2





UNION SQUARE PARCEL D3.1

THOROUGHFARE PLANS **50 WEBSTER AVENUE** SOMERVILLE, MASSACHUSETTS



COVER SHEET AND LOCUS MAP SUBDIVISION PLAN OF LAND LAYOUT & MATERIALS PLAN GRADING, DRAINAGE & UTILITIES PLAN CONSTRUCTION DETAILS CONSTRUCTION DETAILS CONSTRUCTION DETAILS
CONSTRUCTION DETAILS CONSTRUCTION DETAILS
ILLUSTRATIVE SITE PLAN
LIGHTING PHOTOMETRIC PLAN



Client Union Square Station Ass 30 Union Square Somerville, MA 02143

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Building Code Consulting
Code Red Consultants

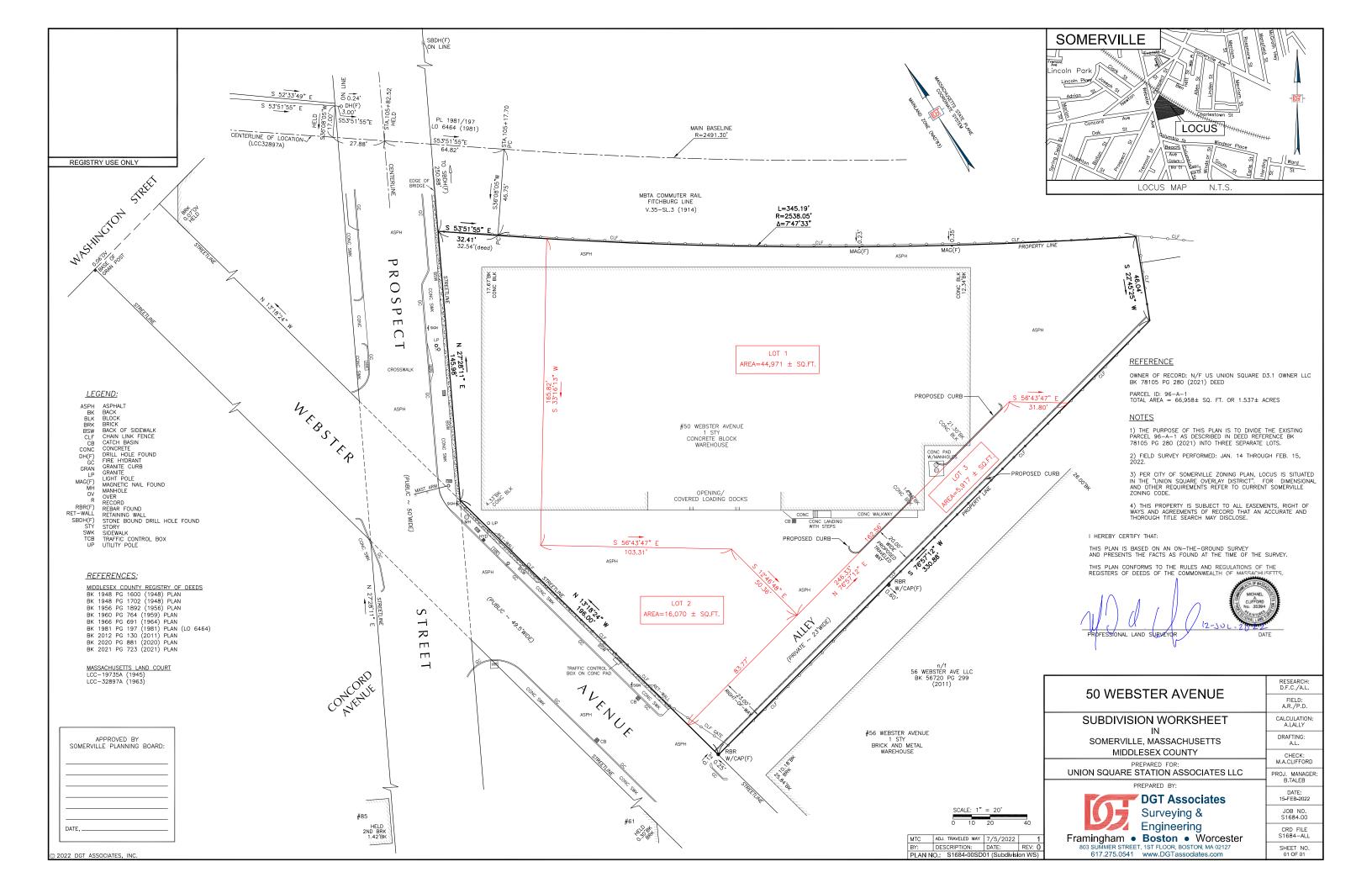


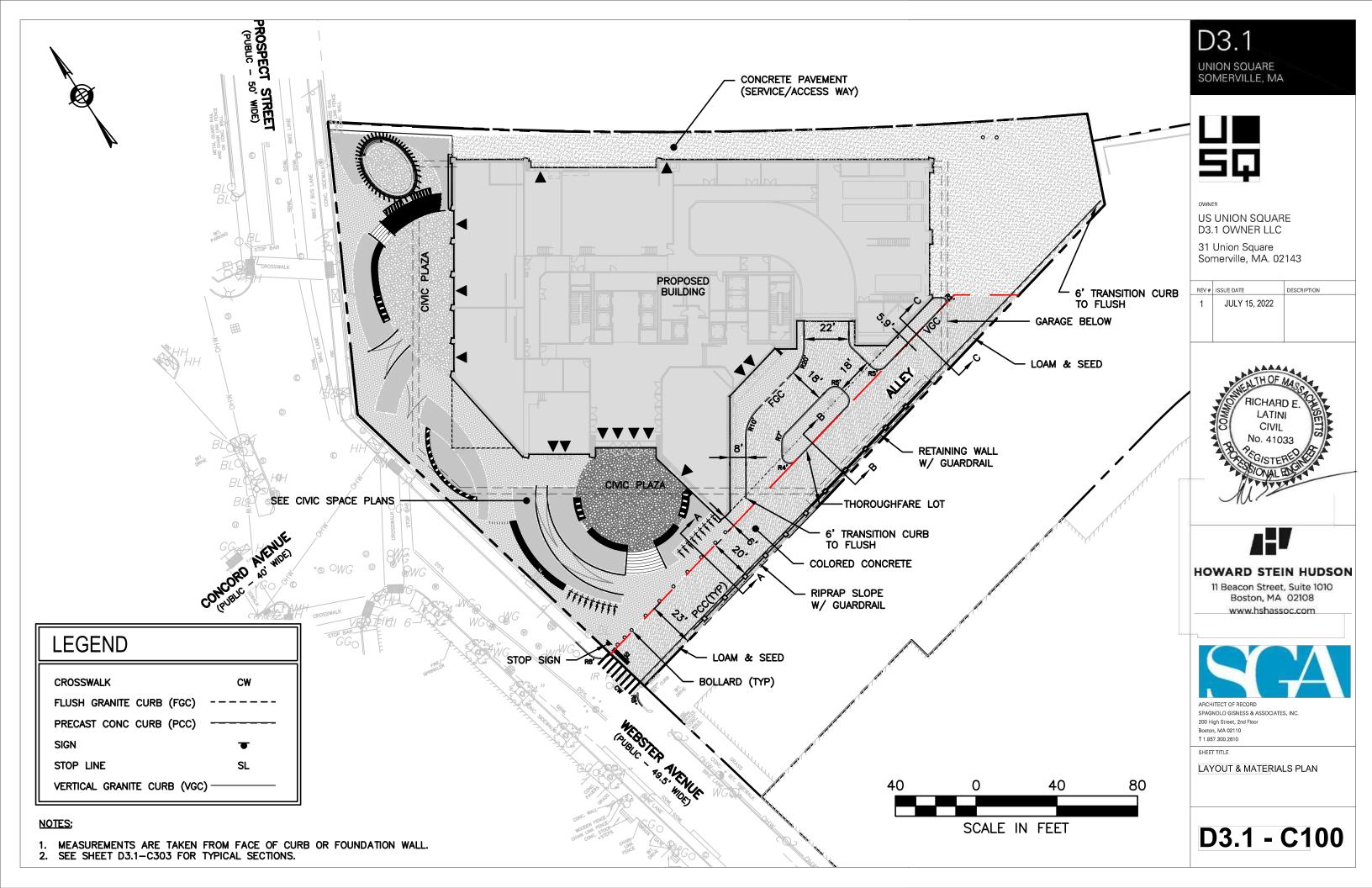
50 Webster Avenue Somerville, MA 02143

SHEET TITLE:

COVER SHEET AND LOCUS MAP

C-000







- ERAL NOTES

 EXISTING TOPOGRAPHIC, PROPERTY LINE AND UTILITY INFORMATION SHOWN IS BASED ON A PLAN

 ENTITLED "TOPOGRAPHIC PLAN, 600 WINDSOR PLACE, LOCATED IN SOMERVILLE, MASSACHUSETTS, SURVEYED FOR UNION SQUARE STATION ASSOCIATES

 LLC (US2)", DATED 7/19/2021 PREPARED BY DESIGN CONSULTANTS, INC. OF SOMERVILLE, MA. THE ACCURACY AND COMPLETENESS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK, AT LEAST 72 HOURS BEFORE EXCAVATION BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT (BAB)344-7233.

 1. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTITUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER.

 1. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLIDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, (SEE CHAPTER 370, ACTS OF 1983, MASSACHUSETTS) PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BECKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAYING.

 5. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.

 6. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED OR REMOVED & DISPOSED.

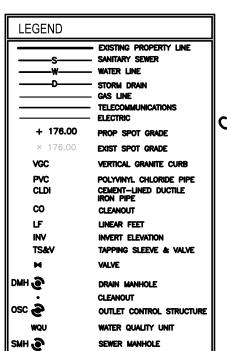
 7. THE CONTRACTOR SHALL BUSINGE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AT HIS OWN EXPENSE, OUTSIDE OF THE PROLECT LIMITS.

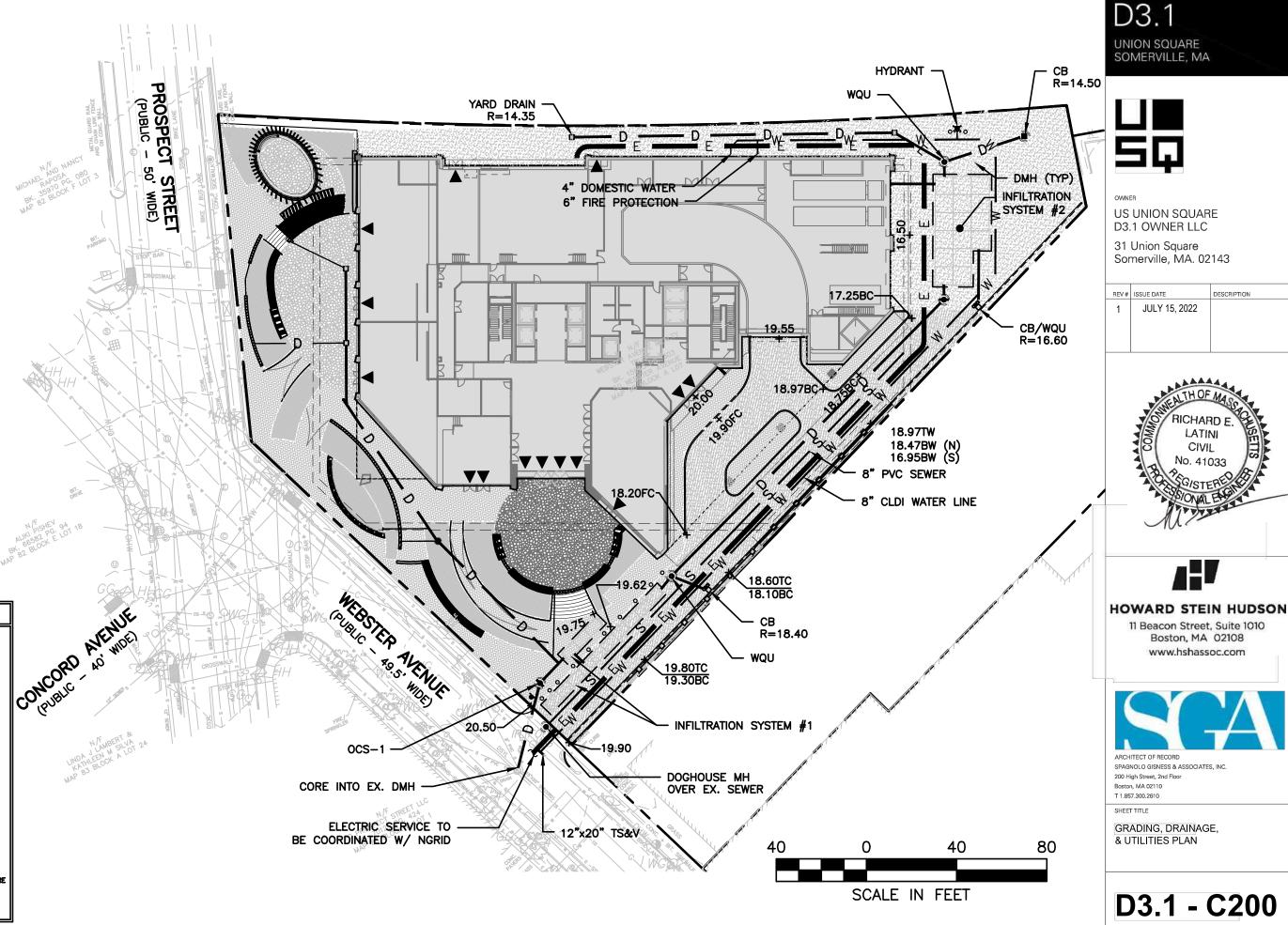
 8. ALL WATER, SEWER, AND DRAIN WORK SHALL BE PROFORMED ACCORDING TO THE RECURREMENTS AND STANDARD DETAILS OF THE CITY OF SOMEWITH. EVEN EXPERS WERE AND STOND DRAIN SMUST BE A MINIMUM OF 10 FEET APART FROM ANY NEW OR EXISTING WATER SERVER AND STOND BRANS MUST BE A MINIMUM OF 10 FEET APART FROM ANY NEW OR EXISTING WATER SERVICES.

 11. PIPE MATERIALS (UNLESS OTHERWISE NOTED)

 STORM DRAIN: SOR-35 PVC SANTARY SEWER AND STOND STORM DRAIN SUST OF CONTROLED.

- WATER PIPE: CLDI CLASS 56 (ZINC COATED)





EROSION & SEDIMENT CONTROL NOTES:

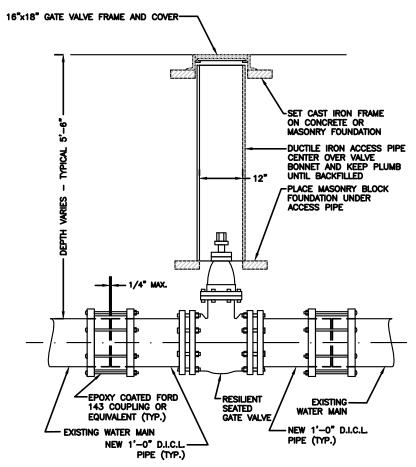
- EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND MAINTAINED AND UPGRADED AS NECESSARY DURING CONSTRUCTION BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND INSTALL ADDITIONAL CONTROL MEASURES AS NEEDED DURING CONSTRUCTION.
- ALL CATCH BASINS RECEIVING DRAINAGE FROM THE PROJECT SITE MUST BE PROVIDED WITH A CATCH BASIN FILTER.
- STABILIZATION OF ALL RE-GRADED AND SOIL STOCKPILE AREAS MUST BE MAINTAINED
- STABILIZATION OF ALL TRE-GRADED AND SOIL STOCKFILE AREAS MUST BE MOUTHFRIED DURING ALL PHASES OF CONSTRUCTION.

 SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROL DEVICES MUST BE PROPERLY REMOVED AND DISPOSED. ALL DAMAGED CONTROLS MUST BE REMOVED AND REPLACED. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL METABLES AND ADDITION BUT OF THE MEASURES, INFORMING ALL PARTIES ENCAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER CITY AGENCY
- OF ANY TRANSFER OF THIS RESPONSIBILITY.

 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING WIND EROSION AND DUST THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL MAY INCLUDE, BUT IS NOT LIMITED TO, SPRINKLING OF WATER ON EXPOSED SOILS AND STREET SWEEPING ADJACENT ROADWAYS
- 7. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN 21 DAYS AFTER LAND DISTURBANCE ACTIVITIES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZED SOILS WITHIN 14 DAYS OF THE LAST DISTURBANCE. IF A DISTURBED AREA WILL BE EXPOSED FOR GREATER THAN ONE YEAR, PERMANENT
- GRASSES OR OTHER APPROVED COVER MUST BE INSTALLED.

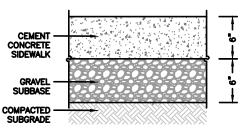
 THE CONTRACTOR MUST KEEP ON—SITE AT ALL TIMES ADDITIONAL FILTER BERMS AND/OR SILT FENCE FOR THE INSTALLATION AT THE DIRECTION OF THE ENGINEER TO MITIGATE ANY
- EMERGENCY CONDITION.

 10. THE CONSTRUCTION FENCING AND EROSION AND SEDIMENT CONTROLS AS SHOWN MAY NOT BE PRACTICAL DURING ALL STAGES OF CONSTRUCTION. EARTHWORK ACTIVITY ON—SITE MUST BE DONE IN A MANNER SUCH THAT RUNOFF IS DIRECTED TO A SEDIMENT CONTROL DEVICE OR INFILTRATED TO THE GROUND.
- 11. DEMOLITION AND CONSTRUCTION DEBRIS MUST BE PROPERLY CONTAINED AND DISPOSED
- 12. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE HAULED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.



1. ALL EXCAVATION AND BACKFILLING AND PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF BOSTON REQUIREMENTS.

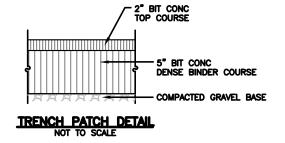
TYPICAL GATE VALVE INSTALLATION NOT TO SCALE

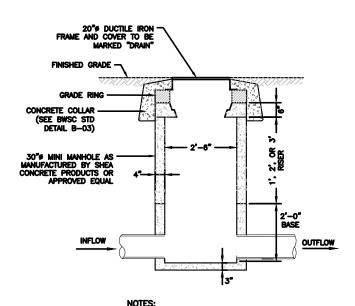


NOTES:

- CONCRETE SIDEWALK DETAIL AND NOTES APPLY TO SIDEWALK WITHIN THE RIGHT-OF-WAY.
- CONCRETE SHALL BE 4,000 PSI.
- SIDEWALKS ARE TO BE RAKED FINISH WITH 3/8 INCH TROWEL JOINTS

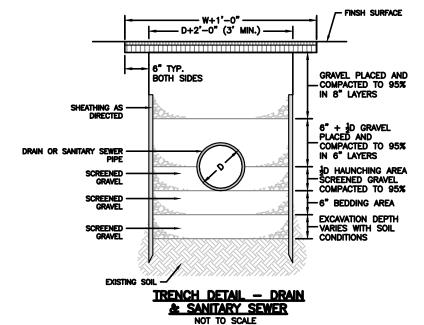
CEM CONC SIDEWALK SECTION DETAIL

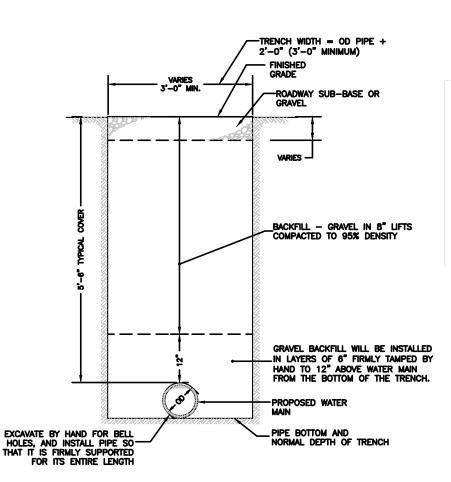




- 1. CONCRETE: 5000 PSI MINIMUM AFTER 28 DAYS.
- 2. DESIGNED FOR H-20 LOADING.

MINI MANHOLE





TRENCH DETAIL - WATER MAIN (A-05)

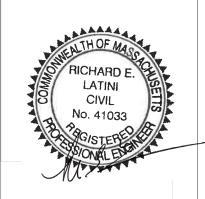
D3.1 UNION SQUARE SOMERVILLE, MA



US UNION SQUARE D3.1 OWNER LLC

31 Union Square Somerville, MA. 02143

REV # ISSUE DATE 05/12/2022 Thoroughfare Plans





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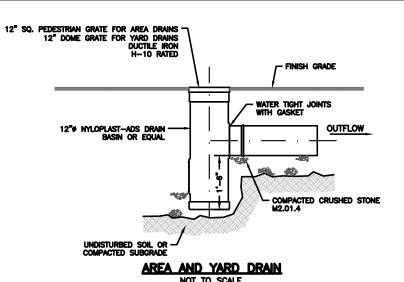
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T 1.857.300.2610

CONSTRUCTION DETAILS



SEE NOTE 2 -CONCRETE ANCHORS (8 PER METER) 4" MIN SIDES 4,000 PSI MIN CONC VIBRATED TO ELIMINATE AIR POCKETS COMPACTED SUBGRADE

NOTES:

1. TRENCH DRAIN ENVIRO—FLOW II, MODEL 9931 WITH ADA—COMPLIANT GRATE MODEL 9870—478—ADA OR APPROVED EQUAL

2. THE FINISH LEVEL OF THE CONCRETE SURROUND MUST BE APPROXIMATELY ** ABOVE THE TOP OF THE CHANNEL EDGE.

3. REFER TO MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE DETAILS

TABLE II - "a" DIMENSION - FEET

2 -•0

3 - 0

OTHERS

1 - 0

1 - 6

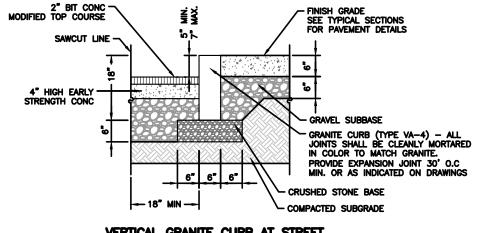
PIPE DIAMETER - INCHES 90° FITTING

6, 8, 10 & 12

16 & 20

24" - 30"

TRENCH DRAIN NOT TO SCALE



VERTICAL GRANITE CURB AT STREET NOT TO SCALE

| | | TABLE I - THRUST - KIPS (WATER PRESSURE = 200 P.S.I.) | | | | | | | | | |
|----------|----------------------|---|------|------|------|------|------|-------|-------|-------|-------|
| | E DIAMETER INCHES | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 42 |
| | EAD ENDS ND TEES | 5.6 | 10 | 15.8 | 22.6 | 40.2 | 62.8 | 90.4 | 141.0 | 203.6 | 277.0 |
| | 90° | 7.9 | 14.2 | 22.4 | 32.0 | 56.8 | 88.8 | 127.7 | 199.0 | 288.0 | 392.0 |
| NGS | 67 1/2° | - | 11.1 | 17.6 | 25.1 | 44.7 | 70.0 | 100.2 | 157.0 | 226.0 | 308.0 |
| FITTINGS | 56 1/4° | - | - | 14.9 | 21.2 | 37.9 | 59.2 | 85.1 | 133.0 | 192.0 | 261.0 |
| | 45° | - | - | - | 17.3 | 30.8 | 48.1 | 69.0 | 108.0 | 156.0 | 212.0 |
| ANGLE | 33 3/4° | - | - | - | 13.1 | 23.3 | 36.5 | 52.5 | 82.0 | 118.0 | 161.0 |
| ı | 22 1/2° | - | - | - | 8.8 | 15.7 | 24.5 | 35.2 | 55.0 | 79.5 | 108.0 |

DESIGN THRUST BLOCKS OR OTHER SUITABLE ANCHORAGE TO SUIT ACTUAL CONDITIONS

| FRAME AND COVER TO MARKED EITHER "SEW IN 3-INCH LETTERING | 'ER" OR "DRAIN" |
|--|---|
| | Concrete Collar -(see BWSC STD Detail B-03) Finished - Grade |
| 2'-0'DA.TYP. | - Grade Ring Precast concrete Sections To conform to astm-478, - Concrete of 4,000 PSI at 28 Days. Use top Slab Where REQUIRED |
| POLYPROPYLENE STEPS 12" O.C. MULTIPLES OF 2',3',0R4' | MASTIC GASKET, TYPICAL ALL _MANHOLE JOINTS FILL LIFTING HOLES WITH CONCRETE TYPICAL REINFORCEMENT, _WELDED WIRE FABRIC 6x6x4Wx4W |
| 6" MIN (2). 4'-0"MIN. (1) | - PRECAST REINFORCED CONCRETE MANHOLE BARRELS - SHELVE TO BE BRICKS LAID FLAT AT A SLOPE OF 1" PER FOOT (4) |
| 6*TYP.(3) | - Concrete fill - Invert to be inverted arch with Bricks laid as strechers and on edge |
| H= 10' OR LESS -#4 AT 18 EW MIDDEPTH H= 10' TO 20' -#4 AT 12 EW MIDDEPTH H= 20' TO 30' -#5 AT 12 EW MIDDEPTH IN ADDITION TO WELDED WIRE FABRIC | -6"SCREENED GRAVEL BEDDING |

- NOTES:

 1. 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS
 GREATER THAN 20 FEET OR WHEN ORDERED BY
 THE ENGINEER.

 2. 6 INCH MIN. WALL THICKNESS AND 7 INCH MIN.
 BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.

 3. 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED.
 CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED
 IN STORM DRAIN MANHOLES AS DIRECTED BY THE
 FINGINFFR.

PRECAST CONCRETE MANHOLE (B-02a) NOT TO SCALE

| REINFORCING STEEL EACH WAY THRUST BLOCK DI b = WIDTH d | | K DIMENSIONS d = DEPTH | CHART | | | |
|---|--|---|---|--|--|--|
| TYPE I TYPE II THRUST BLOCK | | | FOR DETERMINING REQUIRED CONCRETE THRUST BLOCK DIMENSIONS AND REINFORCING 140 120 120 100 90 90 70 100 90 90 90 90 100 10 | | | |
| SOIL TYPE SOIL TYPE B C A B C | 1 | | | | | |
| #5a12 SPECIAL DESIGN REQUIRED #9a12 #6a12 #6a12 #7a9 DO NOT USE #5a9 #1a12 DO NOT USE | 18-0 16-0 14-0 12-0 10-0 8-0 7-0 6-0 5-0 4-0 3-0 | 8-0 8-0 8-0 8-0 8-0 7-0 5-0 4-0 3-0 | 140 130 120 110 100 90 80 70 60 50 10 Type B Soil Type C Sound Shale Hard Pan Broken Bedrack except Shale | | | |

THRUST BLOCK DIMENSIONS (A-01c)

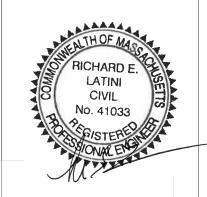
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US UNION SQUARE D3.1 OWNER LLC

31 Union Square Somerville, MA. 02143

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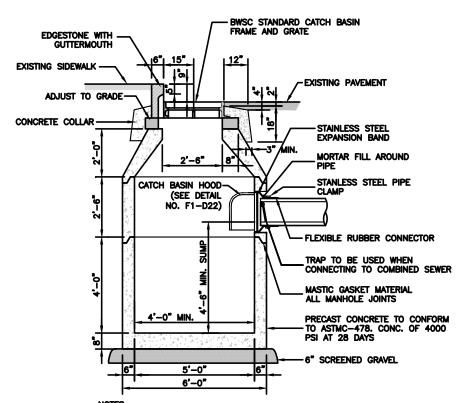


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T 1.857.300.2610

SHEET TITLE

CONSTRUCTION DETAILS



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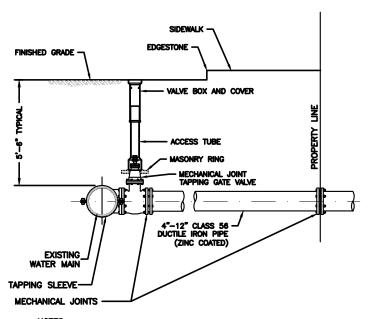
1. ADEQUATE FOR H-20 MINIMUM LOADING.

CATCH BASIN FRAME SHALL BE 3-FLANGE MEETING MASSDOT CATCH
BASIN FRAME E 201.6 OR APPROVED EQUAL IN ORDER TO
ACCOMMODATE STORM SACK FILTER. FRAME SHALL BE 4-FLANGE
WHERE NO INLET STONE IS SHOWN ON THE PLANS.

2. CATCH BASIN GRATE SHALL BE EAST JORDAN MODEL 5520M2 OR
APPROVED FOULD MEETING MASSDOT CATCH BASIN CRATE 5 201.10

APPROVED EQUAL MEETING MASSDOT CATCH BASIN GRATE E 201.10.

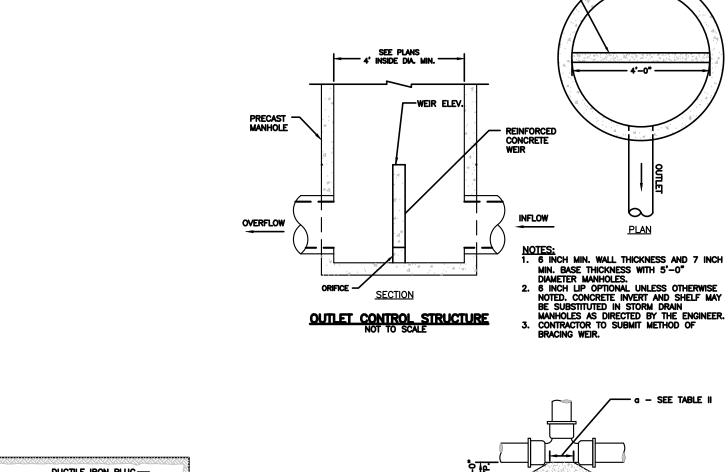
CATCH BASIN NOT TO SCALE

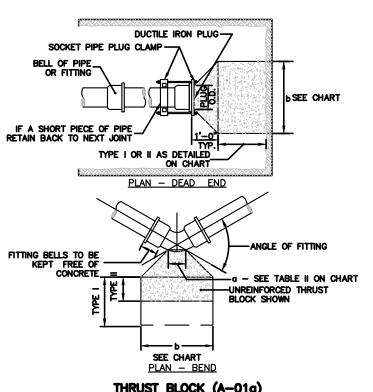


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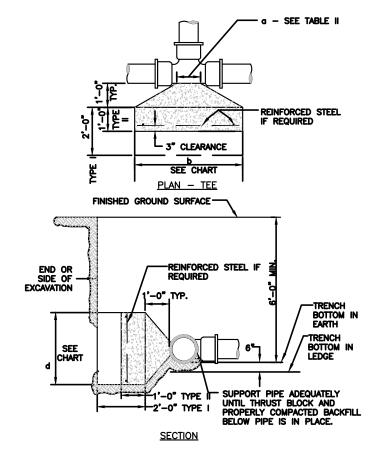
- 1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR CONCRETE THRUST BLUCK TO BE USED ONLY WHERE IT WILL BEA ON UNDISTURBED EARTH.
 USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
 SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.

TAPPING SLEEVE & VALVE (A-09) NOT TO SCALE





THRUST BLOCK (A-01a) NOT TO SCALE



THRUST BLOCK (A-01b)

REINFORCED CONCRETE WEIR

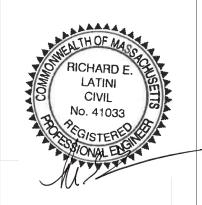
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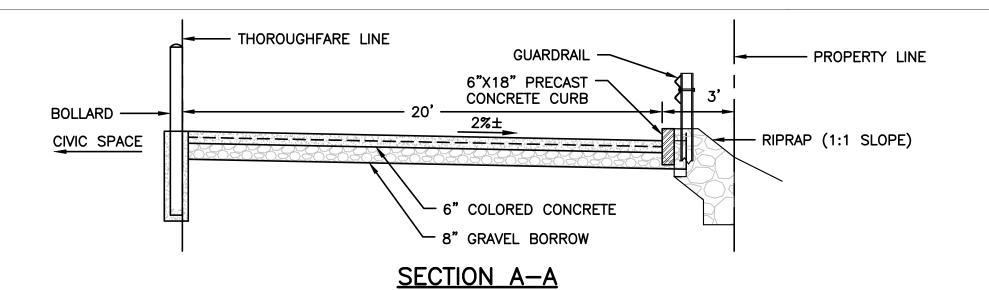
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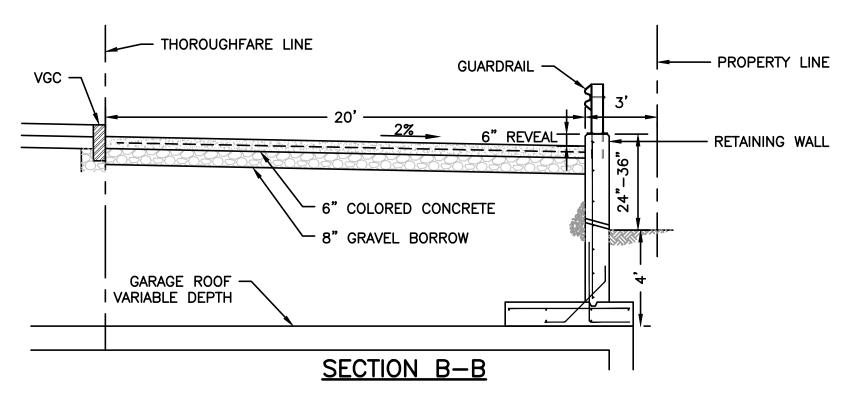


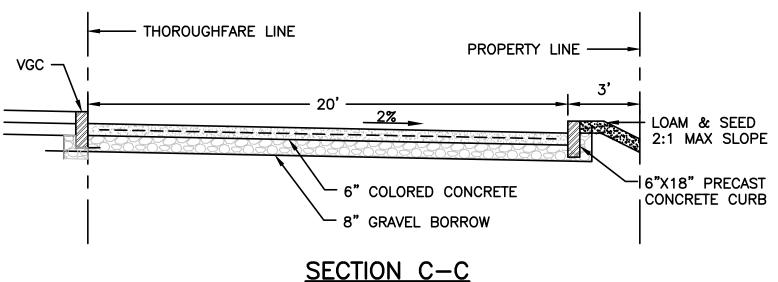
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CONSTRUCTION DETAILS







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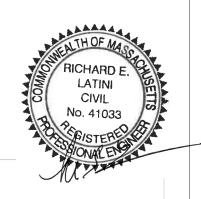


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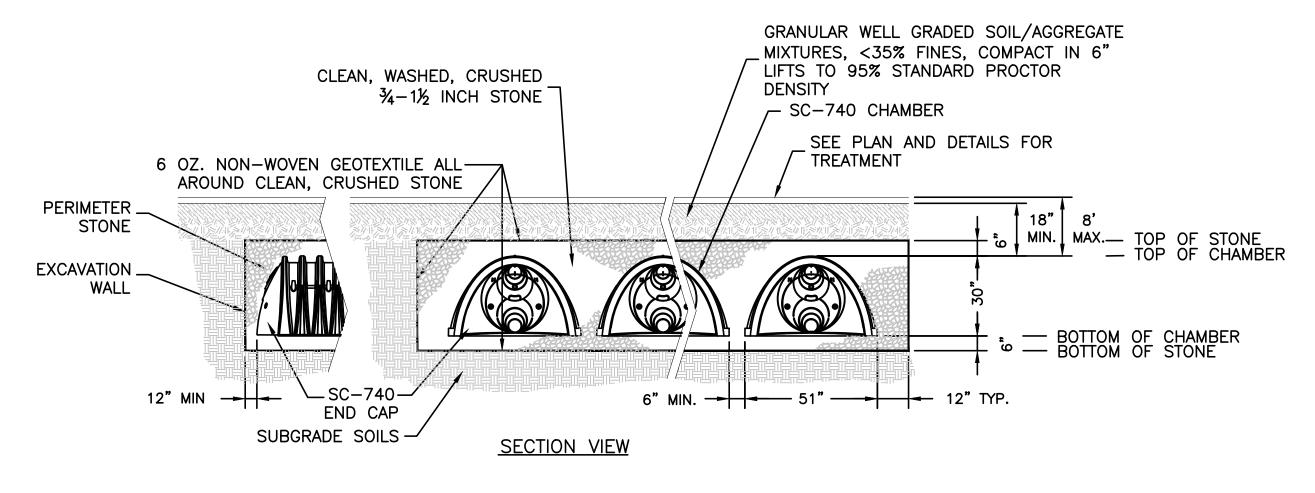
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SHEET TITLE

CONSTRUCTION DETAILS TYPICAL SECTIONS



SUBSURFACE INFILTRATION SYSTEM #1



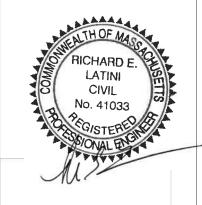


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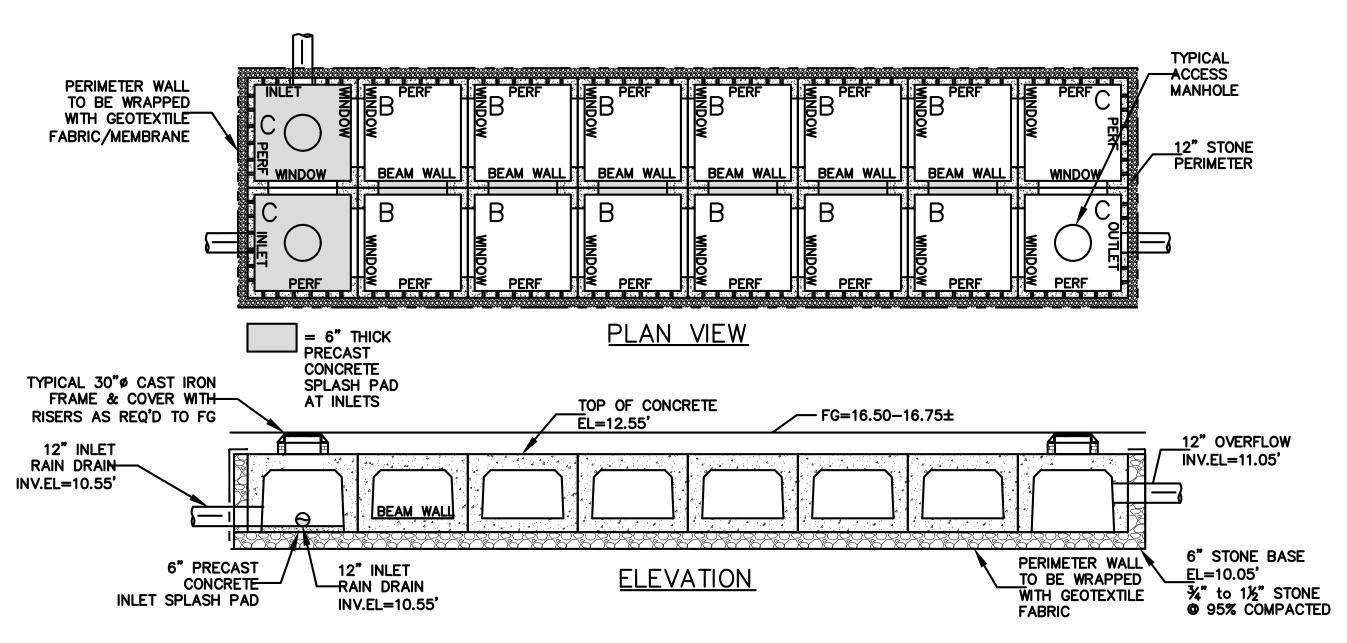


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CONSTRUCTION DETAILS



SUBSURFACE INFILTRATION SYSTEM #2
NOT TO SCALE



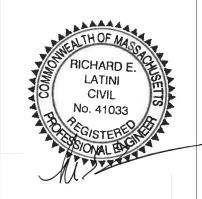


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CONSTRUCTION DETAILS







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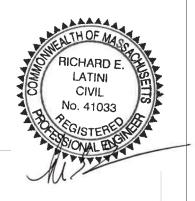


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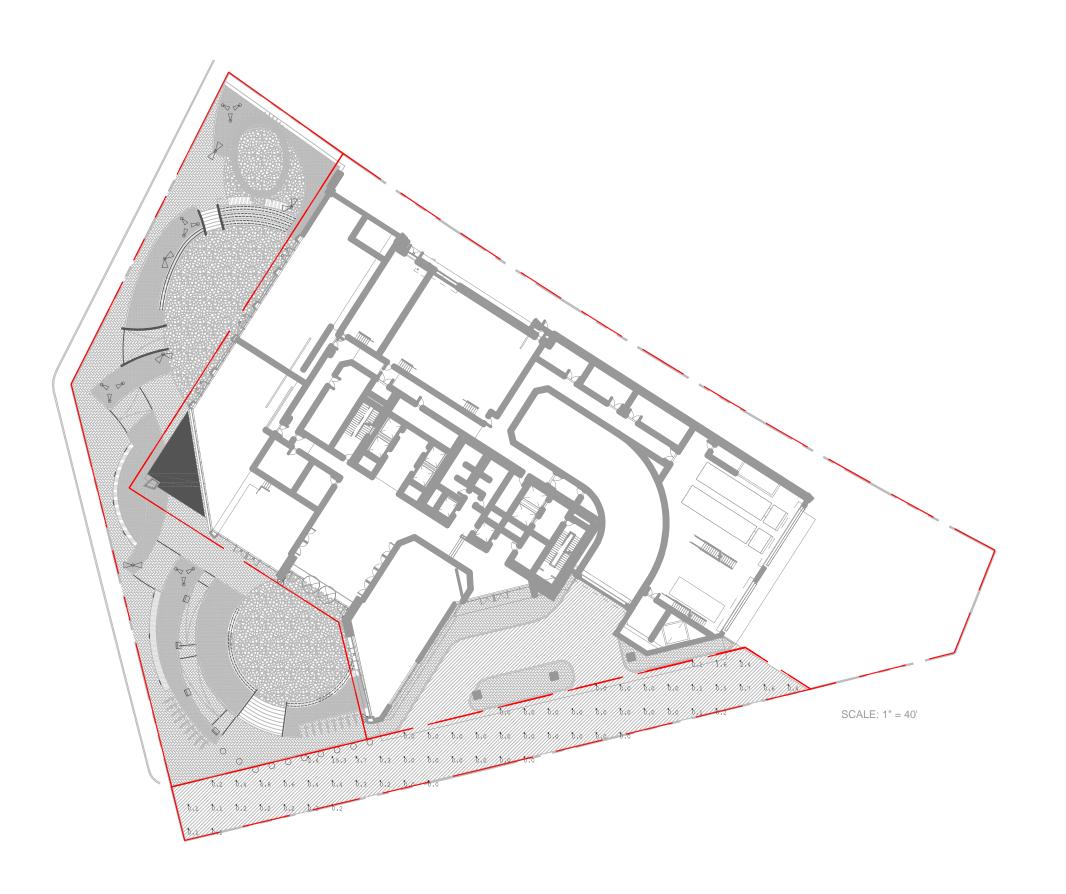


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SHEET TITLE

ILLUSTRATIVE SITE PLAN

SP-100



D3.1

UNION SQUARE
SOMERVILLE, MA

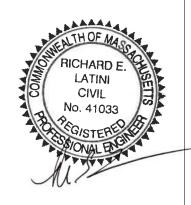


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THOROUGHFARE PHOTOMETRIC PLAN

LP-100