#### **PROJECT INFORMATION**

SCOPE OF WORK:

UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS

SITE ADDRESS:

SOMERVILLE, MA 02145

LATITUDE: N 42.3961°

N 42.3961' 42' 23' 45.96" N W -71.0997' -71' 05' 58.92" W

LONGITUDE: JURISDICTION:

NATIONAL, STATE & LOCAL CODES OR ORDINANCES

CURRENT USE: PROPOSED USE:

TELECOMMUNICATIONS FACILITY
TELECOMMUNICATIONS FACILITY

NOC#

800-638-2822

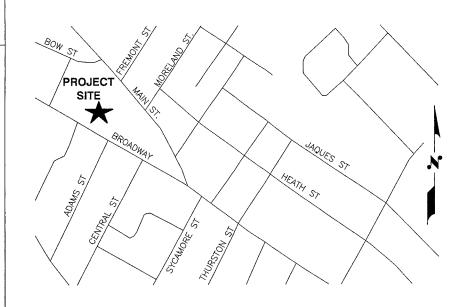


# SITE NUMBER: MA2231 SITE NAME: SOMERVILLE 425 BROADWAY (MA0022)

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DIRECTIONS TO SITE:
FROM FRAMINGHAM, MA. START OUT GOING SOUTHWEST ON COCHITUATE RD / MA-30 W TOWARD WHITTIER ST. 0.2 MI, MAKE A U-TURN AT WHITTIER ST ONTO COCHITUATE RD(RT-30 E) - 0.3 MI, TAKE RAMP ONTO I-90 E TOWARD BOSTON/MASS PIKE ENTRANCE/JCT I-95 (TOLL APPLIES) - 18.2 MI, TAKE LEFT EXIT #24 A-B-C/QUINCY/S. STATION/CONCORD NH ONTO I-93 N TOWARD #24C-B/#24B/24C-B/CONCORD NH (TOLL APPLIES) - 4.0 MI, TAKE EXIT #29/SOMERVILLE (RT-28)/EVERETI (RT-38) ONTO MYSTIC AVE(RT-38 N) TOWARD MC GRATH HWY (RT-28)/SOMERVILLE - 0.3 MI, MAKE A SHARP LEFT TURN ON MYSTIC AVE(RT-38 S), TURN RIGHT ON FELLSWAY W - 0.3 MI, TURN RIGHT ON BROADWAY - 0.5 MI, BEAR RIGHT ON BROADWAY - 0.1 MI, ARRIVE AT 425 BROADWAY, SOMERVILLE, ON THE RIGHT.

**VICINITY MAP** 



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   ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED.
   DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING
   THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY
   ALLOWED.
- THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY
  ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE
  DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT
  GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

**GENERAL NOTES** 

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



72 HOURS

BEFORE YOU DIG



CALL TOLL FREE 888-DIG-SAFE

UNDERGROUND SERVICE ALERT





22 KEEWAYDIN DRIVE

SALEM, NH 03079

SITE NUMBER: MA2231 SITE NAME: SOMERVILLE 425 BROADWAY (MA0022)

425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY



550 COCHITUATE ROAD FRAMINGHAM, MA 01701

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AT&T
TITLE SHEET

T-1

#### **GROUNDING NOTES**

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

#### **GENERAL NOTES**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR - SAI

SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - AT&T MOBILITY

- 2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- 3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- 5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
- 7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
- 9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER
- 11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- 13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

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

BUILDING CODE: MA STATE BUILDING CODE 780 CMR 7TH EDITION ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

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

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

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL  $\,$ 

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

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

#### **ABBREVIATIONS** AGI ABOVE GRADE LEVEL G.C. GENERAL CONTRACTOR RF RADIO FREQUENCY AWG AMERICAN WIRE GAUGE MGB MASTER GROUND BUS BCW BARE COPPER WIRE MIN MINIMUM TBD TO BE DETERMINED PROPOSED NEW BTS BASE TRANSCEIVER STATION TBR TO BE REMOVED TBRR TO BE REMOVED EXISTING EXISTING MOT TO SCALE AND REPLACED REFERENCE REF EG EQUIPMENT GROUND TYP TYPICAL EQUIPMENT GROUND RINGS/ REQUIRED amm

Hudson Design Groupus 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 2-101 IEL: [978] 557-5553 FAX: [978] 336-5586



22 KEEWAYDIN DRIVE

SALEM, NH 03079

SITE NUMBER: MA2231 SITE NAME: SOMERVILLE 425 BROADWAY (MA0022)

> 425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY

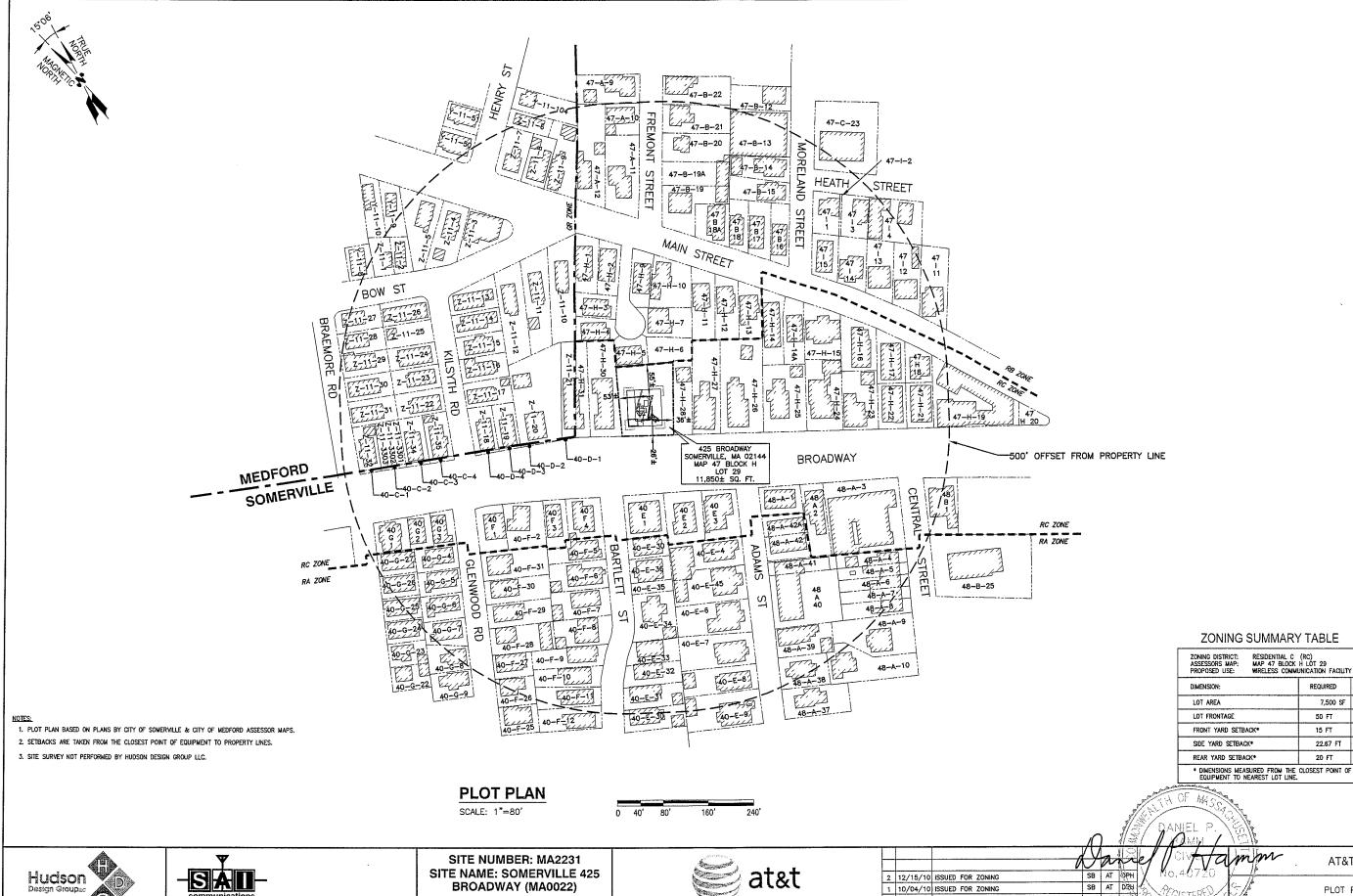


550 COCHITUATE ROAD FRAMINGHAM, MA 01701

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AT&T

GENERAL NOTES







22 KEEWAYDIN DRIVE SALEM, NH 03079

425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY



550 COCHITUATE ROAD FRAMINGHAM, MA 01701

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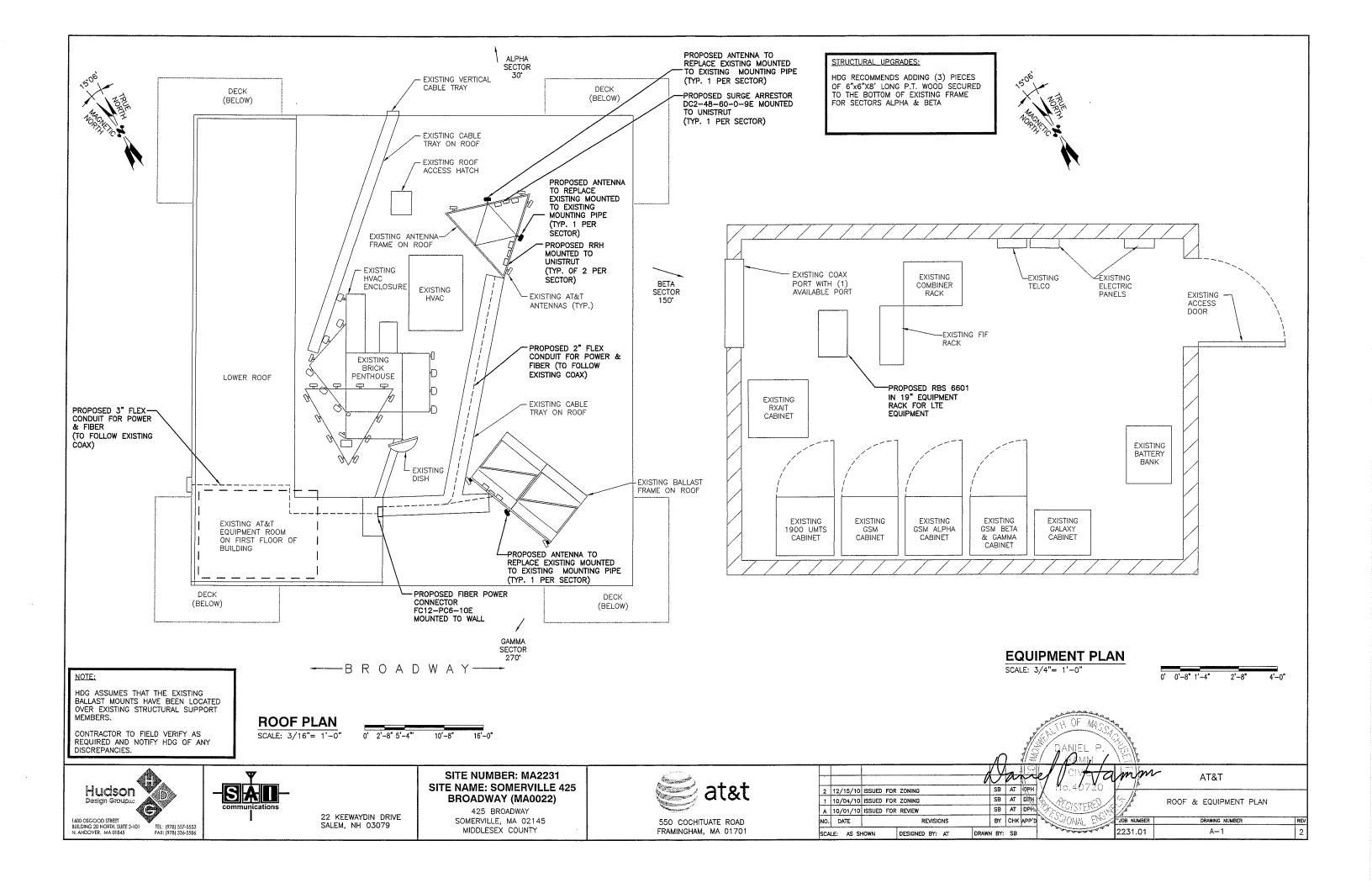
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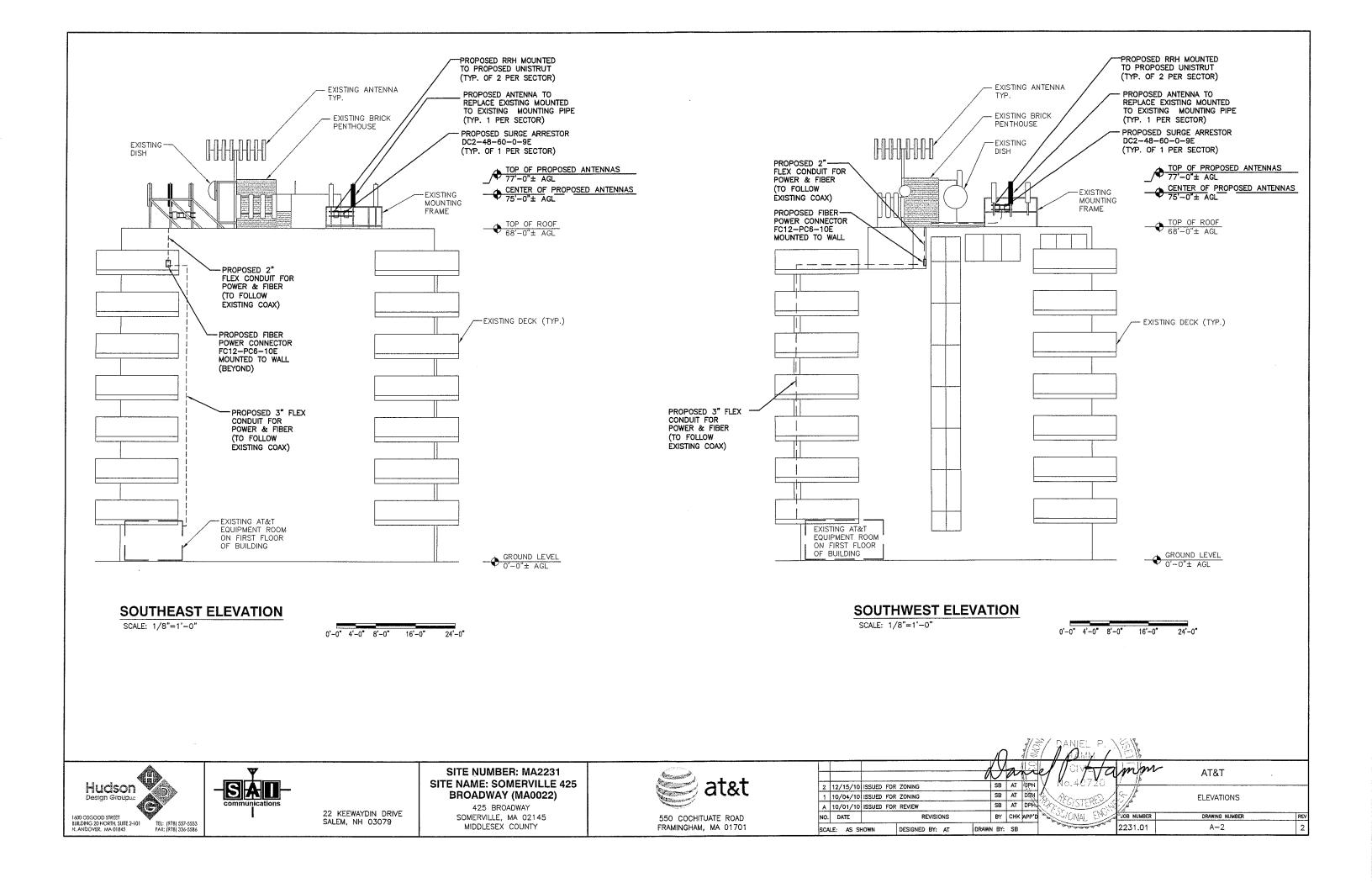
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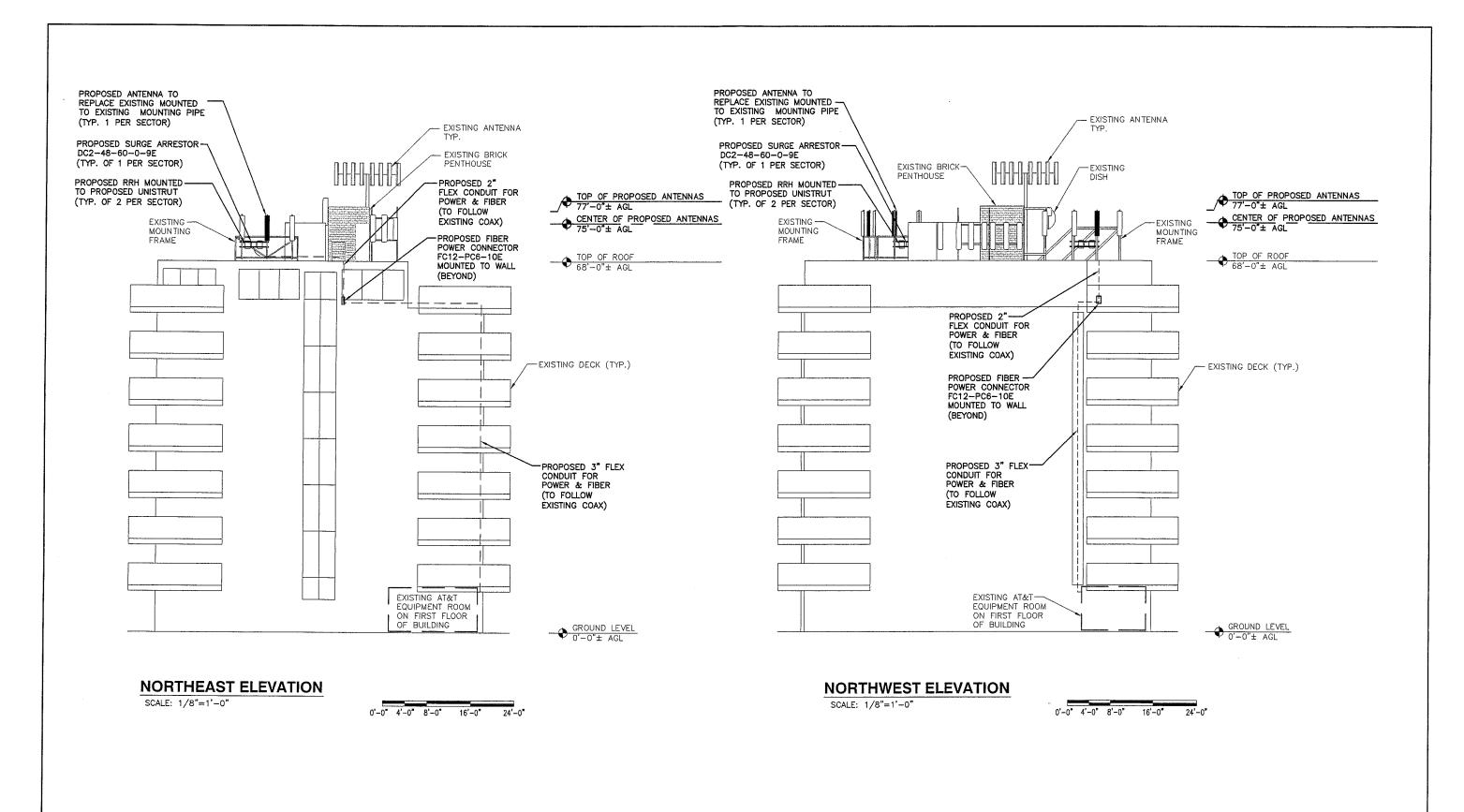
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22 KEEWAYDIN DRIVE

SALEM, NH 03079

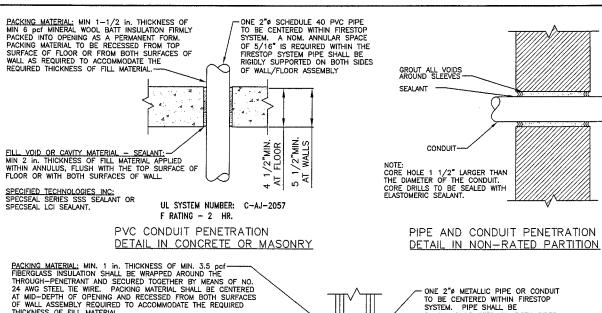
SITE NUMBER: MA2231 SITE NAME: SOMERVILLE 425 BROADWAY (MA0022)

425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY



550 COCHITUATE ROAD FRAMINGHAM, MA 01701

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PACKING MATERIAL; MIN. 1 in. THICKNESS OF MIN. 3.5 pcf
FIBERGLASS INSULATION SHALL BE WRAPPED AROUND THE
THROUGH-PENETRANT AND SECURED TOGETHER BY MEANS OF NO.
24 AWG STELL TIE WIRE. PACKING MATERIAL SHALL BE CENTERED
AT MID-DEPTH OF OPENING AND RECESSED FROM BOTH SURFACES
OF WALL ASSEMBLY REQUIRED TO ACCOMMODATE THE REQUIRED
THICKNESS OF BLI MATERIAL THICKNESS OF FILL MATERIAL

FILL VOID OR CAVITY MATERIAL - CAULK OR PUTTY: IN 2 HR FIRE RATED ASSEMBLIES MIN 3/4 IN. THICKNESS FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 IN. CROWN IS FORMED AROUND THE PENETRATING ITEM. IN 1 HR FIRE RATED ASSEMBLIES, MIN 5/8 in. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS ON BOTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 3/8 in. CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1 in. BEYOND THE PERIPHERY OF THE OPENING.

SPECIFIED TECHNOLOGIES INC: SPECSEAL SERIES SSS SEALANT, SPECSEAL LCI SEALANT OR SPECSEAL PUTTY.

UL SYSTEM NUMBER: W-L-1029 F RATING - 1 & 2 HR.

ROOMS TO BE FIRE-STOPPED.

RIGIDI Y SUPPORTED ON BOTH SIDES WALL/FLOOR ASSEMBLY

> USE FULL CONDUIT RUNS THROUGH PENETRATIONS

ALL CORES THROUGH ELECTRIC

PIPE AND CONDUIT PENETRATION DETAIL IN GYPSUM WALLBOARD

MAXIMUM PIPE DIAMETER (%)	MAXIMUM EMT	ANNULAR SPACE (in.)	FORMING MATERIAL THICKNESS (in.)	MINIMUM SEALANT THICKNESS (in.)	F RATING (HOURS)	T RATING (HOURS)
1-1/2	-	3/8 TO 2-1/8	2-1/2	2	3	1
6	4	3/8 TO 3/4	3-1/2	1	3	0
6	4	3/8 TO	2-1/2	3	0	
						r-STEE

SI FEVE CONCRETE FLOOR OR WALL ASSEMBLY, MINIMUM 4-1/2 in. (OPTIONAL) THICKNESS FLOOR/ MINIMUM 6-1/2 in, WALL-TYPE AS OR TYPE SS:
MINIMUM THICKNESS OF SEALANT AS
SPECIFIED IN THE TABLE BELOW, APPLIED
WITHIN THE OPENING, FLUSH WITH THE
TOP SURFACE OF THE FLOOR OR BOTH SURFACES OF THE WALL. FORMING MATERIAL: MINERAL WOOL INSULATION (MINIMUM 4.0 pcf) FIRMLY PACKED INTO THE OPENING AS A PERMANENT FORM; — SEE TABLE FOR MINIMUM REQUIRED

METALLIC PIPE: STEEL PIPE: 6"ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. CONDUIT: 4"¢ (OR SMALLER) ELECTRICAL METALLIC TUBING (EMT) OR 6"# RIGID STEEL CONDUIT.

> UL SYSTEM NUMBER: C-AJ-1020 F RATING - 3 HR.

PIPE AND CONDUIT PENETRATION DETAIL IN CONCRETE OR MASONRY

WALL HR	MAX DIAM OF THROUGH PENETRANT in.	T RATING HR
1	2	1
1	1-1/4	1
2	2	1
2	1-1/4	1 1/2

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

THROUGH PENETRANTS: ONE 2" NONMETALLIC PIPE, CONDUIT OR RACEWAY TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. A NOM ANNULAR SPACE OF S/16 in. IS REQUIRED WITHIN THE FIRESTOP
SYSTEM. PIPE, CONDUIT OR RACEWAY TO BE
RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY.

FILL. VOID OR CAVITY MATERIAL - SEALANT: MIN 5/8 in. THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WITH ANNOLOS, FLOSH WITH BUTH SURFACES OF WALL. ADDITIONAL FILL MATERIAL TO BE INSTALLED SUCH THAT A MIN 1/4 in. THICK CROWN IS FORMED AROUND THE PENETRATING ITEM AND LAPPING 1 in. BEYOND THE PERIPHERY OF THE OPENING.

SPECIFIED TECHNOLOGIES INC: SPECSEAL SERIES SSS SEALANT. SPECSEAL LCI SEALANT.

> UL SYSTEM NUMBER: W-L-2093 F RATING - 1 & 2 HR.

PVC CONDUIT PENETRATION DETAIL IN GYPSUM WALLBOARD

#### PENETRATION DETAILS

SALEM, NH 03079

Hudson 1400 OSGOOD STREET BUILDING 20 NORTH, SUITE 2-101 N. ANDOVER, MA 01845 TEL: {978} 557-5553 FAX: {978} 336-5586



SITE NAME: SOMERVILLE 425 **BROADWAY (MA0022)** 22 KEEWAYDIN DRIVE

425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY

SITE NUMBER: MA2231



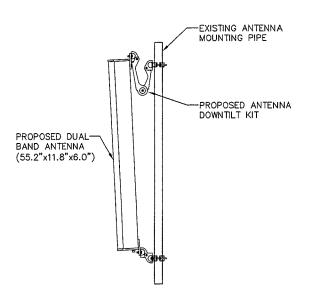
550 COCHITUATE ROAD FRAMINGHAM, MA 01701 NOTE:

HDG ASSUMES THAT THE EXISTING BALLAST MOUNTS HAVE BEEN LOCATED OVER EXISTING STRUCTURAL SUPPORT

CONTRACTOR TO FIELD VERIFY AS REQUIRED AND NOTIFY HDG OF ANY DISCREPANCIES.

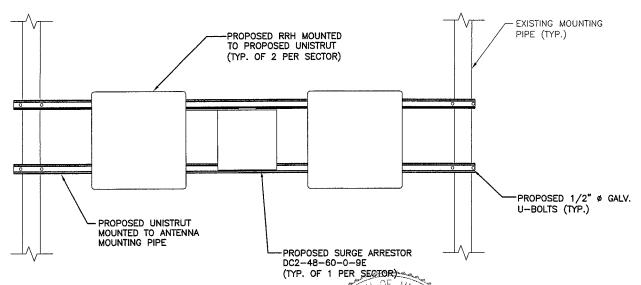
NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



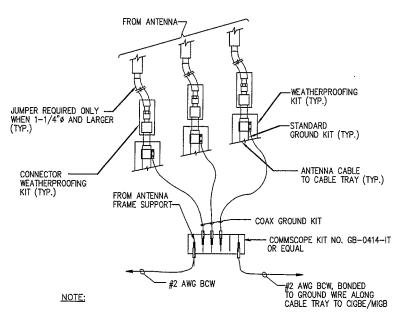
#### PROPOSED ANTENNA DETAIL

SCALE: N.T.S.



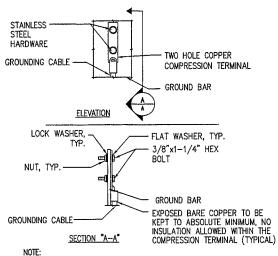
#### PROPOSED RRH MOUNTING DETAIL

Vamm AT&T SB AT OPH 2 12/15/10 ISSUED FOR ZONING SB AT DRH 1 10/04/10 ISSUED FOR ZONING DETAILS SB AT DPF A 10/01/10 ISSUED FOR REVIEW BY CHK APP'D NO. DATE REVISIONS DRAWING NUMBER 2231.01 A-4 SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SB



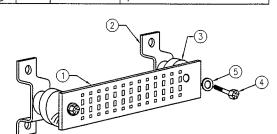
 DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

# GROUND WIRE TO GROUND BAR CONNECTION DETAIL N.T.S.



1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

# TYPICAL GROUND BAR CONNECTION DETAIL



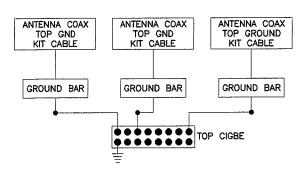
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

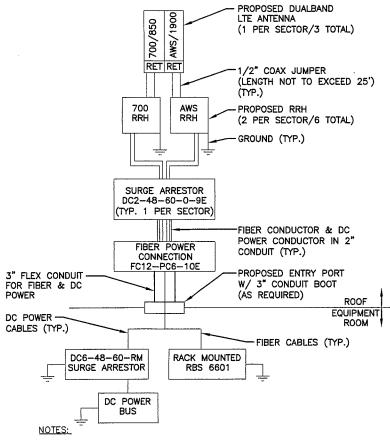
SECTION "A" - SURGE ABSORBERS

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



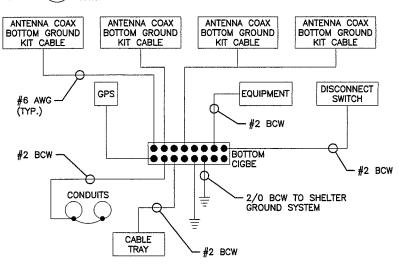
#### NOTES:

- 1. BOND ANTENNA GROUNDING KIT CABLE TO TOP CIGBE.
- 2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIGBE.



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





GROUND BAR - DETAIL

N.T.S.

22 KEEWAYDIN DRIVE SALEM, NH 03079

#### SITE NUMBER: MA2231 SITE NAME: SOMERVILLE 425 BROADWAY (MA0022)

425 BROADWAY SOMERVILLE, MA 02145 MIDDLESEX COUNTY

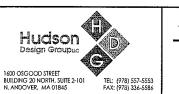


550 COCHITUATE ROAD FRAMINGHAM, MA 01701

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ľ	1	10/04/1	ISSUED FOR	ZONING		SB	AT	DSH		Nonwood /	5-14	PLUMBING DIAGRAM & DETAILS	
ſ	Α	10/01/1	ISSUED FOR	REVIEW		SB	AT	DPH	KĢ				
	١٥.	DATE		REVISIONS		BY	СНК	APP'	30	RESUMAL ENGLA	JOB NUMBER	DRAWING NUMBER	REV
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DANIEL P EN

SCHEMATIC GROUNDING DIAGRAM



## LOCUS MAP



1

PHOTO LOCATION

FOR VISUAL REFERENCE ONLY.
ACTUAL VISABILITY IS DEPENDANT
UPON WEATHER CONDITIONS, SEASON,
SUNLIGHT, AND VIEWER LOCATION



PHOTO LOCATIONS
NOT TO SCALE

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS: 425 BROADWAY

425 BROADWAY SOMERVILLE, MA 02145



SITE	TYPE:	ROOFTOP

DATE: 10/22/10

DRAWN BY: DB

### **EXISTING CONDITIONS**



# PHOTO LOCATION # 1 VIEW EAST FROM BROADWAY/KILSYTH RD. INTERSECTION DATE OF PHOTO: 10/17/10

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS:

425 BROADWAY

SOMERVILLE, MA 02145



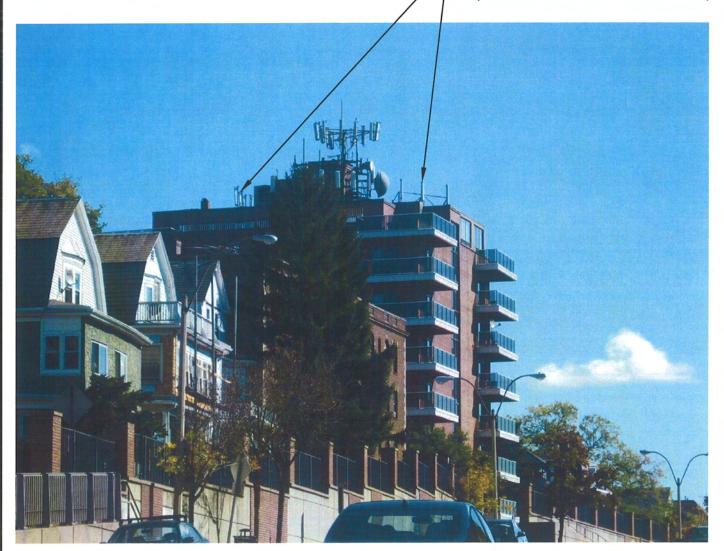
SITE TYPE: ROOFTOP

DATE: 10/22/10

COCHITUATE ROAD DRAWN BY: DB

#### PROPOSED CONDITIONS

PROPOSED ANTENNA MOUNTED TO EXISTING MOUNTING PIPE (TYP. 1 PER SECTOR, TOTAL OF 3)



# PHOTO LOCATION # 1 VIEW EAST FROM BROADWAY/KILSYTH RD. INTERSECTION DATE OF PHOTO: 10/17/10

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS:

425 BROADWAY

SOMERVILLE, MA 02145

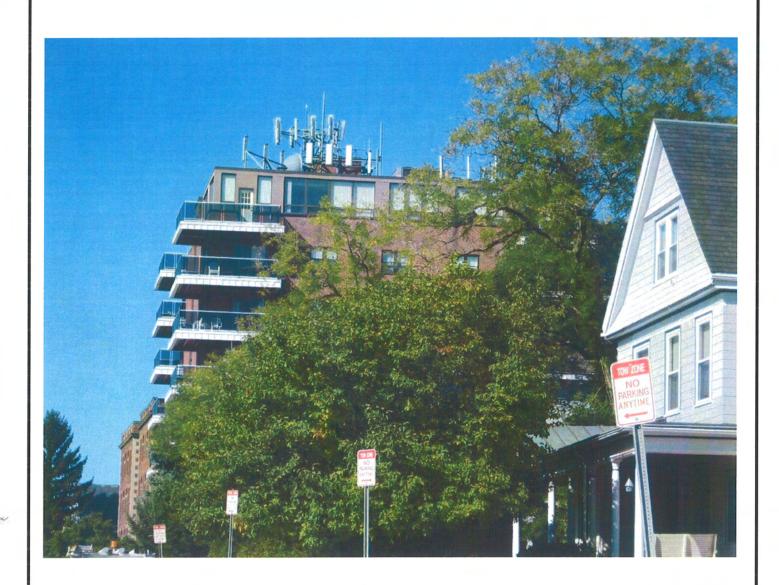
at&t

550 COCHITUATE ROAD FRAMINGHAM, MA 01701 SITE TYPE: ROOFTOP

DATE: 10/22/10

TE ROAD DRAWN BY: DB

## **EXISTING CONDITIONS**



# PHOTO LOCATION # 2 VIEW NORTHWEST FROM BROADWAY DATE OF PHOTO: 10/17/10

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS: 425 BROADWAY

SOMERVILLE, MA 02145



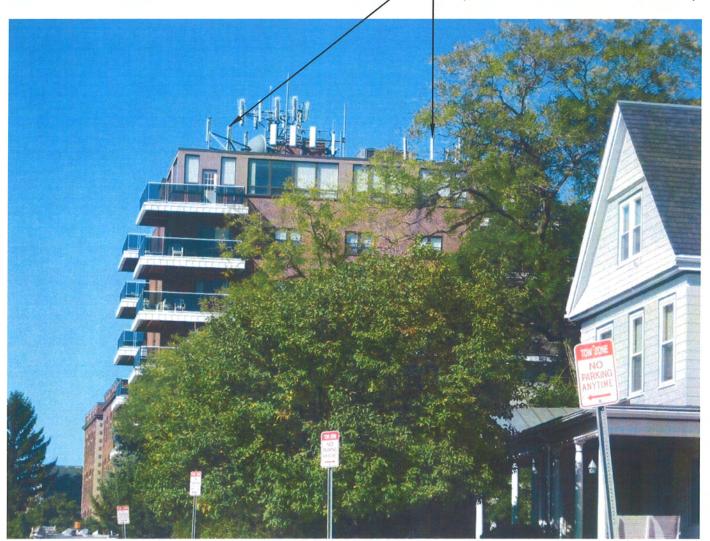
E TYPE: POOFTOP DATE:

SITE TYPE: ROOFTOP DATE: 10/22/10

DRAWN BY: DB SCALE: NTS

### PROPOSED CONDITIONS

PROPOSED ANTENNA MOUNTED TO EXISTING MOUNTING PIPE (TYP. 1 PER SECTOR, TOTAL OF 3)



### PHOTO LOCATION # 2 VIEW NORTHWEST FROM BROADWAY **DATE OF PHOTO: 10/17/10**

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS: 425 BROADWAY

SOMERVILLE, MA 02145



SITE TYPE: ROOFTOP

DATE: 10/22/10

DRAWN BY: DB

## **EXISTING CONDITIONS**



# PHOTO LOCATION # 3 VIEW SOUTHWEST FROM FREMONT ST. DATE OF PHOTO: 10/22/10

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS: 425

425 BROADWAY SOMERVILLE, MA 02145 550 COCHITUATE ROAD FRAMINGHAM, MA 01701

SITE TYPE: ROOFTOP

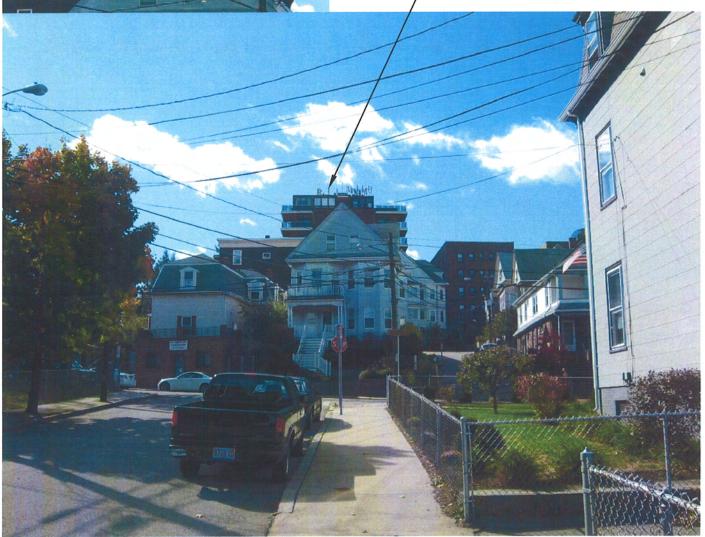
DATE: 10/22/10

COCHITUATE ROAD DRAWN BY: DB

#### PROPOSED CONDITIONS



PROPOSED ANTENNA MOUNTED TO EXISTING MOUNTING PIPE (TYP. 1 PER SECTOR, TOTAL OF 3)



### PHOTO LOCATION #3 VIEW SOUTHWEST FROM FREMONT ST. **DATE OF PHOTO: 10/22/10**

REV1: 11/22/10

SITE NO: MA2231

SITE NAME: SOMERVILLE 425 BROADWAY

ADDRESS: 425 BROADWAY

SOMERVILLE, MA 02145



SITE TYPE: ROOFTOP

DATE: 10/22/10

DRAWN BY: DB