

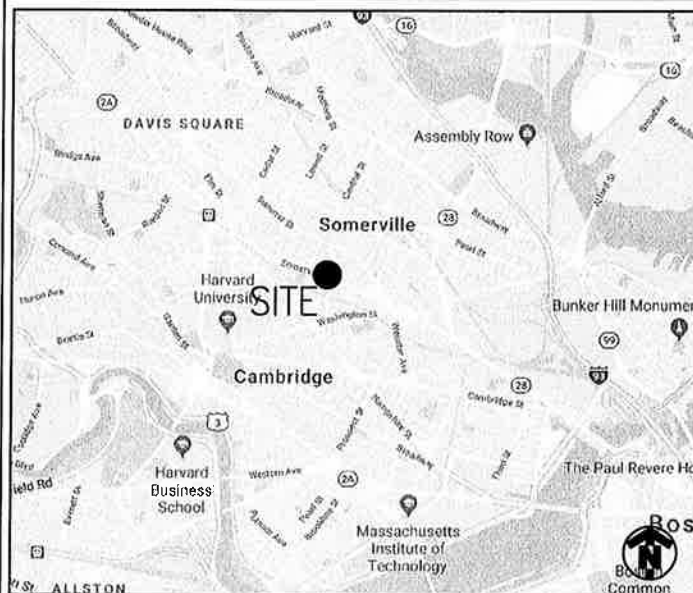
## SHEET INDEX

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## DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:  
HEAD SOUTHWEST. TURN LEFT TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO  
LEGGATT MCCALL CONN. CONTINUE ONTO BURR ST. TURN LEFT ONTO COCHITUATE  
RD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 E/MASSPIKE  
W/SPRINGFIELD/BOSTON. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR  
INTERSTATE 90 E/INTERSTATE 95/MASSACHUSETTS TURNPIKE/BOSTON AND MERGE  
ONTO I-90 E/MASSACHUSETTS TURNPIKE. USE THE LEFT LANE TO TAKE EXIT 18  
TOWARD CAMBRIDGE. MERGE ONTO CAMBRIDGE ST. TURN LEFT ONTO MEMORIAL DR.  
TURN RIGHT ONTO HINGHAM ST. TURN LEFT ONTO PUTNAM AVE. SLIGHT LEFT  
ONTO MASSACHUSETTS AVE. TURN RIGHT ONTO HARVARD ST. TURN LEFT ONTO  
PRESCOTT ST. TURN RIGHT ONTO CAMBRIDGE ST. TURN LEFT ONTO SUMNER RD.  
TURN RIGHT ONTO KIRKLAND ST. TURN LEFT ONTO IRVING ST. CONTINUE ONTO  
SCOTT ST. TURN RIGHT ONTO BEACON ST. DESTINATION WILL BE ON THE LEFT

## LOCATION MAP



at&amp;t

PROJECT  
LTE 4C/5C/RETRO FIT  
SITE NAME  
SOMERVILLE 175 BEACON ST

CELL SITE ID  
MAL02269  
FA SITE NUMBER  
10133869  
PACE ID

MRCTB024598/MRCTB024728/MRCTB024940

SITE ADDRESS  
175 BEACON STREET  
SOMERVILLE, MA 02143  
STRUCTURE TYPE  
ROOFTOP

## PROJECT TEAM



smartlink

PROJECT MANAGER

INFINIGY

1033 Watervliet Shaker Rd  
Albany, NY 12205  
Office # (518) 690-0790  
Fax # (518) 690-0793

ENGINEER

## SCOPE OF WORK (PER LTE RFDS, DATED 11/23/2017, V2.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

## TOWER

- REMOVE (3) RRUS-A2 MODULES
- INSTALL (3) PANEL ANTENNAS
- INSTALL (3) B14 447B
- INSTALL (3) 4426 B66
- INSTALL (3) RRUS-12

## GROUND

- UPGRADE BB TO 5216 WITH IDL2
- ADD (2) XMU

## PROJECT SUMMARY

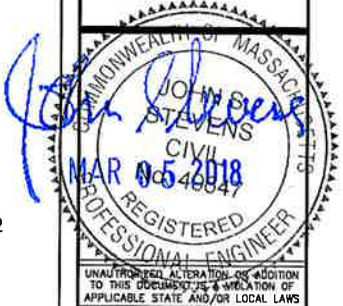
SITE NAME: SOMERVILLE 175 BEACON ST  
CELL SITE ID: MAL02269  
FA SITE #: 10133869  
SITE ADDRESS: 175 BEACON STREET  
SOMERVILLE, MA 02143  
COUNTY: MIDDLESEX  
SITE COORDINATES:  
LATITUDE: 42.3798500° N (NAD 83)  
LONGITUDE: 71.1075700° W (NAD 83)  
ELEVATION: ±57' (AMSL)  
RAD CENTER: ±55' (AGL)  
LANDLORD: BEACON ASSOCIATES, INC.  
C/O JET REALITY  
P.O. BOX 45014  
SOMERVILLE, MA 02145  
APPLICANT: AT&T MOBILITY  
550 COCHITUATE RD.  
FRAMINGHAM, MA 01701  
CLIENT REPRESENTATIVE: SMARTLINK, LLC  
85 RANGEWAY RD., BUILDING 3, SUITE 102  
NORTH BILLERICA, MA 01862  
CONTACT: EDWARD WEISSMAN  
(917)528-1857  
ENGINEER: INFINIGY  
1033 WATERVLIET SHAKER ROAD  
ALBANY, NY 12205  
CONTACT: ALEX WELLER  
(518) 690-0790  
BUILDING CODE: MA BUILDING CODE  
UNIFORM BUILDING CODE  
BUILDING OFFICIALS & CODE ADMINISTRATORS  
UNIFORM MECHANICAL CODE  
UNIFORM PLUMBING CODE  
LOCAL BUILDING CODE  
CITY/COUNTY ORDINANCES  
ELECTRICAL CODE: NATIONAL ELECTRICAL CODE (LATEST EDITION)



TO OBTAIN LOCATION OF PARTICIPANTS  
UNDERGROUND FACILITIES BEFORE  
YOU DIG IN MASSACHUSETTS, CALL DIG  
SAFE SYSTEM, INC.  
TOLL FREE: 1-888-344-7233 OR  
www.digsafe.com  
MASSACHUSETTS  
STATUTE REQUIRES MIN  
OF 2 WORKING DAYS  
NOTICE BEFORE YOU  
EXCAVATE

INFINIGY

1033 Watervliet Shaker Rd  
Albany, NY 12205  
Office # (518) 690-0790  
Fax # (518) 690-0793



1	ISSUED FOR PERMIT	BWW	03/05/18
0	ISSUED FOR REVIEW	BWW	01/29/18
No	Submittal / Revision	App'd	Date
Drawn:	BWW	Date:	01/29/18
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Project Number:	499-006		

Project Title:  
SOMERVILLE 175  
BEACON STREET  
MAL02269  
FA# 10133869  
175 BEACON STREET  
SOMERVILLE, MA 02143

Prepared For:



Drawing Scale:

AS NOTED

CD

Date:

03/05/18

Drawing Title

TITLE PAGE

Drawing Number

T1

## GENERAL NOTES

## PART 1 – GENERAL REQUIREMENTS

- 1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
  - A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
  - B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
  - C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC").
  - D. AND NFPA 101 (LIFE SAFETY CODE).
  - E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
  - F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).
- 1.2 DEFINITIONS:
  - A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
  - B. COMPANY: AT&T CORPORATION
  - C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
  - D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
  - E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- 1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.
- 1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
- 1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
  - A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
- 1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.
- 1.7 NOTICE TO PROCEED:
  - A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
  - B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

## PART 2 – EXECUTION

- 2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
- 2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.
- 2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HERewith, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

- 2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.  
A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.
- 2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.
- 2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

### PART 3 - RECEIPT OF MATERIAL & EQUIPMENT

- 3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
- A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
  - B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
  - C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
  - D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
  - E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
  - F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

## PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

- 4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- 4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- 4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
  - A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
  - B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- 4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.
- 4.5 CONDUCT TESTING AS REQUIRED HEREIN.

## PART 5 – TESTS AND INSPECTIONS

- 5.1 TESTS AND INSPECTIONS:
- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
  - B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.
  - C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
  - D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
  - E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

- F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
- G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

## PART 6 – TRENCHING AND BACKFILLING

- 6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.
- A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.
  - B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.
  - C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
  - D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.
  - E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.
  - F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.
  - G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTILING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

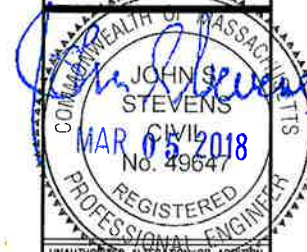
SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
	TRANSFORMER
	KILOWATT HOUR METER
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
-----	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
	GROUND ROD
	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
	<div>REPRESENTS DETAIL NUMBER</div> <div>REF. DRAWING NUMBER</div>

## ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

INFINIGY<sup>2</sup>

3 Watervliet Shaker Rd  
Albany, NY 12205  
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Fax # (518) 690-0793



UNAUTHORIZED ALTERATION OR ADDITION  
TO THIS DOCUMENT IS A VIOLATION OF  
APPLICABLE STATE AND/OR LOCAL LAWS


1	ISSUED FOR PERMIT	BMM	03/05/18
0	ISSUED FOR REVIEW	BMM	01/29/18
No.	Submittal / Revision	App'd	Date
Drawn: <u>BMM</u> Date: <u>01/29/18</u>			
Designed: <u>ASW</u> Date: <u>01/29/18</u>			
Checked: <u>AJD</u> Date: <u>01/29/18</u>			

Project Number: 499-006

Project Title:

SOMERVILLE 175  
BEACON STREET

MAL02269  
FA# 10133869

175 BEACON STREET  
SOMERVILLE, MA 02143

Prepared For:  smartlink  
For:

Drawing Scale:  
AS NOTED

Date:  
03/05/18

**CD**

Drawing Title	
---------------	--

## GENERAL NOTES

Drawing Number

**C1**

EXISTING BUILDING

PROPOSED RRUS ON (E) NON  
PENETRATING BALLAST (TYP. OF (1)  
PER SECTOR, (3) SECTORS TOTAL)  
• (1) RRUS-B14 4487  
• (1) 4426 B66

EXISTING ROOF

EXISTING PENTHOUSE

EXISTING HVAC (TYP.)

EXISTING AT&T  
EQUIPMENT PLATFORM

EXISTING AT& CABLE  
TRAY ON ROOF

PROPOSED AT&T STEALTH MODIFICATION  
TO REPLACE EXISTING STEALTH CHIMNEY  
(TYP. OF (1) PER SECTOR, (3) SECTORS  
TOTAL) (SEE SHEETS S2,S3,S4 AND S5)

EXISTING AT&T STEALTH ENCLOSURE  
TO REMAIN (TYP. OF (1) PER  
SECTOR, (3) SECTORS TOTAL)



1 OVERALL SITE PLAN  
SCALE: AS NOTED

GRAPHIC SCALE:  
20' 10' 0 10' 20'  
SCALE (11x17): 1" = 20'-0"  
SCALE (22x34): 1" = 10'-0"

BASEMAPPING PREPARED FROM A SITE WALK  
PERFORMED BY INFINIGY ENGINEERING ON  
09/26/17 AND PROVIDED INFORMATION, AND  
DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

INFINIGY

1033 Watervliet Shaker Rd  
Albany, NY 12205  
Office # (518) 686-0790  
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1	ISSUED FOR PERMIT	BWM	03/05/18
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Drawn:	BWM	Date:	01/29/18
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Checked:	AJD	Date:	01/29/18
Project Number:			
499-006			

Project Title:  
SOMERVILLE 175  
BEACON STREET  
MAL02269  
FA# 10133869  
175 BEACON STREET  
SOMERVILLE, MA 02143

Prepared For:



Drawing Scale:

AS NOTED

Date:

03/05/18

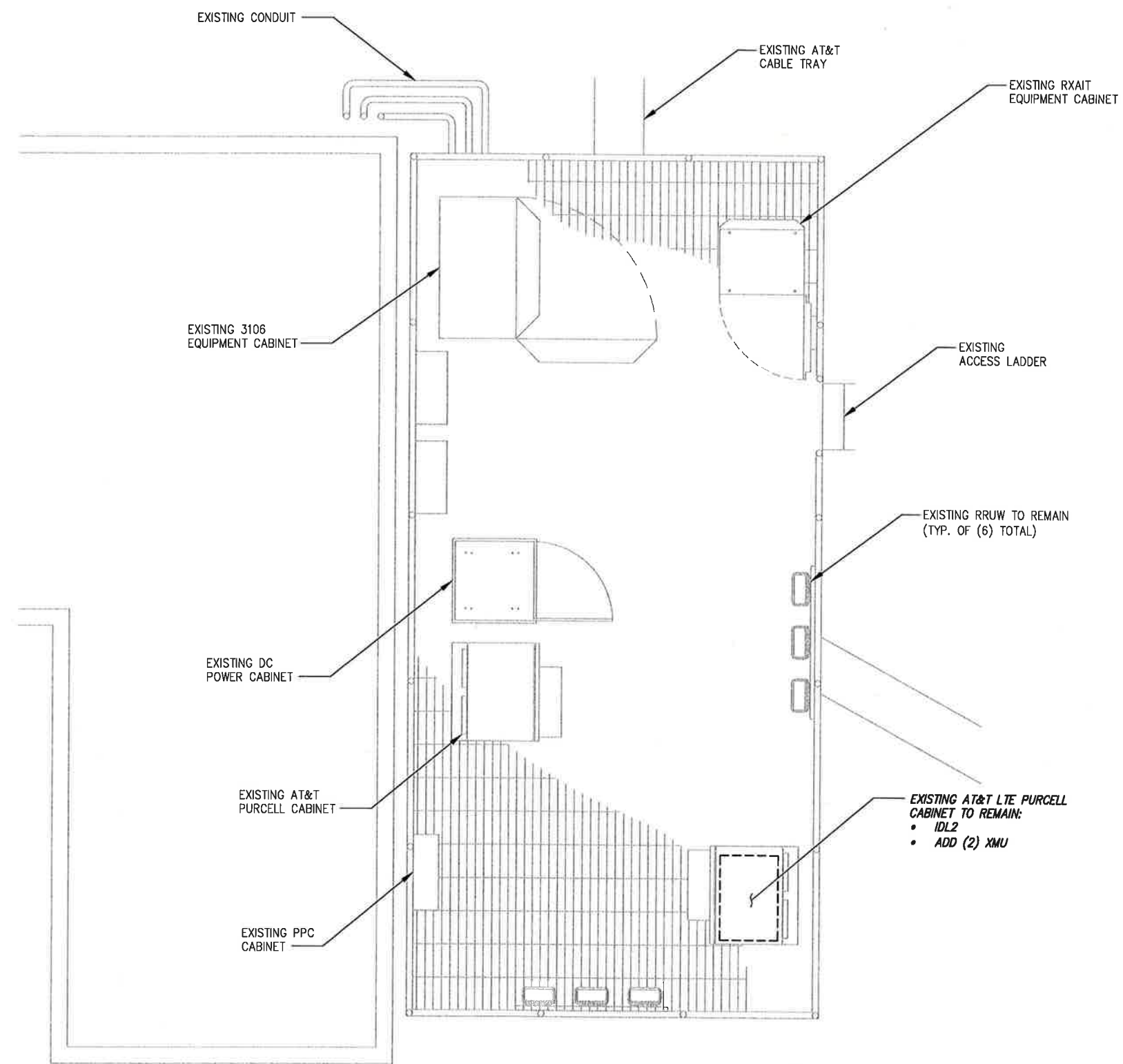
Drawing Title

OVERALL  
SITE PLAN

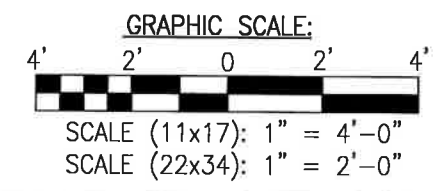
Drawing Number

C2

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 1/09/18 AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



1 ENLARGED SITE PLAN  
SCALE: AS NOTED



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Office # (518) 680-0780  
Fax # (518) 680-0783

No.	Submital / Revision	App'd	Date
1	ISSUED FOR PERMIT	BWM	03/05/18
0	ISSUED FOR REVIEW	BWM	01/29/18

Drawn: BWM Date: 01/29/18  
Designed: ASW Date: 01/29/18  
Checked: AJO Date: 01/29/18

Project Number: 499-006

Project Title:  
**SOMERVILLE 175 BEACON STREET**  
**MAL02269**  
**FA# 10133869**  
175 BEACON STREET  
SOMERVILLE, MA 02143

Prepared For:

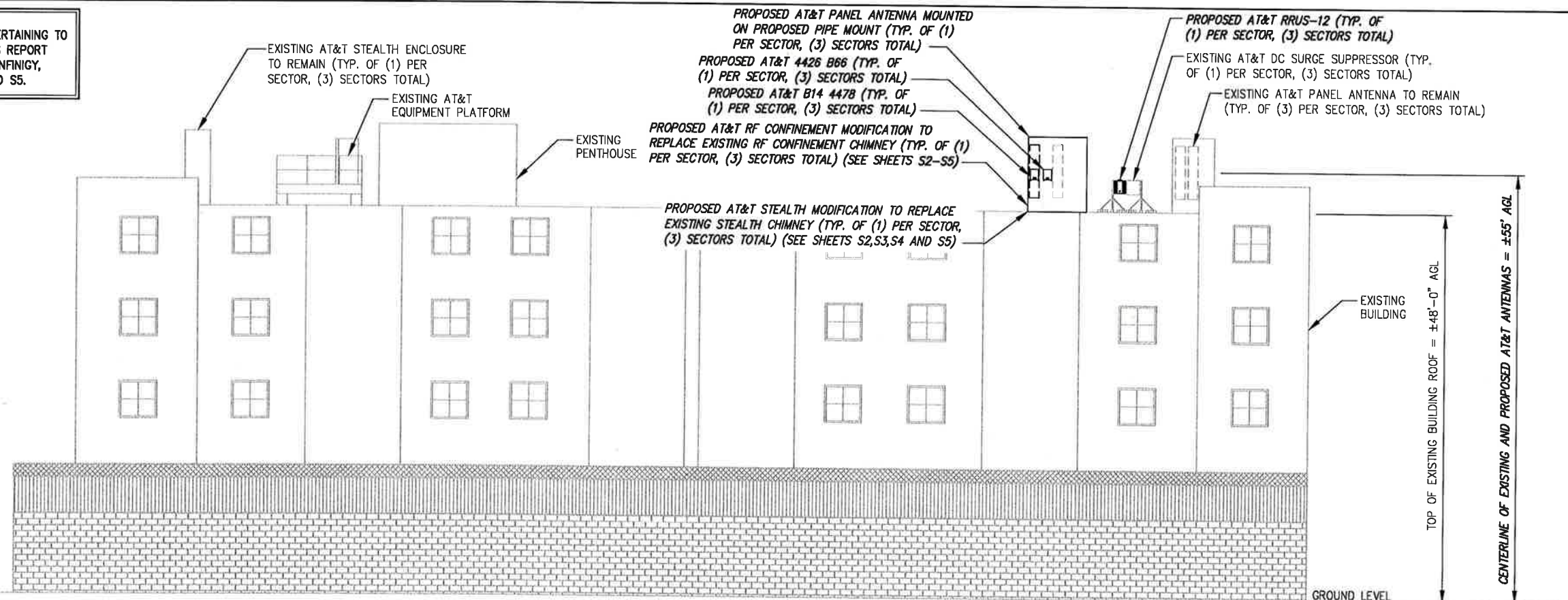
Drawing Scale: AS NOTED  
Date: 03/05/18  
**CD**

Drawing Title:  
**ENLARGED SITE PLAN**

Drawing Number:  
**C3**

NOTE:  
FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'MOUNT ANALYSIS REPORT WITH MODIFICATION DESIGN', COMPLETED BY INFINIGY, DATED 2/26/18. SEE SHEETS S2, S3, S4, AND S5.

- NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
  - 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



1 ELEVATION VIEW  
NOT TO SCALE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 11/23/17, V 2.00												
SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/DIPLEXER	RRUS	AZIMUTH	ANTENNA Q. HEIGHT	CABLE FEEDER		RAYCAP UNIT		
								TYPE	LENGTH			
ALPHA	A-1	(E) UMTS 850	KATHREIN 80010764	(1) TT19-08BP111-001	--	30°	±55'	(2) (E) 1-5/8" COAX CABLES	--	(3) (E) DC6		
	A-2	(E) LTE 700/1900	CCI OPA-65R-LCUU-H4	--	(E) (1) RRUS-32	30°	±55'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--			
	A-3	(P) LTE 700/ AWS/WCS	KATHREIN 800-10964	--	(1) (P) B14 4478 (1) (P) 4426 B66	30°	±55'	SEE A-2 FOR CABLE INFORMATION	--			
	A-4	(E) LTE 700/1900	CCI OPA-65R-LCUU-H4	--	(E) (1) RRUS-11 (E) (1) RRUS-12 (P) (1) RRUS-12	30°	±55'	SEE A-2 FOR CABLE INFORMATION	--			
BETA	B-1	(E) LTE 700/1900	ANDREW SBNHH-1D65A	(1) TT19-08BP111-001	--	150°	±55'	(2) (E) 1-5/8" COAX CABLES	--		(3) (E) DC6	
	B-2	(E) LTE 700/1900	ANDREW SBNHH-1D65A	--	(E) (1) RRUS-32	150°	±55'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--			
	B-3	(P) LTE 700/ AWS/WCS	KATHREIN 800-10964	--	(1) (P) B14 4478 (1) (P) 4426 B66	150°	±55'	SEE B-2 FOR CABLE INFORMATION	--			
	B-4	(E) UMTS 850	KATHREIN 742-264	--	(E) (1) RRUS-11 (E) (1) RRUS-12 (P) (1) RRUS-12	150°	±55'	SEE B-2 FOR CABLE INFORMATION	--			
GAMMA	G-1	(E) UMTS 850	KATHREIN 742-264	(1) TT19-08BP111-001	--	270°	±55'	(2) (E) 1-5/8" COAX CABLES	--			(3) (E) DC6
	G-2	(E) LTE 700/1900	ANDREW SBNHH-1D65A	--	(E) (1) RRUS-32	270°	±55'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--			
	G-3	(P) LTE 700/ WCS/AWS	KATHREIN 800-10964	--	(1) (P) B14 4478 (1) (P) 4426 B66	270°	±55'	SEE G-2 FOR CABLE INFORMATION	--			
	G-4	(E) LTE 700/1900	ANDREW SBNHH-1D65A	--	(E) (1) RRUS-11 (E) (1) RRUS-12 (P) (1) RRUS-12	270°	±55'	SEE G-2 FOR CABLE INFORMATION	--			

\*CABLE LENGTH FROM RFDS (CONTRACTOR TO VERIFY PRIOR TO ORDERING)

2 AT&T ANTENNA SCHEDULE  
NOT TO SCALE

INFINIGY

1033 Watervliet Shaker Rd  
Albany, NY 12205  
Office # (518) 860-0790  
Fax # (518) 860-0793

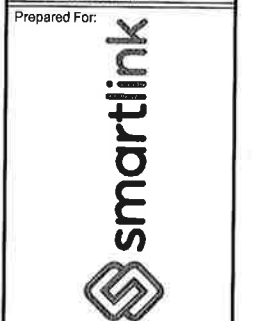


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0	ISSUED FOR REVIEW	BMW	01/29/18
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Drawn:	BMW	Date:	01/29/18
Designed:	ASW	Date:	01/29/18
Checked:	AJO	Date:	01/29/18

Project Number:  
499-006

Project Title:  
**SOMERVILLE 175 BEACON STREET**  
**MAL02269**  
**FA# 10133869**  
175 BEACON STREET  
SOMERVILLE, MA 02143



Drawing Scale:  
AS NOTED  
Date:  
03/05/18  
**CD**

Drawing Title  
**ELEVATION VIEW**

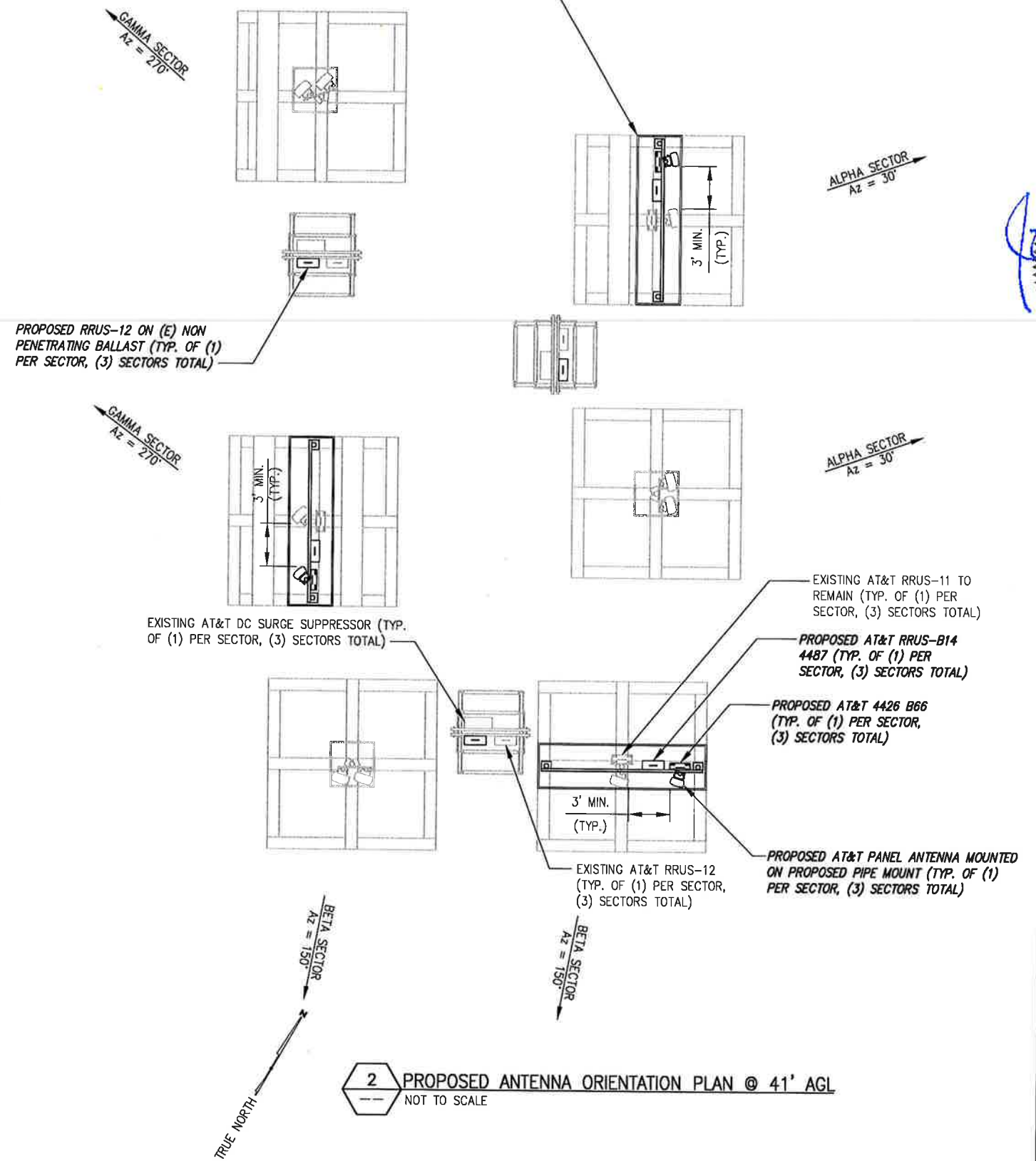
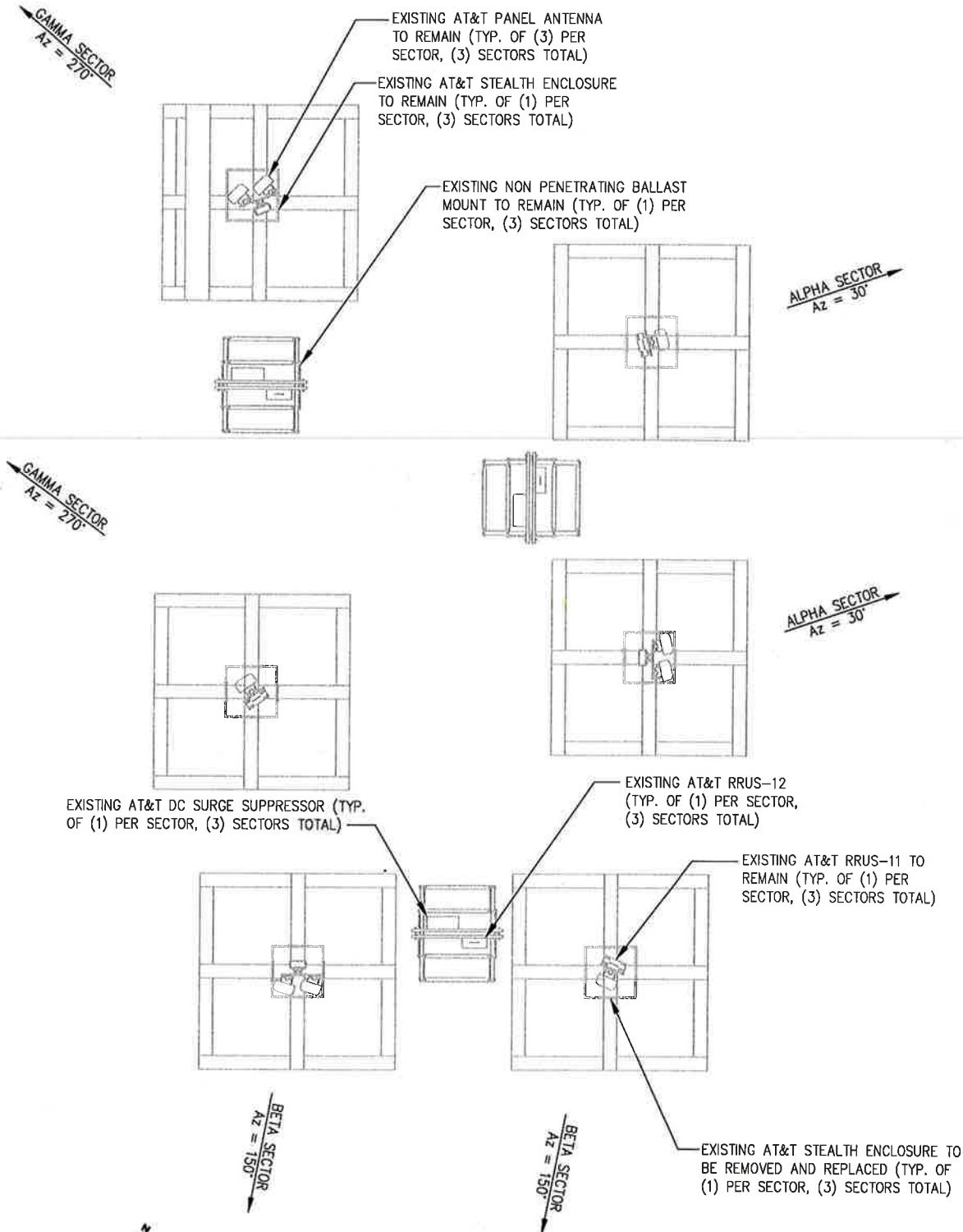
Drawing Number  
**C4**

- NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
  - 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:  
FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNTS, SEE 'MOUNT ANALYSIS REPORT WITH MODIFICATION DESIGN', COMPLETED BY INFINIGY, DATED 2/26/18. SEE SHEETS S2, S3, S4, AND S5.

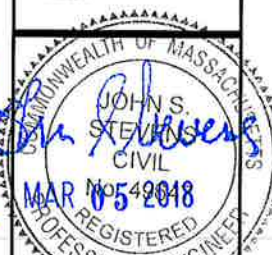
PROPOSED RF CONFINEMENT EXTERIOR TO MATCH EXISTING RF CONCEALED CHIMNEY

PROPOSED AT&T RF CONFINEMENT MODIFICATION TO REPLACE EXISTING RF CONFINEMENT CHIMNEY (TYP. OF (1) PER SECTOR, (3) SECTORS TOTAL) (SEE SHEETS S2-S5)



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No.	Submit / Revision	App'd	Date
Drawn:	BMV	Date:	01/29/18
Designed:	ASW	Date:	01/29/18
Checked:	AJO	Date:	01/29/18

Project Number: 499-006

Project Title:  
SOMERVILLE 175  
BEACON STREET  
MAL02269  
FA# 10133869  
175 BEACON STREET  
SOMERVILLE, MA 02143

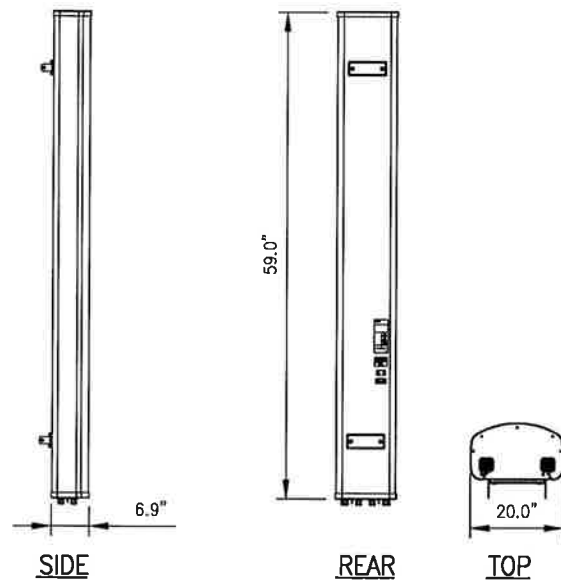
Prepared For:



Drawing Scale:  
AS NOTED  
Date:  
03/05/18  
CD

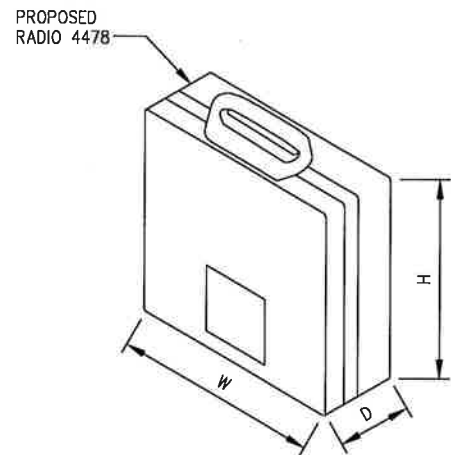
Drawing Title:  
ANTENNA  
ORIENTATION  
PLAN

Drawing Number:  
C5



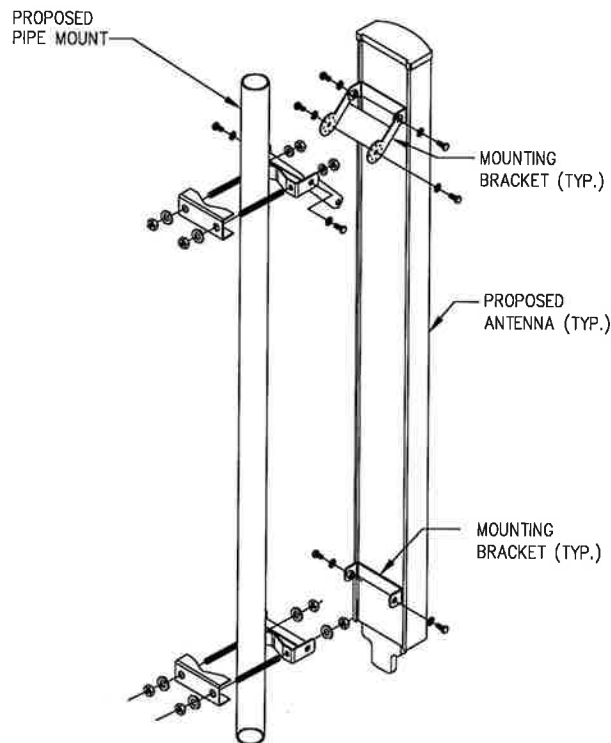
KATHREIN MODEL NO.: 800-10964	
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(59.0"x20.0"x6.9")
WEIGHT, W/	
PRE-MOUNTED BRACKETS:	83.8 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL  
NOT TO SCALE

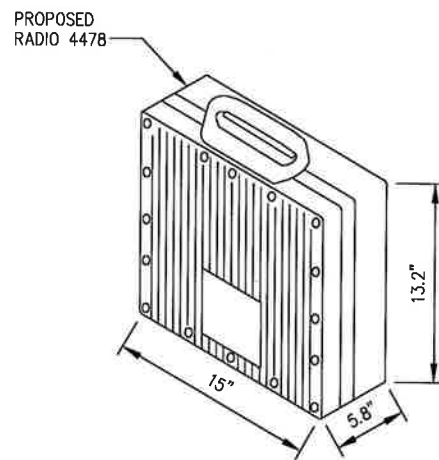


RADIO 4478 SPECIFICATIONS	
• HxWxD, (INCHES) :	TBD
• WEIGHT (LBS) :	59.5
• COLOR :	GRAY
• MOUNTING BRACKET:	WALL

4 ERICSSON RADIO 4478 DETAIL  
NOT TO SCALE

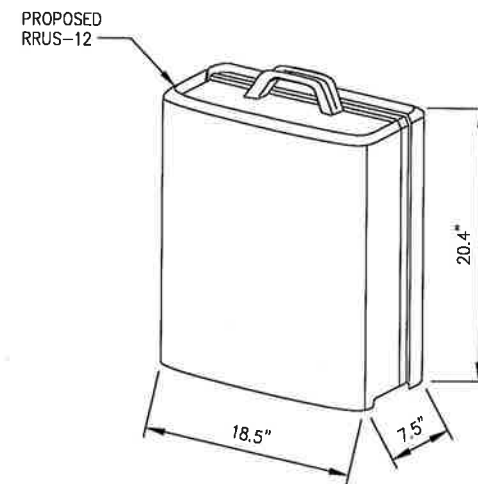


2 ANTENNA MOUNTING DETAIL  
NOT TO SCALE



RADIO 4426-B66 SPECIFICATIONS	
• HxWxD, (INCHES) :	15"x13.2"x5.8"
• WEIGHT (LBS) :	48.5
• COLOR :	GRAY

5 ERICSSON 4426-B66 DETAIL  
NOT TO SCALE



RRUS-12 SPECIFICATIONS	
• HxWxD, (INCHES) :	20.4"x18.5"x7.5"
• WEIGHT (LBS) :	57.9
• COLOR :	GRAY

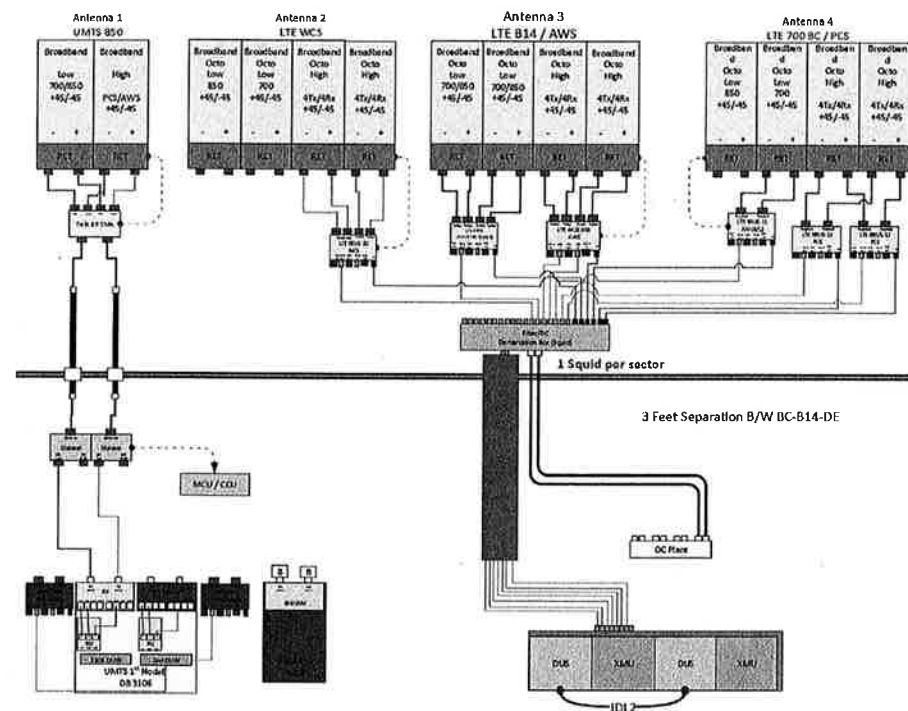
3 ERICSSON RRUS-12 DETAIL  
NOT TO SCALE

INFINIGY

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Albany, NY 12205  
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Fax # (518) 890-0793

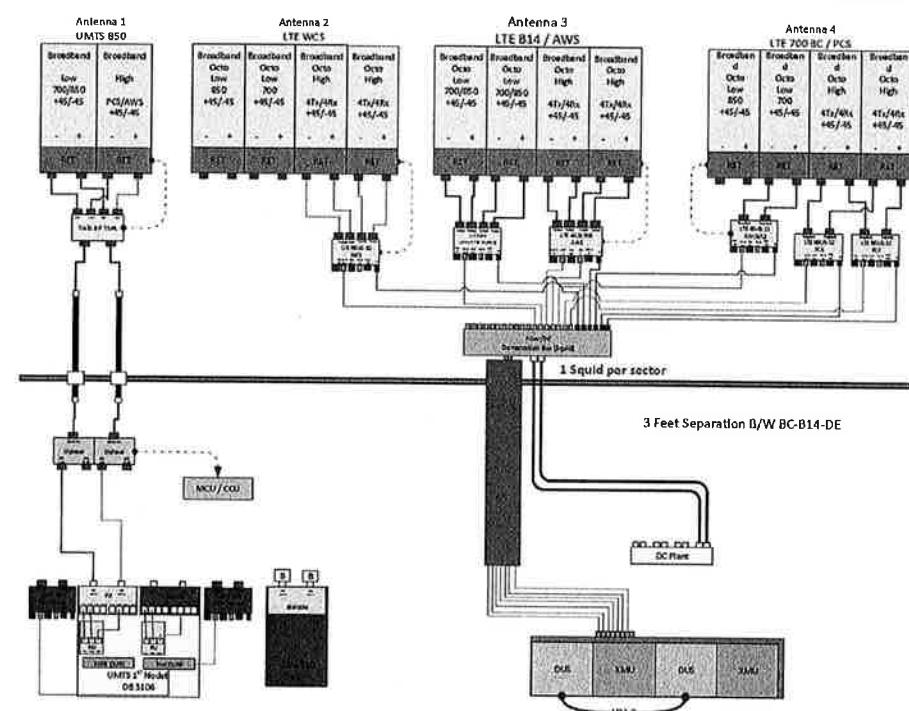
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0	ISSUED FOR REVIEW	BMW	01/29/18		
No	Submittal / Revision	App'd	Date		
Drawn:	BMW	Date:	01/29/18		
Designed:	ASW	Date:	01/29/18		
Checked:	AJD	Date:	01/29/18		
Project Number: 499-006					
Project Title: SOMERVILLE 175 BEACON STREET MAL02269 FA# 10133869 175 BEACON STREET SOMERVILLE, MA 02143					
Prepared For: smartlink					
Drawing Scale:	AS NOTED	CD			
Date:	03/05/18				
Drawing Title: EQUIPMENT DETAILS					
Drawing Number: C6					

Diagram - Sector A  
 Diagram File Name: MAL02269\_A\_B14\_AWS\_PCS\_REV2.rvt  
 Alt Site Name: MAL02269  
 Location Name: SOMERVILLE 175  
 BEACON ST  
 Market: BOSTON  
 Market Cluster: NEW ENGLAND  
 Comments: \*Important Note: For detailed radio to antenna wiring refer to the latest 4TAR Antenna radio Port connections Field Notice (RFL-INV-2016-365)



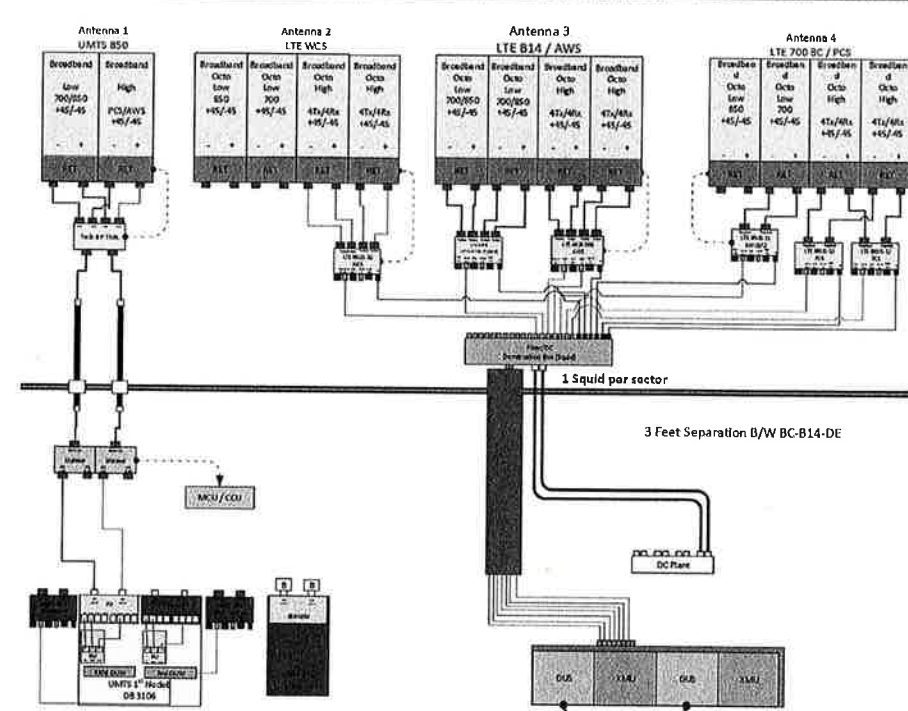
ALPHA SECTOR

Diagram - Sector A  
 Diagram File Name: MAL02269\_A\_B14\_AWS\_PCS\_REV2.rvt  
 Alt Site Name: MAL02269  
 Location Name: SOMERVILLE 175  
 BEACON ST  
 Market: BOSTON  
 Market Cluster: NEW ENGLAND  
 Comments: \*Important Note: For detailed radio to antenna wiring refer to the latest 4TAR Antenna radio Port connections Field Notice (RFL-INV-2016-365)



BETA SECTOR

Diagram - Sector A  
 Diagram File Name: MAL02269\_A\_B14\_AWS\_PCS\_REV2.rvt  
 Alt Site Name: MAL02269  
 Location Name: SOMERVILLE 175  
 BEACON ST  
 Market: BOSTON  
 Market Cluster: NEW ENGLAND  
 Comments: \*Important Note: For detailed radio to antenna wiring refer to the latest 4TAR Antenna radio Port connections Field Notice (RFL-INV-2016-365)



GAMMA SECTOR

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)  
 NOT TO SCALE

\*BASED ON LTE RFDS, DATED  
 11/23/2017, V2.00

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Drawn:	BWM	Date:	01/29/18
Designed:	ASW	Date:	01/29/18
Checked:	ADD	Date:	01/29/18

Project Number:  
 499-008

Project Title:  
 SOMERVILLE 175  
 BEACON STREET  
 MAL02269  
 FA# 10133869  
 175 BEACON STREET  
 SOMERVILLE, MA 02143

Prepared For:

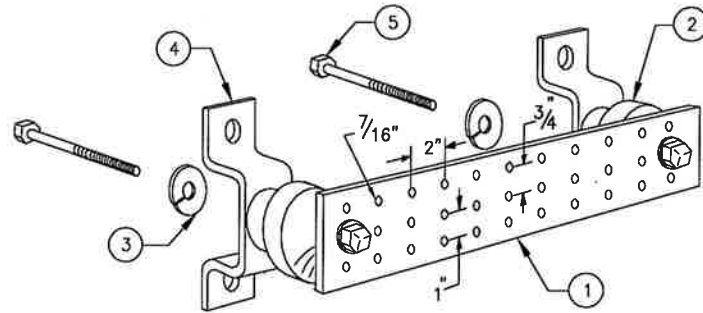


Drawing Scale:  
 AS NOTED  
 Date:  
 03/05/18

CD

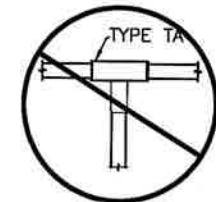
Drawing Title  
**PLUMBING  
 DIAGRAM**

Drawing Number  
**C7**

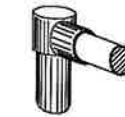


#### LEGEND

- 1 - SOLID TINNED COPPER GROUND BAR, 1/4" x 4" x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- 2 - INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
- 3 - 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
- 4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
- 5 - 5/8-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
- 6 - GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
- 7 - GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
- 8 - GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
- 9 - HARDWARE DIAMETER SHALL BE MINIMUM 3/8"



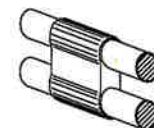
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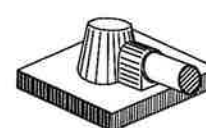
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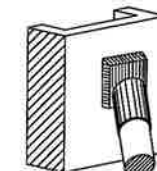
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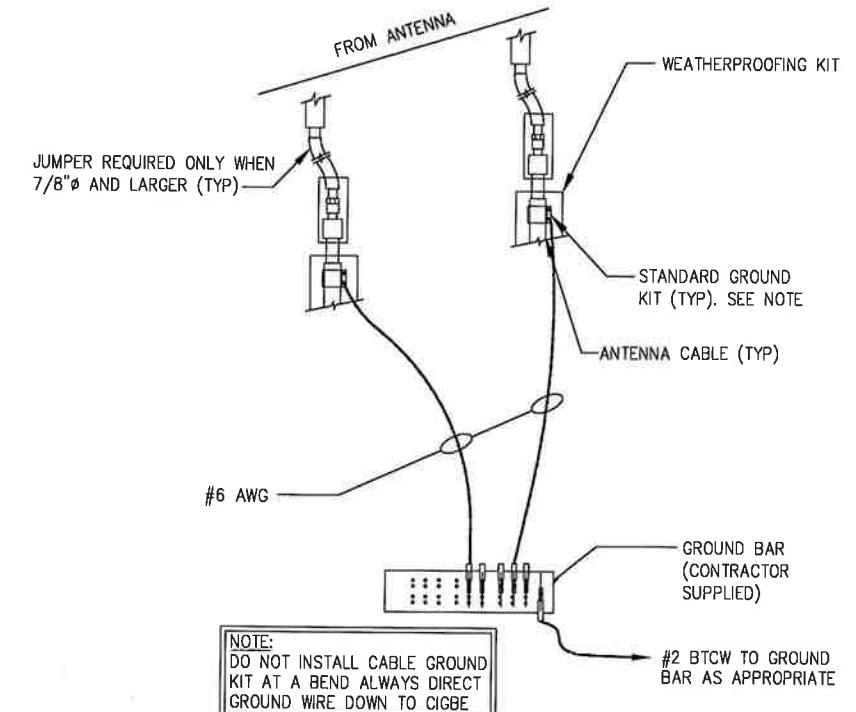
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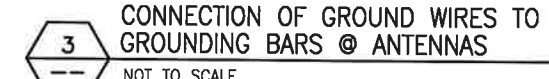
TYPE KA



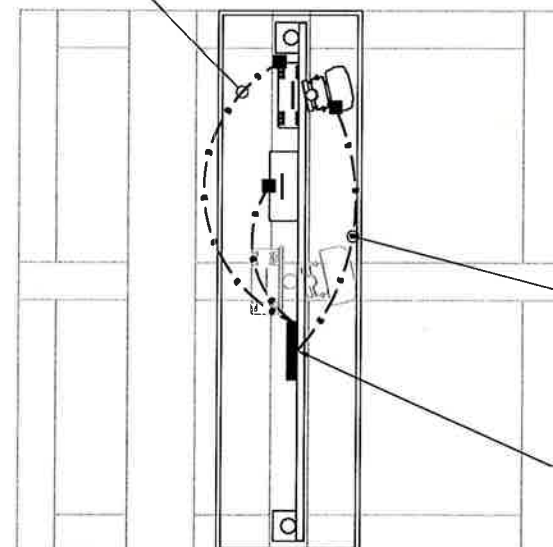
TYPE VS



NOTE:  
DO NOT INSTALL CABLE GROUND KIT AT A BEND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE



GROUND PROPOSED RRUs TO EXISTING GROUND BAR (TYP.) PER MANUFACTURER SPECS



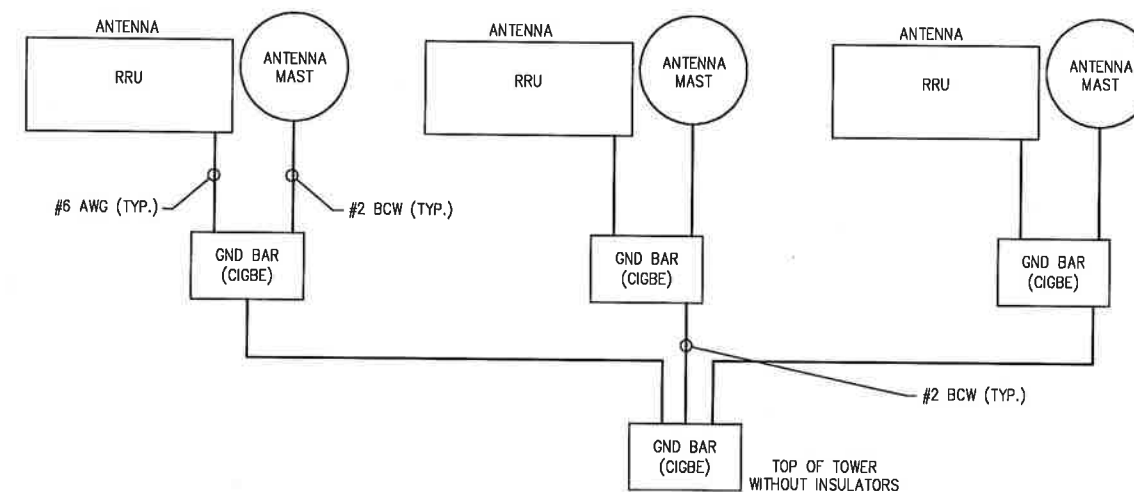
GROUND PROPOSED ANTENNA TO EXISTING GROUND BAR (TYP.) PER MANUFACTURER SPECS

EXISTING ANTENNA GROUND BAR (CONTRACTOR TO CONFIRM) (TYP.)



#### GROUNDING SYMBOLS

- COMPRESSION TYPE CONNECTION
- EXOTHERMIC WELD TYPE CONNECTION
- G — #2/0 BTS COPPER CONDUCTOR BURIED GROUND CABLE



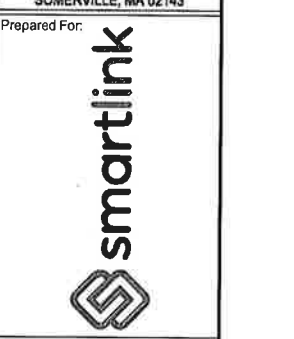
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Fax # (518) 690-0793



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499-006			

Project Title:  
**SOMERVILLE 175 BEACON STREET**  
**MAL02269**  
**FA# 10133869**  
175 BEACON STREET  
SOMERVILLE, MA 02143



Drawing Scale:  
AS NOTED  
Date:  
03/05/18

Drawing Title:  
**GROUNDING DETAILS**

Drawing Number:  
**C8**

# ANTENNA MOUNT DESIGN DRAWINGS

PREPARED BY:

## INFINIGY®

FROM ZERO TO INFINIGY  
the solutions are endless

MAL02269  
SOMERVILLE 175 BEACON STREET  
175 BEACON STREET  
SOMERVILLE, MA 02143

2/26/2018

INFINIGY JOB # 499-006



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**PROFESSIONAL SEAL**

IT IS A VIOLATION OF LAW FOR ANY PERSON,  
UNLESS THEY ARE ACTING UNDER THE  
DIRECTION OF A LICENSED PROFESSIONAL  
ENGINEER, TO ALTER THESE DOCUMENTS.

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
  - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
  - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
  - RECTANGULAR HSS TO BE A500, GRADE B. Fy=46 KSI, U.N.O.
  - ROUND HSS TO BE A500, GRADE B. Fy=42 KSI, U.N.O.
  - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
  - BOLTS TO BE A325-X. Fu=120 KSI, U.N.O.
  - U-BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
  - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
  - CMU BLOCK ANCHORS: ADHESIVE - HY120, U.N.O.
  - CONCRETE ANCHORS: ADHESIVE - HY150, U.N.O.
  - CONCRETE REBAR: ADHESIVE - RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE - CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE - CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH - CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
  - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
  - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
  - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
  - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
  - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

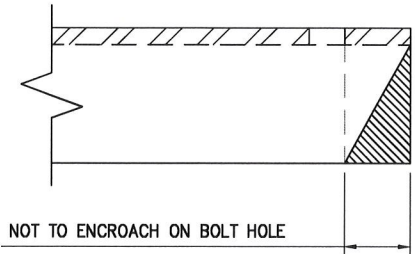
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

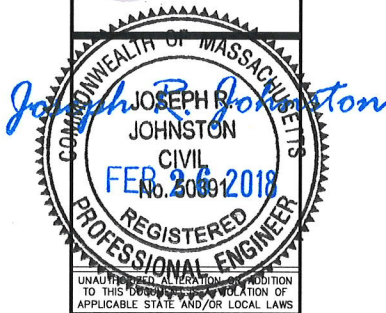
1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
  - a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
  - b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
  - c. MECHANICAL AND EPOXIED ANCHORAGES.
  - d. FIBER REINFORCED POLYMER.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



INFINIGY

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0	ISSUED FOR REVIEW	DSP	02/26/18
No	Submittal / Revision	App'd	Date
	DSP	Date:	02/26/18
	Designed: EB	Date:	02/26/18
	Checked: NRO	Date:	02/26/18
Project Number:			
499-006			

Project Title:  
**SOMERVILLE 175  
BEACON STREET**  
**MAL02269**  
**FA# 10133869**  
175 BEACON STREET  
SOMERVILLE, MA 02143

Prepared For:



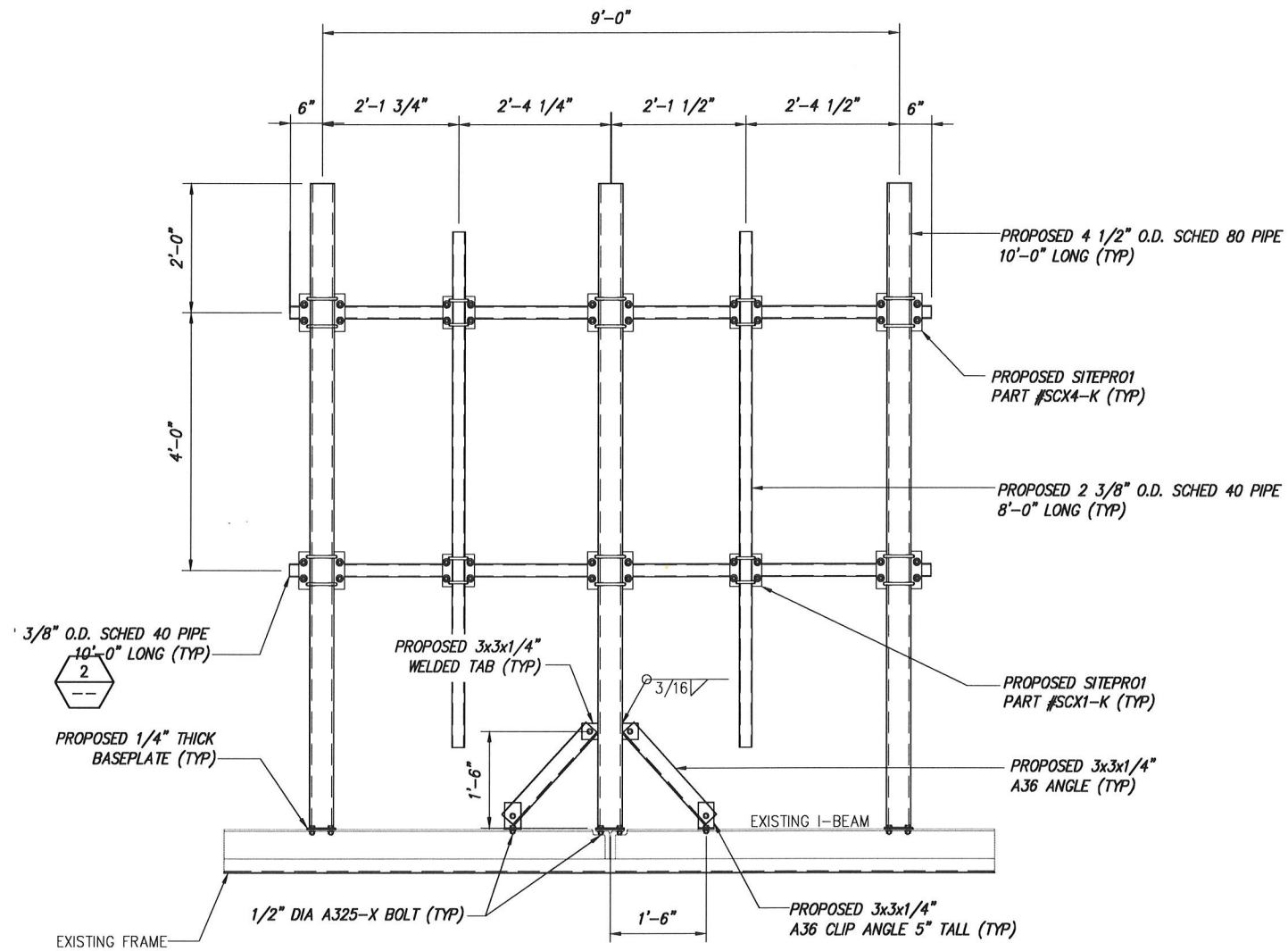
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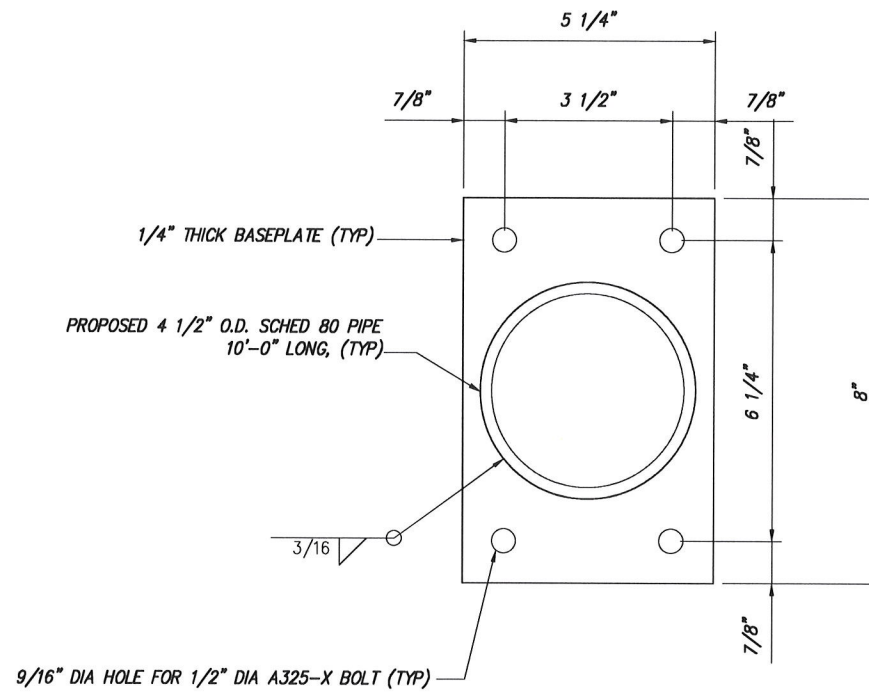
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**NOTE: BALLAST FRAME REQUIRE MINIMUM (30) 16x8x8 CMU BLOCKS (TYP. 3 SECTORS)**



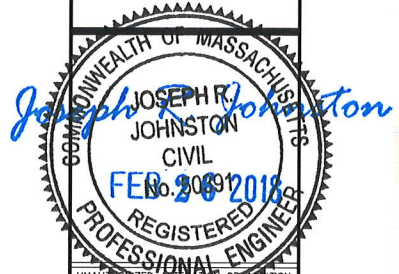
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2 BASEPLATE DETAIL  
-- SCALE: NOT TO SCALE

**INFINIGY**<sup>®</sup>  
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Designed: <u>        EB        </u> Date: <u>02/26/18</u>			
Checked: <u>        NRO        </u> Date: <u>02/26/18</u>			

Project Number:

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**SOMERVILLE 175  
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**FA# 10133869**  
**175 BEACON STREET**  
**SOMERVILLE, MA 02143**

Prepared For:



Drawing Scale:	
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AS NOTED

Date: 2/26/18

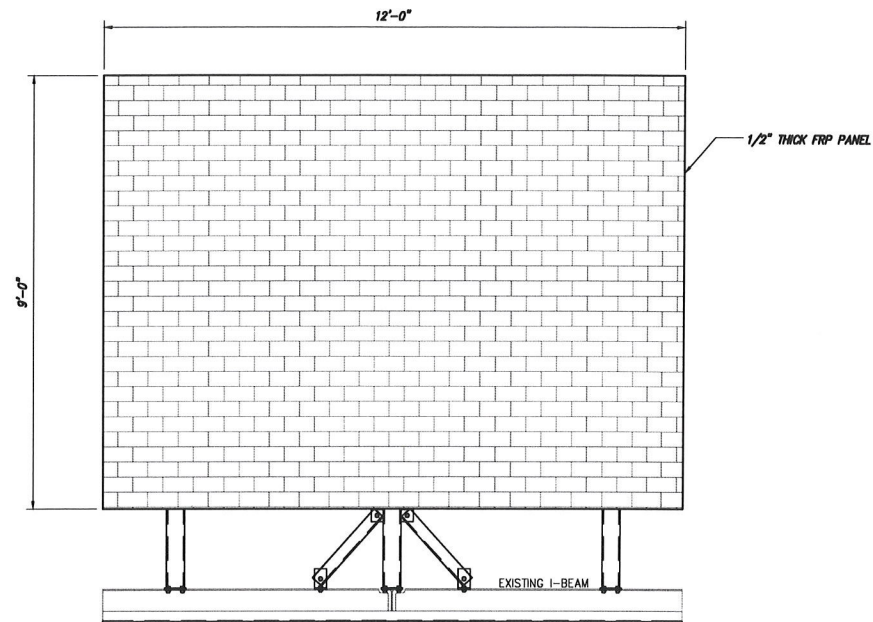
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## ELEVATIONS

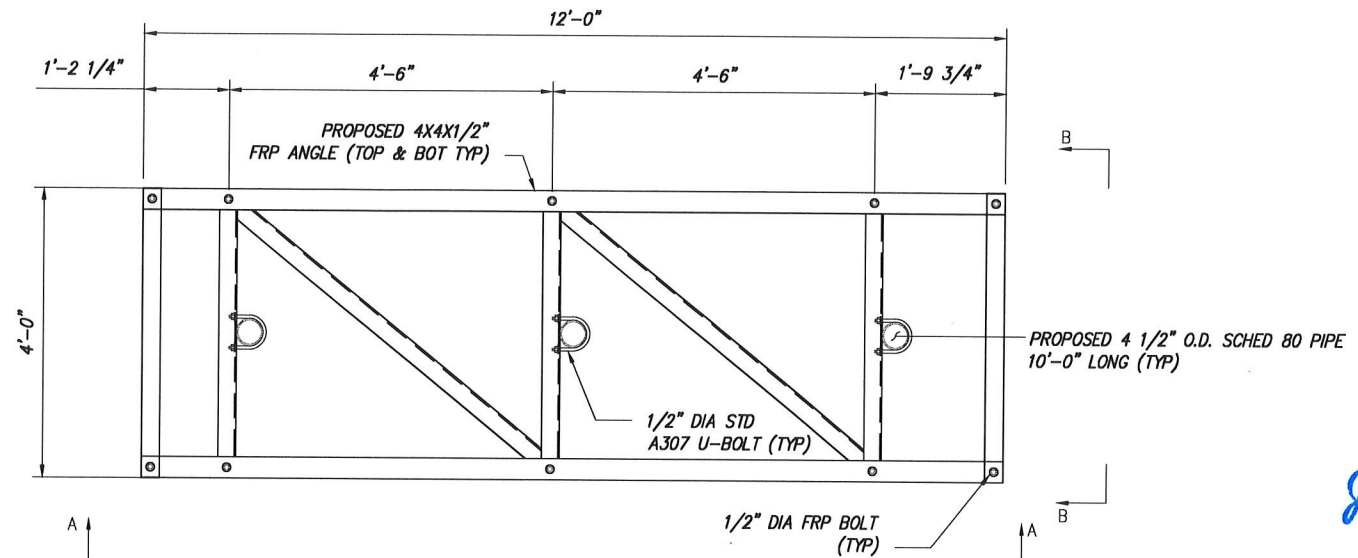
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S4

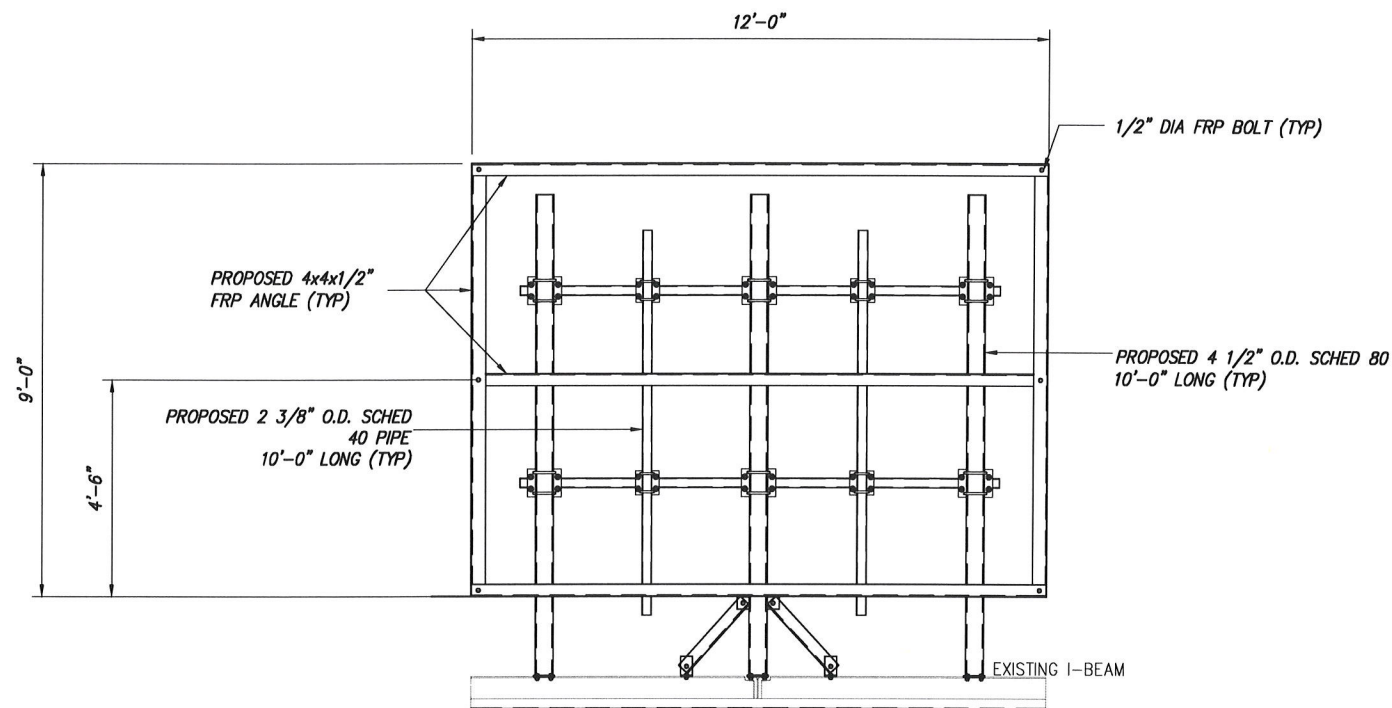
NOTE: BALLAST FRAME REQUIRE MINIMUM (30)  
16x8x8 CMU BLOCKS (TYP. 3 SECTORS)



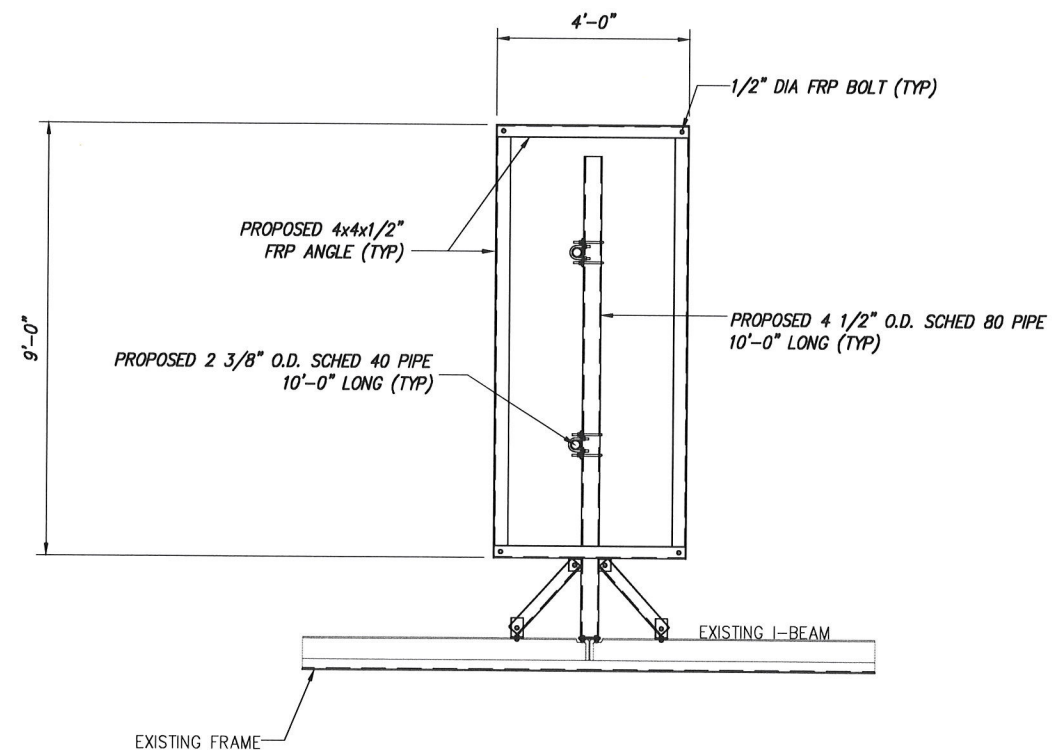
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2 PLAN VIEW  
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3 SECTION A-A  
SCALE: NOT TO SCALE



4 SECTION B-B  
SCALE: NOT TO SCALE

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SOMERVILLE, MA 02143

Prepared For:



Drawing Scale:

AS NOTED

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Date:

02/26/18

Drawing Title

FRP SCREEN  
ELEVATIONS

Drawing Number

S5