



CITY OF SOMERVILLE

Commonwealth of Massachusetts

93 Highland Avenue

Somerville, MA 02143

(617) 625-6600

BUSINESS LICENSE APPLICATION - Small Wireless Facility

File #: 19-014864

License #: BL19-000106

Address: 17 OTIS ST

Licensee: Matthew Pricco Network Building + Consulting

DBA Name: ExteNet Systems, Inc.

Business Ownership Type: Corporation

Legal Name of Entity: ExteNet Systems, Inc.

Owners/Officers: James A. Hyde, H. Anthony Lehv, Daniel L. Timm,

License Information:

Do you believe this to be a 6409(a) application?:

Describe the reason for the work, and the intended beneficiaries:

Provide the detailed description of the work that should appear on the License: Extenet proposes to install a small cell wireless facility on an existing wood utility pole. The principal elements of the proposed facility are an antenna housed in a 24" long shroud side-mounted on the pole, including an additional 6" of base mounting equipment and three radios in a shroud also mounted on the pole. See the plans accompanying this application for details. This proposal improves wireless capacity for residents, businesses and visitors.

of installations on existing poles: 1

of installations on new poles:

Provide the legal name of the entity that will own the License: ExteNet Systems, Inc.

Approval Conditions:

Approved By:

Hans Jensen, Approved

Karla Cuarezma, Approved

Malik Drayton, Approved

John Power, Approved

Mark Lawhorne, Approved

John J. Long, Approved

LATITUDE: 42.387469°
LONGITUDE: -71.088108°

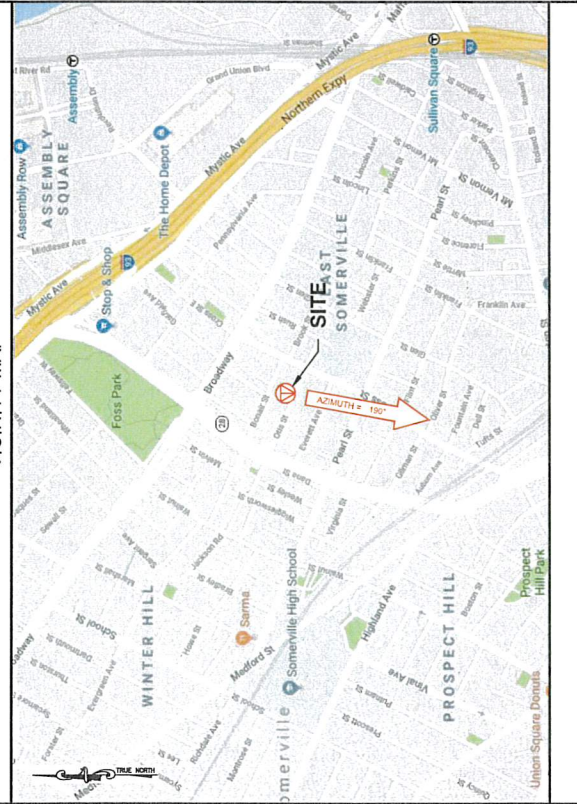


NE-MA-BSTN3N01-TMO
NE-MA-BSTN3N01-03343 / NE3273BA_31LAB

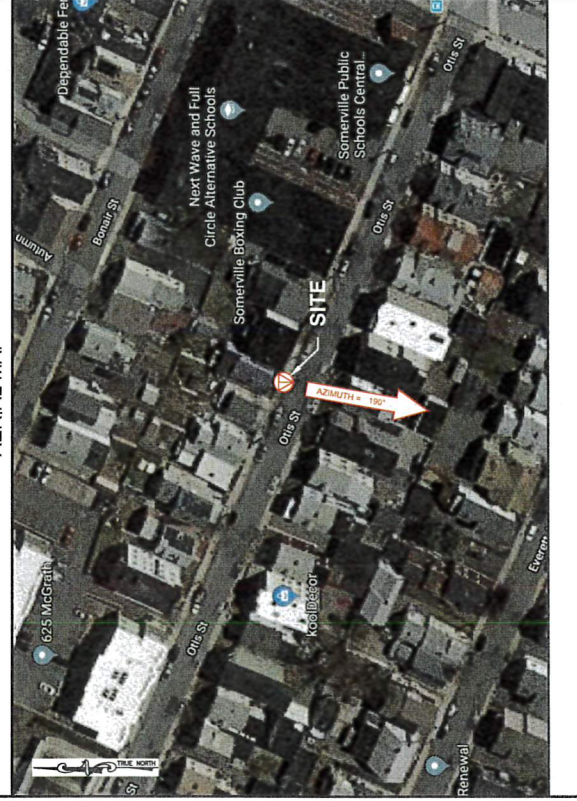
PROPOSED SMALL CELL NODE
17 OTIS STREET, SOMERVILLE, MA 02145
CITY OF SOMERVILLE, MIDDLESEX COUNTY



VICINITY MAP



AERIAL MAP



PROJECT INFORMATION

PROJECT NAME: NE-MA-BSTN3N01-TMO
POLE TAG: 28474
LONGITUDE: 42.387469°
LATITUDE: -71.088108°
CITY OF SOMERVILLE
MIDDLESEX COUNTY
EXTENET PROJECT MANAGER: 3000 WASHINGTON RD, SUITE 340
LITTLE ROCK, AR 72640
HUB LOCATION: HUB-4803669
421 MYSTIC AVENUE
SOMERVILLE, MA 02145
ELECTRIC COMPANY: EVERSOURCE

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2015 INTERNATIONAL BUILDING CODE
- (MASSACHUSETTS AMENDED 9TH EDITION)
- 2017 NATIONAL ELECTRICAL CODE
- NFPA 12015 EDITION
- IEEE C62 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/MIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER B1
- IEEE C92 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- IEEE C92 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- ANSI/ISA-95.01-2011

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NE-MA-BSTN3N01-03343
TMO ID: NE3273BA_31LAB
17 OTIS STREET
SOMERVILLE, MA 02145
MIDDLESEX COUNTY

REVISIONS

REV	DATE	DESCRIPTION	BY
1	08/11/19	PRELIMINARY	AMJ
2	08/11/19	STAMP ADDED	CVE
3	08/11/19	REVISION	WBE
4	07/02/20	REVISION	WBE
5	03/19/20	15' COMPLIANCE ADDED	WBE



KRUPA K. KULKARNI, P.E.
MA PROFESSIONAL ENGINEER LIC. #50019

TITLE SHEET

SHEET
01 OF 05

WEATHER SEAL GUIDELINES:

- [illegible]

HEAT SHRINK

- [illegible]

~~ANDREWS CLAM SHALL~~

1. PROPERTY TABLES REFER TO SPECIFICATION.
2. APPLY THE LAYER OF 1/4" INCH BULKY FIBER CONNETTIVEZ DOWNS AT LEAST 1-1/2" INCHES PAST TOP AND BOTTOM OF CONNETTIVEZ TO PREVENT AIR AND MOISTURE FROM ATTACHING TO THE CONNETTIVEZ.
3. INSPECT THE DOWNS TO MAKE SURE IT IS NOT CHIPPED, CRACKED OR ANY SOUNDS OF SQUELCH THAT WILL TAKE AWAY FROM A FULL SEAL AROUND THE CONNETTIVEZ.
4. APPLY FROM CORRECT SIDE OF CABLE AND CONNETTIVEZ TYPE - I.E. 1/2" INCH FOR 1/2" INCH NOT 7/8TH FOR 1/2" INCH.
5. USE ONLY CORRECT SIZE PER CABLE AND CONNETTIVEZ TYPE - MOST CABLE SHELL TYPE SEALANT DOWNS WIND AROUND OR CLAMP AROUND A CABLE WITH A 1/2" INCH DIA. CLAMP.
6. CLAMP AROUND A CABLE WITH A 1/2" INCH DIA. CLAMP.
7. BE CAREFUL WHEN STRETCHING LOCKING DOWNS INTO PLACE ON CABLE SHELL TYPE SEALANT DOWNS. IF THEY ARE PLASTIC DO NOT TRY TO BREAK THEM OFF. INSTEAD, GRAB THE OTHER END OF THE LOCKING DOWNS AND PULL THEM AWAY TO CRACK THEM TO BREAK THEM OFF. IF THEY ARE METAL DO NOT TRY TO CRACK THEM OFF. IF THEY ARE METAL CRACK THEM OFF BY TRYING TO RE-CHISEL THEM.
8. THE CLAMP IS ON AND LOCKED AROUND THE CONNETTIVEZ PROCESS IS COMPLETE.

PPC BOOT

1. CONNECT BOOT OVER OTHER CONNECTOR IS PLACED TO CABLE. THEN MAKE THE CONNECTION. WHILE IT IS BEING COUPLED, AN UNEXPECTED FORCE MAY BE APPLIED TO THE SUBCONNECTOR WHICH WILL NOT BE ABLE TO USE THE BOOT. THE BOOT IS NOT DESIGNED TO BE USED IN THIS MANNER. IF THE BOOT IS DAMAGED, IT MUST BE REPLACED. THE CONNECTOR IS NOT REMOVABLE AND CAN GET OUT OF POSITION. DO NOT TRY TO STRETCH THE BOOT TO SLIDE IT OVER THE CONNECTION.
2. PLACE THE BOOT OVER THE CABLE, AND THEN MAKE THE CONNECTION.
3. TORQUE THE CONNECTION TO PROPER SPECIFICATIONS.
4. SLIDE BOOT UP TO COVER THE ENTIRE CONNECTION, FOLLOWING THE PPG GUIDELINE.
5. THIS PROCESS IS COMPLETE AT THIS TIME.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING DEVICES SHALL BE APPROVED AND LISTED FOR THEIR INTENDED USE.
3. ALL WIRES SHALL BE 75%/90% COPPER UNLESS NOTED OTHERWISE.
4. ALL GROUNDING DEVICES SHALL BE 75%/90% COPPER UNLESS NOTED OTHERWISE.
5. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:
 - a. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:
 - b. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:
 - c. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:
 - d. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:
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11. GROUNDING CONNECTIONS SHALL BE MADE BY THE FOLLOWING METHODS:

GROUNDING GUIDELINES:

- THE FIRST AND MOST IMPORTANT CAUSE PREVENTING ELECTRICAL DAMAGE AND SHOCK HAZARDS PROPER AND ADEQUATE GROUNDING IN PLACE TO PREVENT FROM EQUIPMENT DAMAGE AND SHOCK HAZARDS.
- WHEN IT COMES TO GROUNDING, THERE ARE TWO MAIN TYPES OF GROUNDING: EQUIPMENT GROUNDING AND SYSTEM GROUNDING. EQUIPMENT GROUNDING IS THE PROCESS OF CONNECTING THE METAL ENCLOSURES OF ELECTRICAL EQUIPMENT TO A COMMON GROUND POINT. THIS IS DONE TO PREVENT ELECTRICAL SHOCK AND DAMAGE TO THE EQUIPMENT. SYSTEM GROUNDING, ON THE OTHER HAND, IS THE PROCESS OF CONNECTING THE ELECTRICAL SYSTEM TO A COMMON GROUND POINT. THIS IS DONE TO PREVENT ELECTRICAL SHOCK AND DAMAGE TO THE SYSTEM.
- THERE ARE SEVERAL REASONS WHY GROUNDING IS IMPORTANT. FIRST, IT PREVENTS ELECTRICAL SHOCK. IF A PERSON TOUCHES A LIVE WIRE, THE CURRENT WILL FLOW THROUGH THE WIRE TO THE GROUND. IF THE WIRE IS NOT PROPERLY GROUNDING, THE CURRENT WILL FLOW THROUGH THE PERSON, CAUSING SHOCK. SECOND, IT PREVENTS ELECTRICAL DAMAGE. IF A WIRE IS NOT PROPERLY GROUNDING, IT CAN CAUSE OVERHEATING, WHICH CAN LEAD TO ELECTRICAL DAMAGE. THIRD, IT PREVENTS FIRE. IF A WIRE IS NOT PROPERLY GROUNDING, IT CAN CAUSE SHORT CIRCUITS, WHICH CAN LEAD TO FIRE.
- TO PREVENT ELECTRICAL SHOCK AND DAMAGE, IT IS IMPORTANT TO PROPERLY GROUND ALL ELECTRICAL EQUIPMENT. THIS CAN BE DONE BY CONNECTING THE METAL ENCLOSURES OF THE EQUIPMENT TO A COMMON GROUND POINT. THIS CAN BE DONE BY USING A GROUNDING WIRE OR A GROUNDING ROD. IT IS ALSO IMPORTANT TO PROPERLY GROUND THE ELECTRICAL SYSTEM. THIS CAN BE DONE BY CONNECTING THE ELECTRICAL SYSTEM TO A COMMON GROUND POINT. THIS CAN BE DONE BY USING A GROUNDING WIRE OR A GROUNDING ROD.
- IF YOU ARE NOT SURE HOW TO PROPERLY GROUND YOUR ELECTRICAL EQUIPMENT OR SYSTEM, IT IS BEST TO CONSULT A QUALIFIED ELECTRICIAN. THEY WILL BE ABLE TO ASSESS YOUR SITUATION AND PROVIDE THE NECESSARY GROUNDING.
- REMEMBER, PROPER GROUNDING IS ESSENTIAL FOR THE SAFETY AND RELIABILITY OF YOUR ELECTRICAL SYSTEM. TAKE THE TIME TO PROPERLY GROUND YOUR EQUIPMENT AND SYSTEM, AND YOU WILL BE PROTECTING YOURSELF AND YOUR INVESTMENT.

COAX GROUNDS

- SUBJECT ANSWERS**
- IN LINE GROUNDS SHOULD BE INSTALLED WITH THE PROPER SIZE GROUND RITS ON ALL CAVY CABLES. THE RITS IN LINE GROUNDS ON FRONT AND BACK OF CAVY RIGS OVER APPROXIMATELY 15 FEET, ANYTHING OVER 300 FEET REQUIRES AN ADDITIONAL GROUND AROUND THE 150 FOOT MARK.
- QUESTIONS**
- ALL WAST PIPES SHOULD BE GROUND TO BARE METAL ON THE PLAST THE GROUND IS ATTACHED AND THEN COULD BE USED TO GROUND THE CAVY RIGS. THE WAST PIPES ARE THE EASIEST POINT ON A BUILDING IT WOULD BE TO GROUND TO.
- ANSWERS**
- THESE WAST PIPES COULD BE USED, BUT IT WOULD BE A LOT OF WORK TO GET THEM ATTACHED TO IT AS WELL AS ALSO HAVE A LIGHTNING ROD ATTACHED TO IT AS WELL.
- QUESTIONS**
- DO THE RIGS HAVE OTHERS OR OTHERS COMPONENTS

GENERAL NOTES:

- [illegible]

22000000

- [illegible]



**Know what's below.
Call before you dig.**

1. EQUIPMENT ELEVATION IS SUBJECT TO MAKE READY PERFORMED BY POLE OWNER.
2. INFORMATION SHALL BE OSHA COMPLIANT AND DISPLAY THE FOLLOWING CONTACT INFORMATION: NAME OF CONTRACTOR, ADDRESS, PHONE NUMBER, FAX NUMBER, E-MAIL ADDRESS, AND WEBSITE. INSTALL PER UTILITY COMPANY REQUIREMENTS AND VERIFY EXACT MOUNTING HEIGHT IN FIELD.
3. MANTAIN MINIMUM OF 8'-6" FROM GROUND LEVEL TO BOTTOM OF PROPOSED SHROUD.
4. MANTAIN MINIMUM OF 42" FROM TOP COMMUNICATION ATTACHMENT TO BOTTOM SECONDARY POWER ATTACHMENT.
5. MANTAIN MINIMUM OF 48" CLEARANCE IN ANY DIRECTION FROM ANTENNA AND MOUNTING BRACKET TO NEAREST SECONDARY POWER CONNECTION.
6. MANTAIN MINIMUM OF 12' FROM TOP COMMUNICATIONS LINE TO ANY ADDITIONAL COMMUNICATIONS LINE.
7. MANTAIN MINIMUM OF 5' FROM GROUND LEVEL TO METER LOCATION.
8. MANTAIN MINIMUM OF 6' CLEARANCE IN ANY DIRECTION FROM ANTENNA AND MOUNTING BRACKET TO NEAREST PRIMARY POWER CONNECTION.
9. EQUIPMENT TO BE INSTALLED ON OPPOSITE SIDE OF TRAFFIC FLOW.
10. POWER SUPPLY & WEATHERHEAD SHOULD BE INSTALLED ON THE SAME SIDE OF THE ROAD AS THE COMMUNICATIONS ATTACHMENT. ALL CABLES TO BE COORDINATE CLIMBING OF THE POLE.



GRAPHIC SCALE

0 1.5 3 6

1 INCH = 3 FEET (2X34)
1 INCH = 6 FEET (1X17)

ATTACHMENT HEIGHTS, ANTENNA AND EQUIPMENT LOCATIONS PENDING MAKE-READY AND STRUCTURAL ANALYSIS

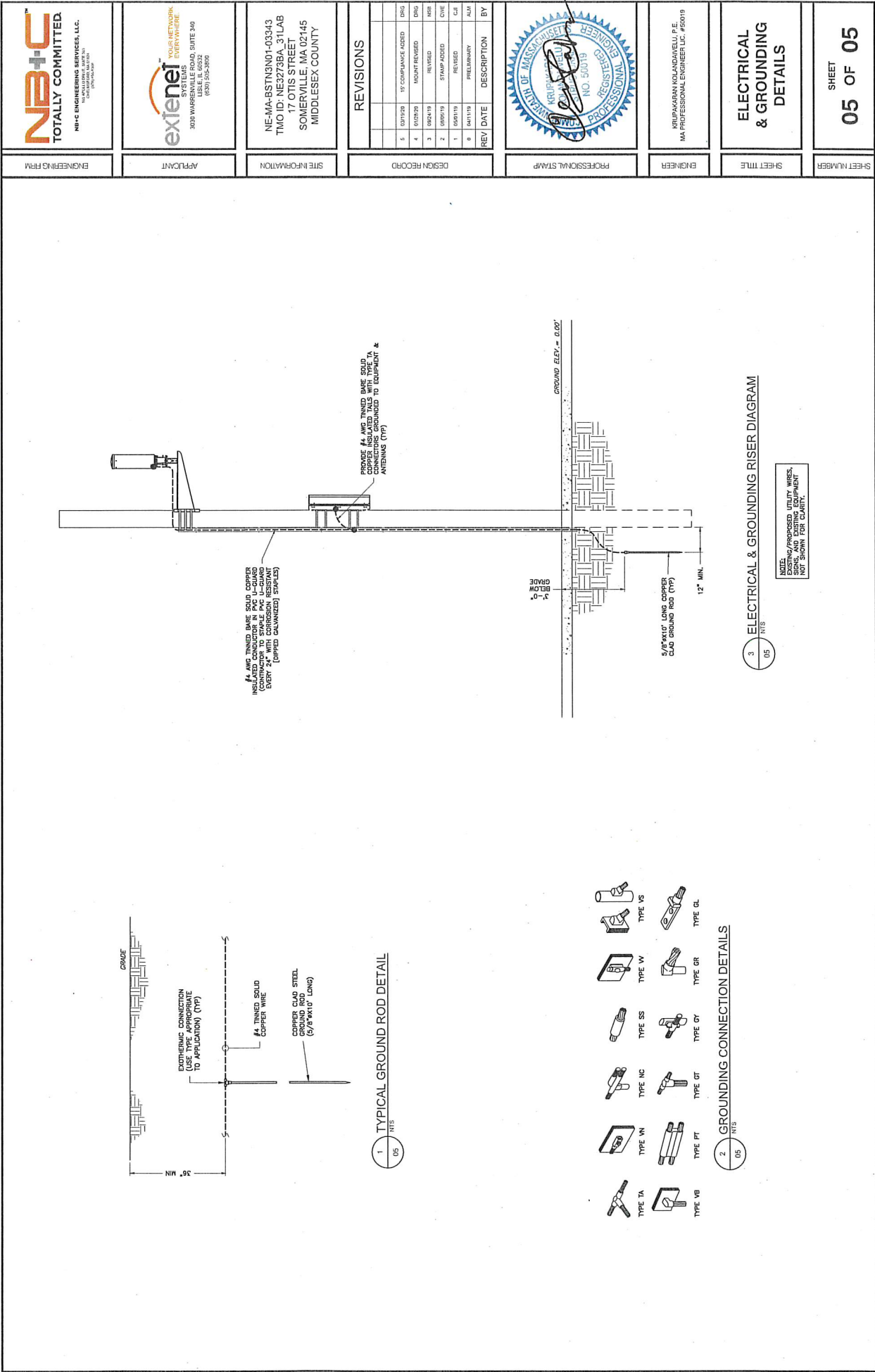


GRAPHIC SCALE

1 INCH = 3 FEET (2X34)
1 INCH = 5 FEET (1X17)



ENGINEERING FIRM	NBC+C TOTALLY COMMITTED. NBC ENGINEERING SERVICES, LLC 100 WASHINGTON STREET, SUITE 200 BOSTON, MA 02108 (617) 592-1800																		
APPICANT	extenet [®] SYSTEMS 2000 WASHINGTON ST., SUITE 200 ROSLINDALE, MA 02126 (617) 595-1800																		
SITE INFORMATION	NE-MA-BSTN3N01-03343 TMO ID: NE3273BA, 31LAB 17 OTIS STREET SOMERVILLE, MA 02145 MIDDLESEX COUNTY																		
DESIGN RECORD	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>15 COMPLIANCE ADDED</td> </tr> <tr> <td>4</td> <td>MOUNT REVISED</td> </tr> <tr> <td>3</td> <td>REINFORCED</td> </tr> <tr> <td>2</td> <td>STAMP ADDED</td> </tr> <tr> <td>1</td> <td>REVISED</td> </tr> <tr> <td>B</td> <td>PRELIMINARY</td> </tr> <tr> <td>A/M</td> <td></td> </tr> </tbody> </table>	REVISIONS		REV	DESCRIPTION	5	15 COMPLIANCE ADDED	4	MOUNT REVISED	3	REINFORCED	2	STAMP ADDED	1	REVISED	B	PRELIMINARY	A/M	
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PROFESSIONAL STAMP																			
ENGINEER	SRIKANTH V. SANKARBHARATHI, P.E. MA PROFESSIONAL ENGINEER LIC. #20019																		
SHEET TITLE	ELEVATION																		
SHEET NUMBER	SHEET 03 OF 05																		



REVISIONS

REV	DATE	DESCRIPTION	BY
1	04/11/19	PRELIMINARY	ALP
2	09/05/19	STAMP ADDED	CSE
3	09/24/19	REVISED	WBS
4	01/02/20	MOUNT REVISED	DAG
5	03/19/20	15 COMPLIANCE ADDED	DAG



ELECTRICAL
& GROUNDING
DETAILS