF) Engineer for C Squared Systems, LLC. C Squared Systems has been contracted by Verizon to provide RF consulting services on its behalf. I have reviewed the proposed site with the Radio Frequency Engineer responsible for Verizon's network design in this area of Massachusetts, which includes the City of Somerville.
2. Verizon is a federally licensed provider of wireless communications services with a nationwide network footprint.
3. Verizon's proposed facility generally consists of installing up to twelve (12) panel antennas (3 sectors, 4 antennas per sector) mounted on three 12' x 12' ballast frames (one per sector) on the rooftop. The antenna centerlines will range from 51.1 feet to 54.8 feet above ground level (AGL) depending on the specific antenna. All antennas within each sector will be located behind an RF-friendly screen wall extending 10 feet above the roofline, with a total height of approximately 56.7 feet AGL.
4. The purpose of the proposed site is to provide improved coverage and additional capacity to the targeted areas of East Somerville generally encompassed by Broadway, Route 28 (Mcgrath Highway) and Washington Street, including the Inner Belt District. The following table summarizes the proposed "Somerville East MA" facility:

Site Name:	Site Address:	Latitude:	Longitude:	Antenna Centerline Height (AGL):
Somerville East	75 Myrtle Street, Somerville, MA	42.3846	-71.0828	51.1' to 54.8' (varies by antenna / sector)

5. I have reviewed Verizon's proposed rooftop installation as well as the surrounding existing and planned antenna sites in Verizon's network. I have analyzed the potential benefits of the proposed site through radio frequency propagation modeling. These analyses employ computer simulations incorporating results from field tests of existing facilities to determine RF coverage for Verizon's network. These simulations consider factors such as antenna type, antenna height, output power, terrain, land use, and RF propagation characteristics associated with the operating frequencies.

6. The following table identifies the surrounding Verizon telecommunications facilities (macro-sites) used to generate the coverage plots attached hereto.

Site Name	Address	City/Town	Location		Structure Type	Antenna Height (ft AGL)	Status
			Latitude	Longitude			
Somerville 5	701 Broadway	Somerville	42.3999	-71.1118	Rooftop	30.7	On-Air
Somerville	425 Broadway	Somerville	42.3962	-71.0999	Rooftop	83.3	On-Air
Somerville 3	422 Mystic Ave	Somerville	42.3952	-71.0890	Rooftop	67.5	On-Air
Somerville Spring Hill	289 Highland Ave	Somerville	42.3928	-71.1130	Rooftop	38.3	On-Air
Somerville 4	153 Highland Ave	Somerville	42.3888	-71.1031	Rooftop	47.5	On-Air
Porter Square	2067 Mass Ave	Cambridge	42.3917	-71.1230	Rooftop	77	On-Air
Cambridge 5	1815 Mass Ave	Cambridge	42.3871	-71.1188	Rooftop	65	On-Air
Harvard SQ 2	1654 Mass Ave	Cambridge	42.3817	-71.1200	Rooftop	67	On-Air
Somerville Conway	94 Beacon St	Somerville	42.3770	-71.1053	Rooftop	95.4/100.8	On-Air
Somerville 2	10 Webster Ave	Somerville	42.3793	-71.0960	Rooftop	64/68	On-Air
Cambridge Donnelly Field	284 Norfolk St	Cambridge	42.3713	-71.0969	Rooftop	56/59.2	On-Air
Somerville South	51 McGrath Hwy	Somerville	42.3745	-71.0830	Rooftop	47.5	On-Air
Cambridge	500 Front St	Cambridge	42.3715	-71.0679	Rooftop	75/83	On-Air
Charlestown 2	10 City Sq	Boston	42.3723	-71.0617	Rooftop	81/78.8	On-Air
Charlestown	199 5th Ave	Boston	42.3781	-71.0515	Rooftop	119	On-Air
Charlestown 1	200 Terminal St	Charlestown	42.3827	-71.0507	Rooftop	45/47	On-Air
Chelsea 2	189 Winnisimmet St	Chelsea	42.3902	-71.0384	Rooftop	62	On-Air
Everett 2	66 Main St	Everett	42.4031	-71.0617	Rooftop	53	On-Air
Medford Station Landing	100 Station Landing	Medford	42.4016	-71.0810	Rooftop	138/145.7	On-Air
BOS Sherman SQ	14 Temple St	Charlestown	42.3870	-71.0761	Lattice	100	On-Air
N Charlestown	529 Main St	Charlestown	42.3845	-71.0723	Rooftop	153.7/155.2	On-Air
Cambridge CRAN10	75-77 Ames St	Cambridge	42.3638	-71.0888	Rooftop	88.9	On-Air
MIT	141 Portland St	Cambridge	42.3657	-71.0925	Rooftop	154	On-Air
Kendall SQ	1 Broadway	Cambridge	42.3631	-71.0835	Rooftop	53	On-Air

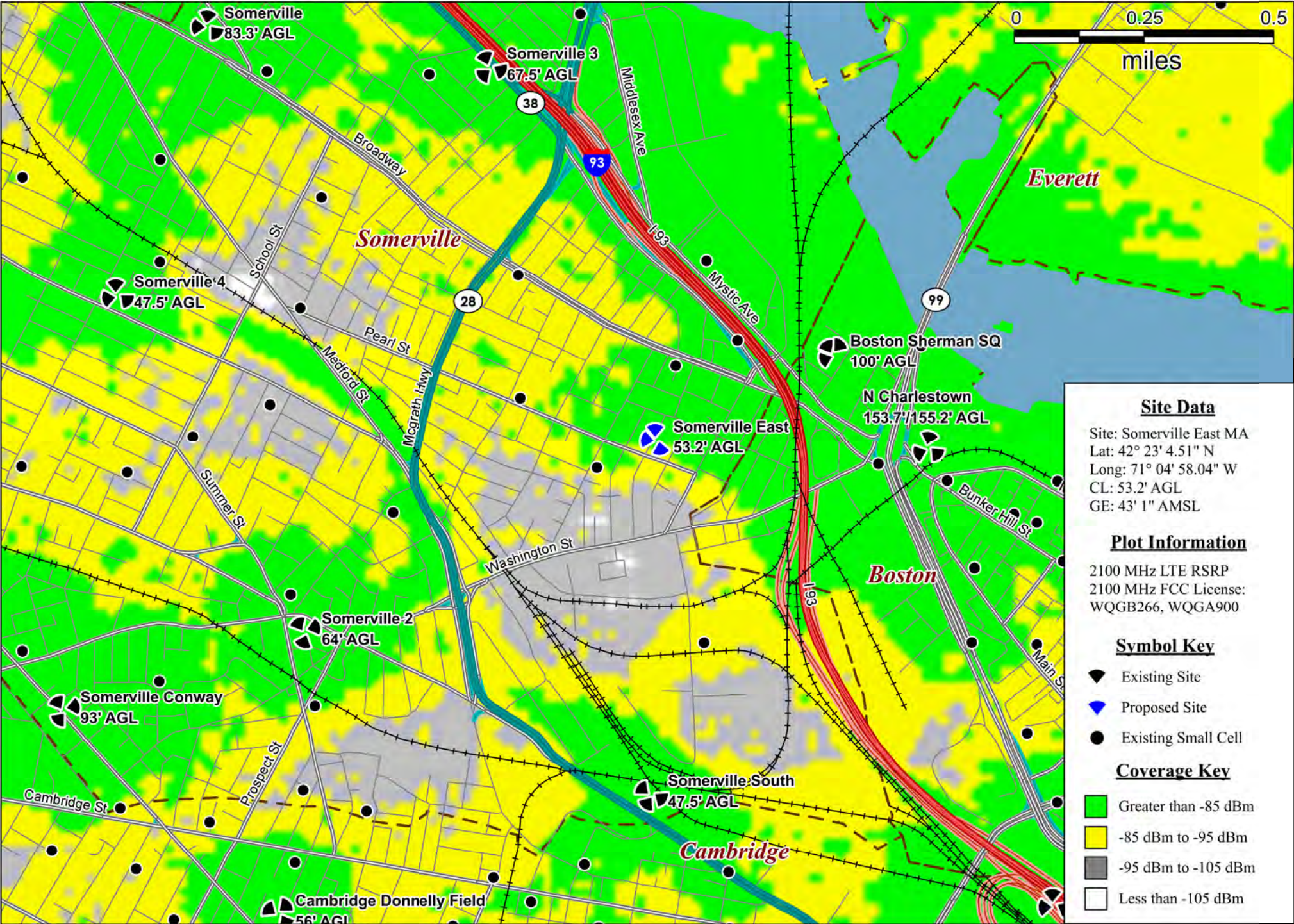
7. Verizon provides LTE services across multiple FCC-licensed frequency bands ranging between 700 MHz and 2100 MHz. These bands function together to deliver LTE service and provide adequate network capacity. Due to the inferior propagation characteristic of higher frequencies (e.g., 2100 MHz) compared to lower frequencies (e.g., 700 MHz), the coverage range decreases at higher bands, resulting in more pronounced gaps in coverage at the higher frequency bands. This in turn limits the ability for these higher frequency bands to support the overall capacity demand on the network.
8. The RF map titled “Somerville East MA – Existing 2100 MHz LTE Coverage (Macro-Sites)” depicts Verizon’s 2100 MHz LTE coverage from the surrounding macro-site facilities. As shown in this map, the deficient coverage areas shown by the gray and white areas highlight where the surrounding macro-site facilities are unable to provide a reliable level of coverage at 2100 MHz and include the targeted areas referenced above.
9. The RF map titled “Somerville East MA – 2100 MHz LTE Coverage with Proposed Site (Macro-Sites)” illustrates the composite 2100 MHz including the proposed facility. The coverage gaps south of Pearl Street and throughout the Inner Belt District are effectively filled in by the proposed site. This improvement enhances Verizon’s network capacity and the quality and reliability of service in the targeted areas.
10. The RF map titled “Somerville East MA – Existing 700 MHz LTE Sector Footprints (Macro-Sites)” depicts the areas primarily served by the sectors (a.k.a. signal “footprints”) of Verizon’s macro sites in the area. Each sector/site of interest is shown in a distinct color, with less relevant sectors displayed in grey. As shown, the surrounding sites such as “BOS Sherman SQ”, “N Charlestown”, and “MIT” currently serve substantial portions of the area surrounding the proposed facility. The proposed site is intended to provide additional network capacity by offloading these sites covering the general area noted above. This will improve service both directly in the targeted area and indirectly in adjacent areas also served by these sites by reducing the capacity demand on them.

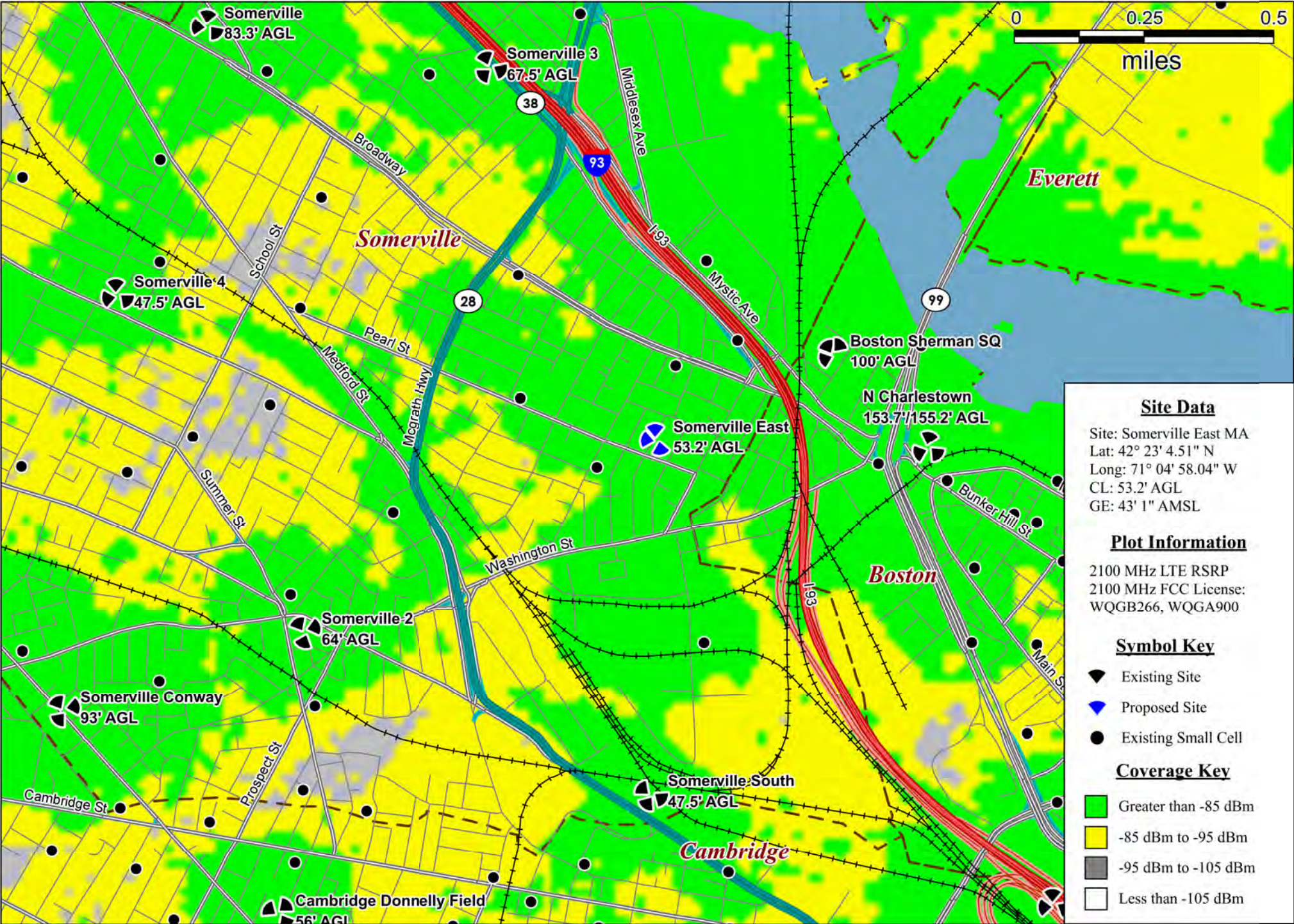
11. The RF map titled “Somerville East MA – 700 MHz LTE Sector Footprints with Proposed Site (Macro-Sites)” shows the composite coverage with the overall footprint of the proposed “Somerville East” facility depicted in dark green. The proposed site will provide improved coverage, additional capacity, and a dominant serving site to the targeted area. As shown, the proposed “Somerville East” facility is an effective solution to adequately offload the surrounding sites/sectors and enhance overall network performance.
12. The map titled “Somerville East MA – Area Topography Map” attached hereto details the terrain features around the proposed “Somerville East” site. These features significantly influence the unique coverage patterns served from a given location and are a critical factor in determining the appropriate location and design for wireless facilities.
13. Based on radio frequency modeling and related analyses, proposed facility will satisfy Verizon’s specific coverage and capacity requirements for this portion of its network.
14. Verizon certifies that the proposed facility will not cause interference to any lawfully operating emergency communication system, television, telephone or radio, in the surrounding area. Verizon holds FCC licenses authorizing operation within specific frequency blocks of the 700 MHz, Cellular, PCS, AWS, CBRS, C-Band, and the 28 GHz bands of the RF spectrum. As a condition of these licenses, Verizon is prohibited from interfering with other licensed devices that are being operated in a lawful manner. Furthermore, no emergency communication system, television, telephone, or radio is licensed to operate in these same frequencies blocks; therefore, interference is highly unlikely.
15. Pursuant to its FCC licenses, Verizon is required to ensure that all radio equipment at the proposed communications facility, and the resulting radio frequency exposure levels, comply with all FCC, federal, and state health and safety standards.
16. Providing wireless communication services benefits the residents, businesses, and visitors within the City of Somerville. The proposed location is well suited to meet Verizon’s network requirements for this area based on its location and characteristics of the surrounding area. Without this facility, Verizon will be unable to provide adequate coverage and capacity to meet current and future network demands, resulting in continued unreliable wireless service in this area of Somerville.

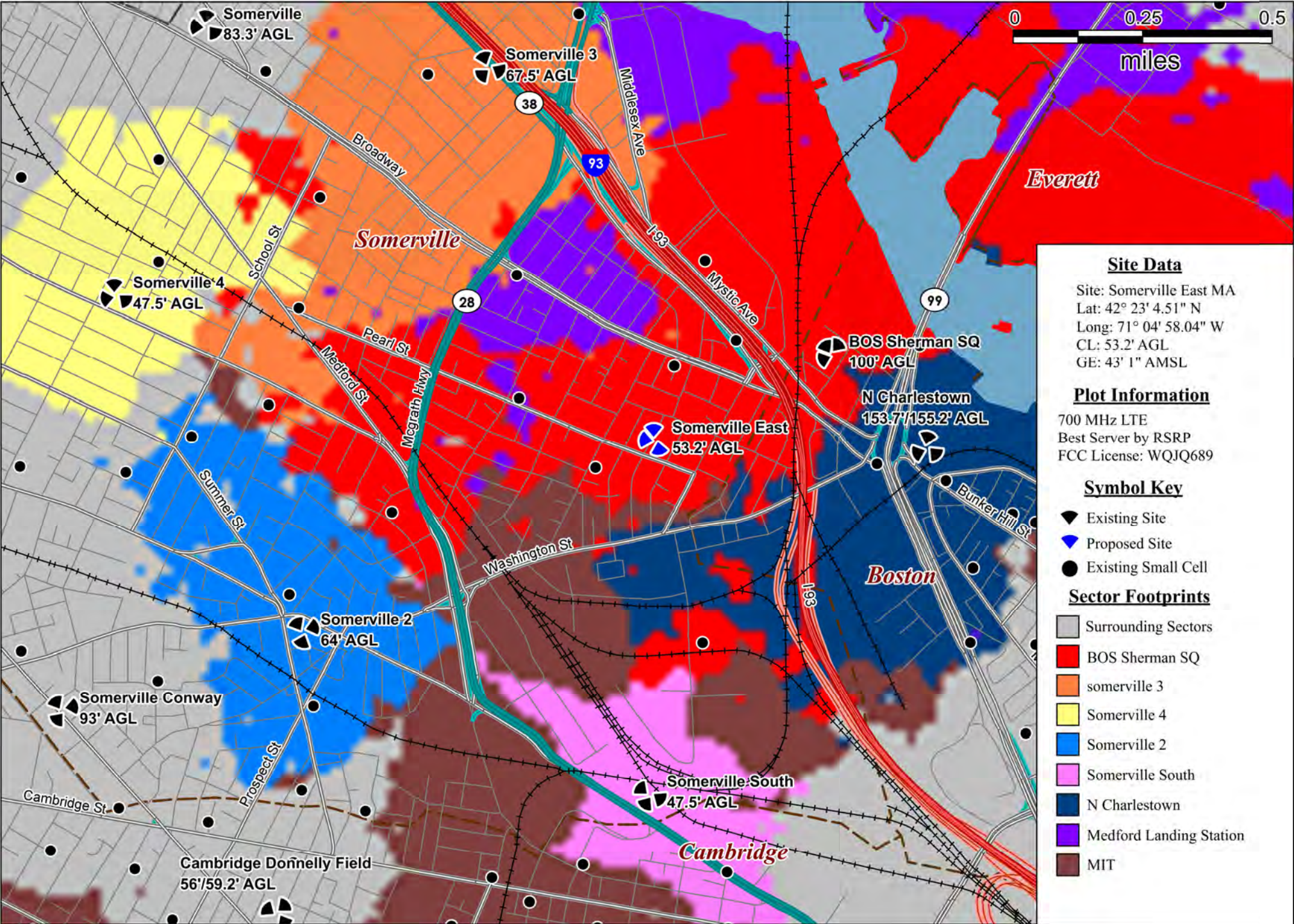
Signed and sworn under the pains and penalties of perjury November 4, 2025.

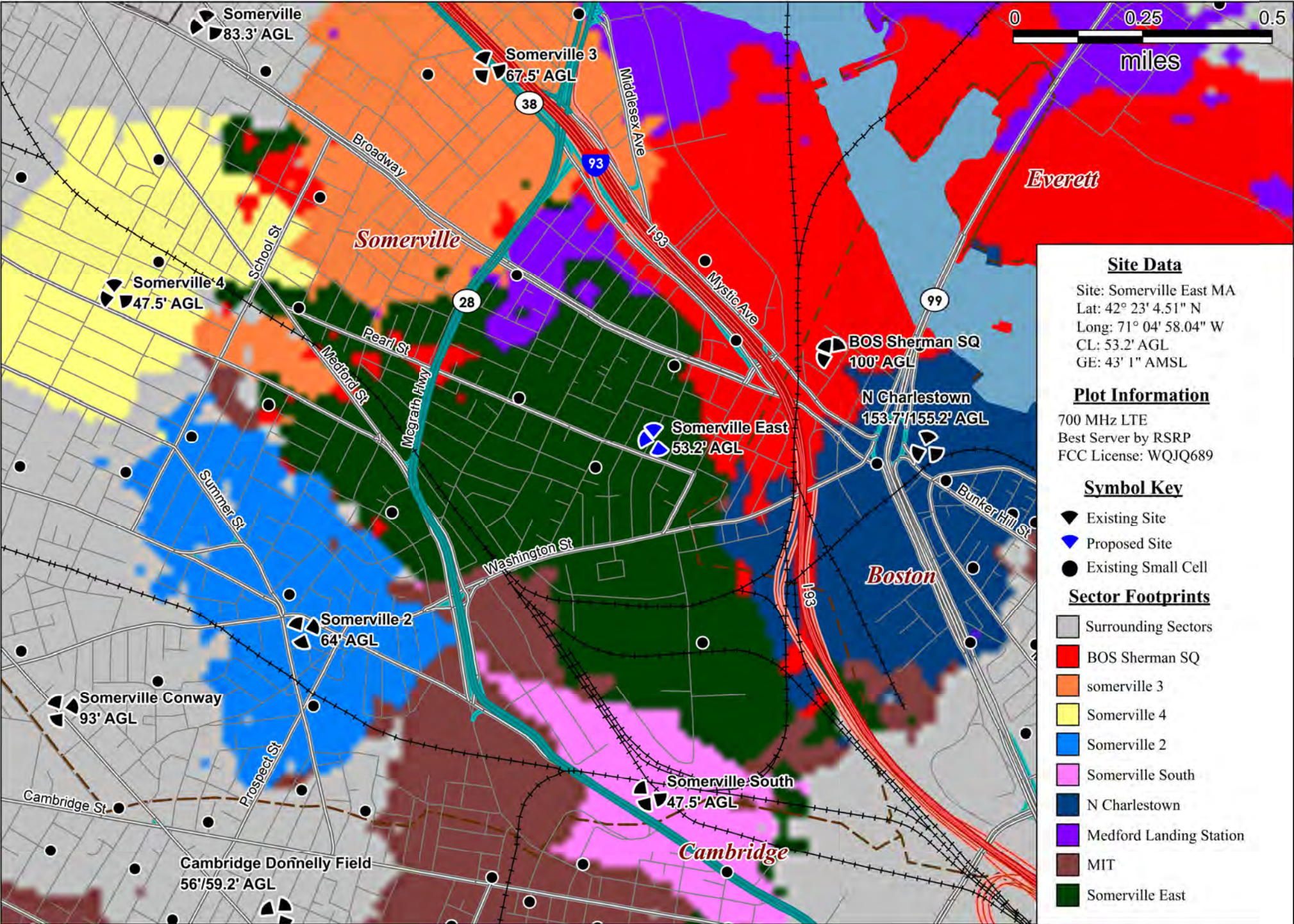
Keith Vellante

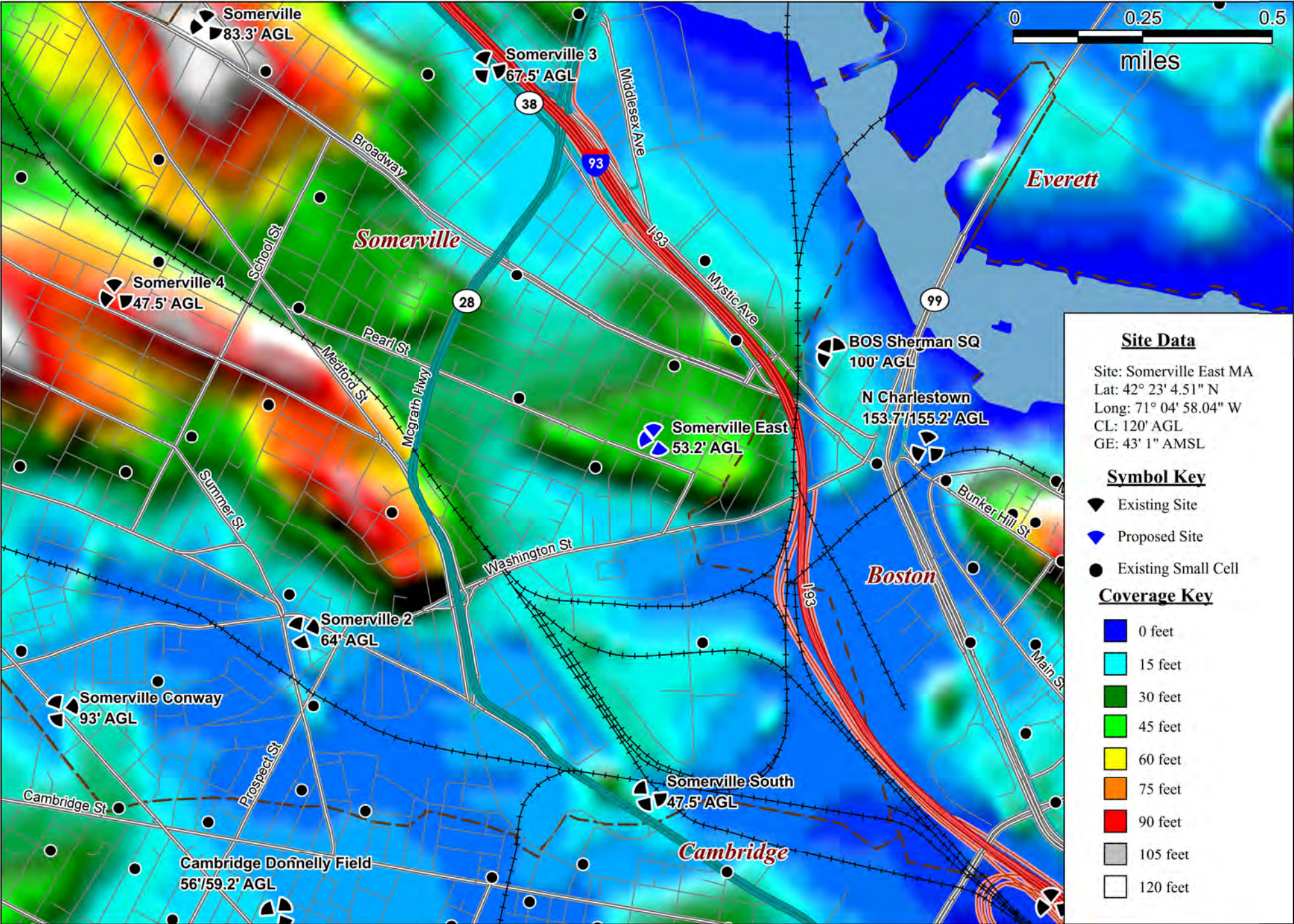
Keith Vellante - Radio Frequency (RF) Engineer
C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032











Prepared for:
Verizon Wireless
Site Name:
Somerville East MA
75 Myrtle Street
Somerville, MA 02145

Simulations Based On Rev-01 Construction Drawings By Dewberry Engineers Inc.
Photos Taken On: 06/27/25



Somerville East MA

75 Myrtle Street
Somerville, MA 02145

(Page 1 of 8)





Somerville East MA

75 Myrtle Street
Somerville, MA 02145
(Page 2 of 8)



Existing View



Proposed View

Proposed Gamma Sector Screen Wall
Concealing Proposed Antennas



Existing View



Proposed View

Proposed Beta Sector Screen Wall
Concealing Proposed Antennas (Typ.-4)



Existing View



Proposed View

Proposed Alpha Sector Screen Wall
Concealing Proposed Antennas



Radio Frequency Exposure FCC Compliance Assessment Pre-Activation

SITE INFORMATION			
Site Name	Somerville_East_MA	Multi-Licensee/Carrier Facility	NO
Site ID	783472	Is Verizon a Significant RFE Contributor in <u>Co-Locator</u> Areas Requiring Mitigation?	N/A
Street Address	75 Myrtle Street		
City, State, Zip	Somerville, Massachusetts		
Structure Type	Rooftop	Assessment Date	10/31/25
Broadcast (AM/FM/TV) Co-Locators	NO	Assessment Purpose	NEW SITE
Total # Access Points	1+	# Total Report Revisions	0
Original Report Date	10/31/25	Report Revision Date	N/A
RFE Compliance Status	SITE MITIGATION IS REQUIRED (see requirements below)(barriers, signs, etc)		

VERIZON'S HIGHEST RF EMISSIONS IN ACCESSIBLE AREAS FOR THIS SITE
ABOVE 10x the Occupational MPE limit

VENDOR INFORMATION			
EBI Consulting 21 B Street Burlington MA 01803	Assessor Name: Andrew Simpson	Phone	(781) 273-2500
		Email	Info@ebiconsulting.com

RFE Assessment Summary

Description of all Compliance Requirements(s):
Install GUIDELINES and NOC INFO signs on all access points. Install NOTICE signs on approaching sides of the barriers near the Sector A, B, and C antennas. Install CAUTION signs on the front, back, and sides of the antenna enclosures. Barriers are only recommended for installation up to 6 feet from the edge of the rooftop because the accessible areas of concern are within 6 feet of an area with no guard rail or parapet greater than 39 inches high in all Sectors. To reduce the risk of exposure and/or injury, EBI recommends that access to the site or areas associated with the active antenna installation be restricted and secured where possible.

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1. Site Mitigation Details

Final Compliant Configuration	SAFETY GUIDELINES	NOTICE	CAUTION	WARNING	NOC INFO	BARRIER/MARKER	
							
	Quantity	Quantity	Quantity	Quantity	Quantity		
Access Point(s)	1				1	☐	
Alpha		2	4			☒	5' x 8'
Beta		3	4			☒	12' x 7'
Gamma		4	4			☒	10' x 15'

Additional Mitigation Details:

N/A

RF Safety Plan

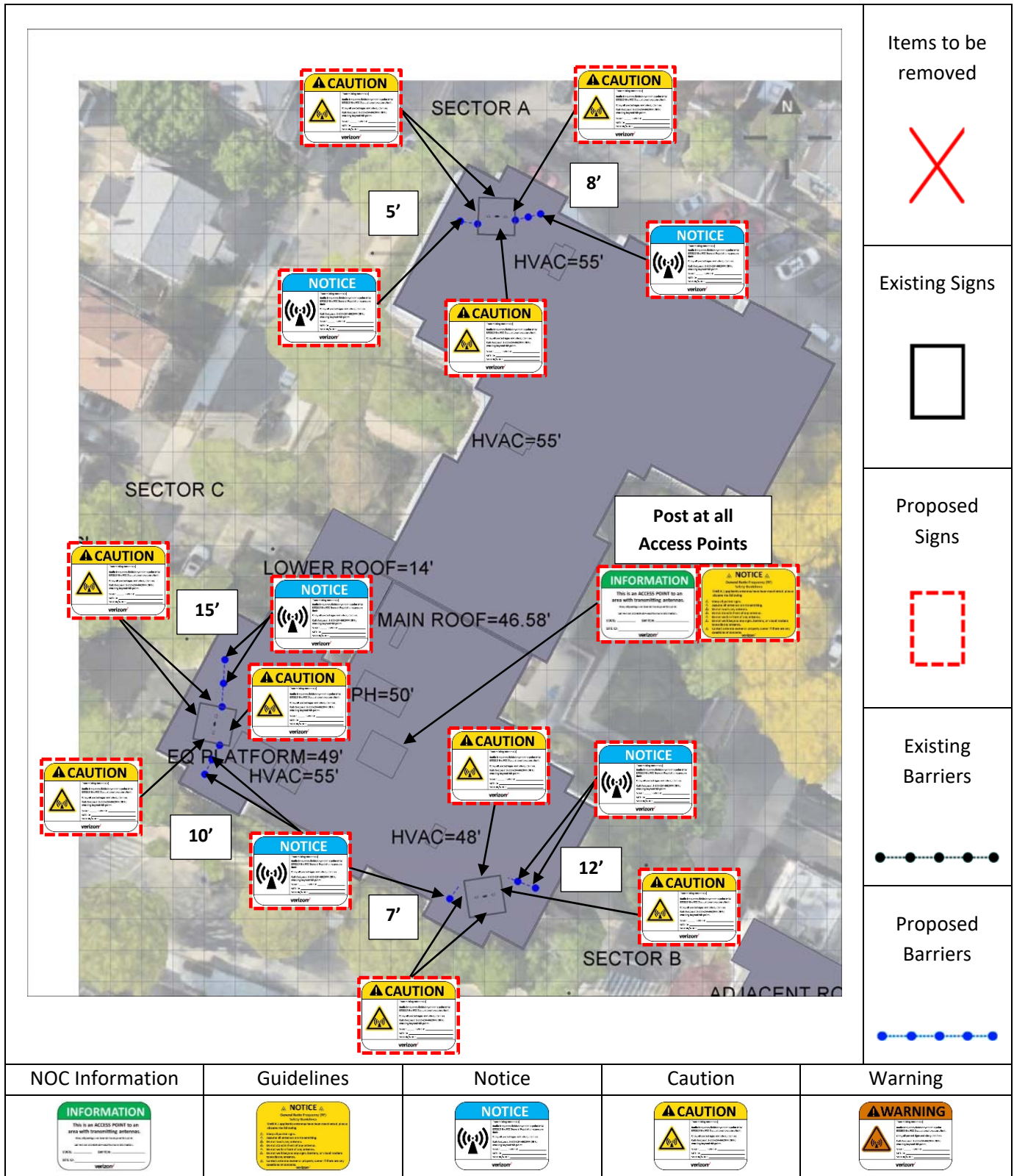
Internal RFSP Required

NO

External RFSP Letter Required

NO

Mitigation Overview



2. Power Mitigation Details

Site Redesign Data (If Engineering Services Requested)

FUZE MAX POWER CHART							
ID	Carrier Name	Frequency Band	Duty Cycle Factor Used	PRF Factor Used in Analysis	Total Reduction Factor (Duty Cycle and PRF)	Additional Reduction	Total Reduction Factor (Duty Cycle, PRF and Additional Reduction) (dB)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3. Antenna Inventory [RF Design/Power Settings]

Requestor Point of Contact

Market:	New England	Name & Title:	Raymond Karram	RF Engineer
		Email:	raymond.karram@verizonwireless.com	

Initial Antenna Inventory

Ant ID	Carrier Name	Antenna Manufacturer	Antenna Model	Mech Tilt	Elec Tilt	Azimuth (°)	ACL (ft)	Antenna Aperture (ft)	Frequency Band	TDD/FDD	System Loss	Configured Radio power (W)	Gain (dBd)	ERP (W)
VZW A1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	0	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW A1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	0	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW A1	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	0	53.17	4.64	LTE 2100	FDD	0	320	14.95	10003.45
VZW A2	Verizon	Samsung	MT6413-77A UE Beam Envelope	0	3	0	54.75	2.4	5G 3700	TDD	1	320	23.35	54973.07
VZW A3	Verizon	Samsung	RT4423-48AB	0	8	0	51.08	0.98	3.5GHz	TDD	1	20	10.37	172.99
VZW A4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	0	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW A4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	0	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW A4	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	0	53.17	4.64	LTE 1900	FDD	0	320	14.35	8712.64
VZW B1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	170	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW B1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	170	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW B1	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	170	53.17	4.64	LTE 2100	FDD	0	320	14.95	10003.45
VZW B2	Verizon	Samsung	MT6413-77A UE Beam Envelope	0	3	170	54.75	2.4	5G 3700	TDD	1	320	23.35	54973.07
VZW B3	Verizon	Samsung	RT4423-48AB	0	8	170	51.08	0.98	3.5GHz	TDD	1	20	10.37	172.99
VZW B4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	170	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW B4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	170	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW B4	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	170	53.17	4.64	LTE 1900	FDD	0	320	14.35	8712.64
VZW C1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	280	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW C1	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	280	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW C1	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	280	53.17	4.64	LTE 2100	FDD	0	320	14.95	10003.45
VZW C2	Verizon	Samsung	MT6413-77A UE Beam Envelope	0	3	280	54.75	2.4	5G 3700	TDD	1	320	23.35	54973.07
VZW C3	Verizon	Samsung	RT4423-48AB	0	8	280	51.08	0.98	3.5GHz	TDD	1	20	10.37	172.99
VZW C4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	280	53.17	4.64	LTE 700	FDD	0	80	11.25	1066.82
VZW C4	Verizon	CommScope	NHH-65A-R2B	0	0 to 18	280	53.17	4.64	LTE 850	FDD	0	80	11.35	1091.67
VZW C4	Verizon	CommScope	NHH-65A-R2B	0	0 to 10	280	53.17	4.64	LTE 1900	FDD	0	320	14.35	8712.64

*A duty cycle of 80% has been applied to all CBRS, mmWave and C-Band technologies. This is reflected in the total ERP.

Site Redesign Data (If Engineering Services Requested)

Ant ID	Carrier Name	Antenna Manufacturer	Antenna Model	Mech Tilt	Elec Tilt	Azimuth (°)	ACL (ft)	Antenna Aperture (ft)	Frequency Band	TDD/FDD	System Loss	Configured Radio power (W)	Gain (dBd)	ERP (W)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table: Z-Heights

Z-height represents the distance from the nearest walking surface to the centerline of the antenna.

Ant Num	Analyzed Elevations (Z)					
	Main Roof	Equipment Platform	Lower Roof	Flagpole	Adjacent Roof	Adjacent Roof
VZW A1	6.59	4.17	39.17	13.17	15.17	18.17
VZW A2	8.17	5.75	40.75	14.75	16.75	19.75
VZW A3	4.50	2.08	37.08	11.08	13.08	16.08
VZW A4	6.59	4.17	39.17	13.17	15.17	18.17
VZW B1	6.59	4.17	39.17	13.17	15.17	18.17
VZW B2	8.17	5.75	40.75	14.75	16.75	19.75
VZW B3	4.50	2.08	37.08	11.08	13.08	16.08
VZW B4	6.59	4.17	39.17	13.17	15.17	18.17
VZW C1	6.59	4.17	39.17	13.17	15.17	18.17
VZW C2	8.17	5.75	40.75	14.75	16.75	19.75
VZW C3	4.50	2.08	37.08	11.08	13.08	16.08
VZW C4	6.59	4.17	39.17	13.17	15.17	18.17
Ant Num	Analyzed Elevations (Z)					
	Adjacent Roof	Utility / Light Poles / Adjacent Roof	Adjacent Roof	Ground		
VZW A1	21.17	23.17	27.17	53.17		
VZW A2	22.75	24.75	28.75	54.75		
VZW A3	19.08	21.08	25.08	51.08		
VZW A4	21.17	23.17	27.17	53.17		
VZW B1	21.17	23.17	27.17	53.17		
VZW B2	22.75	24.75	28.75	54.75		
VZW B3	19.08	21.08	25.08	51.08		
VZW B4	21.17	23.17	27.17	53.17		
VZW C1	21.17	23.17	27.17	53.17		
VZW C2	22.75	24.75	28.75	54.75		
VZW C3	19.08	21.08	25.08	51.08		
VZW C4	21.17	23.17	27.17	53.17		

Abbreviations:

PH: Penthouse FE: Fire Exit EQ: Equipment Cabinet ACL: Antenna Centerline	PU: Public Utility Pole PLS: Public Lighting Structure TCS: Traffic Control Structure MRPA: Maximum (Vendor) Radio Power Available	AR: Adjacent Roof ASR: Adjacent Sloped Roof LR/UR: Lower Roof/Upper Roof
--	---	--

4. Accessible Areas Assessment

Accessible Area	Distance to antenna (ft)			
	Alpha	Beta	Gamma	Delta
Rooftop located on top of adjacent building	N/A	N/A	N/A	N/A
Accessible areas (porch, fire escape) located on the side of the building	N/A	N/A	N/A	N/A
Buildings with Windows or open-air features (i.e. parking garage)	N/A	N/A	N/A	N/A
Building side with no accessible areas	N/A	N/A	N/A	N/A
Light Pole	N/A	N/A	N/A	N/A
Utility Pole with accessible objects on Pole (Transformers, splicing boxes, etc)	N/A	N/A	N/A	N/A
Utility Pole with no accessible objects (only crossarms and wires)	N/A	N/A	N/A	N/A
Other _____ (fill in the type of object)	N/A	N/A	N/A	N/A

5. Prediction Modeling

Are the areas being modeled ONLY accessible to persons trained to work in an RF environment (Occupational Area)?

NO

Main Roof (46.58 feet AGL)



Equipment Platform (49 feet AGL)



Lower Roof (14 feet AGL)



Flagpole (40 feet AGL)



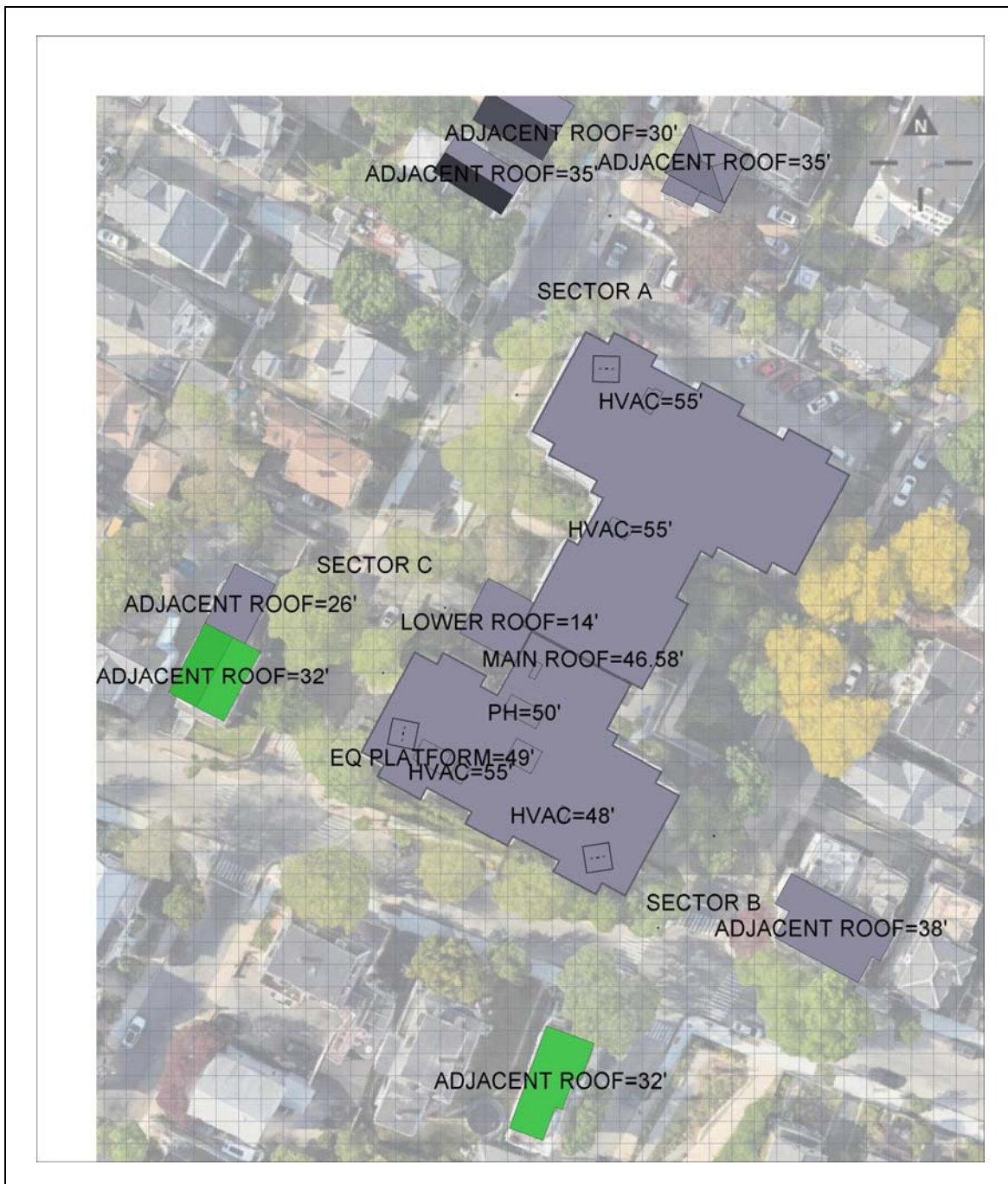
Adjacent Rooftop (38 feet AGL)



Adjacent Rooftop (35 feet AGL)



Adjacent Rooftop (32 feet AGL)



Adjacent Rooftop (30 feet AGL)



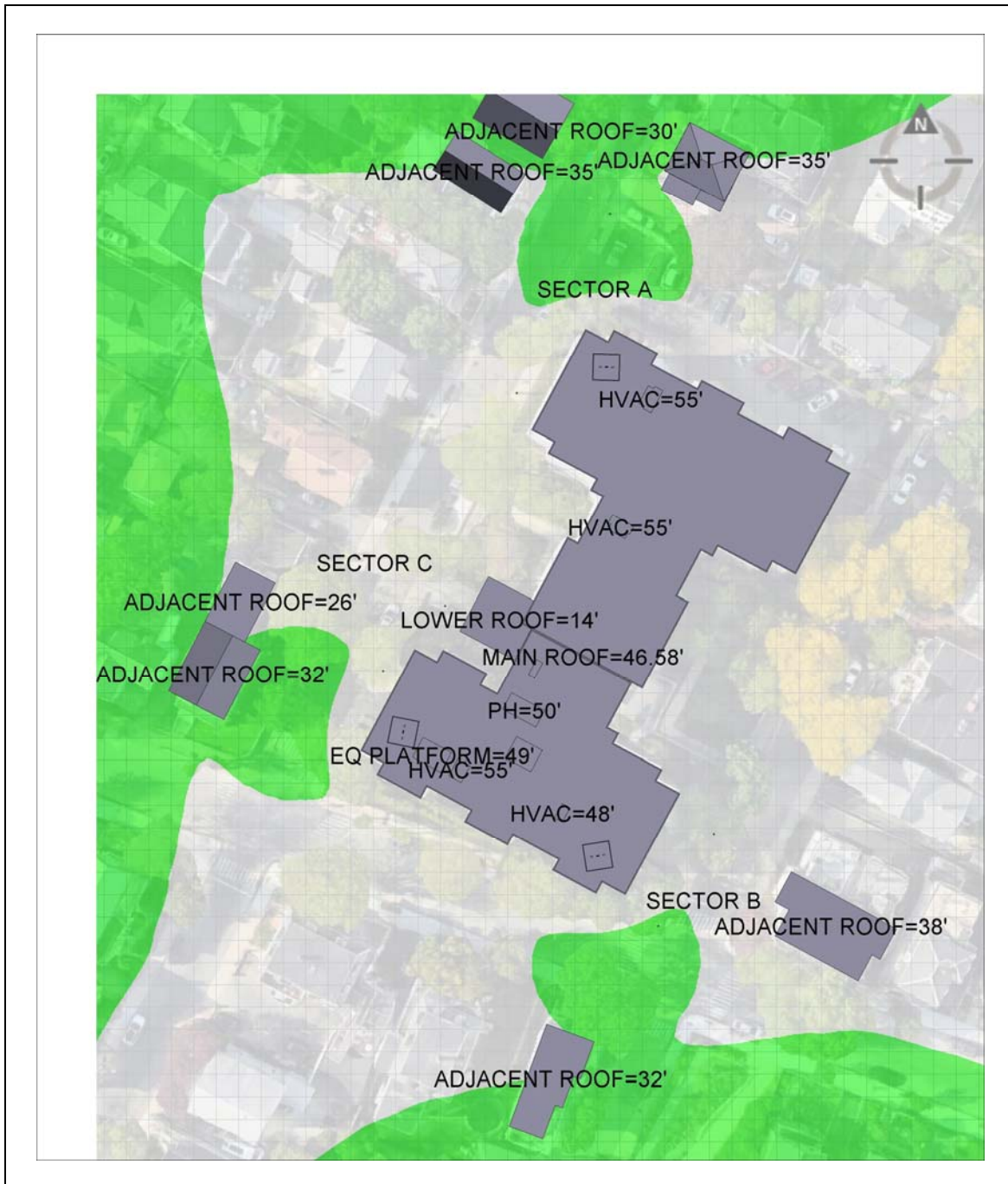
Light and Utility Poles (30 feet AGL)



Adjacent Rooftop (26 feet AGL)



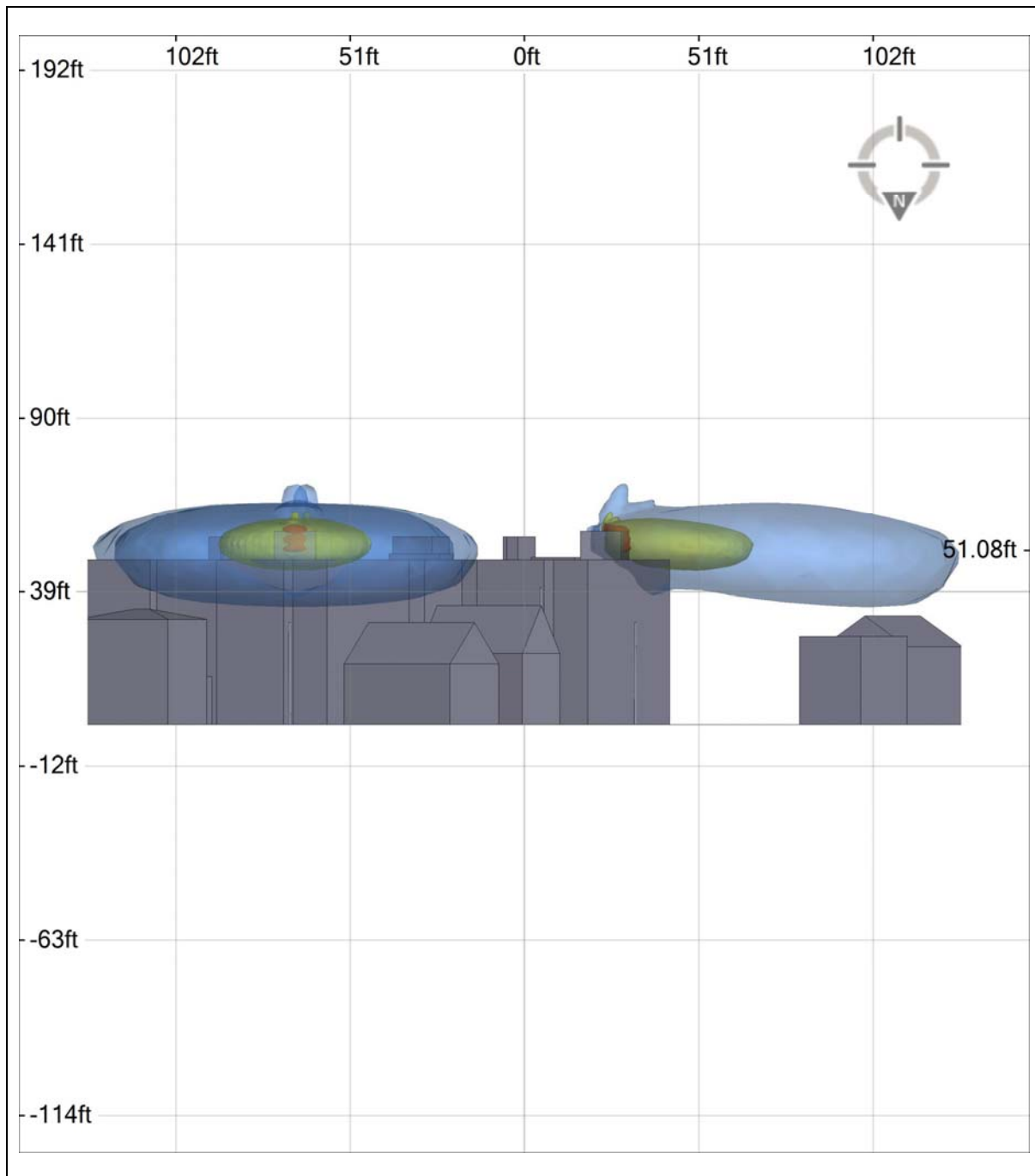
Ground (0 feet)



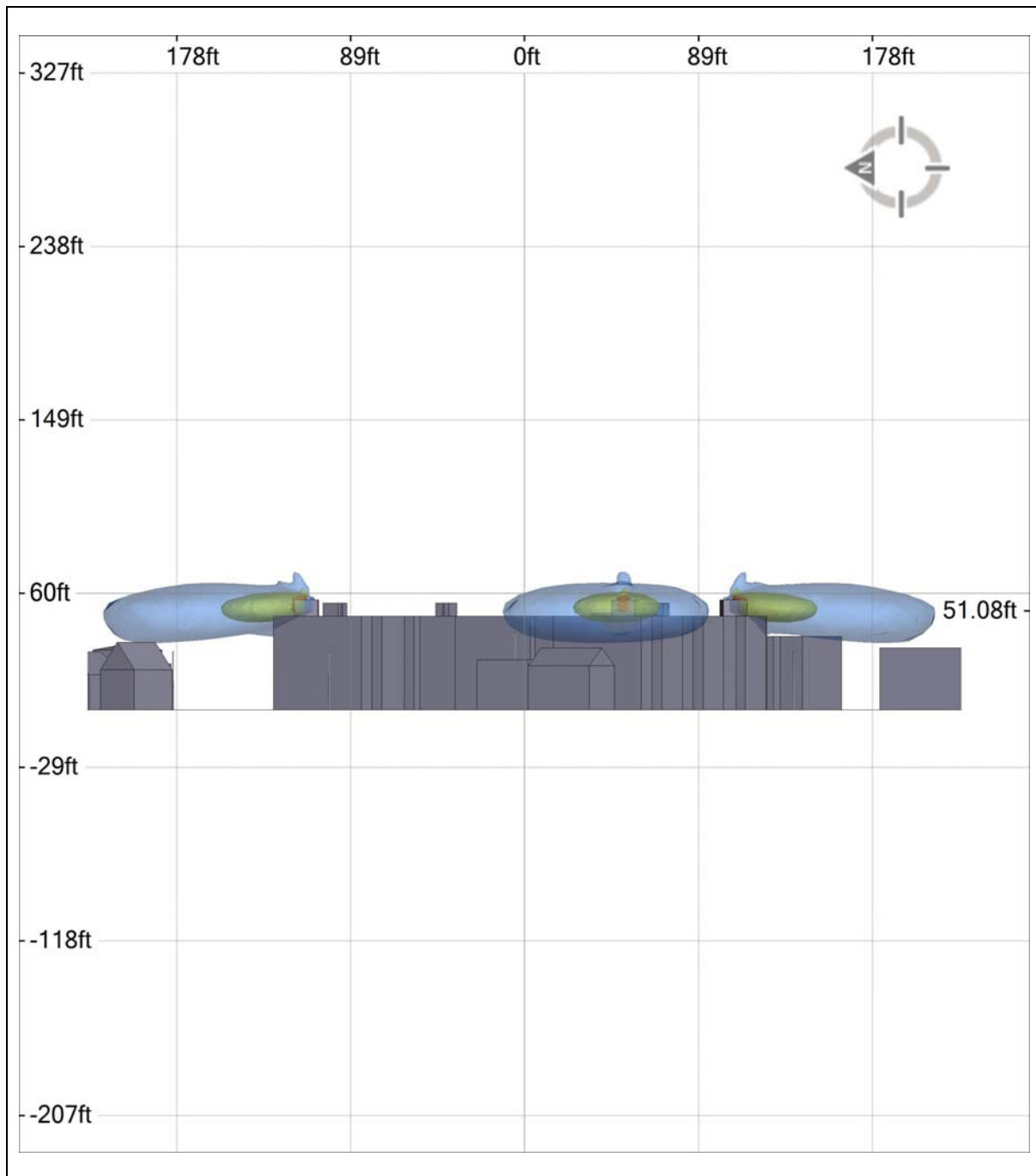
Antenna Face Level



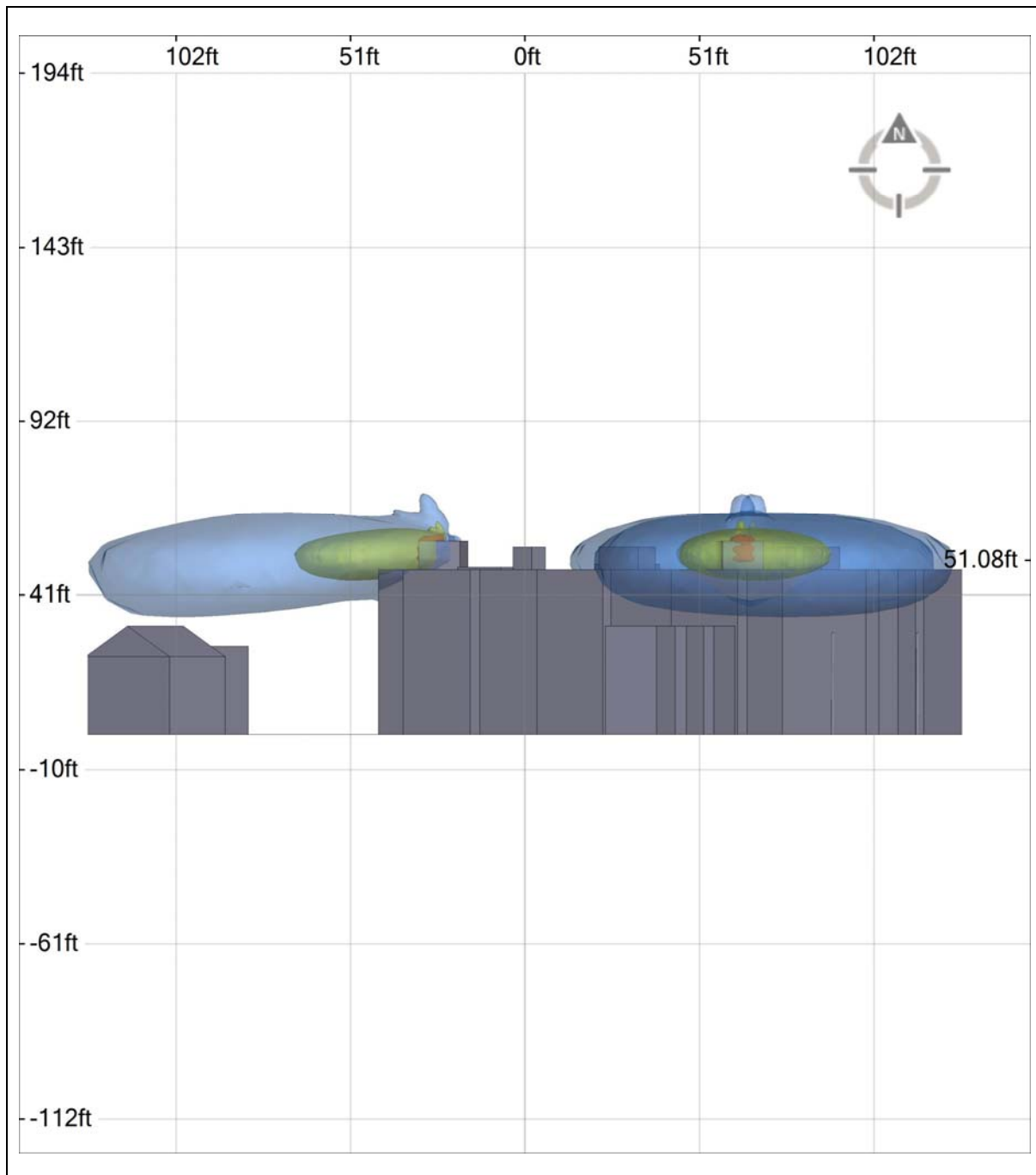
North Elevation View



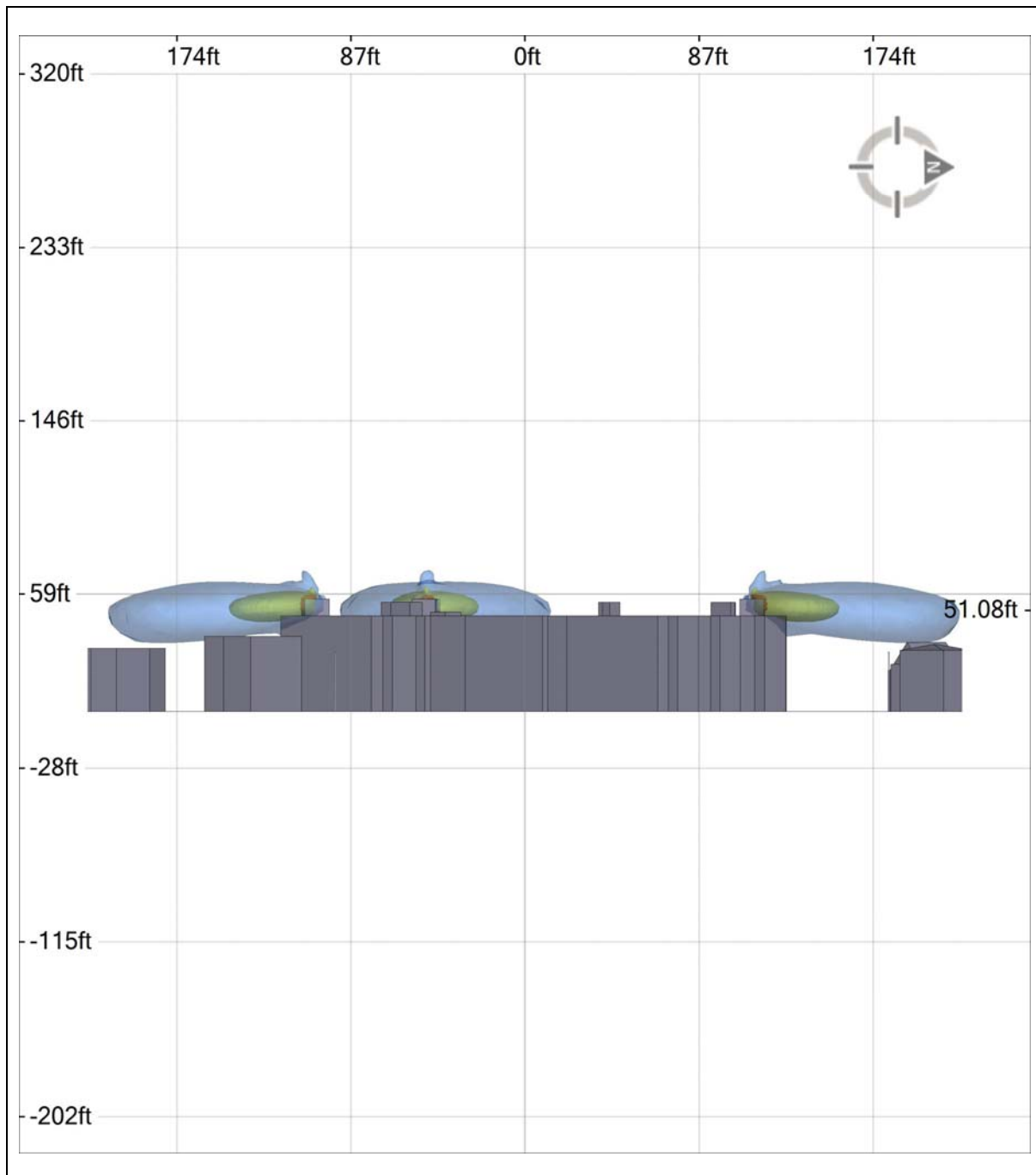
West Elevation View



South Elevation View



East Elevation View



6. Site Accessibility

Did the property owner or agent of the property owner (e.g. a security guard) grant you access to the rooftop?	NO
If not - were you required to be escorted by Verizon personnel in order to gain access?	NO
Were you required to provide any proof of identity to gain access?	NO
What specific documents were required in order to gain access?	N/A
Were all access points locked at time of assessment?	NO
Were all access points alarmed at time of assessment?	NO
Were there any broken locks or inoperable alarms on any of the access points to the rooftop?	NO
Were there any access issues caused by either the property owner or agent of the property owner?	NO
Are Verizon signs posted on the front, back and sides of antenna arrays where possible?	NO
Are Verizon signs visible from all areas of approach?	NO
Are there any broken, damaged or illegible Verizon signs?	NO
Are there any broken or damaged Verizon physical barriers?	NO
Are there any Verizon indicative markers in need of repair or replacement?	NO
Additional Notes:	
N/A	

7. Predicted Emissions and Conclusions

This section details simulated 3D exclusion zones and emissions levels at specified points of interest. Result values are provided as a percentage of the FCC OET 65 standard (unless otherwise specified).

Site Information			
Verizon's Max % MPE Measured (General Population – GP)	(N/A – no site visit performed)	Verizon's Max % MPE (Predictive – GP)	22,450% at the Main Roof Level

Field Point Data				
Field Point Name	Contributing Operator	Averaging Scheme	Max Value	Unit

Environmental Slice Data				
Environmental Slice Name	Contributing Operator	Averaging Scheme	Max Value	Unit
Adjacent Roof=14'	All	3 point (6 ft range, 3 ft samples)	16.35	% of FCC OET 65 Public
Adjacent Roof=24'	All	3 point (6 ft range, 3 ft samples)	36.87	% of FCC OET 65 Public
Adjacent Roof=26'	All	3 point (6 ft range, 3 ft samples)	54.36	% of FCC OET 65 Public
Adjacent Roof=30'	All	3 point (6 ft range, 3 ft samples)	72.2	% of FCC OET 65 Public
Adjacent Roof=30'_1	All	3 point (6 ft range, 3 ft samples)	72.2	% of FCC OET 65 Public
Adjacent Roof=32'	All	3 point (6 ft range, 3 ft samples)	98.08	% of FCC OET 65 Public
Adjacent Roof=32'_1	All	3 point (6 ft range, 3 ft samples)	98.41	% of FCC OET 65 Public
Adjacent Roof=32'_2	All	3 point (6 ft range, 3 ft samples)	98.08	% of FCC OET 65 Public
Adjacent Roof=35'	All	3 point (6 ft range, 3 ft samples)	90.8	% of FCC OET 65 Public
Adjacent Roof=35'_1	All	3 point (6 ft range, 3 ft samples)	83.31	% of FCC OET 65 Public

Adjacent Roof=35'_2	All	3 point (6 ft range, 3 ft samples)	83.31	% of FCC OET 65 Public
Adjacent Roof=35'_3	All	3 point (6 ft range, 3 ft samples)	74.81	% of FCC OET 65 Public
Adjacent Roof=35'_4	All	3 point (6 ft range, 3 ft samples)	71.6	% of FCC OET 65 Public
Adjacent Roof=35'_5	All	3 point (6 ft range, 3 ft samples)	90.8	% of FCC OET 65 Public
Adjacent Roof=38'	All	3 point (6 ft range, 3 ft samples)	35.37	% of FCC OET 65 Public
Antenna Face Level=54.75'	All	3 point (6 ft range, 3 ft samples)	66490	% of FCC OET 65 Public
Equipment Platform=49'	All	3 point (6 ft range, 3 ft samples)	73.73	% of FCC OET 65 Public
Flagpole=40'	All	3 point (6 ft range, 3 ft samples)	5.736	% of FCC OET 65 Public
Ground=0'	All	3 point (6 ft range, 3 ft samples)	12.98	% of FCC OET 65 Public
Light Pole=30'	All	3 point (6 ft range, 3 ft samples)	1.733	% of FCC OET 65 Public
Light Pole=30'_1	All	3 point (6 ft range, 3 ft samples)	20.9	% of FCC OET 65 Public
Lower Roof=14'	All	3 point (6 ft range, 3 ft samples)	0.4819	% of FCC OET 65 Public
Main Roof=46.58'	All	3 point (6 ft range, 3 ft samples)	22450	% of FCC OET 65 Public
Utility Pole=30'	All	3 point (6 ft range, 3 ft samples)	53.9	% of FCC OET 65 Public
Utility Pole=30'_1	All	3 point (6 ft range, 3 ft samples)	1.606	% of FCC OET 65 Public
Utility Pole=30'_2	All	3 point (6 ft range, 3 ft samples)	12.69	% of FCC OET 65 Public

Predicted Emissions Conclusions

RFE Evaluation Results Narrative:

Based on data provided for this MPE modeling, this site has been determined to be compliant upon implementation of proposed mitigation.

Elevation Summary	Predictive max. General Population MPE level (%)					
	VZW Sectors			All Carrier Sectors		
	Alpha	Beta	Gamma	Alpha	Beta	Gamma
Adjacent Roof=26'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Adjacent Roof=30'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Adjacent Roof=32'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Adjacent Roof=35'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Adjacent Roof=38'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Equipment Platform=49'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Flagpole=40'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Ground=0'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Utility / Light Pole=30'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Lower Roof=14'	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%	Not Exceeding 100%
Main Roof=46.58'	Exceeding 100%	Exceeding 100%	Exceeding 100%	Exceeding 100%	Exceeding 100%	Exceeding 100%

Best efforts were made to identify other wireless carriers within 500 feet of the subject property. Based on aerial photography review, there were no other carriers located on adjacent structures.

Potential Co-Locator Areas: Verizon Responsibility

The following table represents potential co-locators for which Verizon is a 5% General Population MPE (1% Occupational MPE) contributor (5% ring).

AT&T	T-Mobile	Dish	Other (name)	Unknown	Other
☐	☐	☐	☐	☐	

8. Site Photos

N/A

9. Field Measurements

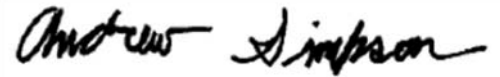
N/A

10. Appendices

- a. Preparer Certification
- b. Reviewer Certification
- c. Ixus software details
- d. FCC Rules & Regulations
- e. OSHA Requirements
- f. RF Signage
- g. Physical Barriers
- h. Indicative Markers
- i. Photos

a. Preparer Certification

I, Andrew Simpson, the preparer of this report, am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I am also fully aware of and familiar with Verizon Wireless's RFE Compliance Analysis policy (RFE CAP) and Signage & Demarcation policy I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

A handwritten signature in black ink that reads "Andrew Simpson". The signature is written in a cursive, flowing style.

b. Vendor Assessment Summary

This section provides details of the installation that the compliance assessment is performed for. Information about the compliance assessor and calculation software used are included.

Compliance Assessor

Site RF Assessor			
 BUILDING VALUE SUSTAINABLY			
EBI Consulting	21 B Street Burlington MA 01803	Phone	(781) 273-2500
		Mobile	N/A
		Email	Info@ebiconsulting.com
Assessor Name		Andrew Simpson	

Compliance simulation software

The IXUS electromagnetic field (EMF) calculation software was used to assess all the RF field levels presented in this study. IXUS (<https://ixusapp.com/>) is a software product of Alphawave Mobile Network Products (Pty) Ltd, who specialize in electromagnetic software and systems. The IXUS software uses a fast and accurate EMF calculation tool that allows for the determination of RF field strength in the vicinity of radio communication base stations and transmitters. At its core, the IXUS EMF calculation module implements field evaluation techniques detailed in the ITU-T K.61, CENELEC 50383, and IEC62232 specifications. The calculation of EMF results at any point in 3-D space is achieved by either a synthetic ray tracing technique, a conservative cylindrical envelope method, or through full-wave EM simulation results obtained from a computational electromagnetic software tool.

The selection of the solution method is determined by the specific antenna being considered. In addition, a conservative and verified modelling technique for 5G beamforming antennas in IXUS is used. The simulation accuracy of the IXUS calculation module has been verified extensively with full-wave EM simulations.

IXUS version number: 4.15 (1)2025.2.1 (Calculator: 2025.2).

Compliance exposure standard: FCC OET 65.

Spatial averaging scheme for exclusion zones: 3 point (6 ft range, 3 ft samples).

Required Modelling Assumptions: Duty Cycle: C-Band, CBRS, mmWave modeled at 80%. All other technology modeled at 100%. Duty Cycle and Maximum Total Power Output based on inputs.

Additional Modelling Assumptions: The modeling is based on worst-case scenario for the number of antennas and antenna parameters. The assumptions used in the modeling are based upon information provided by Verizon and information gathered from other sources

c. Other Compliance Report Details

Verizon Wireless has contracted with EBI Consulting, an independent Radio Frequency consulting firm, to conduct a **Radio Frequency Exposure (RFE) FCC Compliance Assessment** of the Somerville_East_MA RF transmitter (Antenna) location (Site). The following report contains a detailed summary of the Radio Frequency environment for the Site as it relates to the Federal Communications Commission (FCC) RFE rules and Occupational Safety & Health Administration (OSHA) Rules and Regulations.

Compliance Status	
Site Compliance:	The maximum cumulative exposure level from all carriers at this site may exceed both the FCC's general population and the FCC's occupational limits. Implementation of the signage and installation of the recommended barriers recommended in the Site Mitigation Diagram and in this report will bring this site into compliance with the FCC's rules and regulations.

The following compliance implementations are currently present at this site:

Current Mitigation	
RF Signage Implementation:	N/A
Access control:	N/A

The following compliance implementations are required for compliance at this site:

Proposed Mitigation	
Proposed Implementation:	Install GUIDELINES and NOC INFO signs on all access points. Install NOTICE signs on approaching sides of the barriers near the Sector A, B, and C antennas. Install CAUTION signs on the front, back, and sides of the antenna enclosures. Barriers are only recommended for installation up to 6 feet from the edge of the rooftop because the accessible areas of concern are within 6 feet of an area with no guard rail or parapet greater than 39 inches high in all Sectors.
Other Notes:	N/A

Structure	
Physical Description:	Rooftop

Total Analyzed Elevations (All Accessible Levels)	The following 10 levels were analyzed using a 6-foot spatial averaging scheme: • Adjacent Roof=26' • Utility / Light Pole / Adjacent Roof=30' • Adjacent Roof=32' • Adjacent Roof=35' • Adjacent Roof=38' • Equipment Platform=49' • Flagpole=40' • Ground=0' • Lower Roof=14' • Main Roof=46.58' • Elevation Views (Mid Zone Avg)
--	---

d. FCC Rules & Regulations

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure (RFE) from wireless facilities (Sites). The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards “incorporate prudent margins of safety.” The following is an overview of the FCC requirements:

Maximum Permissible Exposure Limit Classifications	
<u>Occupational/Controlled Environment</u> An area where RF exposure may occur with persons who are aware of the potential for exposure as a condition of employment (e.g., telecommunications workers) or specific activity and can exercise control over their exposure. This category includes RF-trained workers who know how to work in an RF environment.	<u>General Population/Uncontrolled Environment</u> An area where RF exposure may occur with persons who are unaware of the potential for exposure and who have no control over their exposure. This category is composed of the general public, including untrained workers.

Limits for Occupational/Controlled Exposure		
Frequency Range (MHz)	Power Density (S) (mW/cm ²)	Averaging Time (minutes) E ² , H ² , or S
300-1500	f/300	6
1500-100,000	5	6
Limits for General Population/Uncontrolled Exposure		
Frequency Range (MHz)	Power Density (S) (mW/cm ²)	Averaging Time (minutes) E ² , H ² , or S
300-1500	f/1500	30
1500-100,000	1	30
<i>f = frequency in MHz</i>		

Significant Contribution to the RF Environment
In general, when the exposure limits specified in § 1.1310 of this part are exceeded in an accessible area due to the emissions from multiple fixed RF sources, actions necessary to bring the area into compliance or preparation of an Environmental Assessment (EA) as specified in § 1.1311 of this part are the shared responsibility of all licensees whose RF sources produce, at the area in question, levels that exceed 5% of the applicable exposure limit proportional to power. However, a licensee demonstrating that its facility was not the most recently modified or newly-constructed facility at the site establishes a rebuttable presumption that such licensee should not be liable in an enforcement proceeding relating to the period of non-compliance. Field strengths must be squared to be proportional to SAR or power density. Specifically, these compliance requirements apply if the square of the electric or magnetic field strength exposure level applicable to a particular RF source exceeds 5% of the square of the electric or magnetic field strength limit at the area in question where the levels due to multiple fixed RF sources exceed the exposure limit.

e. Occupational Safety and Health Administration (OSHA) Requirements

A formal adopter of FCC Standards, OSHA stipulates that those in the Occupational classification must complete training in the following: RF Safety, RF Awareness, and Utilization of Personal Protective Equipment. OSHA also provides options for Hazard Prevention and Control:

Hazard Prevention	Control
Utilization of good equipment Enact control of hazard areas Limit exposures Employ medical surveillance and accident response	Employ Lockout/Tag out Utilize personal alarms & protective clothing Prevent access to hazardous locations Develop or operate an administrative control program

RF Signage

RFE Signage is signs meeting certain specifications that Verizon installs to inform people about an RFE source in an area accessible by people where the applicable MPE limit is exceeded. Per OSHA requirements, all signs shall be furnished with rounded or blunt corners and shall be free from sharp edges, burrs, splinters, or other sharp projections. The ends or heads of bolts or other fastening devices shall be located in such a way that they do not constitute a hazard.

GUIDELINES	Category Two - Notice	Category Three - Caution	Category Four – Warning or Danger
This sign will inform anyone of the basic precautions to follow when entering an area with transmitting radiofrequency equipment.	This sign indicates that RF emissions may exceed the FCC General Population MPE limit. - Sign Color Blue - Sign Signal Word “Notice”	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit. - Sign Color Yellow - Sign Signal Word “Caution”	This sign indicates that RF emissions may exceed at least 10x the FCC Occupational MPE limit. - Sign Color Orange or Red - Sign Signal Word “Warning” or “Danger” Red “DANGER” signs must be installed (in addition to the orange warning signs) in Areas where immediate and serious injury will occur on contact with an Antenna. No access to category four areas unless a reduction in category occurs.

Category One - Information	
Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number. • Sign Color Green • Sign Signal Word “Information”	

Signs for Category Two through Four must have the following:

- Appropriate signal word, associated color {i.e., {DANGER” (red), “WARNING” (orange), “CAUTION,” (yellow) “NOTICE” (blue)};
- RF energy advisory symbol;
- An explanation of the RF source;
- Behavior necessary to comply with the exposure limits; and
- Up-to-date contact information.

f. Physical Barriers

Physical barriers are human-made structural obstacles installed at a Site that:

- demarcate RFE Category boundaries; are installed above ground;
- possess enough structural integrity to withstand normal environmental forces (e.g., wind, rain, snow, ice); and
- are typically 39 to 42 inches in height so as not to pose a tripping hazard.
- **Example:** chain-connected stanchions

g. Indicative Markers

Indicative Markers are another type of barrier that Verizon uses. Indicative markers are:

- objects that indicate a position, place, or route; are typically placed on the ground;
- and demarcate RFE Category boundaries.

Verizon frequently uses Indicative Markers in warmer climates where there is little snow or debris accumulation that would impede their visibility.

Example: paint stripes



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

617.695.3400
617.695.3310 fax
www.dewberry.com

May 22, 2025

Verizon Wireless
51 Alder Street
Medway, MA 02053

**Re: Somerville East MA
PLSC: 783472
Fuze #: 17380317
75 Myrtle Street
Somerville, MA 02145**

To Whom it May Concern:

Verizon Wireless has proposed to install (3) new CBRs RRHs RT4423-48A w/ integrated clip-on antennas, (3) new MT6413-77A antennas w/ integrated RRHs, (6) NHH-65A-R2B antennas, (3) Samsung RF4461d-13A RRHs, (3) Samsung RF4439d-25A RRHs, and (3) 6-OVPs on the rooftop at the above referenced site. Verizon is also installing (1) equipment cabinet (1000 lbs), (1) battery cabinet (4000 lbs), (1) ILC Power Panel (420 lbs), (1) telco cabinet (1656 lbs) and transformer/disconnect (350 lbs). The proposed antennas will be installed inside proposed (3) 8'Wx3'Dx8'H FRP cannisters on proposed 12'x12' custom ballast frames with the RRHs installed on Unistrut. The proposed cabinets will be installed on a proposed steel dunnage attaching into the existing HVAC steel dunnage platform that bears down on existing bearing walls below. **The proposed ballast mount to have 0 lb of ballast evenly distributed across the four trays of the mount.**

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 10/22/24) provided by Verizon Wireless and has determined that the proposed ballast frames with FRP enclosures, steel dunnage and existing building have adequate capacity to support the proposed equipment configuration. Dewberry assumes that the new antennas, RRHs, OVPs and associated equipment are installed per the latest Construction Drawings by Dewberry.

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

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

Sincerely,
Dewberry Engineers Inc.

Brandon Kelsey, P.E.
Structural Project Engineer

05/22/2025



Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.: 50121487/50183479 **By:** AMD **Date:** 05/21/25
Job Name: Somerville East MA **Checked:** BGK **Date:** 05/22/25

Location: 75 Myrtle Street, Somerville, MA 02145
Client: Verizon Wireless

Scope of Work:

- Proposed installation of (3) new 12'x12' ballast frames:
 - Installing (3) new CBRS RRHs RT4423-48A w/ integrated clip-on antennas, (3) new MT6413-77A antennas w/ integrated RRHs, (6) NHH-65A-R2B antennas, (3) Samsung RF4461d-13A RRHs, (3) Samsung RF4439d-25A RRHs, and (3) 6-OVPs on frames.
 - Installing (3) 8'Wx3'Dx8'H FRP enclosures for proposed antennas top of enclosure shall be 10' AGL max.
- Proposed installation of (1) equipment cabinet (1000 lbs), (1) battery cabinet (4000 lbs), (1) ILC Power Panel (420 lbs), (1) telco cabinet (1656 lbs) and transformer/disconnect (350 lbs) on proposed steel frame over existing rooftop HVAC steel dunnage.

Codes / Standards / References:

- Massachusetts State Building Code – 780 CMR 10th edition
- IBC 2021
- TIA-222-H
- ASCE 7-16
- AISC 15th Ed.
- RFDS dated 10/22/24
- Existing building drawings by Heinhardt Associates, Inc. dated 10/08/76
- Site visit by Dewberry Engineers on 10/10/24
- Latest Construction Drawings by Dewberry Engineers

Design & Analysis Assumptions:

- Assume antennas are centered on mounting pipes with RRHs mounted on mounting frame behind antennas.
- Design and analysis are based on dead and wind loads. The analysis checks for normal bending and shear stresses.
- The analysis checks for overturning based on a minimum factor of safety of 1.5 and sliding based on a minimum factor of safety of 1.2.
- Analysis considers 4-1/2" OD steel dunnage post downs as 4.5"x0.237" HSS rounds (Fy=46 ksi, Fu=58 ksi).
- Analysis concludes at column for proposed/existing steel dunnage.
- Existing HVAC dimensions considered: 3500 lbs. at 10.9'Wx6.3'Dx7.0'H.
- Existing platform post downs are over bearing walls and posting down into assumed grouted hollow core planks.
- Rooftop hollow core planks are assumed to be 4HC8-66-SS with no concrete topping.



Dewberry Engineers Inc. | 617.695.3400
99 Summer Street, Suite 700 | 617.695.3310 fax
Boston, MA 02110-1200 | www.dewberry.com

Conclusion / Recommendations:

- The existing structure has sufficient capacity to support the proposed installation.
- The proposed steel dunnage has sufficient capacity to support the proposed installation.
- Proposed ballast mount to have **0 lb** of ballast evenly distributed across the four trays of the mount.



Job Number 50183479
Made by: AMD
Date: 05/09/25
Checked by: BGK
Date: 05/12/25

(Somerville MA) - Design Wind Load

\\dewberry.dewberryroot.local\Enterprise\DEI\TelecomEV\Projects\VZW\50121487-NE\50183479 - Somerville East\4 Eng\Struct\Rev0\Calcs\Ballast Sled Cal

Wind Load Design Criteria

Site Name: Somerville MA

BALLAST SLED CHECKS

General Information & Design Input ASCE 7-16

Item	Value	Description	Reference
$V_{ult} =$	119.00	Ultimate Design Wind Speed	780 CMR 10th Edition Mass. Bldg. Code
$V_{asd} =$	92.20	$(\sqrt{0.6}) * V_{ult}$	Adjustment for ASD Load Combo. 1.0D+0.6W
$K_d =$	0.95	Wind Direction Probability Factor	Table 26.6-1
Class	II	Structure Classification	Table 1.5-1
$I =$	1.00	Importance Factor (Without Ice)	Table 1.5-2
$z = h =$	57.67	ft. (A.G.L.)	Max. Center of Appurtenance
Exp. Cat.	B	Exposure Category	Sect. 26.7.3
$z_g =$	1200.00	Terrain Exposure Constant	Table 26.9-1
$\alpha =$	7.00	Terrain Exposure Constant	Table 26.9-2
$K_z =$	0.84	Velocity Pressure Coefficient	Table 29.3-1
Topo. Cat.	1.00	Topographic Category (1-5)	Sect. 26.8.1
$e =$	2.72	Natural Logarithmic base	
$\gamma =$	N/A	Height attenuation Factor	
$L_h =$	N/A	Distance upwind of crest	
$H =$	N/A	ft. Height of crest above surrounding terrain	
$K_1 =$	N/A	Topographic Multiplier	Figure 26.8-1
$K_2 =$	N/A	Topographic Multiplier	Figure 26.8-1
$K_3 =$	N/A	Topographic Multiplier	Figure 26.8-1
$K_{zt} =$	1.00	$= (1 + K_1 K_2 K_3)^2$	Sect. 26.8.2
$G_h =$	0.85	Gust Effect Factor	Sect. 26.9.1
$q_{z \text{ design}} =$	17.5 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_{asd}^2)(I)$	Sect. 29.3.2

Design Wind Forces:

Section 2.6.9.2

$$F_a = q_{z \text{ design}} G_h (EPA)_a$$

(see calculation tables on following pages)

(where $(EPA)_a$ = effective projected area of the appurtenance = $C_a A_a$)



Made by: AMD

Checked by: BGK

Fast Sled Calcs XX-XX-XX (ASCE7-10)

(Somerville MA) - Design Wind Load

\\dewberry.dewberryroot.local\Enterprise\DE\TelecomEV\Projects\VZW\50121487-NE\50183479 - Somerville East\4 Eng\Struct\Rev0\Calcs\Ballast Sled Calcs XX-XX-XX (ASCE7-10)

Element Definition

Description	Dimensions (in.)			Weight (lb)	Length / # Supports
	W	D	H		
NHH-65A-R2B	11.85	7.09	55.63	35.05	1.00
MT6413-77A w/ RRH	15.75	5.51	28.90	57.30	1.00
RF4461d-13A RRH	14.90	10.20	14.90	79.10	1.00
RF4439d-25A RRH	14.90	10.00	14.90	74.70	1.00
RT4423-48B Clip Antenna+RRH	8.66	5.02	14.25	15.40	1.00
OVF	16.50	12.60	29.50	32.00	1.00
Enclosure	102.00	42.00	99.00	Next Page	1.00

Design Wind Load

[illegible]

Design Effective Projected Area & Wind Loads

[illegible]



Job Number 50183479
 Made by: AMD
 Date: 05/09/25
 Checked by: BGK
 Date: 05/12/25

Newton North MA - Custom 8'x8' Ballast Load Calculation

\\dewberry.dewberryroot.local\Enterprise\DEI\TelecomEV\Projects\WZ\50121487-NE\50183479 - Somerville East\4 Eng\Struct\Rev0\Calcs\Ballast Sled Calcs XX-XX-XX (ASCE7-1)

Dead Load

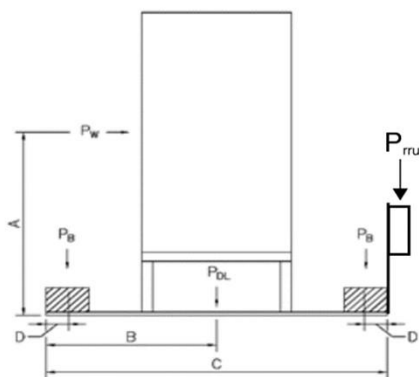
- Use custom 8'x8' ballast mount

Item	Quantity	Dimensions (ft.)			Weight	Total Weight (lb)
		L	W	H		
Antenna & ballast frame						
NHH-65A-R2B	2	-	-	-	35.05 lb. ea.	70.11
MT6413-77A w/ RRH	1	-	-	-	57.30 lb. ea.	57.30
RT4423-48B Clip Antenna+RRH	1	-	-	-	15.40 lb. ea.	15.40
Fiberglass panels	2	3.50	8.25	0.02	104.00 lb/ft ³	124.92
Fiberglass panels	2	8.50	8.25	0.02	104.00 lb/ft ³	303.39
Vertical L6x6x0.375 (FRP)	4	8.50	-	-	3.25 lb/ft	110.50
Horizontal L3x3x0.375 (FRP)	6	8.50	-	-	1.57 lb/ft	80.07
	4	3.50	-	-	1.57 lb/ft	21.98
2.375" OD Sch 40 pipe	3	8.25	-	-	3.66 lb/ft	90.59
C10x15.3	2	12.00	-	-	15.30 lb/ft	367.20
	4	10.33	-	-	15.30 lb/ft	632.20
	2	3.25	-	-	15.30 lb/ft	99.45
	1	2.17	-	-	15.30 lb/ft	33.15
L6x6x0.375 (steel)	3	8.50	-	-	14.90 lb/ft	379.95
L6x6x0.375 (steel)	4	2.50	-	-	14.90 lb/ft	149.00
L3x3x0.375 (steel)	3	3.50	-	-	7.20 lb/ft	75.60
					P _{DL} =	2.76 k
RRH & RRH rack						
RF4461d-13A RRH	1	-	-	-	79.10 lb. ea.	79.10
RF4439d-25A RRH	1	-	-	-	74.70 lb. ea.	82.00
OVP	1	-	-	-	32.00 lb. ea.	83.00
2.38" OD Sch 40 pipe	2	4.00	-	-	3.60 lb/ft	28.80
Kicker L3x3x1/4	2	3.70	-	-	4.90 lb/ft	36.26
P1000 unistrut	2	6.50	-	-	1.89 lb/ft	24.57
Steel Conn. Plates	4	0.50	0.50	0.04	490.00 lb/ft ³	19.60
Steel Conn. Plates	2	0.33	0.33	0.03	490.00 lb/ft ³	3.34
Steel Conn. Plates	14	0.67	0.67	0.04	490.00 lb/ft ⁴	123.18
					P _{RRH} =	0.33 k

Σ Total Weight = 3091 lb

Calculate Required Ballast for Mount

P_T = 3.09 k



$$P_B = ?$$

$$P_W = 1.43 \text{ k} \quad (\Sigma \text{ Wind Loads of enclosure \& RRHs})$$

$$P_{DL} = 2.76 \text{ k} \quad (\text{Ballast frame \& eq. Dead Load})$$

$$P_{RRU} = 0.33 \text{ k} \quad (\text{RRH \& RRH rack Dead Load})$$

Dimensions:

$$A = 5.88 \text{ ft.} \quad C = 8.00 \text{ ft.}$$

$$B = 4.00 \text{ ft.}$$

Check sled for overturning:

$$\text{Req'd } M_R/M_{OT} \geq 1.5 \text{ (F.S.)}$$

$$M_R = P_{DL}(B) + 2P_B(B) + P_B(C) + P_{ru}(C) \\ = 13.7 \text{ k-ft} + 2P_B(C)$$

$$M_{OT} = P_W(A) \\ = 8.4 \text{ k-ft}$$

$$\text{Solve for } P_B: \quad 1.5 \leq \frac{13.7 \text{ k-ft} + 2P_B(C)}{8.4 \text{ k-ft}} \quad \rightarrow \quad P_B = -0.070 \text{ k} \quad (\text{per side})$$

Check sled for sliding (steel over rubber roofing mats):

$$\text{Req'd} = F_R/F_W \geq 1.2 \text{ (F.S.)}$$

$$F_R = \mu * (P_{DL} + 4P_B) = 0.6 * (P_{DL} + 4P_B) \quad F_W = P_w = 1.43 \text{ k}$$

$$\text{Solve for } P_B: \quad 1.2 \leq \frac{0.60 * (P_{DL} + 4P_B)}{1.43 \text{ k}} \quad \rightarrow \quad P_B = -0.060 \text{ k} \quad (\text{per side})$$

$$\text{Total Ballast Weight} = \boxed{0.00 \text{ lb}} \quad (4x \text{ sides total})$$

$$\text{Rubber Roofing Mat} = \boxed{144 \text{ lb}} \quad (9 \text{ mats, } 2.6 \text{ psf each})$$

Total Dead Load for Exist. Roof Check

$$\text{Total Dead Load} = (P_T + \text{Total Ballast} + \text{Roofing Mats})$$

$$= (3090.6532225 \text{ lb} + (0 \text{ lb}) + (144 \text{ lb})) = \boxed{3235 \text{ lb}} \quad \text{or} \quad \boxed{22.5 \text{ psf over a } 12' \times 12' \text{ area}}$$



Dewberry Engineers, Inc.

800 N Magnolia Ave
Suite 1000
Orlando, FL 32803

Project
Somerville E

Section
Snow Load

Calc. by
AMD

Date
4/29/2025

Chk'd by
BGK

Date
4/30/2025

Job Ref.
50183479

Sheet no./rev.
1

App'd by
Date

SNOW LOADING

In accordance with ASCE7-16

Tedds calculation version 1.0.09

Building details

Roof type Flat
Width of roof $b = 134.00$ ft

Ground snow load

Ground snow load (Figure 7.2-1) $p_g = 40.00$ lb/ft²
Density of snow $\gamma = \min(0.13 \times p_g / 1 \text{ ft} + 14 \text{ lb/ft}^3, 30 \text{ lb/ft}^3) = 19.20$ lb/ft³
Terrain type Sect. 26.7 B
Exposure condition (Table 7.3-1) Fully exposed
Exposure factor (Table 7.3-1) $C_e = 0.90$
Thermal condition (Table 7.3-2) Unheated structures
Thermal factor (Table 7.3-2) $C_t = 1.20$
Importance category (Table 1.5-1) II
Importance factor (Table 1.5-2) $I_s = 1.00$
Min snow load for low slope roofs (Sect 7.3.4) $p_{f_min} = I_s \times 20 \text{ lb/ft}^2 = 20.00$ lb/ft²
Flat roof snow load (Sect 7.3) $p_r = 0.7 \times C_e \times C_t \times I_s \times p_g = 30.24$ lb/ft²

Left parapet

Balanced snow load height $h_b = p_r / \gamma = 1.58$ ft
Height of left parapet $h_{pptL} = 2.50$ ft
Height from balance load to top of left parapet $h_{c_pptL} = h_{pptL} - h_b = 0.92$ ft
Length of roof - left parapet $l_{u_pptL} = b = 134.00$ ft
Drift height windward drift - left parapet $h_{d_pptL} = \sqrt[3]{(I_s) \times 0.75 \times (0.43 \times (\max(20 \text{ ft}, l_{u_pptL}) \times 1 \text{ ft}^2)^{1/3} \times (p_g / 1 \text{ lb/ft}^2 + 10)^{1/4} - 1.5 \text{ ft})} = 3.26$ ft
Drift height - left parapet $h_{d_pptL} = \min(h_{d_pptL}, h_{pptL} - h_b) = 0.92$ ft
Drift width $W_{d_pptL} = \min(4 \times h_{d_pptL}^2 / h_{c_pptL}, 8 \times (h_{pptL} - h_b), b) = 7.40$ ft
Drift surcharge load - left parapet $p_{d_pptL} = h_{d_pptL} \times \gamma = 17.76$ lb/ft²

Right parapet

Height of right parapet $h_{pptR} = 2.50$ ft
Height from balance load to top of right parapet $h_{c_pptR} = h_{pptR} - h_b = 0.92$ ft
Length of roof - right parapet $l_{u_pptR} = b = 134.00$ ft
Drift height windward drift - right parapet $h_{d_pptR} = \sqrt[3]{(I_s) \times 0.75 \times (0.43 \times (\max(20 \text{ ft}, l_{u_pptR}) \times 1 \text{ ft}^2)^{1/3} \times (p_g / 1 \text{ lb/ft}^2 + 10)^{1/4} - 1.5 \text{ ft})} = 3.26$ ft
Drift height - right parapet $h_{d_pptR} = \min(h_{d_pptR}, h_{pptR} - h_b) = 0.92$ ft
Drift width $W_{d_pptR} = \min(4 \times h_{d_pptR}^2 / h_{c_pptR}, 8 \times (h_{pptR} - h_b), b) = 7.40$ ft
Drift surcharge load - right parapet $p_{d_pptR} = h_{d_pptR} \times \gamma = 17.76$ lb/ft²



Dewberry Engineers, Inc.

800 N Magnolia Ave
Suite 1000
Orlando, FL 32803

Project
Somerville E

Section
Snow Load

Calc. by
AMD

Date
4/29/2025

Chk'd by
BGK

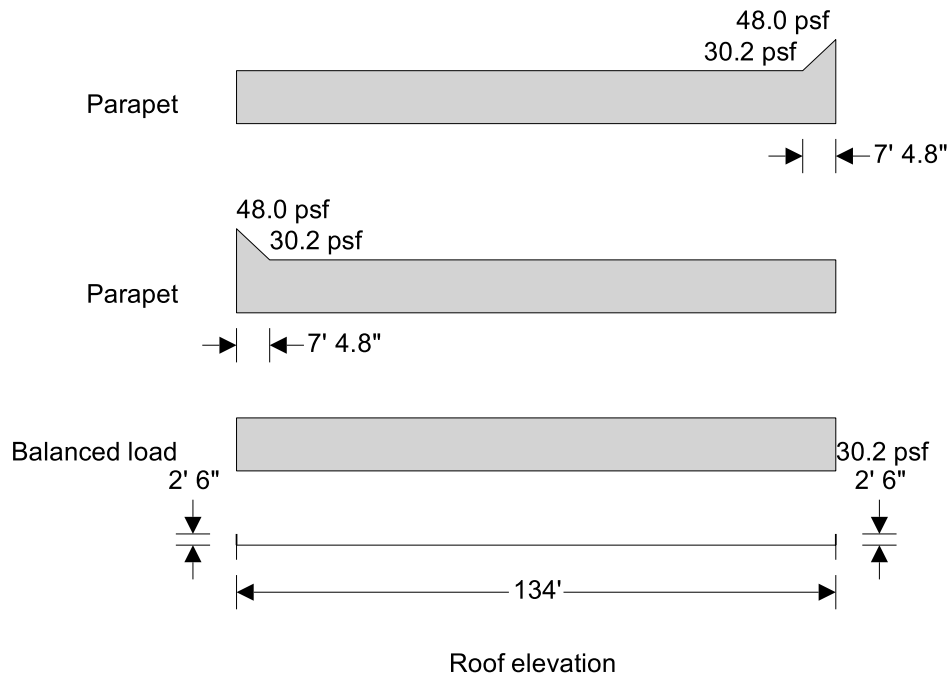
Date
4/30/2025

Job Ref.
50183479

Sheet no./rev.
2

App'd by

Date



3.6 Hollow-Core Load Tables (cont.)

Strand Pattern Designation

76-S

S = straight

Diameter of strand in 16ths

Number of strand (7)

Safe loads shown include dead load of 10 lb/ft² for untopped members and 15 lb/ft² for topped members. Remainder is live load. Long-time cambers include superimposed dead load but do not include live load.

Capacity of sections of other configurations are similar. For precise values, see local hollow-core manufacturer.

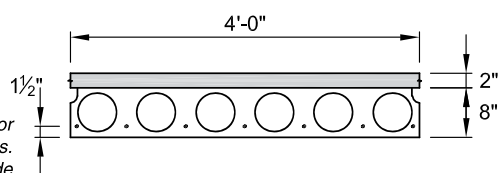
Key

385— Safe superimposed service load, lb/ft²

0.1 — Estimated camber at erection, in.

0.2 — Estimated long-time camber, in.

4'-0" × 8"
Normalweight Concrete



Section Properties

No Topping

2 in. topping

A	=	215 in. ²	-
I	=	1666 in. ⁴	3071 in. ⁴
y _b	=	4.00 in.	5.29 in.
y _t	=	4.00 in.	4.71 in.
S _b	=	417 in. ³	581 in. ³
S _t	=	417 in. ³	652 in. ³
wt	=	224 lb/ft	324 lb/ft
DL	=	56 lb/ft ²	81 lb/ft ²
V/S	=	1.92 in.	

$$f'_c = 5000 \text{ psi}$$

$$f_{pu} = 270,000 \text{ psi}$$

4HC8

Table of safe superimposed service load, lb/ft², and cambers, in.

No Topping

Strand designation code	Span, ft																																						
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40									
66-S	385	345	313	283	260	240	223	204	179	158	140	124	110	98	87	77	69	61	54	48	43	38	33	29															
	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	-0.1	-0.2	-0.3	-0.5	-0.6														
	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.3	-0.5	-0.7	-0.9	-1.4															
76-S	449	407	367	334	309	285	263	242	213	188	167	149	133	119	106	95	86	77	69	62	55	50	44	39	35	31	26												
	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9	-1.4	-1.7	-2.0									
	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.6	-0.8	-1.1	-1.4	-1.7	-2.0												
58-S	422	380	346	316	290	267	247	231	216	202	190	179	169	160	144	130	118	107	97	88	80	72	66	60	54	48	42	37	32	28									
	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0	-0.4	-0.3	-0.5	-0.7	-0.9									
	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.0	-0.2	-0.4	-0.6	-0.9	-1.2	-1.6	-2.0	-2.4									
68-S	476	430	393	361	332	309	286	269	253	235	223	209	200	180	165	153	142	132	121	110	101	92	84	77	70	63	56	51	45	40									
	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.2	0.1	-0.1	-0.3									
	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.7	0.6	0.4	0.2	0.0	-0.2	-0.5	-0.8	-1.1	-1.5									
78-S	488	442	402	370	341	318	295	275	259	241	229	215	203	195	180	168	157	144	135	126	118	110	101	92	84	77	70	64	58	52									
	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.3									
	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.0	0.8	0.7	0.5	0.3	0.0	-0.3	-0.7									

4HC8 + 2

Table of safe superimposed service load, lb/ft², and cambers, in.

2 in. Normalweight Topping

Strand designation code	Span, ft																																							
	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40												
66-S	400	365	333	308	282	256	224	197	173	153	135	119	105	93	82	68	56	45	36	26																				
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.0	-0.0	-0.1	-0.2	-0.3																				
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.4	-0.6	-0.7	-0.9	-1.2	-1.4																			
76-S	474	435	396	366	340	304	267	235	208	184	164	146	130	116	103	88	74	62	51	41	31																			
	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	-0.0	-0.1	-0.2																			
	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9	-1.2	-1.4																		
58-S	445	405	374	342	318	298	275	260	243	228	217	196	177	159	143	126	110	95	82	70	59	49	40	32																
	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.1	0.3	0.2	0.1	0.0	-0.1	-0.2	-0.4	-0.6	-0.9	-1.2	-1.5	-1.8									
	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.1	-0.1	-0.2	-0.4	-0.6	-0.9	-1.2	-1.5	-1.8															
68-S		463	426	393	366	342	319	299	282	267	251	239	216	195	177	158	140	124	110	97	84	73	62	53	44	36	28													
		0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.4	0.2	0.1	-0.1	-0.6	0.5	0.4	0.2	0.1	-0.1							
		0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.0	-0.2	-0.4	-0.6	-0.9	-1.2	-1.6	-2.0	-2.4	-0.6	-0.9	-1.2	-1.6	-2.0	-2.4						
78-S		472	435	402	375	348	325	305	288	273	257	245	232	220	207	186	167	149	133	119	106	94	83	73	64	55	46	38												
		0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	0.9	0.9	0.7	0.6	0.5	0.3	-0.1	-0.3	-0.6	-0.9	-1.3	-1.7	-2.1				
		0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

Project Title: Somerville East MA
 Engineer: AMD
 Project ID: 50183479
 Project Descr:

General Beam Analysis

Project File: Somerville.ec6

LIC# : KW-06014365, Build:20.23.2.14

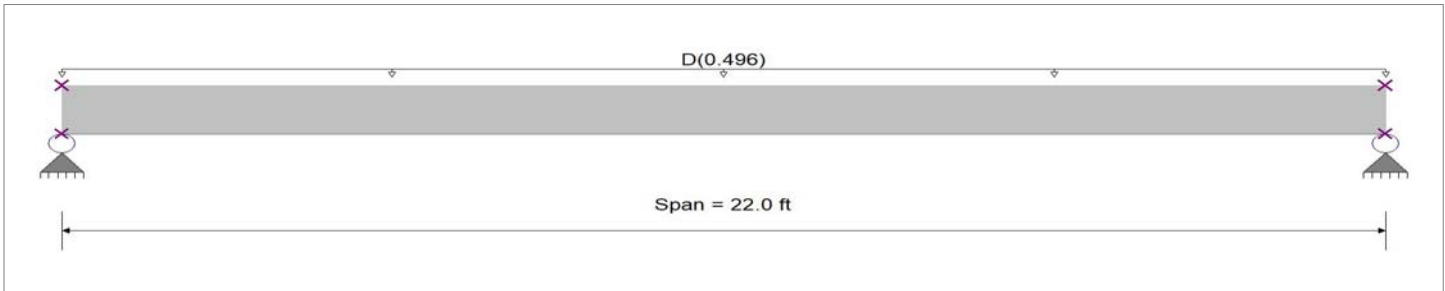
DEWBERRY

(c) ENERCALC INC 1983-2022

DESCRIPTION: 4'x8" 4HC8-66-S No Topping Hollow-Core NW Concrete Plank

General Beam Properties

Elastic Modulus 29,000.0 ksi
Span #1 Span Length = 22.0 ft Area = 10.0 in² Moment of Inertia = 100.0 in⁴



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 0.1240 ksf, Tributary Width = 4.0 ft, (Superimposed Service Load)

DESIGN SUMMARY

Maximum Bending =	30.008 k-ft	Maximum Shear =	5.456 k
Load Combination	D Only	Load Combination	D Only
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1
Location of maximum on span	11.000 ft	Location of maximum on span	0.000 ft
Maximum Deflection			
Max Downward Transient Deflection	0.000 in		0
Max Upward Transient Deflection	0.000 in		0
Max Downward Total Deflection	0.909 in		290
Max Upward Total Deflection	0.009 in		30505

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios		Summary of Moment Values (k-ft)							Shear Values (k)	
Segment Length	Span #	M	V	Mmax +	Mmax -	Ma - Max	Mnx	Mnx/Omega	Cb	Rm	Va Max	Vnx/Vnx/Omega
Overall MAXimum Envelope												
Dsgn. L = 22.00 ft	1			30.01		30.01					5.46	
D Only												
Dsgn. L = 22.00 ft	1			30.01		30.01					5.46	
+0.60D												
Dsgn. L = 22.00 ft	1			18.00		18.00					3.27	

Project Title: Somerville East MA
 Engineer: AMD
 Project ID: 50183479
 Project Descr:

General Beam Analysis

Project File: Somerville.ec6

LIC# : KW-06014365, Build:20.23.2.14

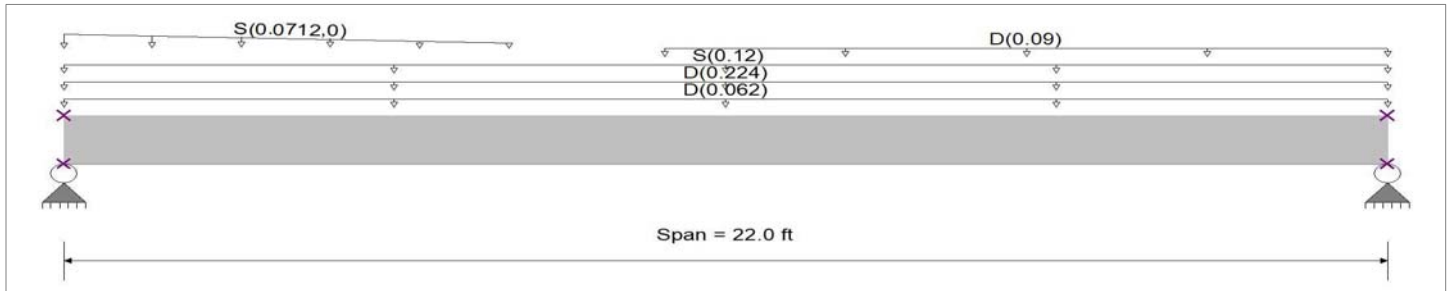
DEWBERRY

(c) ENERCALC INC 1983-2022

DESCRIPTION: Proposed conditions (Sled 10'-22') of 4HC8-66-S No Topping Plank

General Beam Properties

Elastic Modulus 29,000.0 ksi
Span #1 Span Length = 22.0 ft Area = 10.0 in² Moment of Inertia = 100.0 in⁴



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 0.01550 ksf, Tributary Width = 4.0 ft, (Dead Load)

Uniform Load : D = 0.2240 k/ft, Tributary Width = 1.0 ft, (Plank Dead Load)

Uniform Load : S = 0.030 ksf, Tributary Width = 4.0 ft, (Snow Load)

Uniform Load : D = 0.02250 ksf, Extent = 10.0 --> 22.0 ft, Tributary Width = 4.0 ft, (Ballast)

Varying Uniform Load : S = 0.01780->0.0 ksf, Extent = 0.0 --> 7.40 ft, Trib Width = 4.0 ft, (Snow Drift)

DESIGN SUMMARY

Maximum Bending =	28.114 k-ft	Maximum Shear =	5.281 k
Load Combination	+D+S	Load Combination	+D+S
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1
Location of maximum on span	11.330 ft	Location of maximum on span	22.000 ft
Maximum Deflection			
Max Downward Transient Deflection	0.231 in	1142	
Max Upward Transient Deflection	0.004 in	71256	
Max Downward Total Deflection	0.849 in	310	
Max Upward Total Deflection	0.006 in	45630	

Maximum Forces & Stresses for Load Combinations

Load Combination			Max Stress Ratios		Summary of Moment Values (k-ft)						Shear Values (k)		
Segment Length	Span #		M	V	Mmax +	Mmax -	Ma - Max	Mnx	Mnx/Omega	Cb	Rm	Va Max	VnxVnx/Omega
Overall MAXimum Envelope													
Dsgn. L = 22.00 ft	1				28.11		28.11					5.28	
D Only													
Dsgn. L = 22.00 ft	1				20.55		20.55					3.93	
+D+S													
Dsgn. L = 22.00 ft	1				28.11		28.11					5.28	
+D+0.750S													
Dsgn. L = 22.00 ft	1				26.22		26.22					4.94	
+0.60D													
Dsgn. L = 22.00 ft	1				12.33		12.33					2.36	

Project Title: Somerville East MA
 Engineer: AMD
 Project ID: 50183479
 Project Descr:

General Beam Analysis

Project File: Somerville.ec6

LIC# : KW-06014365, Build:20.23.2.14

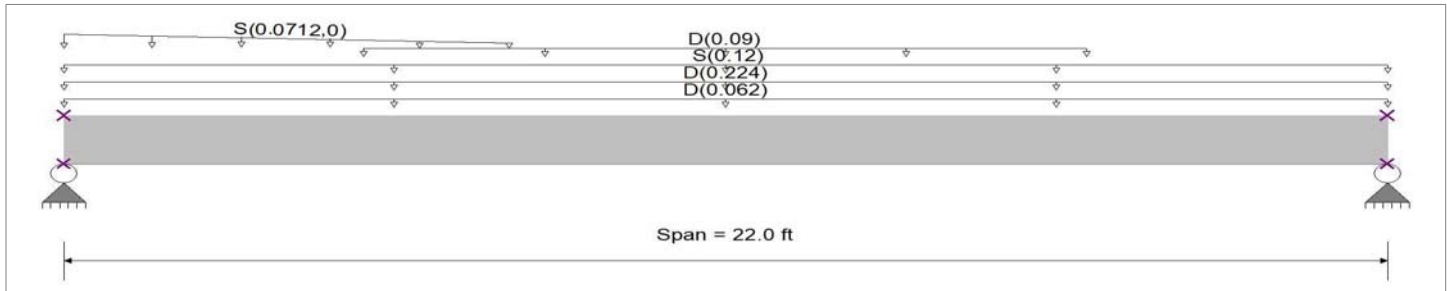
DEWBERRY

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DESCRIPTION: Proposed conditions (Sled 5'-17") of 4HC8-66-S No Topping Plank

General Beam Properties

Elastic Modulus 29,000.0 ksi
 Span #1 Span Length = 22.0 ft Area = 10.0 in² Moment of Inertia = 100.0 in⁴



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Uniform Load : D = 0.01550 ksf, Tributary Width = 4.0 ft, (Dead Load)

Uniform Load : D = 0.2240 k/ft, Tributary Width = 1.0 ft, (Plank Dead Load)

Uniform Load : S = 0.030 ksf, Tributary Width = 4.0 ft, (Snow Load)

Uniform Load : D = 0.02250 ksf, Extent = 5.0 --> 17.0 ft, Tributary Width = 4.0 ft, (Ballast)

Varying Uniform Load : S = 0.01780->0.0 ksf, Extent = 0.0 --> 7.40 ft, Trib Width = 4.0 ft, (Snow Drift)

DESIGN SUMMARY

Maximum Bending =	29.208 k-ft	Maximum Shear =	5.240 k
Load Combination	+D+S	Load Combination	+D+S
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1
Location of maximum on span	10.890 ft	Location of maximum on span	0.000 ft
Maximum Deflection			
Max Downward Transient Deflection	0.231 in	1142	
Max Upward Transient Deflection	0.004 in	71256	
Max Downward Total Deflection	0.881 in	299	
Max Upward Total Deflection	0.006 in	42944	

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios		Summary of Moment Values (k-ft)						Shear Values (k)		
Segment Length	Span #	M	V	Mmax +	Mmax -	Ma - Max	Mnx	Mnx/Omega	Cb	Rm	Va Max	Vnx/Vnx/Omega
Overall MAXimum Envelope												
Dsgn. L = 22.00 ft	1			29.21		29.21					5.24	
D Only												
Dsgn. L = 22.00 ft	1			21.62		21.62					3.69	
+D+S												
Dsgn. L = 22.00 ft	1			29.21		29.21					5.24	
+D+0.750S												
Dsgn. L = 22.00 ft	1			27.31		27.31					4.85	
+0.60D												
Dsgn. L = 22.00 ft	1			12.97		12.97					2.21	



Job Number	50183479
Made by:	AMD
Date:	05/09/25
Checked by:	BGK
Date:	05/12/25

(Somerville East MA) - Structure Loading

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Site Name: Somerville East MA

Existing Building Information

- Existing building plans by Einhardt Associates Inc. dated 10/08/76
- Massachusetts 780 CMR 10th Edition for wind and snow load
- Upper roof is constructed with hollow concrete planks

Existing Dead Load

- Estimated roof dead load:

4.5" Rigid Insulation =	6.75 psf	(Assumed)
Smooth Waterproofing =	1.50 psf	(Assumed)
1" Plywood =	3.20 psf	(Assumed)
Misc. Mech Load =	4.00 psf	(Assumed)
Total Exist. Dead Load =	15.5 psf	

Hollow-Core NW Conc Plank = 224 lb/ft (Using 4' trib. Width, PCI)
Note: estimated values using Table C3-1 ASCE 7-10

Proposed Dead Load

- Proposed ballast frame = 22.5 psf (See ballast excel calcs)

Live Load

- Design Live Load:
Live Load = 20.0 psf Massachusetts 780 CMR 10th Edition

Snow Load

- Snow load = 30.2 psf (See TEDDs)
- Snow drift load = 17.8 psf (See TEDDs)
*Snow drift width is 7.4 ft

Allowable Conditions

- Safe superimposed service load = 124.0 psf (See PCI Table)
- Safe superimposed service moment = 30.0 k-ft (See Enercalc)
- Proposed service load moment (sled @ 10'-22') = 28.1 k-ft (See Enercalc) **94%**
- Proposed service load moment (sled @ 5'-17') = 29.2 k-ft (See Enercalc) **97%**



V 1.0

Job Number: 50183479
Made by: AMD
Date: 4/30/2025
Checked by: BGK
Date: 5/1/2025

(Somerville MA) - Design Wind Load

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Site Name: Somerville MA

Dead and Live Loading**PLATFORM CHECKS****Equipment on Platform**

<u>Equipment</u>	<u>Weight Ea. (lbs)</u>	<u>Quantity</u>	<u>Weight Total (lbs)</u>	<u>Status</u>	<u>Group Action Factor</u>	
					Z	X
Equip Cab	1000	1	1000	Proposed	1	1
Battery Cab	4000	1	4000	Proposed	1	1
Telco	1656	1	1656	Proposed	1	1
HVAC	3500	1	3500	Existing	1	1
Total			10156			

Equipment on Handrail

<u>Equipment</u>	<u>Weight Ea. (lbs)</u>	<u>Quantity</u>	<u>Weight Total (lbs)</u>	<u>Status</u>	<u>Group Action Factor</u>	
					Z	X
PPC	420	1	420	Proposed	1	1
Transformer	350	1	350	Proposed	1	1
Total			770			

Group Action Factor is based on engineering judgment of exposure of cabinet and proximity of adjacent shielding cabinets.

Live Load: 20.0 psf
Hand Rail: 15.0 lb/ft
Grating: 10.0 psf

Snow Loading

$P_g = 40.0 \text{ psf}$ (CMR 10th Edition)
 $I = 1.0$
 $C_e = 1.0$ (Table 7.3-1, ASCE 7-16)
 $C_t = 1.2$ (Table 7.3-2, ASCE 7-16)
 $P_f = (0.7)(C_e)(C_t)(I)(P_g)$
 $= 33.6 \text{ psf}$
 $= 20.0 \text{ psf}$ (min snow) (Sect. 7.3.4, ASCE 7-16)
Use **33.6 psf**

Wind Load per ASCE 7-16**Design Criteria**

Height, $h = 51.70 \text{ ft}$ (CL of Cabinets)
Risk Category = II (Table 1.5-1, ASCE 7-16)
Basic Wind Speed, $V = 119 \text{ mph}$ (ASCE 7-16, Hazard Tool)
 $K_d = 0.85$ (Table 26.6-1, ASCE 7-16)
Exposure Category = B (Sect. 26.7.3, ASCE 7-16)
 $K_{zt} = 1$ (Sect. 26.8.2, ASCE 7-16)
 $G = 0.85$ (Sect. 26.11.1, ASCE 7-16)
 $K_e = 1.00$ (Table 26.9-1, ASCE 7-16)
 $K_h = 0.8185$ (Table 26.10-1, ASCE 7-16)

Velocity Pressure

$q_h = 0.00256(K_h)(K_{zt})(K_d)(K_e)(V^2)$ (Eqn. 26.10-1, ASCE 7-16)
 $= 25.22 \text{ lb/ft}^2$



V 1.0

Job Number: 50183479
Made by: AMD
Date: 4/30/2025
Checked by: BGK
Date: 5/1/2025

(Somerville MA) - Design Wind Load

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Pressure on Equipment

$$\begin{aligned} GC_r &= 1.9 && (\text{Sect. 29.4.1, ASCE 7-16}) \\ F &= q_h(GC_r) && (\text{Eqn. 29.4-2, ASCE 7-16}) \\ &= \mathbf{47.92 \text{ lb/ft}^2} \end{aligned}$$

<u>Description</u>	<u>Dimensions</u>			<u>Area (Z) (ft²)</u>	<u>Area (X) (ft²)</u>	<u>F (Z) (lb)</u>	<u>F (X) (lb)</u>
	<i>W</i>	<i>D</i>	<i>H</i>				
Equip Cab	36.00 in	36.00 in	72.00 in	18.00	18.00	862.5	862.5
Battery Cab	36.00 in	36.00 in	72.00 in	18.00	18.00	862.5	862.5
Telco	24.00 in	24.00 in	48.00 in	8.00	8.00	383.3	383.3
HVAC	131.00 in	76.00 in	84.00 in	76.42	44.33	3661.7	2124.3

<u>Description</u>	<u>Dimensions</u>			<u>Area (Z) (ft²)</u>	<u>Area (X) (ft²)</u>	<u>F (Z) (lb)</u>	<u>F (X) (lb)</u>
	<i>W</i>	<i>D</i>	<i>H</i>				
PPC	11.00 in	20.00 in	24.00 in	1.83	3.33	87.8	159.7
Transformer	15.00 in	24.00 in	42.00 in	4.38	7.00	209.6	335.4
						297.5	495.2

Uplift Force (Overturning)

$$\begin{aligned} F_{vz} &= F(H/2)/(D) \\ F_{vx} &= F(H/2)/(W) \end{aligned}$$

<u>Description</u>	<u>F_{vz} (lb)</u>	<u>F_{vx} (lb)</u>
Equip Cab	862.5	862.5
Battery Cab	862.5	862.5
Telco	383.3	383.3
HVAC	2023.7	681.1

Uplift Force

$$\begin{aligned} GC_r &= 1.5 && (\text{Sect. 29.4.1, ASCE 7-16}) \\ F_v &= q_h(GC_r) && (\text{Eqn. 29.4-3, ASCE 7-16}) \\ &= \mathbf{37.83 \text{ lb/ft}^2} \end{aligned}$$

<u>Description</u>	<u>Dimensions</u>		<u>Area (A_r) (ft²)</u>	<u>F_v (lb)</u>
	<i>W</i>	<i>D</i>		
Equip Cab	36.00 in	36.00 in	9.00	340.5
Battery Cab	36.00 in	36.00 in	9.00	340.5
Telco	24.00 in	24.00 in	4.00	151.3
HVAC	131.00 in	76.00 in	69.14	2615.4

Loading Combinations (For Steel) (Sect. 2.3.1, ASCE 7-16)

1.4D
1.2D + 0.5(Lr or S)
1.2D+1.6(Lr or S)+0.5W
1.2D + 1.0W + 0.5(Lr or S)
0.9D + 1.0W

Loading Combinations (For Wall Check)

(Sect. 2.4.1, ASCE 7-16)

D+(Lr or S)
D+0.75(Lr or S)
D+0.6W
D+0.75(0.6W)+0.75(Lr or S)
0.6D+0.6W

L = Live Load
S = Snow Load
D = Dead Load
W = Load due to Pressure

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	Part Platform		
Job Title Somerville	Ref		
	By AMD	Date 5/1/2025	Chd BGK
Client VZW	File Somerville.STD	Date/Time 22-May-2025 10:42	

Job Information

	Engineer	Checked	Approved
Name:	AMD	BGK	BGK
Date:	5/1/2025	5/2/2025	5/2/2025

Project ID	
Project Name	

Structure Type	SPACE FRAME
----------------	-------------

Number of Nodes	48	Highest Node	50
Number of Elements	54	Highest Beam	57

Number of Basic Load Cases	5
Number of Combination Load Cases	43

Included in this printout are data for:

All	The Whole Structure
-----	---------------------

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	DEAD
Primary	2	LIVE LOAD
Primary	3	SNOW
Primary	4	WIND (Z)
Primary	5	WIND (X)
Combination	6	1.4D
Combination	7	1.2D+0.5L
Combination	8	1.2D+0.5S
Combination	9	1.2D+1.6L+0.5W(Z)
Combination	10	1.2D+1.6L+0.5W(-Z)
Combination	11	1.2D+1.6L+0.5W(X)
Combination	12	1.2D+1.6L+0.5W(-X)
Combination	13	1.2D+1.6S+0.5W(Z)
Combination	14	1.2D+1.6S+0.5W(-Z)
Combination	15	1.2D+1.6S+0.5W(X)
Combination	16	1.2D+1.6S+0.5W(-X)
Combination	17	1.2D+1.0W(Z)+0.5L
Combination	18	1.2D+1.0W(-Z)+0.5L
Combination	19	1.2D+1.0W(Z)+0.5S
Combination	20	1.2D+1.0W(-Z)+0.5S
Combination	21	1.2D+1.0W(X)+0.5L
Combination	22	1.2D+1.0W(-X)+0.5L
Combination	23	1.2D+1.0W(X)+0.5S
Combination	24	1.2D+1.0W(-X)+0.5S
Combination	25	0.9D+1.0W(Z)

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	Part Platform		
Job Title Somerville	Ref		
	By AMD	Date 5/1/2025	Chd BGK
Client VZW	File Somerville.STD	Date/Time 22-May-2025 10:42	

Job Information Cont...

Type	L/C	Name
Combination	26	0.9D+1.0W(-Z)
Combination	27	0.9D+1.0W(X)
Combination	28	0.9D+1.0W(-X)
Combination	29	D+L
Combination	30	D+S
Combination	31	D+0.75(0.6W(X))+0.75L
Combination	32	D+0.75(0.6W(-X))+0.75L
Combination	33	D+0.75(0.6W(Z))+0.75L
Combination	34	D+0.75(0.6W(-Z))+0.75L
Combination	35	D+0.75(0.6W(X))+0.75S
Combination	36	D+0.75(0.6W(-X))+0.75S
Combination	37	D+0.75(0.6W(Z))+0.75S
Combination	38	D+0.75(0.6W(-Z))+0.75S
Combination	39	D+0.75L
Combination	40	D+0.75S
Combination	41	D+0.6W(Z)
Combination	42	D+0.6W(-Z)
Combination	43	D+0.6W(X)
Combination	44	D+0.6W(-X)
Combination	45	0.6D+0.6W(Z)
Combination	46	0.6D+0.6W(-Z)
Combination	47	0.6D+0.6W(X)
Combination	48	0.6D+0.6W(-X)



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Part Platform

Job Title **Somerville**

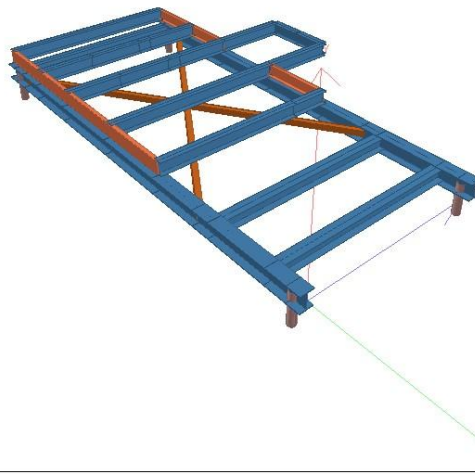
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By **AMD** Date **5/1/2025** Chd **BGK**

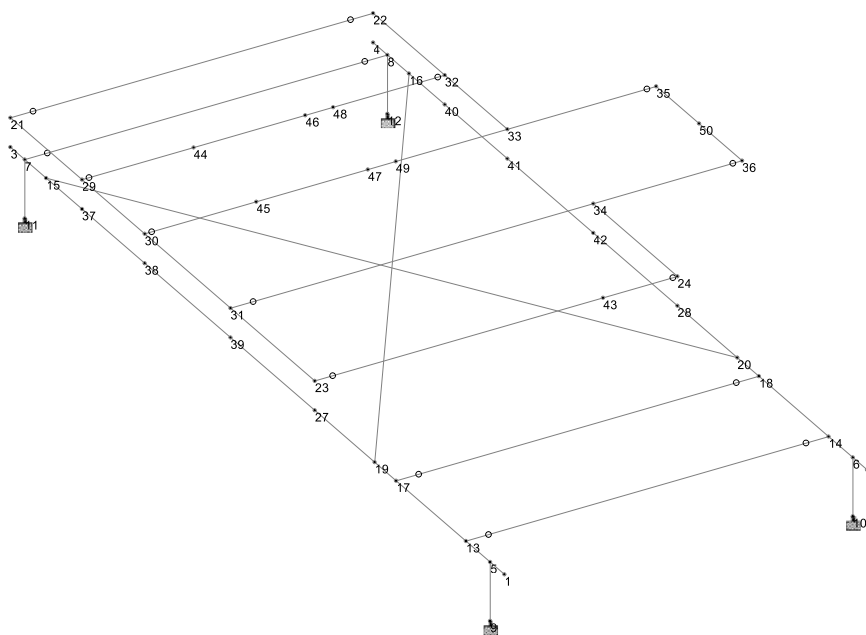
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3D Rendered View



Node Numbers



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Part Platform

Job Title **Somerville**

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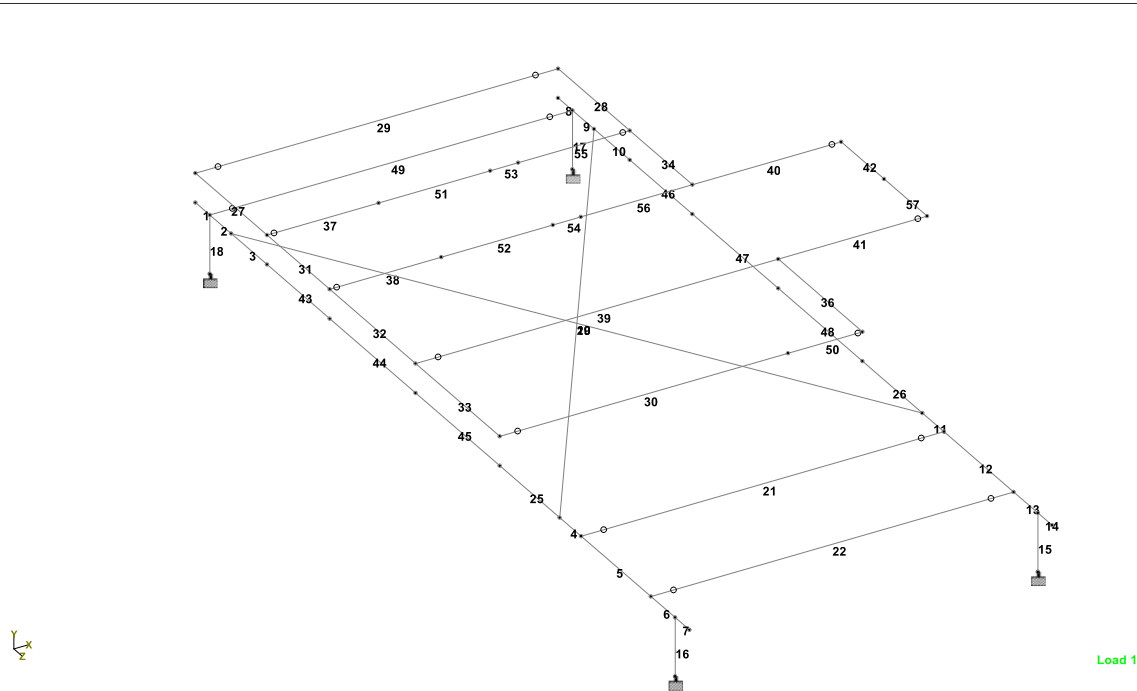
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Beam Numbers

Section Properties

Prop	Section	Area (in ²)	I _{yy} (in ⁴)	I _{zz} (in ⁴)	J (in ⁴)	Material
1	W8X18	5.260	7.970	61.900	0.172	STEEL_50_KS
2	C8X18	5.510	1.970	43.900	0.434	STEEL_36_KS
3	L35354	1.700	3.196	0.824	0.036	STEEL_36_KS
4	W8X24	7.080	18.300	82.700	0.346	STEEL_36_KS
5	W10X39	11.500	45.000	209.000	0.976	STEEL_36_KS
6	HSSP4.500X0.237	2.960	6.790	6.790	13.583	STEEL

Materials

Mat	Name	E (kip/in ²)	v	Density (kip/in ³)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6.5E -6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E -6
3	ALUMINUM	10E+3	0.330	9.8e-05	12.8E -6
4	STAINLESSSTEEL	28E+3	0.300	0.000	9.9E -6
5	STEEL_36_KSI	29E+3	0.300	0.000	6.5E -6
6	STEEL_50_KSI	29E+3	0.300	0.000	6.5E -6
7	STEEL_275_NMM2	29.7E+3	0.300	0.000	6.67E -6
8	STEEL_355_NMM2	29.7E+3	0.300	0.000	6.67E -6

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	PartPlatform		
Job Title Somerville	Ref		
	By AMD	Date 5/1/2025	Chd BGK
Client VZW	File Somerville.STD	Date/Time 22-May-2025 10:42	

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip*ft/deg)	rY (kip*ft/deg)	rZ (kip*ft/deg)
9	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
10	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
11	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
12	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Releases

Beam ends not shown in this table are fixed in all directions.

Beam	Node	x	y	z	rx	ry	rz
21	17	Fixed	Fixed	Fixed	Fixed	Pin	Pin
21	18	Fixed	Fixed	Fixed	Fixed	Pin	Pin
22	13	Fixed	Fixed	Fixed	Fixed	Pin	Pin
22	14	Fixed	Fixed	Fixed	Fixed	Pin	Pin
29	21	Fixed	Fixed	Fixed	Fixed	Pin	Pin
29	22	Fixed	Fixed	Fixed	Fixed	Pin	Pin
30	23	Fixed	Fixed	Fixed	Fixed	Pin	Pin
37	29	Fixed	Fixed	Fixed	Fixed	Pin	Pin
38	30	Fixed	Fixed	Fixed	Fixed	Pin	Pin
39	31	Fixed	Fixed	Fixed	Fixed	Pin	Pin
49	7	Fixed	Fixed	Fixed	Fixed	Pin	Pin
49	8	Fixed	Fixed	Fixed	Fixed	Pin	Pin
50	24	Fixed	Fixed	Fixed	Fixed	Pin	Pin
55	32	Fixed	Fixed	Fixed	Fixed	Pin	Pin



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Part Platform

Job Title **Somerville**

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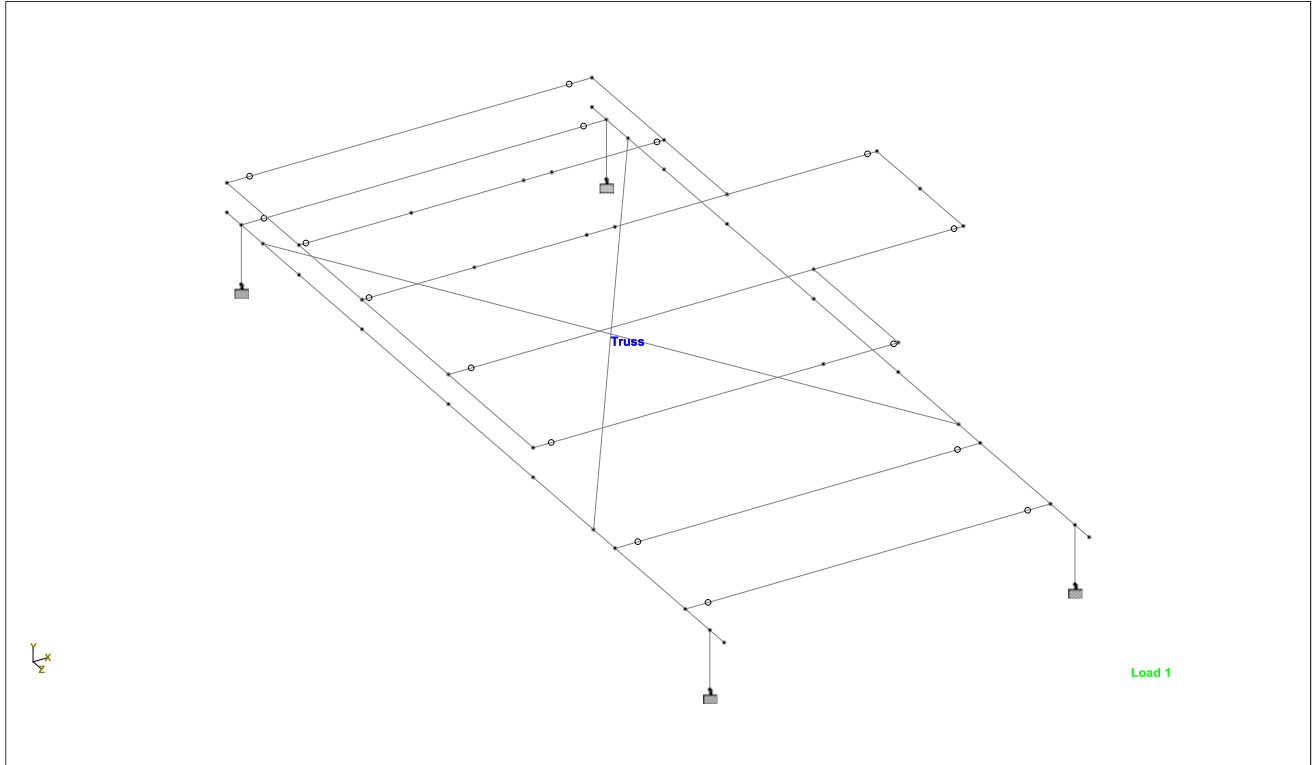
Date **5/1/2025**

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Truss Members

Primary Load Cases

Number	Name	Type
1	DEAD	Dead
2	LIVE LOAD	Live
3	SNOW	Snow
4	WIND (Z)	Wind
5	WIND (X)	Wind



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Part Platform

Job Title **Somerville**

Ref

By **AMD**

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Client **VZW**

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Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
6	1.4D	1	DEAD	1.40
7	1.2D+0.5L	1	DEAD	1.20
		2	LIVE LOAD	0.50
8	1.2D+0.5S	1	DEAD	1.20
		3	SNOW	0.50
9	1.2D+1.6L+0.5W(Z)	1	DEAD	1.20
		2	LIVE LOAD	1.60
		4	WIND (Z)	0.50
10	1.2D+1.6L+0.5W(-Z)	1	DEAD	1.20
		2	LIVE LOAD	1.60
		4	WIND (Z)	-0.50
11	1.2D+1.6L+0.5W(X)	1	DEAD	1.20
		2	LIVE LOAD	1.60
		5	WIND (X)	0.50
12	1.2D+1.6L+0.5W(-X)	1	DEAD	1.20
		2	LIVE LOAD	1.60
		5	WIND (X)	-0.50
13	1.2D+1.6S+0.5W(Z)	1	DEAD	1.20
		3	SNOW	1.60
		4	WIND (Z)	0.50
14	1.2D+1.6S+0.5W(-Z)	1	DEAD	1.20
		3	SNOW	1.60
		4	WIND (Z)	-0.50
15	1.2D+1.6S+0.5W(X)	1	DEAD	1.20
		3	SNOW	1.60
		5	WIND (X)	0.50
16	1.2D+1.6S+0.5W(-X)	1	DEAD	1.20
		3	SNOW	1.60
		5	WIND (X)	-0.50
17	1.2D+1.0W(Z)+0.5L	1	DEAD	1.20
		4	WIND (Z)	1.00
		2	LIVE LOAD	0.50
18	1.2D+1.0W(-Z)+0.5L	1	DEAD	1.20
		4	WIND (Z)	-1.00
		2	LIVE LOAD	0.50
19	1.2D+1.0W(Z)+0.5S	1	DEAD	1.20
		4	WIND (Z)	1.00
		3	SNOW	0.50
20	1.2D+1.0W(-Z)+0.5S	1	DEAD	1.20
		4	WIND (Z)	-1.00
		3	SNOW	0.50
21	1.2D+1.0W(X)+0.5L	1	DEAD	1.20
		5	WIND (X)	1.00
		2	LIVE LOAD	0.50
22	1.2D+1.0W(-X)+0.5L	1	DEAD	1.20



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Job No
50183479

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Part Platform

Job Title **Somerville**

Ref

By **AMD**

Date **5/1/2025**

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Client **VZW**

File **Somerville.STD**

Date/Time **22-May-2025 10:42**

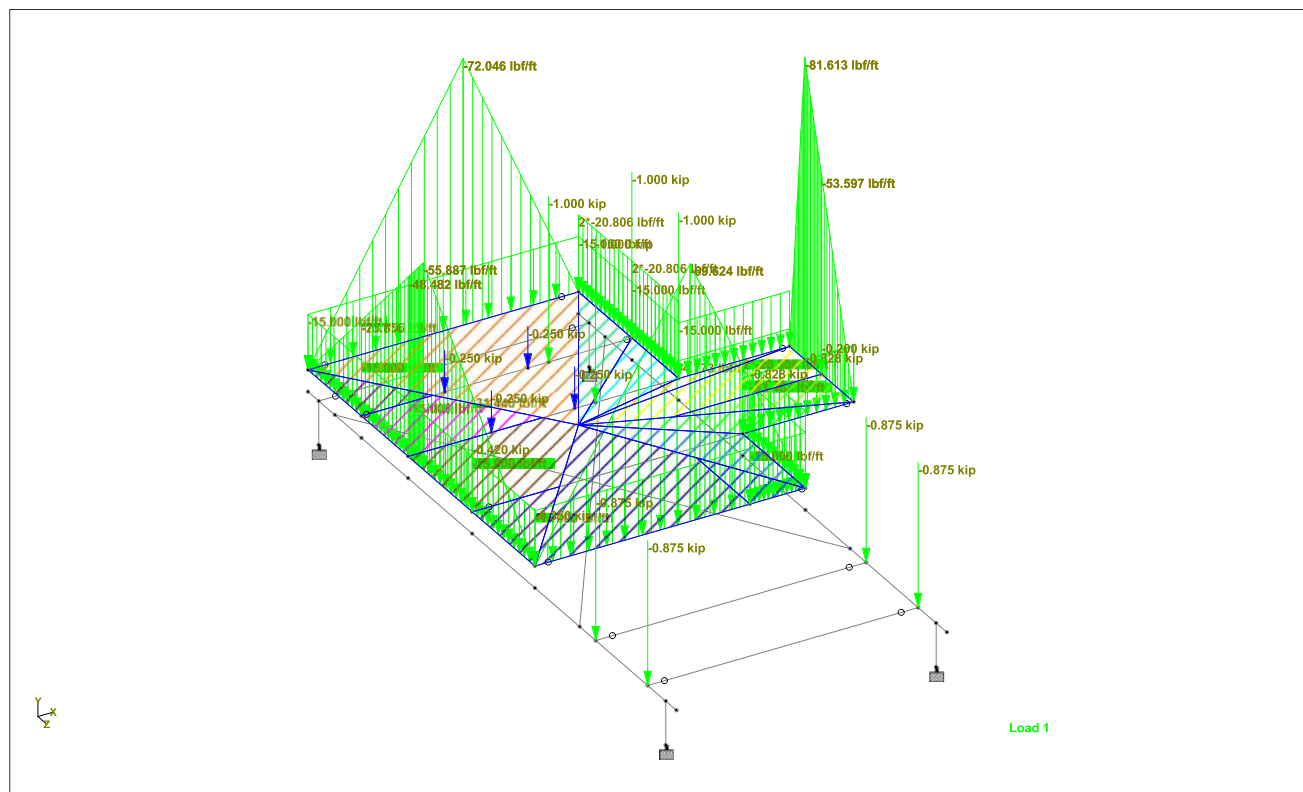
Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		5	WIND (X)	-1.00
		2	LIVE LOAD	0.50
23	1.2D+1.0W(X)+0.5S	1	DEAD	1.20
		5	WIND (X)	1.00
		3	SNOW	0.50
24	1.2D+1.0W(-X)+0.5S	1	DEAD	1.20
		5	WIND (X)	-1.00
		3	SNOW	0.50
25	0.9D+1.0W(Z)	1	DEAD	0.90
		4	WIND (Z)	1.00
26	0.9D+1.0W(-Z)	1	DEAD	0.90
		4	WIND (Z)	-1.00
27	0.9D+1.0W(X)	1	DEAD	0.90
		5	WIND (X)	1.00
28	0.9D+1.0W(-X)	1	DEAD	0.90
		5	WIND (X)	-1.00
29	D+L	1	DEAD	1.00
		2	LIVE LOAD	1.00
30	D+S	1	DEAD	1.00
		3	SNOW	1.00
31	D+0.75(0.6W(X))+0.75L	1	DEAD	1.00
		5	WIND (X)	0.45
		2	LIVE LOAD	0.75
32	D+0.75(0.6W(-X))+0.75L	1	DEAD	1.00
		5	WIND (X)	-0.45
		2	LIVE LOAD	0.75
33	D+0.75(0.6W(Z))+0.75L	1	DEAD	1.00
		4	WIND (Z)	0.45
		2	LIVE LOAD	0.75
34	D+0.75(0.6W(-Z))+0.75L	1	DEAD	1.00
		4	WIND (Z)	-0.45
		2	LIVE LOAD	0.75
35	D+0.75(0.6W(X))+0.75S	1	DEAD	1.00
		5	WIND (X)	0.45
		3	SNOW	0.75
36	D+0.75(0.6W(-X))+0.75S	1	DEAD	1.00
		5	WIND (X)	-0.45
		3	SNOW	0.75
37	D+0.75(0.6W(Z))+0.75S	1	DEAD	1.00
		4	WIND (Z)	0.45
		3	SNOW	0.75
38	D+0.75(0.6W(-Z))+0.75S	1	DEAD	1.00
		4	WIND (Z)	-0.45
		3	SNOW	0.75
39	D+0.75L	1	DEAD	1.00

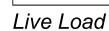
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	Part Platform		
Job Title Somerville	Ref		
	By AMD	Date 5/1/2025	Chd BGK
Client VZW	File Somerville.STD	Date/Time 22-May-2025 10:42	

Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		2	LIVE LOAD	0.75
40	D+0.75S	1	DEAD	1.00
		3	SNOW	0.75
41	D+0.6W(Z)	1	DEAD	1.00
		4	WIND (Z)	0.60
42	D+0.6W(-Z)	1	DEAD	1.00
		4	WIND (Z)	-0.60
43	D+0.6W(X)	1	DEAD	1.00
		5	WIND (X)	0.60
44	D+0.6W(-X)	1	DEAD	1.00
		5	WIND (X)	-0.60
45	0.6D+0.6W(Z)	1	DEAD	0.60
		4	WIND (Z)	0.60
46	0.6D+0.6W(-Z)	1	DEAD	0.60
		4	WIND (Z)	-0.60
47	0.6D+0.6W(X)	1	DEAD	0.60
		5	WIND (X)	0.60
48	0.6D+0.6W(-X)	1	DEAD	0.60
		5	WIND (X)	-0.60



Dead Load





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Job Title **Somerville**

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Ref

By **AMD**

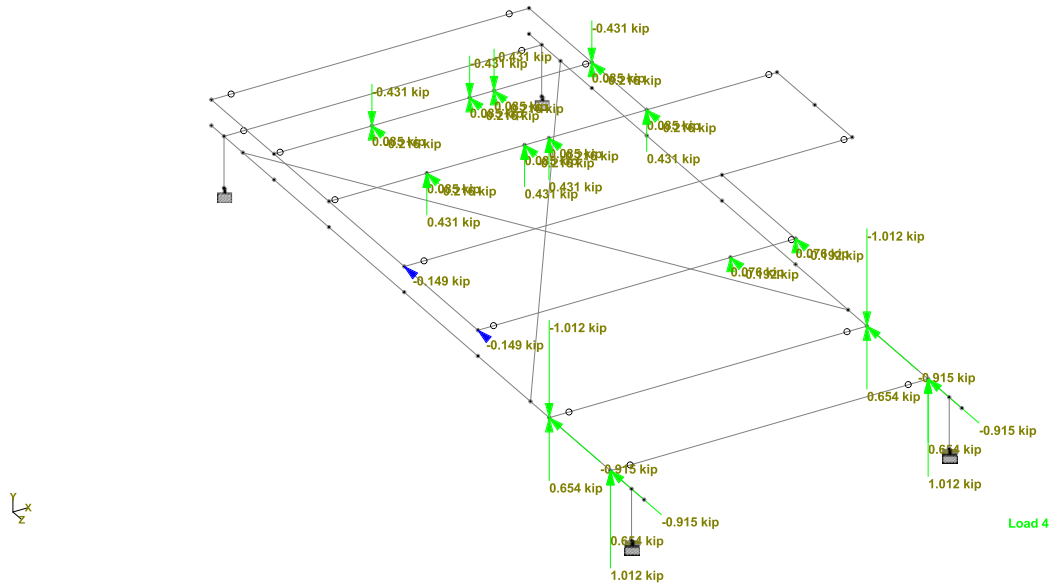
Date **5/1/2025**

Chd **BGK**

Client **VZW**

File **Somerville.STD**

Date/Time **22-May-2025 10:42**



Wind Load (Z Direction)



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Job Title Somerville

Client VZW

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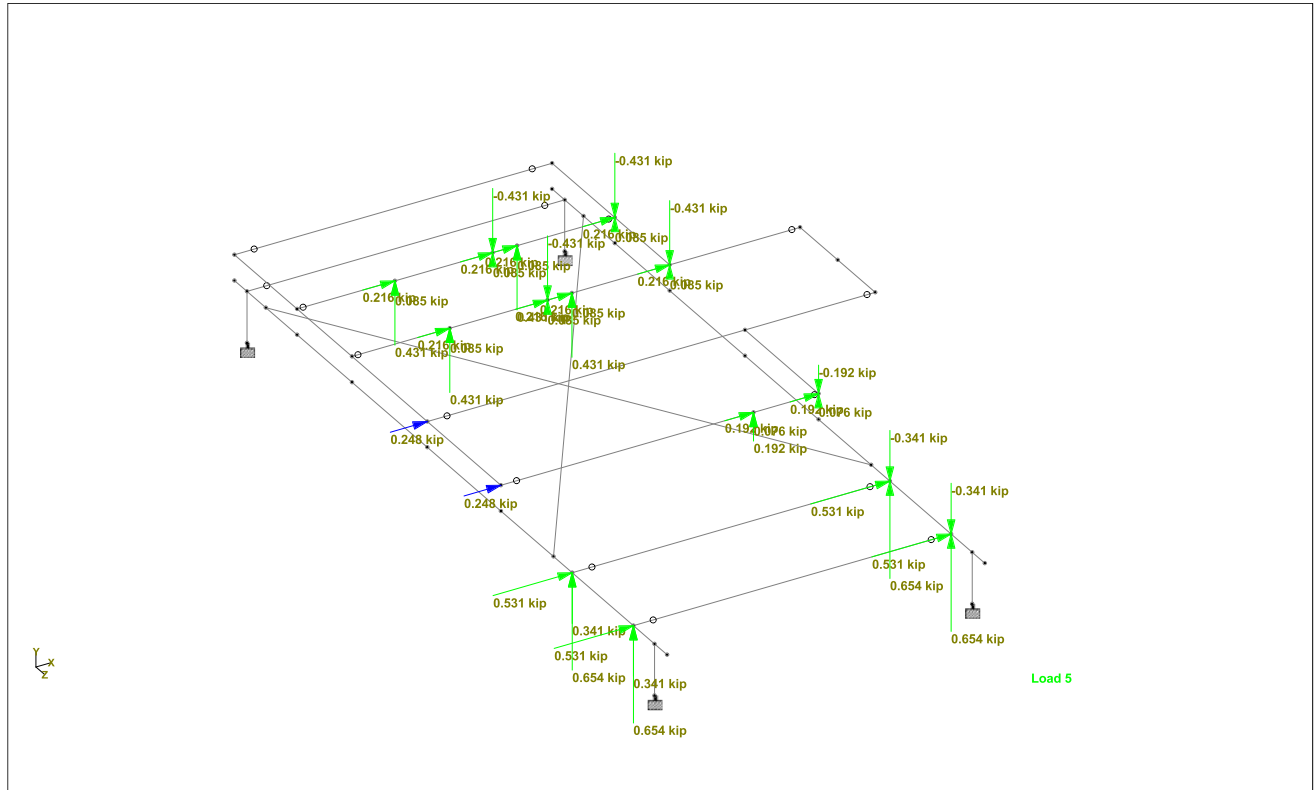
By AMD

Date5/1/2025

Chd BGK

File Somerville.STD

Date/Time 22-May-2025 10:42



Wind Load (X Direction)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
1	W10X39	W10X39	0.036	1.000	0.036	Cl.G1	16	11.500	209.000	45.000	0.976
2	W10X39	W10X39	0.065	1.000	0.065	Cl.G1	16	11.500	209.000	45.000	0.976
3	W10X39	W10X39	0.063	1.000	0.063	Cl.G1	16	11.500	209.000	45.000	0.976
4	W10X39	W10X39	0.142	1.000	0.142	Eq.H1-3a(H1-	16	11.500	209.000	45.000	0.976
5	W10X39	W10X39	0.125	1.000	0.125	Eq.H1-3a(H1-	24	11.500	209.000	45.000	0.976
6	W10X39	W10X39	0.093	1.000	0.093	Cl.G1	24	11.500	209.000	45.000	0.976
7	W10X39	W10X39	0.001	1.000	0.001	Cl.G1	6	11.500	209.000	45.000	0.976
8	W10X39	W10X39	0.057	1.000	0.057	Cl.G1	14	11.500	209.000	45.000	0.976
9	W10X39	W10X39	0.119	1.000	0.119	Cl.G1	15	11.500	209.000	45.000	0.976
10	W10X39	W10X39	0.117	1.000	0.117	Cl.G1	15	11.500	209.000	45.000	0.976
11	W10X39	W10X39	0.193	1.000	0.193	Eq.H1-3a(H1-	14	11.500	209.000	45.000	0.976
12	W10X39	W10X39	0.155	1.000	0.155	Eq.H1-3a(H1-	16	11.500	209.000	45.000	0.976
13	W10X39	W10X39	0.123	1.000	0.123	Cl.G1	14	11.500	209.000	45.000	0.976
14	W10X39	W10X39	0.001	1.000	0.001	Cl.G1	6	11.500	209.000	45.000	0.976
15	HSSP4.5C	HSSP4.5C	0.871	1.000	0.871	Eq.H1-1b	14	2.960	6.790	6.790	13.580
16	HSSP4.5C	HSSP4.5C	0.462	1.000	0.462	Eq.H1-1b	14	2.960	6.790	6.790	13.580
17	HSSP4.5C	HSSP4.5C	0.862	1.000	0.862	Eq.H1-1b	15	2.960	6.790	6.790	13.580
18	HSSP4.5C	HSSP4.5C	0.489	1.000	0.489	Eq.H1-1b	24	2.960	6.790	6.790	13.580

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Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
19	L35354	L35354	0.715	1.000	0.715	Eq.H2-1	28	1.700	0.805	3.215	0.035
20	L35354	L35354	0.310	1.000	0.310	Eq.H2-1	5	1.700	0.805	3.215	0.035
21	W8X24	W8X24	0.007	1.000	0.007	Eq.H1-3a(H1-	6	7.080	82.700	18.300	0.346
22	W8X24	W8X24	0.007	1.000	0.007	Eq.H1-1b	6	7.080	82.700	18.300	0.346
25	W10X39	W10X39	0.193	1.000	0.193	Eq.H1-3a(H1-	16	11.500	209.000	45.000	0.976
26	W10X39	W10X39	0.302	1.000	0.302	Eq.H1-3a(H1-	14	11.500	209.000	45.000	0.976
27	C8X18	C8X18	0.157	1.000	0.157	Eq.H1-1b	24	5.510	43.900	1.970	0.434
28	C8X18	C8X18	0.126	1.000	0.126	Eq.H1-1b	13	5.510	43.900	1.970	0.434
29	W8X18	W8X18	0.084	1.000	0.084	Eq.H1-1b	13	5.260	61.900	7.970	0.172
30	W8X18	W8X18	0.101	1.000	0.101	Eq.H1-1b	14	5.260	61.900	7.970	0.172
31	C8X18	C8X18	0.105	1.000	0.105	Eq.H1-1b	14	5.510	43.900	1.970	0.434
32	C8X18	C8X18	0.138	1.000	0.138	Eq.H1-1b	14	5.510	43.900	1.970	0.434
33	C8X18	C8X18	0.152	1.000	0.152	Eq.H1-1b	24	5.510	43.900	1.970	0.434
34	C8X18	C8X18	0.227	1.000	0.227	Eq.H1-1b	12	5.510	43.900	1.970	0.434
36	C8X18	C8X18	0.332	1.000	0.332	Eq.H1-1a	16	5.510	43.900	1.970	0.434
37	W8X18	W8X18	0.110	1.000	0.110	Eq.H1-1b	17	5.260	61.900	7.970	0.172
38	W8X18	W8X18	0.067	1.000	0.067	Eq.H1-1b	4	5.260	61.900	7.970	0.172
39	W8X18	W8X18	0.089	1.000	0.089	Cl.F2.2	11	5.260	61.900	7.970	0.172
40	W8X18	W8X18	0.124	1.000	0.124	Eq.H1-1b	12	5.260	61.900	7.970	0.172
41	W8X18	W8X18	0.094	1.000	0.094	Eq.H1-1b	24	5.260	61.900	7.970	0.172
42	W8X18	W8X18	0.025	1.000	0.025	Eq.H1-3a(H1-	12	5.260	61.900	7.970	0.172
43	W10X39	W10X39	0.089	1.000	0.089	Eq.H1-1b	24	11.500	209.000	45.000	0.976
44	W10X39	W10X39	0.099	1.000	0.099	Eq.H1-1b	24	11.500	209.000	45.000	0.976
45	W10X39	W10X39	0.098	1.000	0.098	Eq.H1-1b	24	11.500	209.000	45.000	0.976
46	W10X39	W10X39	0.192	1.000	0.192	Eq.H1-1b	24	11.500	209.000	45.000	0.976
47	W10X39	W10X39	0.328	1.000	0.328	Eq.H1-3a(H1-	14	11.500	209.000	45.000	0.976
48	W10X39	W10X39	0.189	1.000	0.189	Eq.H1-1b	24	11.500	209.000	45.000	0.976
49	W8X24	W8X24	0.007	1.000	0.007	Cl.F2.2	6	7.080	82.700	18.300	0.346
50	W8X18	W8X18	0.074	1.000	0.074	Eq.H1-1b	14	5.260	61.900	7.970	0.172
51	W8X18	W8X18	0.149	1.000	0.149	Eq.H1-1b	17	5.260	61.900	7.970	0.172
52	W8X18	W8X18	0.075	1.000	0.075	Eq.H1-3a(H1-	20	5.260	61.900	7.970	0.172
53	W8X18	W8X18	0.149	1.000	0.149	Eq.H1-1b	17	5.260	61.900	7.970	0.172
54	W8X18	W8X18	0.075	1.000	0.075	Eq.H1-3a(H1-	20	5.260	61.900	7.970	0.172
55	W8X18	W8X18	0.142	1.000	0.142	Eq.H1-1b	17	5.260	61.900	7.970	0.172
56	W8X18	W8X18	0.103	1.000	0.103	Eq.H1-1b	9	5.260	61.900	7.970	0.172
57	W8X18	W8X18	0.025	1.000	0.025	Cl.F6.1	24	5.260	61.900	7.970	0.172

Failed Members

There is no data of this type.



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Part Platform

Job Title **Somerville**

Ref

By **AMD**

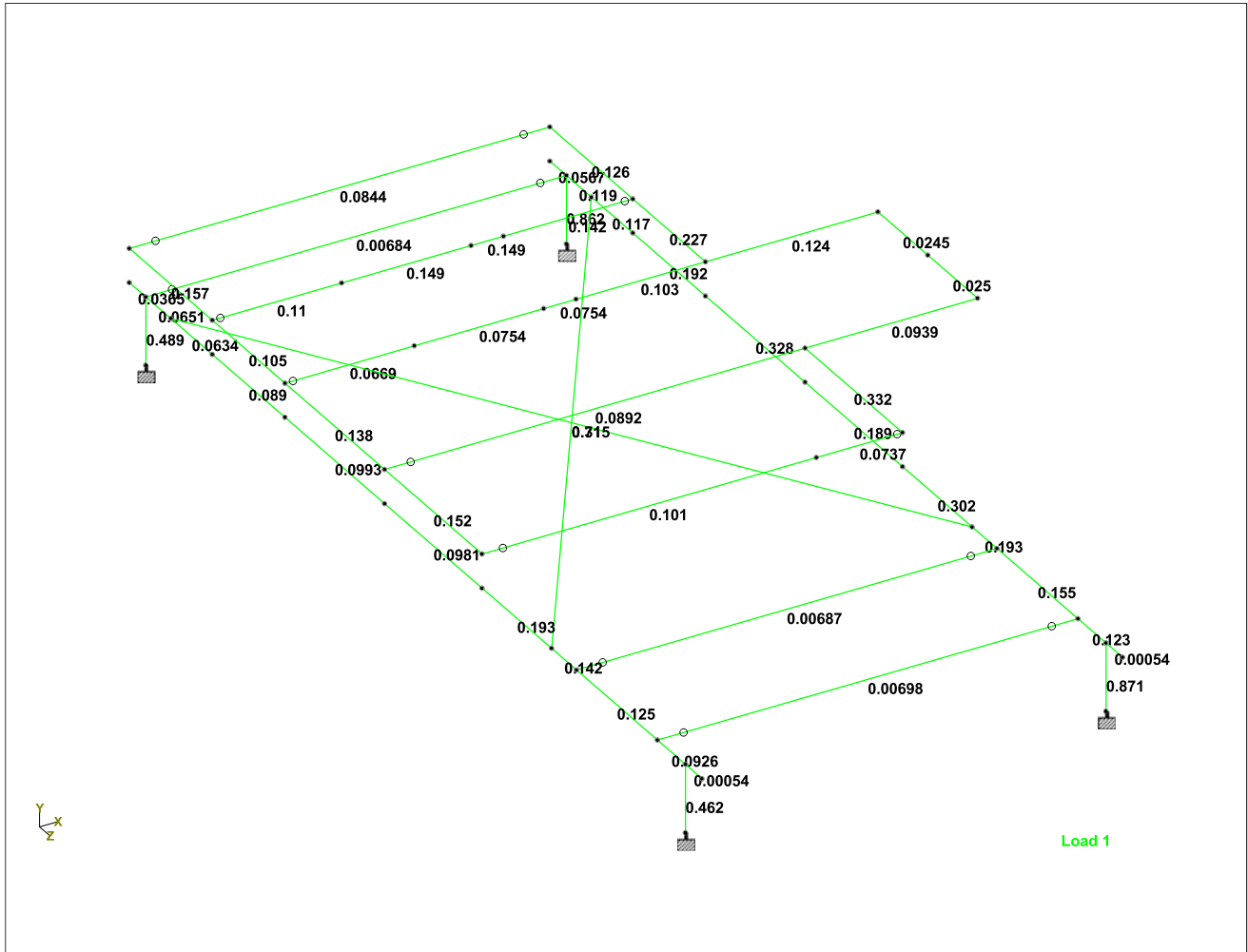
Date **5/1/2025**

Chd **BGK**

Client **VZW**

File **Somerville.STD**

Date/Time **22-May-2025 10:42**



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	Part Platform		
Job Title Somerville	Ref		
	By AMD	Date 5/1/2025	Chd BGK
Client VZW	File Somerville.STD	Date/Time 22-May-2025 10:42	

Job Information

	Engineer	Checked	Approved
Name:	AMD	BGK	BGK
Date:	5/1/2025	5/2/2025	5/2/2025

Project ID	
Project Name	

Structure Type	SPACE FRAME
----------------	-------------

Number of Nodes	48	Highest Node	50
Number of Elements	54	Highest Beam	57

Number of Basic Load Cases	5
Number of Combination Load Cases	43

Included in this printout are data for:

All	The Whole Structure
-----	---------------------

Included in this printout are results for load cases:

Type	L/C	Name
Combination	6	1.4D
Combination	7	1.2D+0.5L
Combination	8	1.2D+0.5S
Combination	9	1.2D+1.6L+0.5W(Z)
Combination	10	1.2D+1.6L+0.5W(-Z)
Combination	11	1.2D+1.6L+0.5W(X)
Combination	12	1.2D+1.6L+0.5W(-X)
Combination	13	1.2D+1.6S+0.5W(Z)
Combination	14	1.2D+1.6S+0.5W(-Z)
Combination	15	1.2D+1.6S+0.5W(X)
Combination	16	1.2D+1.6S+0.5W(-X)
Combination	17	1.2D+1.0W(Z)+0.5L
Combination	18	1.2D+1.0W(-Z)+0.5L
Combination	19	1.2D+1.0W(Z)+0.5S
Combination	20	1.2D+1.0W(-Z)+0.5S
Combination	21	1.2D+1.0W(X)+0.5L
Combination	22	1.2D+1.0W(-X)+0.5L
Combination	23	1.2D+1.0W(X)+0.5S
Combination	24	1.2D+1.0W(-X)+0.5S



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Job No
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Part Platform

Job Title **Somerville**

Ref

By **AMD** Date **5/1/2025** Chd **BGK**

Client **VZW**

File **Somerville.STD**

Date/Time **22-May-2025 10:42**

Reaction Summary

			Horizontal	Vertical	Horizontal	Moment		
	Node	L/C	FX (kip)	FY (kip)	FZ (kip)	MX (kip·in)	MY (kip·in)	MZ (kip·in)
Max FX	12	24:1.2D+1.0W(	1.698	8.890	5.909	23.794	16.827	-34.282
Min FX	12	21:1.2D+1.0W(	-1.743	8.927	8.513	50.436	-16.391	35.949
Max FY	12	15:1.2D+1.6S+	-0.886	12.002	9.886	54.144	-7.930	18.770
Min FY	9	21:1.2D+1.0W(	-0.596	2.389	-3.729	-25.516	8.829	12.227
Max FZ	12	15:1.2D+1.6S+	-0.886	12.002	9.886	54.144	-7.930	18.770
Min FZ	10	14:1.2D+1.6S+	0.051	8.380	-10.255	-55.615	-0.321	-0.702
Max MX	12	15:1.2D+1.6S+	-0.886	12.002	9.886	54.144	-7.930	18.770
Min MX	10	20:1.2D+1.0W(	0.056	8.029	-9.519	-55.842	-0.336	-0.853
Max MY	12	22:1.2D+1.0W(	1.698	8.592	5.786	23.080	16.831	-34.244
Min MY	12	23:1.2D+1.0W(	-1.743	9.224	8.635	51.149	-16.395	35.911
Max MZ	12	21:1.2D+1.0W(	-1.743	8.927	8.513	50.436	-16.391	35.949
Min MZ	12	24:1.2D+1.0W(	1.698	8.890	5.909	23.794	16.827	-34.282



NORTHEAST > North East > New England > West Roxbury-1 > Somerville_East_MA

Flanagan, Jason - jason.flanagan@verizonwireless.com - 20241022_133111

Project Details			Location Information		
Carrier Aggregation	N		Site Id	617360072	
Ecip	N		Search Ring#		
Project Name	SOMERVILLE_EAST_MA		E-NodeB ID#	null	
Project Alt Name	SOMERVILLE_EAST_MA - NEW BUILD		PSLC#	783472	
Project Id	17380317		Switch Name	West Roxbury-1	
Designed Sector Carrier 4G	15		Tower Type		
Designed Sector Carrier 5G	3		Site Type	MACRO	
Additional Sector Carrier 4G	0		Street Address	75 Myrtle Street	
Additional Sector Carrier 5G	0		City	Somerville	
Suffix			State	MA	
FP Solution Type & Tech Type	MCR;4G_700;4G_850;4G_AWS;4G_CBR;5G L-Sub6;4G_PCS		Zip Code	02145	
			County	Middlesex	
			Latitude	42.381442/ 42° 22' 53.191"	
			Longitude	-71.081944/ 71° 4' 54.998"	

Project Scope

Antenna Summary

Added Antenna

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
				LTE		Samsung	Clip On Antenna - For RT4423	130	130.4	0(A),170(B),280(C)	PHYSICAL	3
					5G	Samsung	MT6413-77A	130	131.2	0(A),170(B),280(C)	PHYSICAL	3
LTE	LTE	LTE	LTE			COMMSCOPE	NHH-65A-R2B	130	132.3	0(A),170(B),280(C)	PHYSICAL	6

Removed Antenna

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
-----	-----	------	-----	------	--------	------	-------	-------------	------------	---------	--------------	---------

Retained Antenna

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
-----	-----	------	-----	------	--------	------	-------	-------------	------------	---------	--------------	---------

Added: 12	Removed: 0	Retained: 0
-----------	------------	-------------

Non Antenna Summary												
Added Non Antenna												
Equipment Type	Locatio	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Install Type	Quantity	
Hybrid Cable	Tower	LTE	LTE	LTE	LTE		5G	N/A	(L1) 6x12 Hybriflex	PHYSICAL	3	
OVP	Tower	LTE	LTE	LTE	LTE		5G	ovp	6 OVP	PHYSICAL	3	
RRU	Tower			LTE	LTE			Samsung	B2/B66A RRH ORAN (RF4439d-25A)	PHYSICAL	3	
RRU	Tower	LTE	LTE					Samsung	RF4461d-13A	PHYSICAL	3	
RRU	Tower					LTE		Samsung	RT4423-48A	PHYSICAL	3	

Removed Non Antenna												
Equipment Type	Locatio	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Install Type	Quantity	

Retained Non Antenna												
Equipment Type	Locatio	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Install Type	Quantity	

Added: 15	Removed: 0	Retained: 0
-----------	------------	-------------

Services			
700 LTE	ERST (9014753)		
Sector	01	02	03
Azimuth	0	170	280
Cell/Enodeb-Id	058288	058288	058288
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE
Centerline	130	130	130
DLEARFCN	5230	5230	5230
Mech Down-tilt	0	0	0
Elect Down-tilt	0	0	0
Tip Height	132.3	132.3	132.3
Regulatory Power	60.33 (W/MHz) ERP	60.33 (W/MHz) ERP	60.33 (W/MHz) ERP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	RF4461d-13A	RF4461d-13A	RF4461d-13A
Number of Tx,Rx	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0
Position	1,4	1,4	1,4
Transmitter Id	22483581	22483584	22483587
Source	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10
Ant. Dimensions H x W x D(inch)	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09
Weight(lb)	35.0	35.0	35.0

Services			
850 LTE	ERST (9014753)		
Sector	01	02	03
Azimuth	0	170	280
Cell/Enodeb-Id	058288	058288	058288
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE
Centerline	130	130	130
DLEARFCN	2560	2560	2560
Mech Down-tilt	0	0	0
Elect Down-tilt	0	0	0
Tip Height	132.3	132.3	132.3
Regulatory Power	252.24 (W/MHz) ERPSD	252.24 (W/MHz) ERPSD	252.24 (W/MHz) ERPSD
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	RF4461d-13A	RF4461d-13A	RF4461d-13A
Number of Tx,Rx	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0
Position	1,4	1,4	1,4
Transmitter Id	22483599	22483600	22483601
Source	VZNPP	VZNPP	VZNPP
Bandwidth	10	10	10
Ant. Dimensions H x W x D(inch)	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09
Weight(lb)	35.0	35.0	35.0

Services			
1900 LTE	ERST (9014753)		
Sector	01	02	03
Azimuth	0	170	280
Cell/Enodeb-Id	058288	058288	058288
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE
Centerline	130	130	130
DLEARFCN	1025	1025	1025
Mech Down-tilt	0	0	0
Elect Down-tilt	0	0	0
Tip Height	132.3	132.3	132.3
Regulatory Power	138.89 (W/MHz) EIRP	138.89 (W/MHz) EIRP	138.89 (W/MHz) EIRP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH ORAN (RF4439d-25A)	B2/B66A RRH ORAN (RF4439d-25A)	B2/B66A RRH ORAN (RF4439d-25A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0
Position	4	4	4
Transmitter Id	22483582	22483585	22483588
Source	VZNPP	VZNPP	VZNPP
Bandwidth	15	15	15
Ant. Dimensions H x W x D(inch)	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09
Weight(lb)	35.0	35.0	35.0

Services			
AWS LTE	ERST (9014753)		
Sector	01	02	03
Azimuth	0	170	280
Cell/Enodeb-Id	058288	058288	058288
Antenna Model	NHH-65A-R2B	NHH-65A-R2B	NHH-65A-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE
Centerline	130	130	130
DLEARFCN	2050	2050	2050
Mech Down-tilt	0	0	0
Elect Down-tilt	0	0	0
Tip Height	132.3	132.3	132.3
Regulatory Power	116.07 (W/MHz) EIRP	116.07 (W/MHz) EIRP	116.07 (W/MHz) EIRP
Transmitter Max Power	46.0 dBm	46.0 dBm	46.0 dBm
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH ORAN (RF4439d-25A)	B2/B66A RRH ORAN (RF4439d-25A)	B2/B66A RRH ORAN (RF4439d-25A)
Number of Tx,Rx	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0
Position	1	1	1
Transmitter Id	22483583	22483586	22483589
Source	VZNPP	VZNPP	VZNPP
Bandwidth	20	20	20
Ant. Dimensions H x W x D(inch)	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09	55.59 x 11.89 x 7.09
Weight(lb)	35.0	35.0	35.0

Services			
CBRS LTE		ERST (9014753)	
Sector	19	20	21
Azimuth	0	170	280
Cell/Enodeb-Id	058288	058288	058288
Antenna Model	Clip On Antenna - For RT4423	Clip On Antenna - For RT4423	Clip On Antenna - For RT4423
Antenna Make	Samsung	Samsung	Samsung
Centerline	130	130	130
DLEARFCN	55990, 56141, 56339, 56537	55990, 56141, 56339, 56537	55990, 56141, 56339, 56537
Mech Down-tilt	0	0	0
Elect Down-tilt	9	9	9
Tip Height	130.4	130.4	130.4
Regulatory Power	5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz)	5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz)	5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz) EIRP/SD, 5.00 (W/MHz)
Transmitter Max Power	36.44 dBm	36.44 dBm	36.44 dBm
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	RT4423-48A	RT4423-48A	RT4423-48A
Number of Tx,Rx	4 , 4	4 , 4	4 , 4
Operational Port Count	0	0	0
Position	3	3	3
Transmitter Id	22483593	22483594	22483595
Source	VZNPP	VZNPP	VZNPP
Bandwidth	10, 20, 20, 20	10, 20, 20, 20	10, 20, 20, 20
Ant. Dimensions H x W x D(inch)	8.7 x 12.0 x 1.5	8.7 x 12.0 x 1.5	8.7 x 12.0 x 1.5
Weight(lb)	3.3	3.3	3.3

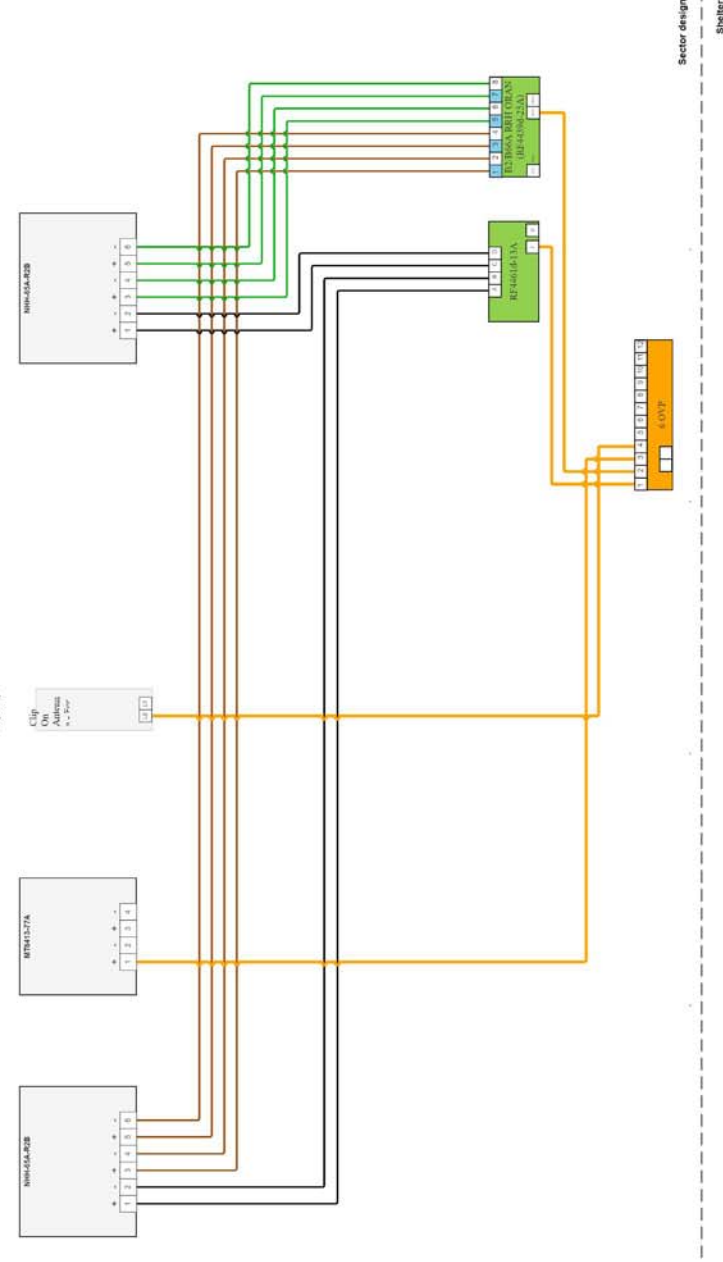
Services				
CBAND NR	ERST (9014753)			
Sector	0381	0382	0383	
Azimuth	0	170	280	
Cell/Enodeb-Id	0589101	0589101	0589101	
Antenna Model	MT6413-77A	MT6413-77A	MT6413-77A	
Antenna Make	Samsung	Samsung	Samsung	
Centerline	130	130	130	
DLEARFCN	650006, 655324	650006, 655324	650006, 655324	
Mech Down-tilt	0	0	0	
Elect Down-tilt	1	1	1	
Tip Height	131.2	131.2	131.2	
Regulatory Power	1170.73 (W/MHz) EIRP, 1480.15 (W/MHz) EIRP	1170.73 (W/MHz) EIRP, 1480.15 (W/MHz) EIRP	1170.73 (W/MHz) EIRP, 1480.15 (W/MHz) EIRP	
Transmitter Max Power	54.4 dBm	54.4 dBm	54.4 dBm	
TMA Make				
TMA Model				
RRU Make	Samsung	Samsung	Samsung	
RRU Model	MT6413-77A	MT6413-77A	MT6413-77A	
Number of Tx,Rx	2 , 2	2 , 2	2 , 2	
Operational Port Count	64	64	64	
Position	2	2	2	
Transmitter Id	22483596	22483597	22483598	
Source	VZNPP	VZNPP	VZNPP	
Bandwidth	100, 60	100, 60	100, 60	
Ant. Dimensions H x W x D(inch)	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	29.53 x 15.75 x 5.51	
Weight(lb)	55.1	55.1	55.1	

Sector	Make	Model	Ant Cl Height AG	Ant Tip Height	Azimuth	Elect Down-tilt	Mech Down-tilt	Gain	Bandwidth	Regulator y Power	700	850	1900	2100	28 GHz	31 GHz	39 GHz	LSub-6	CBRS
01	COMMSCOPE	NHH-65A-R2	130	132.3	0	0	0	11.34	65.5	60.33	WQJQ689								
02	COMMSCOPE	NHH-65A-R2	130	132.3	170	0	0	11.34	65.5	60.33	WQJQ689								
03	COMMSCOPE	NHH-65A-R2	130	132.3	280	0	0	11.34	65.5	60.33	WQJQ689								
01	COMMSCOPE	NHH-65A-R2	130	132.3	0	0	0	11.54	56	252.24		KNKA201							
02	COMMSCOPE	NHH-65A-R2	130	132.3	170	0	0	11.54	56	252.24		KNKA201							
03	COMMSCOPE	NHH-65A-R2	130	132.3	280	0	0	11.54	56	252.24		KNKA201							
01	COMMSCOPE	NHH-65A-R2	130	132.3	0	0	0	14.31	63.25	138.89			KNL F646.KN LH242.KNLH 310						
02	COMMSCOPE	NHH-65A-R2	130	132.3	170	0	0	14.31	63.25	138.89			KNL F646.KN LH242.KNLH 310						
03	COMMSCOPE	NHH-65A-R2	130	132.3	280	0	0	14.31	63.25	138.89			KNL F646.KN LH242.KNLH 310						
01	COMMSCOPE	NHH-65A-R2	130	132.3	0	0	0	14.44	56	116.07				WQGA900.WC GB266					
02	COMMSCOPE	NHH-65A-R2	130	132.3	170	0	0	14.44	56	116.07				WQGA900.WC GB266					
03	COMMSCOPE	NHH-65A-R2	130	132.3	280	0	0	14.44	56	116.07				WQGA900.WC GB266					
0381	Samsung	MT6413-77A	130	131.2	0	1	0	23.15	105	1170.73								WRNE627.WR NE628.WRNE 629.WRNE63 0.WRNE631	
0382	Samsung	MT6413-77A	130	131.2	170	1	0	23.15	105	1170.73								WRNE627.WR NE628.WRNE 629.WRNE63 0.WRNE631	
0383	Samsung	MT6413-77A	130	131.2	280	1	0	23.15	105	1170.73								WRNE627.WR NE628.WRNE 629.WRNE63 0.WRNE631	
0381	Samsung	MT6413-77A	130	131.2	0	1	0	23.15	105	1480.15								WRNE631.WR NE632.WRNE 633.WRNE63	
0382	Samsung	MT6413-77A	130	131.2	170	1	0	23.15	105	1480.15								WRNE631.WR NE632.WRNE 633.WRNE63	
0383	Samsung	MT6413-77A	130	131.2	280	1	0	23.15	105	1480.15								WRNE631.WR NE632.WRNE 633.WRNE63	
19	Samsung	Clip On Antenna - For RT4423	130	130.4	0	9	0	10.37	68	5									
20	Samsung	Clip On Antenna - For RT4423	130	130.4	170	9	0	10.37	68	5									
21	Samsung	Clip On Antenna - For RT4423	130	130.4	280	9	0	10.37	68	5									

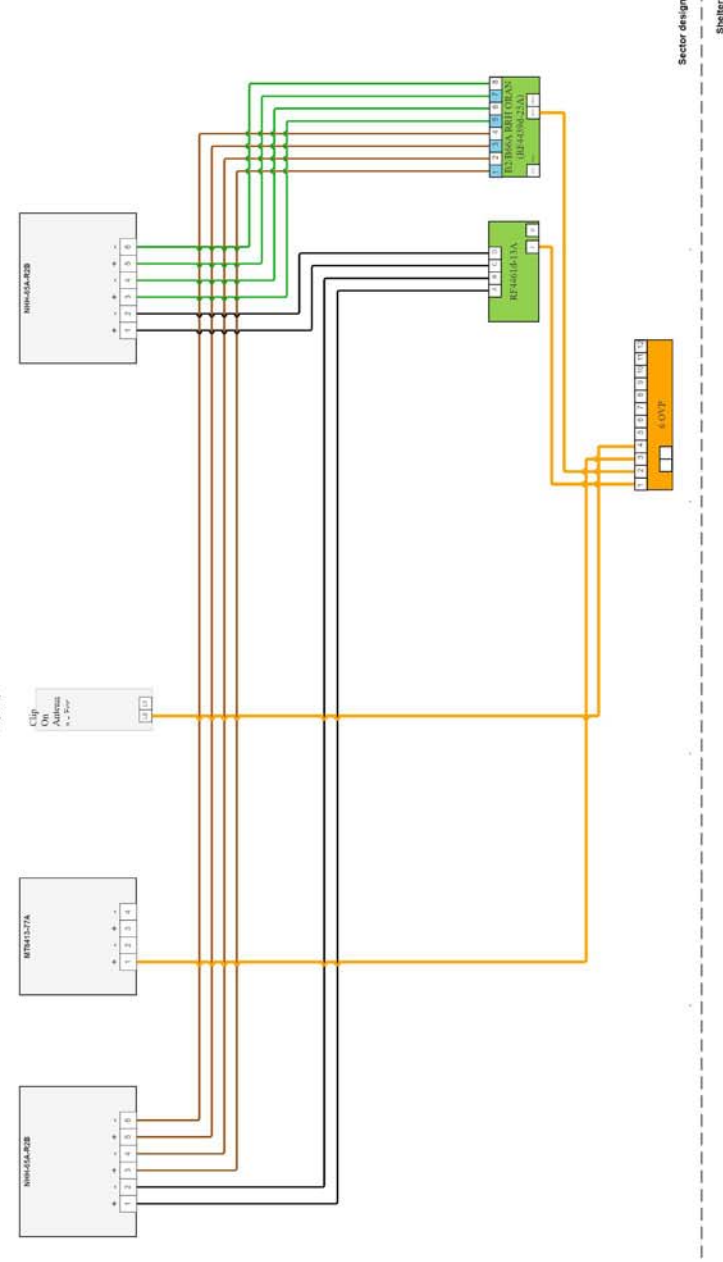
CallSign	Market	Radio Code	Market #	Block	State	County	License Name	Wholly Owner	Total MHz	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq. mil	Status	Action	Approve for Insvc
WQJQ689	Northeast	WU	REA001	C	MA	25017	Cellco Partners hip	Yes	22.000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	746.000 - 757.000/.000 - .000	776.000 - 787.000/.000 - .000	60.33	1000	1995.55	proposed	added	1
KNKA201	Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	CL	CMA006	B	MA	25017	Cellco Partners hip	Yes	25.000	835.000 - 845.000/846.500 - 849.000	880.000 - 890.000/891.500 - 894.000	835.000 - 845.000/846.500 - 849.000	880.000 - 890.000/891.500 - 894.000	252.24	1000	1995.55	proposed	added	1
KNLF646	Boston, MA	CW	BTA051	C	MA	25017	AirTouch Cellular	Yes	10.000	1895.000 - 1900.000/.000 - .000	1975.000 - 1980.000/.000 - .000	1895.000 - 1900.000/.000 - .000	1975.000 - 1980.000/.000 - .000	138.89	1640	1995.55	proposed	added	1
KNLH310	Boston, MA	CW	BTA051	E	MA	25017	AirTouch Cellular	Yes	10.000	1885.000 - 1890.000/.000 - .000	1965.000 - 1970.000/.000 - .000	1885.000 - 1890.000/.000 - .000	1965.000 - 1970.000/.000 - .000	138.89	1640	1995.55	proposed	added	1
KNLH242	Boston, MA	CW	BTA051	F	MA	25017	Cellco Partners hip	Yes	10.000	1890.000 - 1895.000/.000 - .000	1970.000 - 1975.000/.000 - .000	1890.000 - 1895.000/.000 - .000	1970.000 - 1975.000/.000 - .000	138.89	1640	1995.55	proposed	added	1
CBRS_CALL SIGN	UNLICENSED , MA	3.5 GHz	UNLICENSED	UNLICENSED	MA	UNLICENSED	UNLICENSED	UNLICENSED	UNLICENSED	UNLICENSED	UNLICENSED	- / -	- / -	5		1995.55	proposed	added	
WRLD617	D25017 - Middlesex , MA	PL	D25017	0	MA	25017	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	5	501	1995.55	proposed	added	1
WRLD616	D25017 - Middlesex , MA	PL	D25017	0	MA	25017	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	5	501	1995.55	proposed	added	1
WRLD615	D25017 - Middlesex , MA	PL	D25017	0	MA	25017	Verizon Wireless Network Procurement LP	Yes	100.000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	3550.000 - 3650.000/.000 - .000	.000 - 3650.000/.000 - .000	5	501	1995.55	proposed	added	1
WQGB266	Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	AW	CMA006	A	MA	25017	Cellco Partners hip	Yes	20.000	1710.000 - 1720.000/.000 - .000	2110.000 - 2120.000/.000 - .000	1710.000 - 1720.000/.000 - .000	2110.000 - 2120.000/.000 - .000	116.07	1640	1995.55	proposed	added	1

WRNE627	Boston, MA	PM	PEA007	A1	MA	25017	Cellco Partners hip	Yes	20,000	3700,000/ .000 - .000	3720,000/ .000 - .000	3700,000/ .000 - .000	1170.73	1640	1995.55	proposed	added	1
WRNE628	Boston, MA	PM	PEA007	A2	MA	25017	Cellco Partners hip	Yes	20,000	3720,000/ .000 - .000	3740,000/ .000 - .000	3720,000/ .000 - .000	1170.73	1640	1995.55	proposed	added	1
WRNE629	Boston, MA	PM	PEA007	A3	MA	25017	Cellco Partners hip	Yes	20,000	3740,000/ .000 - .000	3760,000/ .000 - .000	3740,000/ .000 - .000	1170.73	1640	1995.55	proposed	added	1
WRNE630	Boston, MA	PM	PEA007	A4	MA	25017	Cellco Partners hip	Yes	20,000	3760,000/ .000 - .000	3780,000/ .000 - .000	3760,000/ .000 - .000	1170.73	1640	1995.55	proposed	added	1
WRNE631	Boston, MA	PM	PEA007	A5	MA	25017	Cellco Partners hip	Yes	20,000	3780,000/ .000 - .000	3800,000/ .000 - .000	3780,000/ .000 - .000	1480.15	1640	1995.55	proposed	added	1
WQGA900	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-R	AW	BEA003	B	MA	25017	Cellco Partners hip	Yes	20,000	1720,000/ 2130,000/ .000 - .000	1730,000/ 2130,000/ .000 - .000	1720,000/ 2130,000/ .000 - .000	116.07	1640	1995.55	proposed	added	1
WRNE632	Boston, MA	PM	PEA007	B1	MA	25017	Cellco Partners hip	Yes	20,000	3800,000/ 3820,000/ .000 - .000	3800,000/ 3820,000/ .000 - .000	3800,000/ 3820,000/ .000 - .000	1480.15	1640	1995.55	proposed	added	1
WRNE633	Boston, MA	PM	PEA007	B2	MA	25017	Cellco Partners hip	Yes	20,000	3820,000/ 3840,000/ .000 - .000	3820,000/ 3840,000/ .000 - .000	3820,000/ 3840,000/ .000 - .000	1480.15	1640	1995.55	proposed	added	1
WRNE634	Boston, MA	PM	PEA007	B3	MA	25017	Cellco Partners hip	Yes	20,000	3840,000/ 3860,000/ .000 - .000	3840,000/ 3860,000/ .000 - .000	3840,000/ 3860,000/ .000 - .000	1480.15	1640	1995.55	proposed	added	1

Alpha (Proposed)



Beta (Proposed)



Legends

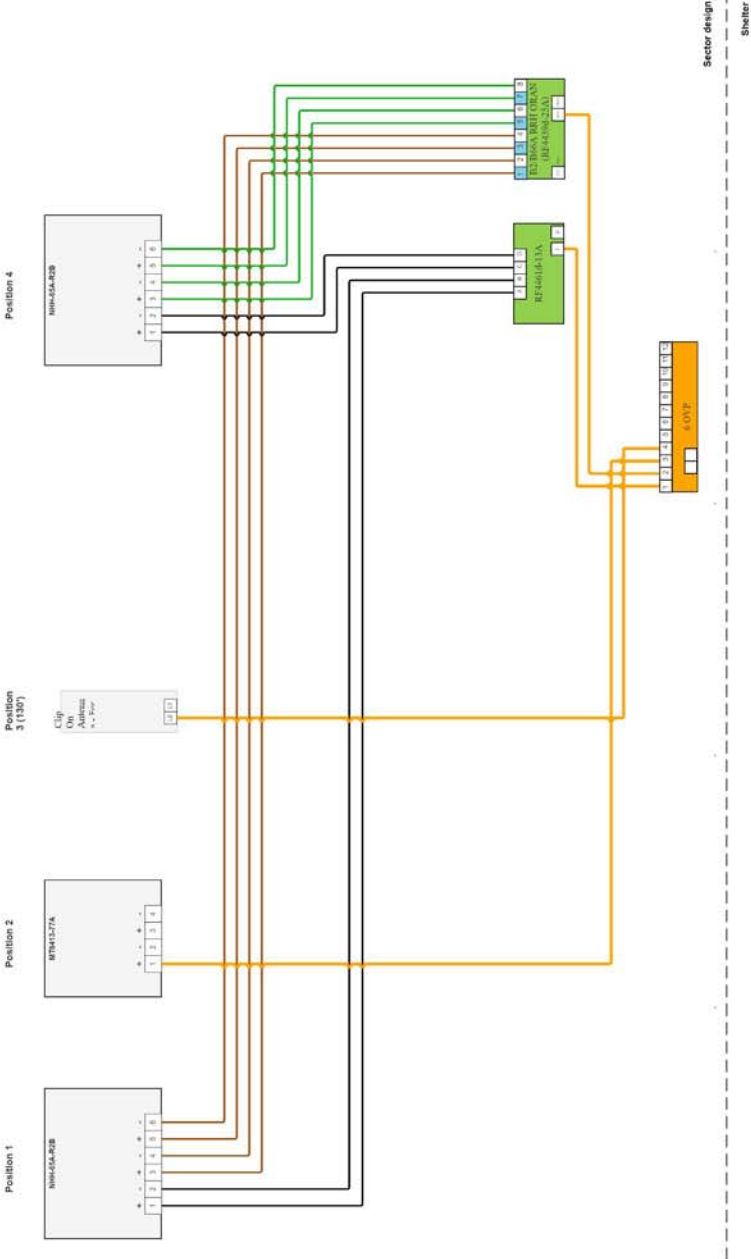
RET dc signal capable port	700/850(LB)
700(LT)	850(CB)
AWS(AW)	PCS(PC)
AWS/PCS(HB)	28GHz(U28)
39GHz(U39)	L-Sub6(S6)
CBRS(RS)	LAA(LA)
Fiber	AISG
DC	

Coax
Coax Jumper
Sectors Shared Equipments

Notes:

- Antenna view is from the back of the antennas
- Colors of connections are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimensions

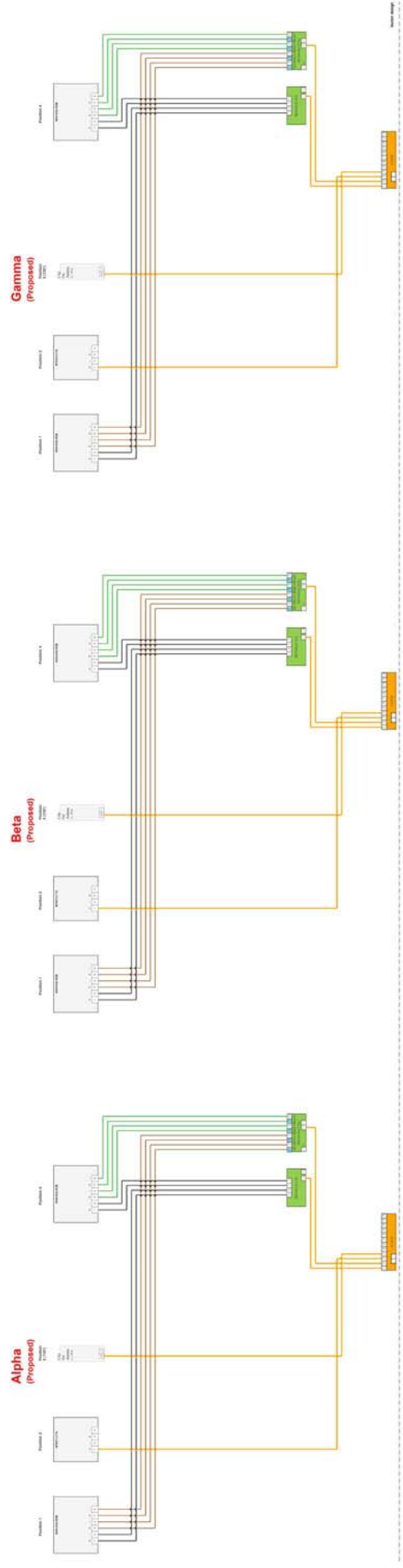
Gamma
(Proposed)



Legends	
RET dc signal capable port	
700/850(LB)	
700(LT)	
850(CB)	
AWS(AW)	
PCS(PC)	
AWS/PCS(HB)	
28GHz(U28)	
39GHz(U39)	
L-Sub6(S6)	
CBRS(RS)	
LAA(LA)	
Fiber	
AISG	
DC	
Coax	
Coax Jumper	
Sectors Shared Equipments	

Notes:

- Antenna view is from the back of the antennas
- Colors of connections are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimensions



FORM: POA (August 2, 2023)
Discontinue Prior Editions



CITY OF SOMERVILLE

Inspectional Services • Planning Board • Zoning Board of Appeals • Historic Preservation Commission

PROPERTY OWNER AUTHORIZATION

Property Address: 75 Myrtle Street, Somerville, MA 02145		
Zoning District: UR Urban Res	Ward: 1	MBL: 91/F/4
Applicant: Cellco Partnership d/b/a Verizon Wireless		
Address: 51 Alder Street, Medway, MA 02053		
Phone: See info for applicant's attorney below.	Email: See info for applicant's attorney below.	
Property Owner: Somerville Housing Authority		
Address: 30 Memorial Road Somerville, MA 02145		
Phone: .	E mail:	
Agent: Michael S. Giaimo, Robinson + Cole LLP, Attorney for the Applicant		
Phone: (617) 557- 5959	Email: mgiaimo@rc.com	

As the **Applicant**, I make the following representations:

1. I understand that an application is not complete until all necessary information has been submitted and all fees have been paid.
2. I understand that an incomplete application will not be reviewed, will not be publicly noticed, and will not be scheduled for a public hearing, as applicable.
3. I certify that the information supplied on and with this form is accurate to the best of my knowledge.
4. I certify that the agent listed on this application form is authorized to represent me before City staff and review boards as it relates to this application.

Signature: Michael S. Giaimo

As the **Owner**, I make the following representations:

1. I certify that I am the owner of the property identified on this property owner authorization form.
2. I certify that the applicant named on this form is authorized to submit this application for the property identified and for the purposes indicated by the submitted documentation.
3. I certify that the agent listed on this application form is authorized to represent me before City staff and review boards as it relates to this application.
4. I permit City staff to conduct site visits on my property.
5. If the ownership of this property changes before the application review is completed, I will provide updated information and new copies of this form.

Signature: Brian Jungst

FEB-1-73 PM 3:55 312RE**11.00

BK12373 PG578

1011 - 28

Exhibit G

The CITY OF SOMERVILLE, a municipal corporation duly established under the laws of the Commonwealth of Massachusetts, ~~and having its usual place of business at Somerville, Middlesex County, Massachusetts,~~ for the consideration of one dollar (\$1.00), the receipt of which is hereby acknowledged, grants to the SOMERVILLE HOUSING AUTHORITY, a public body, politic and corporate, established under the laws of this of Commonwealth, of Somerville, with ~~quitclaim covenants~~

the land in said Somerville, being described as follows:

~~Beginning at the intersection of Myrtle Street and Pearl Street~~
Beginning at the intersection of Myrtle Street and Pearl Street and running along the easterly side of Myrtle Street, three hundred seven and seven tenths (307.7) feet; hence turning ninety degrees to the east and running southeasterly, sixty-five and seventy-five hundredths (65.75) feet; hence turning ninety degrees to the southwest and running twenty-one and two tenths (21.2) feet; hence turning ninety degrees to the east and running eighty-six (86) feet to Florence Street; hence turning and running along westerly side of Florence Street, two hundred sixty-three (263) feet to Pearl Street; hence turning and running northwesterly on the northern side of Pearl Street, one hundred seventy-two (172) feet to the point of beginning. Containing 49,000 square feet of land more or less. Being the same parcel of land shown on a plan entitled "CITY OF SOMERVILLE TRANSFER OF LAND TO SOMERVILLE HOUSING AUTHORITY" dated December 6, 1972 to be recorded in the Middlesex South District Registry of Deeds. For power of Mayor to convey, see Order No. 123659 of Somerville Board of Aldermen passed December 14, 1972.

In witness whereof, the said CITY OF SOMERVILLE has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by S. Lester Ralph,

its Mayor, hereto duly authorized, this *twelfth* day of *January* in the year one thousand nine hundred and *seventy-three*.
Signed and sealed in presence of

APPROVED AS TO FORM:
City Solicitor
City Solicitor

CITY OF SOMERVILLE
by *S. Lester Ralph*
Mayor

The Commonwealth of Massachusetts
Middlesex, ss. *January 12, 1973*

Then personally appeared the above named S. Lester Ralph, Mayor of the City of Somerville, and acknowledged the foregoing instrument to be the free act and deed of the CITY OF SOMERVILLE,

before me,

Lawrence J. Bloom
Notary Public - ~~JANUARY 1973~~
My commission expires *Sept. 28* 1973

CITY OF SOMERVILLE TRANSFER OF LAND TO SOMERVILLE HOUSING AUTHORITY

SCALE 1"=40' DEC. 6, 1972
FRANK A. SESTITO
COMMISSIONER OF PUBLIC WORKS

Frank A. Sestito
Frank A. Sestito, Commissioner
of Public Works and City Engineer



85.75
21.2
86

MYRTLE STREET

307.7

49,000 SQ. FT.

172

PEARL STREET

263

FLORENCE STREET

