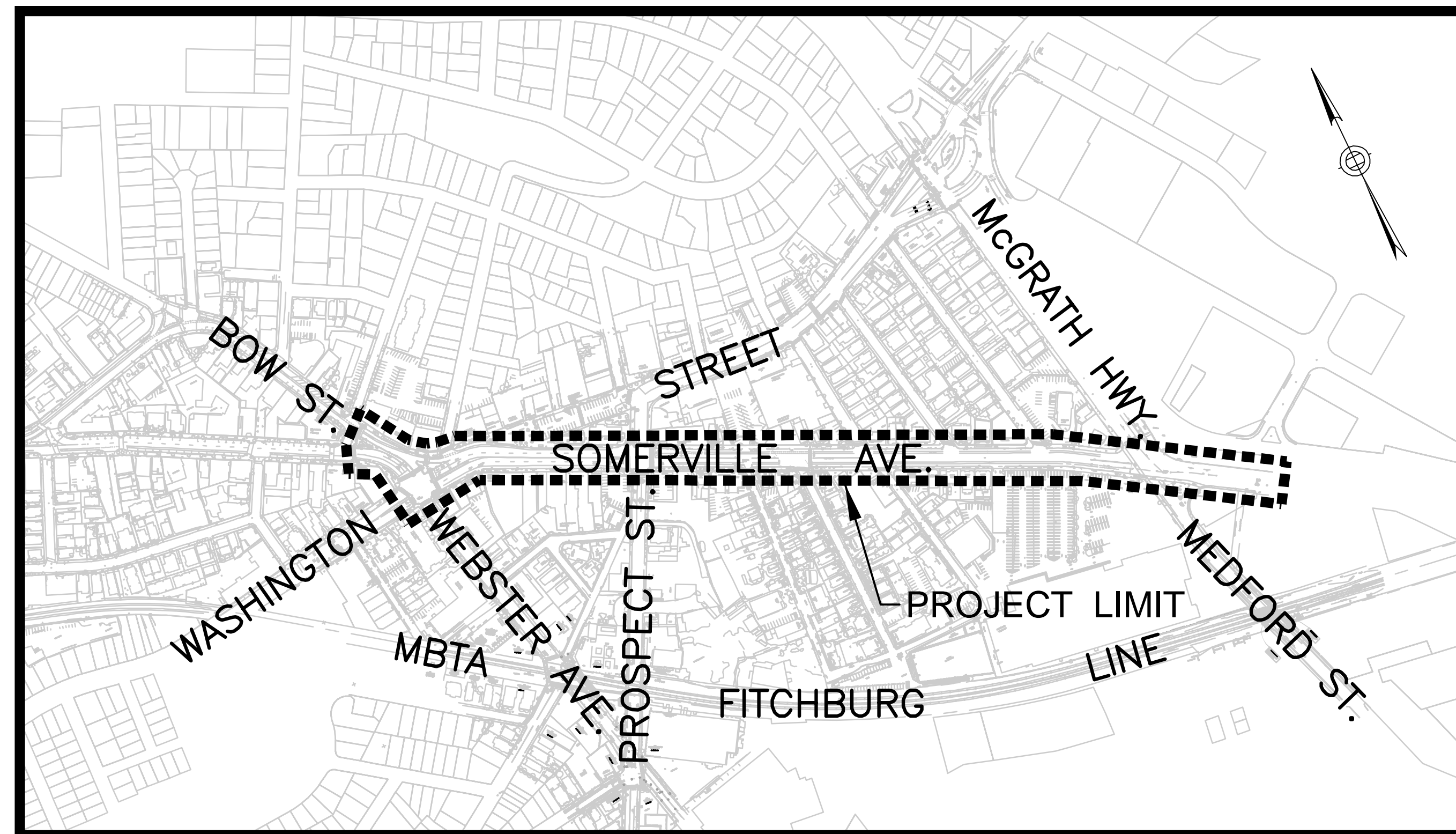


CITY OF SOMERVILLE
 UNION SQUARE UTILITY AND TRANSPORTATION IMPROVEMENTS
 CONSTRUCTION PACKAGES 2 & 3
 SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 IFB #18-24
 SOMERVILLE, MASSACHUSETTS



LOCUS MAP

SCALE: 1"=300'



WSP | PARSONS BRINCKERHOFF
 75 ARLINGTON STREET BOSTON, MA 02116
 Phone: (617) 426-7330, FAX: (617) 482-0642

STANTEC CONSULTING SERVICES, INC.
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TOOLE DESIGN GROUP, LLC
 33 BROAD STREET BOSTON, MA 02109
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BRYANT ASSOCIATES, INC.
 98 NORTH WASHINGTON STREET, SUITE B-1, BOSTON, MA 02114
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HATCH ASSOCIATES CONSULTANTS, INC.
 27 CONGRESS STREET, SUITE 508, SALEM, MA 01970
 Phone: (978) 740-0096, FAX: (412) 809-6611

BSI ENGINEERING, INC.
 100 HALLET STREET BOSTON, MA 02124
 Phone: (617) 265-4200, FAX: (617) 209-1297

PEER CONSULTANTS, PC
 99 SOUTH BEDFORD STREET BURLINGTON, MA 01803
 Phone: (781) 238-8880, FAX: (781) 238-8884

IRRIGATION CONSULTING, INC.
 4 HOTEL PLACE PEPPERELL, MA 01463
 Phone: (978) 433-8972, FAX: (978) 433-2788

VOLUME 2 OF 3
 DATE: Dec. 11, 2017

VOLUME 3 OF 3

TRAFFIC MANAGEMENT

TM-1	TRAFFIC MANAGEMENT - KEY PLAN
TM-2	TRAFFIC MANAGEMENT - GENERAL NOTES AND LEGEND
TM-3	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 1 OF 3
TM-4	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 2 OF 3
TM-5	TRAFFIC MANAGEMENT PLANS - TYPICAL DETAILS AND SECTIONS - SHEET 3 OF 3
TM-6 to TM-10	NOT USED
TM-9	ADVANCE WARNING VMS AND SIGNS LOCATION PLAN
TM-10	ADVANCE WARNING SIGN LOCATION PLAN
TM-11	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 1 OF 6
TM-12	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 2 OF 6
TM-13	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 3 OF 6
TM-14	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 4 OF 6
TM-15	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 5 OF 6
TM-16	TRAFFIC MANAGEMENT PLANS - EXISTING CONDITIONS - SHEET 6 OF 6
TM-17 to TM-31	NOT USED
TM-32	TRAFFIC SIGN SUMMARY - SHEET 1 OF 5
TM-33	TRAFFIC SIGN SUMMARY - SHEET 2 OF 5
TM-34	TRAFFIC SIGN SUMMARY - SHEET 3 OF 5
TM-35	TRAFFIC SIGN SUMMARY - SHEET 4 OF 5
TM-36	TRAFFIC SIGN SUMMARY - SHEET 5 OF 5
TM-37 to TM-46	NOT USED
TM-47	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 1 OF 3
TM-48	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 2 OF 3
TM-49	WATER MAIN REPLACEMENT TMP SEGMENT 1 SHEET 3 OF 3
TM-50	WATER MAIN REPLACEMENT TMP SEGMENT 2-1 SHEET 1 OF 3
TM-51	WATER MAIN REPLACEMENT TMP SEGMENT 2-1 SHEET 2 OF 3
TM-52	WATER MAIN REPLACEMENT TMP SEGMENT 2-1 SHEET 3 OF 3
TM-53	WATER MAIN REPLACEMENT TMP SEGMENT 2-2 SHEET 1 OF 1
TM-54	WATER MAIN REPLACEMENT TMP SEGMENT 2-3 SHEET 1 OF 1
TM-55	WATER MAIN REPLACEMENT TMP SEGMENT 2-4 SHEET 1 OF 1
TM-56	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 1 OF 3
TM-57	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 2 OF 3
TM-58	WATER MAIN REPLACEMENT TMP SEGMENT 3-1 SHEET 3 OF 3
TM-59	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 1 OF 3
TM-60	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 2 OF 3
TM-61	NOT USED
TM-62	WATER MAIN REPLACEMENT TMP SEGMENT 3-2 SHEET 3 OF 3
TM-63	WATER MAIN REPLACEMENT TMP SEGMENT 3-3 SHEET 1 OF 1
TM-64	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 1 OF 3
TM-65	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 2 OF 3
TM-66	WATER MAIN REPLACEMENT TMP SEGMENT 4-1 SHEET 3 OF 3
TM-67	WATER MAIN REPLACEMENT TMP SEGMENT 4-2 SHEET 1 OF 1
TM-68	WATER MAIN REPLACEMENT TMP SEGMENT 4-3 SHEET 1 OF 2
TM-69	WATER MAIN REPLACEMENT TMP SEGMENT 4-3 SHEET 2 OF 2
TM-70	WATER MAIN REPLACEMENT TMP SEGMENT 4-4 SHEET 1 OF 2
TM-71	WATER MAIN REPLACEMENT TMP SEGMENT 4-4 SHEET 2 OF 2
TM-72	WATER MAIN REPLACEMENT TMP SEGMENT 4-5 SHEET 1 OF 1
TM-73	WATER MAIN REPLACEMENT TMP SEGMENT 4-6 SHEET 1 OF 1
TM-74	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 1 OF 3
TM-75	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 2 OF 3
TM-76	WATER MAIN REPLACEMENT TMP SEGMENT 5-1 SHEET 3 OF 3
TM-77	WATER MAIN REPLACEMENT TMP SEGMENT 5-2 SHEET 1 OF 1
TM-78	WATER MAIN REPLACEMENT TMP SEGMENT 5-3 SHEET 1 OF 2
TM-79	WATER MAIN REPLACEMENT TMP SEGMENT 5-3 SHEET 2 OF 2
TM-80	WATER MAIN REPLACEMENT TMP SEGMENT 5-4 SHEET 1 OF 1
TM-81	WATER MAIN REPLACEMENT TMP SEGMENT 5-5 SHEET 1 OF 1
TM-82	WATER MAIN REPLACEMENT TMP SEGMENT 5-6 SHEET 1 OF 2
TM-83	WATER MAIN REPLACEMENT TMP SEGMENT 5-6 SHEET 2 OF 2
TM-84	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 1 OF 3
TM-85	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 2 OF 3
TM-86	WATER MAIN REPLACEMENT TMP SEGMENT 5-7 SHEET 3 OF 3
TM-87	WATER MAIN REPLACEMENT TMP SEGMENT 5-8 SHEET 1 OF 1
TM-88	WATER MAIN REPLACEMENT TMP SEGMENT 5-9 SHEET 1 OF 1
TM-89	WATER MAIN REPLACEMENT TMP SEGMENT 5-10 SHEET 1 OF 1
TM-90	WATER MAIN REPLACEMENT TMP SEGMENT 5-11 SHEET 1 OF 1
TM-91 to TM-110	NOT USED
TM-111	TRAFFIC MANAGEMENT PLAN - STAGE 1A - SHEET 1 OF 2
TM-112	TRAFFIC MANAGEMENT PLAN - STAGE 1A - SHEET 2 OF 2
TM-113	TRAFFIC MANAGEMENT - STAGE 1A - DETOUR PLAN
TM-114	UPSTREAM SEWER RELOCATION- STAGE 1A-2
TM-115	UPSTREAM SEWER RELOCATION- STAGE 1A-3
TM-116 to TM-120	NOT USED
TM-121	TRAFFIC MANAGEMENT PLAN - STAGE 1B
TM-122 to TM-124	NOT USED
TM-125	TRAFFIC MANAGEMENT - STAGE 1B - DETOUR PLAN

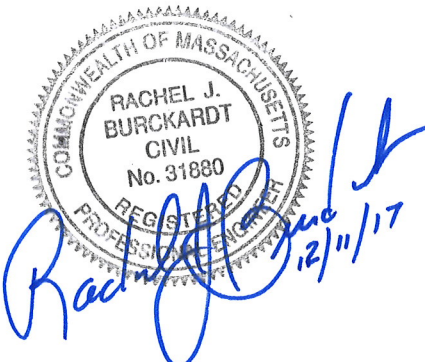
TRAFFIC MANAGEMENT (CONTINUED)

TM-126 to TM-130	NOT USED
TM-131	TRAFFIC MANAGEMENT PLAN - STAGE 1C - SHEET 1 OF 2
TM-132	TRAFFIC MANAGEMENT PLAN - STAGE 1C - SHEET 2 OF 2
TM-133 to TM-134	NOT USED
TM-135	TRAFFIC MANAGEMENT PLAN- STAGE 1D-1- SHEET 1 OF 2
TM-136	TRAFFIC MANAGEMENT PLAN- STAGE 1D-1- SHEET 2 OF 2
TM-137	TRAFFIC MANAGEMENT - STAGE 1D-1- DETOUR PLAN
TM-138	TRAFFIC MANAGEMENT PLAN- STAGE 1D-2
TM-139	TRAFFIC MANAGEMENT- STAGE 1D-2- DETOUR PLAN
TM-140	TRAFFIC MANAGEMENT PLAN- STAGE 1D-3
TM-141	NOT USED
TM-142	TRAFFIC MANAGEMENT PLAN- STAGE 1D-4- SHEET 1 OF 2
TM-143	TRAFFIC MANAGEMENT PLAN- STAGE 1D-4- SHEET 2 OF 2
TM-144	TRAFFIC MANAGEMENT- STAGE 1D-4- DETOUR PLAN
TM-145	TRAFFIC MANAGEMENT PLAN - STAGE 1D-5
TM-146 to TM-150	NOT USED
TM-151	TRAFFIC MANAGEMENT PLAN - STAGE 1E-1 - SHEET 1 OF 2
TM-152	TRAFFIC MANAGEMENT PLAN - STAGE 1E-1 - SHEET 2 OF 2
TM-153	TRAFFIC MANAGEMENT - STAGE 1E-1 - DETOUR PLAN - SHEET 1 OF 2
TM-154	TRAFFIC MANAGEMENT - STAGE 1E-1 - DETOUR PLAN - SHEET 2 OF 2
TM-155	TRAFFIC MANAGEMENT PLAN - STAGE 1E-2
TM-156	TRAFFIC MANAGEMENT - STAGE 1E-2 - DETOUR PLAN
TM-157 to TM-160	NOT USED
TM-161	TRAFFIC MANAGEMENT PLAN - STAGE 1F
TM-162 to TM-164	NOT USED
TM-165	TRAFFIC MANAGEMENT - STAGE 1F - DETOUR PLAN
TM-166 to TM-200	NOT USED
TM-201	TRAFFIC MANAGEMENT PLAN - STAGE 2A
TM-202 to TM-204	NOT USED
TM-205	TRAFFIC MANAGEMENT - STAGE 2A - DETOUR PLAN
TM-206 to TM-210	NOT USED
TM-211	TRAFFIC MANAGEMENT PLAN - STAGE 2B - SHEET 1 OF 2
TM-212	TRAFFIC MANAGEMENT PLAN - STAGE 2B - SHEET 2 OF 2
TM-213 to TM-214	NOT USED
TM-215	TRAFFIC MANAGEMENT - STAGE 2B - DETOUR PLAN
TM-216 to TM-220	NOT USED
TM-221	TRAFFIC MANAGEMENT PLAN - STAGE 2C - SHEET 1 OF 2
TM-222	TRAFFIC MANAGEMENT PLAN - STAGE 2C - SHEET 2 OF 2
TM-223 to TM-224	NOT USED
TM-225	TRAFFIC MANAGEMENT - STAGE 2C - DETOUR PLAN
TM-226 to TM-230	NOT USED
TM-231	TRAFFIC MANAGEMENT PLAN - STAGE 2D - SHEET 1 OF 2
TM-232	TRAFFIC MANAGEMENT PLAN - STAGE 2D - SHEET 2 OF 2
TM-233 to TM-234	NOT USED
TM-235	TRAFFIC MANAGEMENT - STAGE 2D - DETOUR PLAN
TM-236 to TM-240	NOT USED
TM-241	TRAFFIC MANAGEMENT PLAN - STAGE 2E - SHEET 1 OF 2
TM-242	TRAFFIC MANAGEMENT PLAN - STAGE 2E - SHEET 2 OF 2
TM-243 to TM-244	NOT USED
TM-245	TRAFFIC MANAGEMENT - STAGE 2E - DETOUR PLAN
TM-246 to TM-250	NOT USED
TM-251	TRAFFIC MANAGEMENT PLAN - STAGE 2F
TM-252 to TM-254	NOT USED
TM-255	TRAFFIC MANAGEMENT - STAGE 2F - DETOUR PLAN
TM-256 to TM-260	NOT USED
TM-261	TRAFFIC MANAGEMENT PLAN - STAGE 2G
TM-262 to TM-264	NOT USED
TM-265	TRAFFIC MANAGEMENT - STAGE 2G - DETOUR PLAN
TM-266 to TM-270	NOT USED
TM-271	TRAFFIC MANAGEMENT PLAN - STAGE 2H - SHEET 1 OF 2
TM-272	TRAFFIC MANAGEMENT PLAN - STAGE 2H - SHEET 2 OF 2
TM-273 to TM-274	NOT USED
TM-275	TRAFFIC MANAGEMENT - STAGE 2H - DETOUR PLAN
TM-276 to TM-280	NOT USED
TM-281	TRAFFIC MANAGEMENT PLAN - STAGE 2I
TM-282 to TM-284	NOT USED
TM-285	TRAFFIC MANAGEMENT - STAGE 2I - DETOUR PLAN
TM-286 to TM-290	NOT USED
TM-291	TRAFFIC MANAGEMENT PLAN - STAGE 2J-1
TM-292	TRAFFIC MANAGEMENT PLAN - STAGE 2J-2
TM-293 to TM-294	NOT USED
TM-295	TRAFFIC MANAGEMENT - STAGE 2J - DETOUR PLAN
TM-296 to TM-300	NOT USED
TM-301	TRAFFIC MANAGEMENT PLAN - STAGE 2K-1

TRAFFIC MANAGEMENT (CONTINUED)

TM-302	TRAFFIC MANAGEMENT PLAN - STAGE 2K-2
TM-303 to TM-310	NOT USED
TM-311	TRAFFIC MANAGEMENT PLAN - STAGE 2L
TM-312 to TM-339	NOT USED
TM-340	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'A'
TM-341	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'B'
TM-342	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'C'
TM-343	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'D'
TM-344	DOWNSTREAM SEWER RELOCATION - TYPICAL SETUP 'E'
TM-345 to TM-410	NOT USED
TM-411	TRAFFIC SIGNAL CHANGES- STAGE 1A - SHEET 1 OF 2
TM-412	TRAFFIC SIGNAL CHANGES- STAGE 1A - SHEET 2 OF 2
TM-413 to TM-420	NOT USED
TM-421	TRAFFIC SIGNAL CHANGES- STAGE 1B - SHEET 1 OF 2
TM-422	TRAFFIC SIGNAL CHANGES- STAGE 1B - SHEET 2 OF 2
TM-423 to TM-424	NOT USED
TM-425	TRAFFIC SIGNAL CHANGES- STAGE 1C- SHEET 1 OF 2
TM-426	TRAFFIC SIGNAL CHANGES- STAGE 1C- SHEET 2 OF 2
TM-427 to TM-430	NOT USED
TM-431	TRAFFIC SIGNAL CHANGES- STAGE 1 D-1 - SHEET 1 OF 2
TM-432	TRAFFIC SIGNAL CHANGES- STAGE 1 D-1 - SHEET 2 OF 2
TM-433 to TM-440	NOT USED
TM-441	TRAFFIC SIGNAL CHANGES- STAGE 1E-1 - SHEET 1 OF 2
TM-442	TRAFFIC SIGNAL CHANGES- STAGE 1E-1 - SHEET 2 OF 2
TM-443	TRAFFIC SIGNAL CHANGES- STAGE 1E-2 - SHEET 1 OF 2
TM-444	TRAFFIC SIGNAL CHANGES- STAGE 1E-2 - SHEET 2 OF 2
TM-445 to TM-450	NOT USED
TM-451	TRAFFIC SIGNAL CHANGES- STAGE 1F - SHEET 1 OF 2
TM-452	TRAFFIC SIGNAL CHANGES- STAGE 1F - SHEET 2 OF 2
TM-453 to TM-460	NOT USED
TM-461	TRAFFIC SIGNAL CHANGES- STAGE 2A - SHEET 1 OF 2
TM-462	TRAFFIC SIGNAL CHANGES- STAGE 2A - SHEET 2 OF 2
TM-463 to TM-470	NOT USED
TM-471	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 1 OF 3
TM-472	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 2 OF 3
TM-473	TRAFFIC SIGNAL CHANGES- STAGE 2B - SHEET 3 OF 3
TM-474	NOT USED
TM-475	TRAFFIC SIGNAL CHANGES- STAGE 2C
TM-476 to TM-480	NOT USED
TM-481	TRAFFIC SIGNAL CHANGES- STAGE 2I - SHEET 1 OF 2
TM-482	TRAFFIC SIGNAL CHANGES- STAGE 2I - SHEET 2 OF 2
TM-483 to TM-490	NOT USED
TM-491	TRAFFIC SIGNAL CHANGES- STAGES 2J-1 AND 2J-2 - SHEET 1 OF 2
TM-492	TRAFFIC SIGNAL CHANGES- STAGES 2J-1 AND 2J-2 - SHEET 2 OF 2
TM-493 to TM-510	NOT USED
TM-511	TRAFFIC SIGNAL CHANGES- STAGE 2K-1 - SHEET 1 OF 2
TM-512	TRAFFIC SIGNAL CHANGES- STAGE 2K-1 - SHEET 2 OF 2
TM-513	TRAFFIC SIGNAL CHANGES- STAGE 2K-2 - SHEET 1 OF 2
TM-514	TRAFFIC SIGNAL CHANGES- STAGE 2K-2 - SHEET 2 OF 2
TM-515 to TM-520	NOT USED
TM-521	TRAFFIC SIGNAL CHANGES- STAGE 2L - SHEET 1 OF 2
TM-522	TRAFFIC SIGNAL CHANGES- STAGE 2L - SHEET 2 OF 2
TM-523 to TM-559	NOT USED
TM-560	STREETSCAPE EAST OF PROSPECT TYPICAL TMP PLANS AND SECTION
TM-561 to TM-599	NOT USED
TM-600	EXISTING BUS ROUTES PLAN
TM-601	BUS ROUTE 87 DETOUR PLAN
TM-602	NOT USED
TM-603	BUS ROUTE 87 INBOUND DETOUR PLAN
TM-604	NOT USED
TM-605	BUS ROUTES 86 OB & 91 OB DETOUR PLAN
TM-606	NOT USED
TM-607	BUS ROUTE 85 OB DETOUR PLAN
TM-608 to TM-699	NOT USED
TM-700	BICYCLE DETOUR PLAN

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ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS

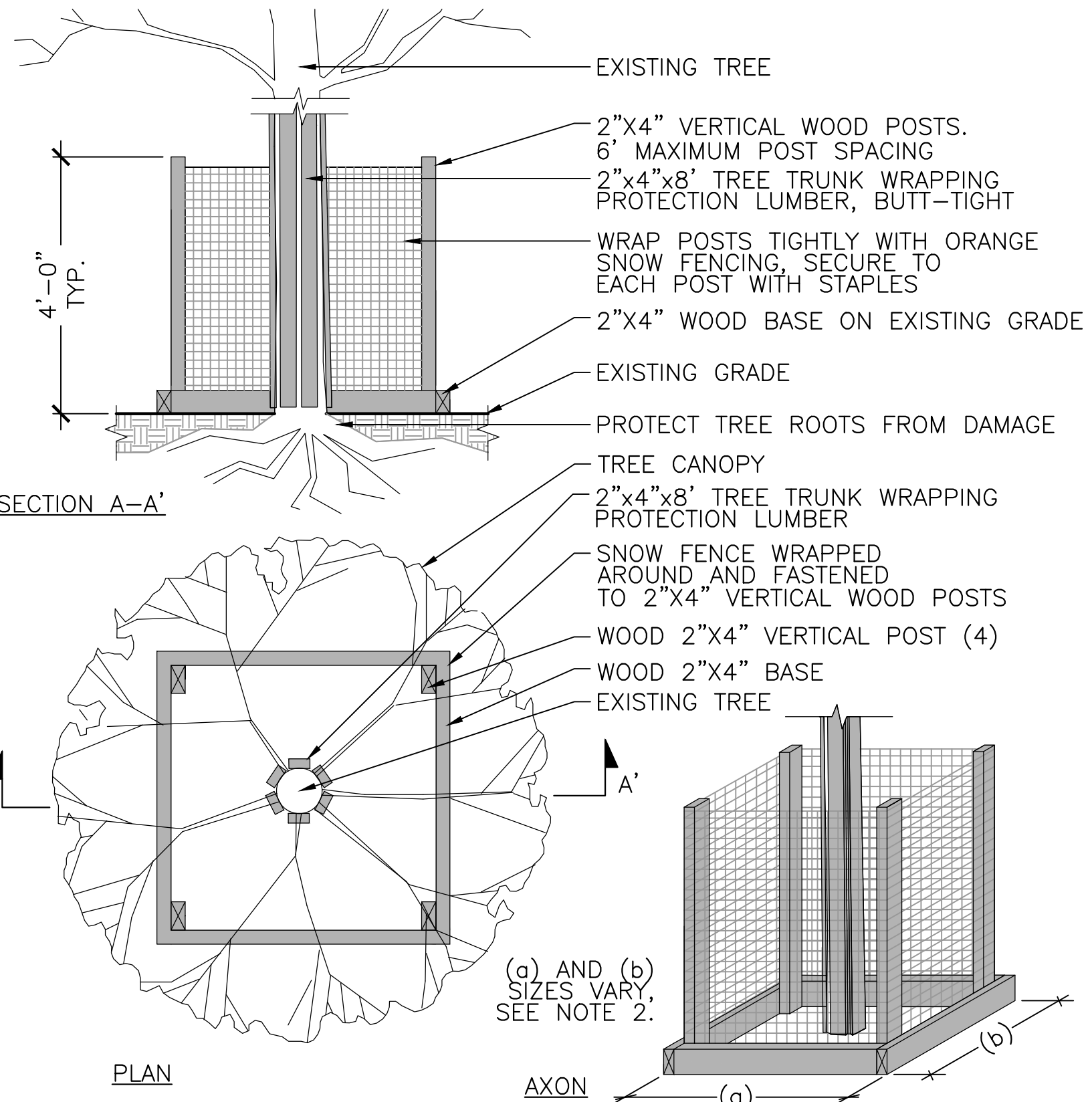
CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT INDEX OF DRAWINGS SHEET 2 OF 2

DESIGNED: N/A	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET	
CHECKED: LAC		<div style="font-size: 2em; font-weight: bold; text-align: center;">G-3</div>	
DRAWN: LAC	REF.		
CHECKED: RJB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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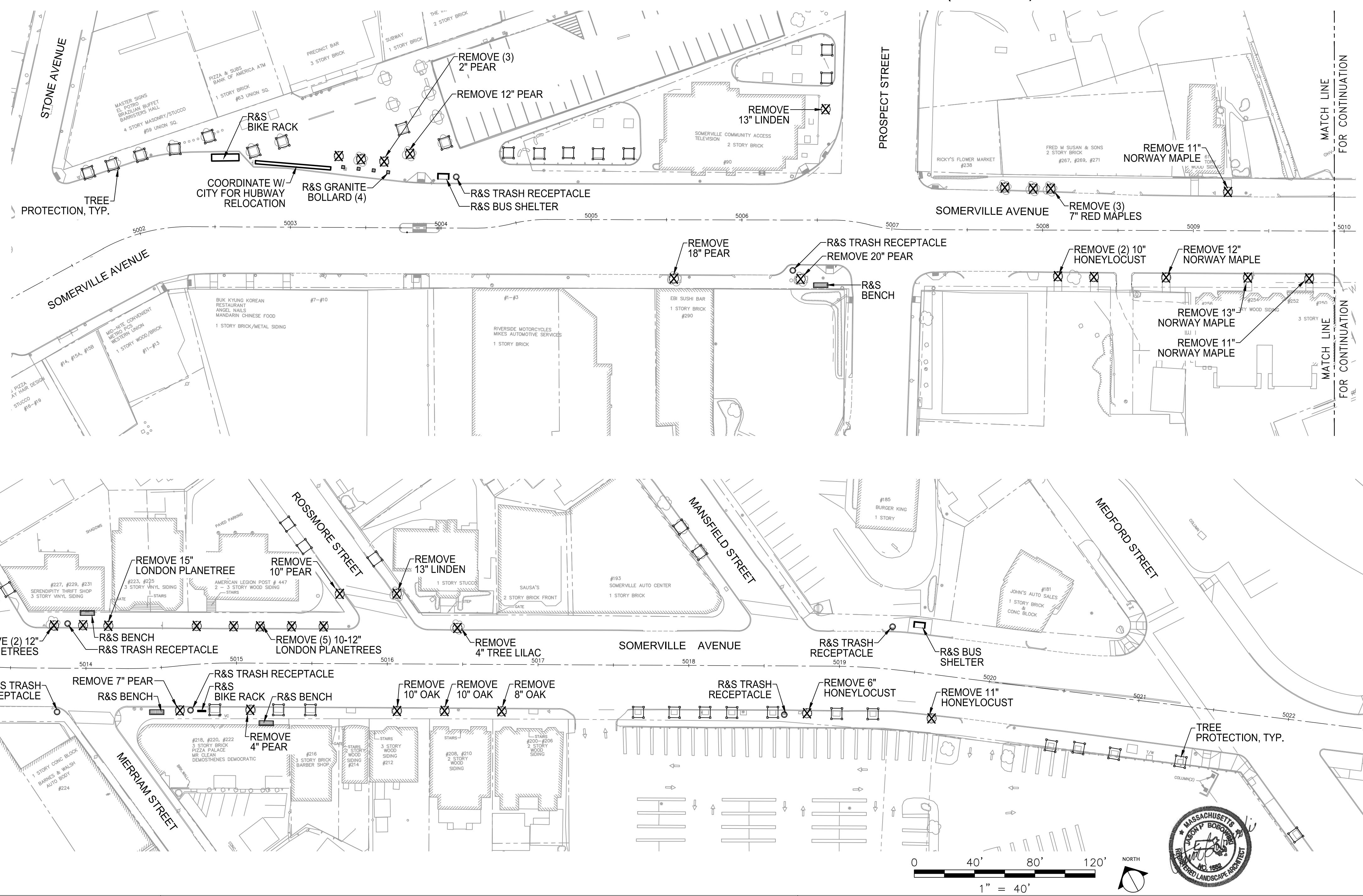
- NOTES:
1. TREE BOX RESTS ON EXISTING GRADE AND IS NOT ANCHORED TO THE GROUND.
 2. SIZE OF TREE BOX VARIES BASED UPON TRUNK SIZE AND LIMITS OF SURFACE ROOTS. FINAL SIZE TO BE DETERMINED BY CITY ARBORIST IN FIELD DURING PRE-CONSTRUCTION SITE WALK.
 3. TREE BOX SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES AND MAINTAINED IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
 4. SUBMIT SHOP DRAWINGS SHOWING ALL MATERIALS AND ATTACHMENTS.

1 TREE PROTECTION BOX AND WRAPPING

SCALE: NTS

LEGEND			LEGEND		
SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
	TREE TO BE REMOVED			R&S BIKE RACK	
	TREE PROTECTION BOX AND WRAPPING			R&S BUS SHELTER	
	R&S BENCH			R&S TRASH RECEPTACLE	
	R&S GRANITE BOLLARD		R&S	REMOVE AND STOCKPILE (SEE NOTES)	

- NOTES:**
1. BUS SHELTERS TO BE REINSTALLED PER PLAN. CONTRACTOR SHALL DELIVER ALL OTHER STOCKPILED SITE FURNISHINGS TO SOMERVILLE DPW.
 2. FOR TRAFFIC MANAGEMENT PLANS, SEE TM-1 TO TM-600.
 3. FOR SIGNAGE PLANS, SEE L-61 TO L-65.
 4. CONTRACTOR SHALL REMOVE AND STOCKPILE STREET FURNISHINGS AND REMOVE TREES ONLY ONE STAGE AHEAD OF WORK.
 5. ALL GRANITE CURB WITHIN LIMITS OF WORK IS TO BE REMOVED AND DISCARDED, UNLESS OTHERWISE NOTED ON THE PLANS.
 6. NOTIFY CITY (90 DAYS BEFORE HUBWAY STATION NEEDS TO BE MOVED, AND THE CITY WILL DIRECT HUBWAY TO DO THE WORK (AT NO COST).



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

SITE PREPARATION & DEMOLITION PLAN

SHEET 1 OF 1

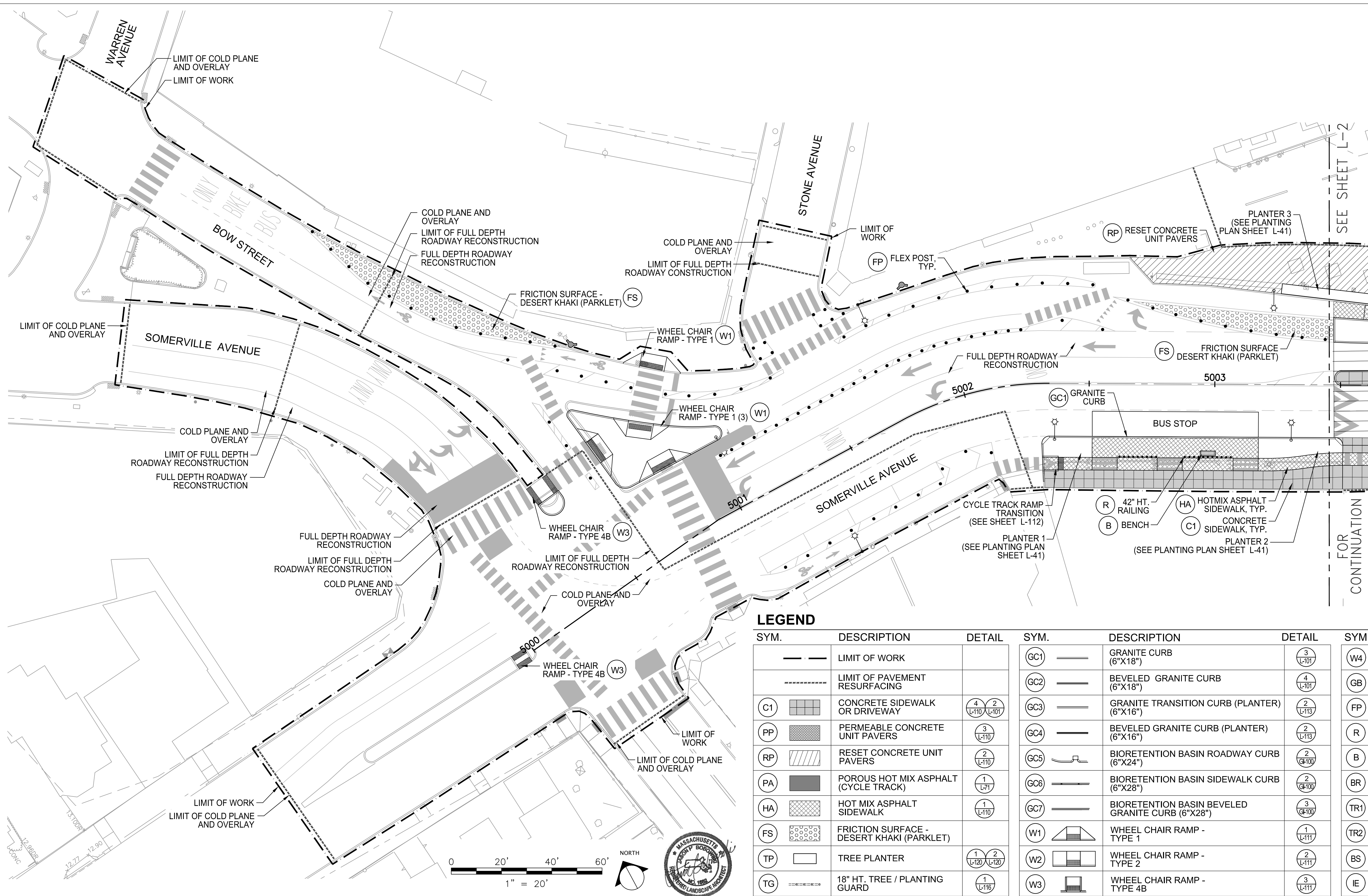
DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

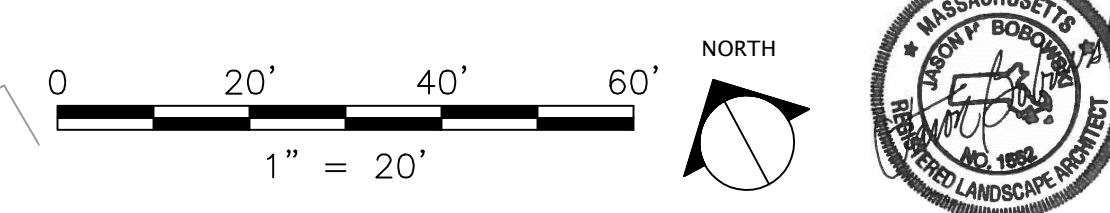
NOTES:

1. SEE LAYOUT PLAN, SHEET L-11.
2. SEE CURB TIE PLAN, SHEET L-21.
3. SEE GRADING PLAN, SHEET L-31.
4. SEE PLANTING PLAN, SHEET L-41.
5. SEE STRIPING PLAN, SHEETS L-51, L-52.
6. SEE SIGNAGE PLAN, SHEETS L-61, L-62.
7. SEE IRRIGATION PLAN, SHEET I-1.



LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		(GC1)	GRANITE CURB (6"X18")	(3) L-101	(W4)	WHEEL CHAIR RAMP - TYPE 4A	(4) L-111
- - - - -	LIMIT OF PAVEMENT RESURFACING		(GC2)	BEVELED GRANITE CURB (6"X18")	(4) L-101	(GB)	GRANITE BOLLARD (RESET & NEW)	(5) L-115
(C1)	CONCRETE SIDEWALK OR DRIVEWAY	(4) L-110 (2) L-101	(GC3)	GRANITE TRANSITION CURB (PLANTER) (6"X16")	(2) L-113	(FP)	FLEX POST	
(PP)	PERMEABLE CONCRETE UNIT PAVERS	(3) L-110	(GC4)	BEVELED GRANITE CURB (PLANTER) (6"X16")	(2) L-113	(R)	42" HT. RAILING	(2) L-116
(RP)	RESET CONCRETE UNIT PAVERS	(2) L-110	(GC5)	BIORETENTION BASIN ROADWAY CURB (6"X24")	(2) (3) L-100	(B)	BENCH	(3) L-116
(PA)	POROUS HOT MIX ASPHALT (CYCLE TRACK)	(1) L-171	(GC6)	BIORETENTION BASIN SIDEWALK CURB (6"X28")	(2) (3) L-100	(BR)	BICYCLE RACK	(4) L-115
(HA)	HOT MIX ASPHALT SIDEWALK	(1) L-110	(GC7)	BIORETENTION BASIN BEVELED GRANITE CURB (6"X28")	(3) (3) L-100	(TR1)	TRASH & RECYCLING RECEPTACLES	(1) L-115
(FS)	FRICITION SURFACE - DESERT KHAKI (PARKLET)		(W1)	WHEEL CHAIR RAMP - TYPE 1	(1) L-111	(TR2)	TRASH & RECYCLING STATION - SOLAR COMPACTOR	(2) L-115
(TP)	TREE PLANTER	(1) L-120 (2) L-120	(W2)	WHEEL CHAIR RAMP - TYPE 2	(2) L-111	(BS)	RESET BUS SHELTER	(3) L-115
(TG)	18" HT. TREE / PLANTING GUARD	(1) L-116	(W3)	WHEEL CHAIR RAMP - TYPE 4B	(3) L-111	(IE)	IRRIGATION ENCLOSURE	(6) L-17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape MATERIALS PLAN
SHEET 1 OF 6

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

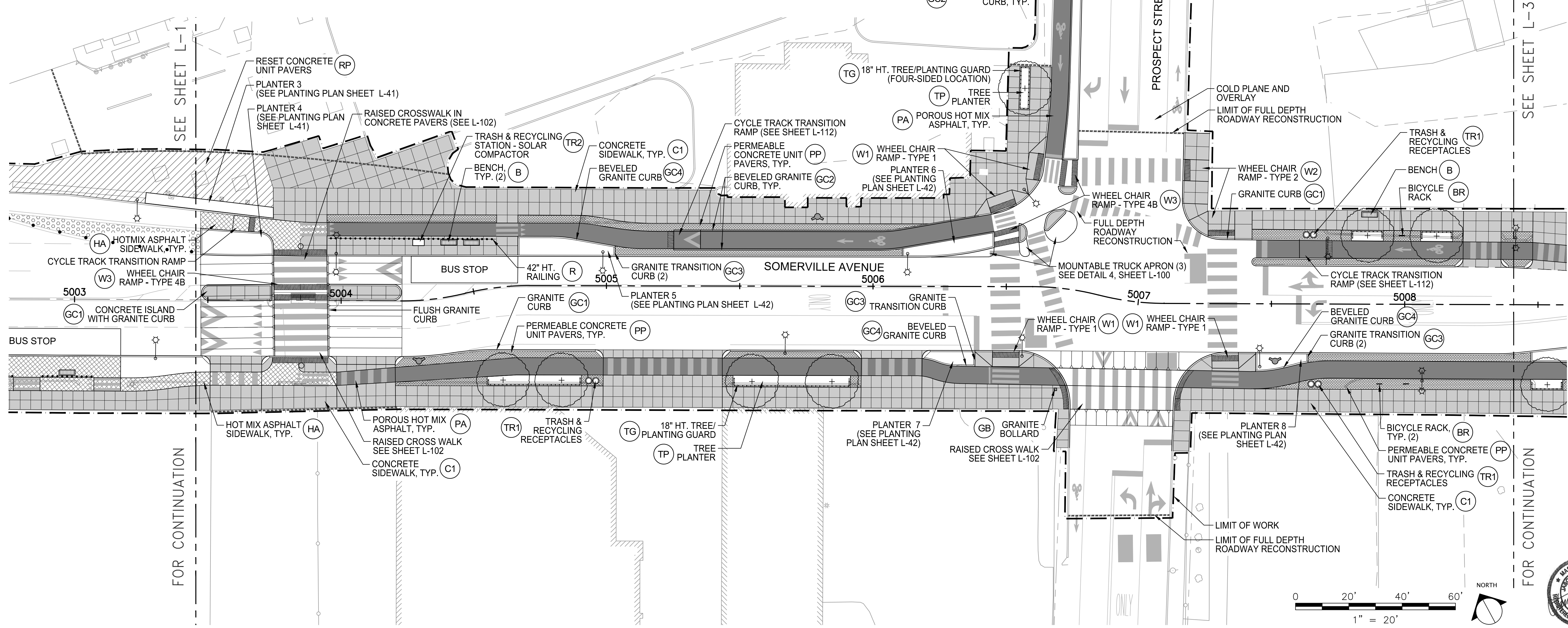
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NO.	DATE	REVISIONS	BY

- NOTES:**
1. SEE LAYOUT PLAN, SHEET L-12.
 2. SEE CURB TIE PLAN, SHEET L-22.
 3. SEE GRADING PLAN, SHEET L-32.
 4. SEE PLANTING PLAN, SHEET L-42.
 5. SEE STRIPING PLAN, SHEET L-52.
 6. SEE SIGNAGE PLAN, SHEET L-62.
 7. SEE IRRIGATION PLAN, SHEET L-72.
 8. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		GC1	GRANITE CURB (6"x18")	3 (L-101)	W4	WHEEL CHAIR RAMP - TYPE 4A	4 (L-111)
----	LIMIT OF PAVEMENT RESURFACING		GC2	BEVELED GRANITE CURB (6"x18")	4 (L-113)	GB	GRANITE BOLLARD (RESET & NEW)	5 (L-115)
C1	CONCRETE SIDEWALK OR DRIVEWAY	4 (L-110) 2 (L-101)	GC3	GRANITE TRANSITION CURB (PLANTER) (6"x16")	2 (L-113)	FP	FLEX POST	
PP	PERMEABLE CONCRETE UNIT PAVERS	3 (L-110)	GC4	BEVELED GRANITE CURB (PLANTER) (6"x16")	2 (L-113)	R	42" HT. RAILING	2 (L-116)
RP	RESET CONCRETE UNIT PAVERS	2 (L-110)	GC5	BIORETENTION BASIN ROADWAY CURB (6"x24")	2 (G-107)	B	BENCH	3 (L-116)
PA	POROUS HOT MIX ASPHALT (CYCLE TRACK)	1 (L-71)	GC6	BIORETENTION BASIN SIDEWALK CURB (6"x28")	2 (G-107)	BR	BICYCLE RACK	4 (L-115)
HA	HOT MIX ASPHALT SIDEWALK	1 (L-110)	GC7	BIORETENTION BASIN BEVELED GRANITE CURB (6"x28")	3 (G-107)	TR1	TRASH & RECYCLING RECEPTACLES	1 (L-115)
FS	FRICTION SURFACE - DESERT KHAKI (PARKLET)		W1	WHEEL CHAIR RAMP - TYPE 1	1 (L-111)	TR2	TRASH & RECYCLING STATION - SOLAR COMPACTOR	2 (L-115)
TP	TREE PLANTER	1 (L-120) 2 (L-120)	W2	WHEEL CHAIR RAMP - TYPE 2	2 (L-111)	BS	RESET BUS SHELTER	3 (L-115)
TG	18" HT. TREE / PLANTING GUARD	1 (L-116)	W3	WHEEL CHAIR RAMP - TYPE 4B	3 (L-111)	IE	IRRIGATION ENCLOSURE	6 (L-7)



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape MATERIALS PLAN
SHEET 2 OF 6

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX: (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX: (978)740-0097	SHEET
CHECKED: DB			L-2
DRAWN: AK/NB	REF.	CONT.	SCALE: 1"=20'
CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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NO.	DATE	REVISIONS	BY

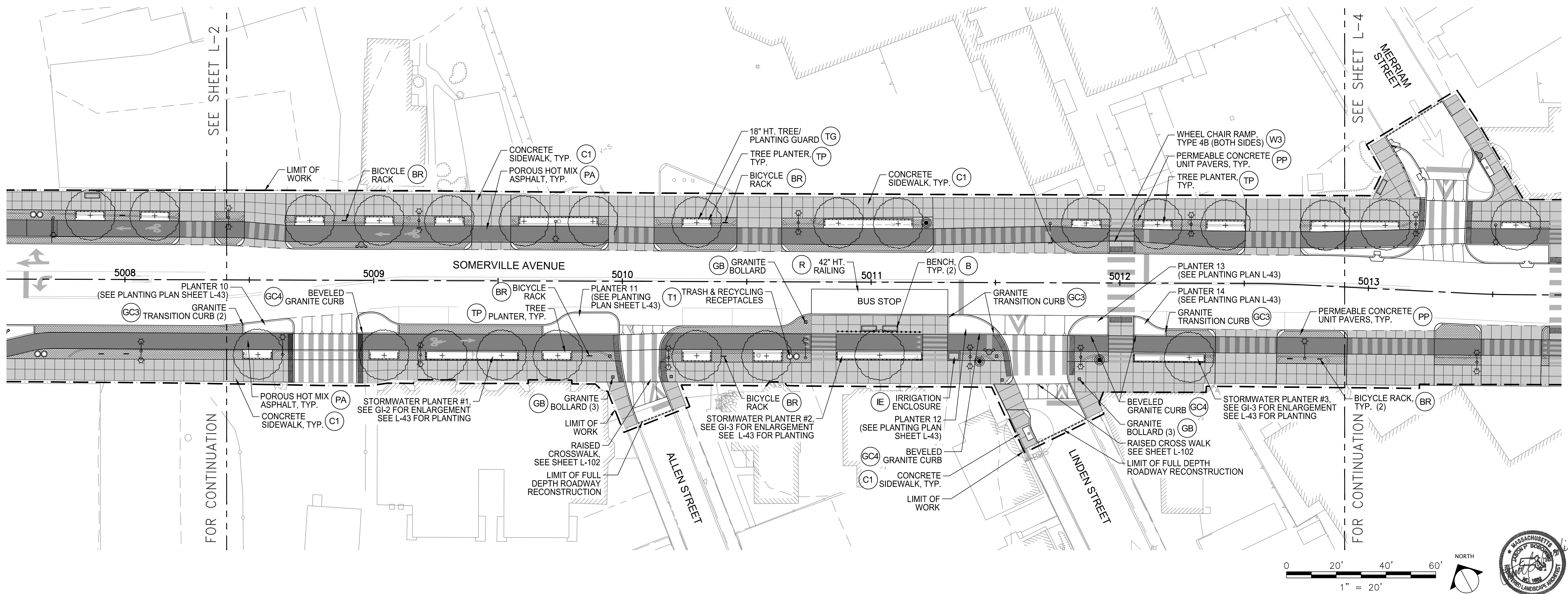
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LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		GC1	GRANITE CURB (6"X18")	3 (L-101)	W4	WHEEL CHAIR RAMP - TYPE 4A	4 (L-111)
-----	LIMIT OF PAVEMENT RESURFACING		GC2	BEVELED GRANITE CURB (6"X18")	4 (L-101)	GB	GRANITE BOLLARD (RESET & NEW)	5 (L-115)
C1	CONCRETE SIDEWALK OR DRIVEWAY	4 (L-110) 2 (L-101)	GC3	GRANITE TRANSITION CURB (PLANTER) (6"X16")	2 (L-113)	FP	FLEX POST	
PP	PERMEABLE CONCRETE UNIT PAVERS	3 (L-110)	GC4	BEVELED GRANITE CURB (PLANTER) (6"X16")	2 (L-113)	R	42" HT. RAILING	2 (L-116)
RP	RESET CONCRETE UNIT PAVERS	2 (L-110)	GC5	BIORETENTION BASIN ROADWAY CURB (6"X24")	2 (L-100)	B	BENCH	3 (L-116)
PA	POROUS HOT MIX ASPHALT (CYCLE TRACK)	1 (L-11)	GC6	BIORETENTION BASIN SIDEWALK CURB (6"X28")	2 (L-100)	BR	BICYCLE RACK	4 (L-115)
HA	HOT MIX ASPHALT SIDEWALK	1 (L-110)	GC7	BIORETENTION BASIN BEVELED GRANITE CURB (6"X28")	3 (L-100)	TR1	TRASH & RECYCLING RECEPTACLES	1 (L-115)
FS	FRICTION SURFACE - DESERT KHAKI (PARKLET)		W1	WHEEL CHAIR RAMP - TYPE 1	1 (L-111)	TR2	TRASH & RECYCLING STATION - SOLAR COMPACTOR	2 (L-115)
TP	TREE PLANTER	1 (L-120) 2 (L-120)	W2	WHEEL CHAIR RAMP - TYPE 2	2 (L-111)	BS	RESET BUS SHELTER	3 (L-115)
TG	18" HT. TREE / PLANTING GUARD	1 (L-116)	W3	WHEEL CHAIR RAMP - TYPE 4B	3 (L-111)	IE	IRRIGATION ENCLOSURE	6 (L-7)

NOTES:

1. SEE LAYOUT PLAN, SHEETS L-14 & L-15.
2. SEE CURB TIE PLAN, SHEET L-23.
3. SEE GRADING PLAN, SHEET L-33.
4. SEE PLANTING PLAN, SHEET L-43.
5. SEE STRIPING PLAN, SHEET L-53.
6. SEE SIGNAGE PLAN, SHEET L-63.
7. SEE IRRIGATION PLAN, SHEET I-3.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape MATERIALS PLAN
SHEET 3 OF 6

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: DB			L-3
DRAWN: AK/NB	REF.	CONT.	SCALE: 1" = 20'
CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

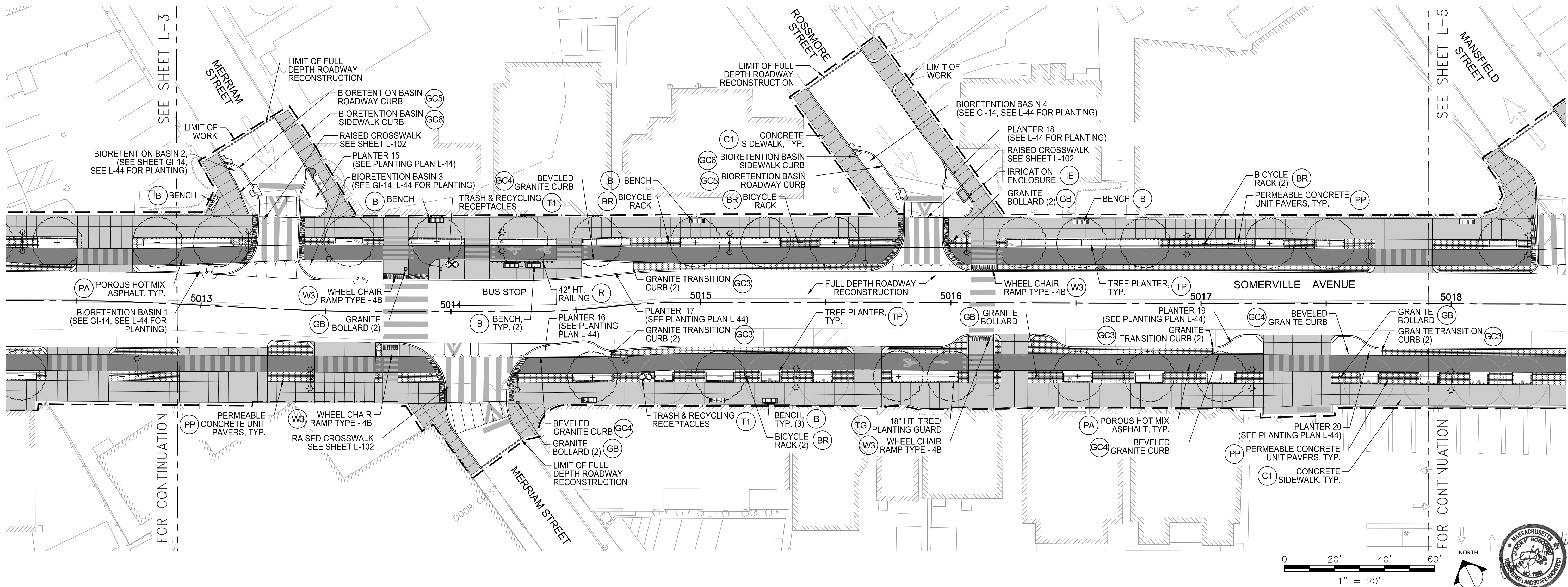
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LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		GC1	GRANITE CURB (6"X18")	3 (L-101)	W4	WHEEL CHAIR RAMP - TYPE 4A	4 (L-111)
-----	LIMIT OF PAVEMENT RESURFACING		GC2	BEVELED GRANITE CURB (6"X18")	4 (L-101)	GB	GRANITE BOLLARD (RESET & NEW)	5 (L-115)
C1	CONCRETE SIDEWALK OR DRIVEWAY	4 (L-110) 2 (L-101)	GC3	GRANITE TRANSITION CURB (PLANTER) (6"X16")	2 (L-115)	FP	FLEX POST	
PP	PERMEABLE CONCRETE UNIT PAVERS	3 (L-110)	GC4	BEVELED GRANITE CURB (PLANTER) (6"X16")	2 (L-115)	R	42" HT. RAILING	2 (L-116)
RP	RESET CONCRETE UNIT PAVERS	2 (L-110)	GC5	BIORETENTION BASIN ROADWAY CURB (6"X24")	2 (G-103)	B	BENCH	3 (L-116)
PA	POROUS HOT MIX ASPHALT (CYCLE TRACK)	1 (L-17)	GC6	BIORETENTION BASIN SIDEWALK CURB (6"X28")	2 (G-103)	BR	BICYCLE RACK	4 (L-115)
HA	HOT MIX ASPHALT SIDEWALK	1 (L-110)	GC7	BIORETENTION BASIN BEVELED GRANITE CURB (6"X28")	3 (G-103)	TR1	TRASH & RECYCLING RECEPTACLES	1 (L-115)
FS	FRICTION SURFACE - DESERT KHAKI (PARKLET)		W1	WHEEL CHAIR RAMP - TYPE 1	1 (L-111)	TR2	TRASH & RECYCLING STATION - SOLAR COMPACTOR	2 (L-115)
TP	TREE PLANTER	1 (L-120) 2 (L-120)	W2	WHEEL CHAIR RAMP - TYPE 2	2 (L-111)	BS	RESET BUS SHELTER	3 (L-115)
TG	18" HT. TREE / PLANTING GUARD	1 (L-116)	W3	WHEEL CHAIR RAMP - TYPE 4B	3 (L-111)	IE	IRRIGATION ENCLOSURE	6 (L-17)

NOTES:

1. SEE LAYOUT PLAN, SHEETS L-15, L-16 & L-17.
2. SEE CURB TIE PLAN, SHEET L-24.
3. SEE GRADING PLAN, SHEET L-34.
4. SEE PLANTING PLAN, SHEET L-44.
5. SEE STRIPING PLAN, SHEETS L-53 & L-54.
6. SEE SIGNAGE PLAN, SHEETS L-63 & L-64.
7. SEE IRRIGATION PLAN, SHEET I-4.



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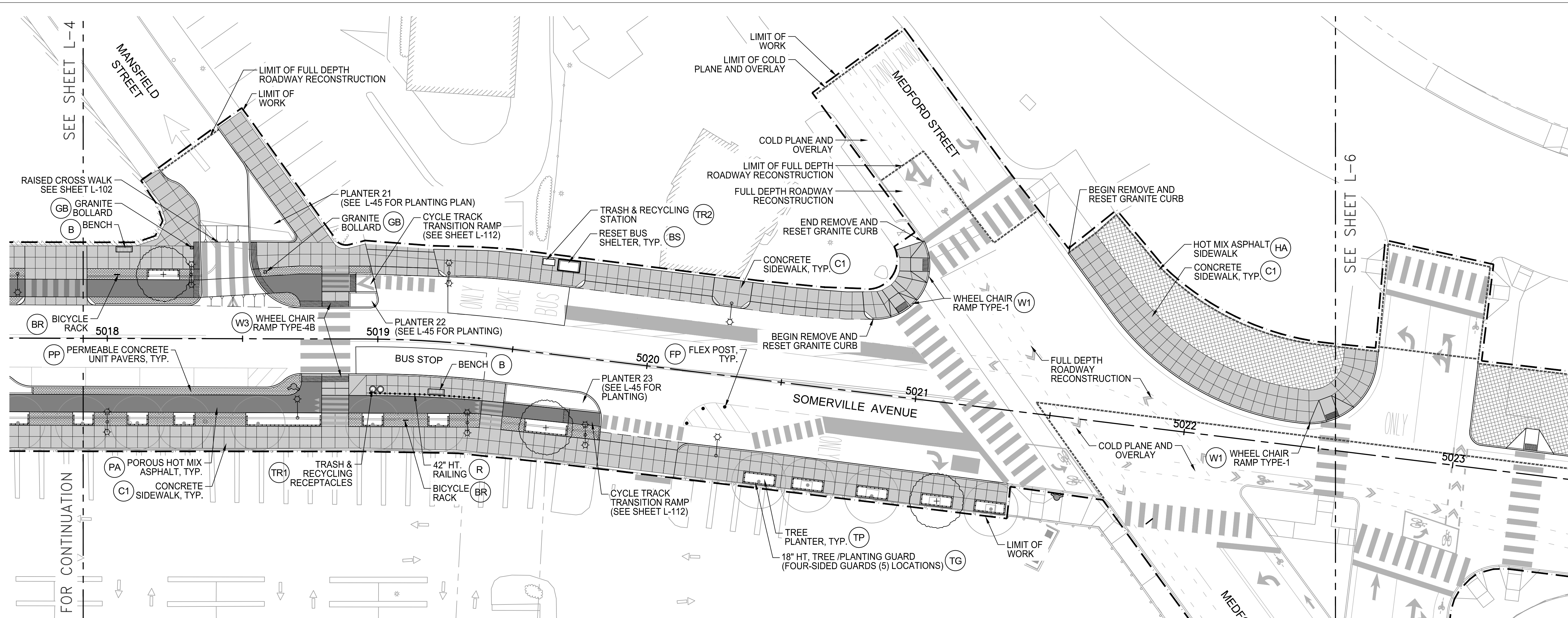
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
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STREETScape MATERIALS PLAN
SHEET 4 OF 6

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: DB			L-4
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LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		GC1	GRANITE CURB (6"X18")	3 (L-107)	W4	WHEEL CHAIR RAMP - TYPE 4A	4 (L-111)
----	LIMIT OF PAVEMENT RESURFACING		GC2	BEVELED GRANITE CURB (6"X18")	4 (L-107)	GB	GRANITE BOLLARD (RESET & NEW)	5 (L-115)
C1	CONCRETE SIDEWALK OR DRIVEWAY	4 (L-110) 2 (L-101)	GC3	GRANITE TRANSITION CURB (PLANTER) (6"X16")	2 (L-113)	FP	FLEX POST	
PP	PERMEABLE CONCRETE UNIT PAVERS	3 (L-110)	GC4	BEVELED GRANITE CURB (PLANTER) (6"X16")	2 (L-113)	R	42" HT. RAILING	2 (L-116)
RP	RESET CONCRETE UNIT PAVERS	2 (L-110)	GC5	BIORETENTION BASIN ROADWAY CURB (6"X24")	2 (G-100)	B	BENCH	3 (L-116)
PA	POROUS HOT MIX ASPHALT (CYCLE TRACK)	1 (L-71)	GC6	BIORETENTION BASIN SIDEWALK CURB (6"X28")	2 (G-100)	BR	BICYCLE RACK	4 (L-115)
HA	HOT MIX ASPHALT SIDEWALK	1 (L-110)	GC7	BIORETENTION BASIN BEVELED GRANITE CURB (6"X28")	3 (G-100)	TR1	TRASH & RECYCLING RECEPTACLES	1 (L-115)
FS	FRICTION SURFACE - DESERT KHAKI (PARKLET)		W1	WHEEL CHAIR RAMP - TYPE 1	1 (L-111)	TR2	TRASH & RECYCLING STATION - SOLAR COMPACTOR	2 (L-115)
TP	TREE PLANTER	1 (L-120) 2 (L-120)	W2	WHEEL CHAIR RAMP - TYPE 2	2 (L-111)	BS	RESET BUS SHELTER	3 (L-115)
TG	18" HT. TREE / PLANTING GUARD	1 (L-116)	W3	WHEEL CHAIR RAMP - TYPE 4B	3 (L-111)	IE	IRRIGATION ENCLOSURE	6 (L-17)

NOTES:

- SEE LAYOUT PLAN, SHEETS L-17 & 18.
- SEE CURB TIE PLAN, SHEET L-25.
- SEE GRADING PLAN, SHEET L-35.
- SEE PLANTING PLAN, SHEET L-45.
- SEE STRIPING PLAN, SHEETS L-54 & L-55.
- SEE SIGNAGE PLAN, SHEETS L-64 & L-65.
- SEE IRRIGATION PLAN, SHEET I-5.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape MATERIALS PLAN
SHEET 5 OF 6

DESIGNED: JB
 CHECKED: DB
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 CHECKED: GJ

WSP PARSONS BRINCKERHOFF
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)462-8487

HATCH
 27 Congress St. Salem, MA 01970
 PH. (978)750-0096 FAX (978)740-0097

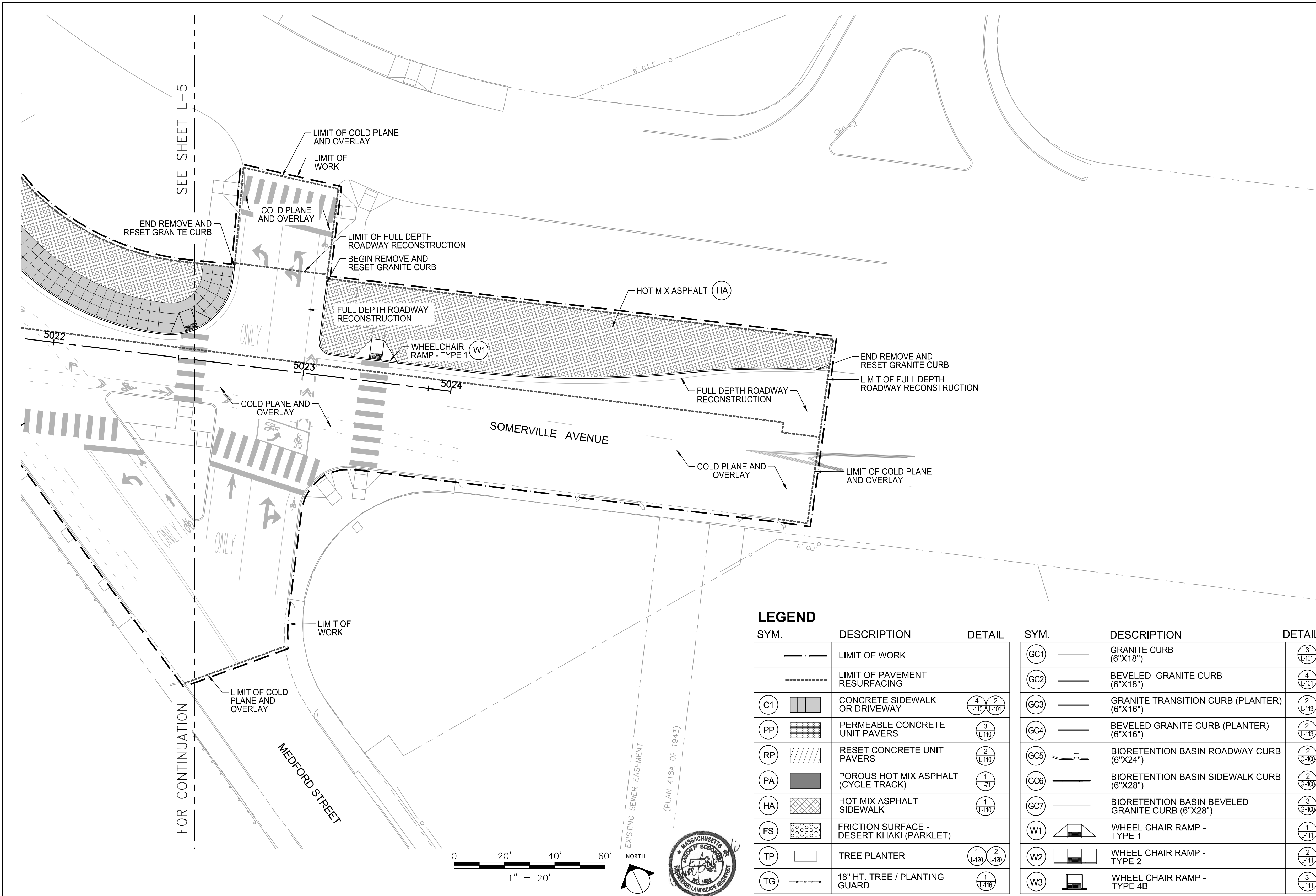
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 ACC. DATE: DEC 2017

SHEET
L-5

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

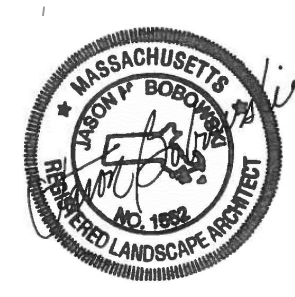
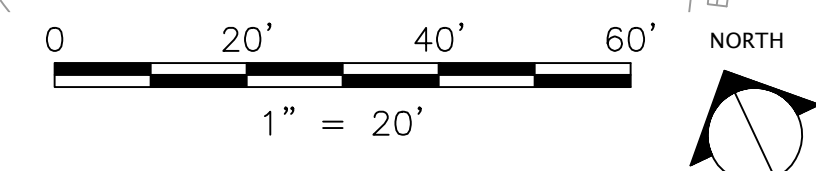
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- NOTES:**
1. SEE LAYOUT PLAN, SHEET L-19.
 2. SEE CURB TIE PLAN, SHEET L-25.
 3. SEE GRADING PLAN, SHEET L-35.
 4. SEE PLANTING PLAN, SHEET L-45.
 5. SEE STRIPING PLAN, SHEET L-55.
 6. SEE SIGNAGE PLAN, SHEET L-65.

LEGEND

SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
---	LIMIT OF WORK		GC1	GRANITE CURB (6"X18")	3 (L-101)	W4	WHEEL CHAIR RAMP - TYPE 4A	4 (L-111)
----	LIMIT OF PAVEMENT RESURFACING		GC2	BEVELED GRANITE CURB (6"X18")	4 (L-101)	GB	GRANITE BOLLARD (RESET & NEW)	5 (L-115)
C1	CONCRETE SIDEWALK OR DRIVEWAY	4 (L-110) 2 (L-101)	GC3	GRANITE TRANSITION CURB (PLANTER) (6"X16")	2 (L-113)	FP	FLEX POST	
PP	PERMEABLE CONCRETE UNIT PAVERS	3 (L-110)	GC4	BEVELED GRANITE CURB (PLANTER) (6"X16")	2 (L-113)	R	42" HT. RAILING	2 (L-116)
RP	RESET CONCRETE UNIT PAVERS	2 (L-110)	GC5	BIORETENTION BASIN ROADWAY CURB (6"X24")	2 (G-100)	B	BENCH	3 (L-116)
PA	POROUS HOT MIX ASPHALT (CYCLE TRACK)	1 (L-71)	GC6	BIORETENTION BASIN SIDEWALK CURB (6"X28")	2 (G-100)	BR	BICYCLE RACK	4 (L-115)
HA	HOT MIX ASPHALT SIDEWALK	1 (L-110)	GC7	BIORETENTION BASIN BEVELED GRANITE CURB (6"X28")	3 (G-100)	TR1	TRASH & RECYCLING RECEPTACLES	1 (L-115)
FS	FRICTION SURFACE - DESERT KHAKI (PARKLET)		W1	WHEEL CHAIR RAMP - TYPE 1	1 (L-111)	TR2	TRASH & RECYCLING STATION - SOLAR COMPACTOR	2 (L-115)
TP	TREE PLANTER	1 (L-120) 2 (L-120)	W2	WHEEL CHAIR RAMP - TYPE 2	2 (L-111)	BS	RESET BUS SHELTER	3 (L-115)
TG	18" HT. TREE / PLANTING GUARD	1 (L-116)	W3	WHEEL CHAIR RAMP - TYPE 4B	3 (L-111)	IE	IRRIGATION ENCLOSURE	6 (L-7)



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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape MATERIALS PLAN
SHEET 6 OF 6

DESIGNED: JB		SHEET L-6
CHECKED: DB		
DRAWN: AK/NB	REF. CONT. SCALE: 1" = 20' ACC. DATE: DEC 2017	
CHECKED: GJ	CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143	

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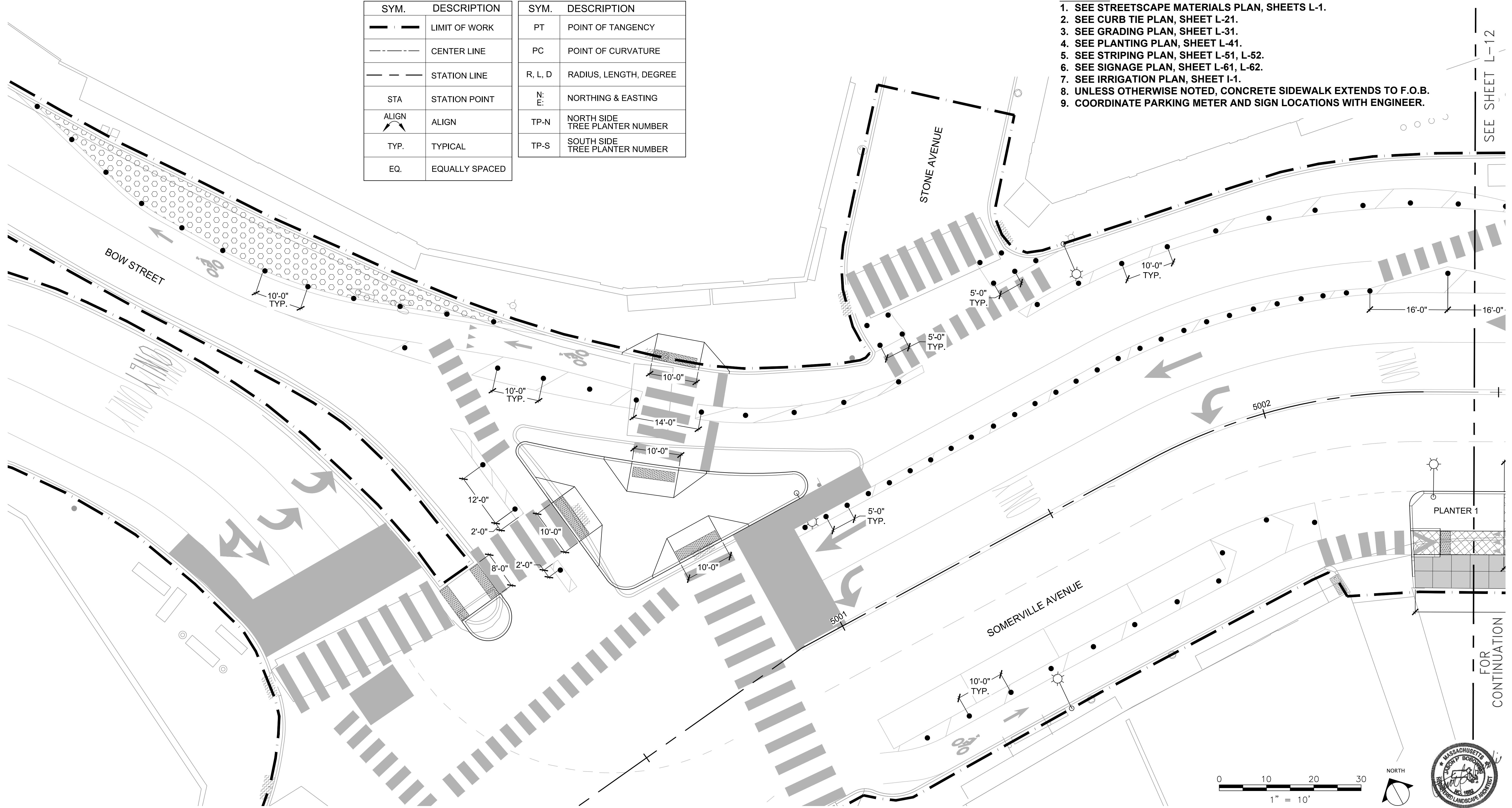
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LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
	LIMIT OF WORK	PT	POINT OF TANGENCY
	CENTER LINE	PC	POINT OF CURVATURE
	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		

NOTES:

1. SEE STREETScape MATERIALS PLAN, SHEETS L-1.
2. SEE CURB TIE PLAN, SHEET L-21.
3. SEE GRADING PLAN, SHEET L-31.
4. SEE PLANTING PLAN, SHEET L-41.
5. SEE STRIPING PLAN, SHEET L-51, L-52.
6. SEE SIGNAGE PLAN, SHEET L-61, L-62.
7. SEE IRRIGATION PLAN, SHEET I-1.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.



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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 1 OF 9

DESIGNED: JB
 CHECKED: DB
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75 Arlington St. Boston, MA 02116
 PH. (617)428-7330 FAX (617)462-8487

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REF. CONT.
 ACC.

SCALE: 1"=10'
 DATE: DEC 2017

SHEET
L-11

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FOR CONTINUATION

SEE SHEET L-12

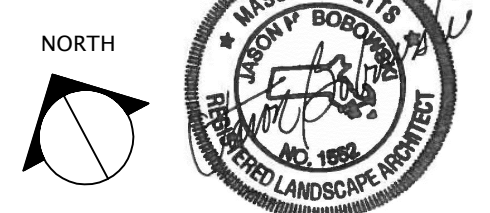
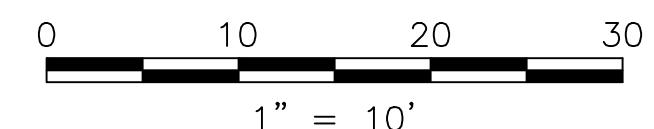
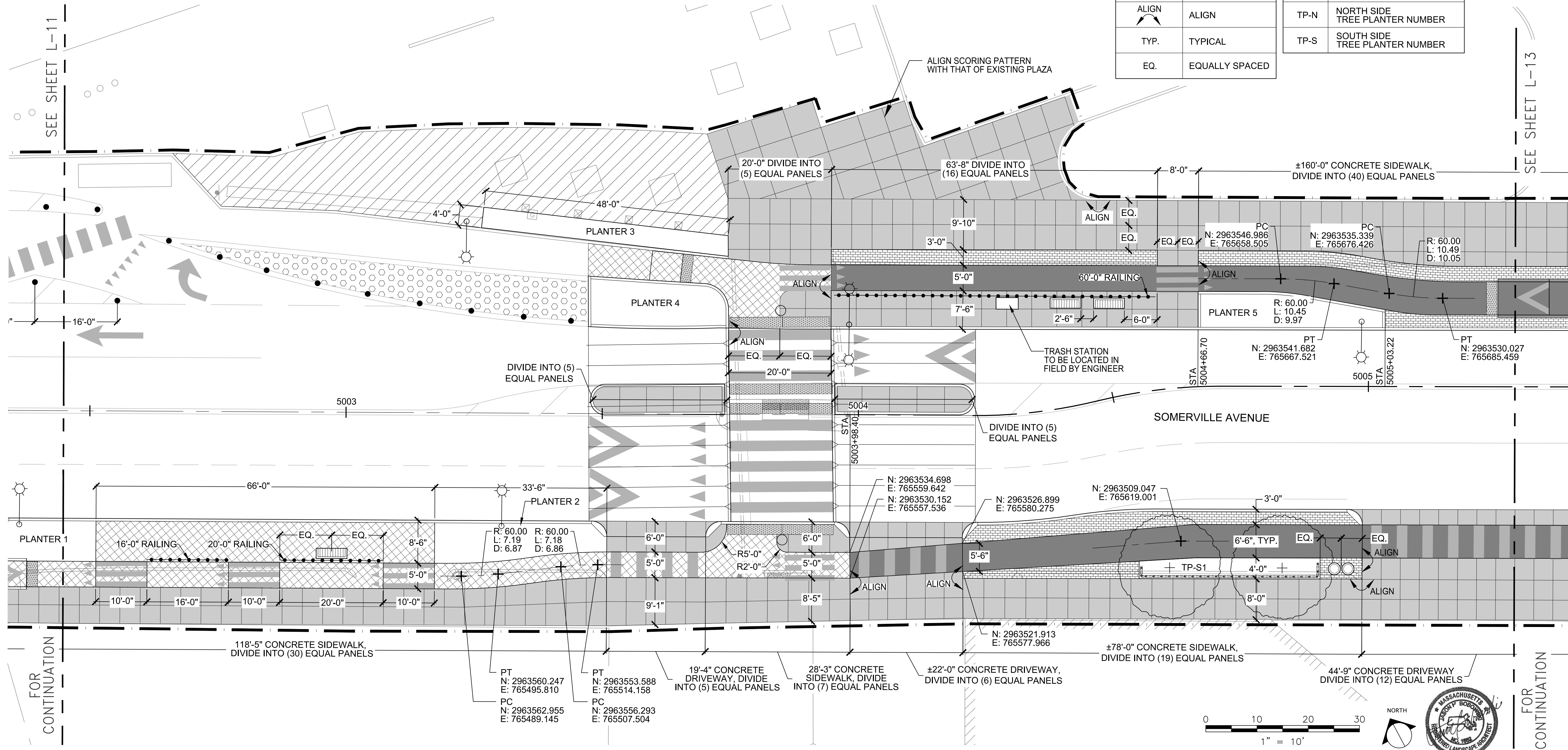


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- NOTES:**
1. SEE STREETScape MATERIALS PLAN, SHEETS L-1 & L-2.
 2. SEE CURB TIE PLAN, SHEETS L-21 & L-22.
 3. SEE GRADING PLAN, SHEETS L-31 & L-32.
 4. SEE PLANTING PLAN, SHEET L-41 & L-42.
 5. SEE STRIPING PLAN, SHEET L-52.
 6. SEE SIGNAGE PLAN, SHEET L-62.
 7. SEE IRRIGATION PLAN, SHEET I-2.
 8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
 9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
— — — — —	LIMIT OF WORK	PT	POINT OF TANGENCY
— · — · — ·	CENTER LINE	PC	POINT OF CURVATURE
— — — — —	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		



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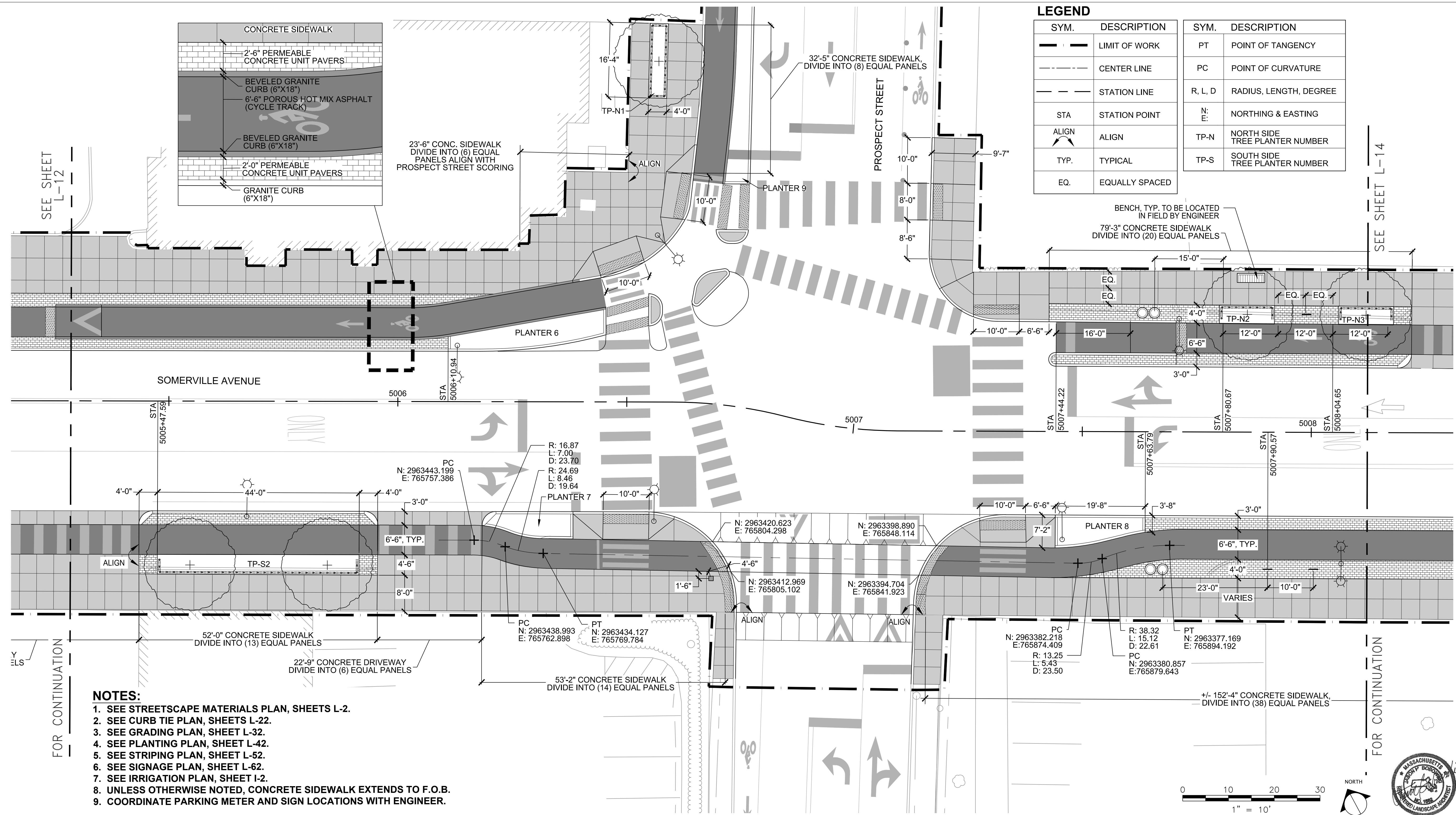
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 2 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: DB			L-12
DRAWN: AK/NB	REF.	CONT.	SCALE: 1"=10'
CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
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- NOTES:**
1. SEE STREETScape MATERIALS PLAN, SHEETS L-2.
 2. SEE CURB TIE PLAN, SHEETS L-22.
 3. SEE GRADING PLAN, SHEET L-32.
 4. SEE PLANTING PLAN, SHEET L-42.
 5. SEE STRIPING PLAN, SHEET L-52.
 6. SEE SIGNAGE PLAN, SHEET L-62.
 7. SEE IRRIGATION PLAN, SHEET I-2.
 8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
 9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

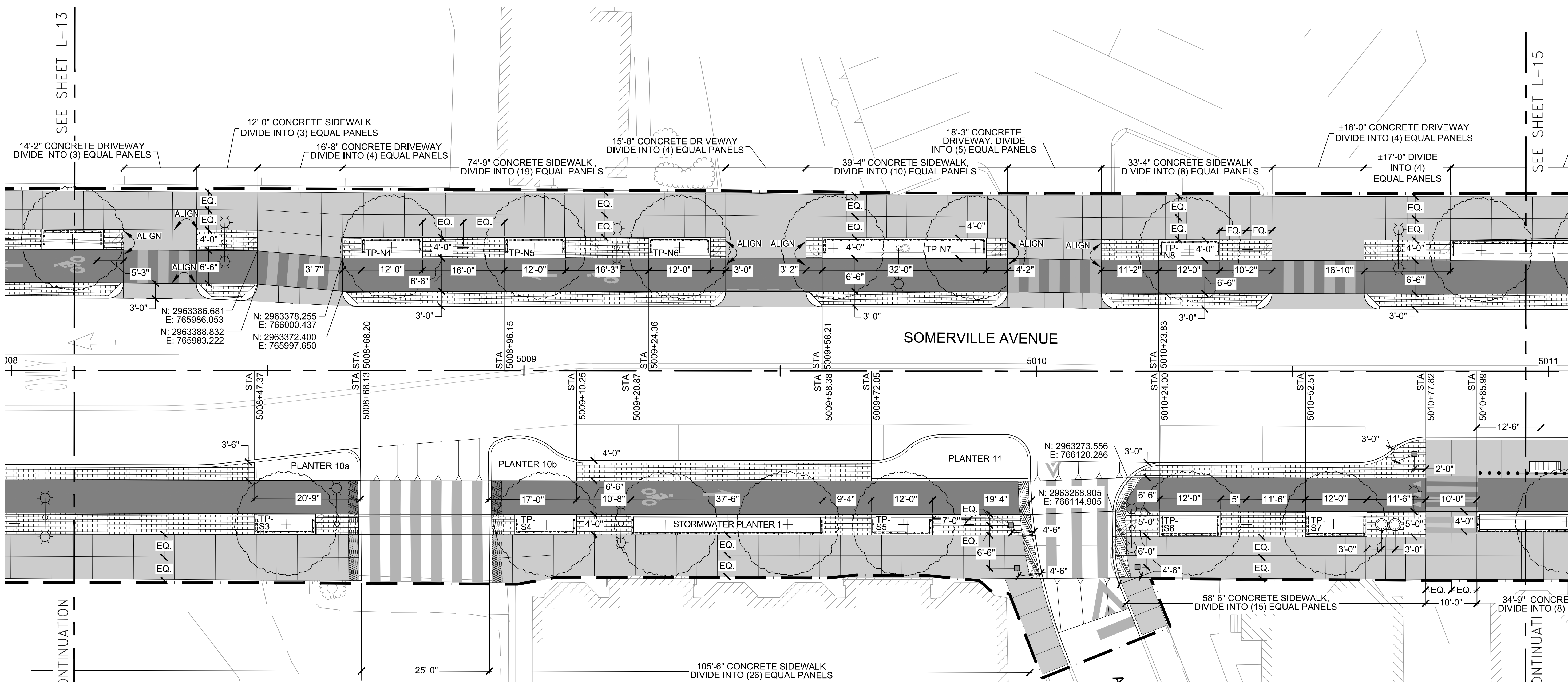
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 3 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: DB			L-13
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CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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FOR CONTINUATION

FOR CONTINUATION

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
— — — — —	LIMIT OF WORK	PT	POINT OF TANGENCY
— · — · — · —	CENTER LINE	PC	POINT OF CURVATURE
— — — — —	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		

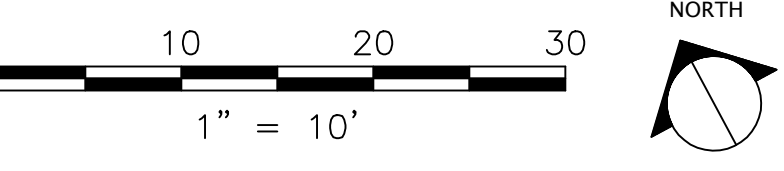
NOTES:

1. SEE SURFACE MATERIALS PLAN, SHEETS L-2 & L-3.
2. SEE CURB TIE PLAN, SHEETS L-22 & L-23.
3. SEE GRADING PLAN, SHEET L-33.
4. SEE PLANTING PLAN, SHEET L-43.
5. SEE STRIPING PLAN, SHEET L-53.
6. SEE SIGNAGE PLAN, SHEET L-63.
7. SEE IRRIGATION PLAN, SHEET I-3.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETSCAPE LAYOUT PLAN
SHEET 4 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

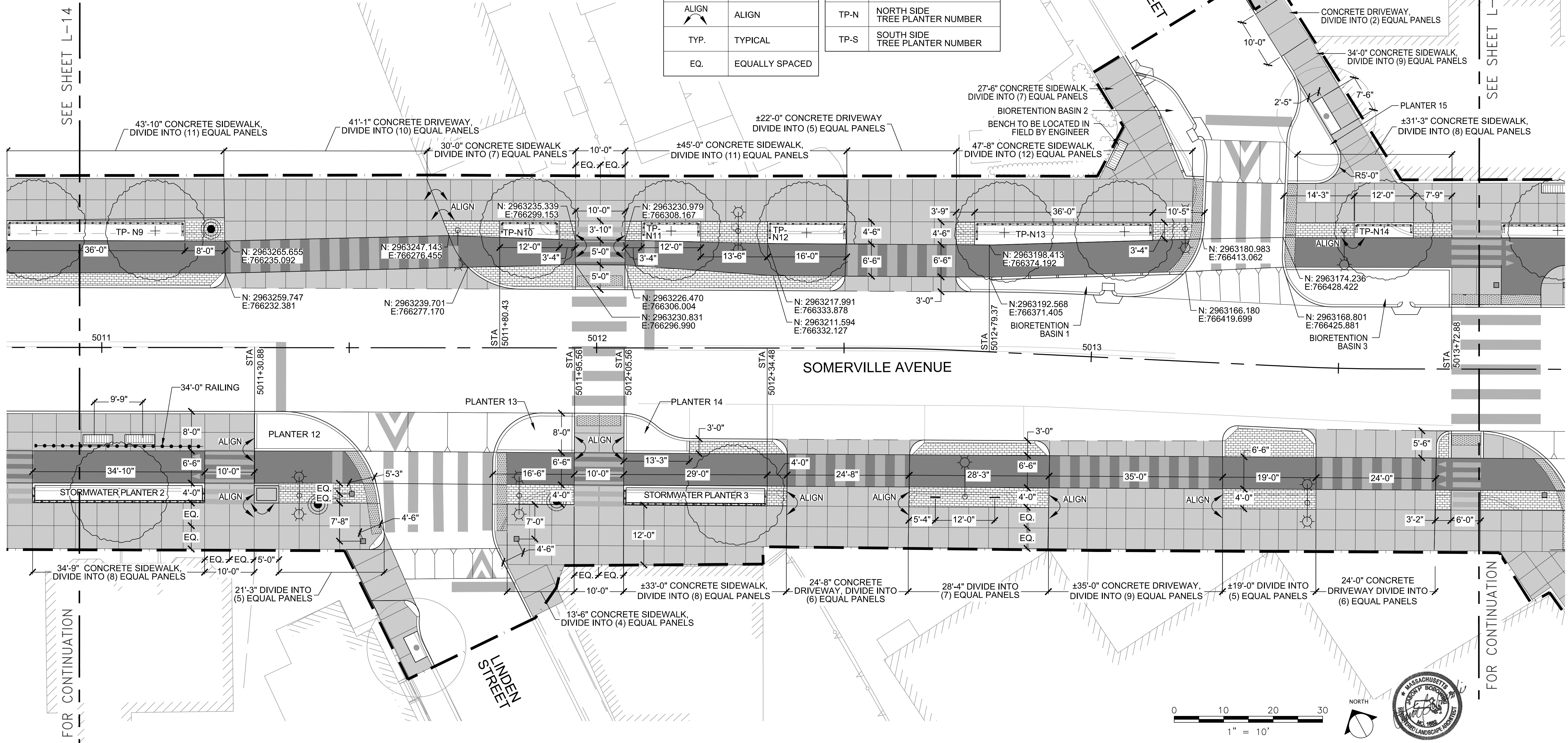
NO.	DATE	REVISIONS	BY

NOTES:

1. SEE STREETScape MATERIALS PLAN AND LEGEND, SHEETS L-3 & L-4.
2. SEE CURB TIE PLAN, SHEETS L-23 & L-24.
3. SEE GRADING PLAN, SHEET L-33 & L-34.
4. SEE PLANTING PLAN, SHEET L-43 & L-44.
5. SEE STRIPING PLAN, SHEET L-53.
6. SEE SIGNAGE PLAN, SHEET L-63.
7. SEE IRRIGATION PLAN, SHEETS I-3 & I-4.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
— — — — —	LIMIT OF WORK	PT	POINT OF TANGENCY
— · — · — ·	CENTER LINE	PC	POINT OF CURVATURE
— — — — —	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		



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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 5 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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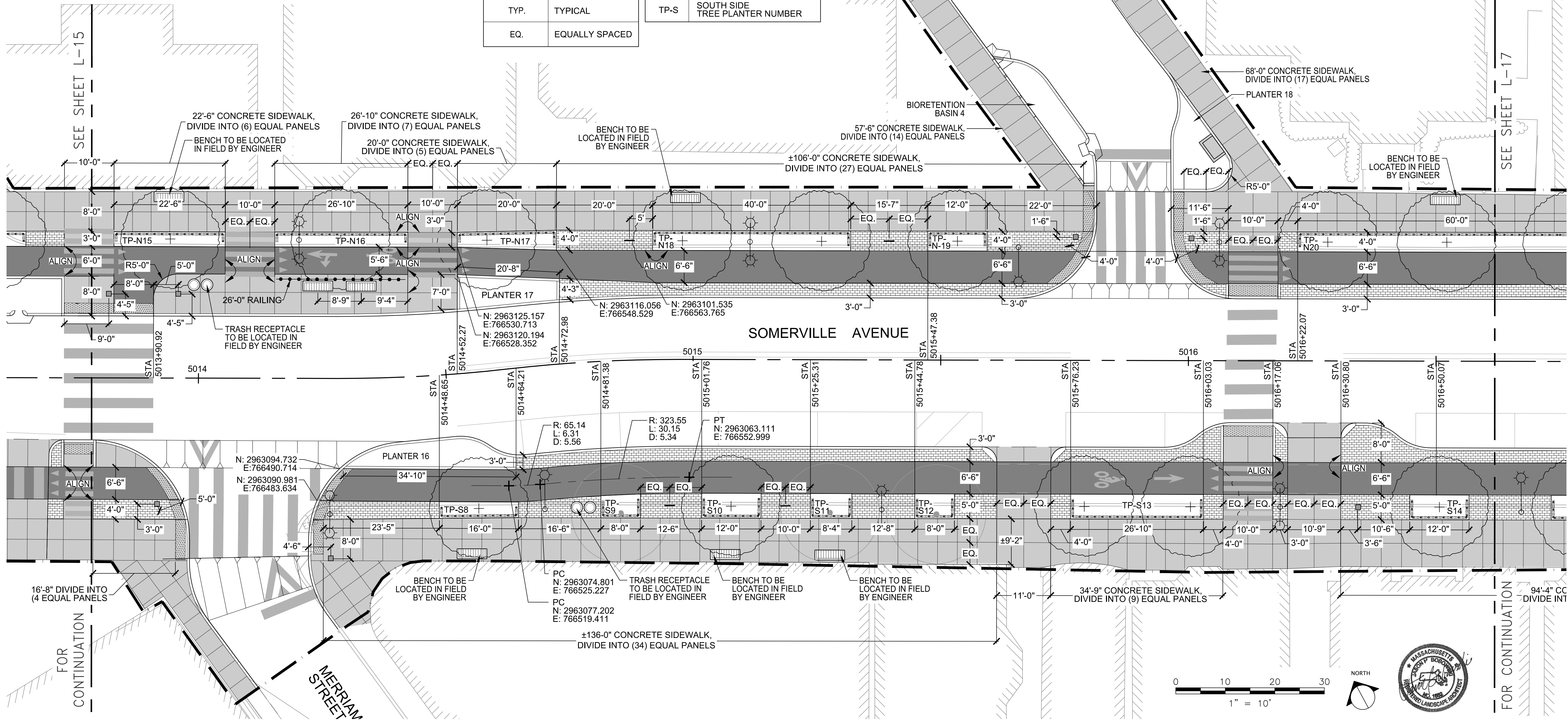
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NOTES:

1. SEE STREETScape MATERIALS PLAN, SHEETS L-4.
2. SEE CURB TIE PLAN, SHEETS L-24.
3. SEE GRADING PLAN, SHEET L-34.
4. SEE PLANTING PLAN, SHEET L-44.
5. SEE STRIPING PLAN, SHEET L-53, L-54.
6. SEE SIGNAGE PLAN, SHEET L-63, L-64.
7. SEE IRRIGATION PLAN, SHEET I-4.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
— — — — —	LIMIT OF WORK	PT	POINT OF TANGENCY
— — — — —	CENTER LINE	PC	POINT OF CURVATURE
— — — — —	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 6 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX: (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0099 FAX: (978)740-0097	SHEET
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CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

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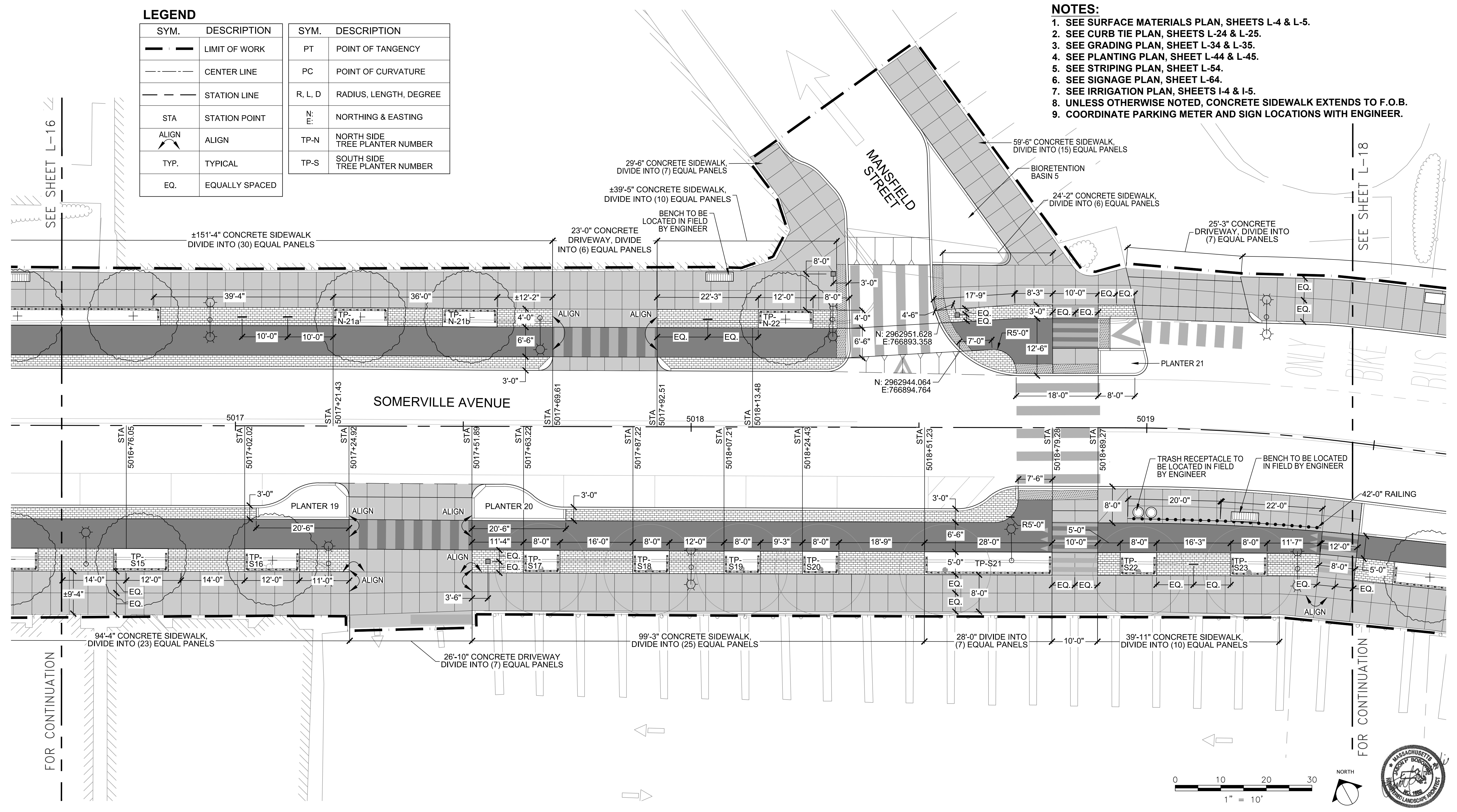
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SYM.	DESCRIPTION	SYM.	DESCRIPTION
— — — — —	LIMIT OF WORK	PT	POINT OF TANGENCY
— · — · — ·	CENTER LINE	PC	POINT OF CURVATURE
— — — — —	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		

NOTES:

1. SEE SURFACE MATERIALS PLAN, SHEETS L-4 & L-5.
2. SEE CURB TIE PLAN, SHEETS L-24 & L-25.
3. SEE GRADING PLAN, SHEET L-34 & L-35.
4. SEE PLANTING PLAN, SHEET L-44 & L-45.
5. SEE STRIPING PLAN, SHEET L-54.
6. SEE SIGNAGE PLAN, SHEET L-64.
7. SEE IRRIGATION PLAN, SHEETS I-4 & I-5.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.



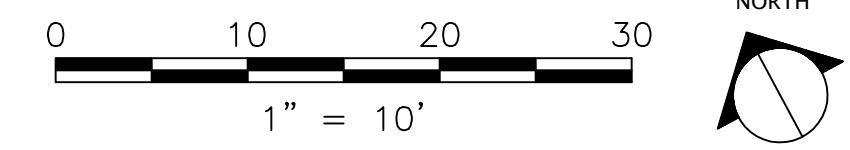
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SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETSCAPE LAYOUT PLAN
SHEET 7 OF 9

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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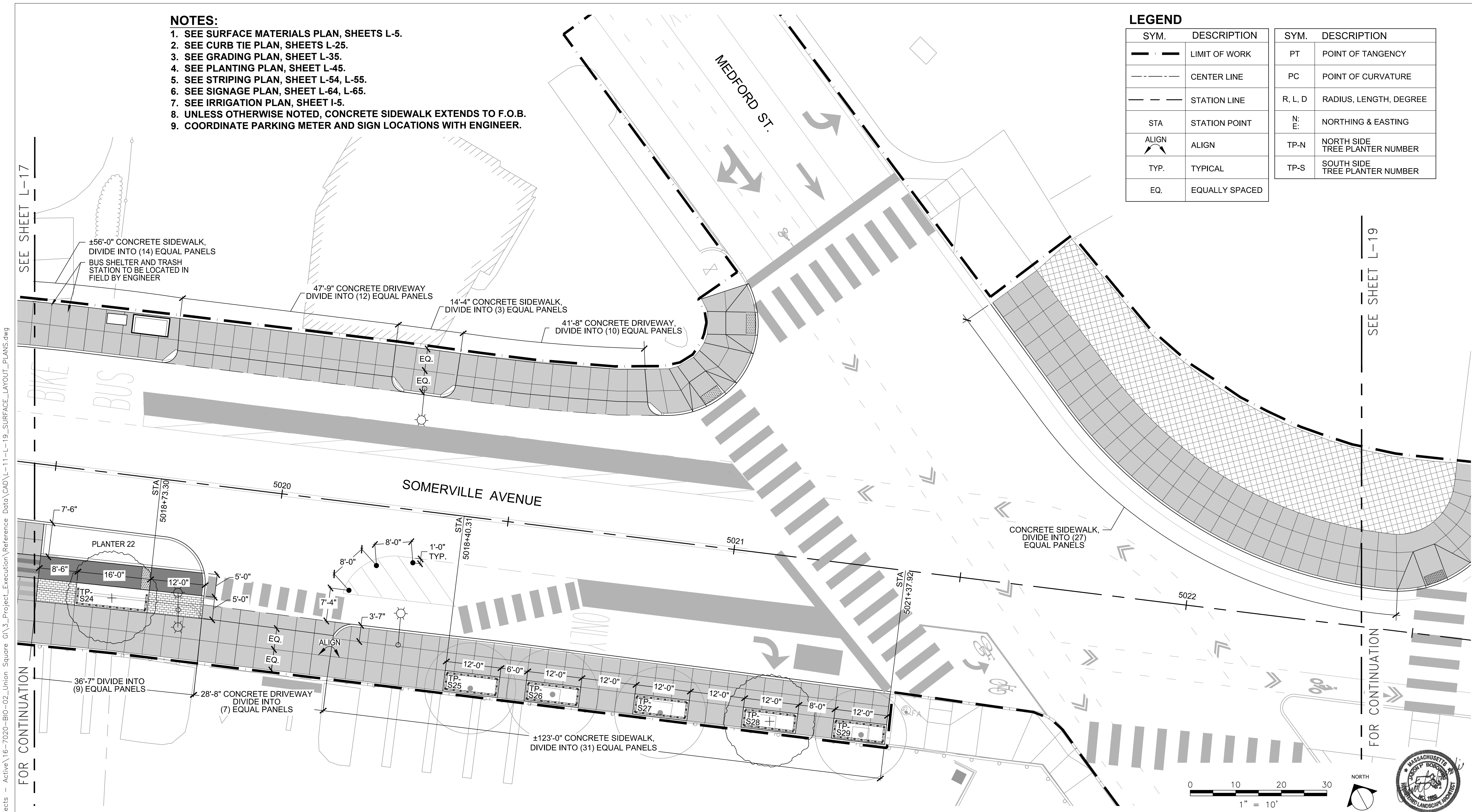


NOTES:

1. SEE SURFACE MATERIALS PLAN, SHEETS L-5.
2. SEE CURB TIE PLAN, SHEETS L-25.
3. SEE GRADING PLAN, SHEET L-35.
4. SEE PLANTING PLAN, SHEET L-45.
5. SEE STRIPING PLAN, SHEET L-54, L-55.
6. SEE SIGNAGE PLAN, SHEET L-64, L-65.
7. SEE IRRIGATION PLAN, SHEET I-5.
8. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
9. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
---	LIMIT OF WORK	PT	POINT OF TANGENCY
---	CENTER LINE	PC	POINT OF CURVATURE
---	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
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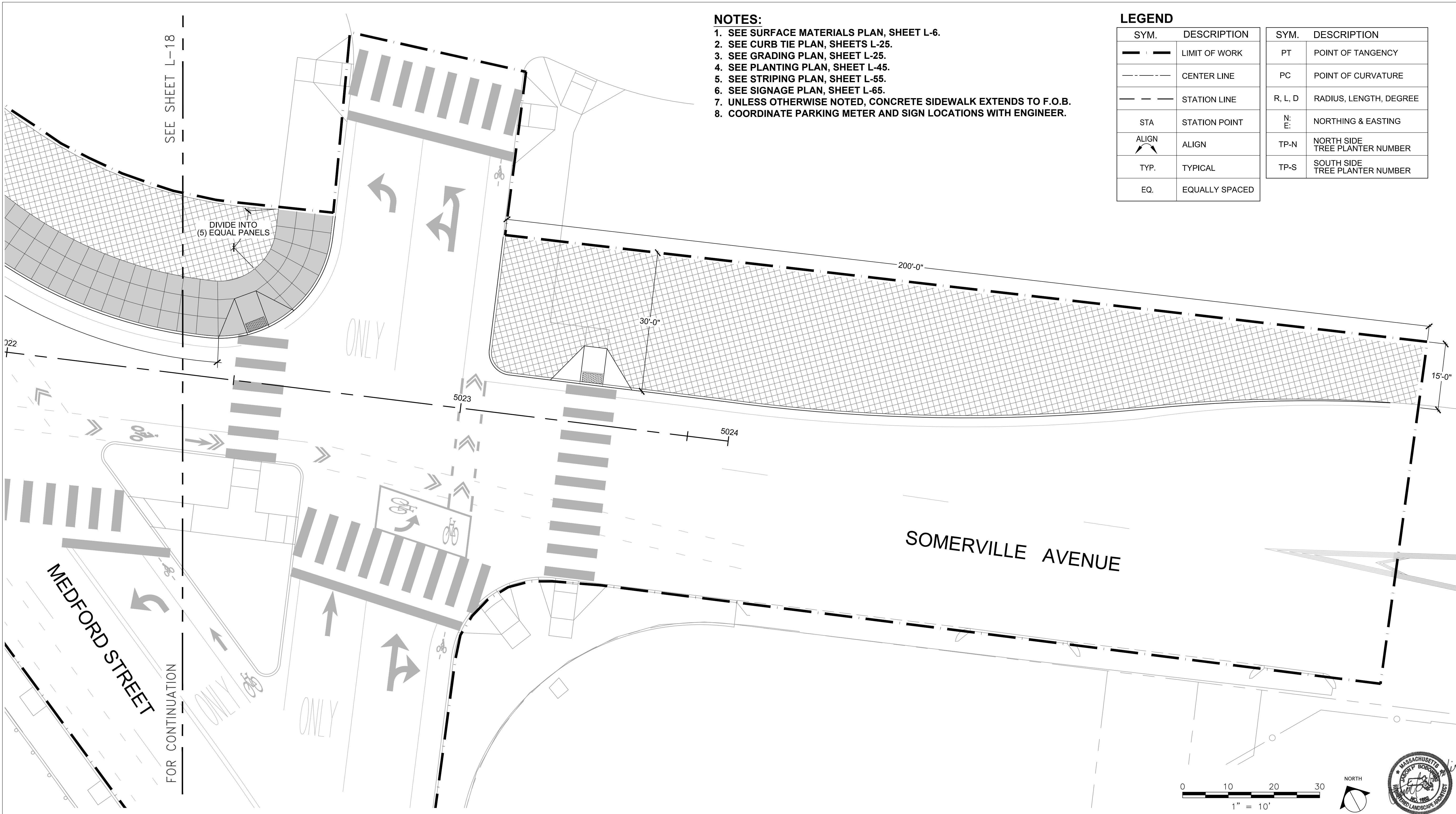
SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETSCAPE LAYOUT PLAN
SHEET 8 OF 9

DESIGNED: JB			SHEET
CHECKED: DB	75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	L-18
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NOTES:

1. SEE SURFACE MATERIALS PLAN, SHEET L-6.
2. SEE CURB TIE PLAN, SHEETS L-25.
3. SEE GRADING PLAN, SHEET L-25.
4. SEE PLANTING PLAN, SHEET L-45.
5. SEE STRIPING PLAN, SHEET L-55.
6. SEE SIGNAGE PLAN, SHEET L-65.
7. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALK EXTENDS TO F.O.B.
8. COORDINATE PARKING METER AND SIGN LOCATIONS WITH ENGINEER.

LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
---	LIMIT OF WORK	PT	POINT OF TANGENCY
----	CENTER LINE	PC	POINT OF CURVATURE
- - - -	STATION LINE	R, L, D	RADIUS, LENGTH, DEGREE
STA	STATION POINT	N: E:	NORTHING & EASTING
ALIGN	ALIGN	TP-N	NORTH SIDE TREE PLANTER NUMBER
TYP.	TYPICAL	TP-S	SOUTH SIDE TREE PLANTER NUMBER
EQ.	EQUALLY SPACED		

SEE SHEET L-18

DIVIDE INTO
(5) EQUAL PANELS

ONLY

MEDFORD STREET
FOR CONTINUATION

FOR CONTINUATION

ONLY

ONLY

SOMERVILLE AVENUE

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape LAYOUT PLAN
SHEET 8 OF 9**

DESIGNED: JB
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CHECKED: GJ

WSP PARSONS BRINCKERHOFF
75 Arlington St. Boston, MA 02116
PH. (617)428-7330 FAX (617)462-8487

HATCH
27 Congress St. Salem, MA 01970
PH. (978)750-0096 FAX (978)740-0097

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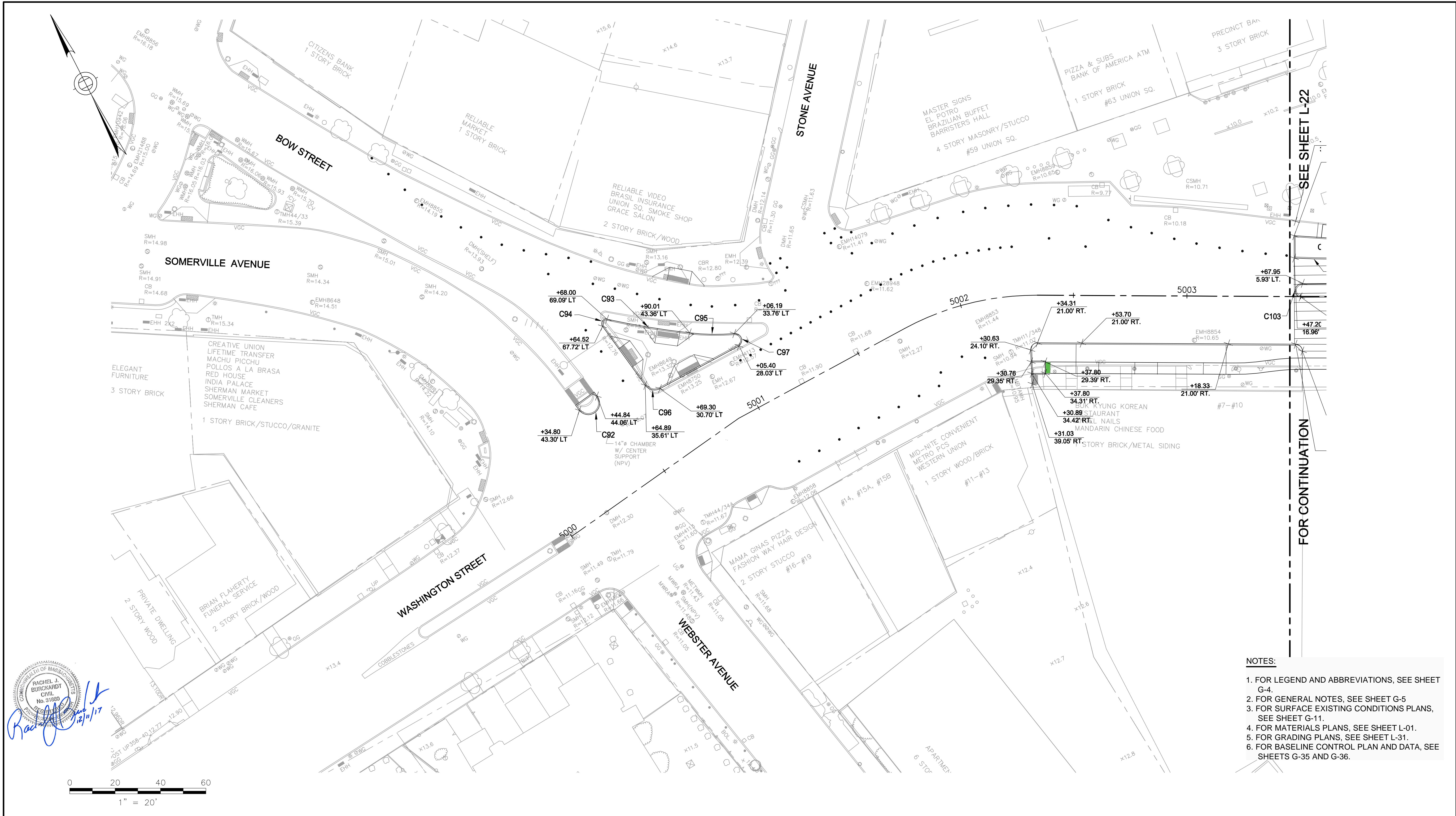
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DATE: DEC 2017

SHEET
L-19

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

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Rachel J. Burckardt

 12/20/17

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-11.
 4. FOR MATERIALS PLANS, SEE SHEET L-01.
 5. FOR GRADING PLANS, SEE SHEET L-31.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

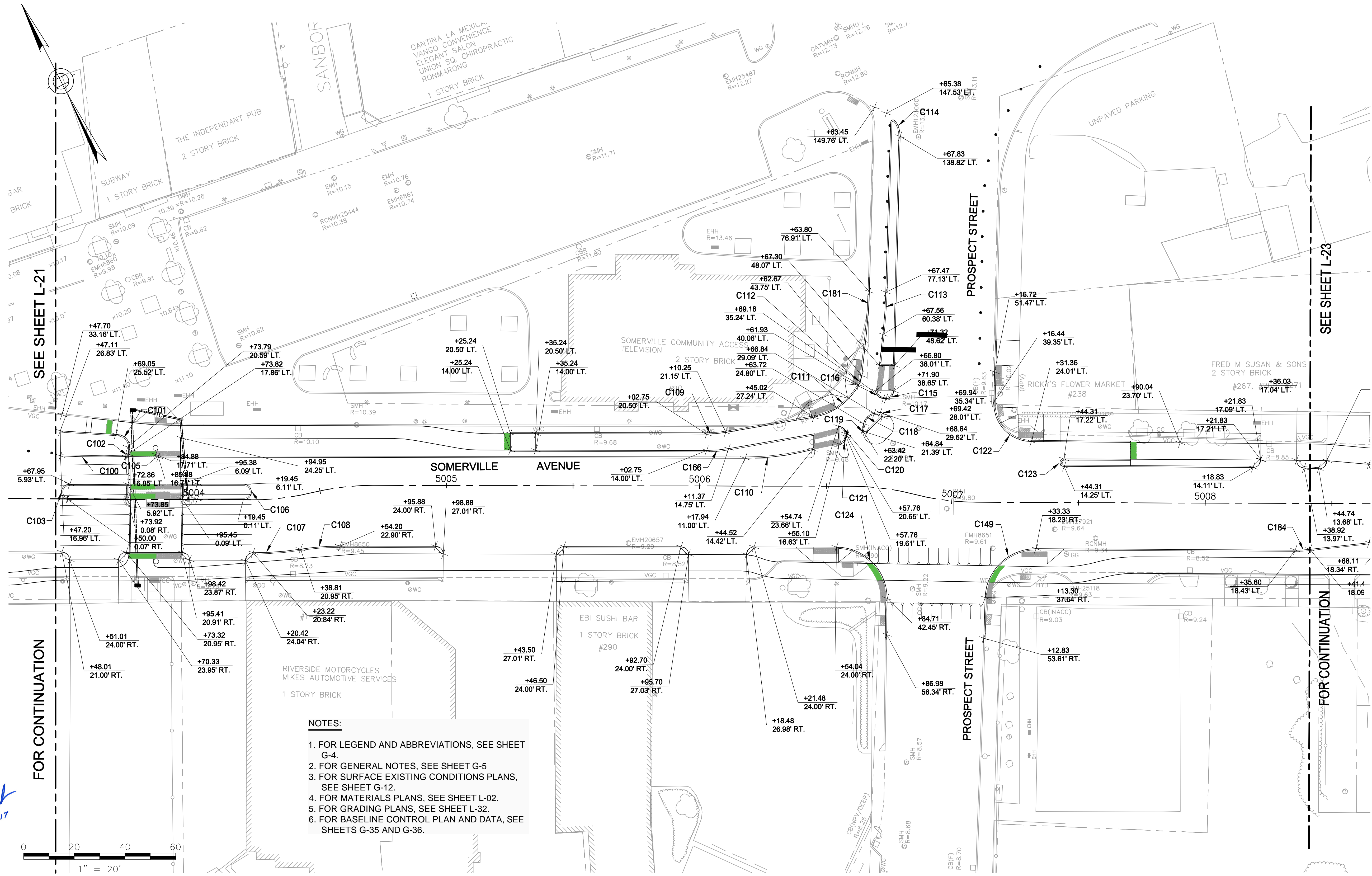
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CURB TIE PLANS
SHEET 1 OF 6

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET								
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SEE SHEET L-22

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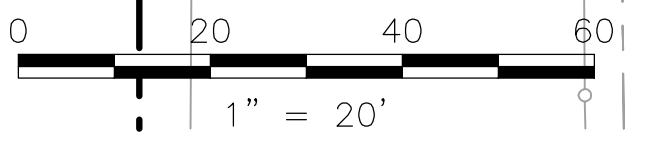
SEE SHEET L-21

SEE SHEET L-23

FOR CONTINUATION

FOR CONTINUATION

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-12.
 4. FOR MATERIALS PLANS, SEE SHEET L-02.
 5. FOR GRADING PLANS, SEE SHEET L-32.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.



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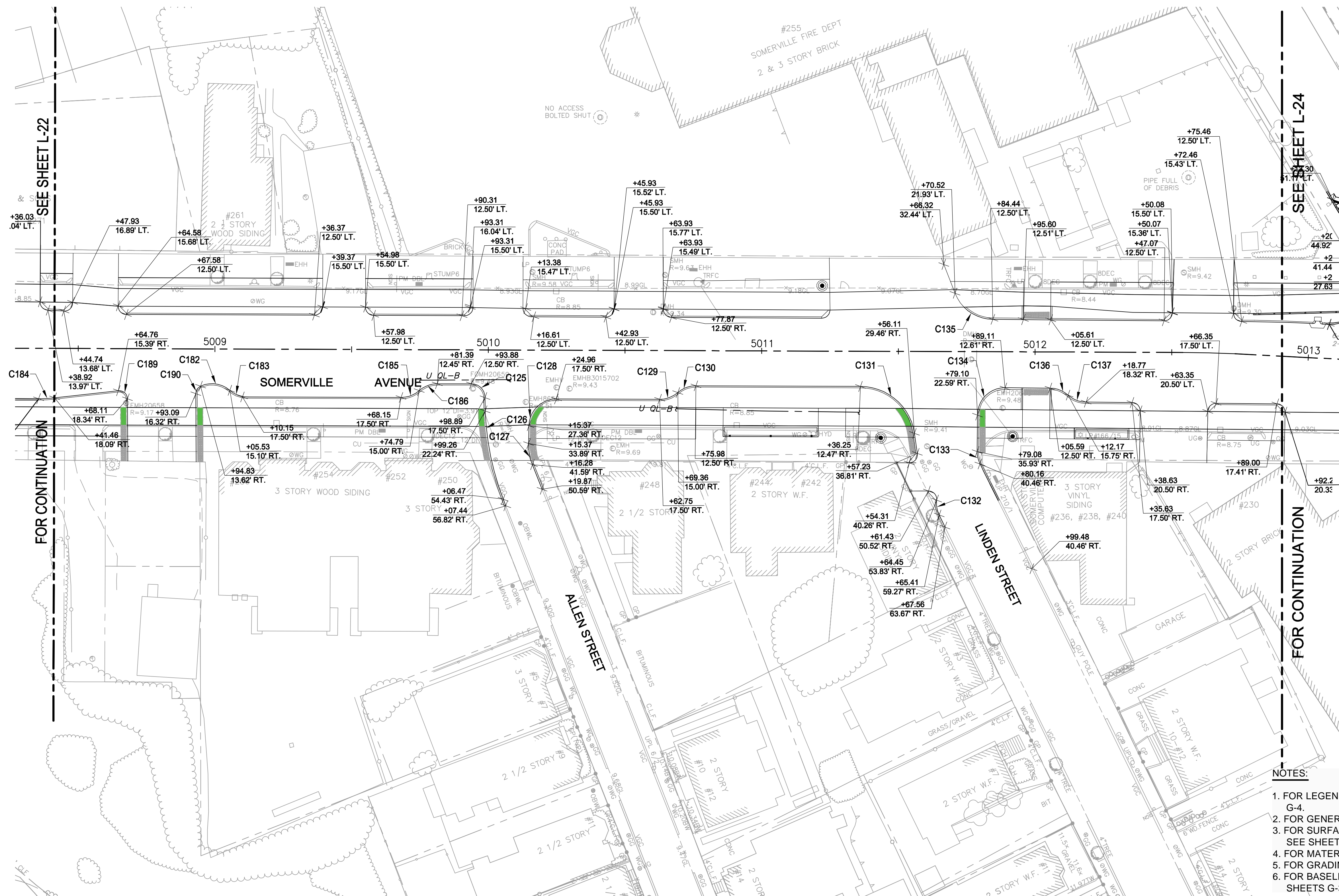
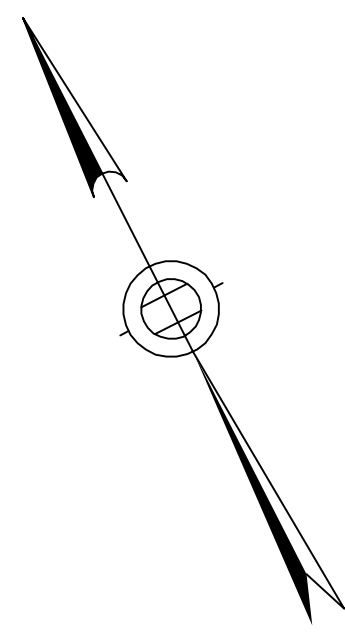
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CURB TIE PLANS
SHEET 2 OF 6

DESIGNED: LAC		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET L-22
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CITY OF SOMERVILLE
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 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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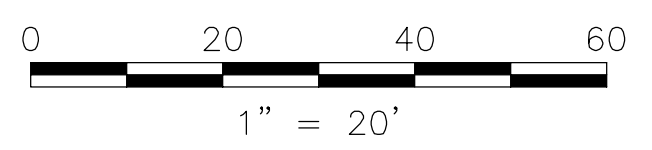
SEE SHEET L-24

FOR CONTINUATION

FOR CONTINUATION

Rachel L. Burckhardt

 12/11/17



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-13.
 4. FOR MATERIALS PLANS, SEE SHEET L-03.
 5. FOR GRADING PLANS, SEE SHEET L-33.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

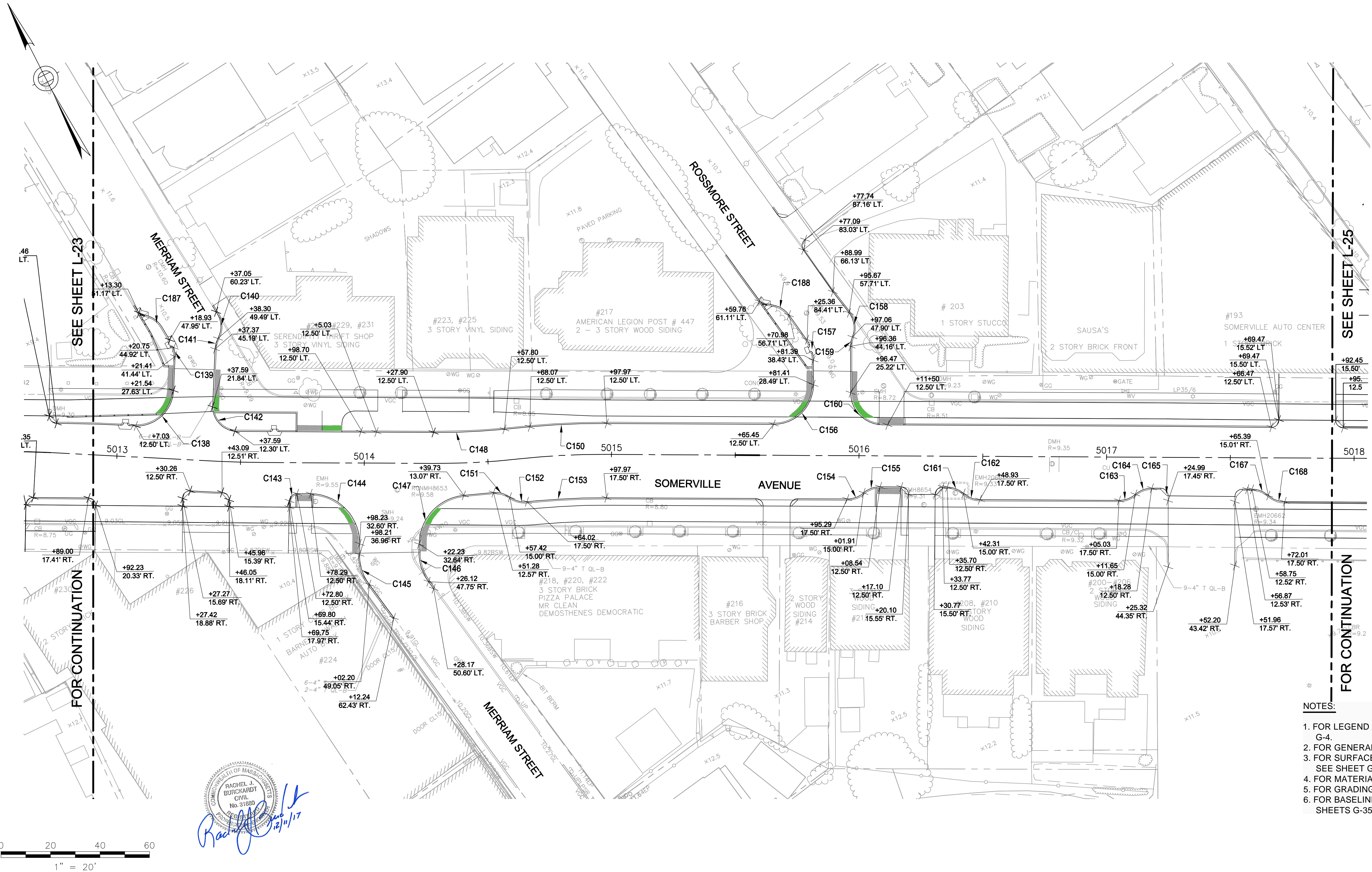
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
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CURB TIE PLANS
SHEET 3 OF 6

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
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SEE SHEET L-23

SEE SHEET L-25

FOR CONTINUATION

FOR CONTINUATION

- NOTES:
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-14.
 4. FOR MATERIALS PLANS, SEE SHEET L-04.
 5. FOR GRADING PLANS, SEE SHEET L-34.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.

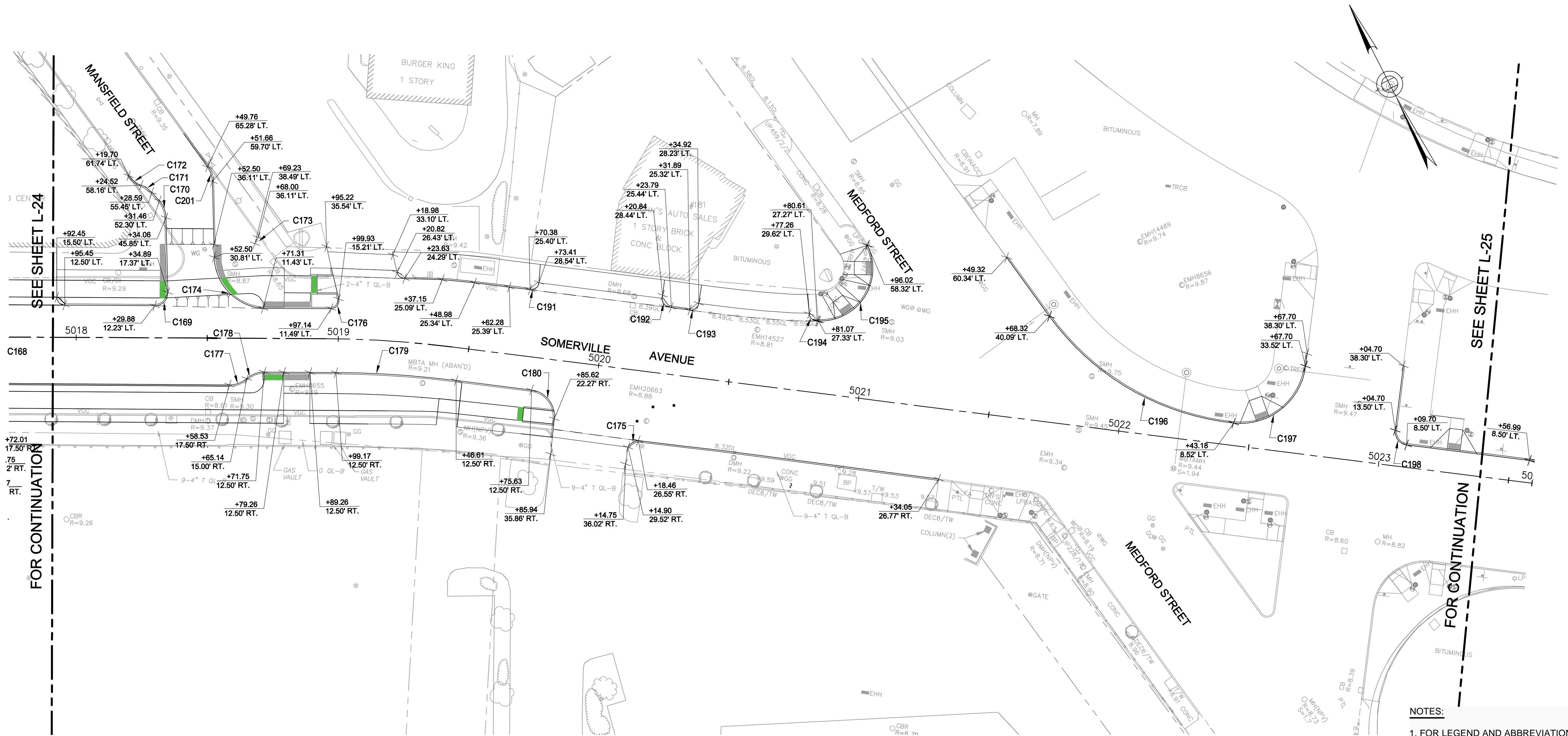
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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
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SHEET 4 OF 6

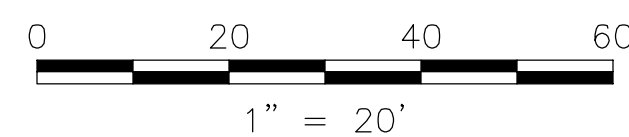
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- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-15.
 4. FOR MATERIALS PLANS, SEE SHEET L-05.
 5. FOR GRADING PLANS, SEE SHEET L-35.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.



Rachel J. Burckardt

 12/11/17

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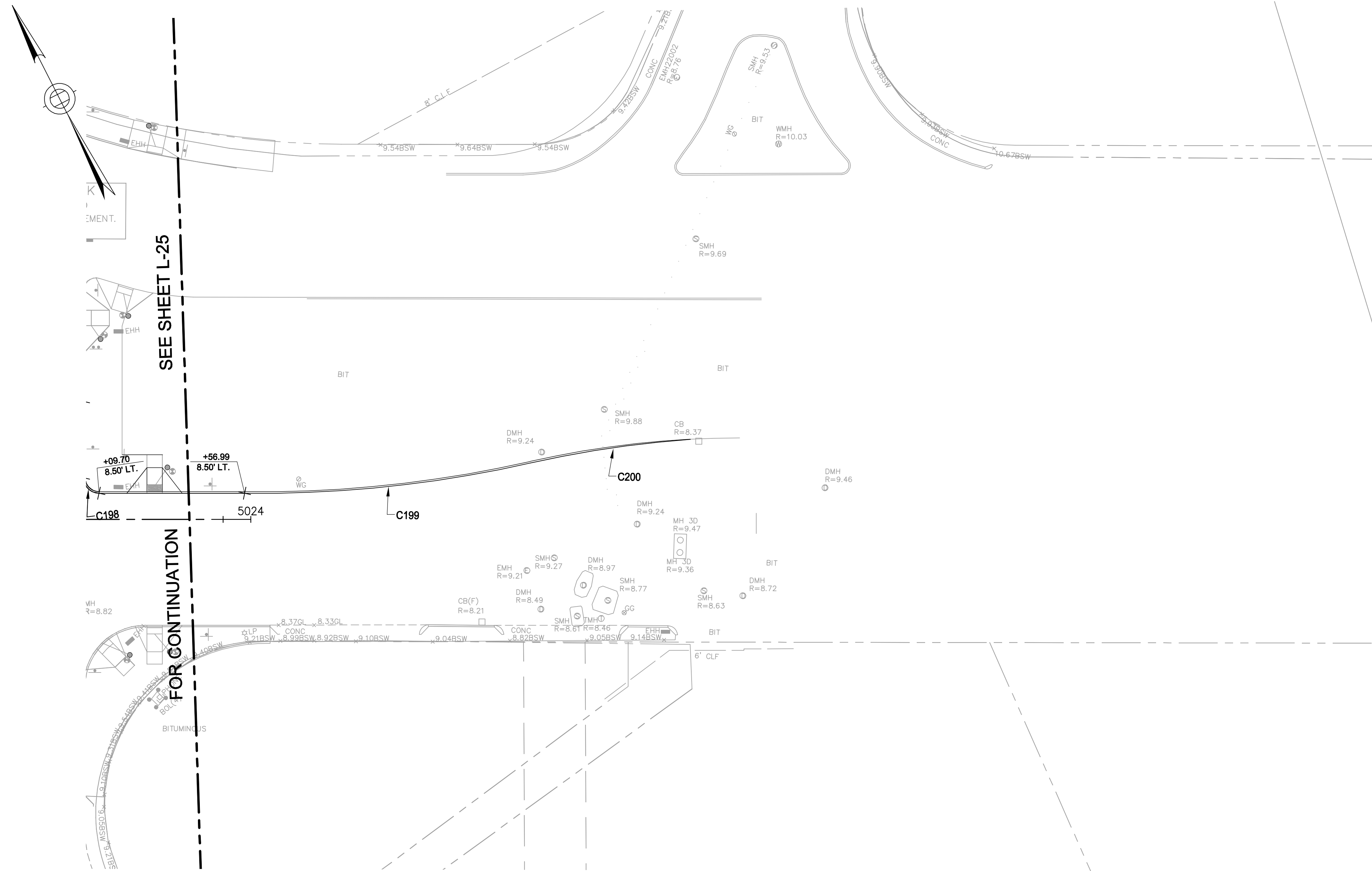
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CURB TIE PLANS
5 OF 6

DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: RJB			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td></td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
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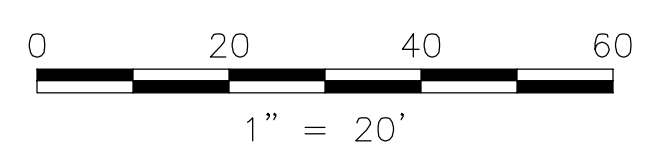
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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Professional Engineer Seal for Rachel J. Burckardt, Civil, No. 31899, State of Massachusetts. Includes a signature and date 12/11/17.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SURFACE EXISTING CONDITIONS PLANS, SEE SHEET G-16.
 4. FOR MATERIALS PLANS, SEE SHEET L-06.
 5. FOR GRADING PLANS, SEE SHEET L-36.
 6. FOR BASELINE CONTROL PLAN AND DATA, SEE SHEETS G-35 AND G-36.

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CURB TIE PLANS
SHEET 6 OF 6

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-26
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CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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Curve Table								
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	NORTHING FROM	EASTING FROM	NORTHING TO	EASTING TO
C92	15.805	5.031	180.000	10.062	2963670.393	765219.063	2963672.874	765228.814
C93	4.826	2.000	138.242	3.737	2963701.519	765247.313	2963699.567	765244.125
C94	36.899	361.000	5.856	36.883	2963701.519	765247.313	2963680.513	765277.629
C95	19.677	100.000	11.274	19.645	2963680.513	765277.629	2963671.852	765295.262
C96	7.199	5.000	82.497	6.593	2963668.004	765250.030	2963663.931	765255.214
C97	8.206	3.000	156.714	5.877	2963666.046	765294.373	2963671.858	765295.246
C100	25.666	300.000	4.902	25.658	2963596.369	765532.391	2963585.160	765555.471
C101	8.161	5.000	93.514	7.285	2963587.806	765558.509	2963594.555	765555.766
C103	8.541	3.009	162.632	5.949	2963584.842	765530.458	2963579.689	765527.486
C104	1.571	1.000	90.000	1.414	2963586.175	765570.371	2963585.701	765569.038
C105	1.571	1.000	90.000	1.414	2963580.735	765566.675	2963579.402	765567.148
C106	8.983	3.009	171.065	5.999	2963549.736	765590.628	2963555.144	765593.226
C107	18.749	117.000	9.181	18.729	2963529.313	765584.740	2963522.595	765602.223
C108	15.623	100.000	8.951	15.607	2963516.978	765616.879	2963522.564	765602.306
C109	7.541	43.500	9.933	7.532	2963495.026	765766.582	2963492.391	765773.637
C110	26.869	105.000	14.661	26.795	2963479.920	765776.219	2963471.588	765801.686
C111	22.611	25.000	51.821	21.848	2963482.949	765807.653	2963486.892	765829.142
C112	3.852	10.000	22.069	3.828	2963486.892	765829.142	2963489.707	765831.736
C113	16.733	206.500	4.643	16.728	2963500.792	765846.196	2963515.379	765854.383
C114	11.118	10.000	63.699	10.554	2963568.520	765885.773	2963579.031	765884.824

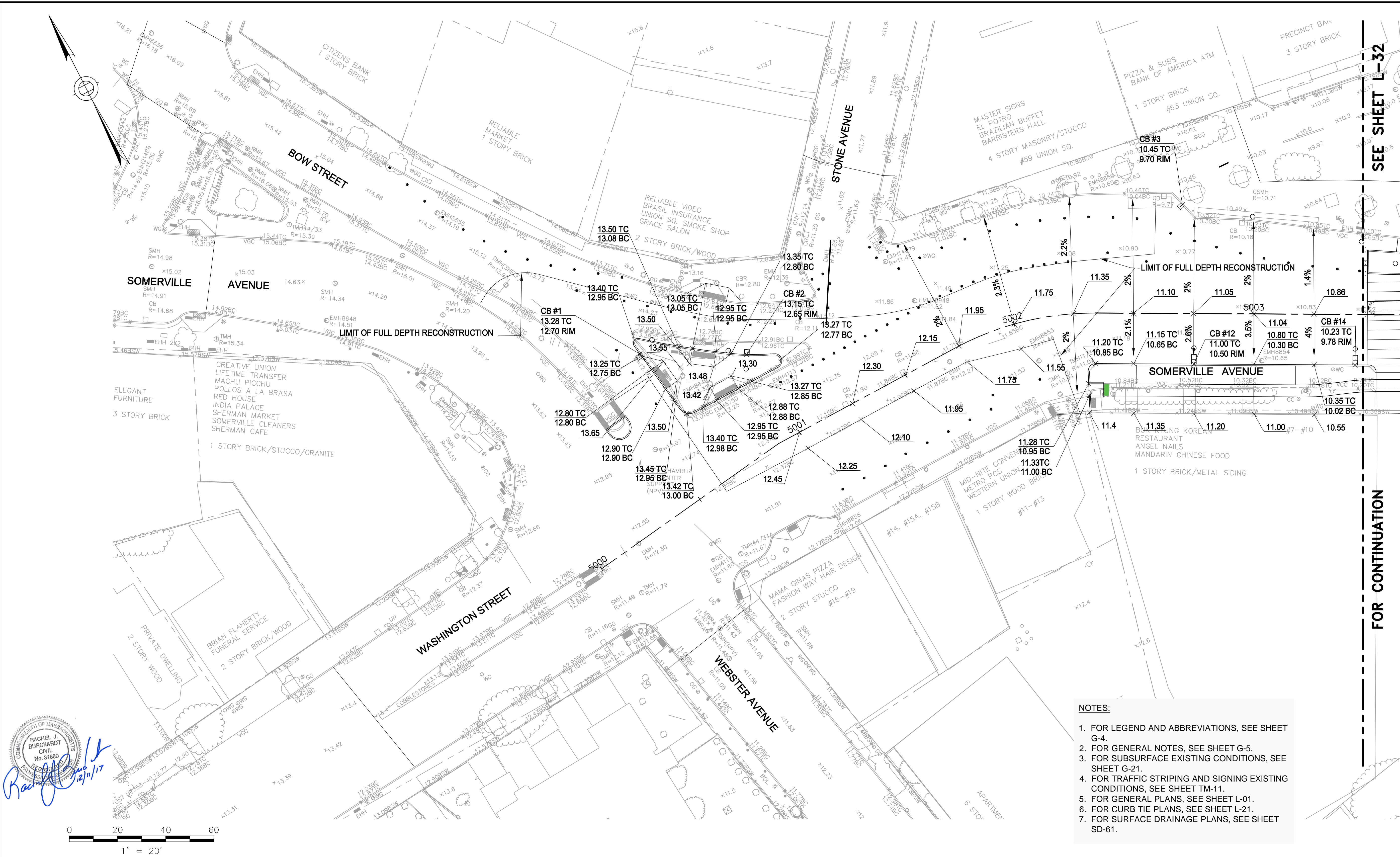
Curve Table								
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C115	4.369	3.000	83.435	3.993	2963477.427	765836.516	2963478.535	765840.352
C116	4.369	3.000	83.435	3.993	2963481.558	765834.046	2963477.874	765835.585
C117	2.502	1.000	143.372	1.899	2963473.400	765832.111	2963471.502	765832.154
C118	6.233	5.000	71.420	5.837	2963472.229	765824.299	2963474.099	765829.828
C119	2.534	1.000	145.208	1.909	2963468.568	765823.918	2963470.092	765822.769
C120	4.369	3.000	83.435	3.993	2963471.523	765816.318	2963475.355	765815.196
C121	4.369	3.000	83.435	3.993	2963469.037	765812.197	2963470.590	765815.875
C122	23.827	15.000	91.012	21.400	2963457.786	765874.265	2963437.511	765881.109
C123	4.978	1.500	190.148	2.988	2963425.855	765889.751	2963423.110	765888.569
C124	31.627	20.000	90.605	28.433	2963405.963	765803.150	2963432.806	765793.775
C125	7.659	5.000	87.761	6.932	2963280.360	766102.603	2963286.849	766100.167
C126	33.138	100.000	18.986	32.986	2963280.360	766102.603	2963248.327	766094.732
C127	7.879	20.000	22.573	7.829	2963262.756	766111.845	2963255.199	766109.802
C128	15.560	10.000	89.152	14.037	2963273.181	766128.023	2963268.609	766114.752
C129	7.227	10.000	41.410	7.071	2963256.874	766162.113	2963256.275	766169.158
C130	7.227	10.000	41.410	7.071	2963255.676	766176.204	2963256.275	766169.158
C131	28.485	20.000	81.604	26.138	2963205.745	766241.004	2963229.690	766230.526
C132	5.590	10.000	32.028	5.517	2963180.175	766237.903	2963174.867	766236.400
C133	4.700	10.000	26.931	4.657	2963185.373	766257.866	2963189.921	766258.869
C134	15.698	10.000	89.944	14.135	2963201.918	766264.695	2963206.549	766278.049

Curve Table								
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	NORTHING FROM	EASTING FROM	NORTHING TO	EASTING TO
C135	17.857	15.000	68.209	16.821	2963245.737	766276.356	2963231.181	766284.787
C136	7.227	10.000	41.410	7.071	2963194.336	766297.794	2963199.470	766292.931
C137	7.227	10.000	41.410	7.071	2963194.336	766297.794	2963189.203	766302.656
C138	23.202	15.000	88.627	20.958	2963183.309	766415.117	2963176.858	766395.177
C139	3.539	10.081	20.114	3.521	2963198.908	766422.537	2963195.529	766421.549
C140	10.604	10.000	60.754	10.114	2963194.665	766440.311	2963203.955	766444.309
C141	4.520	10.000	25.900	4.482	2963194.665	766440.311	2963191.268	766437.387
C142	16.080	10.000	92.129	14.402	2963171.024	766426.732	2963157.350	766431.255
C143	4.655	3.000	88.897	4.202	2963122.961	766438.334	2963124.316	766442.311
C144	31.519	20.000	90.295	28.357	2963121.963	766447.215	2963095.187	766456.551
C145	12.950	20.000	37.098	12.725	2963091.267	766454.645	2963078.648	766453.011
C146	12.804	20.000	36.681	12.587	2963081.945	766476.799	2963069.469	766475.137
C147	29.320	20.000	83.994	26.764	2963084.788	766478.181	2963094.847	766502.983
C148	28.654	287.500	5.710	28.642	2963123.020	766502.805	2963111.932	766529.214
C149	30.871	20.000	88.438	27.896	2963398.550	765864.681	2963389.666	765838.237
C150	31.146	312.500	5.711	31.134	2963108.431	766538.873	2963096.378	766567.579
C151	7.012	10.000	40.175	6.869	2963090.741	766514.312	2963086.212	766519.476
C152	7.229	10.000	41.420	7.073	2963086.212	766519.476	2963081.606	766524.844
C153	28.156	282.500	5.711	28.145	2963080.226	766528.651	2963069.330	766554.602
C154	7.227	10.000	41.409	7.071	2963027.261	766642.283	2963026.654	766649.328

Curve Table								
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	NORTHING FROM	EASTING FROM	NORTHING TO	EASTING TO
C155	7.245	10.000	41.512	7.088	2963026.039	766656.389	2963026.654	766649.328
C156	25.228	16.000	90.342	22.695	2963067.218	766628.354	2963074.809	766649.742
C157	3.270	15.000	12.490	3.263	2963083.467	766653.833	2963086.552	766654.898
C158	10.422	10.000	59.716	9.957	2963085.459	766672.166	2963094.962	766675.140
C159	3.831	10.000	21.949	3.807	2963085.459	766672.166	2963082.390	766669.914
C160	20.343	13.000	89.658	18.330	2963065.451	766661.911	2963048.177	766668.041
C161	7.227	10.000	41.410	7.071	2963009.174	766685.758	2963014.290	766680.876
C162	7.227	10.000	41.409	7.071	2963009.174	766685.758	2963004.059	766690.640
C163	7.227	10.000	41.410	7.071	2962979.758	766741.289	2962979.151	766748.334
C164	7.245	10.000	41.512	7.088	2962978.536	766755.395	2962979.151	766748.334
C165	4.712	3.000	90.000	4.243	2962977.009	766758.635	2962973.016	766760.069
C166	8.668	50.000	9.933	8.657	2963489.157	765763.789	2963486.128	765771.899
C167	7.245	10.000	41.512	7.088	2962955.748	766796.684	2962960.871	766791.786
C168	7.227	10.000	41.410	7.071	2962955.748	766796.684	2962950.633	766801.566
C169	8.007	5.000	91.756	7.179	2962955.054	766873.381	2962952.580	766866.642
C170	7.090	10.000	40.621	6.942	2962988.028	766885.403	2962981.100	766884.960
C171	4.958	10.000	28.410	4.908	2962992.115	766884.180	2962996.328	766881.663
C172	6.077	10.000	34.821	5.984	2963001.629	766878.886	2962996.328	766881.663
C173	4.419	2.000	126.588	3.573	2962957.193	766911.097	2962959.345	766913.949
C174	30.910	20.000	88.551	27.924	2962959.557	766895.082	2962933.369	766904.774

Curve Table								
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	NORTHING FROM	EASTING FROM	NORTHING TO	EASTING TO
C176	5.403	3.000	103.182	4.702	2962922.800	766927.015	2962924.874	766931.235
C177	7.227	10.000	41.410	7.071	2962913.080	766879.510	2962912.462	766886.554
C178	7.227	10.000	41.410	7.071	2962911.843	766893.598	2962912.462	766886.554
C179	45.957	387.500	6.795	45.930	2962899.946	766918.292	2962877.594	766958.415
C180	15.474	10.000	88.658	13.976	2962861.993	766982.886	2962848.384	766986.066
C181	16.206	200.000	4.643	16.202	2963504.200	765840.661	2963518.329	765848.590
C182	11.404	10.000	65.340	10.796	2963327.138	766021.405	2963333.083	766012.393
C183	7.264	10.000	41.621	7.106	2963327.138	766021.405	2963322.090	766026.405
C184	5.876	50.000	6.733	5.872	2963354.283	765956.870	2963352.057	765962.304
C185	4.763	5.000	54.576	4.585	2962827.106	767011.394	2962826.527	767006.846
C187	7.812	10.000	44.758	7.615	2963215.359	766418.181	2963208.645	766421.772
C188	7.854	10.000	45.000	7.654	2963104.434	766652.865	2963110.865	766648.716
C189	5.031	3.000	96.084	4.462	2963344.451	765984.499	2963340.345	765986.245
C190	3.442	3.000	65.744	3.257	2963333.083	766012.393	2963331.351	766009.636
C191	4.888	3.000	93.352	4.365	2962896.821	766998.758	2962897.838	767003.003
C192	4.669	3.000	89.165	4.212	2962872.257	767042.937	2962868.138	767043.817
C193	4.655	3.000	88.912	4.202	2962863.685	767050.584	2962864.512	767054.704
C194	4.502	3.000	85.981	4.091	2962842.919	767091.149	2962839.137	767092.708

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Rachel J. Burckhardt

 Civil

 No. 31880

 State of Massachusetts

 12/11/17

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-21.
 4. FOR TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-11.
 5. FOR GENERAL PLANS, SEE SHEET L-01.
 6. FOR CURB TIE PLANS, SEE SHEET L-21.
 7. FOR SURFACE DRAINAGE PLANS, SEE SHEET SD-61.

SEE SHEET L-32

FOR CONTINUATION

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GRADING PLANS
SHEET 1 OF 6

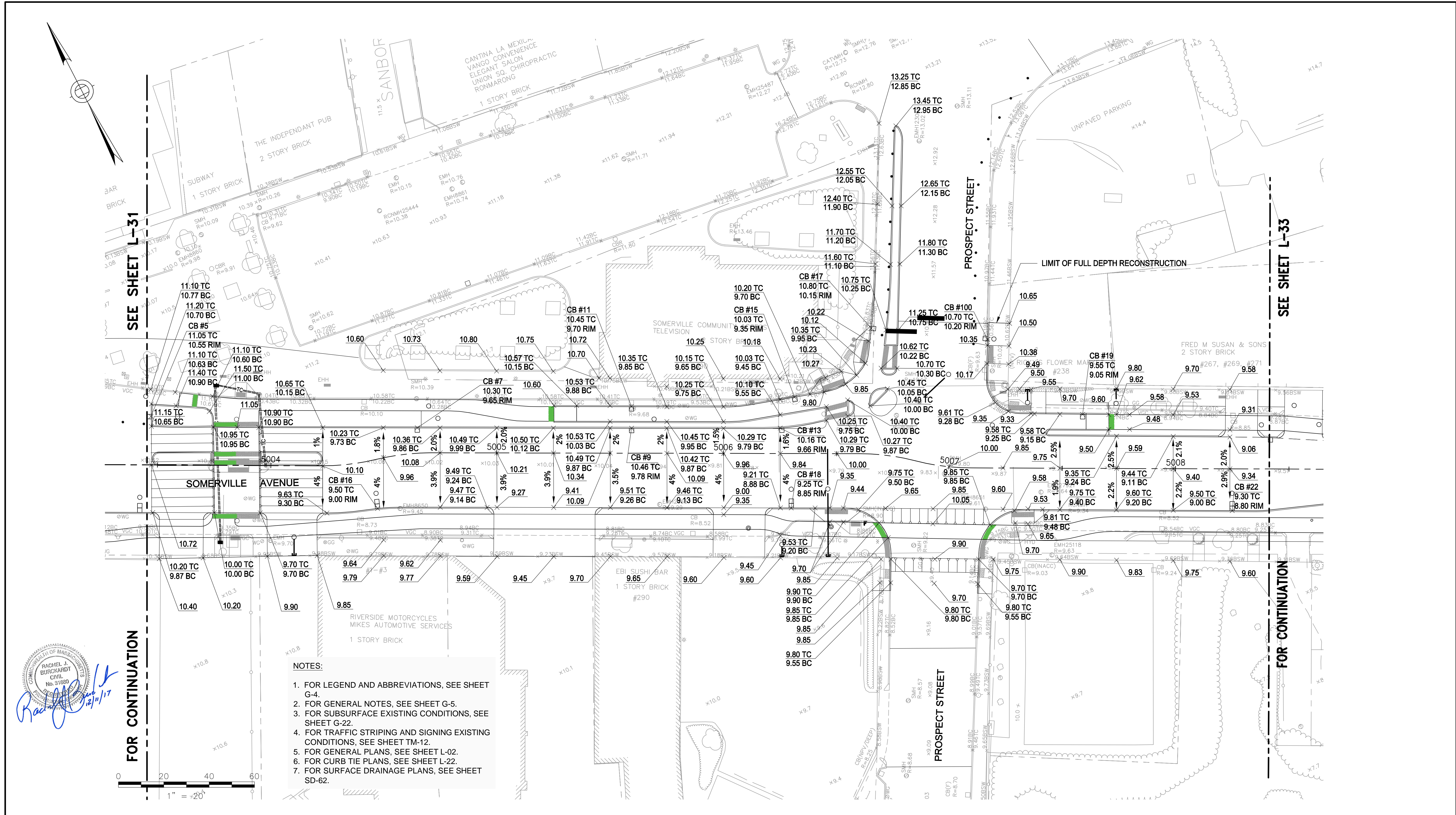
DESIGNED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
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CITY OF SOMERVILLE
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SEE SHEET L-31

SEE SHEET L-33

FOR CONTINUATION

FOR CONTINUATION

NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
2. FOR GENERAL NOTES, SEE SHEET G-5.
3. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-22.
4. FOR TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-12.
5. FOR GENERAL PLANS, SEE SHEET L-02.
6. FOR CURB TIE PLANS, SEE SHEET L-22.
7. FOR SURFACE DRAINAGE PLANS, SEE SHEET SD-62.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GRADING PLANS
SHEET 2 OF 6

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 Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

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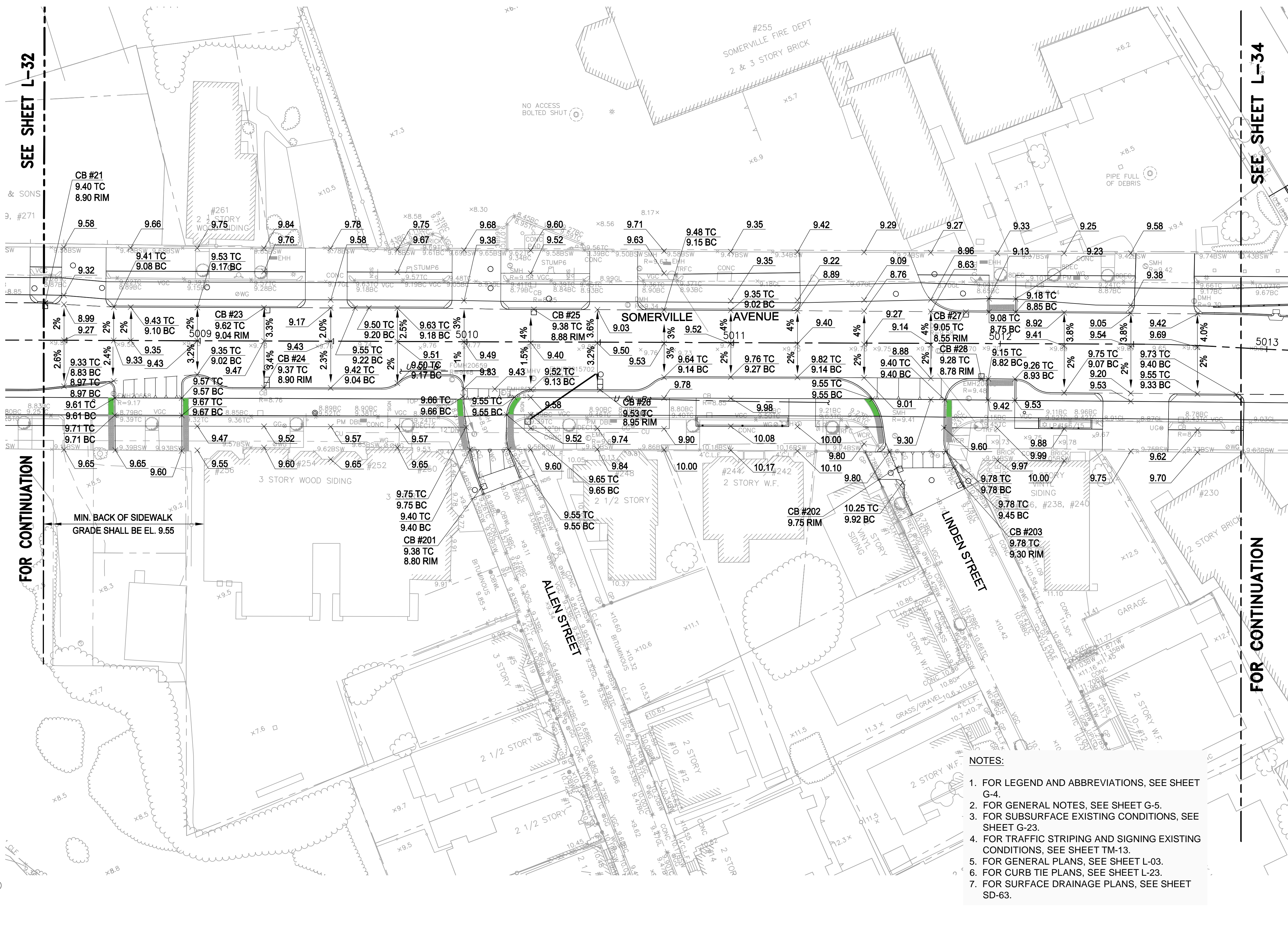
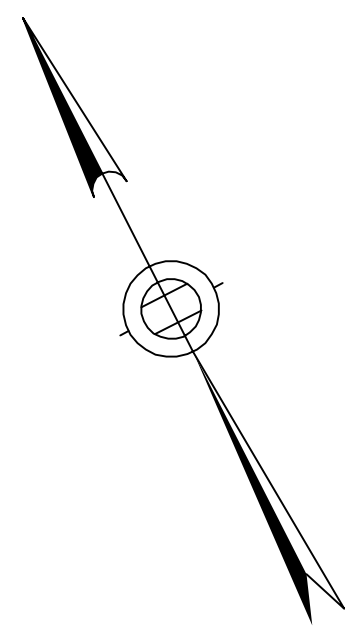
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CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
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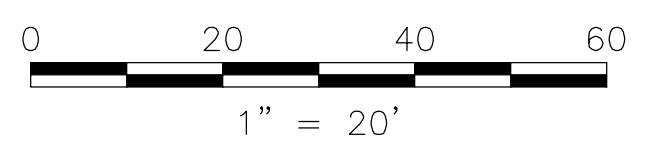
SEE SHEET L-34

FOR CONTINUATION

FOR CONTINUATION

MIN. BACK OF SIDEWALK GRADE SHALL BE EL. 9.55

Professional seal for Rachel J. Burckardt, Civil Engineer, No. 31880, dated 12/11/17.



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-23.
 4. FOR TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-13.
 5. FOR GENERAL PLANS, SEE SHEET L-03.
 6. FOR CURB TIE PLANS, SEE SHEET L-23.
 7. FOR SURFACE DRAINAGE PLANS, SEE SHEET SD-63.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

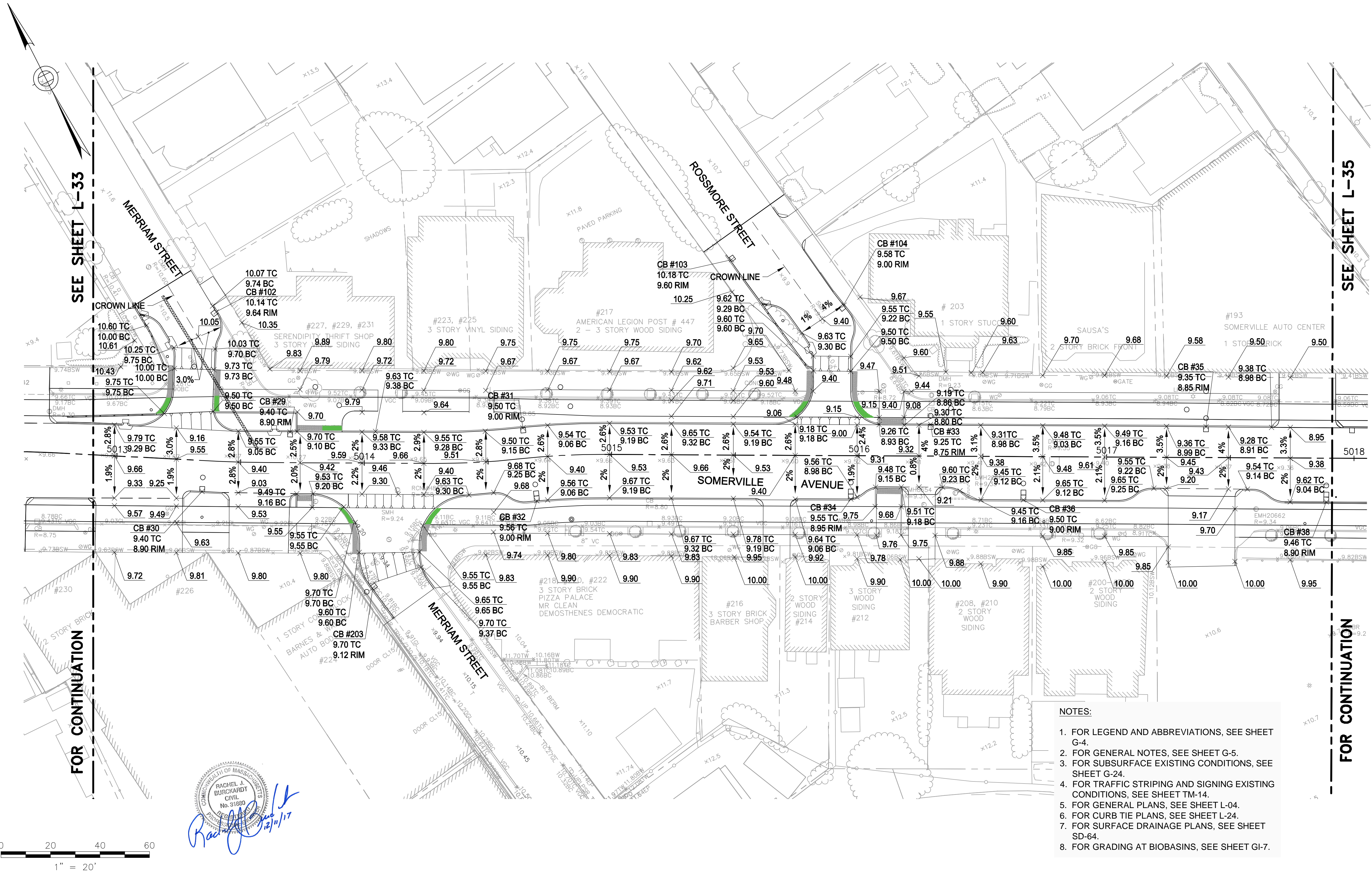
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GRADING PLANS
SHEET 3 OF 6

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CHECKED: RJB	ACC.	DATE: DEC 2017		

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

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Rachel J. Burckardt
 12/11/17

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-24.
 4. FOR TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-14.
 5. FOR GENERAL PLANS, SEE SHEET L-04.
 6. FOR CURB TIE PLANS, SEE SHEET L-24.
 7. FOR SURFACE DRAINAGE PLANS, SEE SHEET SD-64.
 8. FOR GRADING AT BIOBASINS, SEE SHEET GI-7.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

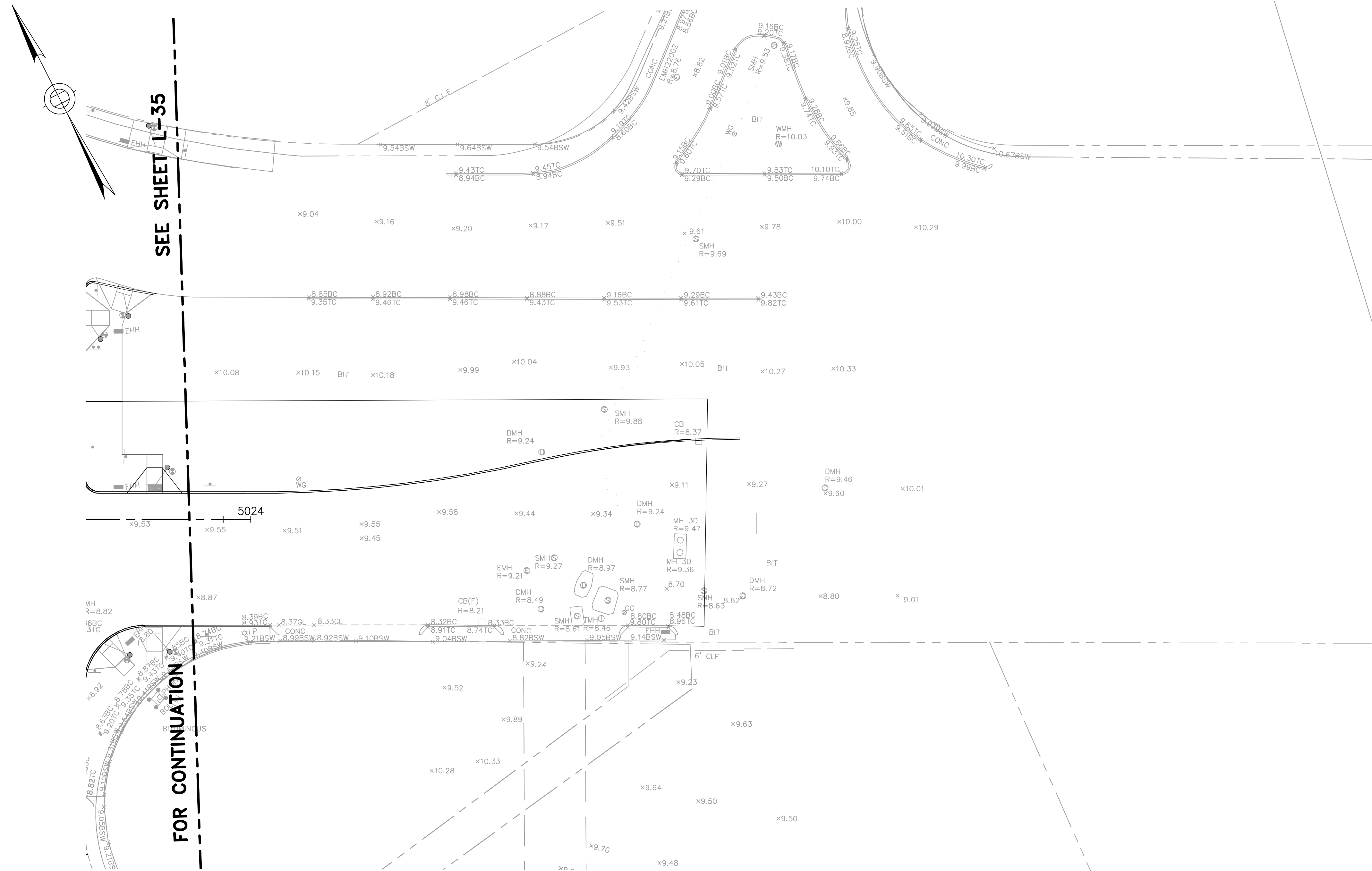
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GRADING PLANS
SHEET 4 OF 6

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET					
CHECKED: JEK			<table border="1"> <tr> <td>REF.</td> <td>CONT.</td> <td>SCALE: 1"=20'</td> </tr> <tr> <td>ACC.</td> <td></td> <td>DATE: DEC 2017</td> </tr> </table>	REF.	CONT.	SCALE: 1"=20'	ACC.
REF.	CONT.	SCALE: 1"=20'					
ACC.		DATE: DEC 2017					
DRAWN: LAC		L-34					
CHECKED: RJB							

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Civil\L-31_L-36 Grading Plans.dwg 2017-11-17 1:59 PM



Professional Engineer Seal for Rachel J. Burckhardt, Civil, No. 31680, State of Massachusetts. Signature and date: Rachel J. Burckhardt, 12/11/17.

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5
 3. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-25.
 4. FOR TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-15.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

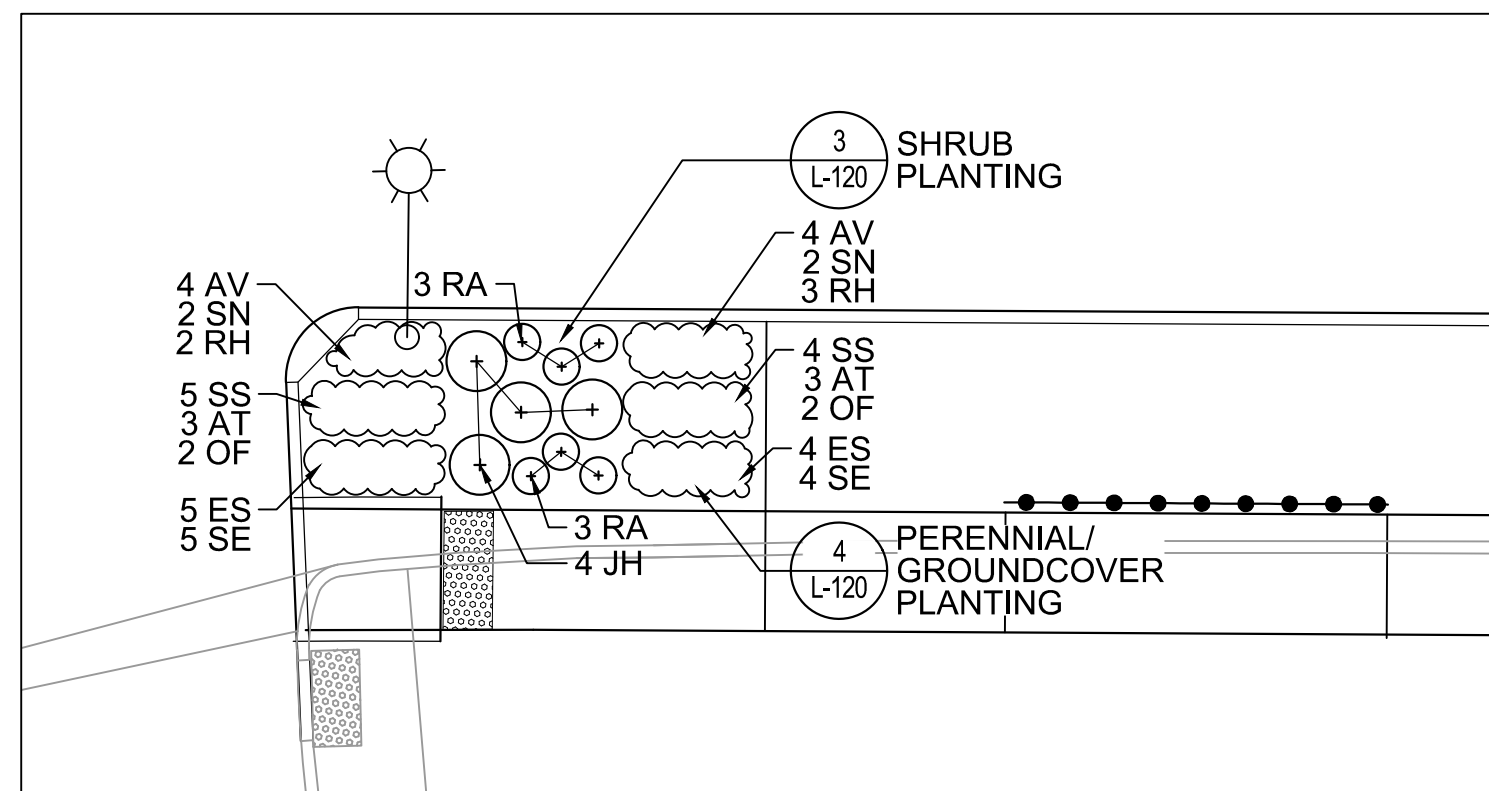
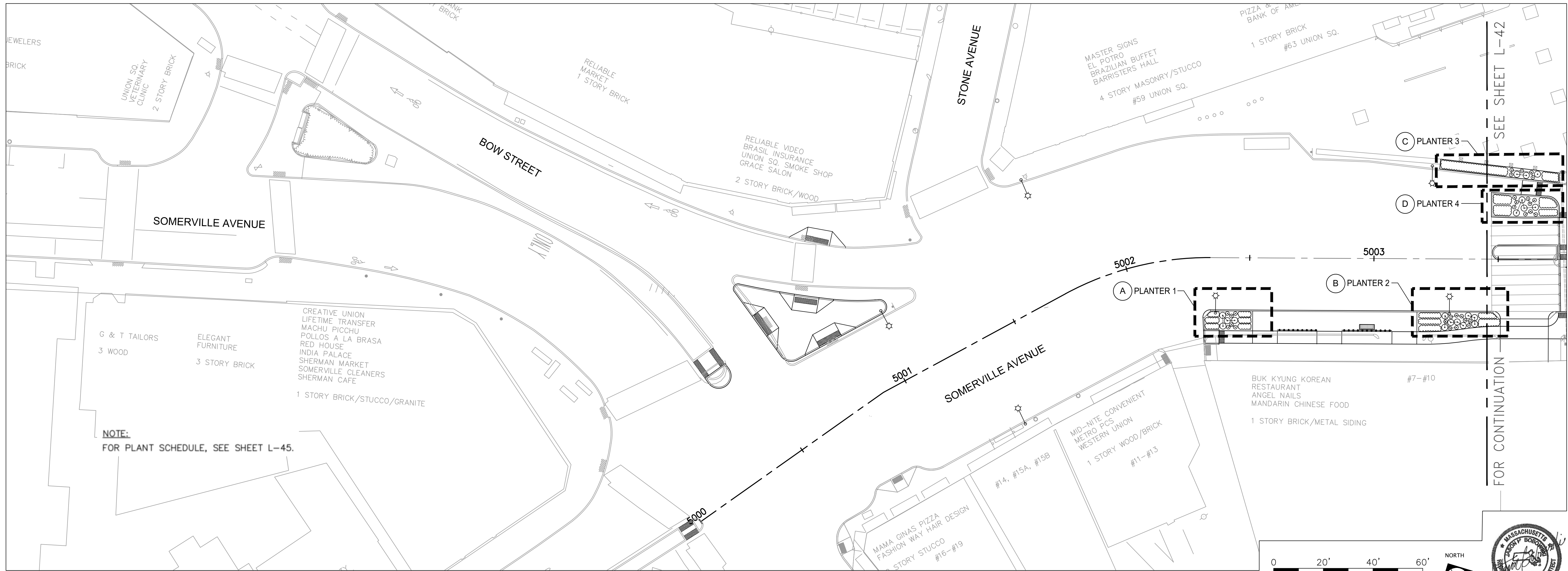
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GRADING PLANS
SHEET 6 OF 6

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-36
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DRAWN: LAC	REF.	CONT.
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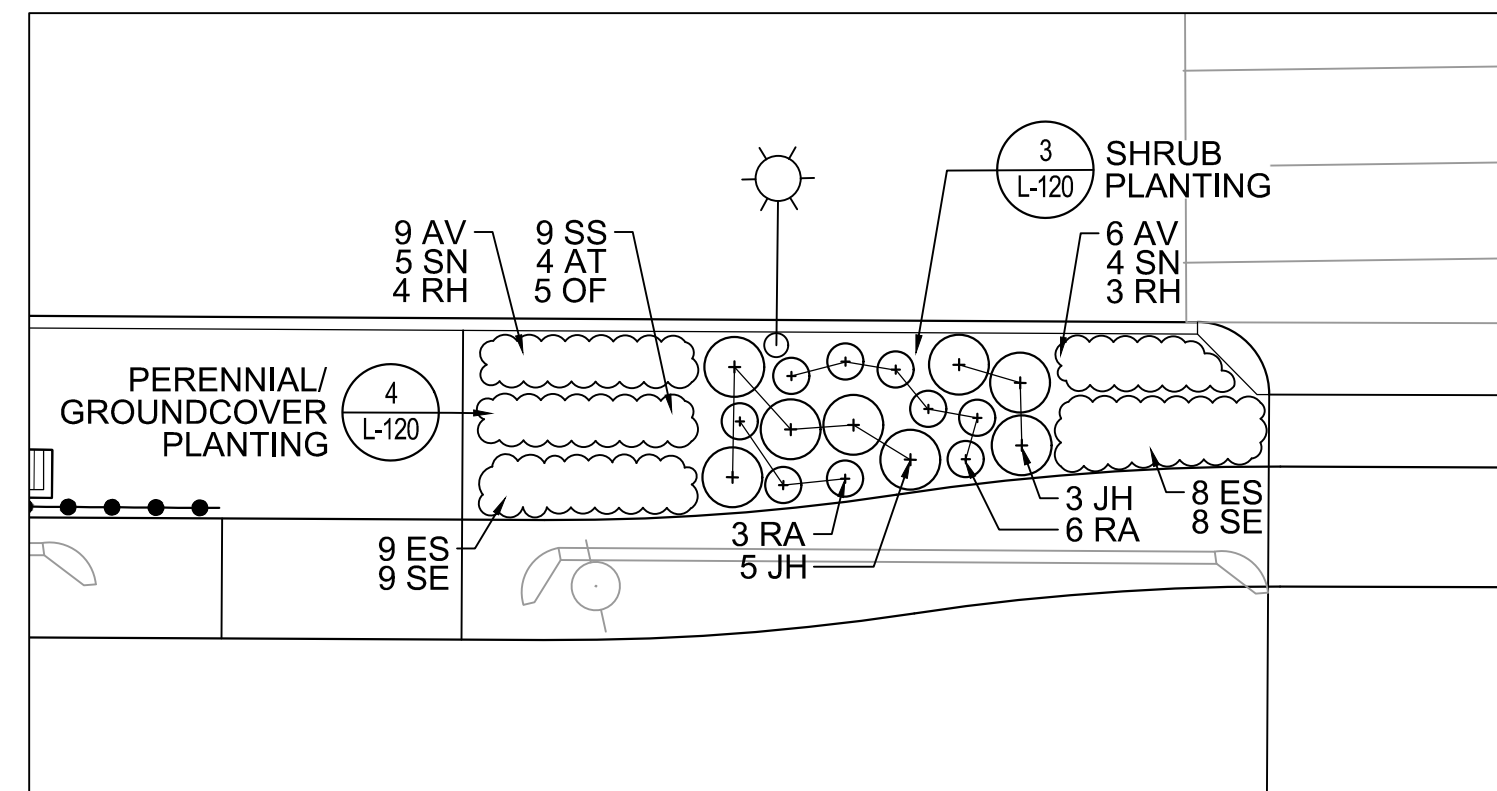
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

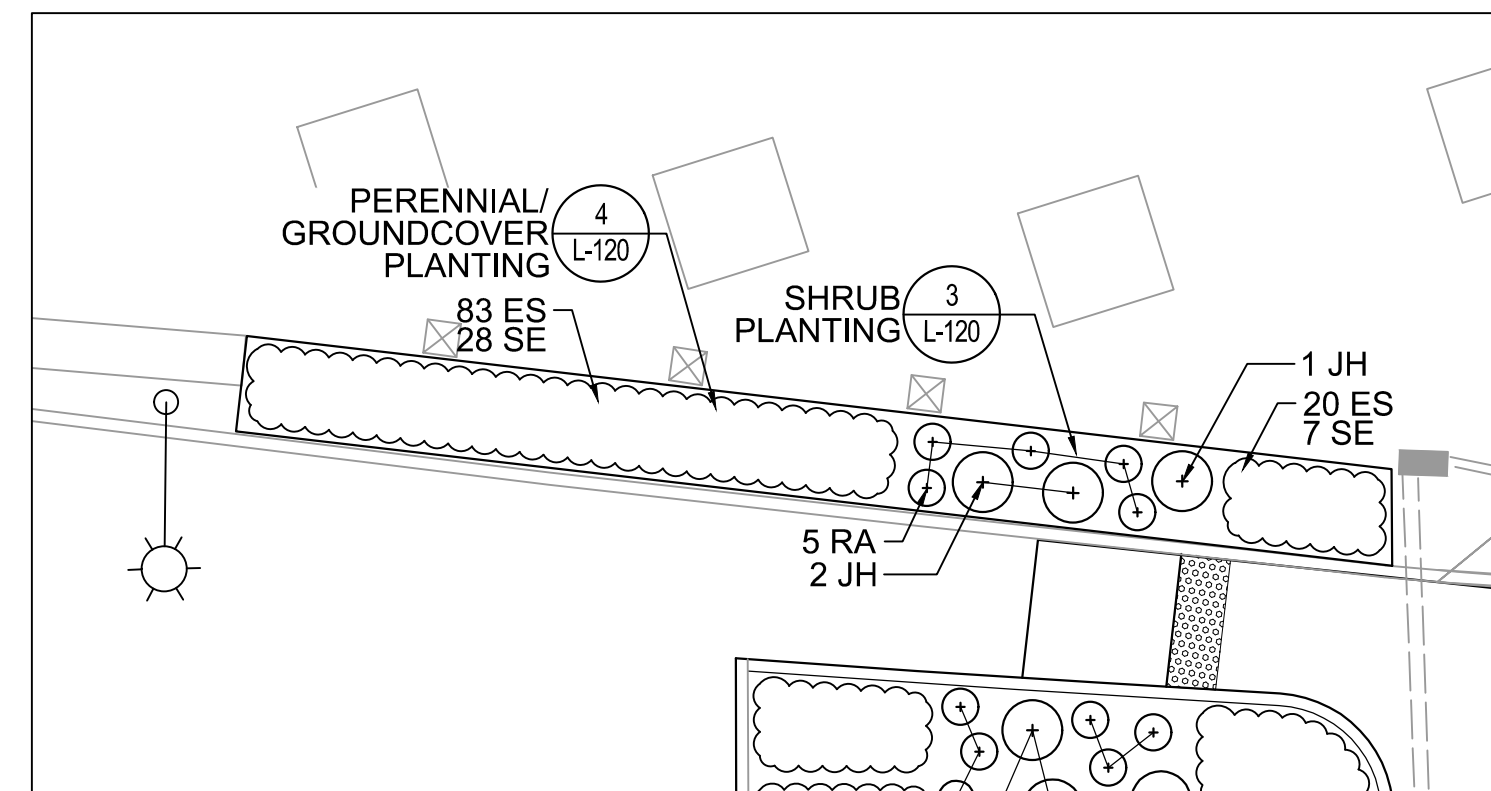
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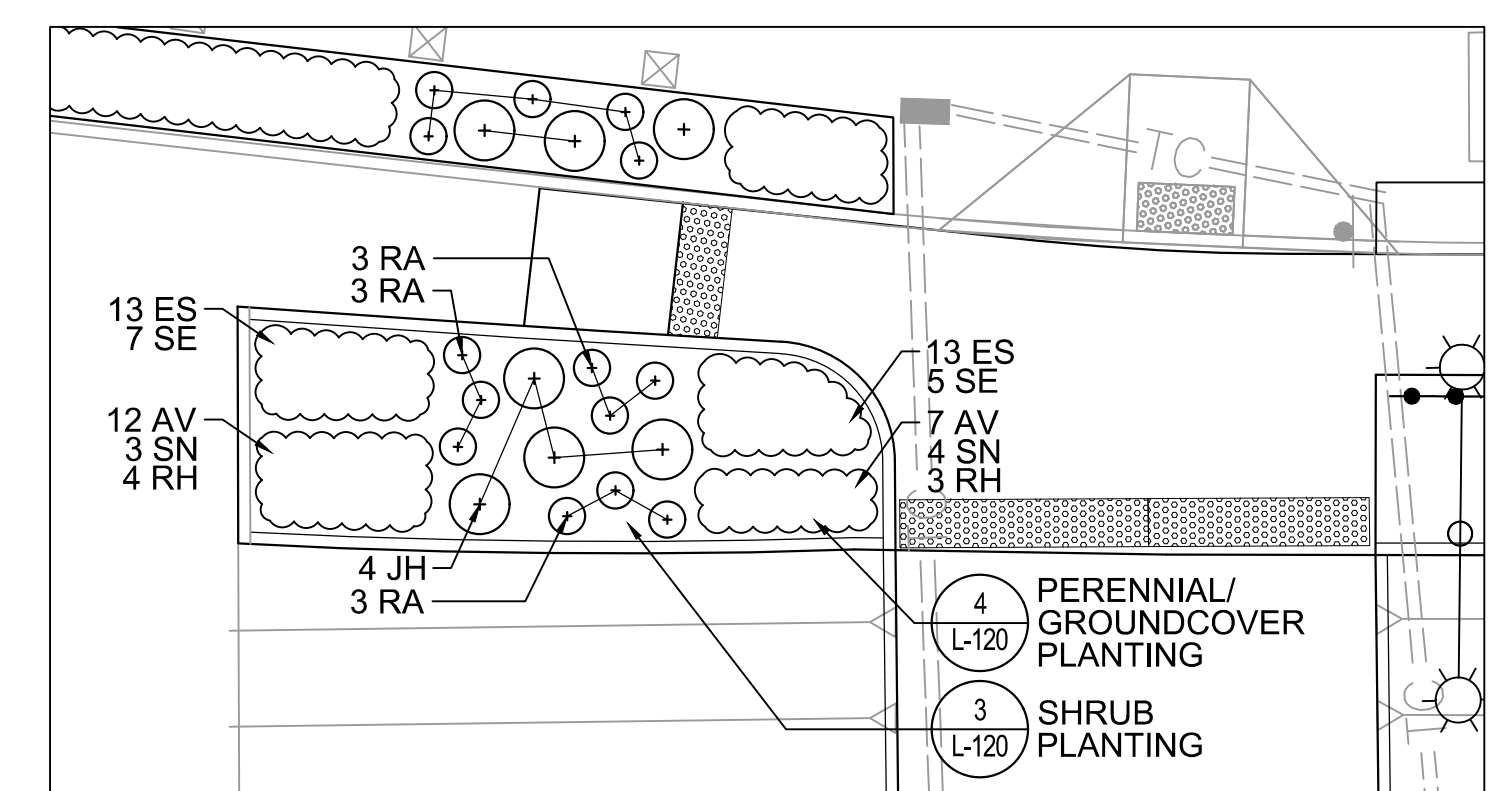
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B PLANTER 2
SCALE: 1/8" = 1'-0"



C PLANTER 3
SCALE: 1/8" = 1'-0"



D PLANTER 4
SCALE: 1/8" = 1'-0"

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

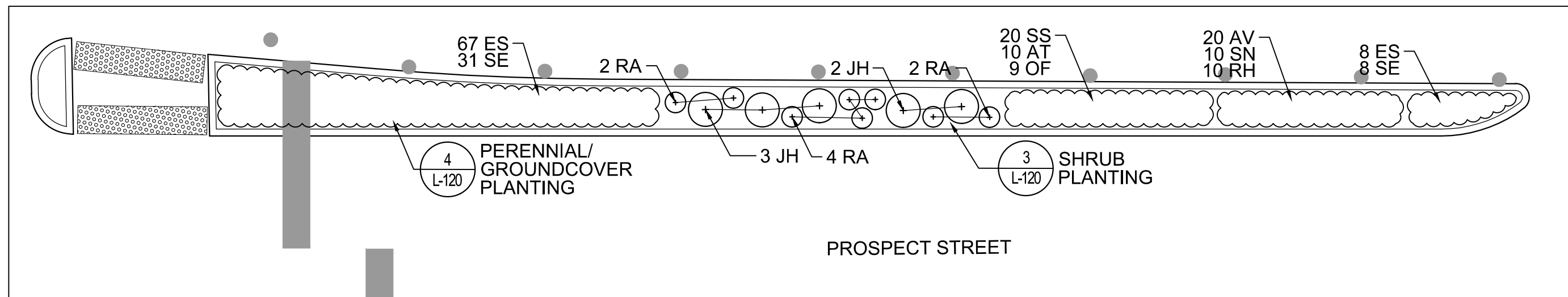
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTING PLAN
SHEET 1 OF 5

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET L-41
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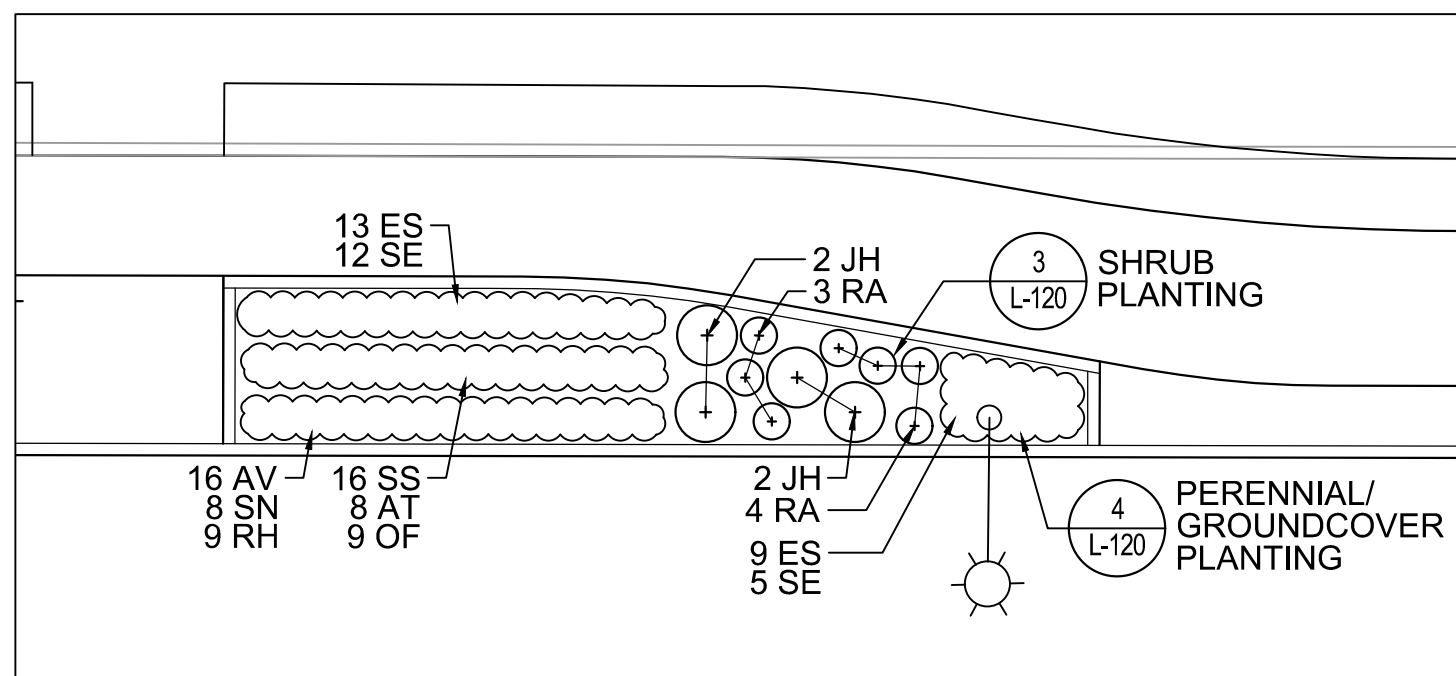
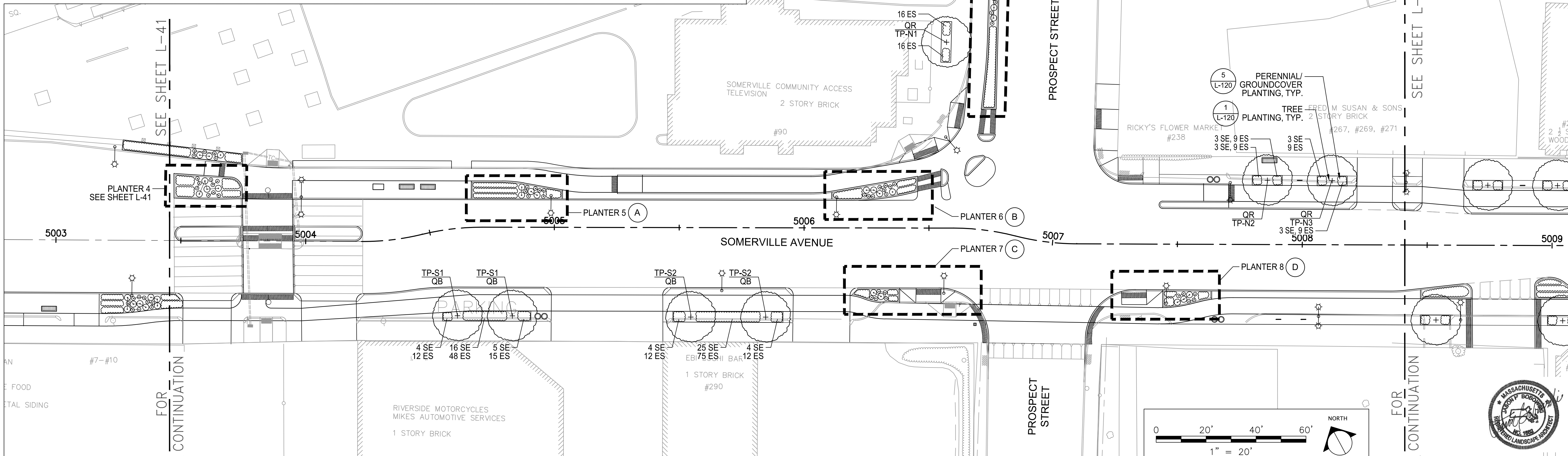
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93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

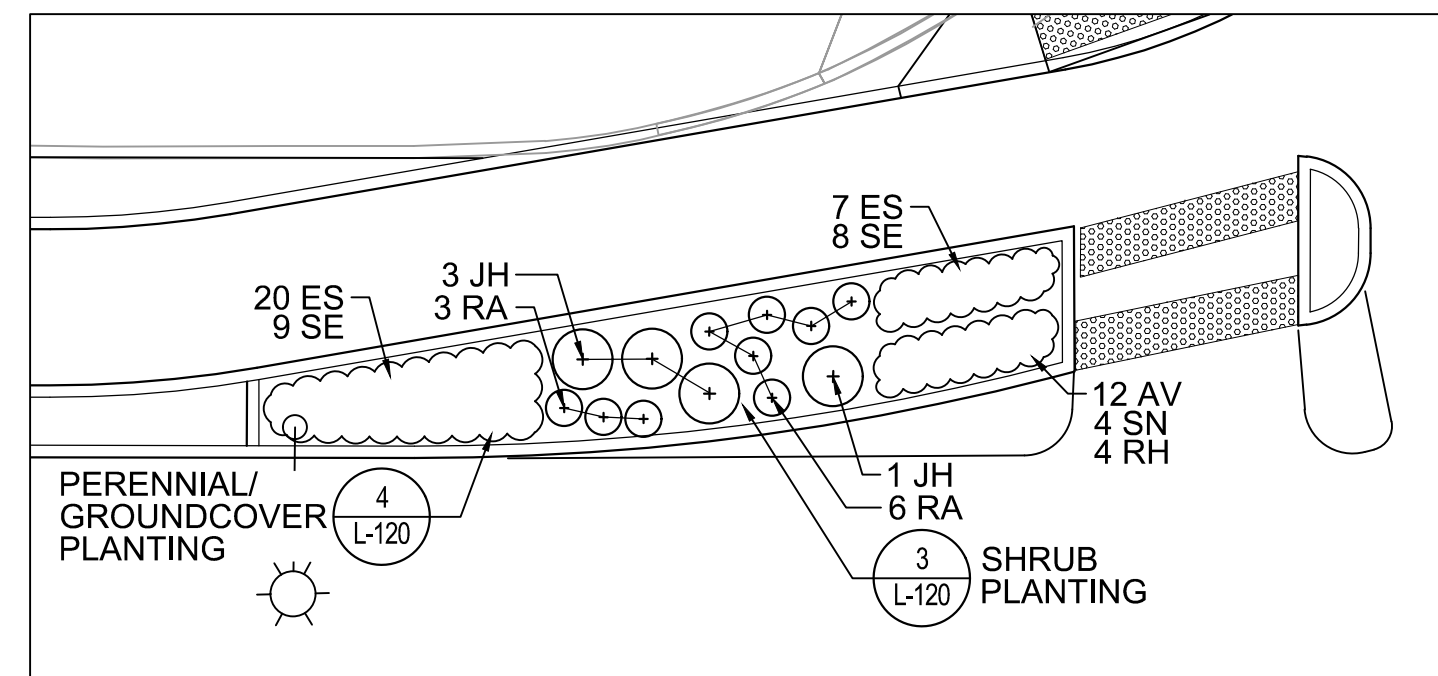
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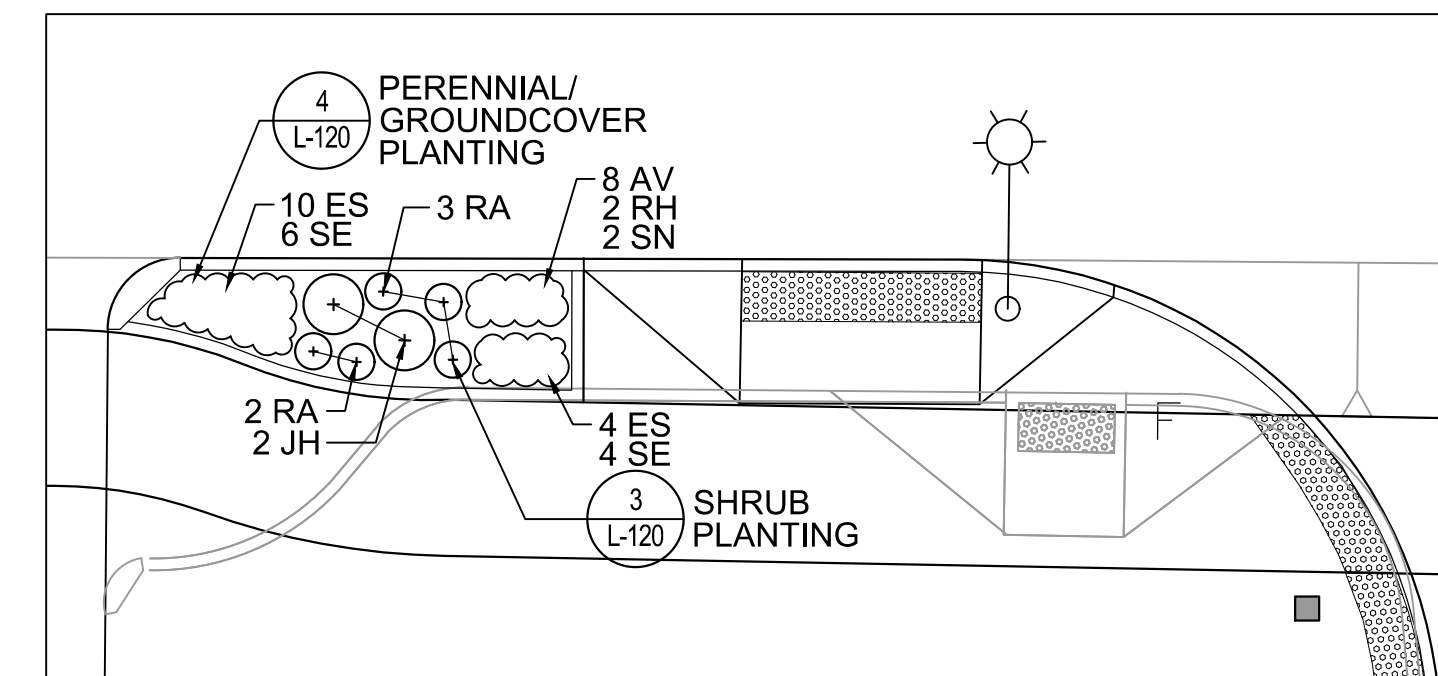
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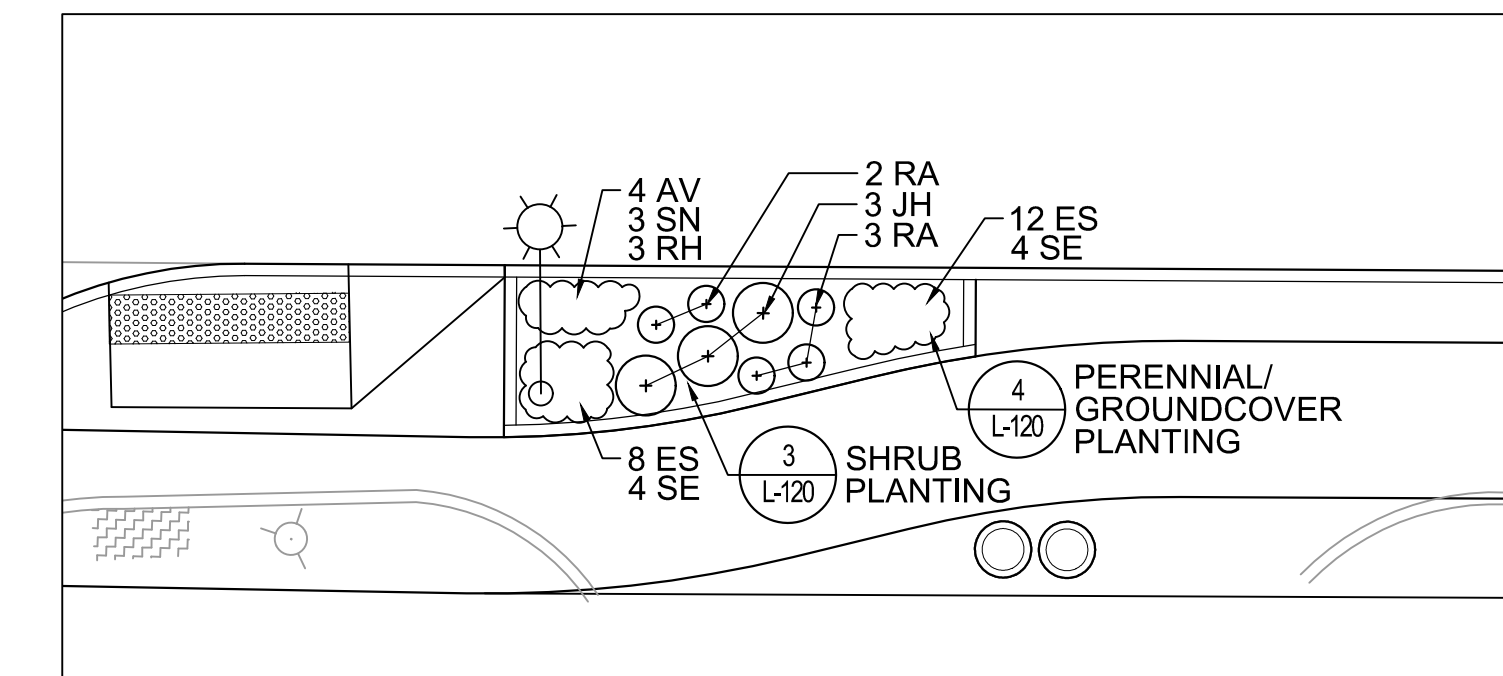
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B PLANTER 6
SCALE: 1/8" = 1'-0"



C PLANTER 7
SCALE: 1/8" = 1'-0"



D PLANTER 8
SCALE: 1/8" = 1'-0"

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

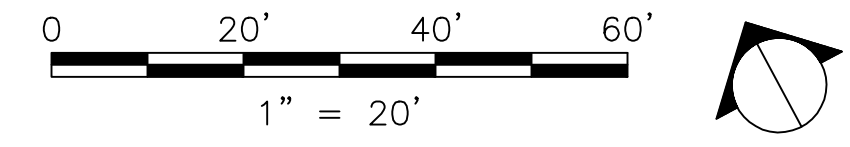
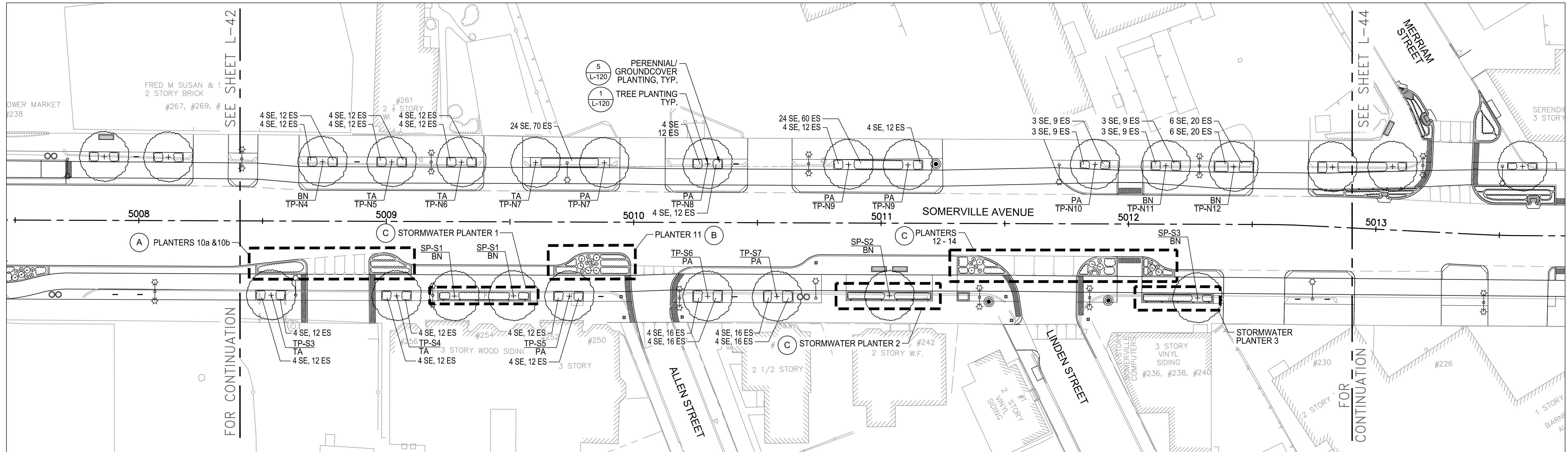
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTING PLAN
SHEET 2 OF 5

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET L-42
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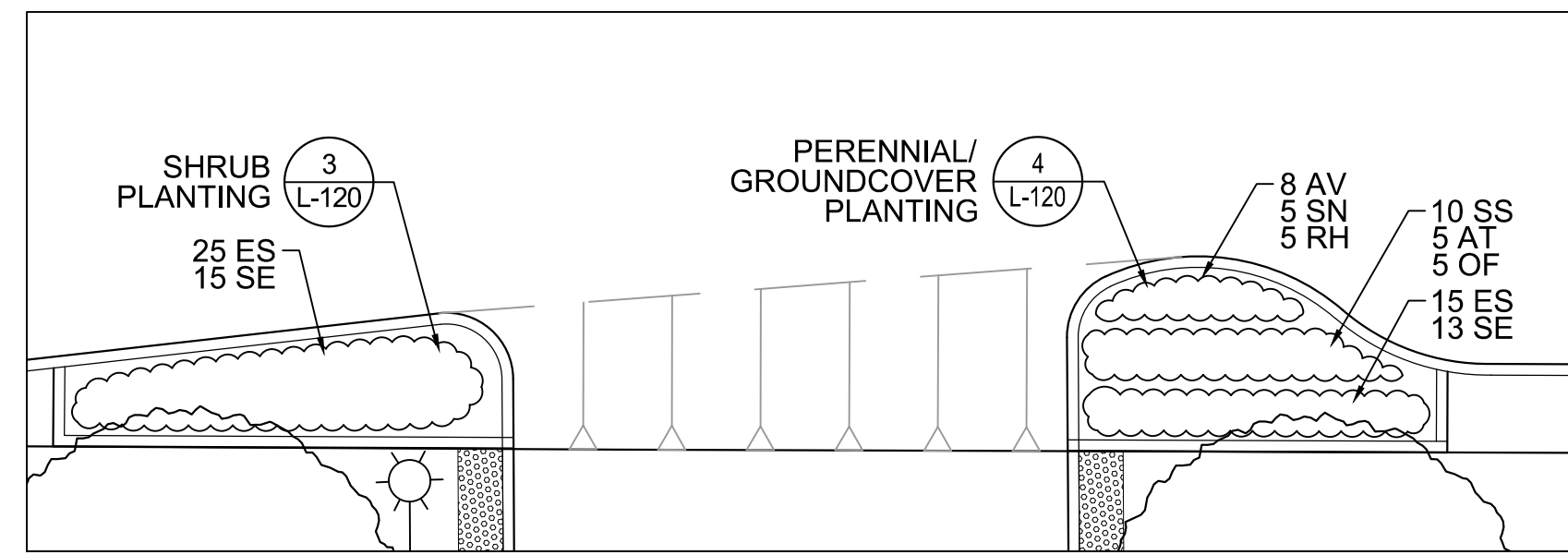
NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

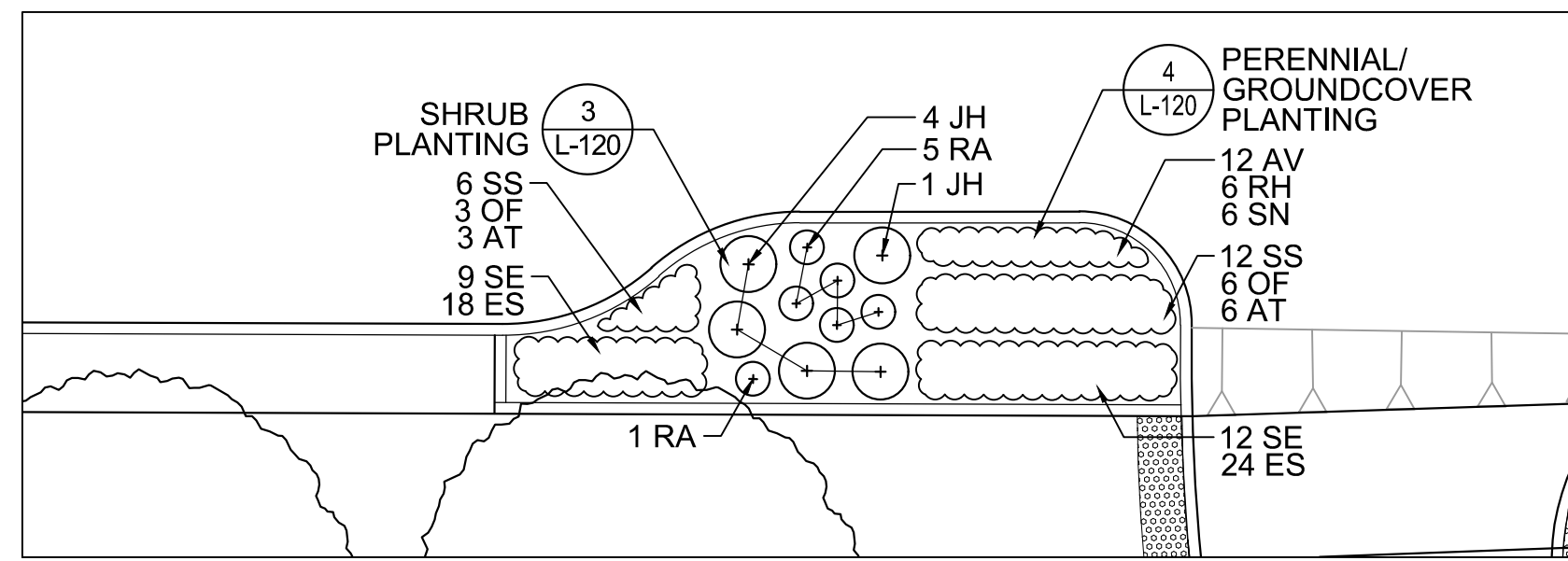
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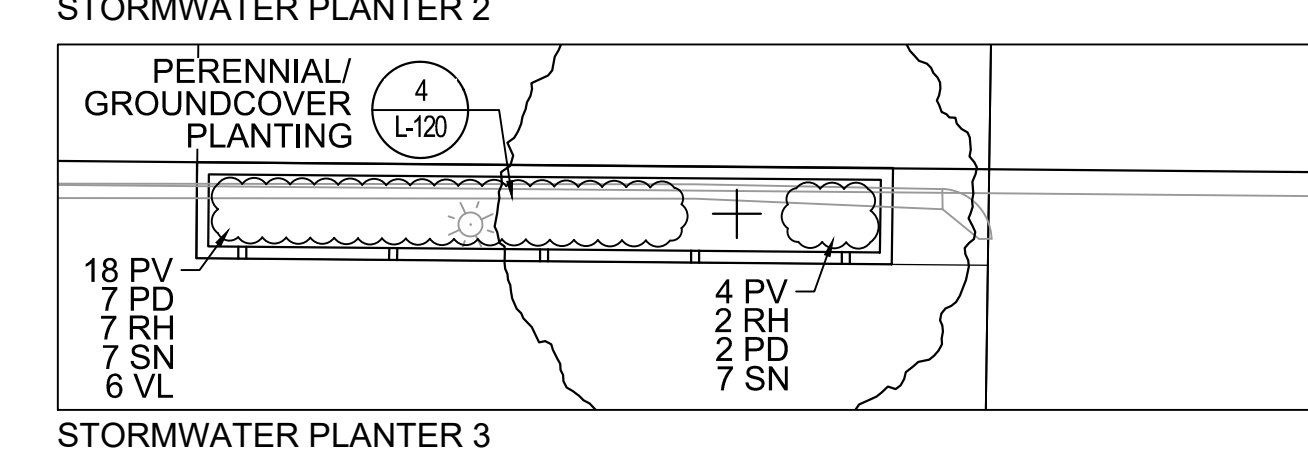
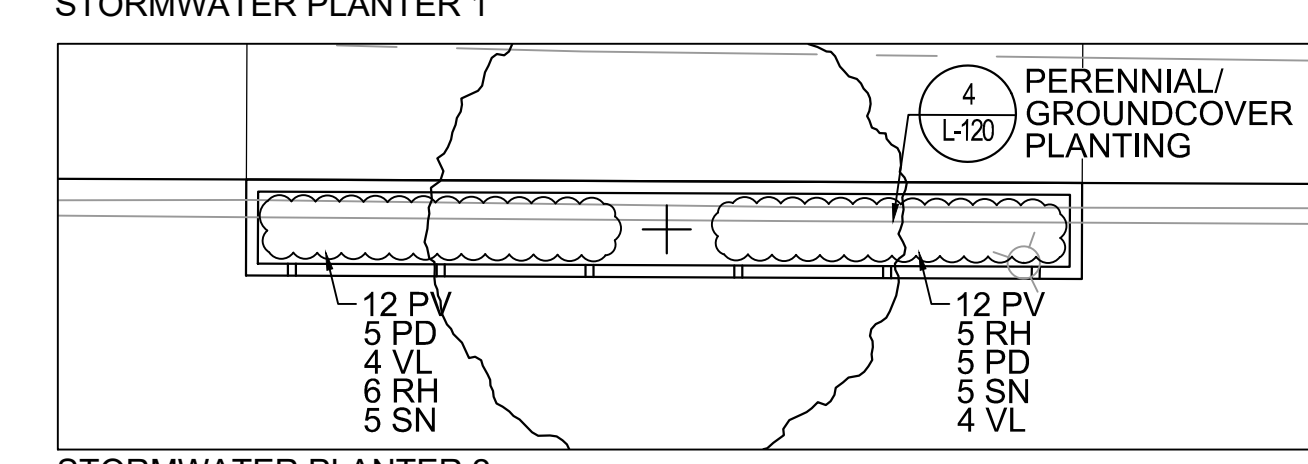
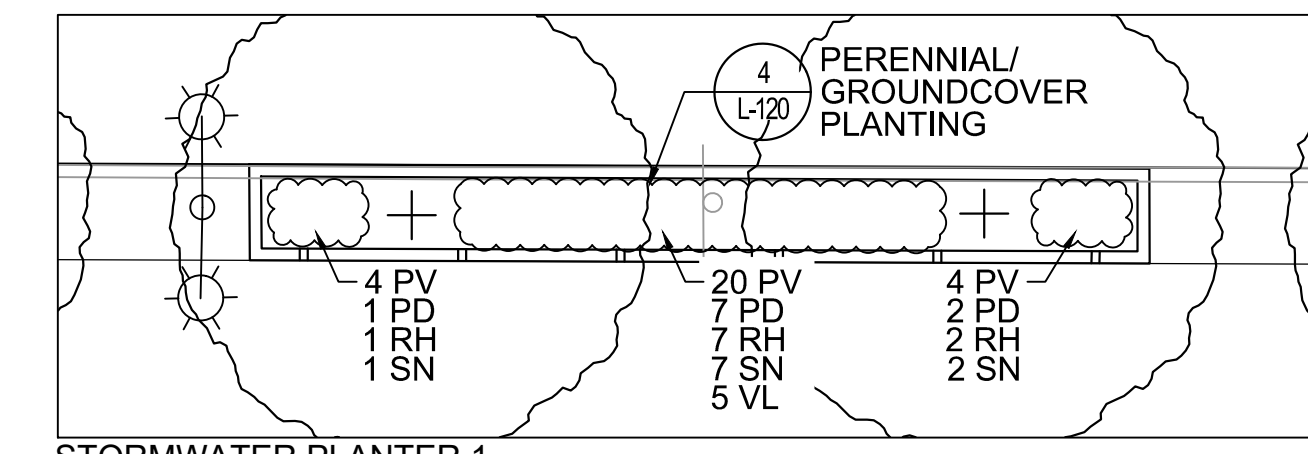
NOTE:
FOR PLANT SCHEDULE, SEE SHEET L-45.



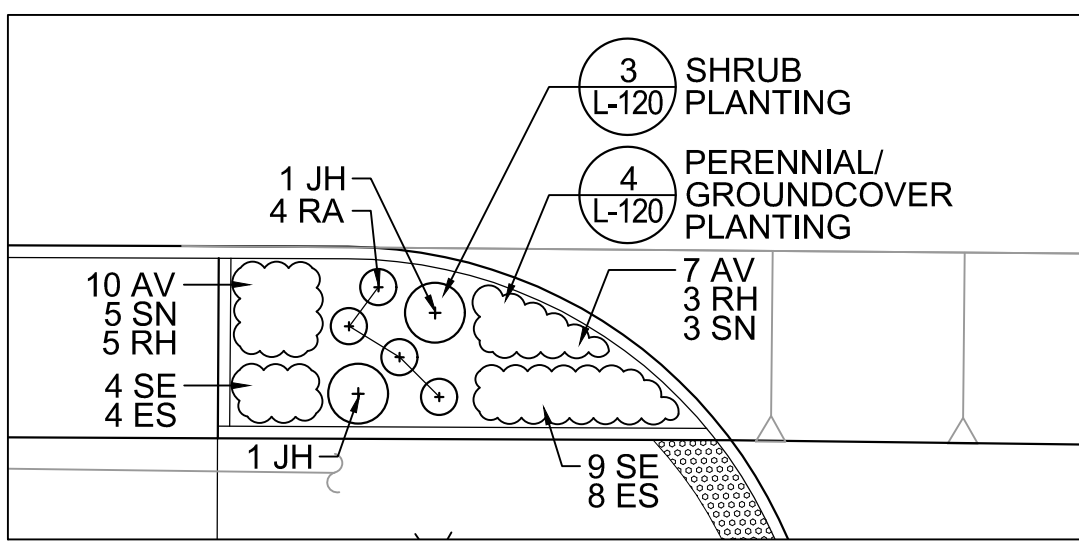
A PLANTERS 10a & 10b
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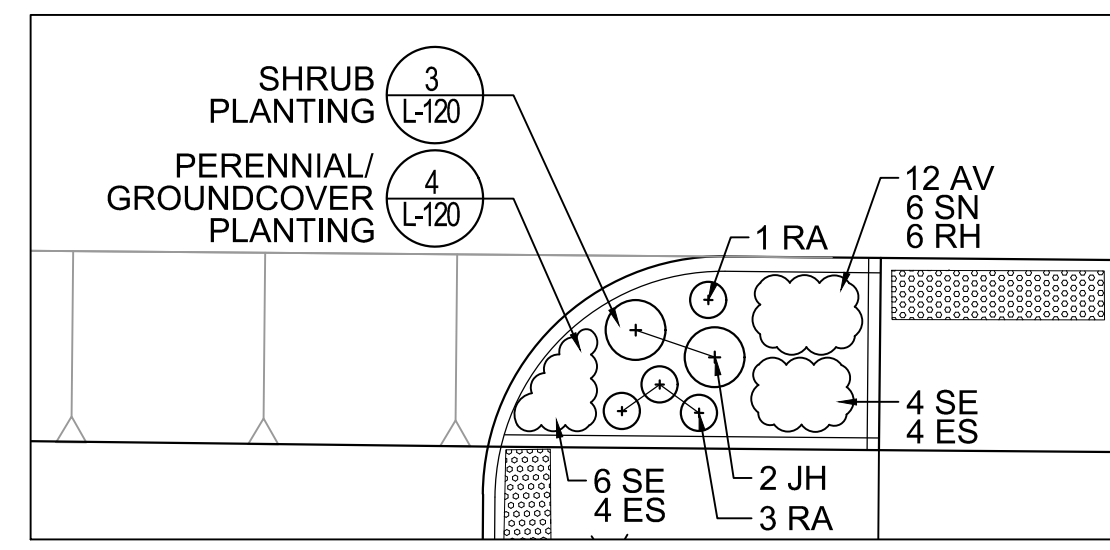
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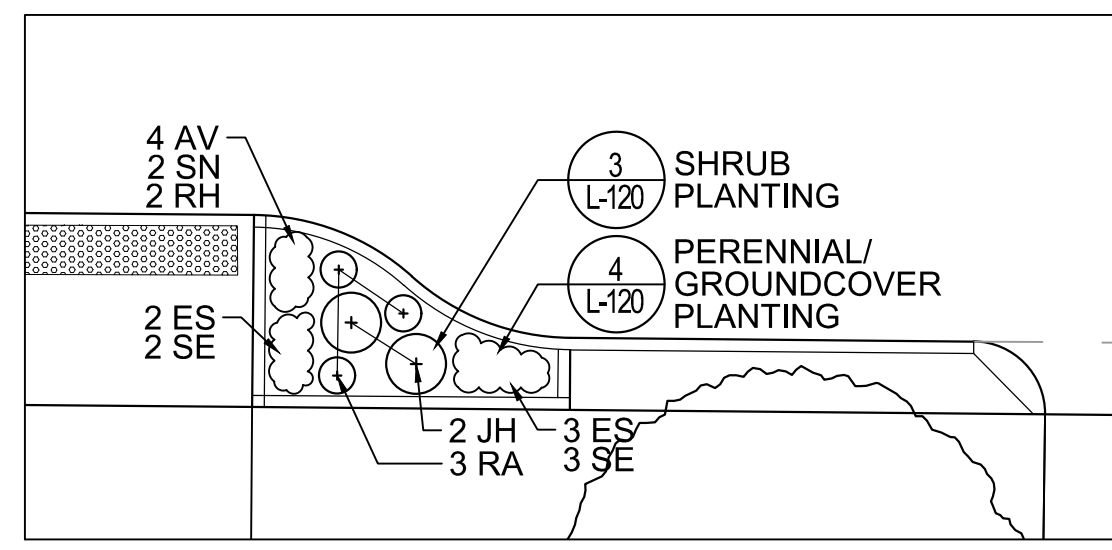
C STORMWATER PLANTERS 1, 2 & 3
SCALE: 1/8" = 1'-0"



C PLANTERS 12 - 14
SCALE: 1/8" = 1'-0"



PLANTER 13



PLANTER 14

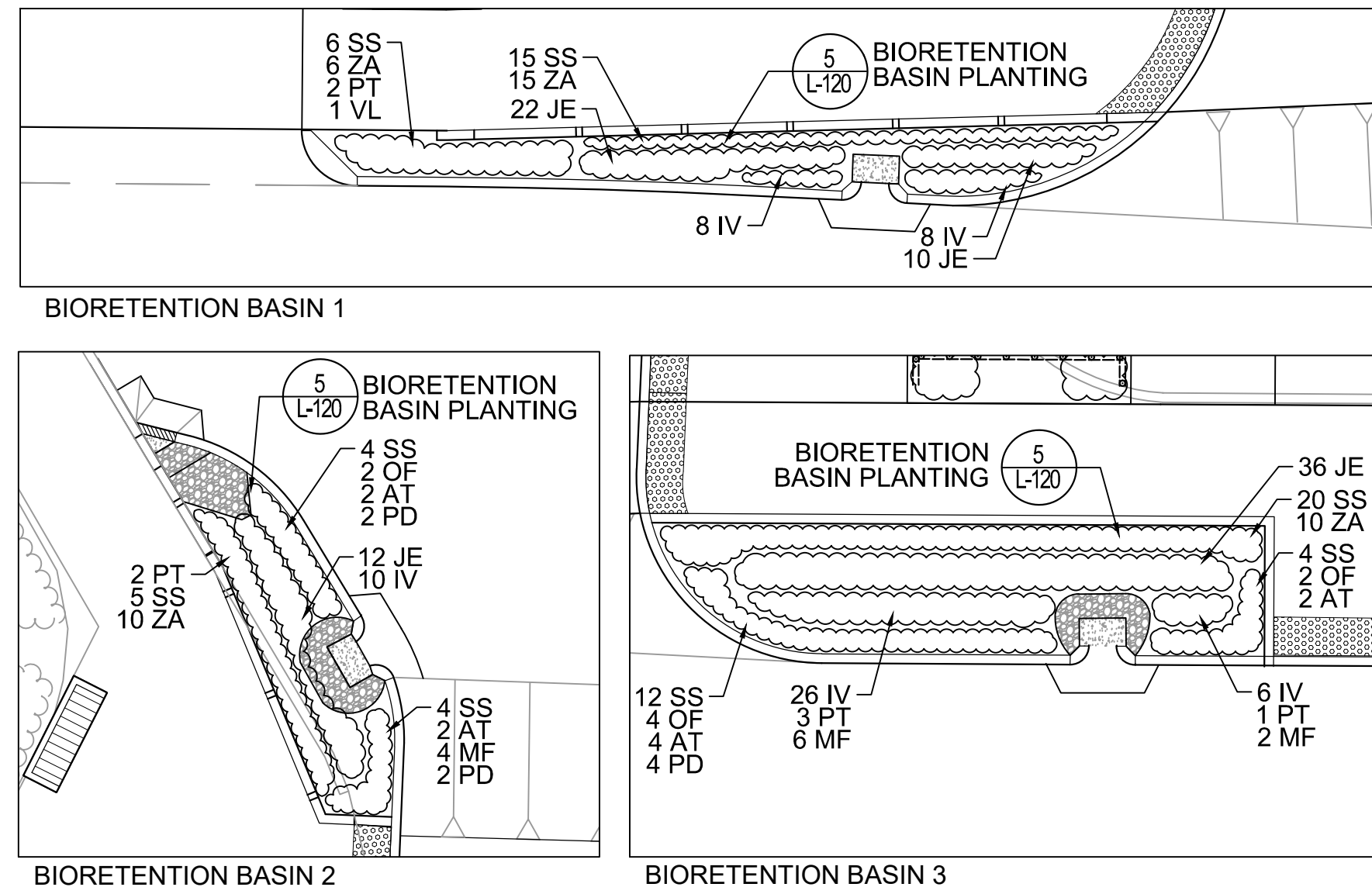
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTING PLAN
SHEET 3 OF 5

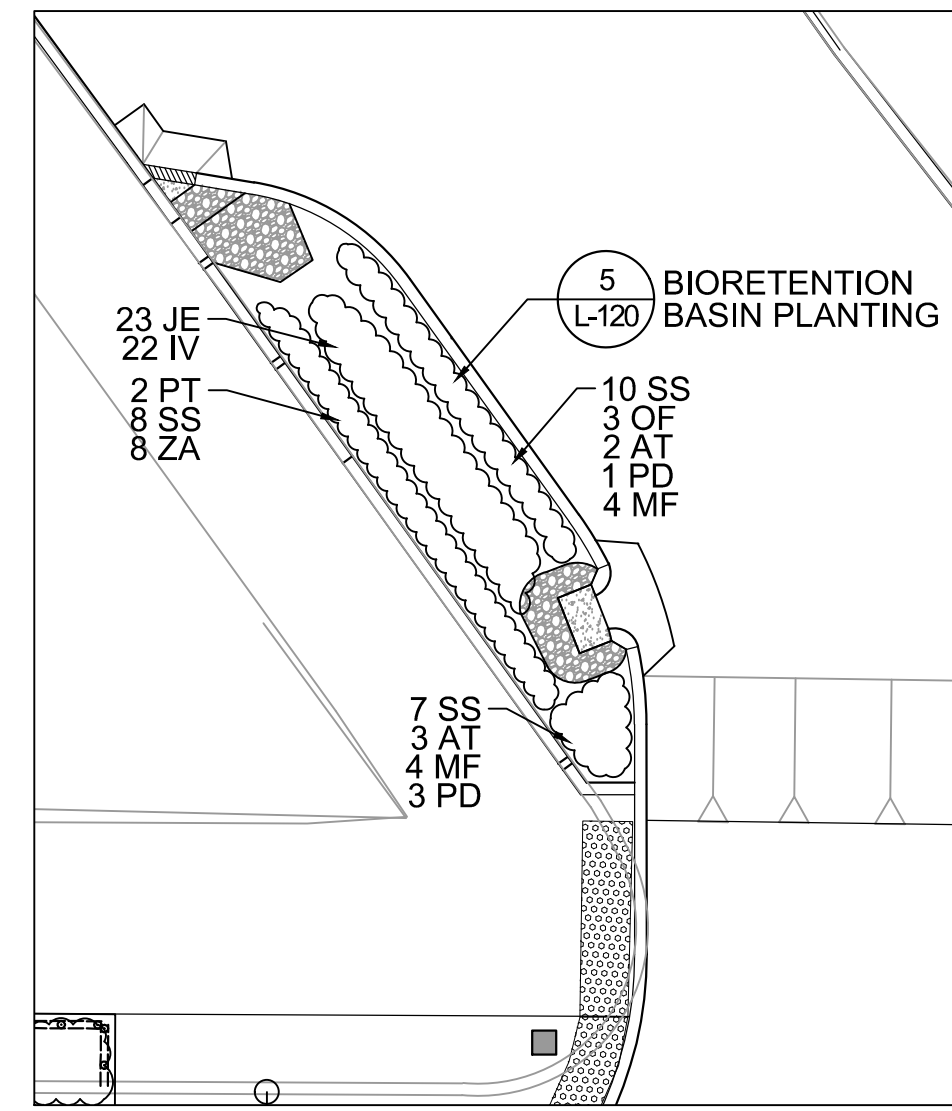
DESIGNED: JB		HATCH 27 Congress St. Salem, MA 01970 PH. (978)750-0099 FAX (978)740-0097	SHEET L-43
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CHECKED: GJ			

NO.	DATE	REVISIONS	BY

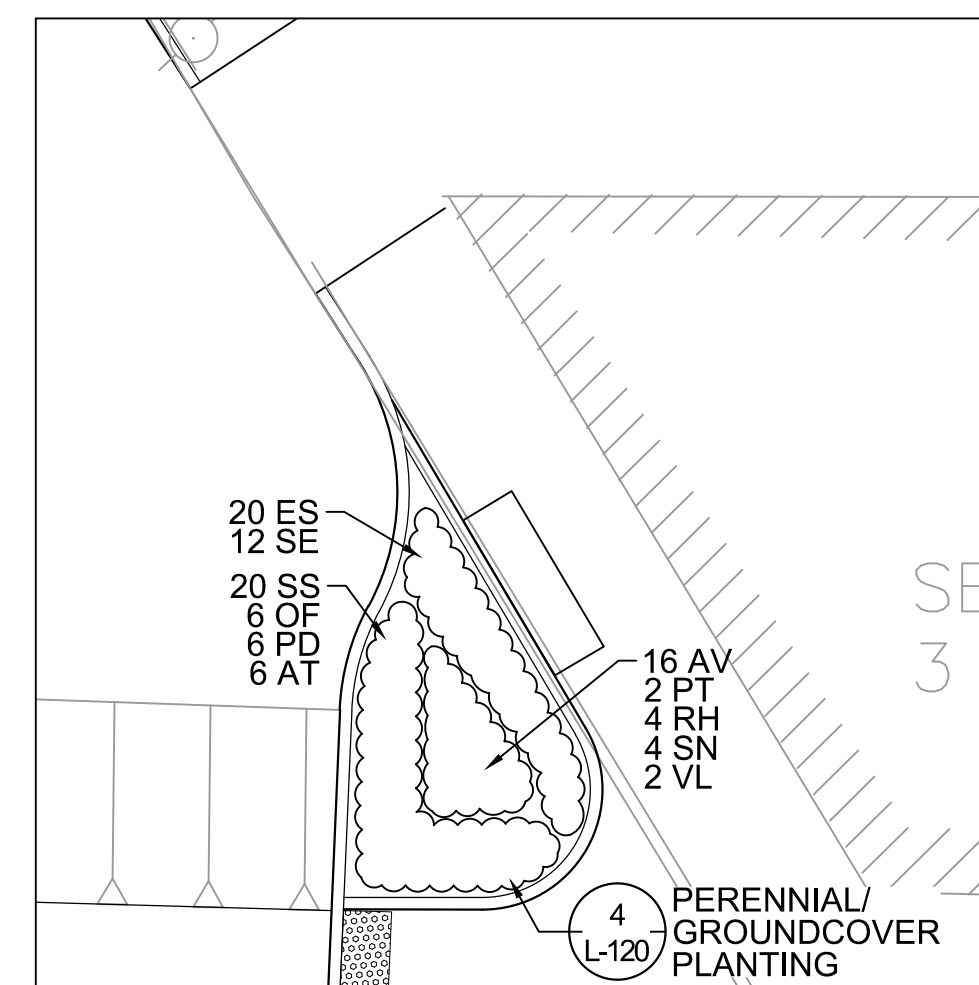
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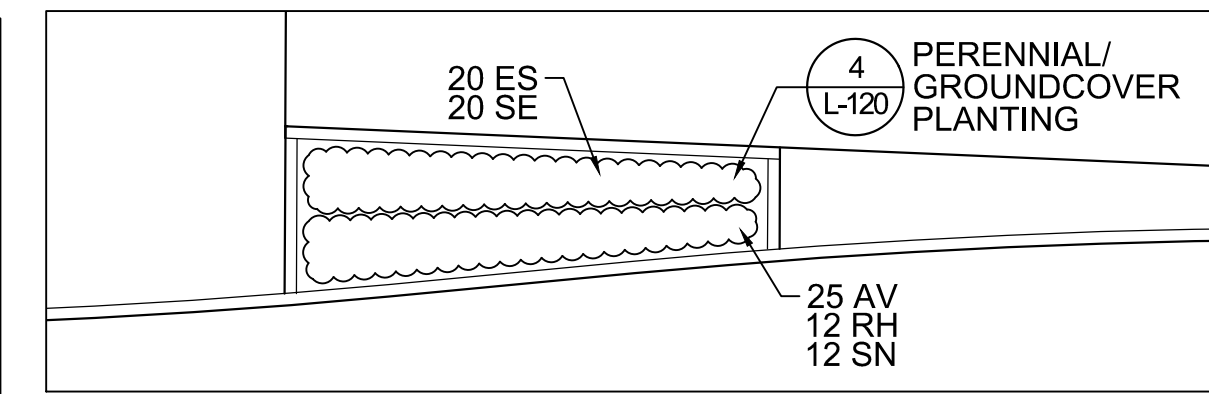
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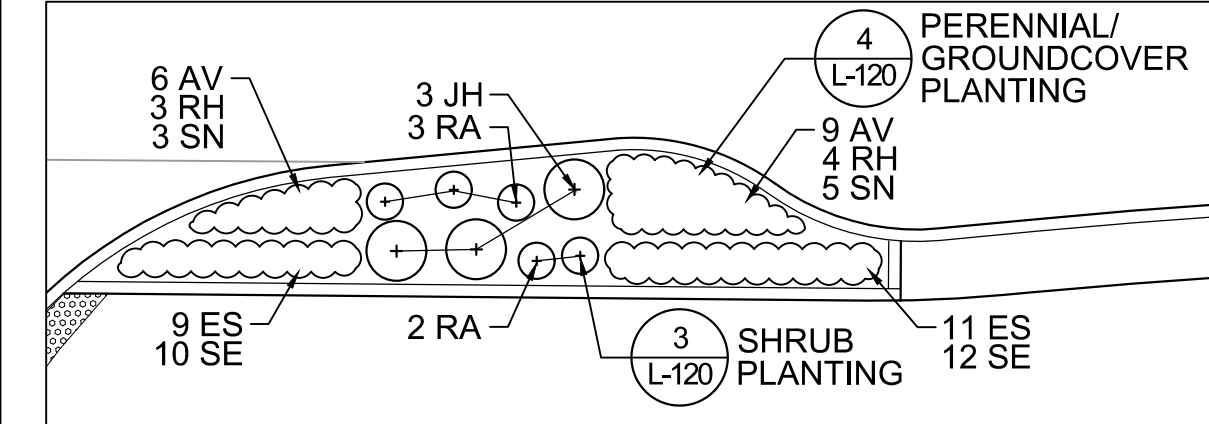
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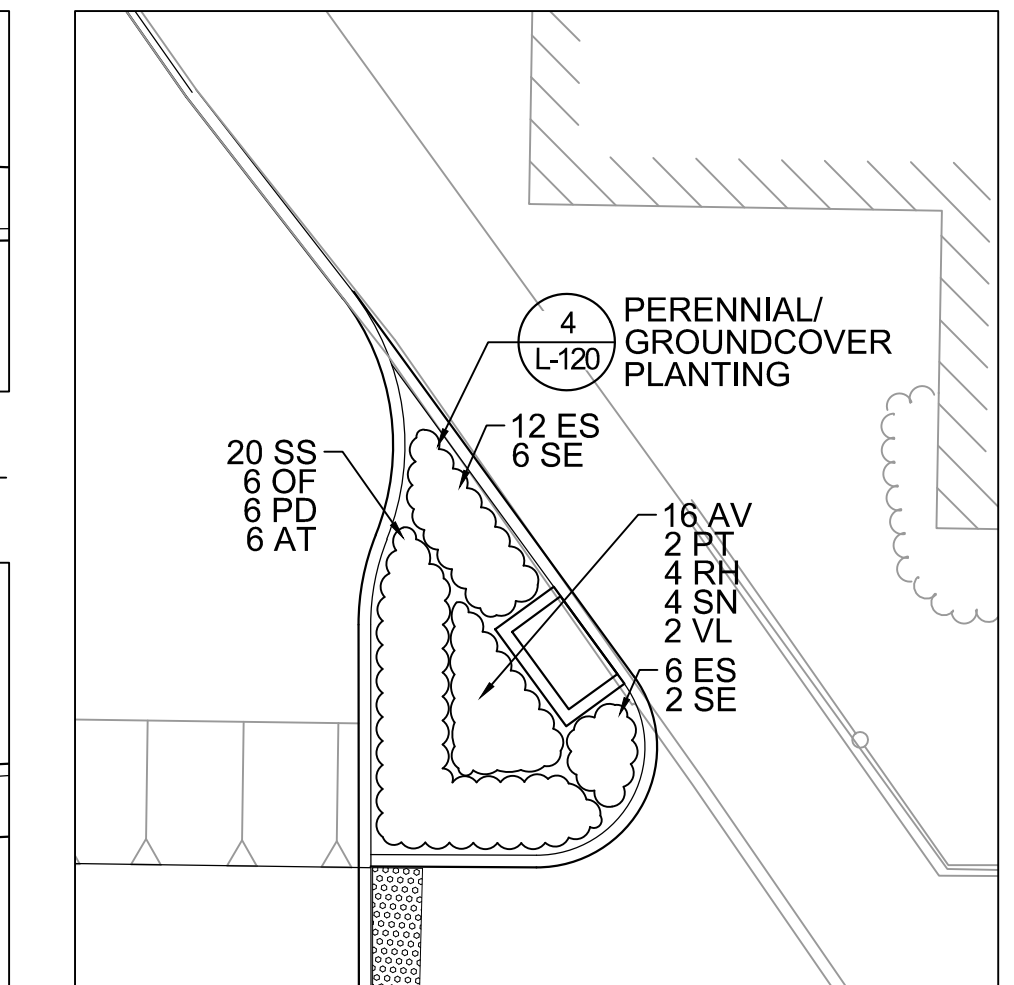
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SCALE: 1/8" = 1'-0"



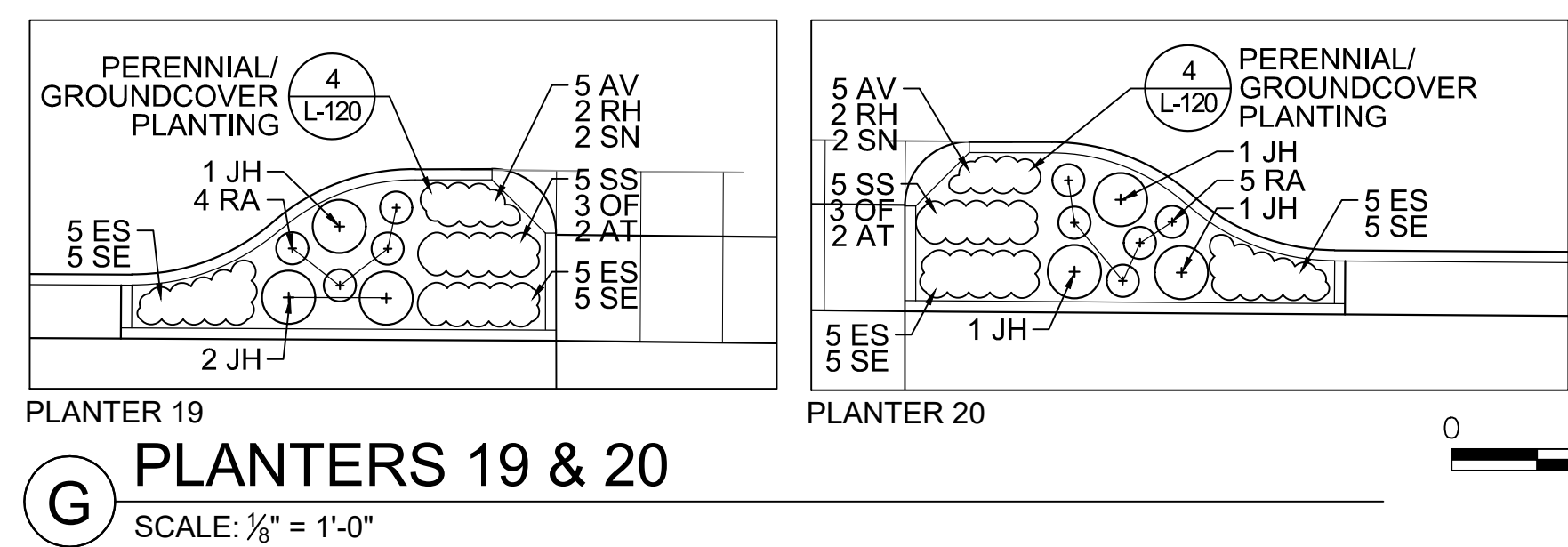
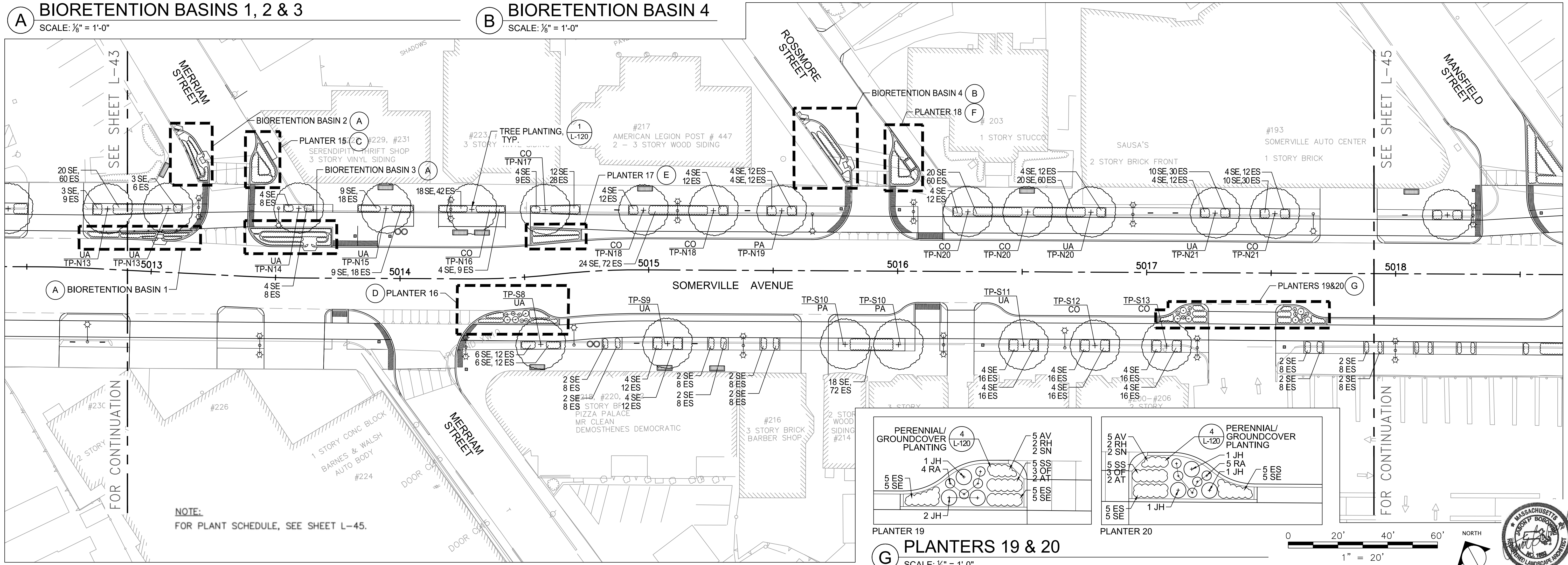
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SCALE: 1/8" = 1'-0"



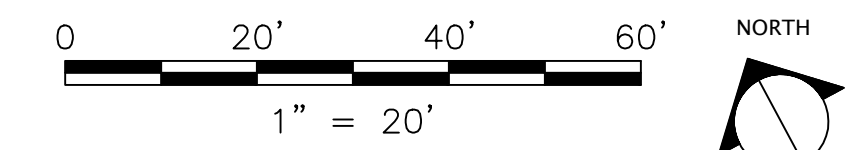
D PLANTER 16
SCALE: 1/8" = 1'-0"



F PLANTER 18
SCALE: 1/8" = 1'-0"



G PLANTERS 19 & 20
SCALE: 1/8" = 1'-0"



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

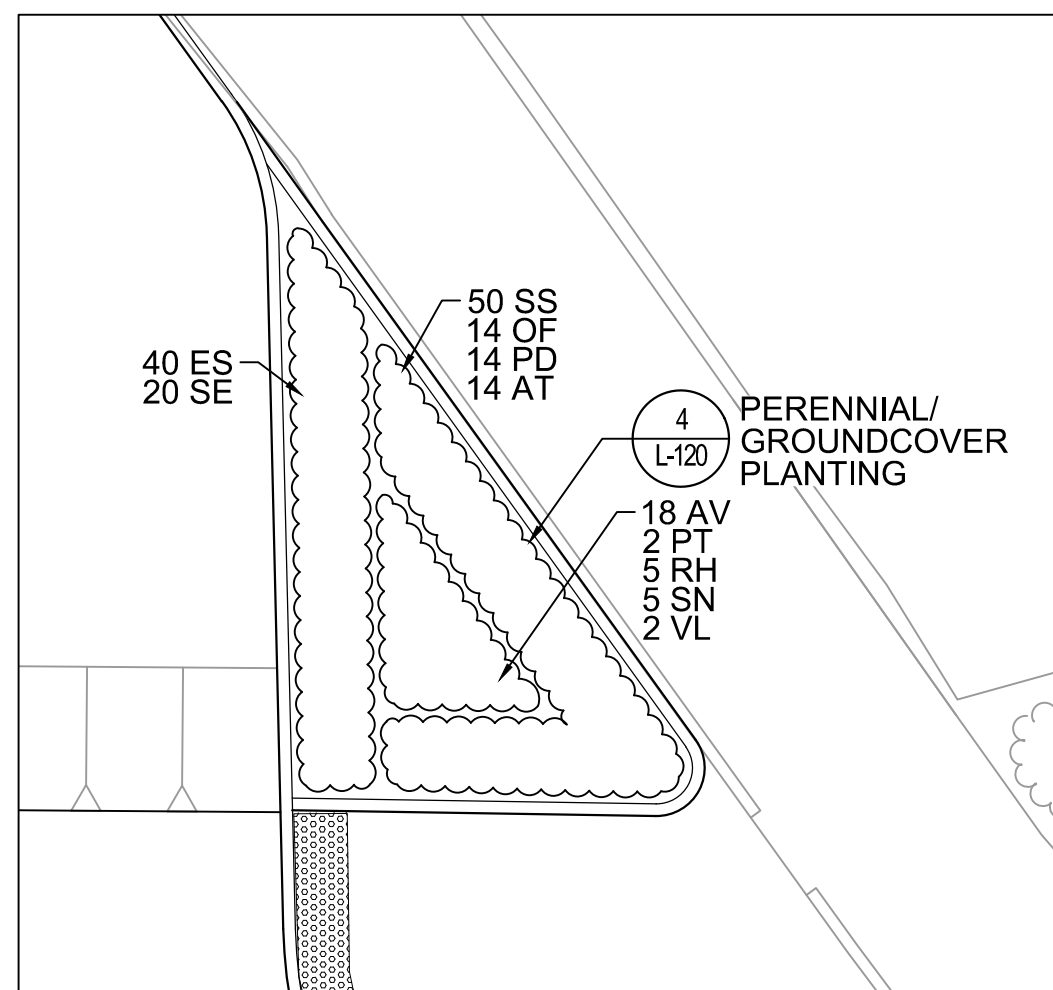
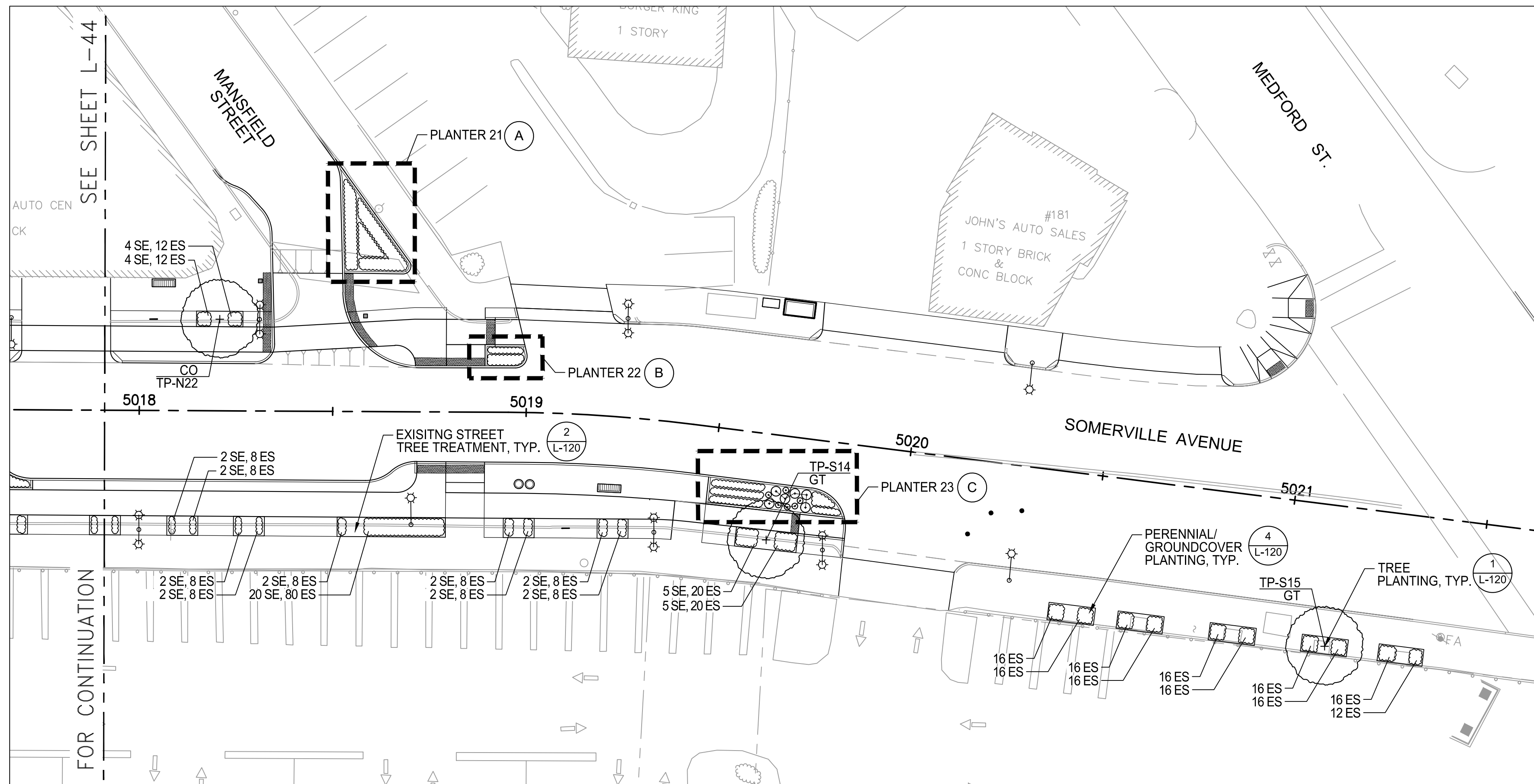
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTING PLAN
SHEET 4 OF 5

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX: (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
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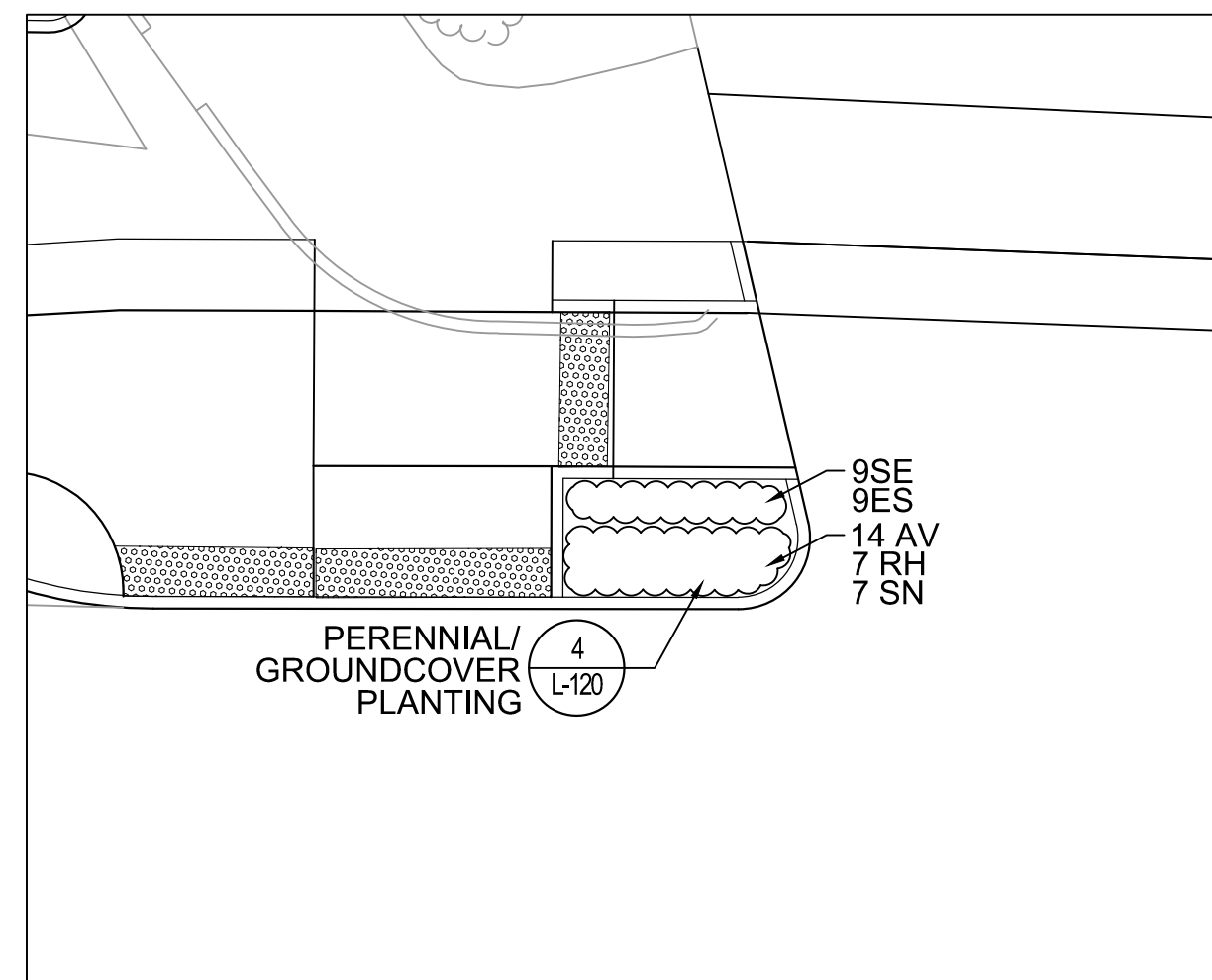
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

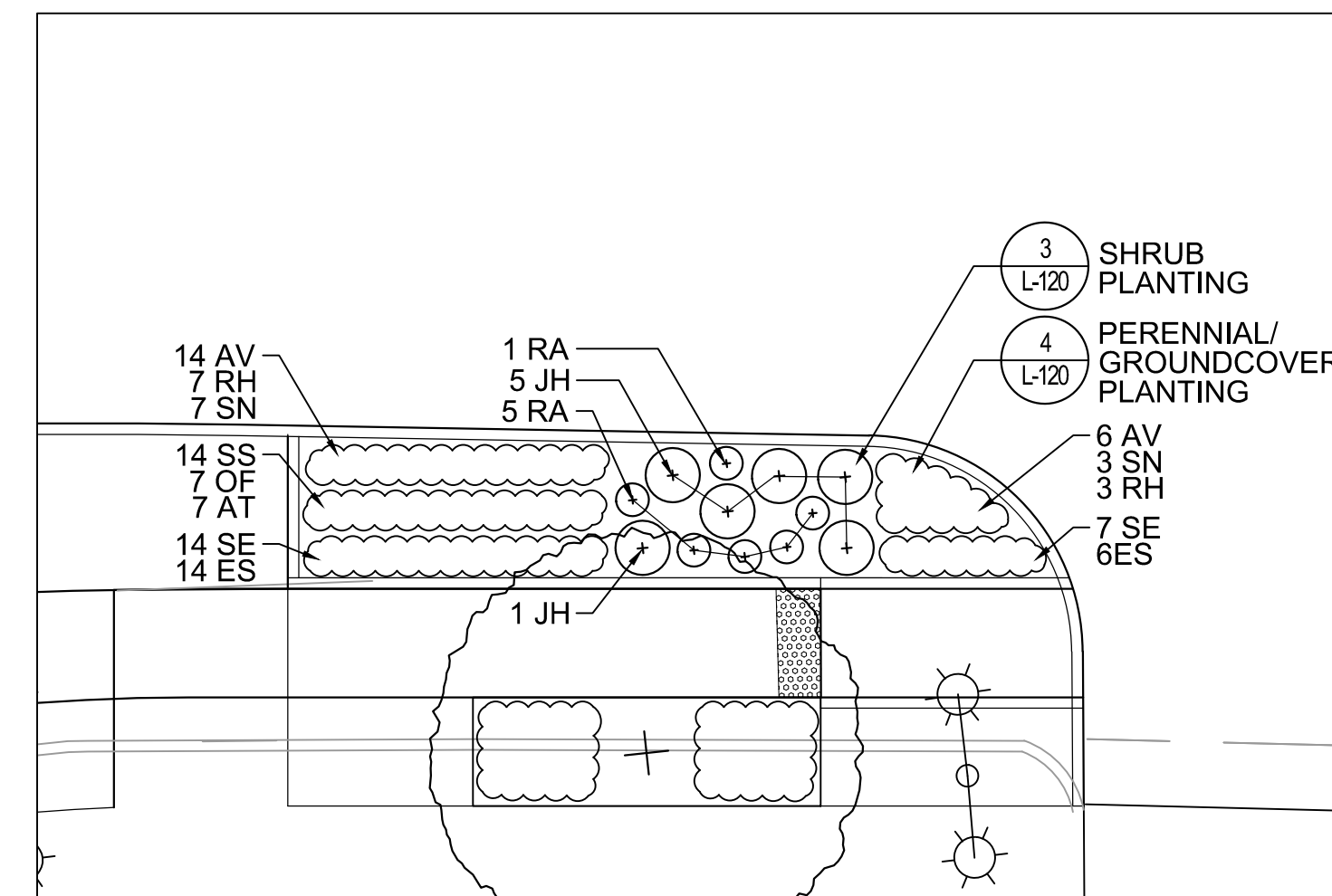
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A PLANTER 21
SCALE: 1/8" = 1'-0"



B PLANTER 22
SCALE: 1/8" = 1'-0"



C PLANTER 23
SCALE: 1/8" = 1'-0"

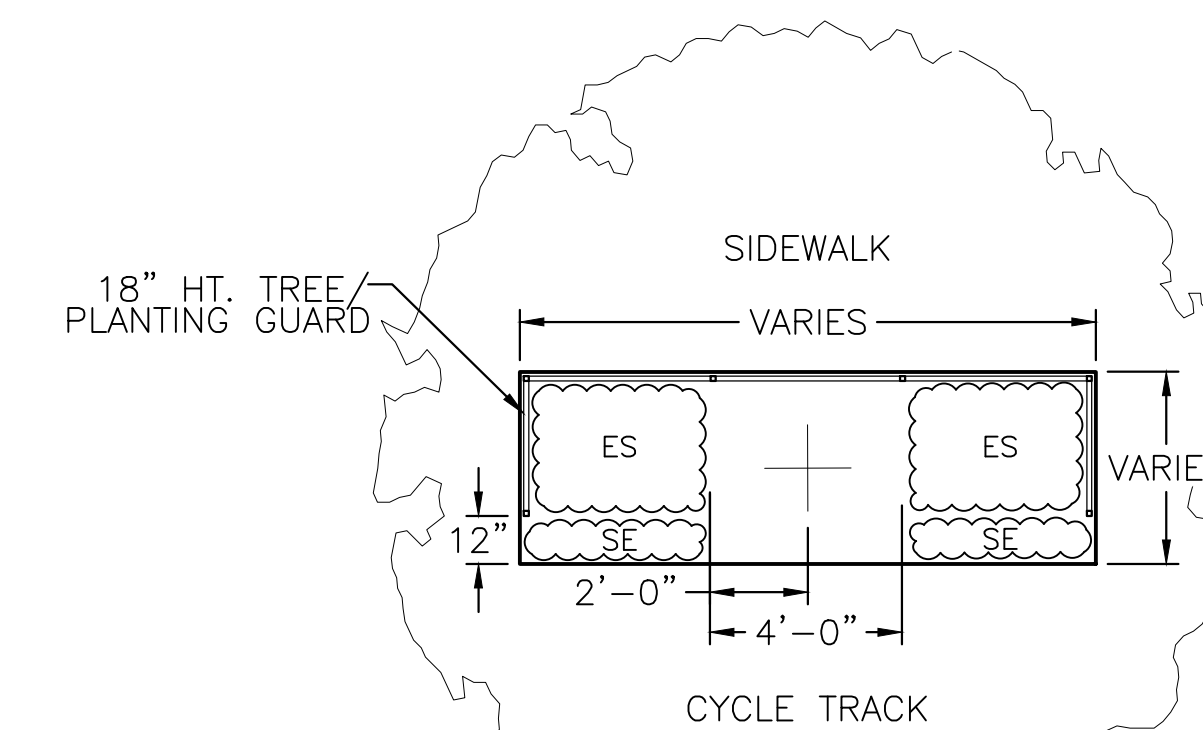
PLANT SCHEDULE

STREET TREES				
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	MIN. SIZE
7	BN	Betula nigra	River Birch	3" CAL.
10	CO	Celtis occidentalis	Common Hackberry	3" CAL.
2	GT	Gleditsia tricanthos var. inermis	Thornless Honeylocust	3" CAL.
11	PA	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Planetree	3" CAL.
3	QA	Quercus rubra	Red Oak	3" CAL.
4	QB	Quercus bicolor	Swamp White Oak	3" CAL.
5	TA	Tilia americana	American Linden	3" CAL.
9	UA	Ulmus americana 'Princeton'	'Princeton' American Elm	3" CAL.
51	TOTAL			

SHRUBS				
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	MIN. SIZE
63	JH	Juniperus horizontalis 'Bar Harbor'	'Bar Harbor' Juniper	18" HT.
100	RA	Rhus aromatica 'Gro-low'	'Gro-low' Fragrant Sumac	18" HT.
179	TOTAL			

PERENNIALS					
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	SPACING	MIN. SIZE
80	AT	Asclepias tuberosa	Butterfly Milkweed	12" O.C.	#2
80	IV	Iris versicolor	Blue Flag Iris	12" O.C.	#2
20	MF	Monarda fistulosa	Wild Bergamot	12" O.C.	#2
91	OF	Oenothera fruticosa	Sundrops	12" O.C.	#2
67	PD	Penstemon digitalis	Beardtongue	12" O.C.	#2
16	PT	Porteranthus trifolatus	Bowman's Root	24" O.C.	#2
157	RH	Rudbeckia hirta	Black-eyed Susan	12" O.C.	#2
939	SE	Symphotrichum ericoides 'Snow Flurry'	'Snow Flurry' Heath Aster	12" O.C.	#2
162	SN	Symphotrichum novae-angliae	New England Aster	12" O.C.	#2
26	VL	Veronia lettermannii 'Iron Butterfly'	'Iron Butterfly' Ironweed	24" O.C.	#2
49	ZA	Zizia aurea	Golden Alexanders	12" O.C.	#2
1687	TOTAL				

GRASSES & FERNS					
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	ON CENTER SPACING	MIN. SIZE
289	AV	Andropogon virginicus	Broomsedge	12" O.C.	QUART
2522	ES	Eragrostis spectabilis	Purple Love Grass	12" O.C.	QUART
103	JE	Juncus effusus	Soft Rush	12" O.C.	QUART
74	PV	Panicum virgatum 'Shenandoah'	'Shenandoah' Switchgrass	18" O.C.	QUART
291	SS	Schizachyrium scoparium	Little Bluestem	12" O.C.	QUART
3279	TOTAL				



NOTE:
(SE) ALWAYS PLANTED ADJACENT TO CYCLE TRACK SIDE OF TREE PIT

TYP. PLANTING AT TREE PLANTER

SCALE: 1/4" = 1'-0"

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS

CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT PLANTING PLAN AND PLANT SCHEDULE SHEET 5 OF 5

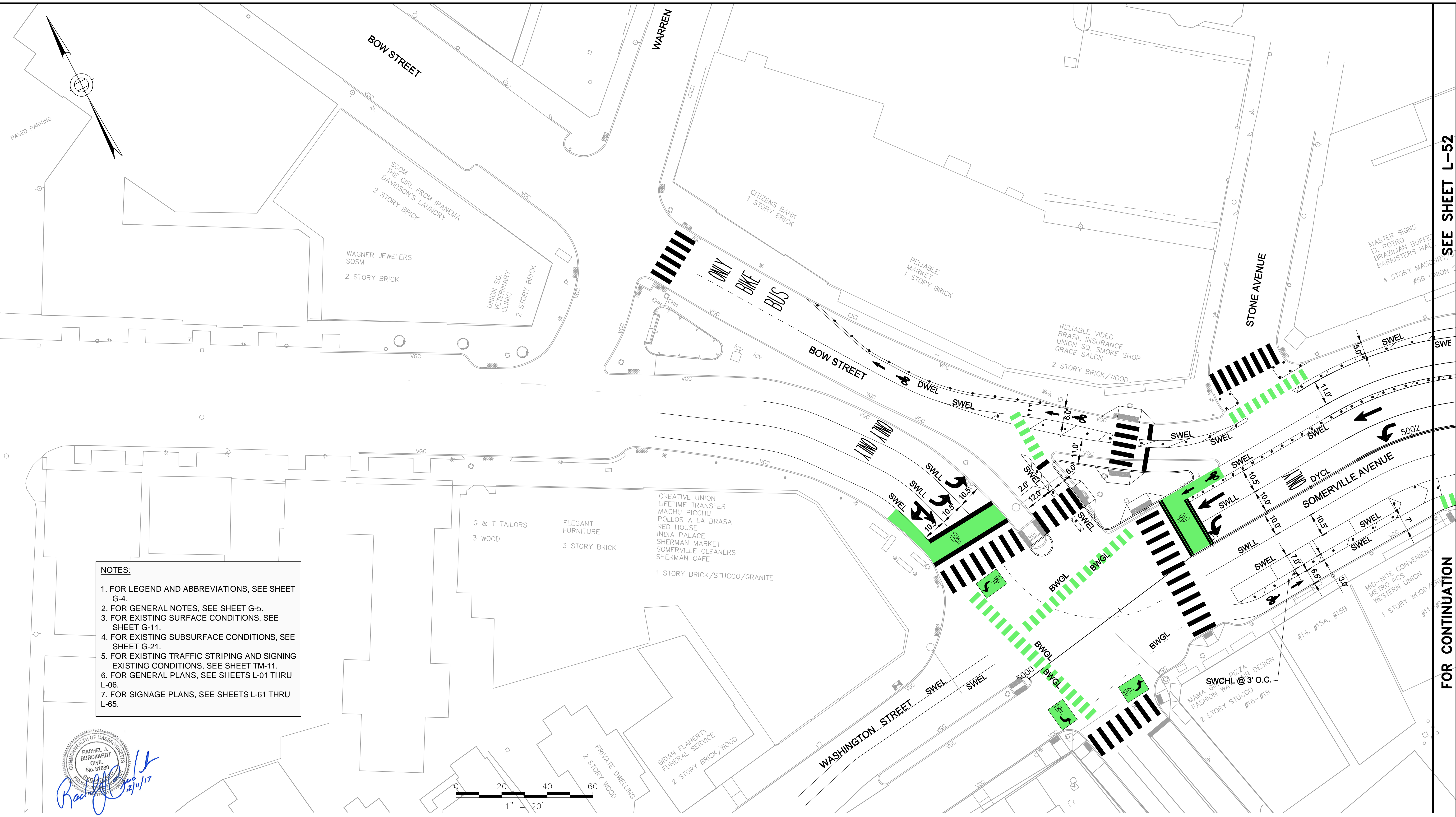
DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET L-45
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CHECKED: GJ	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY



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- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEET G-11.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEET G-21.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-11.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.

Rachel J. Burckardt
 CIVIL ENGINEER
 No. 31820
 State of Massachusetts
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STRIPING PLAN
SHEET 1 OF 5

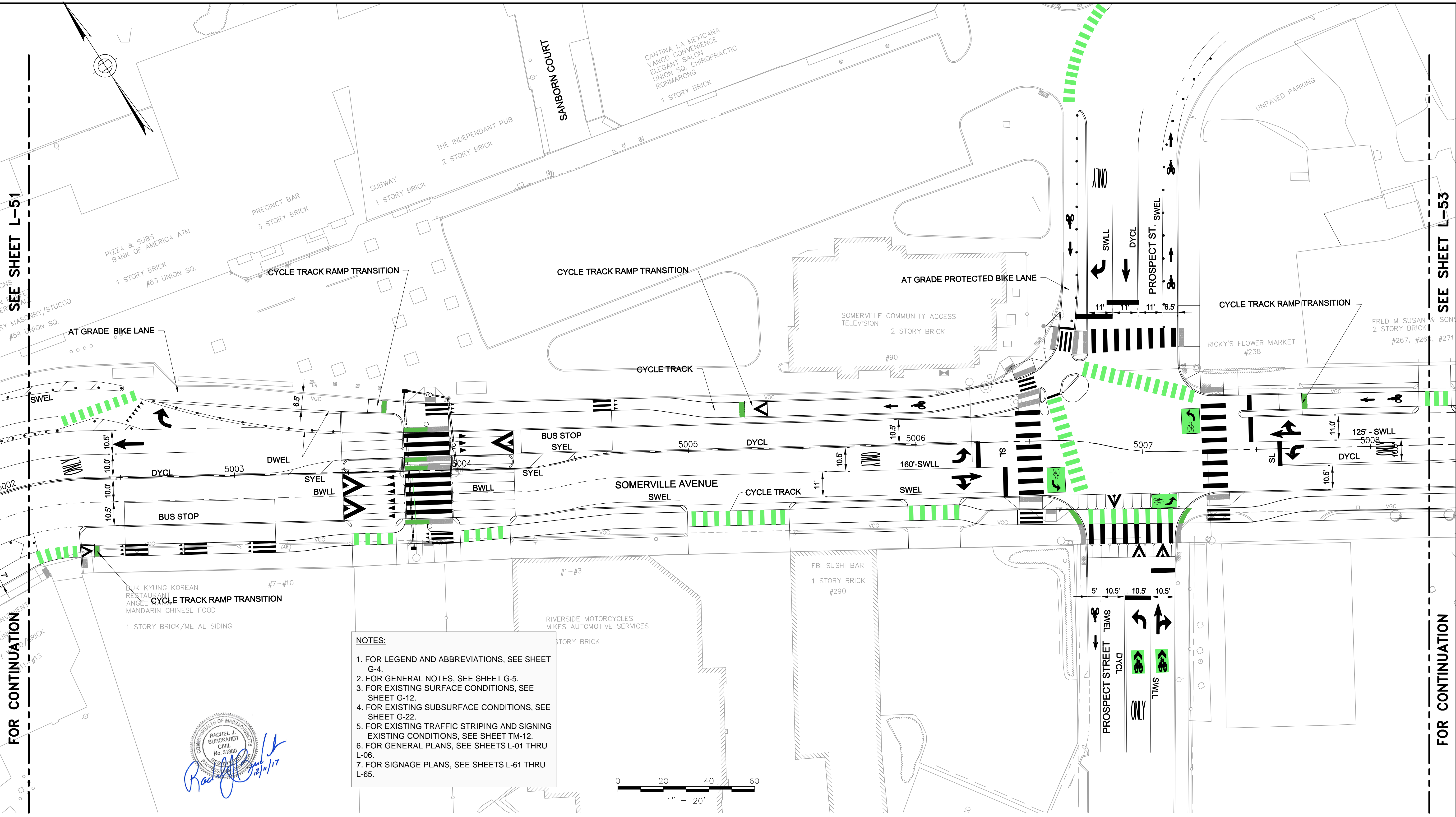
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CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

SEE SHEET L-52

FOR CONTINUATION

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SEE SHEET L-51

SEE SHEET L-53

FOR CONTINUATION

FOR CONTINUATION

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEET G-12.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEET G-22.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-12.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.

Rachel J. Burckardt

 12/11/17

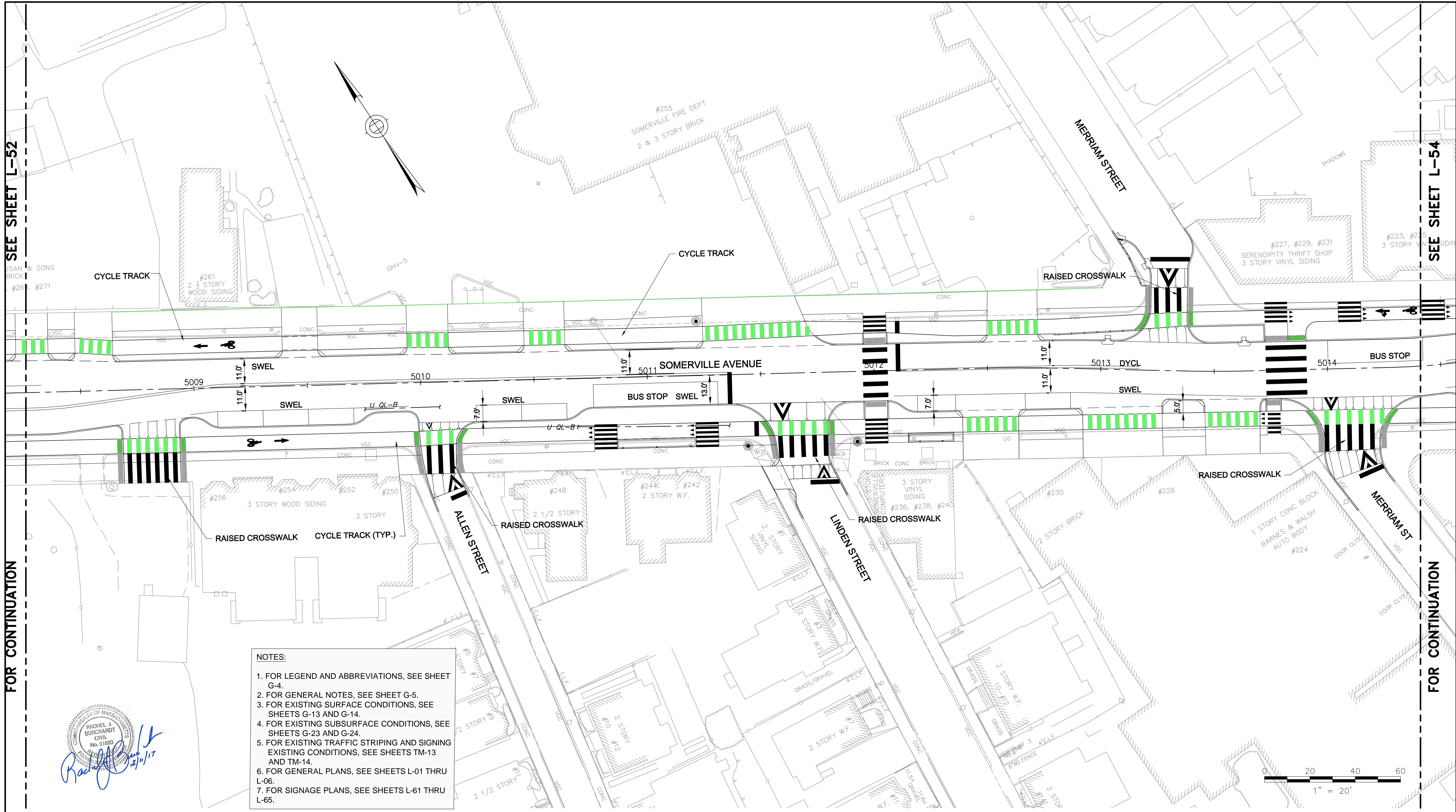
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STRIPING PLAN
SHEET 2 OF 5

DESIGNED: LAC CHECKED: RJB DRAWN: LAC CHECKED: RJB	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET <h1 align="center">L-52</h1>
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CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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SEE SHEET L-52

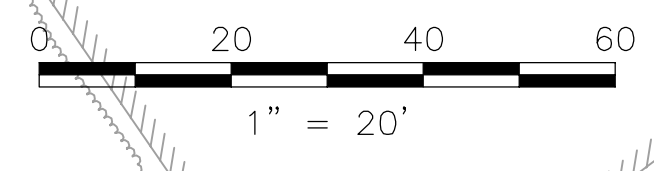
SEE SHEET L-54

FOR CONTINUATION

FOR CONTINUATION

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-13 AND G-14.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-23 AND G-24.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-13 AND TM-14.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.

Rachel J. Burckhardt
 Civil
 No. 31880
 State of Massachusetts
 Expires 12/31/17



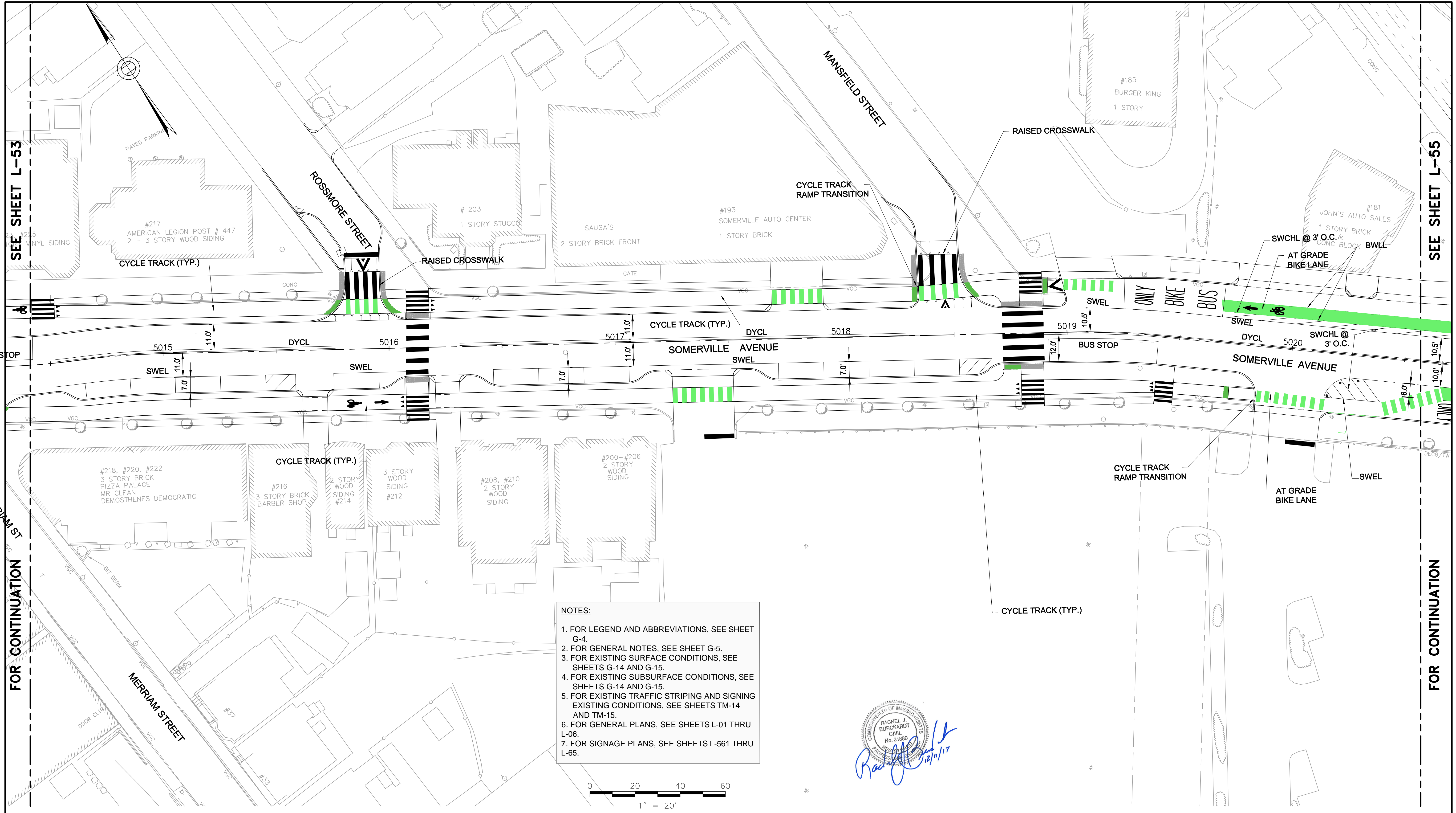
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STRIPING PLAN
SHEET 3 OF 5

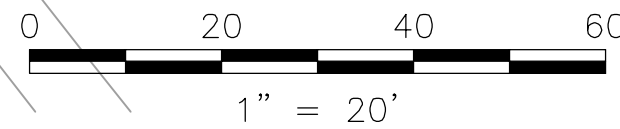
DESIGNED: LAC	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-53
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

T:\52647LS Union Square Study and Design\SHI DWG\CP-2_CP-3 Sewer Separation\Civil\L-51_L-55 Striping_Plans.dwg 2017-11-16 6:24 PM



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-14 AND G-15.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-14 AND G-15.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-14 AND TM-15.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-561 THRU L-65.

Rachel J. Burckardt
 12/11/17



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NO.	DATE	REVISIONS	BY

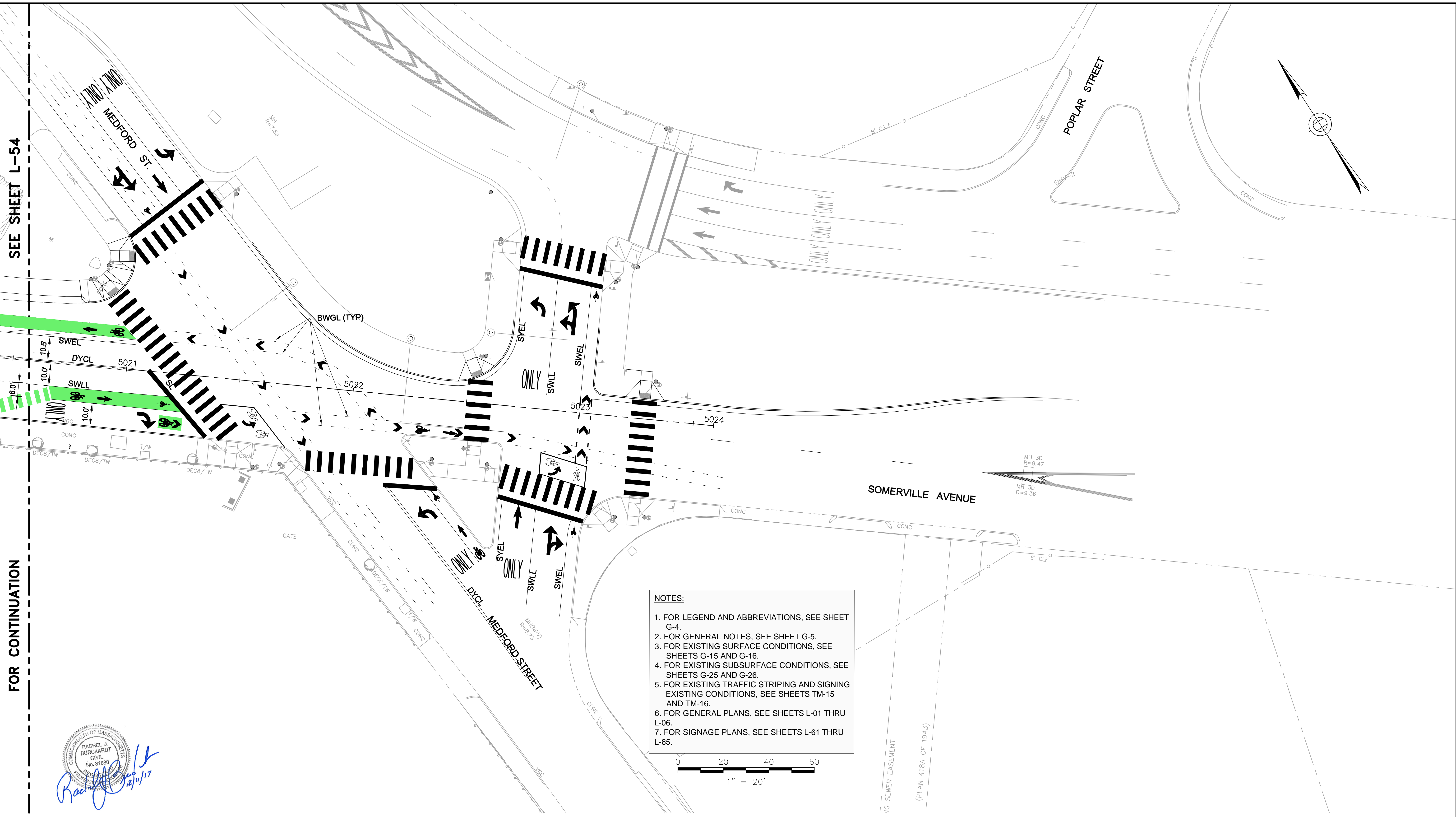
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STRIPING PLAN
SHEET 4 OF 5

DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-54
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

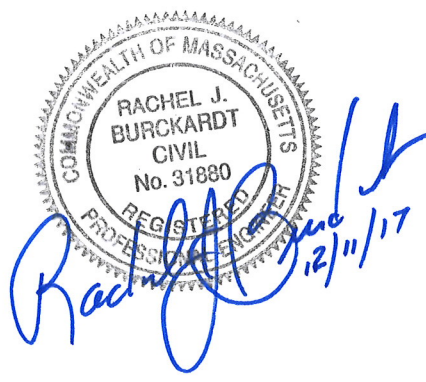
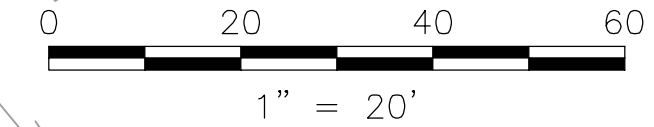
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SEE SHEET L-54

FOR CONTINUATION



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-15 AND G-16.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-25 AND G-26.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-15 AND TM-16.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

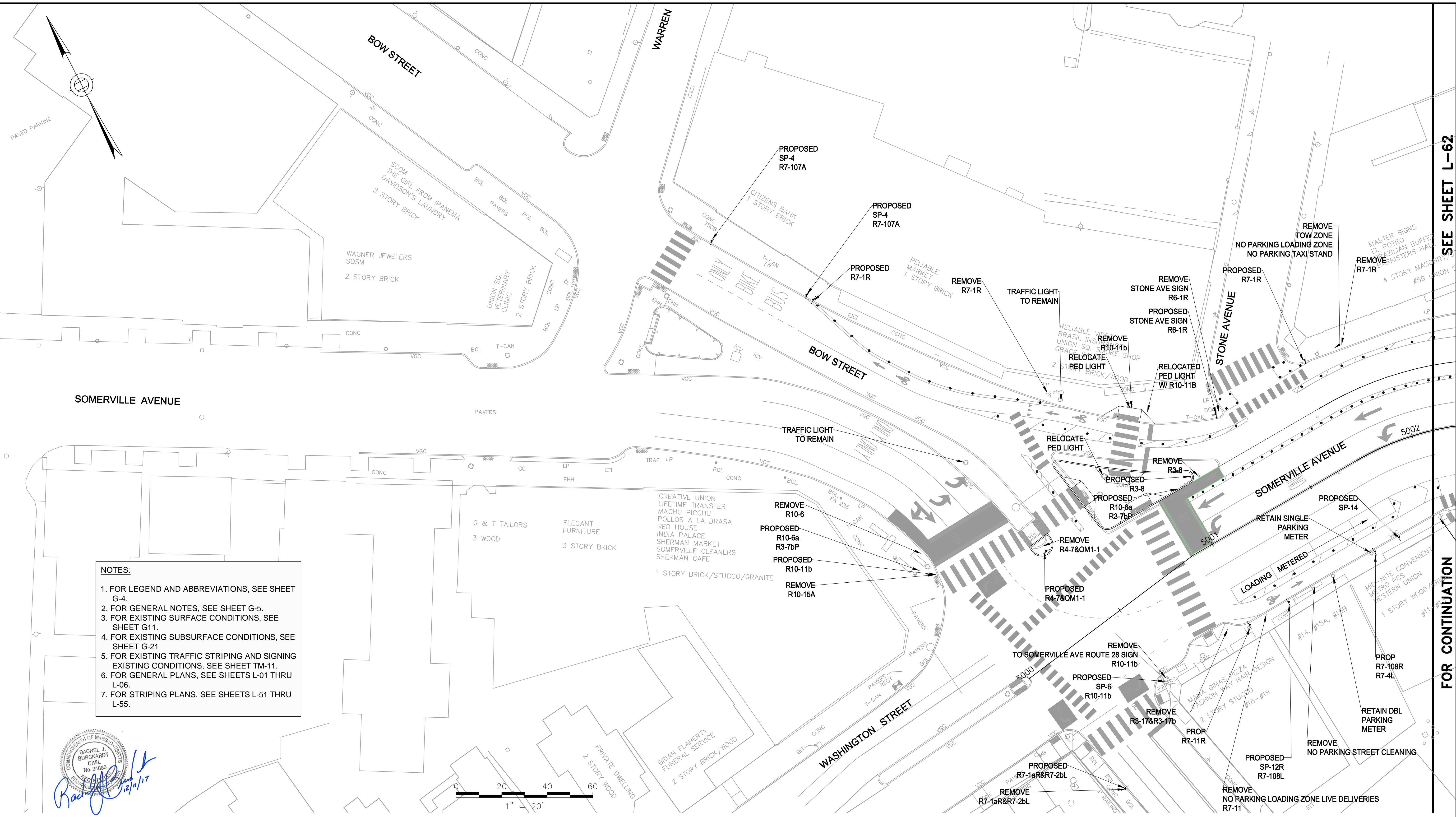
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT STRIPING PLAN

SHEET 5 OF 5

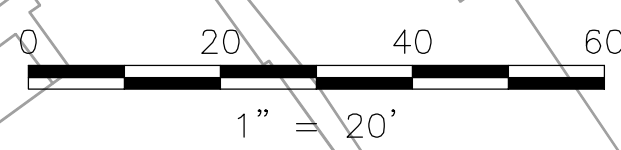
DESIGNED: LAC	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-55
CHECKED: RJB		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

2017-12-04 12:35 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Civil\L-61_L-65 Signage_Plans.dwg



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEET G11.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEET G-21.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-11.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR STRIPING PLANS, SEE SHEETS L-51 THRU L-55.

Rachel J. Burckhardt
 Civil
 No. 31690
 State of Massachusetts
 12/11/17



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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SIGNAGE PLAN
SHEET 1 OF 5

DESIGNED: AD	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		L-61
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

SEE SHEET L-62

FOR CONTINUATION

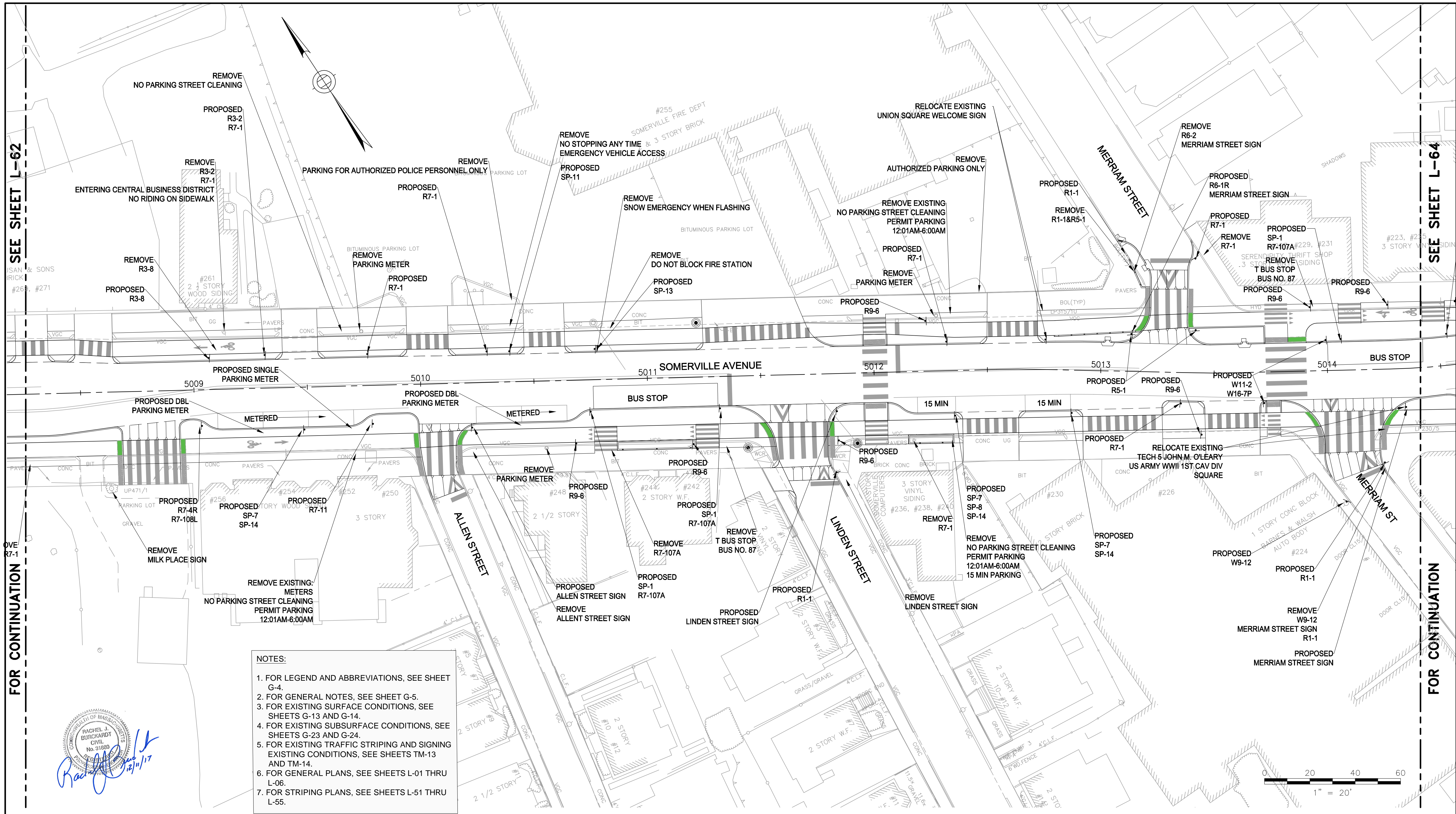
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SEE SHEET L-62

FOR CONTINUATION

SEE SHEET L-64

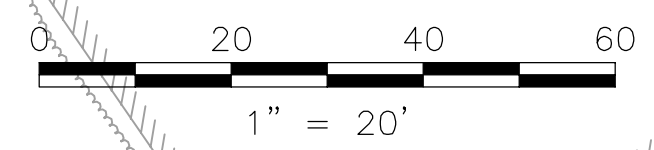
FOR CONTINUATION



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-13 AND G-14.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-23 AND G-24.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-13 AND TM-14.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR STRIPING PLANS, SEE SHEETS L-51 THRU L-55.

Rachel J. Burckhardt

 12/11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SIGNAGE PLAN
SHEET 3 OF 5

DESIGNED: AD	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET	
CHECKED: JC			L-63
DRAWN: LAC	REF.	CONT.	
CHECKED: RJB	ACC.		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143			

2017-12-04 12:45 PM T:\52647LS Union Square Study and Design\SHIT DWG\CP-2_CP-3 Sewer Separation\Civil\L-66_L-67 TRAFFIC SIGN SUMMARY.dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
OM1-1	18"	18"		3	YELLOW	YELLOW	YELLOW		2.25
R1-1	30"	30"		7	RED	WHITE	WHITE		6.25
R3-2L	36"	36"		6	WHITE	BLACK	RED		9
R3-2R	36"	36"		1	WHITE	BLACK	RED		9
R3-7L	30"	30"		1	WHITE	BLACK	BLACK		6.25
R3-7R	30"	30"		1	WHITE	BLACK	BLACK		6.25
R3-8	24"	30"		2	WHITE	BLACK	WHITE		5
R3-8B	30"	30"		1	WHITE	BLACK	WHITE		6.25
R3-20R	24"	36"		1	WHITE	BLACK	WHITE		6
R4-5	24"	30"		1	WHITE	BLACK	WHITE		5
R4-7	24"	30"		3	WHITE	BLACK	WHITE		5
R5-1	30"	30"		8	RED	WHITE	WHITE		6.25
R6-1L	36"	12"		8	WHITE	BLACK	BLACK		3
R6-1R	36"	12"		8	WHITE	BLACK	BLACK		3

Rachel J. Burckardt
 CIVIL
 No. 31680
 12/11/17

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
R7-1	12"	18"		13	WHITE	RED	RED		1.5
R7-1L	12"	18"		7	WHITE	RED	RED		1.5
R7-1R	12"	18"		7	WHITE	RED	RED		1.5
R7-1aR	12"	18"		1	WHITE	RED	RED		1.5
R7-2bL	12"	18"		1	WHITE	RED	RED		1.5
R7-4	24"	12"		2	WHITE	RED	RED		2
R7-11	24"	12"		1	WHITE	RED	RED		2
R7-107A	12"	30"		14	WHITE	BLACK/RED	RED		2.5
R7-225	24"	12"		2	WHITE	BLACK	BLACK		2
R9-2	12"	18"		2	WHITE	BLACK	BLACK		1.5
R9-6	12"	18"		13	WHITE	BLACK	BLACK		1.5
R10-6	24"	36"		4	WHITE	BLACK	BLACK		6

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGN SUMMARY
 SHEET 1 OF 3

DESIGNED: AD
 CHECKED: JC
 DRAWN: JLM
 CHECKED: RJB

Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

REF. _____ CONT. _____
 ACC. _____ DATE: DEC 2017

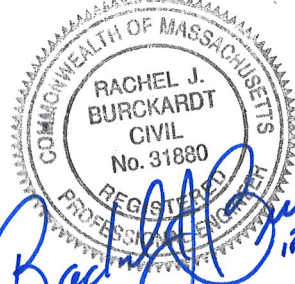
SHEET
L-66

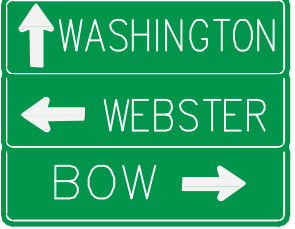




CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-12-04 12:45 PM T:\52647LS Union Square Study and Design\SHD\DWG\CP-2_CP-3 Sewer Separation\Civil\L-66_L-67 TRAFFIC SIGN SUMMARY.dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
R10-7	24"	30"		1	WHITE	BLACK	BLACK		5
R10-11B	24"	24"		4	WHITE	BLACK	BLACK		4
R10-15A	30"	36"		4	WHITE/YELLOW	WHITE/BLACK/RED	BLACK		7.5
R10-22	18"	12"		5	WHITE	BLACK	BLACK		1.5
W9-12	18"	12"		1	YELLOW	BLACK	BLACK		1.5
W11-2	30"	30"		10	YELLOW	BLACK	BLACK		6.25
W16-7p	24"	12"		10	YELLOW	BLACK	BLACK		2
D1-1	30"	18"		1	GREEN	WHITE	WHITE		3.75
D1-1e	36"	42"		2	GREEN	WHITE	WHITE		10.5


Rachel J. Burckardt
 12/11/17


IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
D1-3	36"	42"		1	GREEN	WHITE	WHITE		10.5
D3-1	18"	8"		1	GREEN	WHITE	WHITE		1
D3-1	18"	8"		1	GREEN	WHITE	WHITE		1
D3-1	18"	8"		1	GREEN	WHITE	WHITE		1
D3-1	18"	8"		1	GREEN	WHITE	WHITE		1
D3-1	24"	8"		1	GREEN	WHITE	WHITE		1.3
D3-1	24"	8"		1	GREEN	WHITE	WHITE		1.3
D3-1	18"	8"		2	GREEN	WHITE	WHITE		1
D3-1	24"	8"		1	GREEN	WHITE	WHITE		1.3

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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGN SUMMARY
 SHEET 2 OF 3

DESIGNED: AD
 CHECKED: JC
 DRAWN: JLM
 CHECKED: RJB


 Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

REF. _____ CONT. _____ SCALE: _____
 ACC. _____ DATE: DEC 2017

SHEET
L-67

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-12-04 12:45 PM T:\52647LS Union Square Study and Design\SHI DWG\CP-2_CP-3 Sewer Separation\Civil\L-66_L-67 TRAFFIC SIGN SUMMARY.dwg

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
SP-1	12"	30"		8	WHITE	BLACK	BLACK		2.5
SP-2	12"	30"		2	WHITE	BLACK	BLACK		2.5
SP-3	12"	30"		1	WHITE	BLACK	BLACK		2.5
SP-4	12"	30"		2	WHITE	BLACK	BLACK		2.5
SP-5	12"	30"		2	WHITE	BLACK	BLACK		2.5
SP-6	24"	12"		1	GREEN	WHITE	WHITE		2
SP-7	12"	18"		7	WHITE	BLACK	BLACK		1.5
SP-8	12"	18"		1	WHITE	GREEN	GREEN		1.5
SP-9	12"	18"		1	WHITE	GREEN	GREEN		1.5

Rachel J. Burckardt
 12/11/17

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	AREA (SF)
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER		
SP-10	12"	18"		1	WHITE	GREEN	GREEN		1.5
SP-11	12"	18"		2	WHITE	RED	RED		1.5
SP-12	12"	18"		3	WHITE	RED	RED		1.5
SP-13	24"	30"		1	WHITE	BLACK	BLACK		5
SP-14	12"	24"		8	WHITE	RED	RED		3
SP-15	12"	30"		1	WHITE	RED	RED		2.5
R7-108	12"	18"		3	WHITE	GREEN	GREEN		1.5

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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT

TRAFFIC SIGN SUMMARY
SHEET 3 OF 3

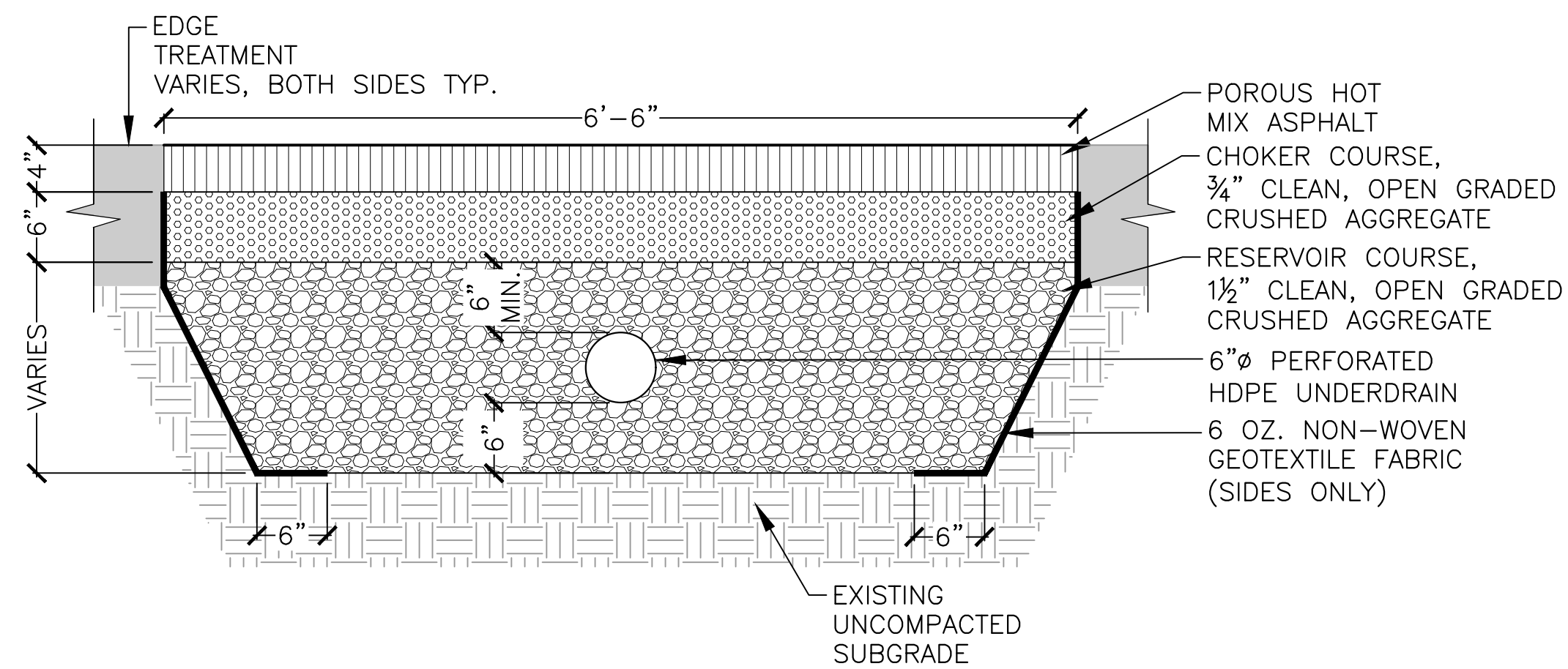
DESIGNED: AD		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	
CHECKED: JC		REF.	CONT.
DRAWN: JLM		SCALE:	
CHECKED: RJB	ACC.	DATE: DEC 2017	

SHEET
L-68

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

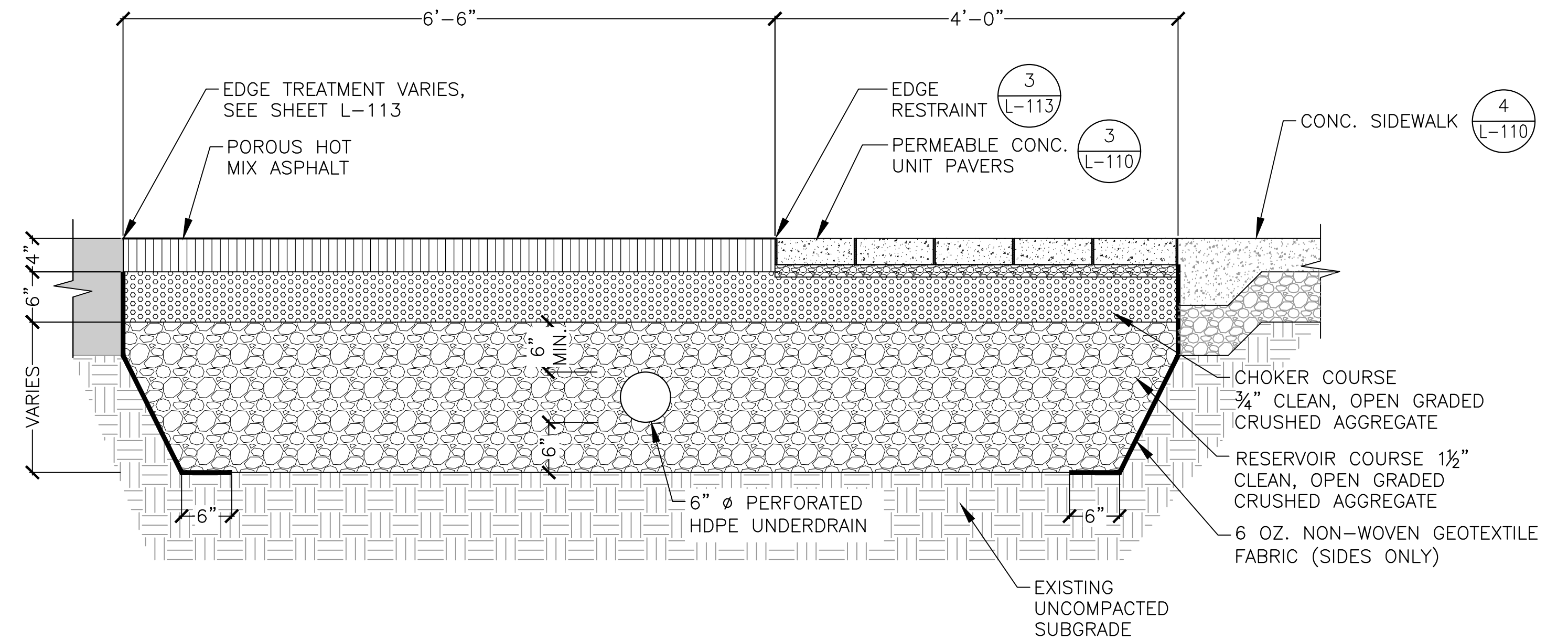
NO.	DATE	REVISIONS	BY

2017-11-14 4:48 PM F:\Projects - Active\16-7020-BIO-02-Union Square GI\3_Project_Execution\Reference Data\CAD\L-71_CYCLE_TRACK SECTIONS.dwg



NOTES:
1. THIS DETAIL APPLIES AT LOCATIONS NOT OVER SOIL CELLS.

1 POROUS HOT MIX ASPHALT (CYCLE TRACK)
SCALE: NTS



NOTE:
1. THIS SECTION GENERALLY APPLIES TO LOCATIONS WHERE THE CYCLE TRACK AND PERMEABLE PAVERS ARE NOT INSTALLED DIRECTLY ADJACENT TO TREE PLANTING AREAS WITH SUBSURFACE SOIL CELLS. REFER TO PLANS FOR VARIATION IN CYCLE TRACK AND PERMEABLE CONC. UNIT PAVER WIDTHS.

2 POROUS HOT MIX ASPHALT (CYCLE TRACK) W/ PERMEABLE CONC. UNIT PAVERS
SCALE: NTS

NOTES:

1. THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
2. UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-1 THROUGH GI-6.
3. FOR STREETScape MATERIAL PLANS, SEE L-1 THROUGH L-6.
4. FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.
5. ALL AGGREGATE SUBBASE FOR PERMEABLE CONC. UNIT PAVERS AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

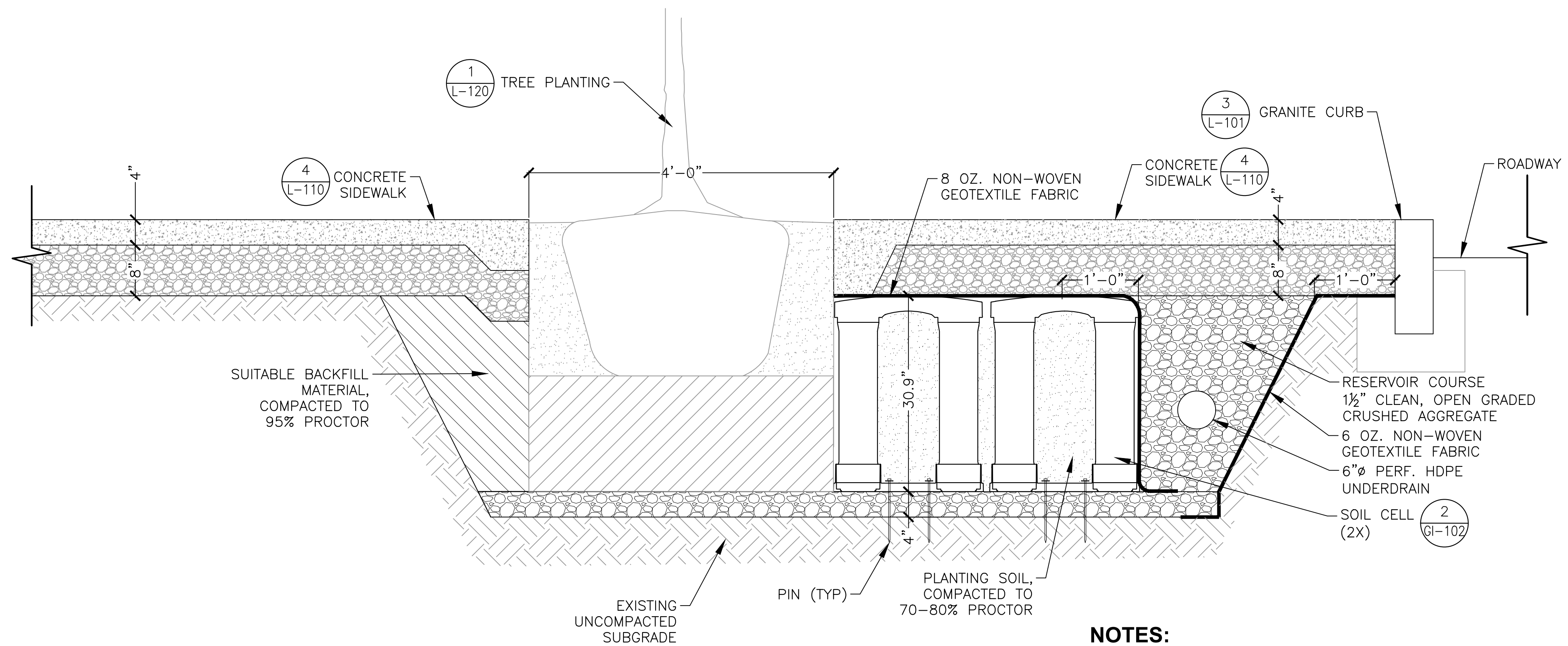
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 1 OF 10

DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-71
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: DB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

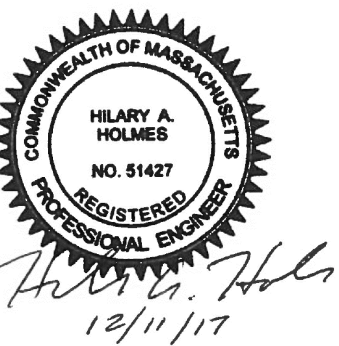
NO.	DATE	REVISIONS	BY

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- NOTES:**
1. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-22.
 2. FOR STREETSCAPE MATERIALS PLAN, SEE SHEET L-2.
 3. THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
 4. UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-1.
 5. SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-1.
 6. AGGREGATE BASE FOR SOIL CELLS AND AGGREGATE SURROUNDING UNDERDRAIN SHALL BE DOUBLE WASHED.
 4. FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.

1 SECTION
SCALE: NTS



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

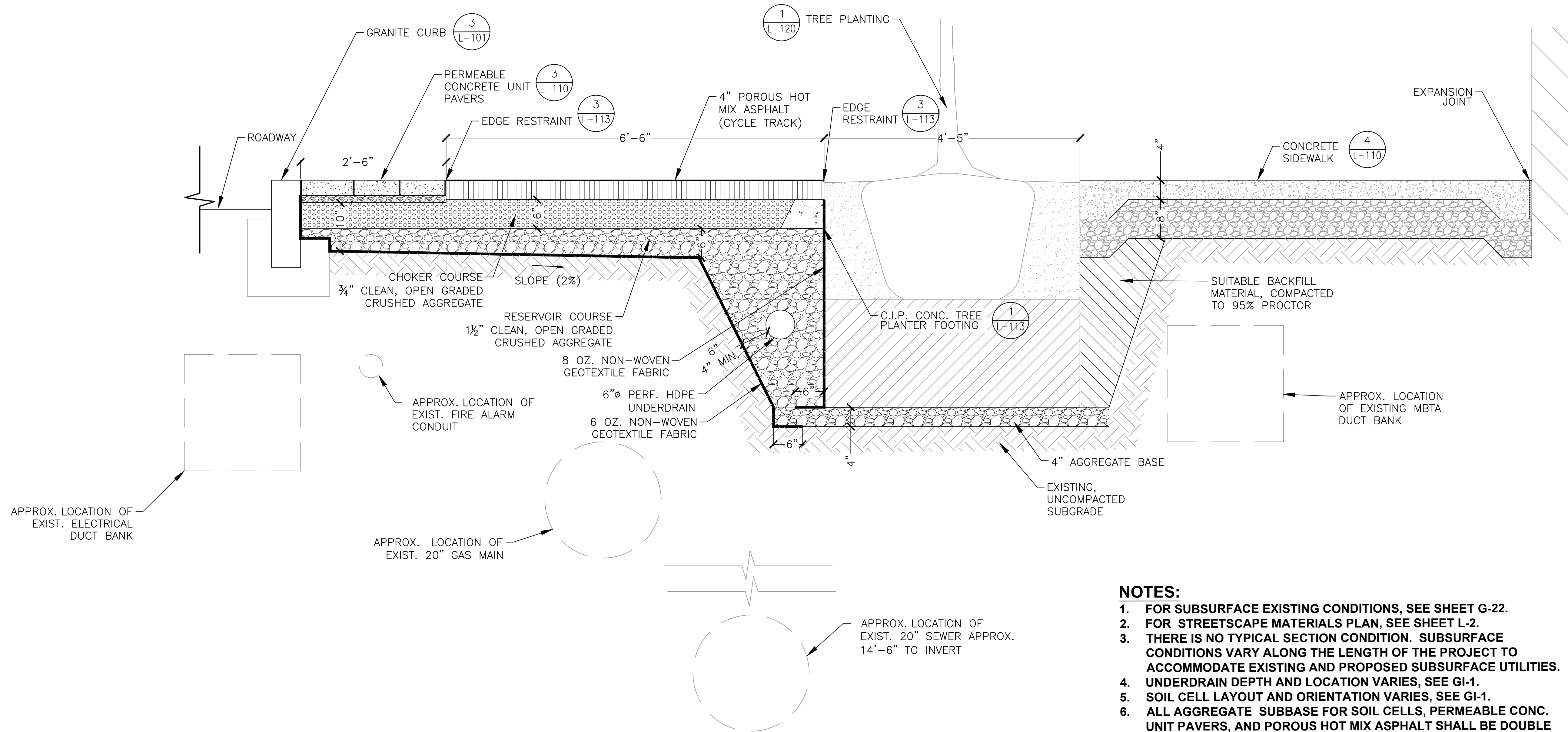
SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETSCAPE SECTIONS
SHEET 2 OF 10

DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-72
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: DB	ACC.		DATE: DEC 2017

NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

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NOTES:

1. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-22.
2. FOR STREETScape MATERIALS PLAN, SEE SHEET L-2.
3. THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
4. UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-1.
5. SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-1.
6. ALL AGGREGATE SUBBASE FOR SOIL CELLS, PERMEABLE CONC. UNIT PAVERS, AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.
7. FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.

1 SECTION
SCALE: NTS

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 3 OF 10

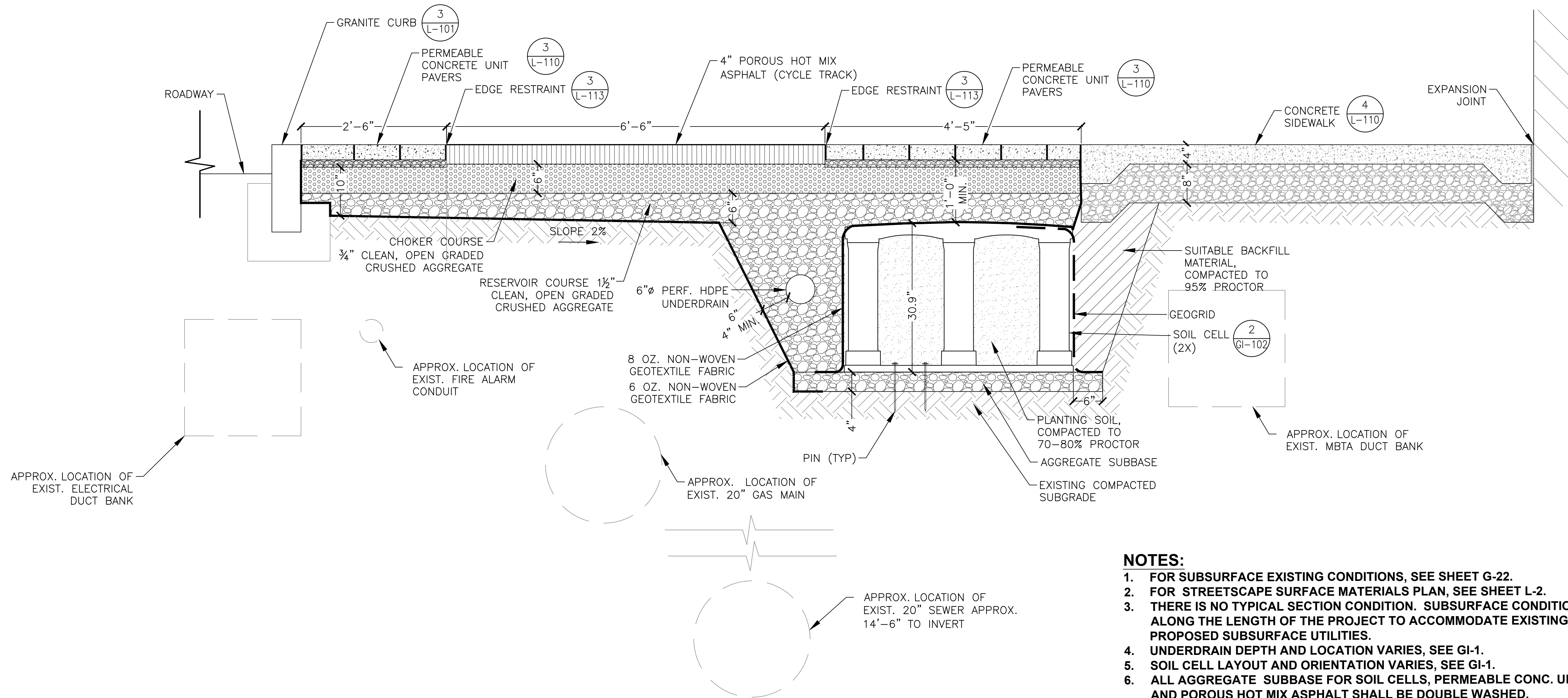
DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-73
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: DB	ACC.		DATE: DEC 2017



CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-11-18 12:11 AM F:\Projects - Active\16-7020-BIO-02-Union Square GI\3_Project_Execution\Reference Data\CAD\L-72_80_SOIL_CELL_SECTIONS.dwg



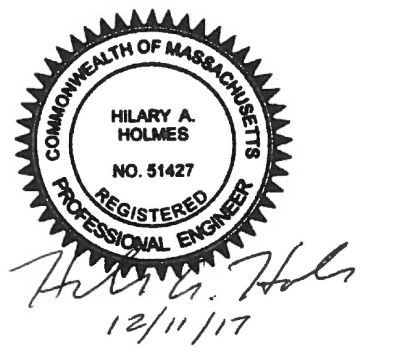
1 SECTION
SCALE: NTS

- NOTES:**
- FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-22.
 - FOR STREETScape SURFACE MATERIALS PLAN, SEE SHEET L-2.
 - THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
 - UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-1.
 - SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-1.
 - ALL AGGREGATE SUBBASE FOR SOIL CELLS, PERMEABLE CONC. UNIT PAVERS, AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.
 - FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.
 - WATERSTOP TO BE INSTALLED AT LOCATION WHERE SOIL CELLS ARE WITHIN 10 FT. OF EXISTING BUILDINGS, SEE GI-102. WOOD BLOCKING INSTEAD OF PINS ARE TO USED TO AVOID PUNCTURING THE GEOMEMBRANE.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 4 OF 10

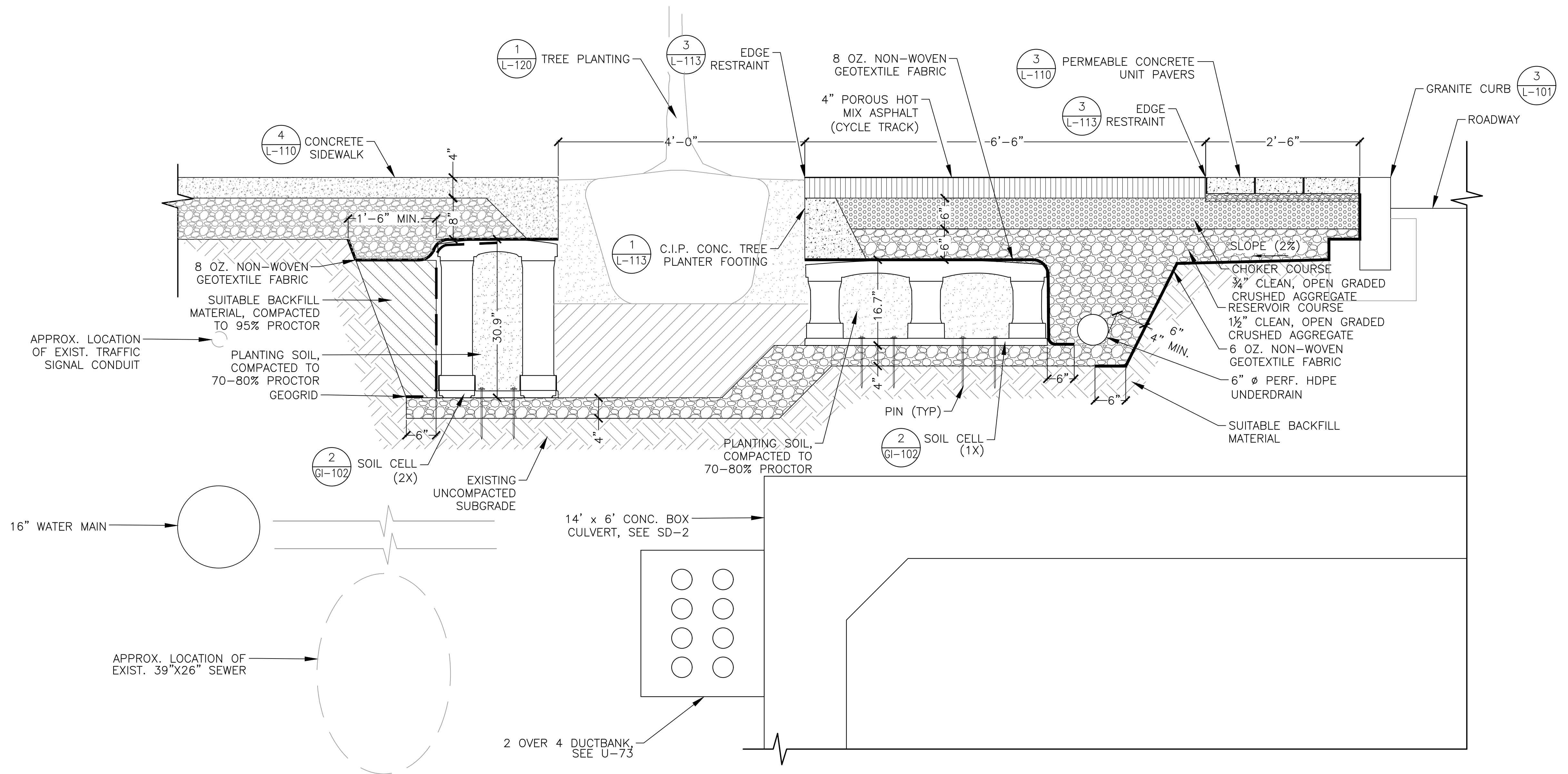
DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-74
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CHECKED: DB	ACC.		DATE: DEC 2017



NO.	DATE	REVISIONS	BY

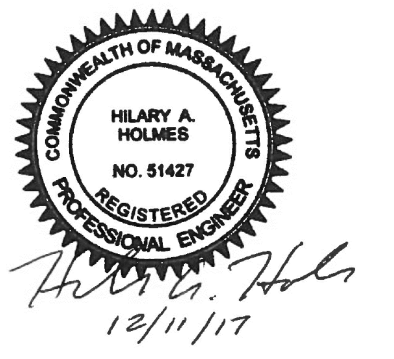
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

2017-11-18 12:11 AM F:\Projects - Active\16-7020-B10-02-Union Square GI\3_Project_Execution\Reference Data\CAD\L-72_80_SOIL_CELL SECTIONS.dwg



1 SECTION
SCALE: NTS

- NOTES:**
- FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-23.
 - FOR STREETScape MATERIALS PLAN, SEE SHEET L-3.
 - THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
 - UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-2.
 - SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-2.
 - ALL AGGREGATE SUBBASE FOR SOIL CELLS, PERMEABLE CONC. UNIT PAVERS, AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.
 - FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

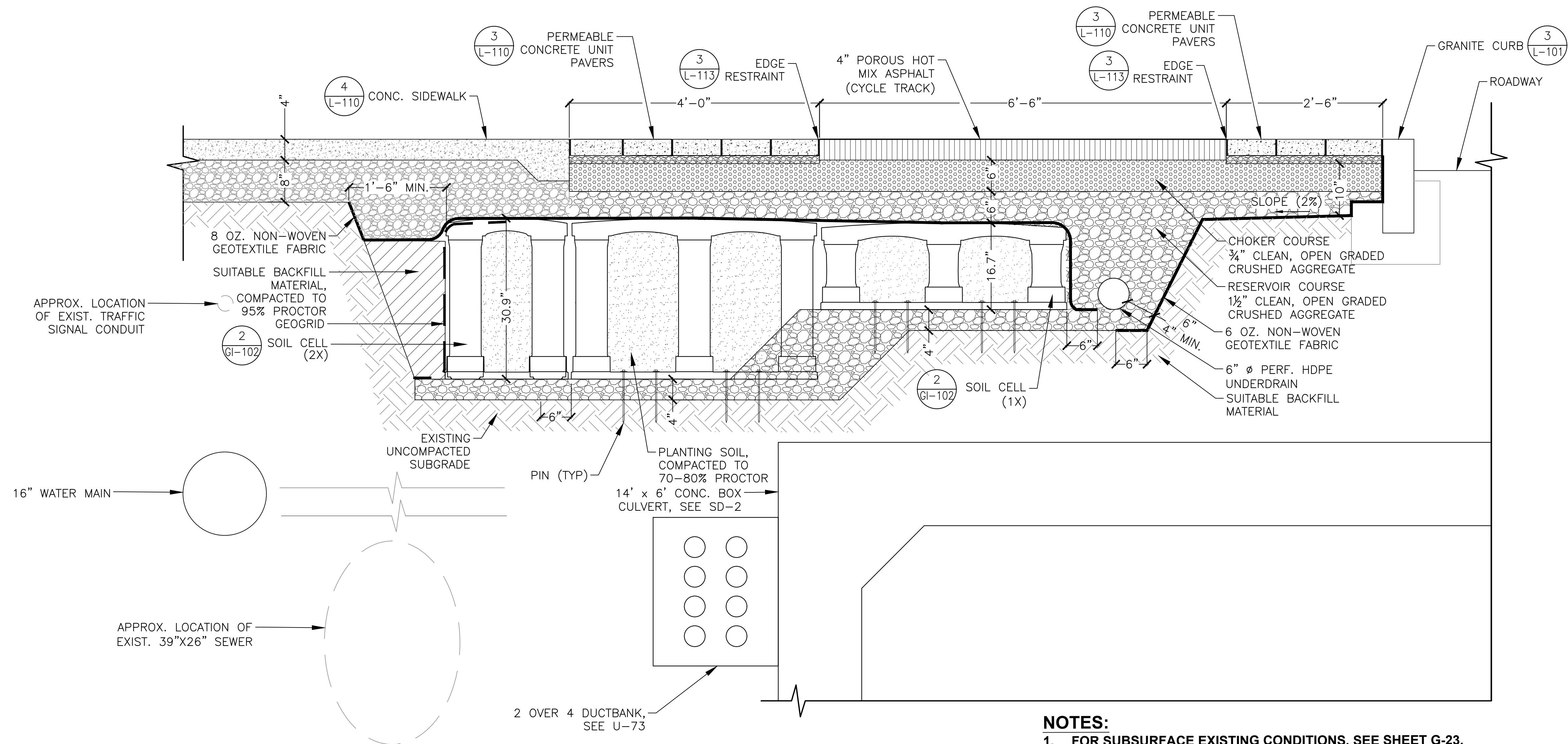
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 5 OF 10

DESIGNED: HH	WSP PARSONS BRINCKERHOFF 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	HATCH 27 Congress St. Salem, MA 01970 PH. (978)750-0098 FAX (978)740-0097	SHEET L-75
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CHECKED: DB	ACC.	DATE: DEC 2017	

NO.	DATE	REVISIONS	BY

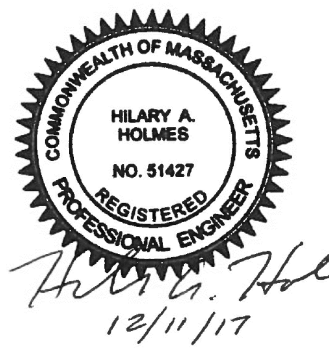
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

2017-11-18 12:11 AM F:\Projects - Active\16-7020-B10-02-Union Square GI\3_Project_Execution\Reference Data\CAD\L-72_80_SOIL_CELL_SECTIONS.dwg



1 SECTION
SCALE: NTS

- NOTES:**
- FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-23.
 - FOR STREETScape MATERIALS PLAN, SEE SHEET L-3.
 - THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
 - UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-2.
 - SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-2.
 - ALL AGGREGATE SUBBASE FOR SOIL CELLS, PERMEABLE CONC. UNIT PAVERS, AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.
 - FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.
 - WATERSTOP TO BE INSTALLED AT LOCATION WHERE SOIL CELLS ARE WITHIN 10 FT. OF EXISTING BUILDINGS, SEE GI-102. WOOD BLOCKING INSTEAD OF PINS ARE TO BE USED TO AVOID PUNCTURING THE GEOMEMBRANE.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

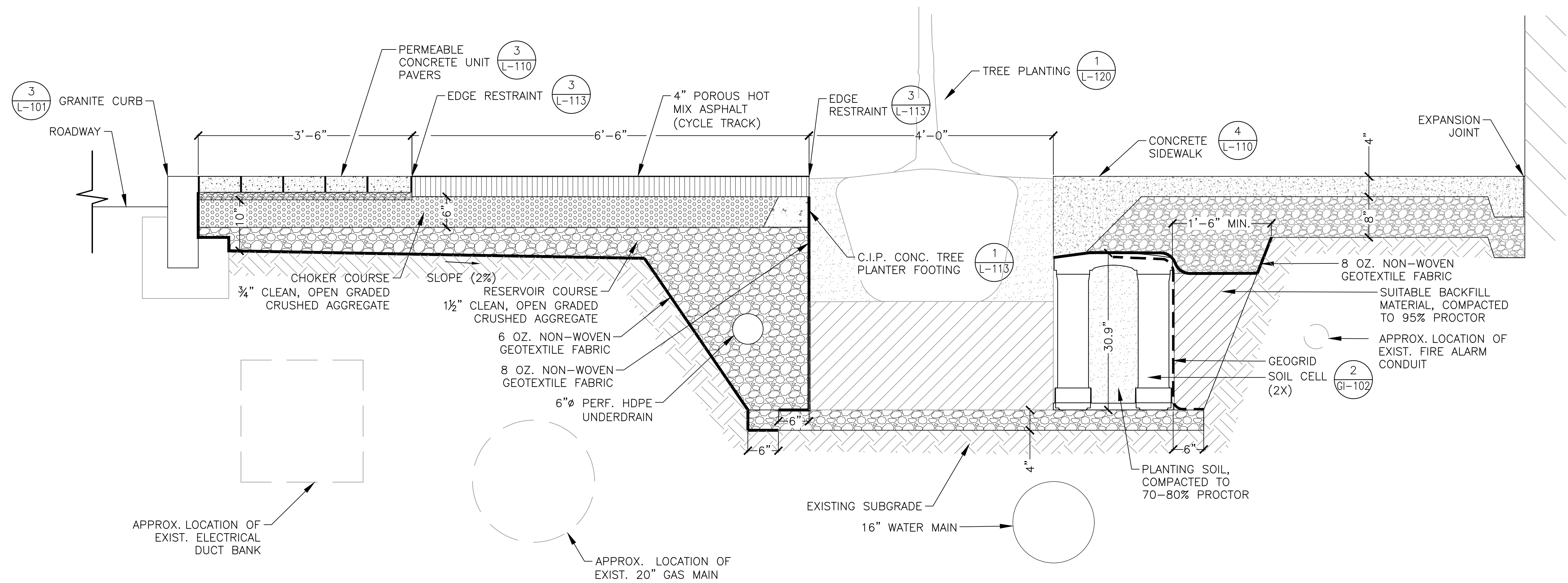
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 6 OF 10

DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-76
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: DB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

2017-11-18 12:11 AM F:\Projects - Active\16-7020-BIO-02_Union Square GI\3_Project_Execution\Reference Data\CAD\L-72_80_SOIL_CELL_SECTIONS.dwg



NOTES:

1. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-23.
2. FOR STREETScape MATERIALS PLAN, SEE SHEET L-3.
3. THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
4. UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-3.
5. SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-3.
6. ALL AGGREGATE SUBBASE FOR SOIL CELLS, PERMEABLE CONC. UNIT PAVERS, AND POROUS HOT MIX ASPHALT SHALL BE DOUBLE WASHED.
7. FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.
8. WATERSTOP TO BE INSTALLED AT LOCATION WHERE SOIL CELLS ARE WITHIN 10 FT. OF EXISTING BUILDINGS, SEE GI-102. WOOD BLOCKING INSTEAD OF PINS ARE TO USED TO AVOID PUNCTURING THE GEOMEMBRANE.

1 SECTION
SCALE: NTS

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 7 OF 10

DESIGNED: HH
CHECKED: EA
DRAWN: AK/NB
CHECKED: DB

WSP PARSONS BRINCKERHOFF
75 Arlington St. Boston, MA 02116
PH. (617)428-7330 FAX (617)462-8487

HATCH
27 Congress St. Salem, MA 01970
PH. (978)750-0096 FAX (978)740-0097

REF. CONT.
ACC.

SCALE: AS NOTED
DATE: DEC 2017

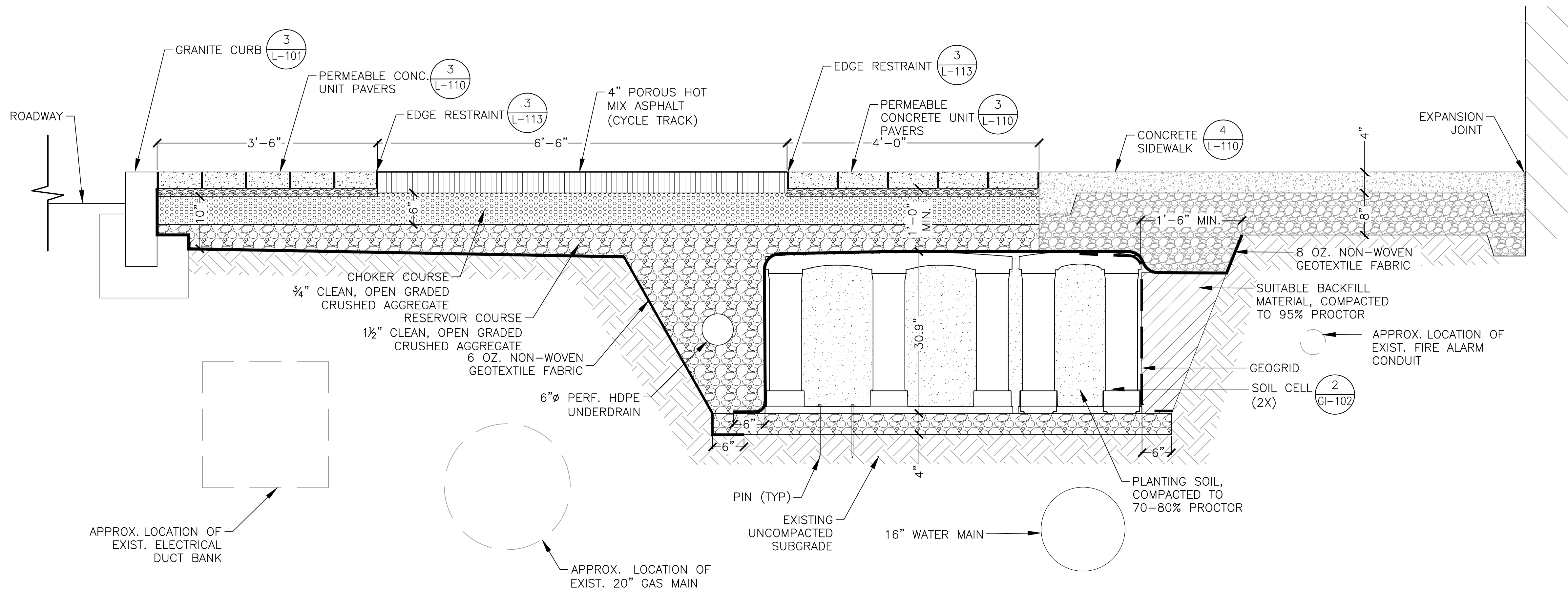
SHEET
L-77

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143



NO.	DATE	REVISIONS	BY

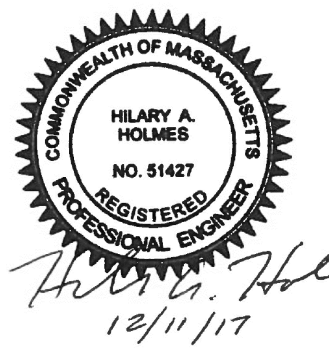
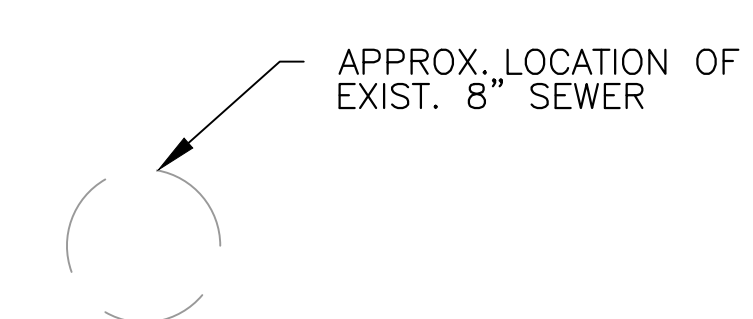
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NOTES:

1. FOR SUBSURFACE EXISTING CONDITIONS, SEE SHEET G-23.
2. FOR STREETScape MATERIALS PLAN, SEE SHEET L-3.
3. THERE IS NO TYPICAL SECTION CONDITION. SUBSURFACE CONDITIONS VARY ALONG THE LENGTH OF THE PROJECT TO ACCOMMODATE EXISTING AND PROPOSED SUBSURFACE UTILITIES.
4. UNDERDRAIN DEPTH AND LOCATION VARIES, SEE GI-3.
5. SOIL CELL LAYOUT AND ORIENTATION VARIES, SEE GI-3.
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7. FOR CONCRETE SIDEWALK AND PAVING DETAILS, SEE L-110.
8. WATERSTOP TO BE INSTALLED AT LOCATION WHERE SOIL CELLS ARE WITHIN 10 FT. OF EXISTING BUILDINGS, SEE GI-102. WOOD BLOCKING INSTEAD OF PINS ARE TO USED TO AVOID PUNCTURING THE GEOMEMBRANE.

1 SECTION
SCALE: NTS



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

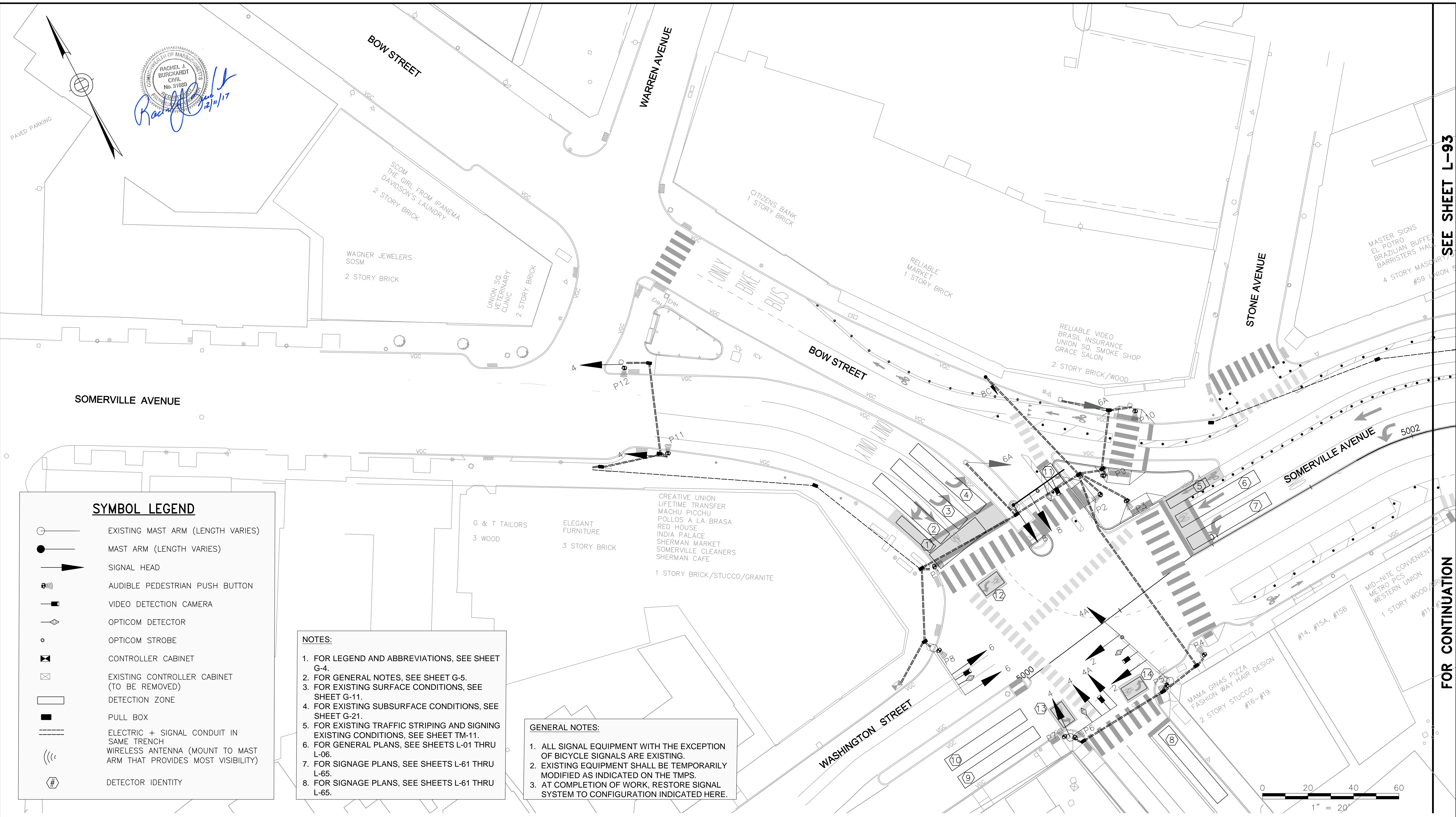
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREETScape SECTIONS
SHEET 8 OF 10

DESIGNED: HH	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: EA			L-78
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: DB	ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Civil\L-90_L-95 Signal_Plans.dwg 2017-11-16 6:49 PM



PROFESSIONAL SEAL
 RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 State of Massachusetts
 12/11/17

SYMBOL LEGEND

- EXISTING MAST ARM (LENGTH VARIES)
- MAST ARM (LENGTH VARIES)
- SIGNAL HEAD
- AUDIBLE PEDESTRIAN PUSH BUTTON
- VIDEO DETECTION CAMERA
- OPTICOM DETECTOR
- OPTICOM STROBE
- CONTROLLER CABINET
- EXISTING CONTROLLER CABINET (TO BE REMOVED)
- DETECTION ZONE
- PULL BOX
- ELECTRIC + SIGNAL CONDUIT IN SAME TRENCH
- WIRELESS ANTENNA (MOUNT TO MAST ARM THAT PROVIDES MOST VISIBILITY)
- DETECTOR IDENTITY

- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEET G-11.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEET G-21.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-11.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.
 8. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.

- GENERAL NOTES:**
1. ALL SIGNAL EQUIPMENT WITH THE EXCEPTION OF BICYCLE SIGNALS ARE EXISTING.
 2. EXISTING EQUIPMENT SHALL BE TEMPORARILY MODIFIED AS INDICATED ON THE T.M.P.S.
 3. AT COMPLETION OF WORK, RESTORE SIGNAL SYSTEM TO CONFIGURATION INDICATED HERE.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
WEBSTER/SOMERVILLE/WASHINGTON
SIGNAL PLAN

DESIGNED: AD	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		L-90
DRAWN: AD	REF. _____	SCALE: 1"=20'
CHECKED: RJB	CONT. _____	DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

SEE SHEET L-93

FOR CONTINUATION

2017-11-16 6:46 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Civil\L-95-L-99 SIGNAL DATA.dwg

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	Ø2 Ø6			Ø4			Ø8			FLASHERS
	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	
WASHINGTON ST/EB/2	G	Y	R	R	R	R	R	R	R	FY
SOMERVILLE AVE/SB/4+4A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	FR
SOMERVILLE AVE/WB/6	G	Y	R	R	R	R	R	R	R	FY
SOMERVILLE AVE/WB RT/6A	R	R	R	G	Y	R	R	R	R	FR
WEBSTER AVE/NB/8	R	R	R	R	R	R	G-GL	Y-YL	R-RL	
WEBSTER AVE BIKE NB 8C	G	Y	R	R	R	R	G	Y	R	
C.W./E-W/P1-P2	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./E-W/P5-P6	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
C.W./N-S/P7-P8	DW	DW	DW	W	FDW	DW	DW	DW	DW	OFF
C.W./N-S/P3-P4	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF
C.W./N-S/P9-P10	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF

MINIMUM GREEN	Ø2 Ø6			Ø4			Ø8		
	25				23			22	
VEHICLE EXTENSION	3			3			3		
MAXIMUM 1 GREEN	53			52			43		
MAXIMUM 2 GREEN	57			45			45		
YELLOW CLEARANCE		3			3			3	
RED CLEARANCE			3			3			3
WALK INTERVAL	9			9			9		
PED. CLEARANCE		22			20			19	
MEMORY	NON-LOCK			NON-LOCK			NON-LOCK		
RECALL (VEH./PED.)	MAX/ON			OFF/ON			OFF/ON		

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PROGRAM/COORDINATION PHASE SPLITS IN SECONDS			HOURS OF OPERATION
			Ø2 Ø6	Ø4	Ø8	
1	120	67	43	44	33	6:00 A.M. TO 10:00 A.M.
2	120	47	46	37	37	3:00 P.M. TO 7:00 P.M.

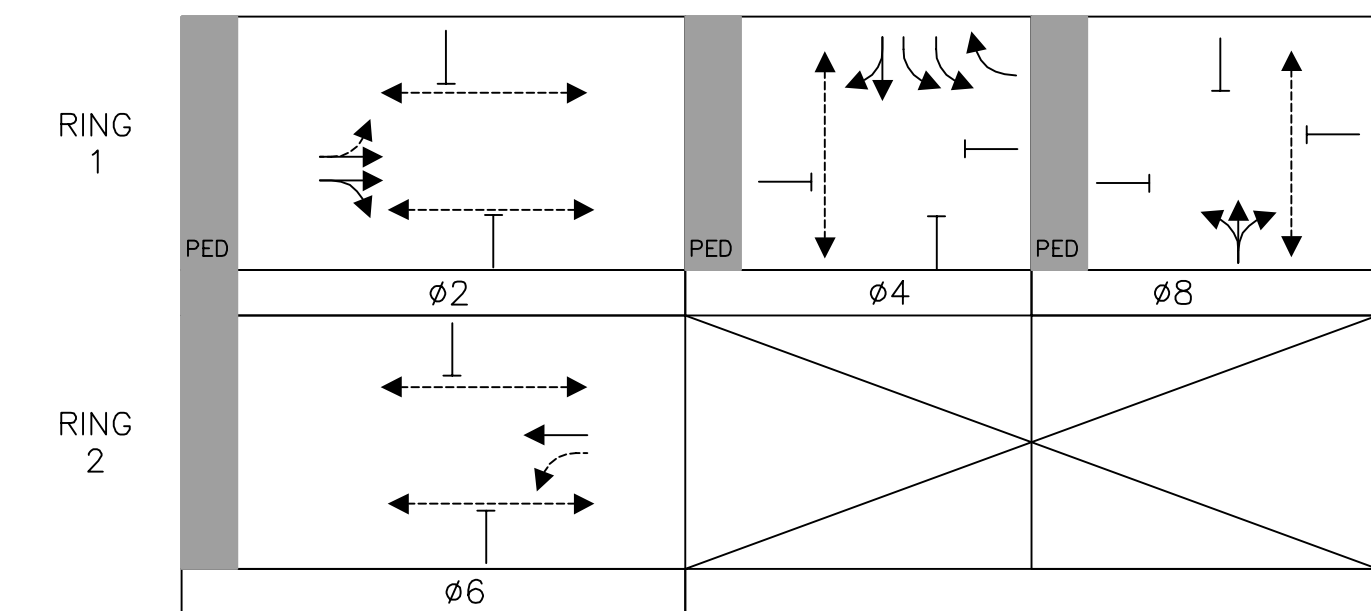
LOOP DETECTOR DATA									CLEARANCES								TECHNICAL NOTES
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	ØCALL	ØEXT.	CHNL.	FROM	TO							
1	1	3X20	-	-	PRES	4	4	4	G	G	G-GL	R	-	-	W	DW	1. WIRELESS ETHERNET INTERCONNECT TO SOMERVILLE AVENUE/ PROSPECT STREET INTERSECTION AND WARREN STREET PEDESTRIAN SIGNAL.
2	1	6X40	-	-	PRES	4	4	1	G-GL	-	G-GL	G-YL	-	-	-	-	
3	1	6X40	-	-	PRES	4	4	2	-	-	-	-	-	-	-	-	
4	1	6X40	-	-	PRES	4	4	3	-	-	-	-	-	-	-	-	
5	1	3X20	-	-	PRES	2+6	2+6	4	R	-	-	-	-	-	-	-	
6	1	6X40	-	-	PRES	2+6	2+6	1	W	-	-	-	-	-	W	FDW	
7	1	6X40	-	-	PRES	2+6	2+6	2	DW	-	-	-	-	-	-	DW	
8	1	6X40	-	-	PRES	8	8	1	-	-	-	-	-	-	-	-	
9	1	6X40	-	-	PRES	2+6	2+6	1	-	-	-	-	-	-	-	-	
10	1	6X40	-	-	PRES	2+6	2+6	2	-	-	-	-	-	-	-	-	
11	1	3X20	-	-	PRES	8	8	4	-	-	-	-	-	-	-	-	
12	1	6X10	-	-	PRES	4	4	4	-	-	-	-	-	-	-	-	
13	1	6X10	-	-	PRES	2+6	2+6	1	-	-	-	-	-	-	-	-	
14	1	6X10	-	-	PRES	8	8	1	-	-	-	-	-	-	-	-	

MAJOR ITEMS REQUIRED

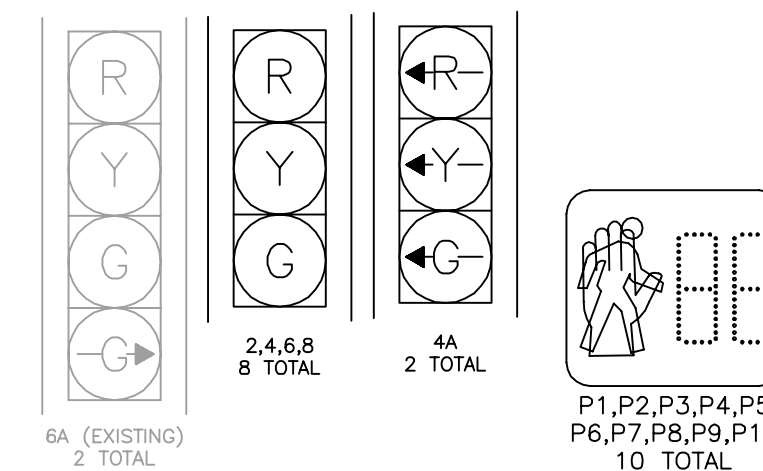
QUANTITY	MAJOR ITEMS REQUIRED
1	EPAC M60 ATC CONTROLLER IN 'PA' CABINET, FOUNDATION, MMU
	BUS INTERFACE UNITS, FLASHER LOAD SWITCHES
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
3	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
10	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
10	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
1	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
1	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST
1	EDGECONNECT VIDEO DETECTION - IP COMMUNICATION MODULE
1	14" X 11" X 11" NEMA FLASHER CABINET (POLE MOUNTED)
1	MODEL CNGE3FE7MS2 HARDENED ETHERNET SWITCH IN CONTROLLER CABINET
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL	

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



SIGNAL FACES



- NOTE:
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT WEBSTER/SOMERVILLE/WASHINGTON SIGNAL DATA

DESIGNED: AD		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET L-91
CHECKED: JC		REF.	CONT.	
DRAWN: AD	ACC.		DATE: DEC 2017	
CHECKED: RJB				

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

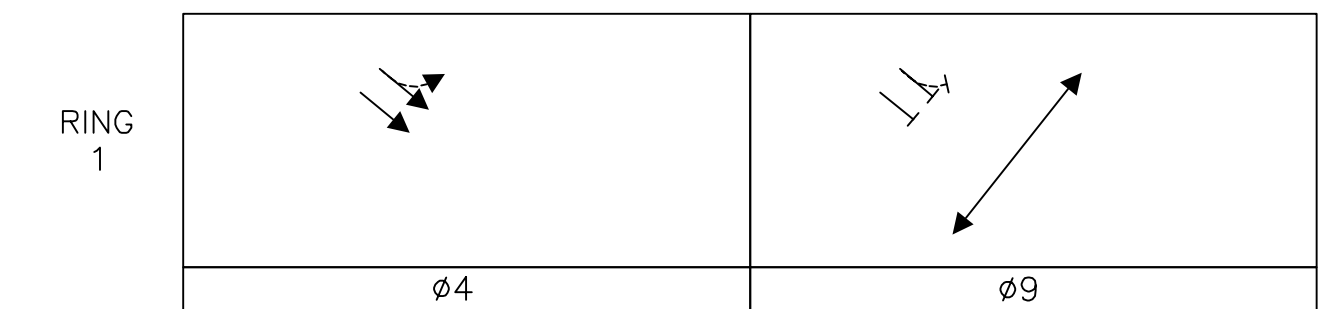
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MAJOR ITEMS REQUIRED

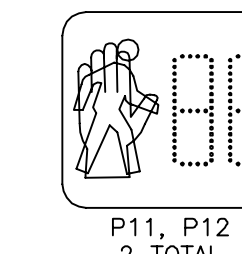
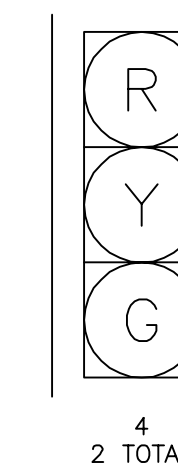
QUANTITY	MAJOR ITEMS REQUIRED
1	4DW CONTROLLER WITH INTERNAL RCU IN EXISTING CABINET
	MMU, BUS INTERFACE UNITS, FLASHER, LOAD SWITCHES
	WITH INTERCONNECT CABLE TO SOMERVILLE AVENUE INTERSECTION
2	12" - 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
2	16" - PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
2	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
1	CABINET POWER SUPPLY
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL	

NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



SIGNAL FACES



- NOTE:**
- ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.

TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	ø4			ø9			OPERATION FLASHING	
	GRN	CL	CL	GRN	CL	CL		
SOMERVILLE AVE/EB/4	G	Y	R	R	R	R	FY	
C.W./E-W/P11-P12	DW	DW	DW	W	FDW	DW	OFF	
INTERVAL SECONDS	MINIMUM GREEN	10		-				
	VEHICLE EXTENSION	3		-				
	MAXIMUM 1 GREEN	27		-				
	MAXIMUM 2 GREEN	27		-				
	YELLOW CLEARANCE		4		-			
	RED CLEARANCE			1		-		
	WALK INTERVAL				9			
PED. CLEARANCE					22			
MEMORY	NON-LOCK			NON-LOCK				
RECALL (VEH./PED.)	MAX/OFF			OFF/OFF				
PROGRAM/COORDINATION PHASE SPLITS IN SECONDS								
CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	ø4			ø9		
1	60	0	27			33		
2	60	0	27			33		
COORDINATED OPERATION								
PROGRAMMED FLASH								

LOOP DETECTOR DATA										CLEARANCES								TECHNICAL NOTES		
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT.	CHNL.		FROM	TO							1. PHASE 9 EXCLUSIVE PEDESTRIAN PHASE ONLY CALLED BY P11-P12 ACTIVATION 2. PEDESTRIAN PHASE RUNS CONCURRENT WITH SOMERVILLE AVE WB/ WASHINGTON ST EB PEDESTRIAN PHASE AT WEBSTER AVE INTERSECTION. 3. REUSE EXISTING CABINET AND POWER CONNECTION; UPGRADE EQUIPMENT		
										G	G-GL	R	-	-	W	DW				
										G	G	-	Y	-	-	-				
										G-GL	-	-	-	-	-	-				
										-	-	-	-	-	-	-				
										-	-	-	-	-	-	-				
										W	-	-	-	-	W	FDW				
										DW	-	-	-	-	-	DW				

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

SOMERVILLE/WARREN

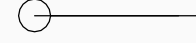
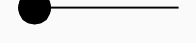

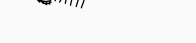




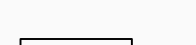

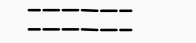
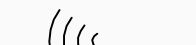


SIGNAL DATA

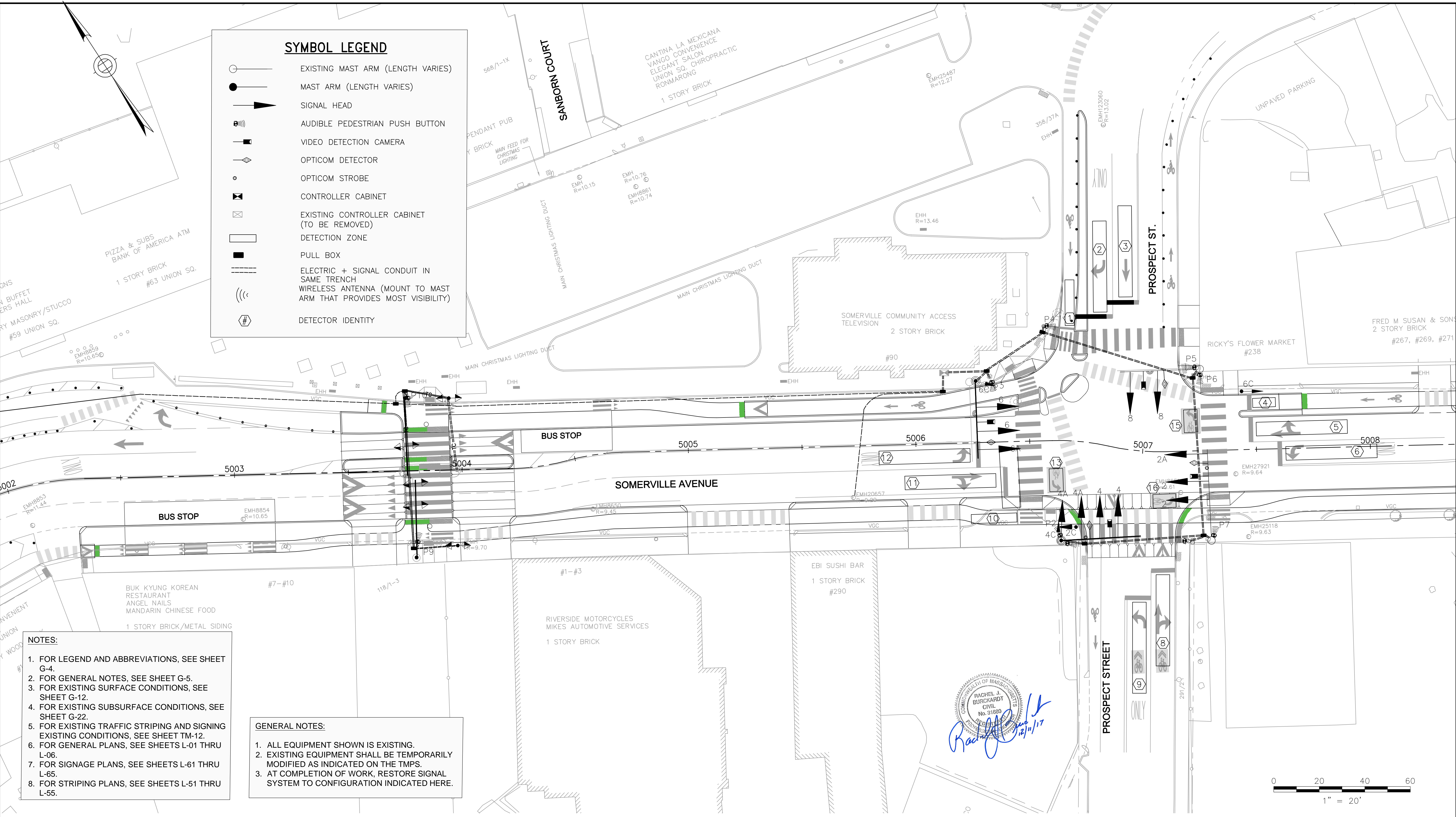
DESIGNED: AD	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-92
CHECKED: JC		
DRAWN: AD	REF. _____	CONT. _____
CHECKED: RJB	ACC. _____	SCALE: N/A DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

NO.	DATE	REVISIONS	BY

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SYMBOL LEGEND

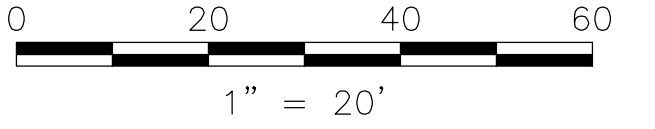
-  EXISTING MAST ARM (LENGTH VARIES)
-  MAST ARM (LENGTH VARIES)
-  SIGNAL HEAD
-  AUDIBLE PEDESTRIAN PUSH BUTTON
-  VIDEO DETECTION CAMERA
-  OPTICOM DETECTOR
-  OPTICOM STROBE
-  CONTROLLER CABINET
-  EXISTING CONTROLLER CABINET (TO BE REMOVED)
-  DETECTION ZONE
-  PULL BOX
-  ELECTRIC + SIGNAL CONDUIT IN SAME TRENCH
-  WIRELESS ANTENNA (MOUNT TO MAST ARM THAT PROVIDES MOST VISIBILITY)
-  DETECTOR IDENTITY



- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEET G-12.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEET G-22.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEET TM-12.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.
 8. FOR STRIPING PLANS, SEE SHEETS L-51 THRU L-55.

- GENERAL NOTES:**
1. ALL EQUIPMENT SHOWN IS EXISTING.
 2. EXISTING EQUIPMENT SHALL BE TEMPORARILY MODIFIED AS INDICATED ON THE TMAPS.
 3. AT COMPLETION OF WORK, RESTORE SIGNAL SYSTEM TO CONFIGURATION INDICATED HERE.

Rachel J. Burckardt
 RACHEL J. BURCKARDT
 CIVIL
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF MASSACHUSETTS
 11/17



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY


SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

PROSPECT/SOMERVILLE/WASHINGTON

SIGNAL PLAN

DESIGNED: AD	 Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		L-93
DRAWN: AD	REF. _____	CONT. _____
CHECKED: RJB	ACC. _____	SCALE: 1"=20'
		DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

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TIMING AND SEQUENCE CHART

STREET/DIRECTION/FACE	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
SOMERVILLE AVE/EB/2+2A	G-GL	Y-YL	R-RL	R	R	R	R	R	R	R	R	R						
SOMERVILLE AVE/WB/6+6A	R	R	R	G-GL	Y-YL	R-RL	R	R	R	R	R	R						
PROSPECT ST/NB/8	R	R	R	R	R	R	G	Y	R	G	Y	R						
WASHINGTON ST/SB THRU/4	R	R	R	R	R	R	G	Y	R	G	Y	R						
WASHINGTON ST/SB RT/4A	GR	YR	RR	R	R	R	R	R	R	GR	YR	RR						
WASHINGTON BIKES SB/4C	R	R	R	R	R	R	G	Y	R	R	R	R						
SOMERVILLE BIKE EB 2C	G	Y	R	R	R	R	R	R	R	R	R	R						
SOMERVILLE BIKE WB 6C	R	R	R	G	Y	R	R	R	R	R	R	R						
C.W./E-W/P4-P5	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW						
C.W./E-W/P1-P8	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW						
C.W./N-S/P6-P7	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW						
C.W./N-S/P2-P3	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW						

I N T E R S E C O N D S	MINIMUM GREEN	15		20		22		7	
	VEHICLE EXTENSION	3		3		3		3	
MAXIMUM 1 GREEN	60		33		39		23		
MAXIMUM 2 GREEN	48		33		43		24		
YELLOW CLEARANCE									
RED CLEARANCE		3		3		3		3	
WALK INTERVAL			3		3		3		
PED. CLEARANCE	9		9		9		9		
MEMORY	NON-LOCK		NON-LOCK		NON-LOCK		NON-LOCK		
RECALL (VEH./PED.)	MAX/ON		MAX/ON		OFF/ON		OFF/ON		

CYCLE NO.	CYCLE LENGTH	OFFSET (SEC.)	PHASE SPLITS IN SECONDS				HOURS OF OPERATION
			ø2	ø6	ø4 ø8	ø4 ø8 ø10	
1	120	0	43	27	32	18	6:00 A.M. TO 10:00 A.M.
2	120	0	39	27	35	19	3:00 P.M. TO 7:00 P.M.

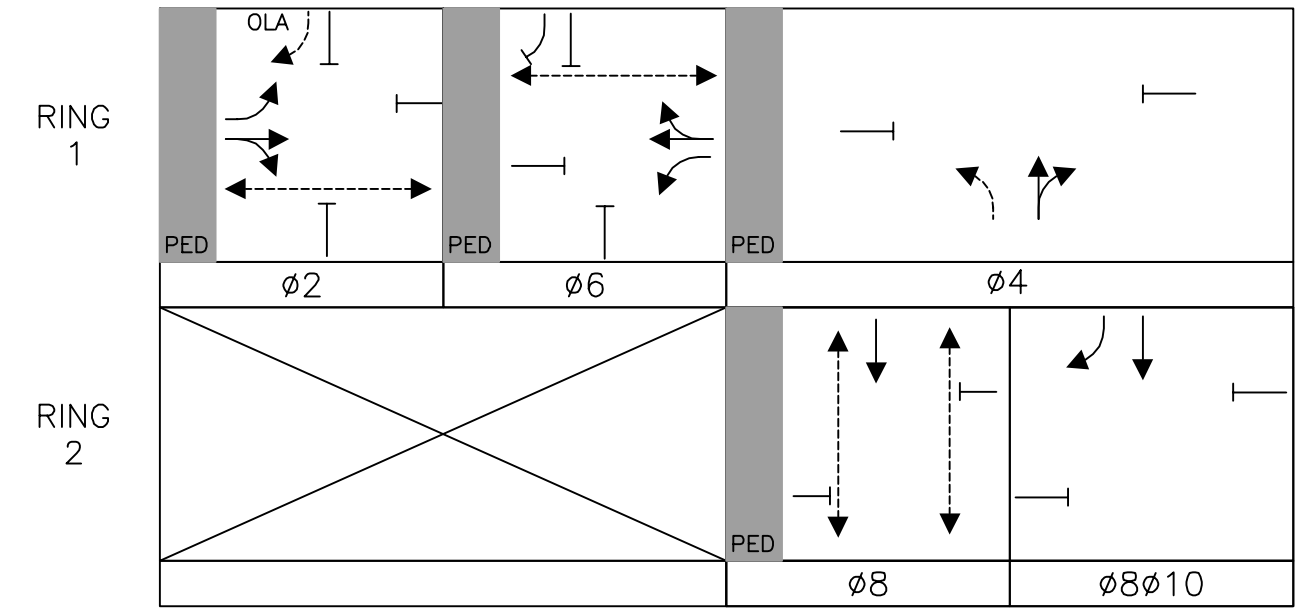
LOOP DETECTOR DATA									CLEARANCES								TECHNICAL NOTES	
IDENT.	QTY.	SIZE	SPLICE	TURNS	MODE	øCALL	øEXT.	CHNL.	FROM	TO								THIS LOCATION IS THE MASTER CONTROLLER.
									G	G-GL	GR	R	-	W	DW			
1	1	3X20	-	-	PRES	4+8	4+8	1										
2	1	6X40	-	-	PRES	4+8+10	4+8+10	2	G	G	-	-	Y	-	-	-		
3	1	6X40	-	-	PRES	4+8	4+8	3	G-GL	-	G-GL	-	G-YL	-	-	-		
4	1	3X20	-	-	PRES	6	6	1	GR	-	-	GR	YL	-	-	-		
5	1	6X40	-	-	PRES	6	6	2	-	-	-	-	-	-	-	-		
6	1	6X40	-	-	PRES	6	6	3	R	-	-	-	-	-	-	-		
8	1	6X40	-	-	PRES	4+8+10	4+8+10	2	DW	-	-	-	-	-	-	DW		
9	1	6X40	-	-	PRES	4+8+10	4+8+10	3	-	-	-	-	-	-	-	-		
10	1	3X20	-	-	PRES	2	2	1	-	-	-	-	-	-	-	-		
11	1	6X40	-	-	PRES	2	2	2	-	-	-	-	-	-	-	-		
12	1	6X40	-	-	PRES	2	2	3	-	-	-	-	-	-	-	-		
13	1	6X10	-	-	PRES	2	2	1	-	-	-	-	-	-	-	-		
15	1	6X10	-	-	PRES	6	6	1	-	-	-	-	-	-	-	-		
16	1	6X10	-	-	PRES	4+8+10	4+8+10	1	-	-	-	-	-	-	-	-		

MAJOR ITEMS REQUIRED

QUANTITY	MAJOR ITEMS REQUIRED
1	EPAC M60 ATC CONTROLLER IN 'PA' CABINET, FOUNDATION, MMU
	BUS INTERFACE UNITS, FLASHER LOAD SWITCHES, ITERIS VANTAGE VECTOR PROCESSORS
3	8' SIGNAL POST, BASE, PEDESTAL & FOUNDATION
8	12"- 3 SECTION (R,Y,G) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G LEFT) L.E.D. VEHICLE SIGNAL INDICATION
2	12"- 3 SECTION (R,Y,G RIGHT) L.E.D. VEHICLE SIGNAL INDICATION
8	16"- PEDESTRIAN L.E.D. SIGNAL COUNTDOWN INDICATION
8	AUDIBLE PEDESTRIAN PUSHBUTTON, SIGN & SADDLE
4	VIDEO DETECTION CAMERA CAPABLE OF REMOTE DATA COLLECTION (OR 1 GRIDSMART 360 CAMERA WITH TRAFFIC COUNT MODULE)
1	OPTICOM PRE-EMPTION SYSTEM (4 DETECTORS, 2 STROBES, 1 4-CHANNEL PHASE SELECTOR)
2	35-FT STEEL MAST ARM AND POLE
1	CABINET POWER SUPPLY
2	RADIO FOR WIRELESS ETHERNET
1	SERVICE CONNECTION AND METER POST
1	EDGECONNECT VIDEO DETECTION - IP COMMUNICATION MODULE
1	MODEL CNGE3FE7MS2 HARDENED ETHERNET SWITCH IN CONTROLLER CABINET

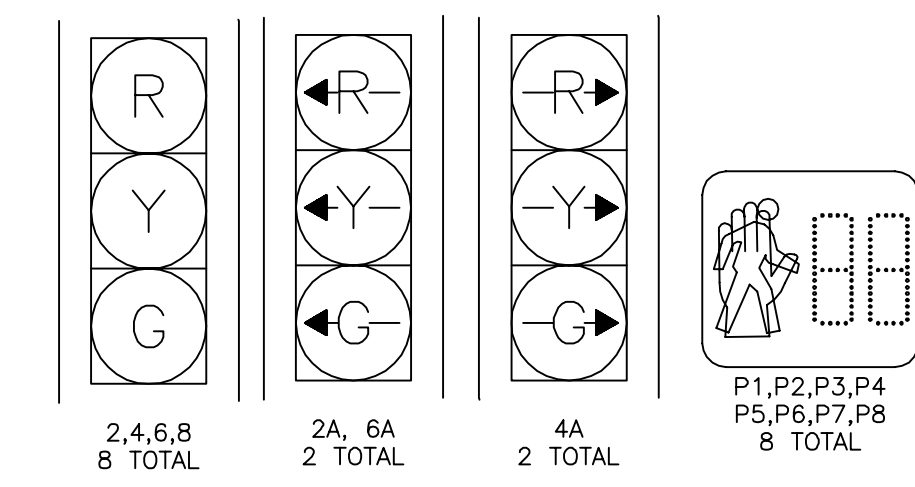
PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL
 NOTE: HAND HOLES/ PULL BOXES AND CONDUIT SHOULD BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

PHASING DIAGRAM



Rachel J. Burckardt
 12/11/17

SIGNAL FACES



- NOTE:
- ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
 - ALL VEHICLE INDICATIONS MOUNTED ON MAST ARMS SHALL BE RIGID MOUNTED AND BE EQUIPPED WITH 5" NON-LOUVERED BACKPLATES.
 - PEDESTRIAN WALK AND DON'T WALK SYMBOLS SHALL BE SOLID-TYPE L.E.D. OUTLINED SYMBOLS SHALL NOT BE USED PER BTD SPECS.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

PROSPECT/SOMERVILLE/WASHINGTON

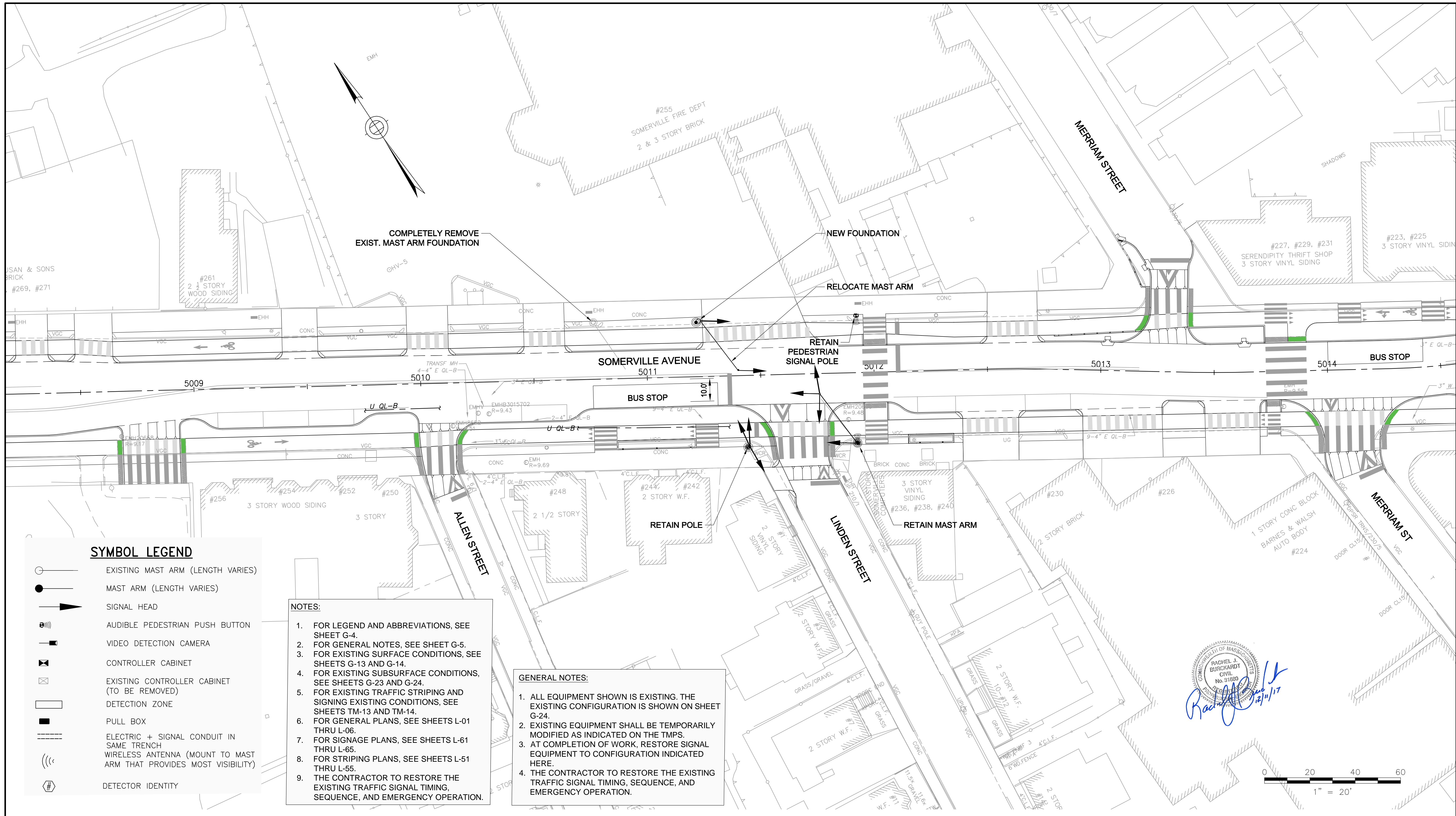
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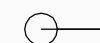

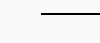




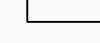


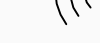
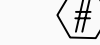
DESIGNED: AD	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JC		L-94
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CHECKED: RJB	ACC.	SCALE: N/A
		DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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-  EXISTING MAST ARM (LENGTH VARIES)
-  MAST ARM (LENGTH VARIES)
-  SIGNAL HEAD
-  AUDIBLE PEDESTRIAN PUSH BUTTON
-  VIDEO DETECTION CAMERA
-  CONTROLLER CABINET
-  EXISTING CONTROLLER CABINET (TO BE REMOVED)
-  DETECTION ZONE
-  PULL BOX
-  ELECTRIC + SIGNAL CONDUIT IN SAME TRENCH
-  WIRELESS ANTENNA (MOUNT TO MAST ARM THAT PROVIDES MOST VISIBILITY)
-  DETECTOR IDENTITY


- NOTES:**
1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 2. FOR GENERAL NOTES, SEE SHEET G-5.
 3. FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-13 AND G-14.
 4. FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-23 AND G-24.
 5. FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-13 AND TM-14.
 6. FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 7. FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.
 8. FOR STRIPING PLANS, SEE SHEETS L-51 THRU L-55.
 9. THE CONTRACTOR TO RESTORE THE EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION.

- GENERAL NOTES:**
1. ALL EQUIPMENT SHOWN IS EXISTING. THE EXISTING CONFIGURATION IS SHOWN ON SHEET G-24.
 2. EXISTING EQUIPMENT SHALL BE TEMPORARILY MODIFIED AS INDICATED ON THE T.M.P.S.
 3. AT COMPLETION OF WORK, RESTORE SIGNAL EQUIPMENT TO CONFIGURATION INDICATED HERE.
 4. THE CONTRACTOR TO RESTORE THE EXISTING TRAFFIC SIGNAL TIMING, SEQUENCE, AND EMERGENCY OPERATION.

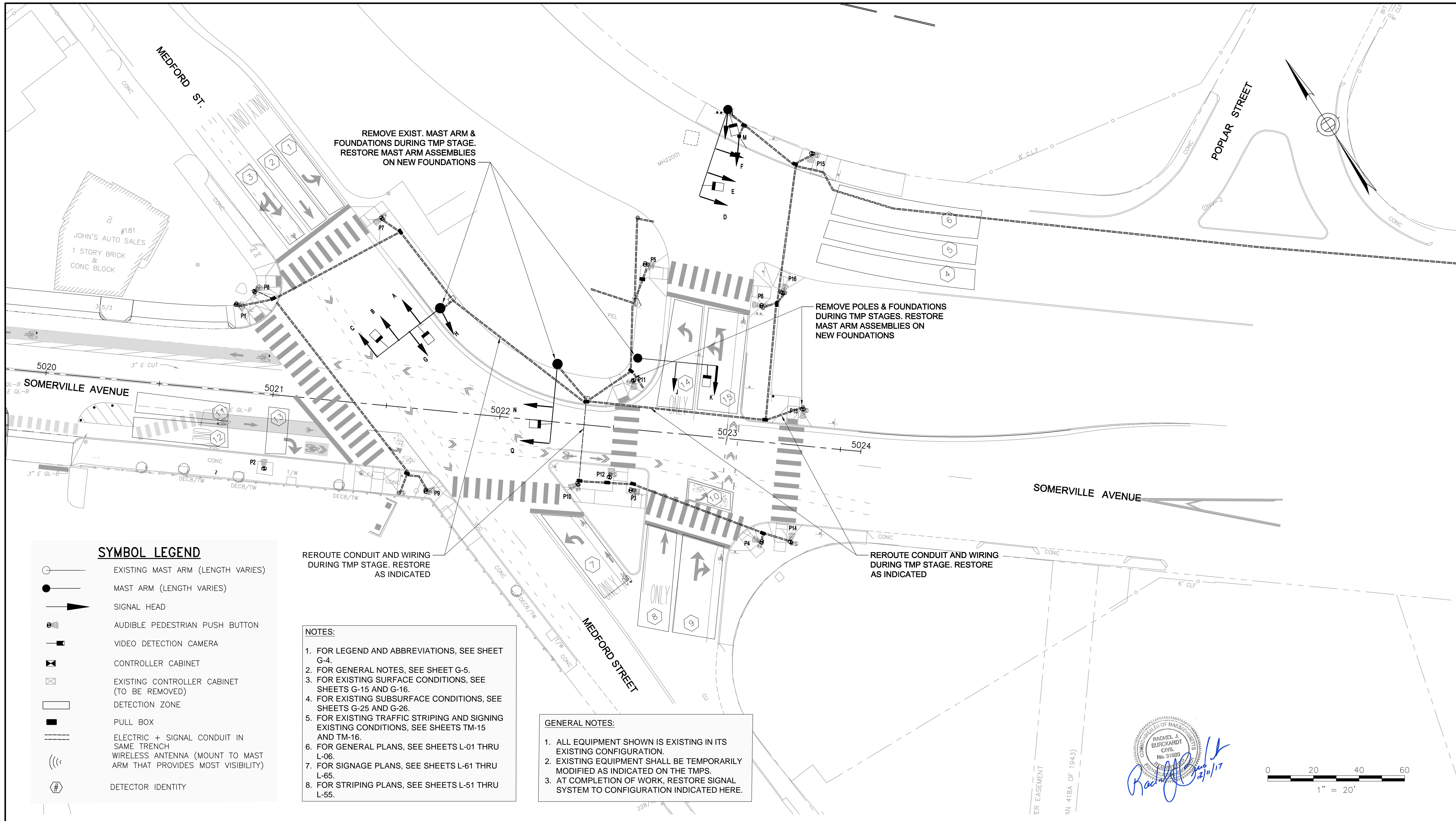
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
EMERGENCY SERVICES
SIGNAL PLAN

DESIGNED: AD		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET
CHECKED: JC		L-95		
DRAWN: AD	REF.	CONT.	SCALE: 1"=20'	
CHECKED: RJB	ACC.		DATE: DEC 2017	
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143				

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SYMBOL LEGEND

- EXISTING MAST ARM (LENGTH VARIES)
- MAST ARM (LENGTH VARIES)
- SIGNAL HEAD
- AUDIBLE PEDESTRIAN PUSH BUTTON
- VIDEO DETECTION CAMERA
- CONTROLLER CABINET
- EXISTING CONTROLLER CABINET (TO BE REMOVED)
- DETECTION ZONE
- PULL BOX
- ELECTRIC + SIGNAL CONDUIT IN SAME TRENCH
- WIRELESS ANTENNA (MOUNT TO MAST ARM THAT PROVIDES MOST VISIBILITY)
- DETECTOR IDENTITY

REROUTE CONDUIT AND WIRING DURING TMP STAGE. RESTORE AS INDICATED

- NOTES:**
- FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
 - FOR GENERAL NOTES, SEE SHEET G-5.
 - FOR EXISTING SURFACE CONDITIONS, SEE SHEETS G-15 AND G-16.
 - FOR EXISTING SUBSURFACE CONDITIONS, SEE SHEETS G-25 AND G-26.
 - FOR EXISTING TRAFFIC STRIPING AND SIGNING EXISTING CONDITIONS, SEE SHEETS TM-15 AND TM-16.
 - FOR GENERAL PLANS, SEE SHEETS L-01 THRU L-06.
 - FOR SIGNAGE PLANS, SEE SHEETS L-61 THRU L-65.
 - FOR STRIPING PLANS, SEE SHEETS L-51 THRU L-55.

- GENERAL NOTES:**
- ALL EQUIPMENT SHOWN IS EXISTING IN ITS EXISTING CONFIGURATION.
 - EXISTING EQUIPMENT SHALL BE TEMPORARILY MODIFIED AS INDICATED ON THE TMPs.
 - AT COMPLETION OF WORK, RESTORE SIGNAL SYSTEM TO CONFIGURATION INDICATED HERE.

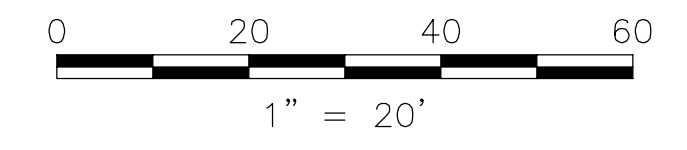
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

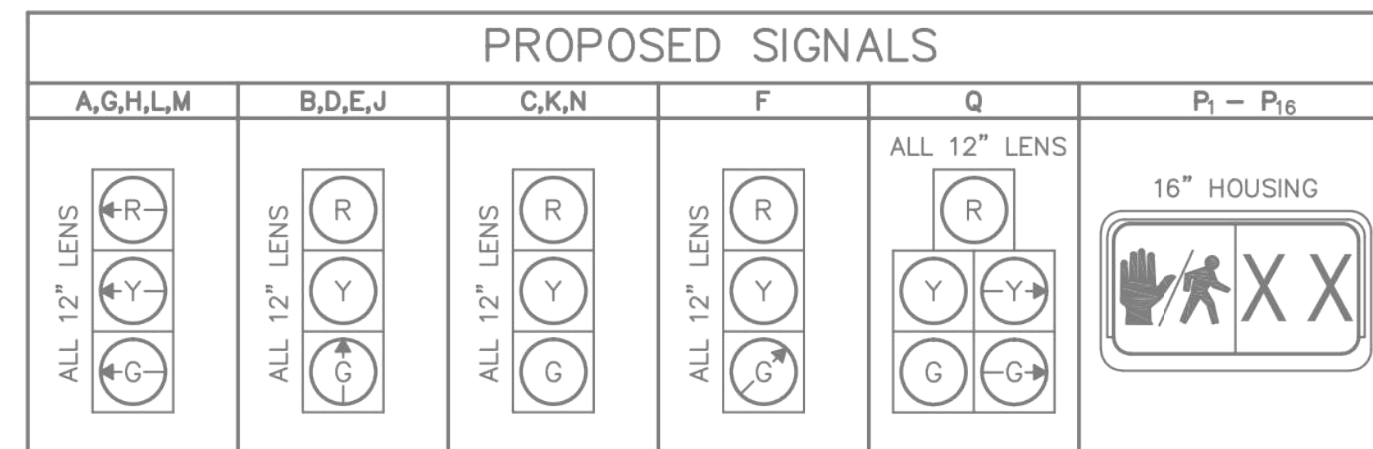
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
MEDFORD/SOMERVILLE
SIGNAL PLAN

DESIGNED: AD		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET L-96
CHECKED: JC		REF.	CONT.	
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CHECKED: RJB				

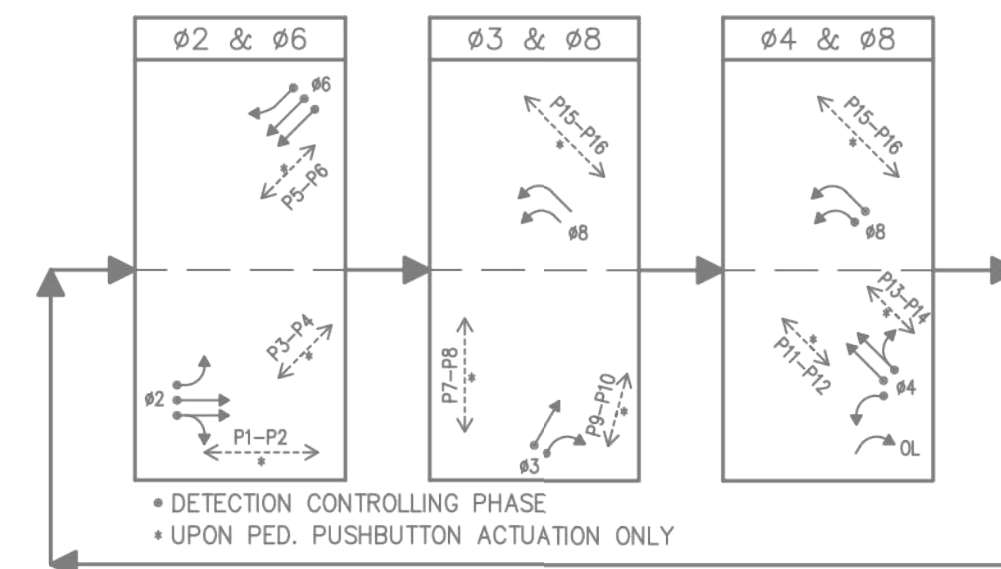
Rachel J. Burckardt
 RACHEL J. BURCKARDT
 No. 31880
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF MASSACHUSETTS
 12/11/17



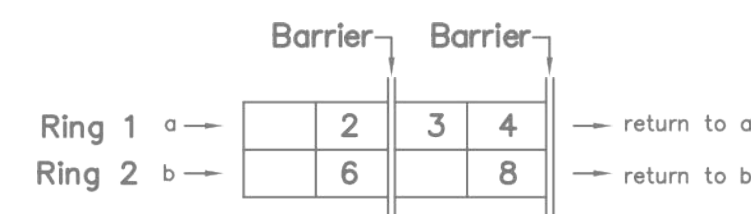


- NOTES:
1. ALL INDICATIONS SHALL BE "LED" TYPE LENS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
 2. ALL OVERHEAD SIGNALS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL HAVE CUT TUNNEL VISORS AND BE EQUIPPED WITH 5" LOUVERED BACKPLATES.
 3. ALL BACKPLATES SHALL INCLUDE A 3" RETROREFLECTIVE BORDER IN ACCORDANCE WITH THE SPECIAL PROVISIONS
 4. ALL PEDESTRIAN DISPLAY SHALL BE "FULL" DISPLAYS. NO OUTLINE SYMBOL SHALL BE PERMITTED.

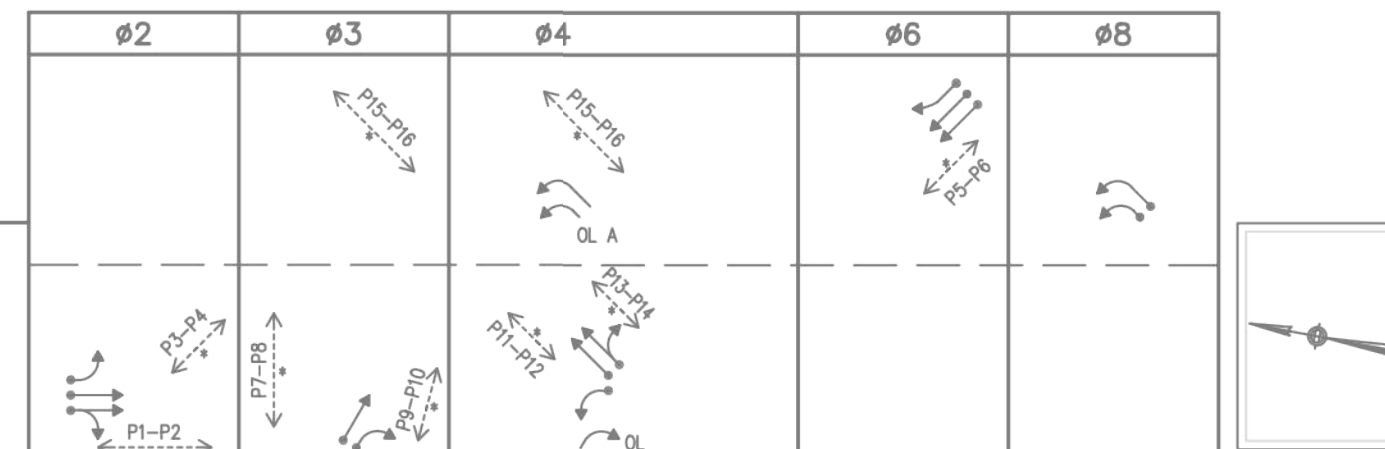
PREFERENTIAL PHASE SEQUENCE



RING STRUCTURE



FULLY-ACTUATED ISOLATED
 SEMI-ACTUATED COORDINATED
 PRE-TIMED WIRE TBCU



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH OPER.		
MEDFORD STREET	SB	A	GL	YL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
MEDFORD STREET	SB	B	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
MEDFORD STREET	SB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY	
McGRATH HIGHWAY NORTHBOUND	NWB	D,E,F*	R	R	R	R	R	R	R	R	R	R	R	GV	Y*	R	R	R	R	R	FY	
MEDFORD STREET	NB	G,H	R	R	R	R	R	R	GL	YL	R	R	R	R	R	R	R	R	R	R	FRL	
MEDFORD STREET	NB	J	R	R	R	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	R	FR	
MEDFORD STREET	NB	K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR	
CUT-THROUGH ROAD	EB	LM	R	R	R	R	R	R	GL	GL	YL	R	R	R	R	R	R	GL	YL	R	FR	
SOMERVILLE AVENUE	SEB	N	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FR	
SOMERVILLE AVENUE	SEB	Q	R	R	R	G	Y	R	R	R/R	R/YR	R	R	R	R	R	R	R	R	R	FR	
PEDESTRIAN		P1-P4	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P5-P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P7-P10	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P11-P14	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
PEDESTRIAN		P15-P16	DW	DW	DW	W/FDW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT	
MINIMUM INITIAL PASSAGE			10			6			10					10			10				EMERGENCY	
MAXIMUM 1 (M-F: 6AM-10AM)			44			20			20					44			20					
MAXIMUM 2 (ALL OTHER TIMES)			40			20			20					40			20					
CHANGE						4.0	2.0		4.0	3.0				4.5	1.0	4.5	1.0			3.0		1.0
PEDESTRIAN			7/17			7/13			7/13					7/13								
RECALL			SOFT			OFF			OFF					SOFT						OFF		
MEMORY			NON-LOCKING			NON-LOCKING			NON-LOCKING					NON-LOCKING						NON-LOCKING		

* NOTE: DYNAMIC "RED" SIGNAL AHEAD SIGN TO DISPLAY "RED" DURING YELLOW AND RED INTERVAL

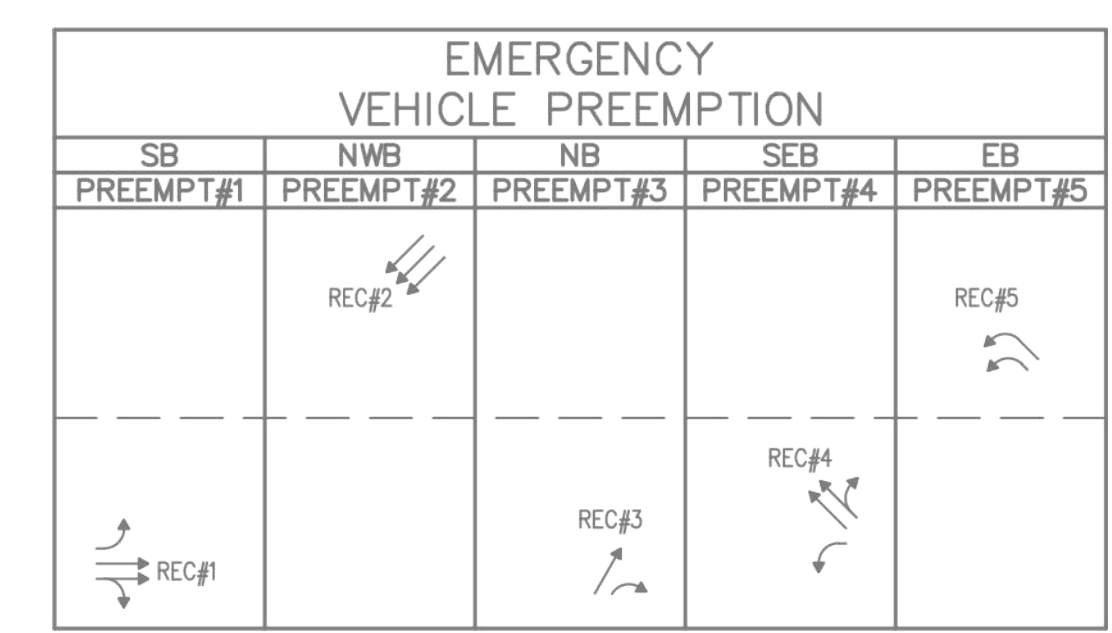
MAJOR ITEMS REQUIRED

QUANTITY	DESCRIPTION
1	TRAFFIC CONTROLLER & CABINET NEMA TS2-TYPE 1 w/FOUNDATION
1	SERVICE CONNECTION (OVERHEAD FROM UTILITY POLE)
1	40' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	35' MAST ARM ASSEMBLY, BASE & FDN. (HEAVY LOADS)
2	35' MAST ARM ASSEMBLY, BASE & FDN. (MEDIUM LOADS)
1	10' SIGNAL POST, BASE & FDN.
15	8' SIGNAL POST, BASE & FDN.
13	SIGNAL HEAD, 3 SECTION
1	SIGNAL HEAD, 5 SECTION
16	PEDESTRIAN HOUSING GRAPHIC LED w/COUNTDOWN TIMER
16	AUDIBLE & VIBRO-TACTILE PEDESTRIAN PUSH BUTTON INTEGRATED SIGN & SADDLE w/LED CONFIRMATION LIGHT
1	VIDEO DETECTION SYSTEM WITH 6 CAMERAS
12	PULL BOX 12"x12" - SD2.031 (PAY SEPARATELY UNDER ITEM 811.31)
2	ELECTRIC HANDHOLE- SD2.022 (PAY SEPARATELY UNDER ITEM 811.22)
5	UNIDIRECTIONAL SINGLE CHANNEL OPTICAL DETECTOR (RECEIVER)
3	PREEMPTION 2-CHANNEL PHASE SELECTOR
3	PREEMPTION CONFIRMATION STROBE (CLEAR)

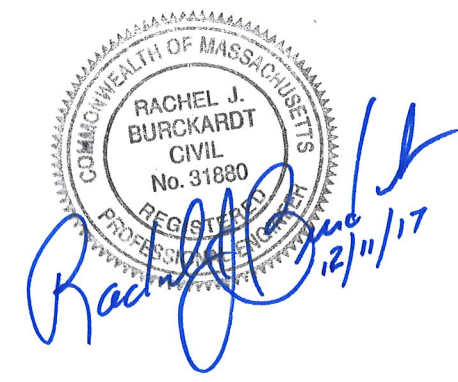
PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

TRAFFIC CONTROLLER DATA

PARAMETER	SELECTION
PHASE ASSIGNMENTS	STD. NEMA
OVERLAPS	STD. NEMA
RINGS	DUAL
DUAL ENTRY	ON (02 & 06)
SIMULTANEOUS GAP OUT DISABLED	YES (02 & 06)
MINIMUM YELLOW IN SECONDS	3
MAX II BY INTERNAL CLOCK	YES
NIGHT TIME FLASH BY INTERNAL CLOCK	NOT USED



- EMERGENCY VEHICLE PREEMPTION OPERATION
1. EMERGENCY VEHICLE PREEMPTION SIGNAL SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS (RECEIVERS) LOCATED AT THE INTERSECTION.
 2. PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME FIRST SERVED BASIS.
 3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED BY OPTICAL DETECTOR REC#1 (REC#2, REC#3, REC#4 OR REC#5), THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PREEMPTION SIGNAL #1, #2, #3, #4 OR #5 GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME THE RELEVANT CLEARANCE INTERVALS AND SERVICE THE SUBSEQUENT EMERGENCY VEHICLE PREEMPTION SIGNAL IF NECESSARY. NORMAL SIGNAL OPERATION SHALL RESUME PROVIDED THAT ALL PREEMPTION SIGNALS HAVE CEASED.
 4. NORMAL VEHICLE CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
 5. PREEMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION SIGNAL IS ON.



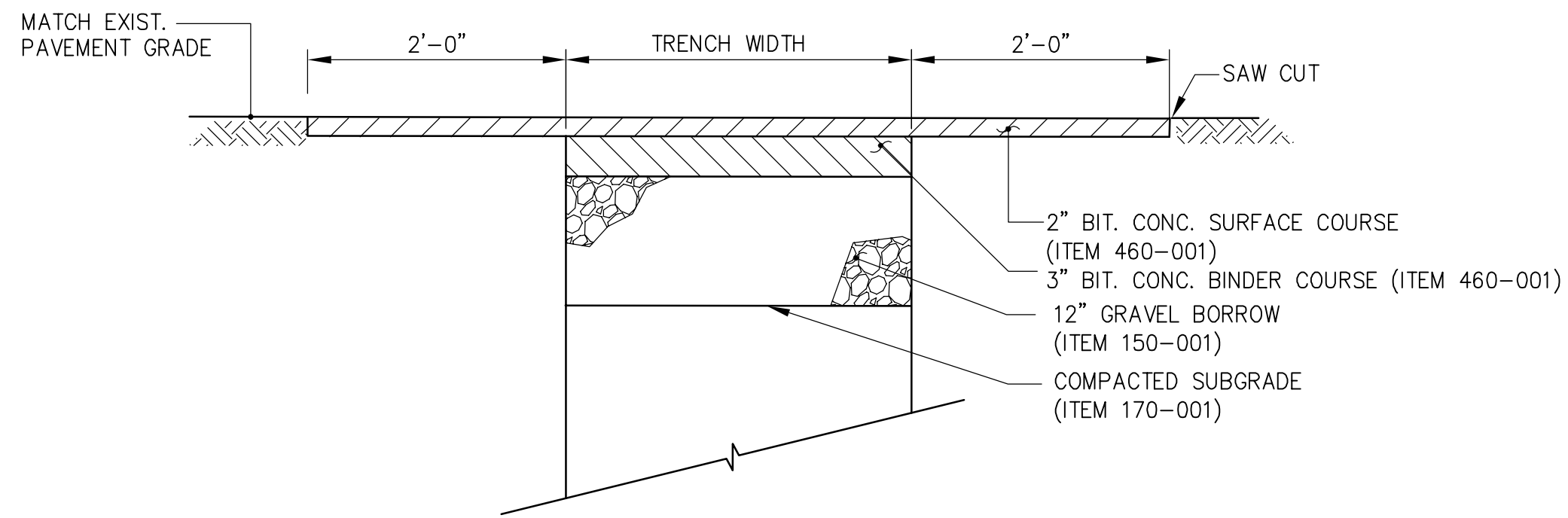
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
 CONTRACT CP-2/CP-3
 SEWER SEPARATION AND WATER REPLACEMENT
 MEDFORD/SOMERVILLE
 SIGNAL DATA

DESIGNED: AD	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-97
CHECKED: JC		
DRAWN: AD	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: NTS DATE: DEC 2017

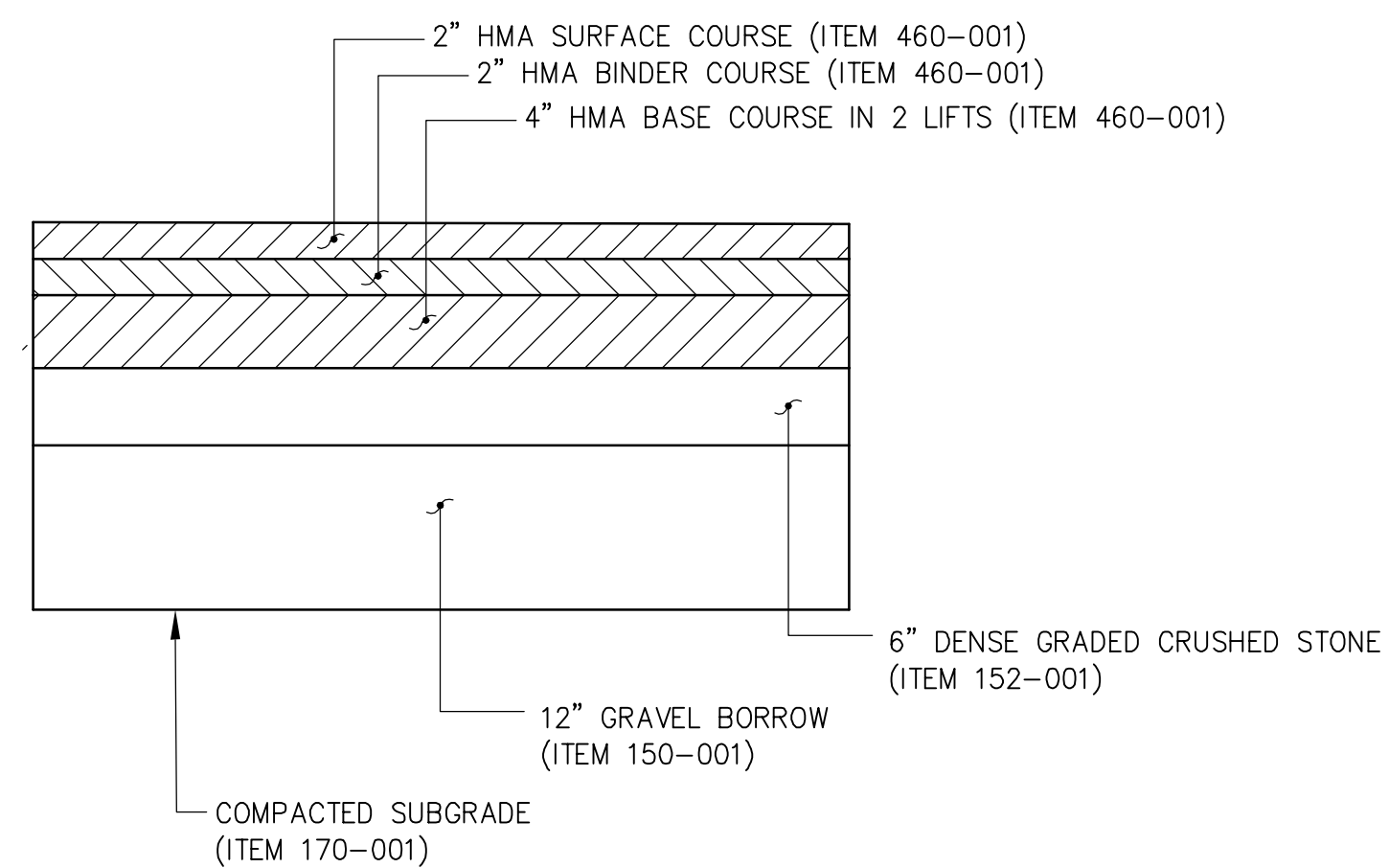
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

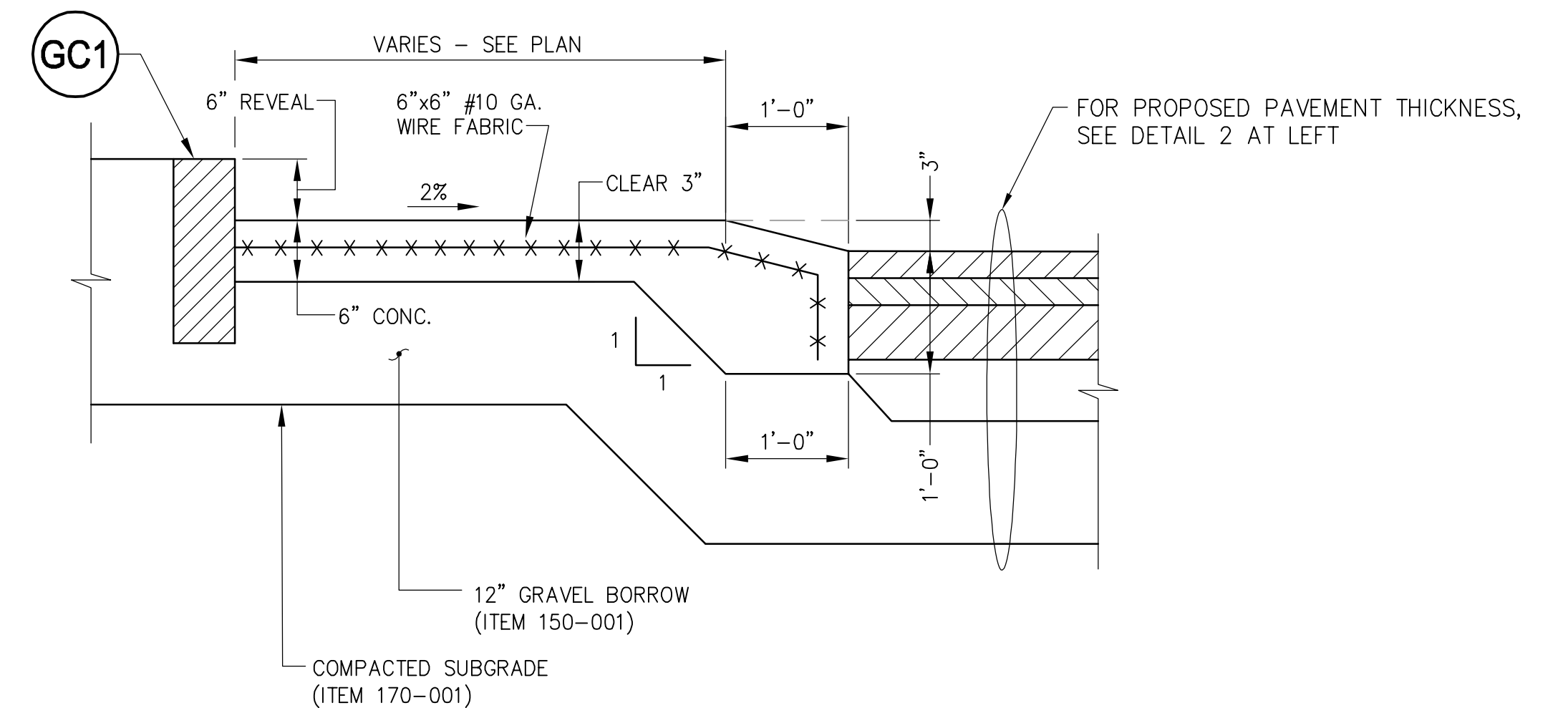


1 SHORT - TERM TEMPORARY PATCH
SCALE: NTS

3 NOT USED
SCALE: NTS



2 TYPICAL FULL DEPTH ROADWAY SECTION AND LONG - TERM PATCH
SCALE: NTS



4 MOUNTABLE TRUCK APRON
SCALE: NTS

Professional Engineer Seal for Rachel J. Burckardt, No. 31890, dated 12/11/17.

2017-12-04 1:54 PM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Civil\L-100_L-101 Civil Details.dwg

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
ROADWAY DETAILS

DESIGNED: RJB
CHECKED: RJB
DRAWN: LAC
CHECKED: RJB



Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

REF. CONT.
ACC.

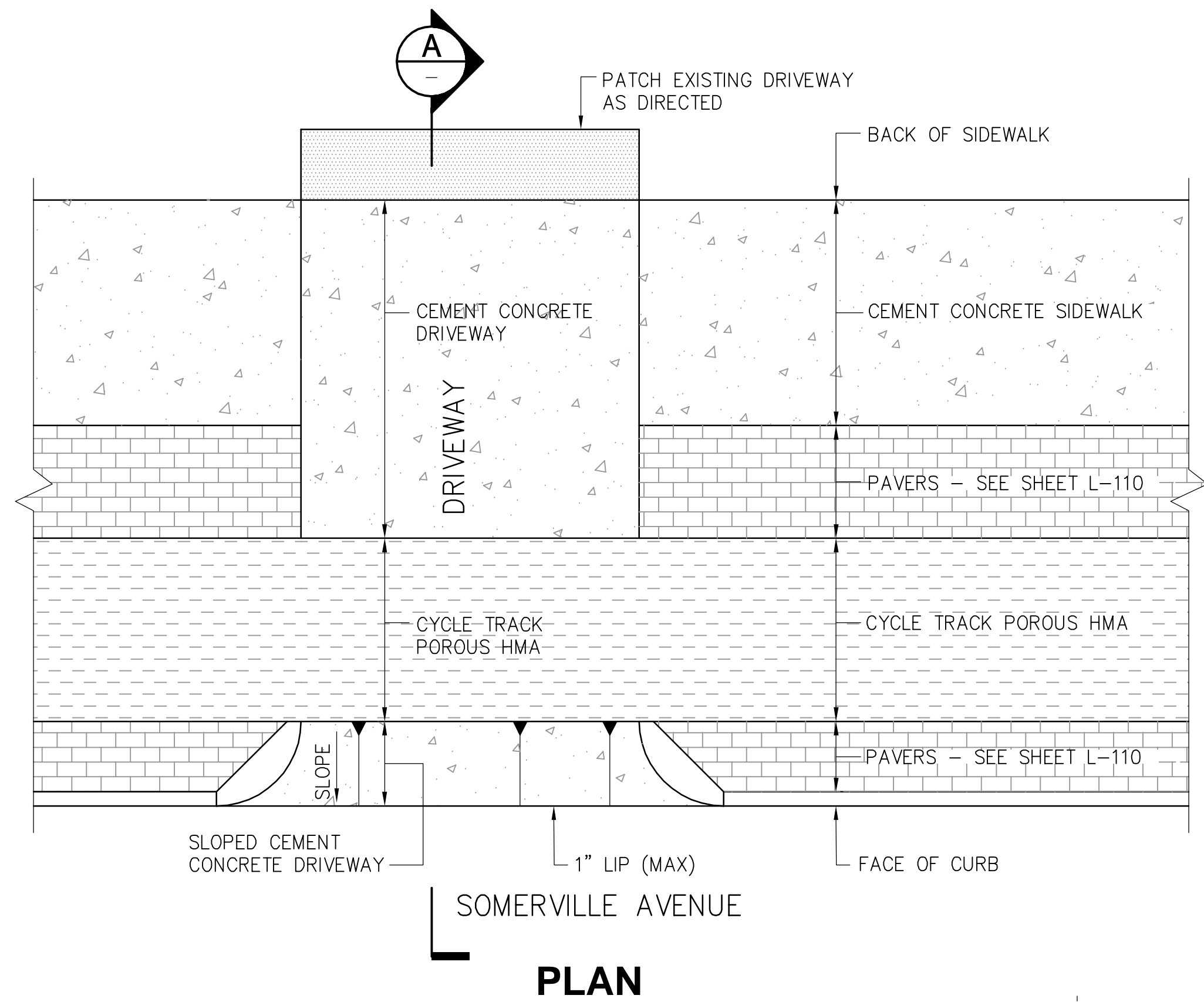
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DATE: DEC 2017

SHEET
L-100

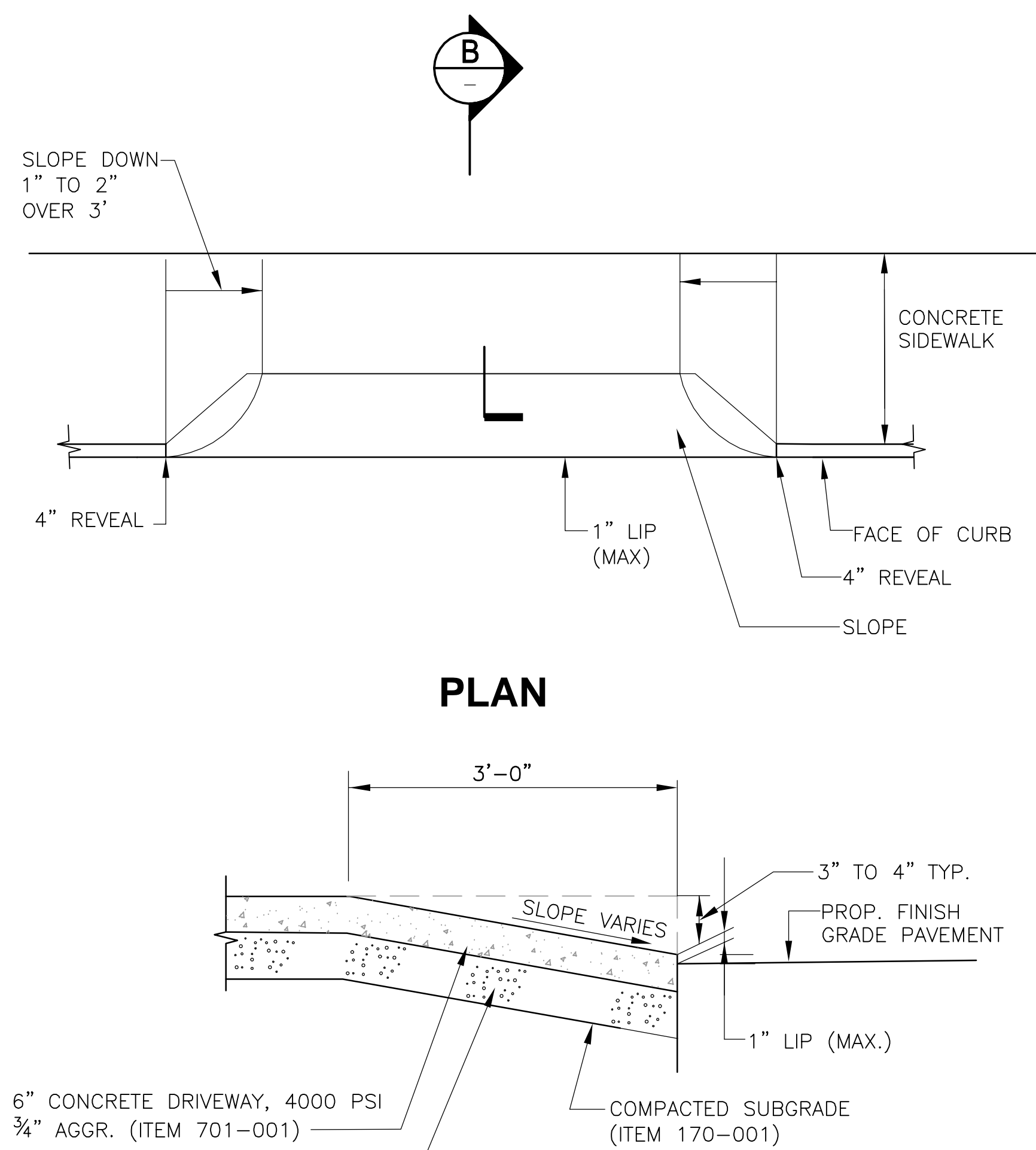
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

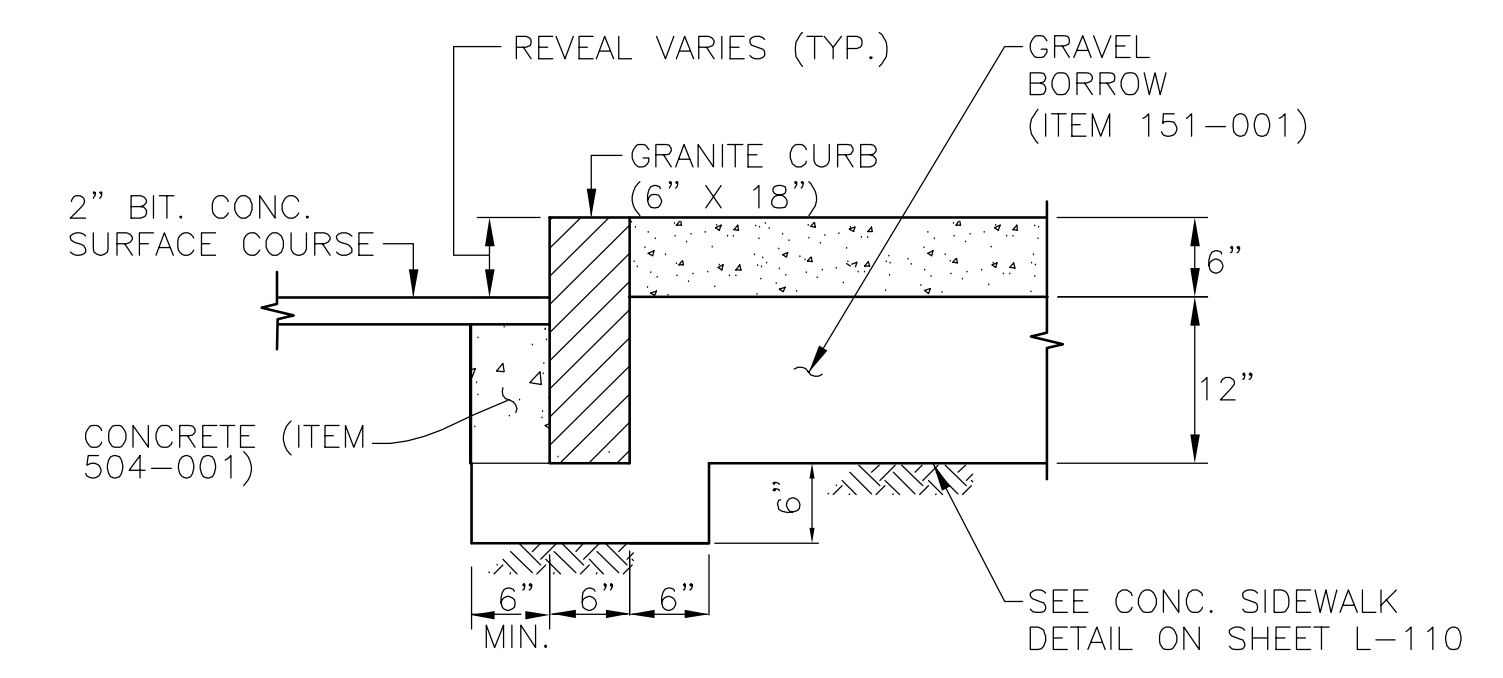
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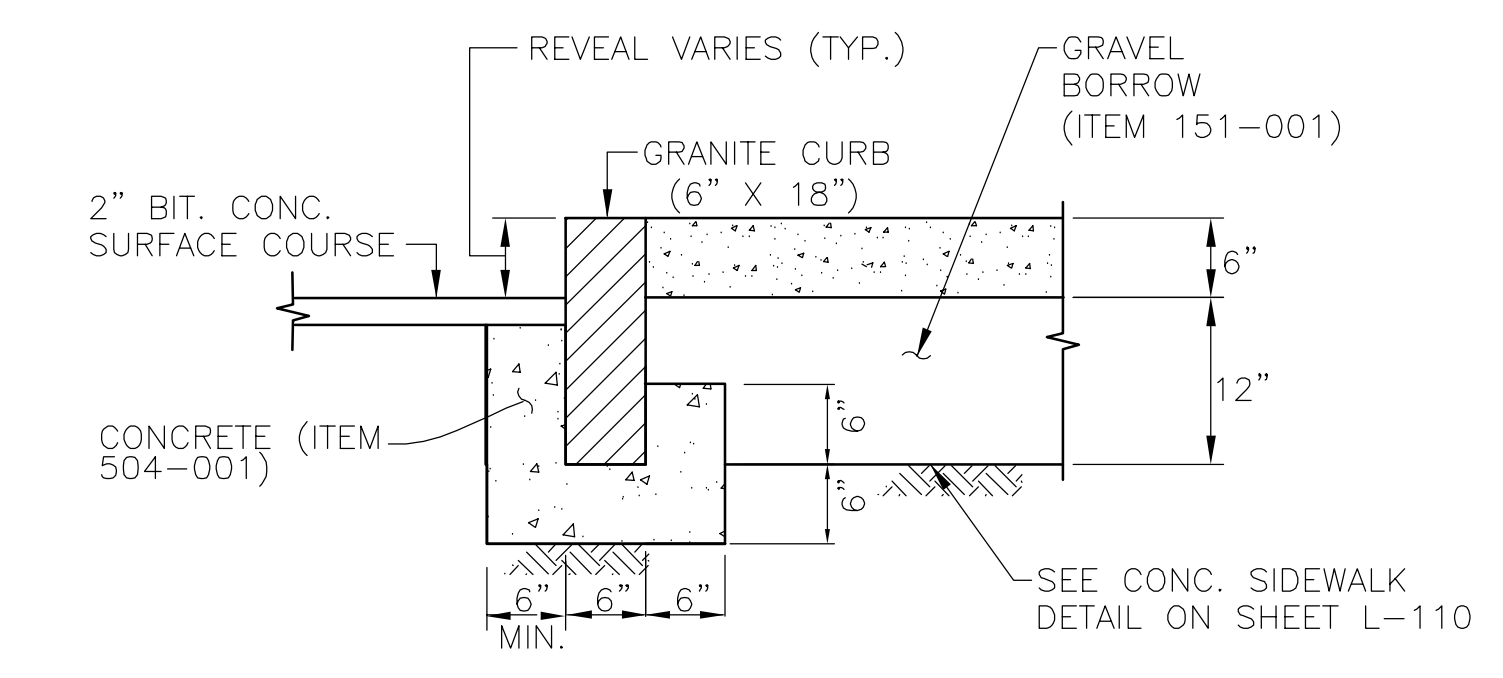
PLAN
SOMERVILLE AVENUE



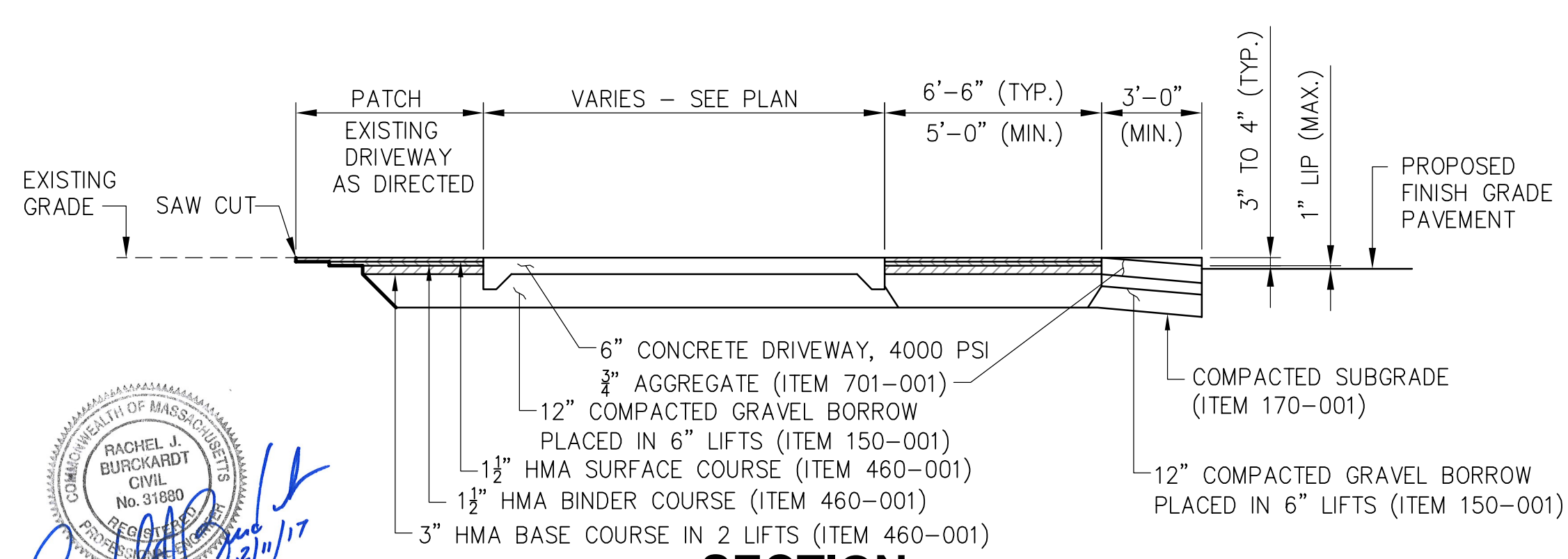
PLAN
B SECTION
SCALE: NTS



C SECTION
SCALE: NTS



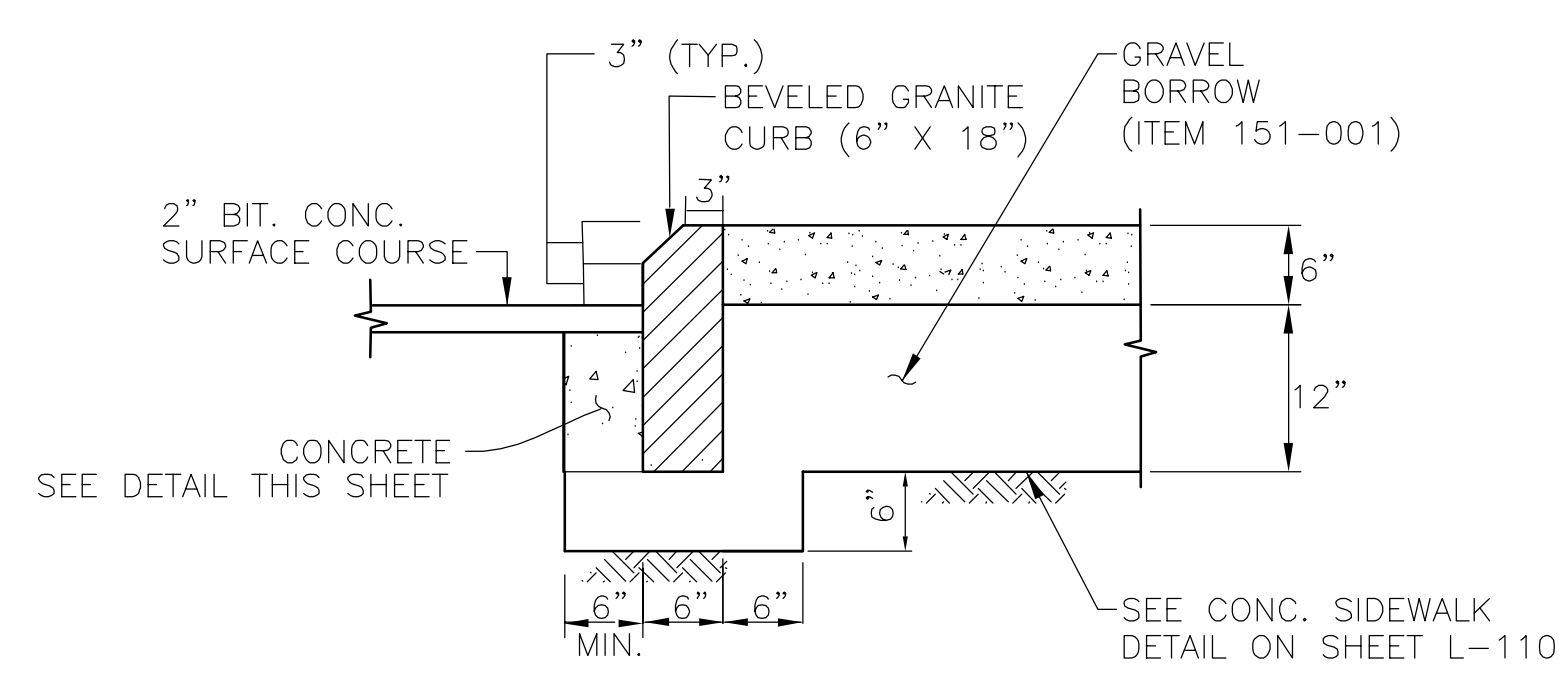
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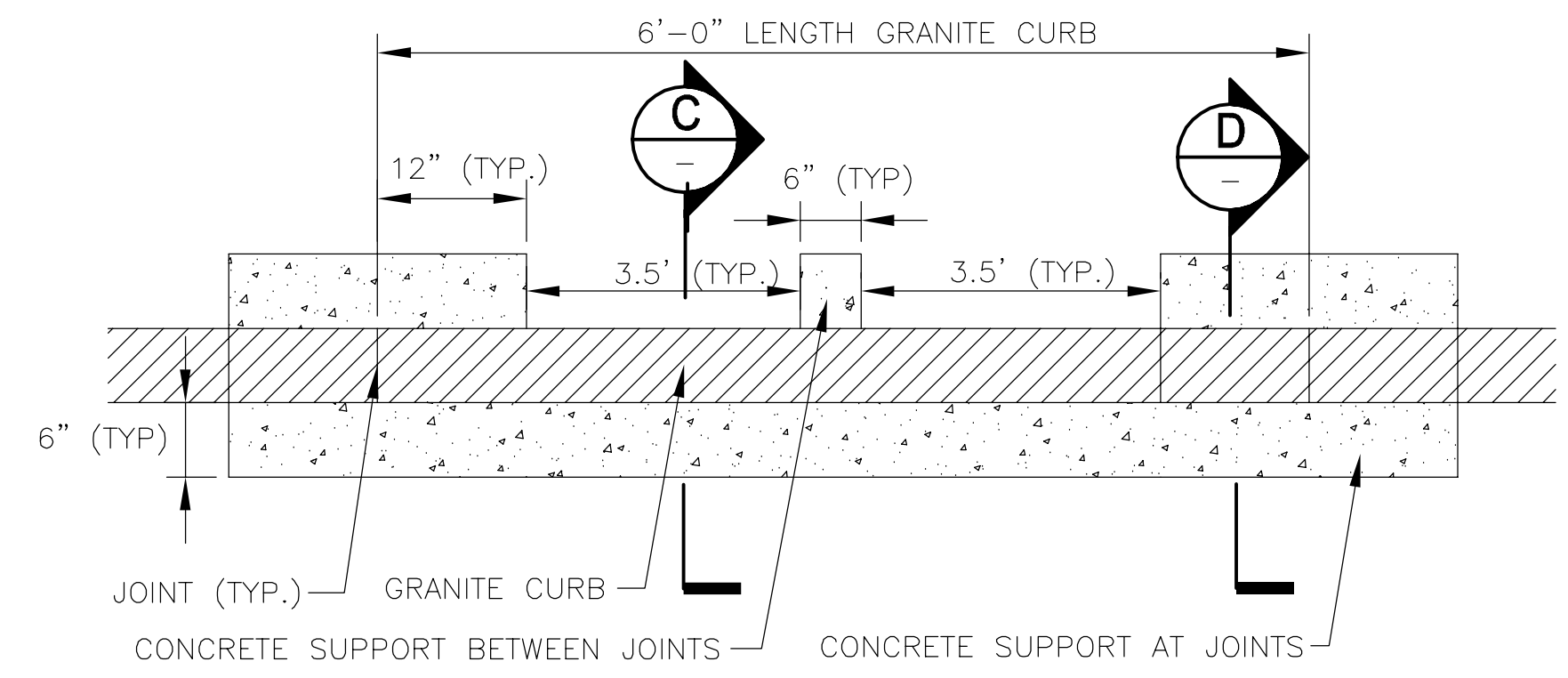
A SECTION
SCALE: NTS

1 CONCRETE PAVEMENT DRIVEWAY (WITH CYCLE TRACK)
SCALE: NTS

2 CONCRETE PAVEMENT DRIVEWAY (WITHOUT CYCLE TRACK)
SCALE: NTS



4 BEVELED GRANITE CURB (6" x 18")
SCALE: NTS



3 GRANITE CURB WITH CONCRETE CRADLE
SCALE: NTS

FOR GRANITE CURB AT STORMWATER PLANTERS AND BIORETENTION BASINS, SEE SHEET GI-18.
FOR CURB AT RAISED PLANTERS, SEE SHEET L-110

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

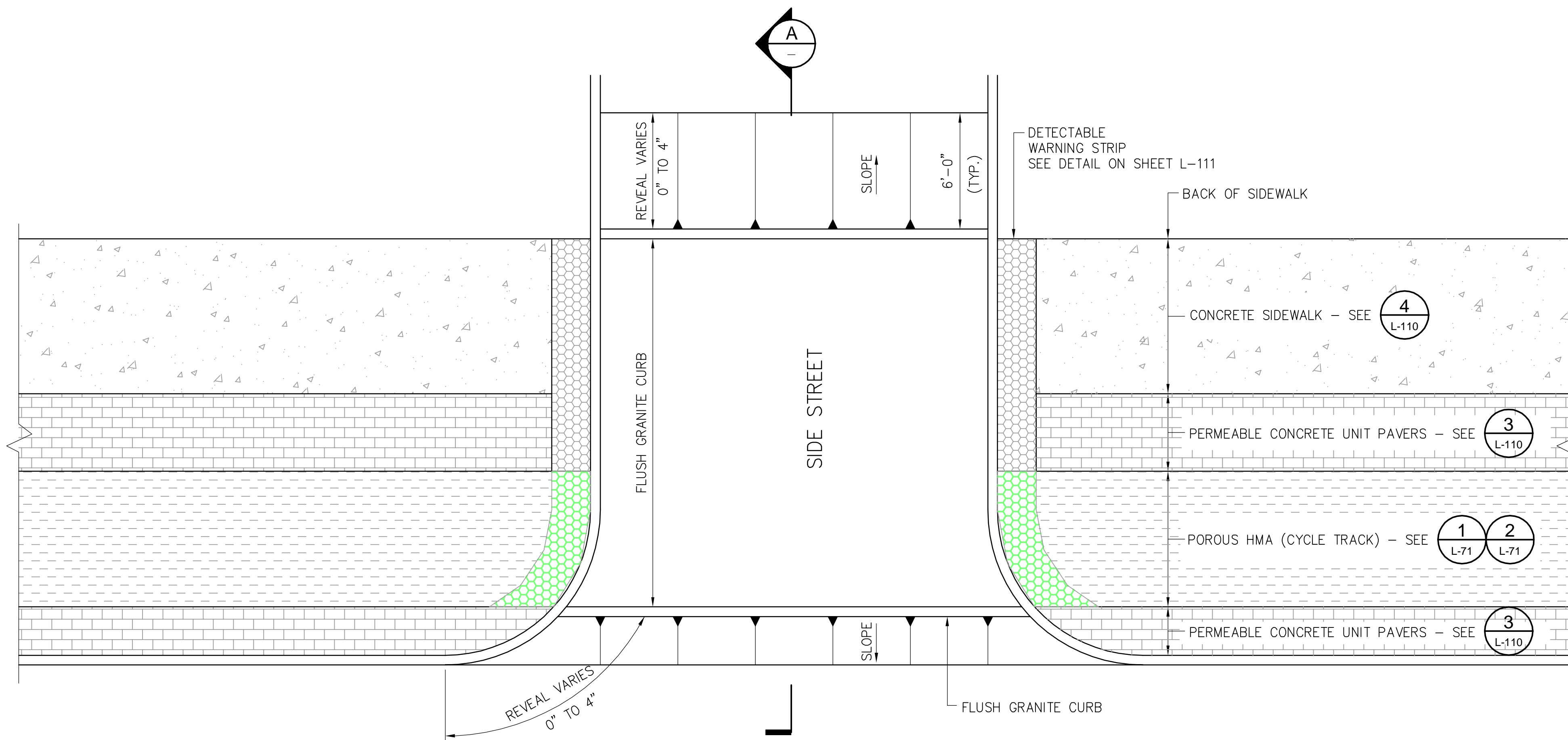
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
DRIVEWAY AND CURB DETAILS

DESIGNED: RJB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET	
CHECKED: RJB			L-101
DRAWN: LAC	REF.	CONT.	
CHECKED: RJB	ACC.		DATE: DEC 2017

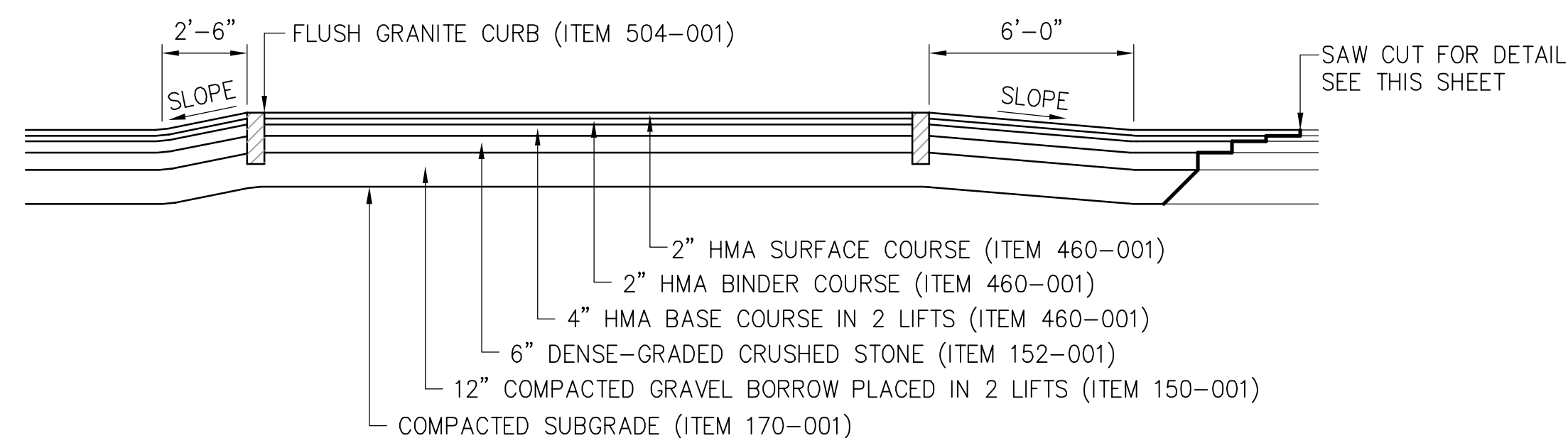
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

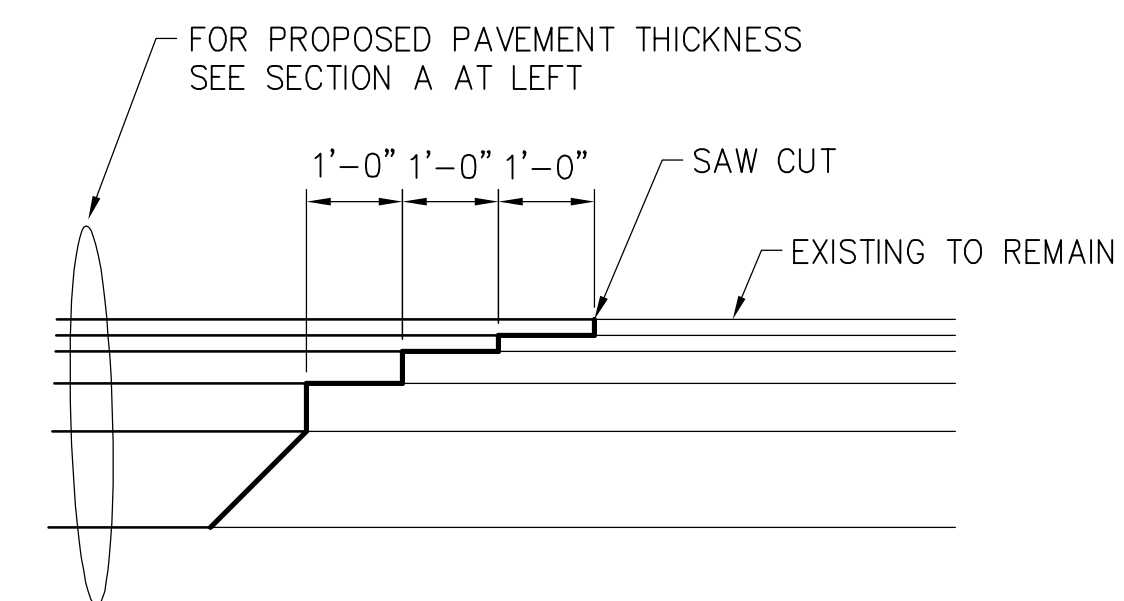
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1 PLAN - RAISED CROSSWALK
SCALE: NTS



A SECTION
SCALE: NTS



2 PAVEMENT TRANSITION
SCALE: NTS

Rachel J. Burckhardt
 CIVIL
 No. 31880
 12/11/17

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
RAISED CROSSWALK DETAILS

DESIGNED: LAC
 CHECKED: RJB
 DRAWN: JLM
 CHECKED: RJB

Parsons Brinckerhoff, Inc.
 75 Arlington St. Boston, MA 02116
 PH. (617)426-7330 FAX (617)482-8487

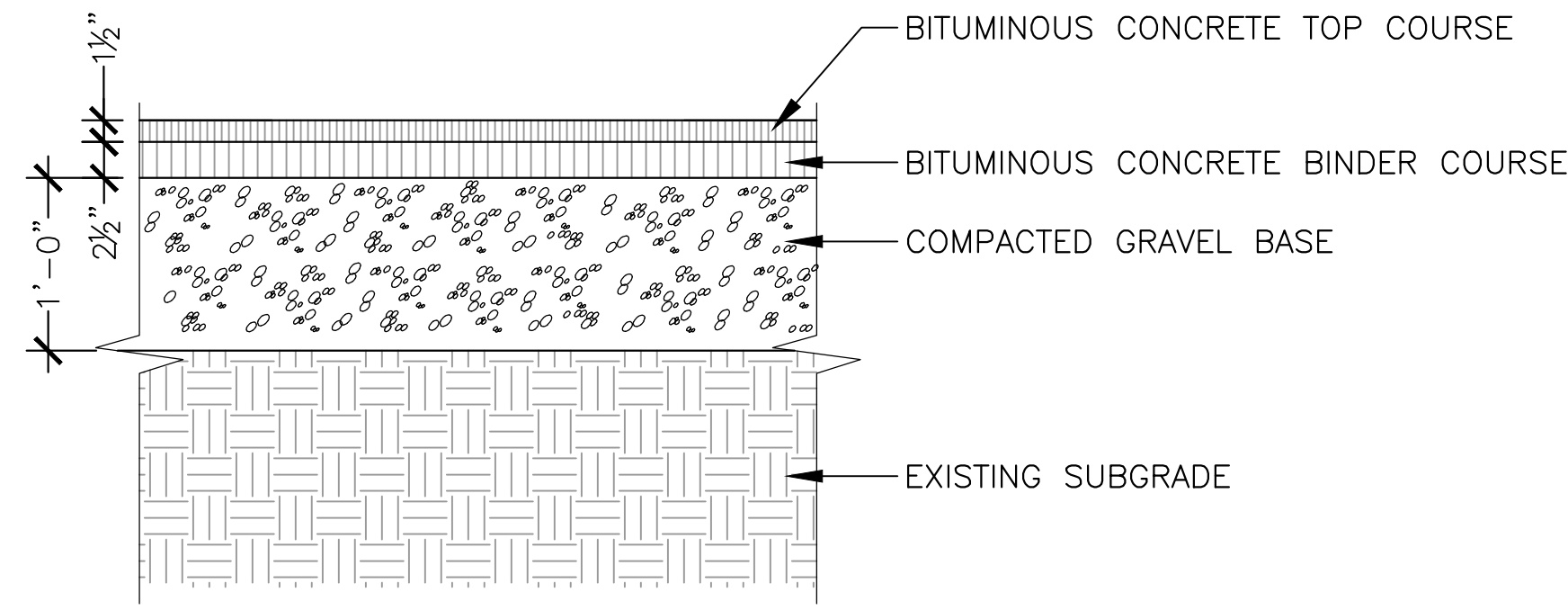
SHEET
L-102

REF. CONT. SCALE: AS SHOWN
 ACC. DATE: DEC 2017

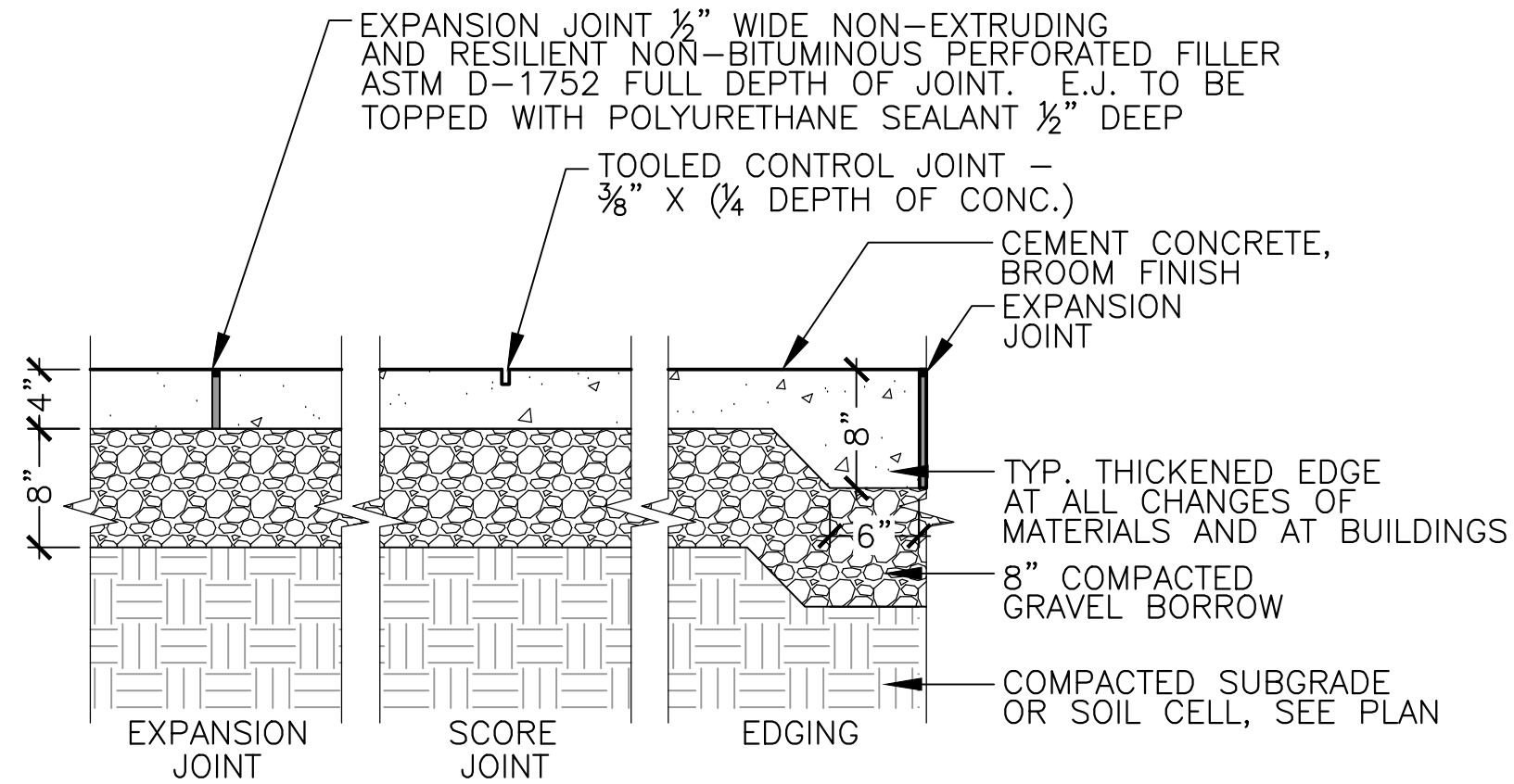
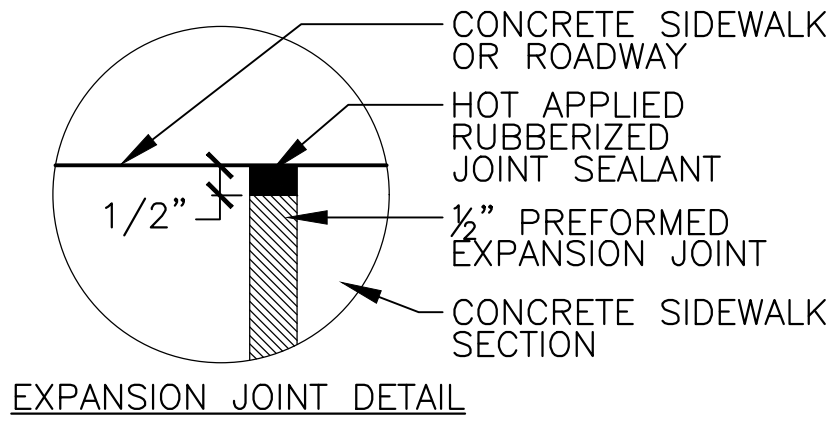
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

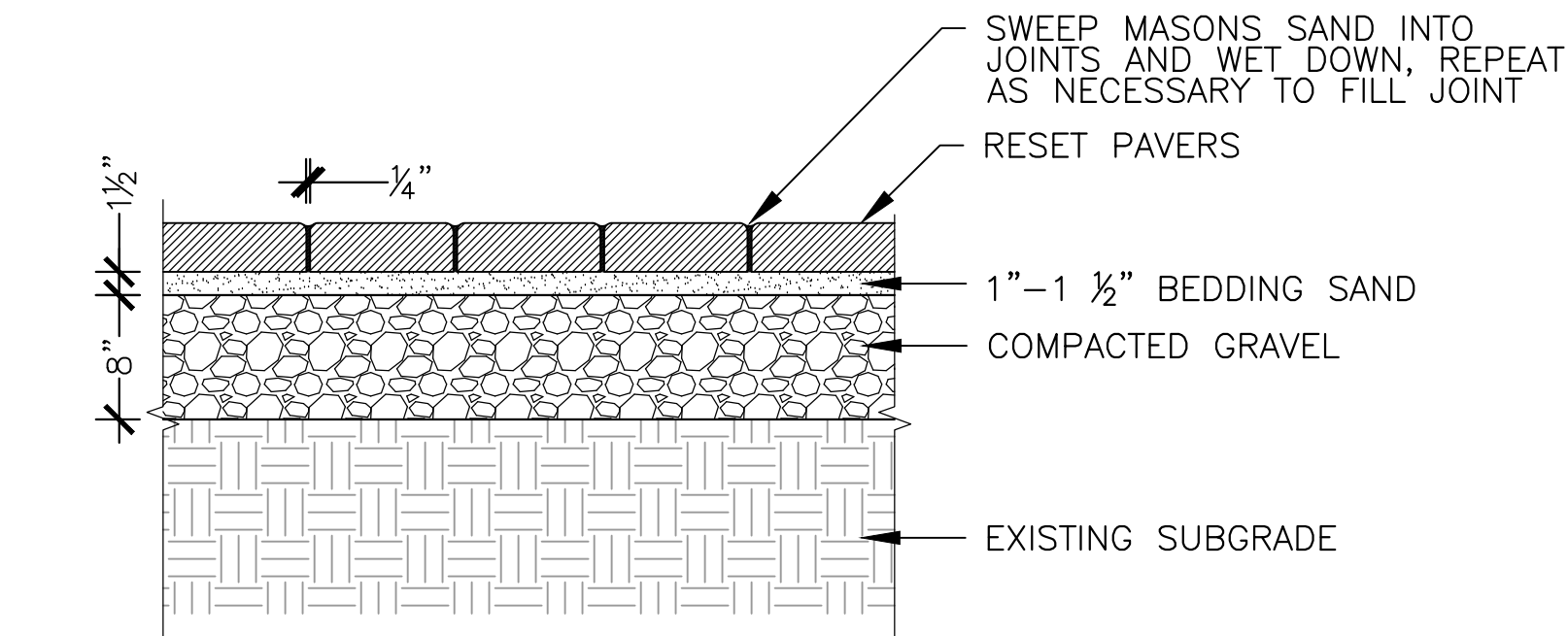
2017-05-09 4:01 PM F:\Projects - Active\16-7020-BIO-02-Union Square GI\3_Project_Execution\Reference Data\CAD\L-110_CONCRETE_DETAILS.dwg



1 HOT MIX ASPHALT SIDEWALK
SCALE: NTS

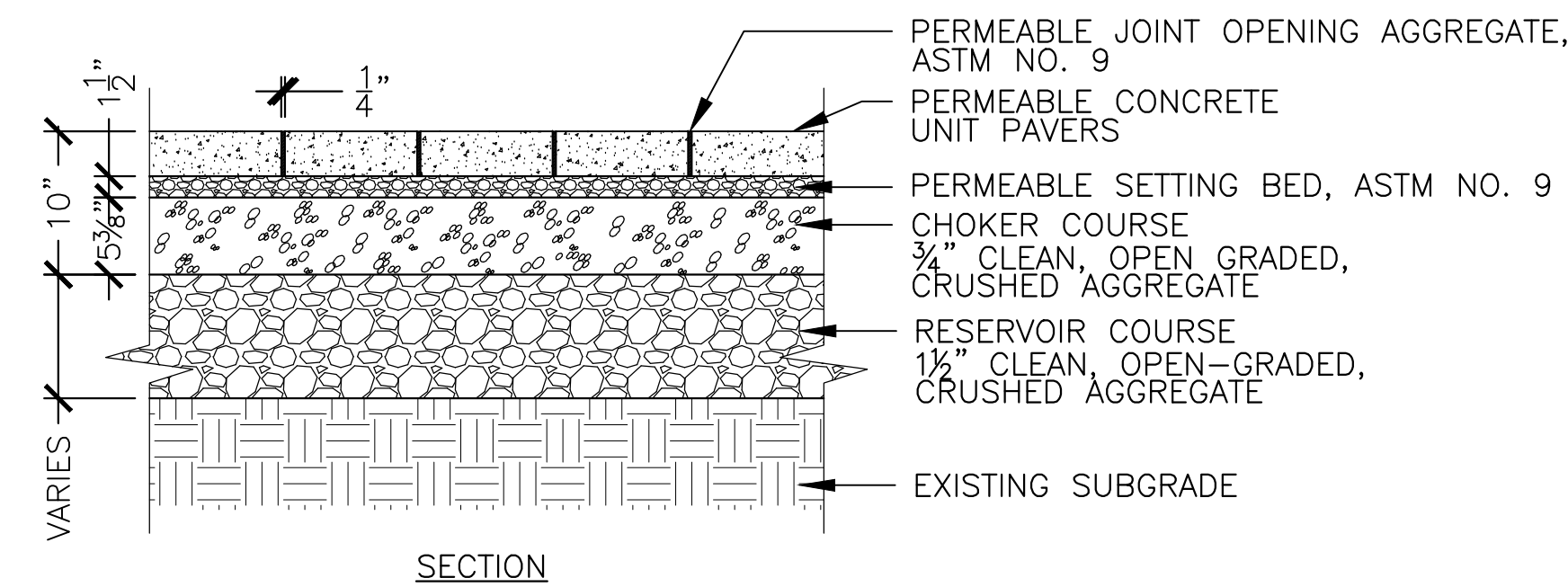


- NOTES:**
1. TYP. E.J. SHALL BE USED WHENEVER HORIZONTAL CONCRETE AND/OR OTHER PAVING SURFACES MEET VERTICAL CONCRETE AND/OR MASONRY SURFACES. NOT MORE THAN 20' IN ANY DIRECTION OR AS SHOWN ON PLANS.
 2. CONCRETE 4000 PSI TYPE II IN 28 DAYS.
 3. EXPANSION AND CONTROL JOINTS SHALL FOLLOW SCORING PATTERN SHOWN ON PLANS.
 4. PROVIDE EXPANSION JOINTS AT MIN. 20 FT. O.C. U.N.O. WITH PRE-FORMED JOINT FILLER.
 5. CONCRETE FINISHED W/STIFF BRISTLED NYLON BROOM, PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
 6. SEE SHEET L-101 FOR CONCRETE PAVEMENT DRIVEWAY DETAIL.

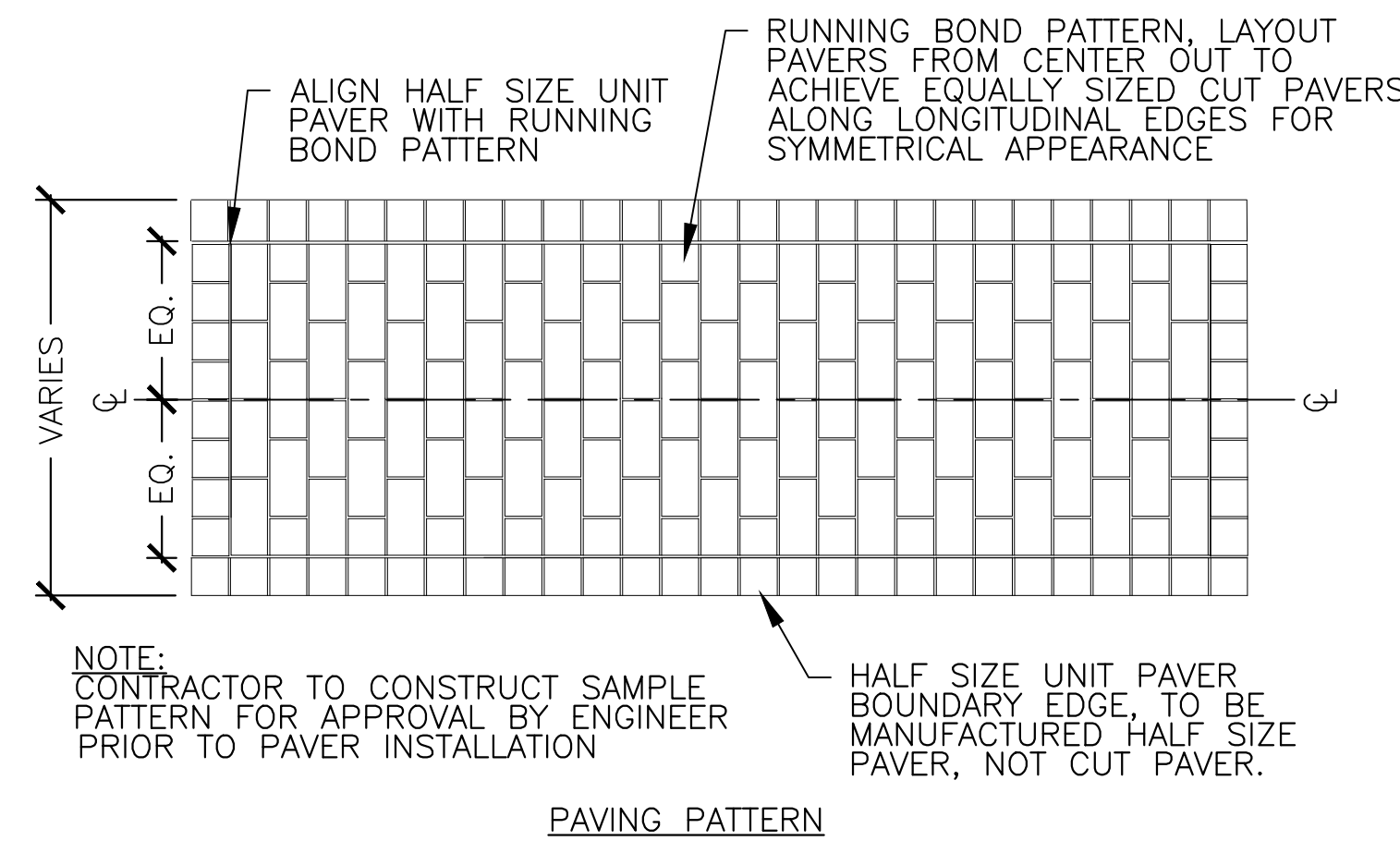


2 RESET CONCRETE UNIT PAVERS
SCALE: NTS

4 CONCRETE SIDEWALK
SCALE: NTS

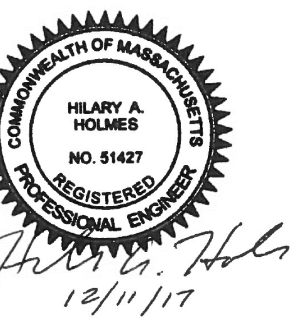


- NOTE:**
1. FOR LOCATION OF UNIT PAVERS WITH UNDERDRAIN AND GEOTEXTILE, SEE SHEETS L-71 THROUGH L-80.
 2. RESERVOIR COURSE DEPTH VARIES BASED ON LOCATION, SEE STREETScape SECTIONS, SHEETS L-71 TO L-80.
 3. EDGE CONDITION VARIES, SEE DETAIL 3/SHEET L-113 FOR EDGE RESTRAINTS.
 4. ALL AGGREGATE SUBBASE SHALL BE DOUBLE WASHED.



3 PERMEABLE CONCRETE UNIT PAVERS
SCALE: NTS

NOTE:
SEE SHEET L-71 FOR POROUS HMA (CYCLE TRACK) DETAIL.



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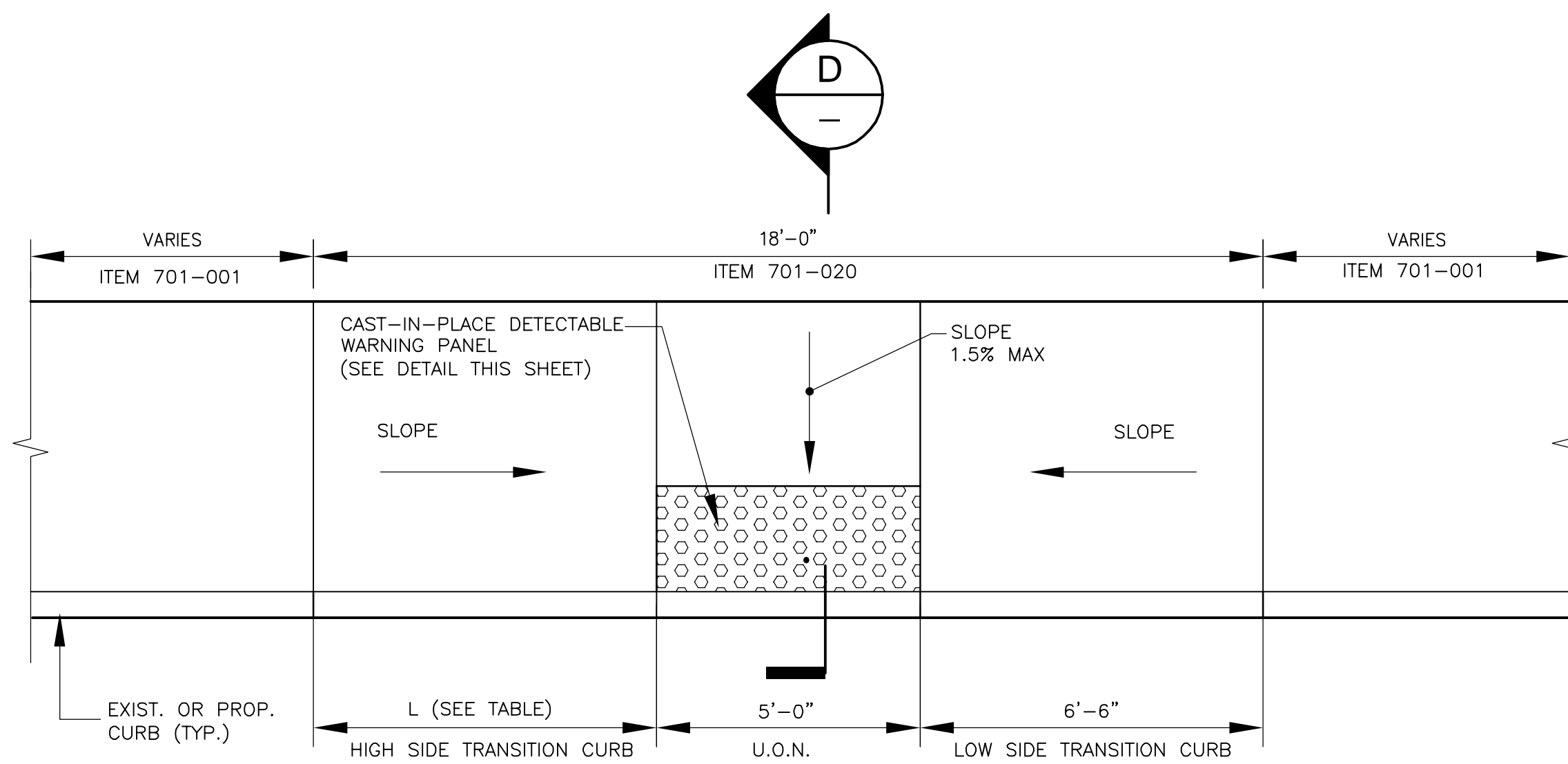
SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CONCRETE & SPECIALTY PAVING DETAILS

DESIGNED: JB			SHEET
CHECKED: DB			
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: GJ	ACC.		DATE: DEC 2017

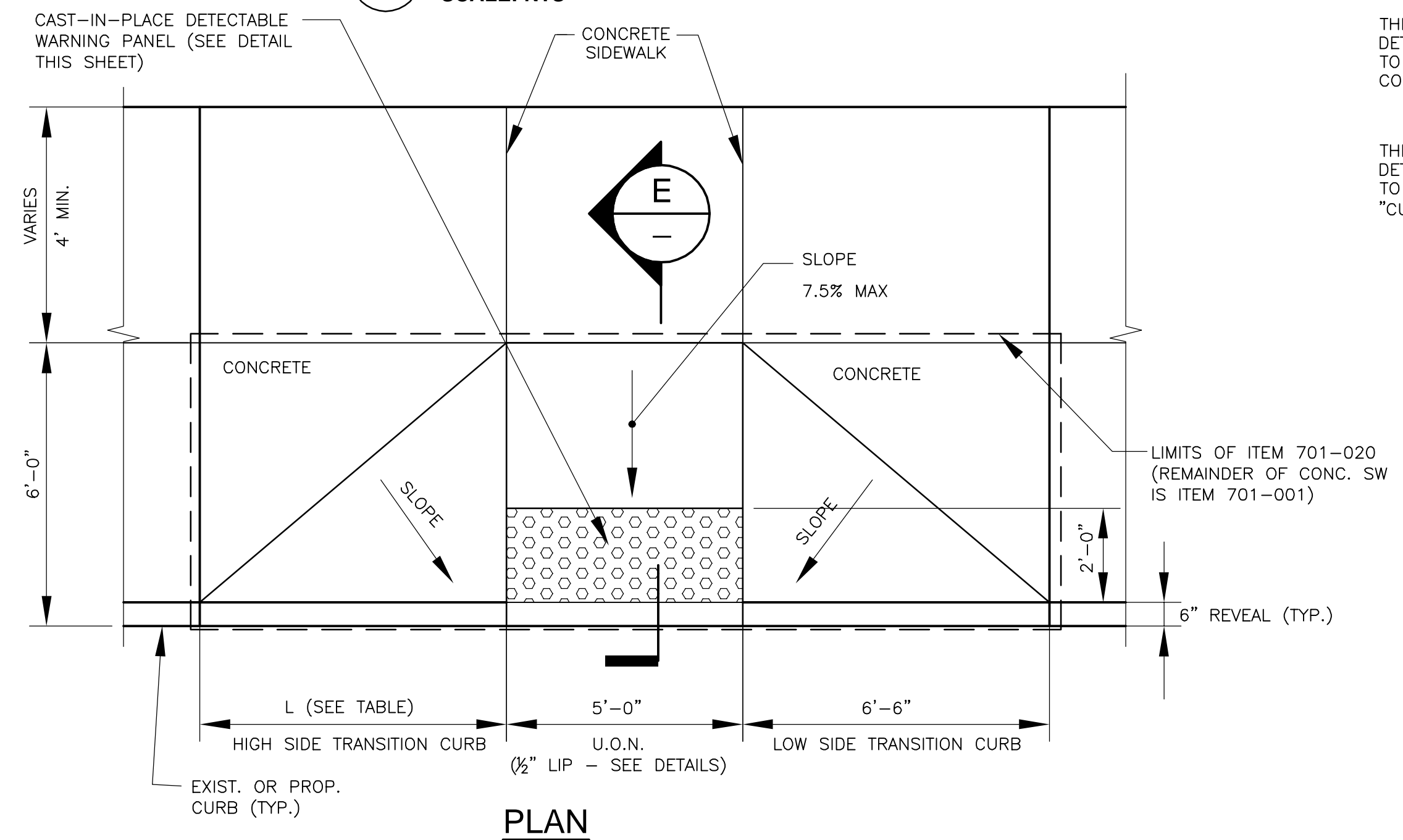
NO.	DATE	REVISIONS	BY

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

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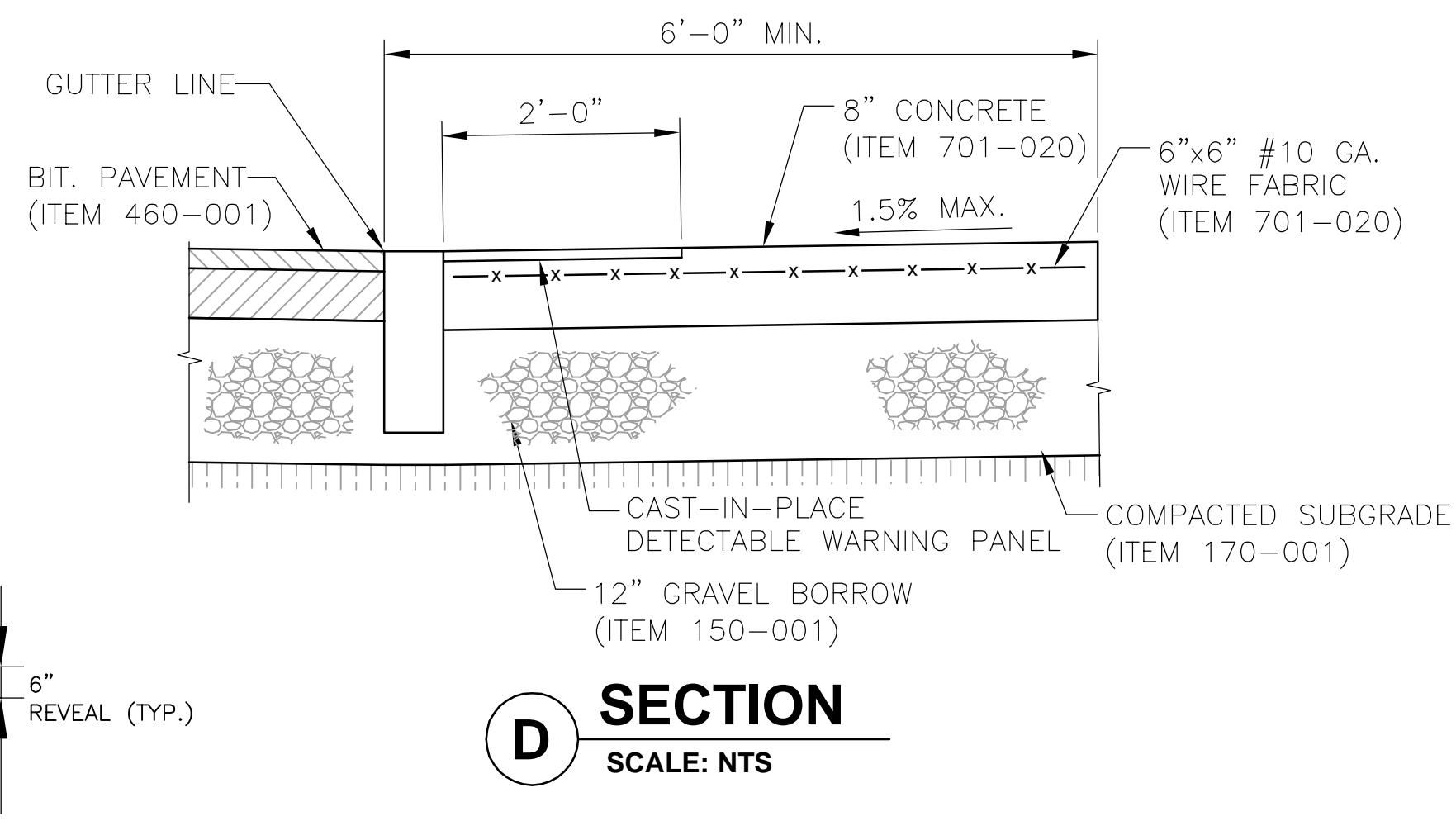


2 WHEELCHAIR RAMP - TYPE 2
SCALE: NTS

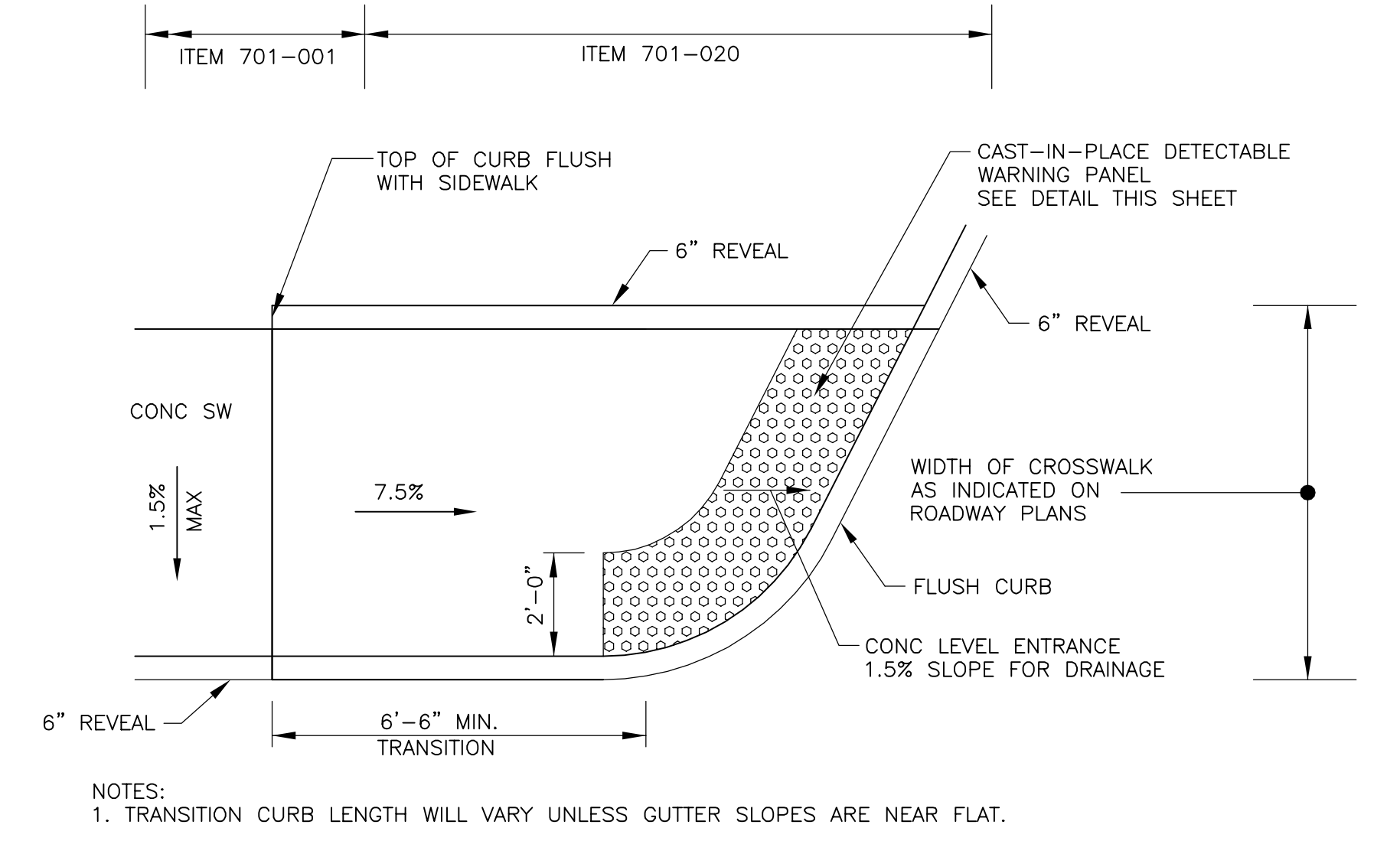


1 WHEELCHAIR RAMP - TYPE 1
SCALE: NTS

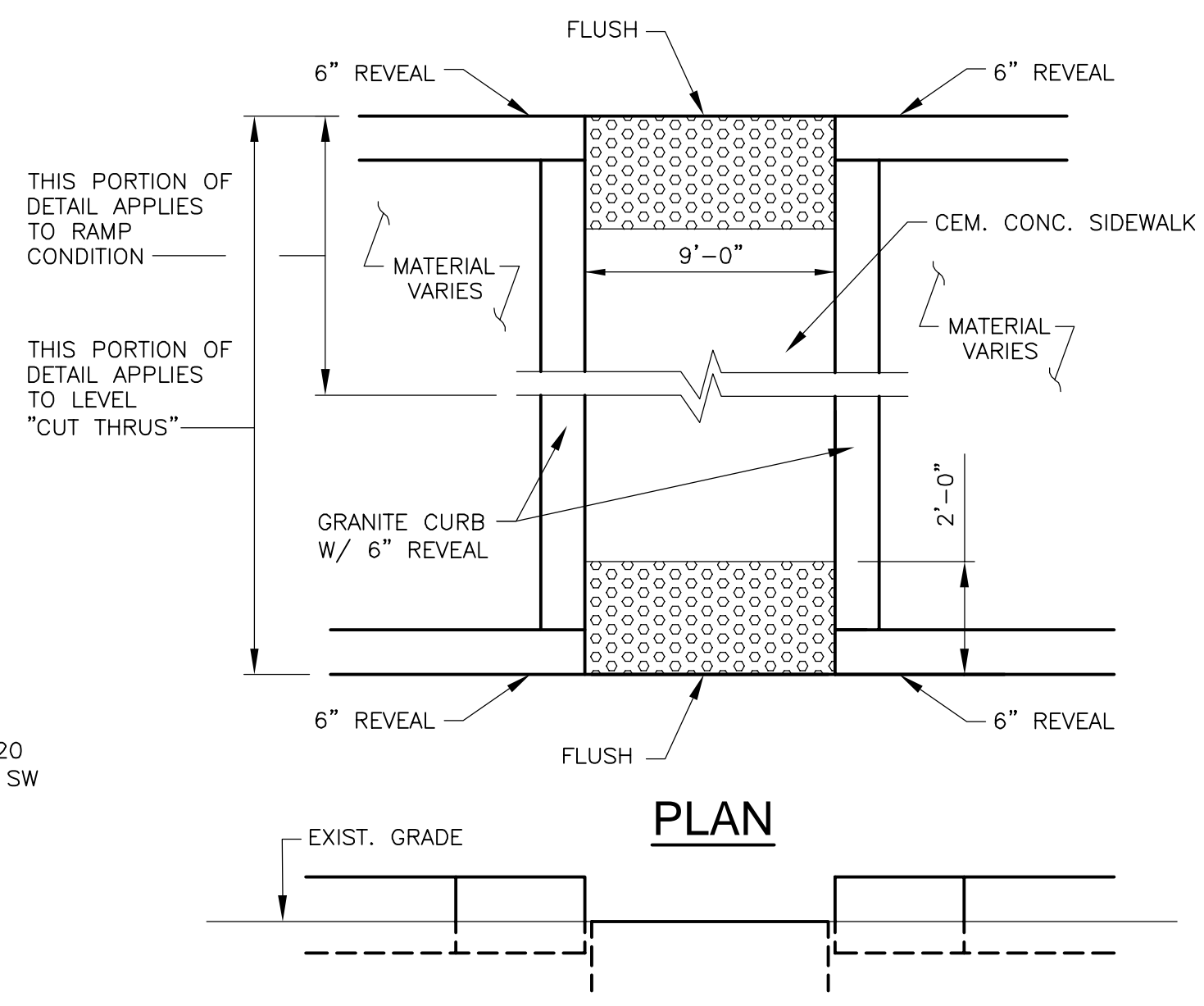
PROFILE FOR TYPE 1 AND TYPE 2



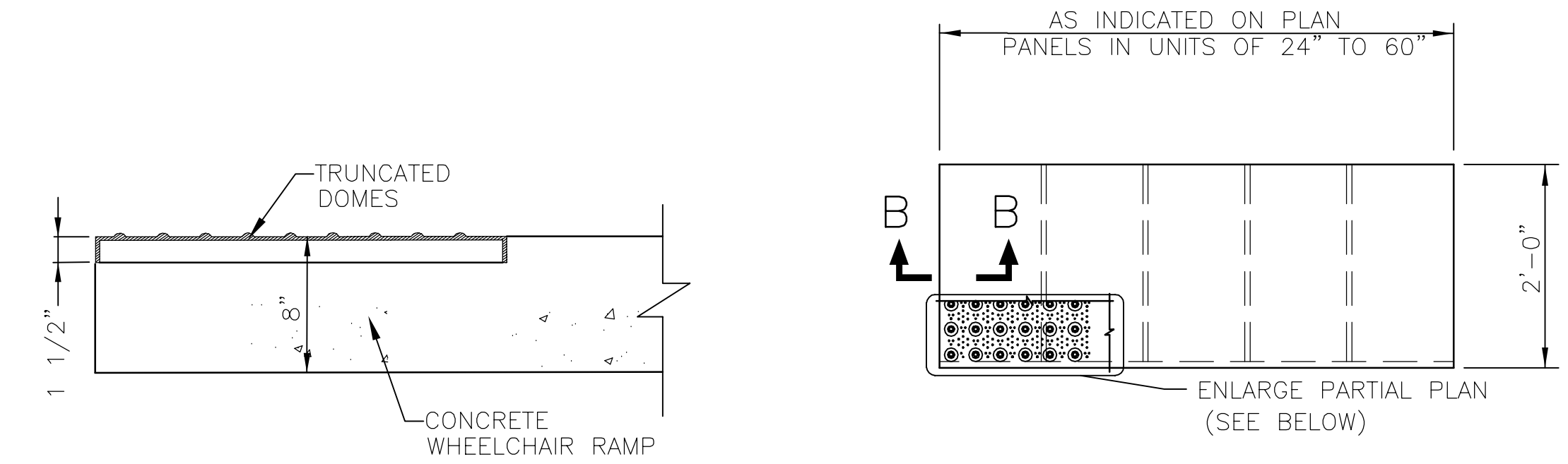
D SECTION
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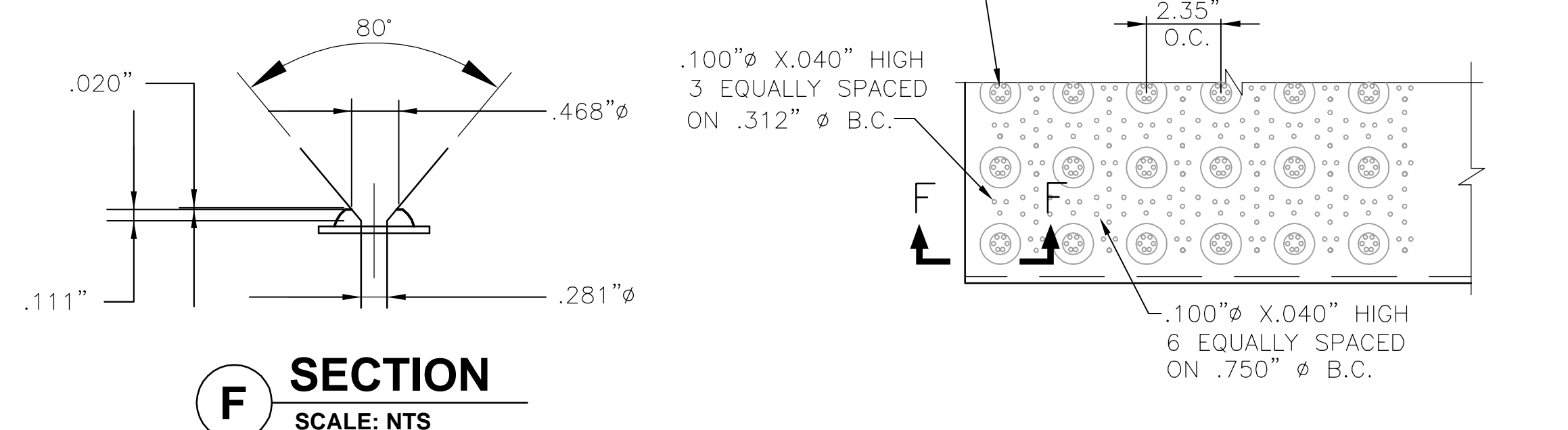
4 WHEELCHAIR RAMP - TYPE 4A
SCALE: NTS



3 WHEELCHAIR RAMP - TYPE 4B
SCALE: NTS



B SECTION
SCALE: NTS



F SECTION
SCALE: NTS

5 ENLARGED PARTIAL PLAN OF DETECTABLE WARNING PANEL
SCALE: NTS

Rachel J. Burckardt
12/11/17

E SECTION
SCALE: NTS

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

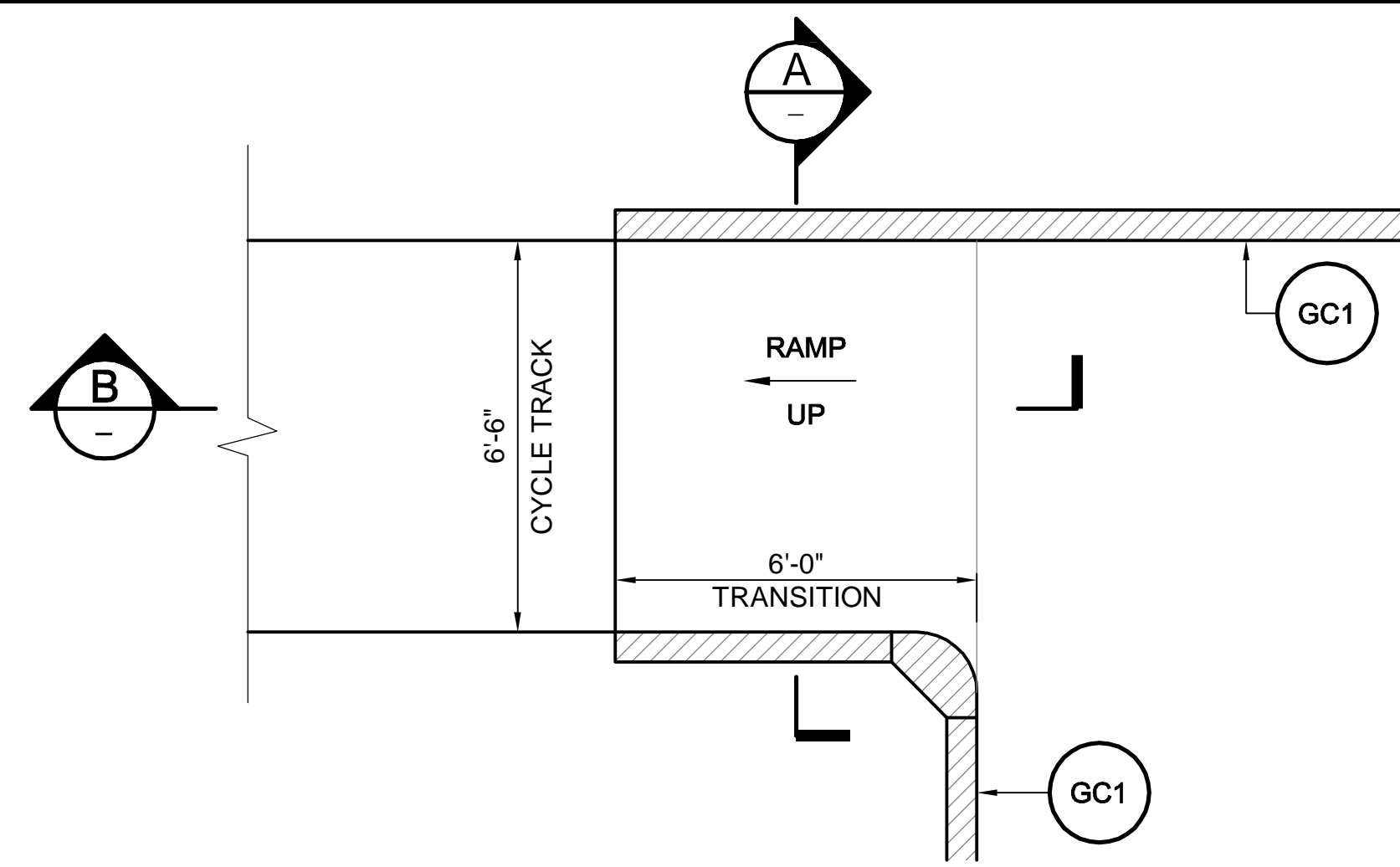
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

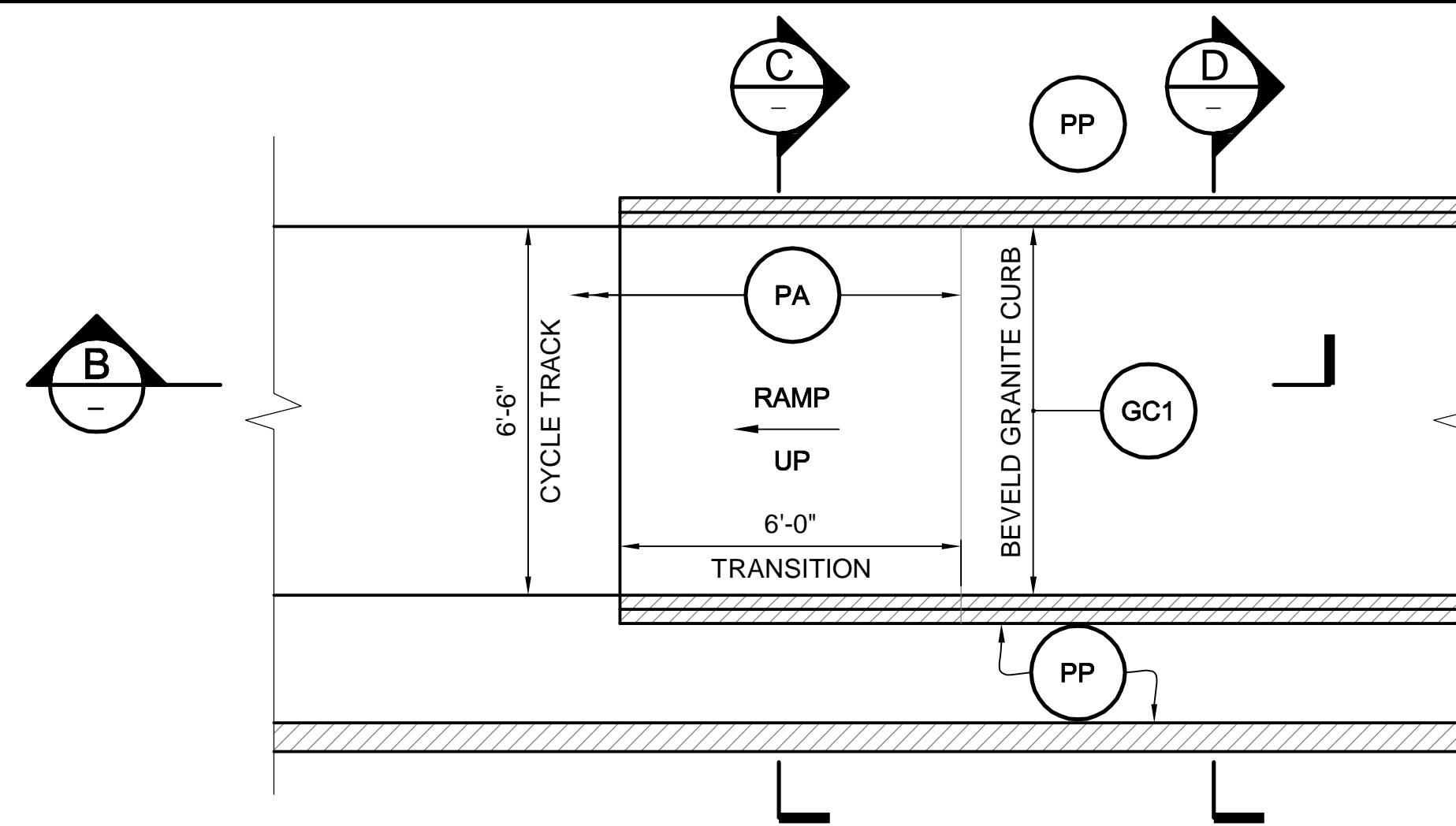
WHEELCHAIR RAMP DETAILS

DESIGNED: RUB	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET L-111
CHECKED: RUB		
DRAWN: LAC	REF.	CONT.
CHECKED: RUB	ACC.	SCALE: NTS DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

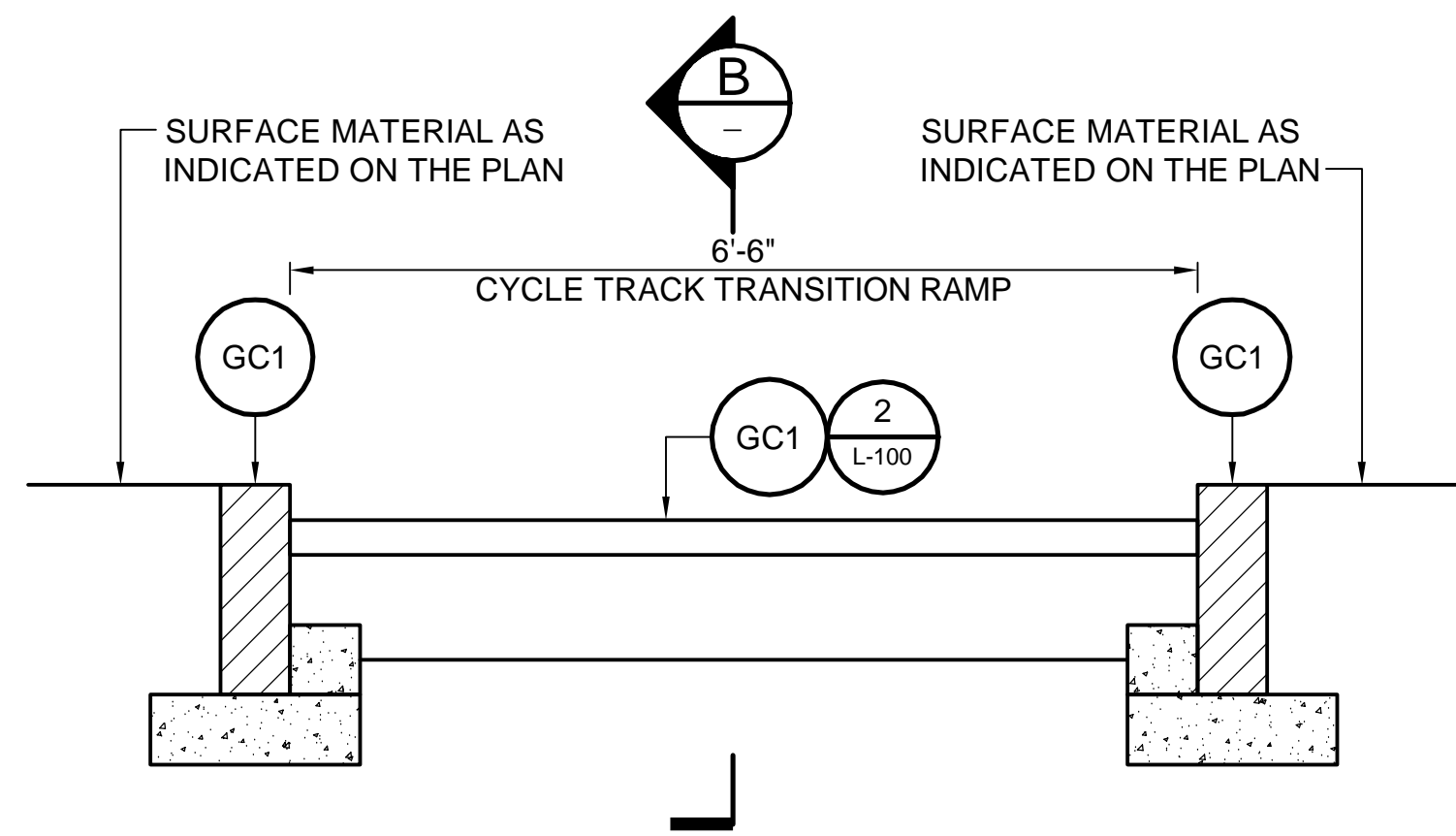
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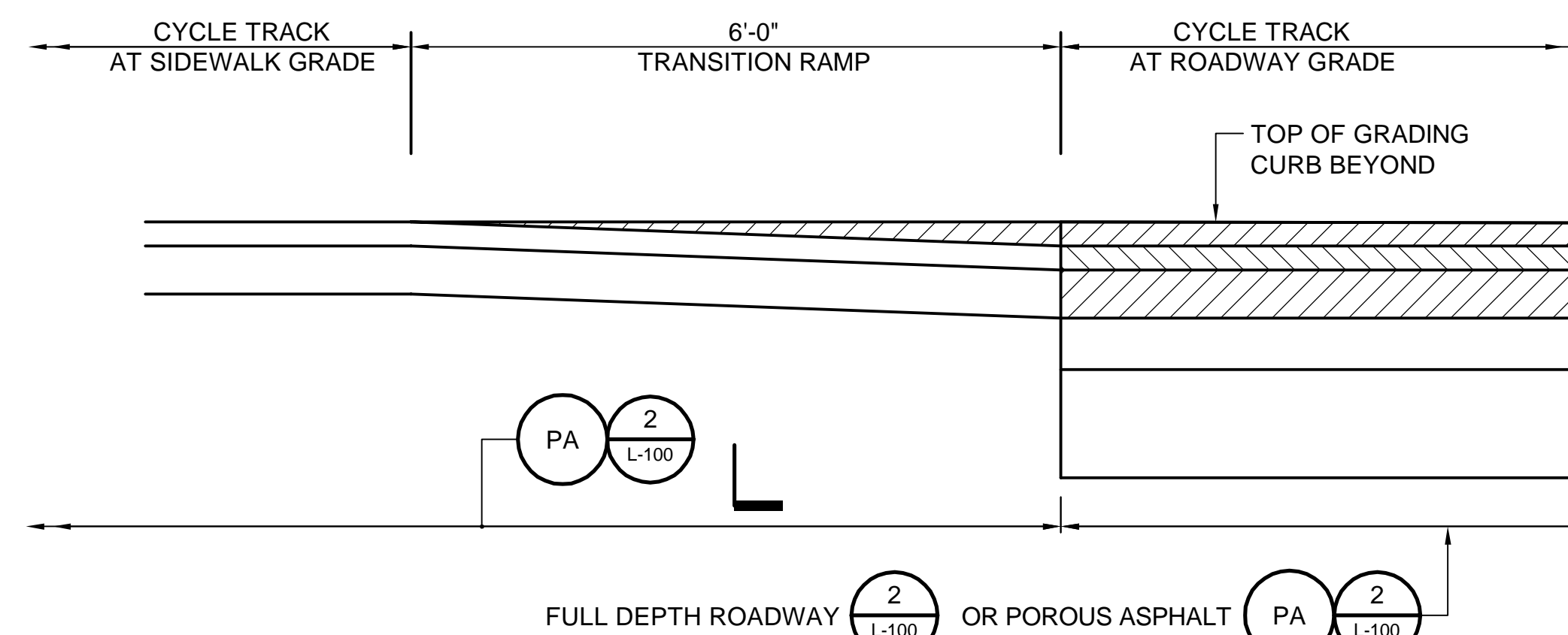
PLAN - CYCLE TRACK TRANSITION RAMP - TYPE 1
SCALE: NTS



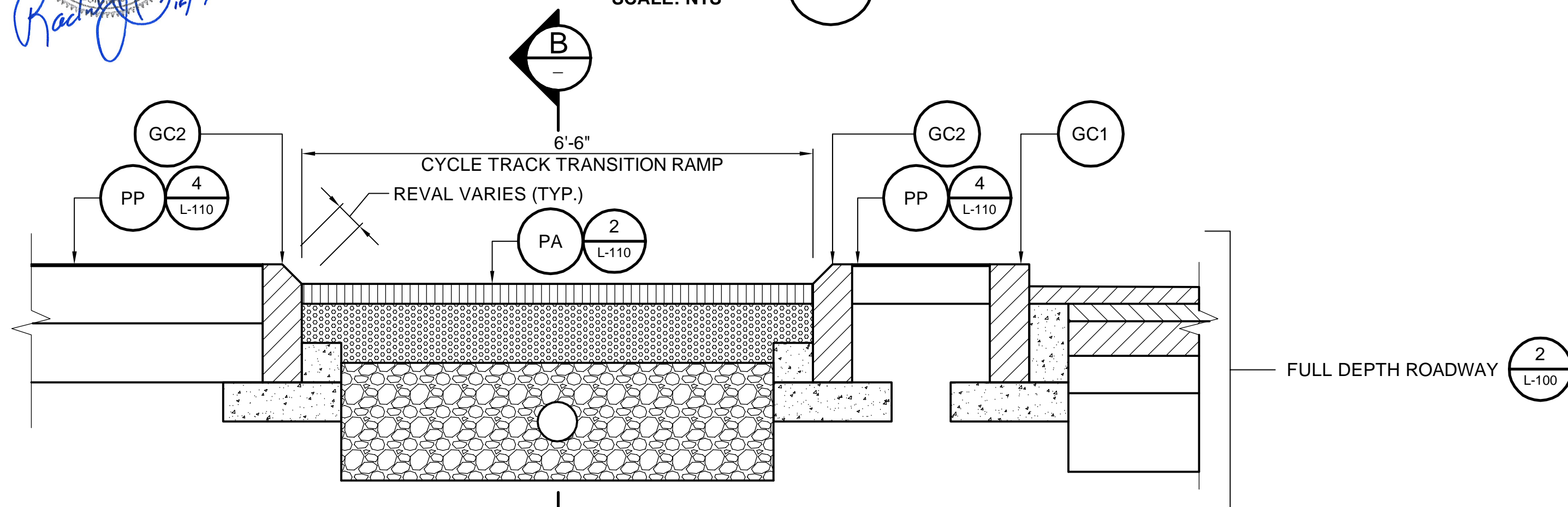
PLAN - CYCLE TRACK TRANSITION RAMP - TYPE 2
SCALE: NTS



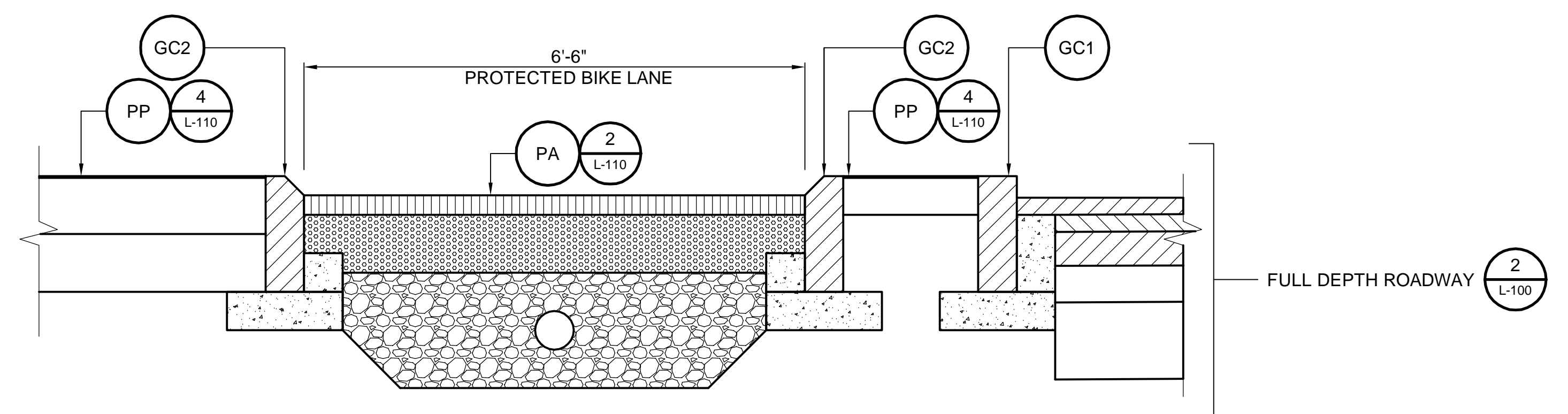
SECTION A
SCALE: NTS



SECTION B
SCALE: NTS



SECTION C
SCALE: NTS



SECTION D
SCALE: NTS

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
CYCLE TRACK TRANSITION RAMP DETAILS

DESIGNED: RJB
CHECKED: JEK
DRAWN: LAC
CHECKED: RJB



Parsons Brinckerhoff, Inc.
75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

REF. CONT.
ACC.

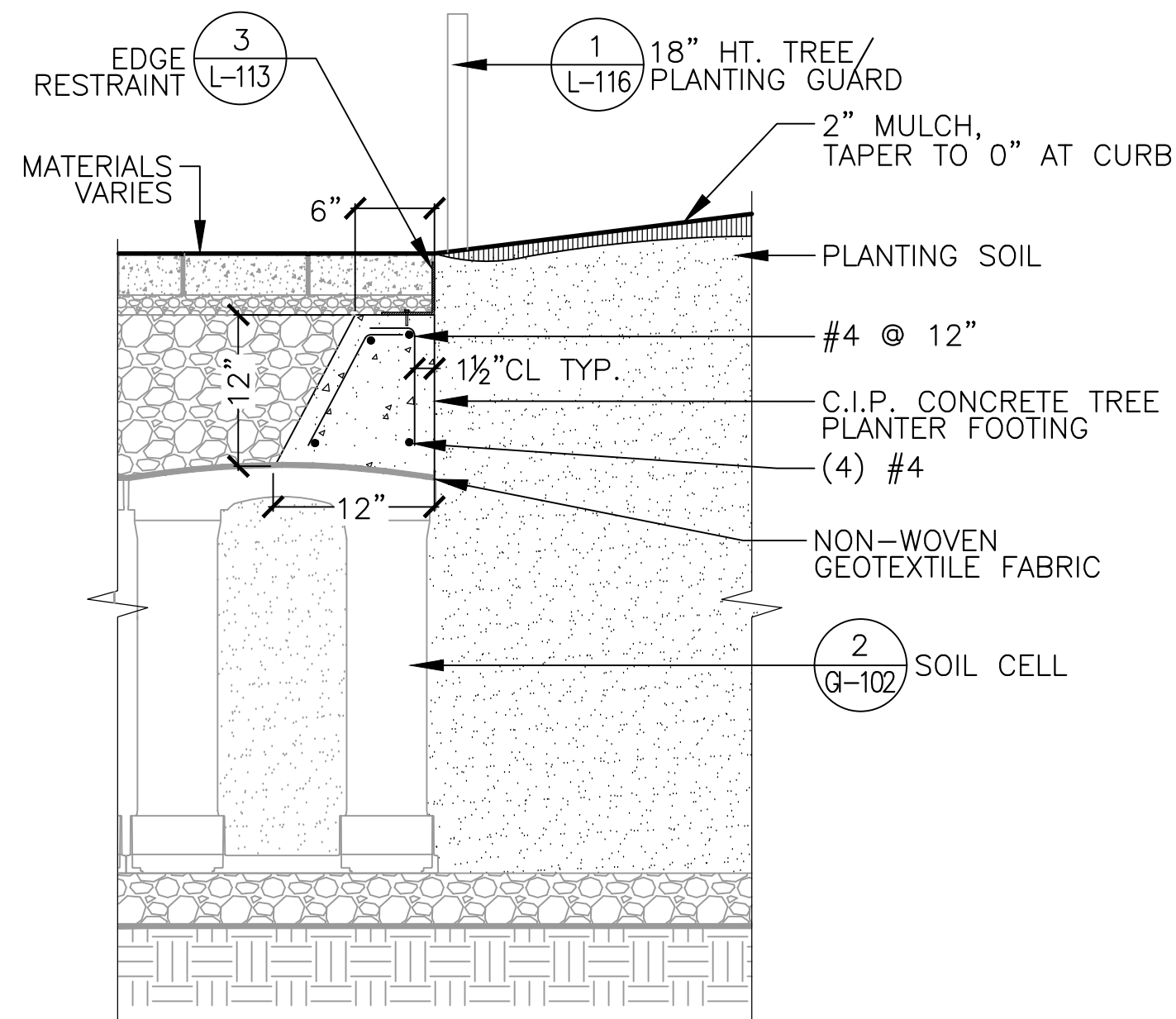
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DATE: DEC 2017

SHEET
L-112

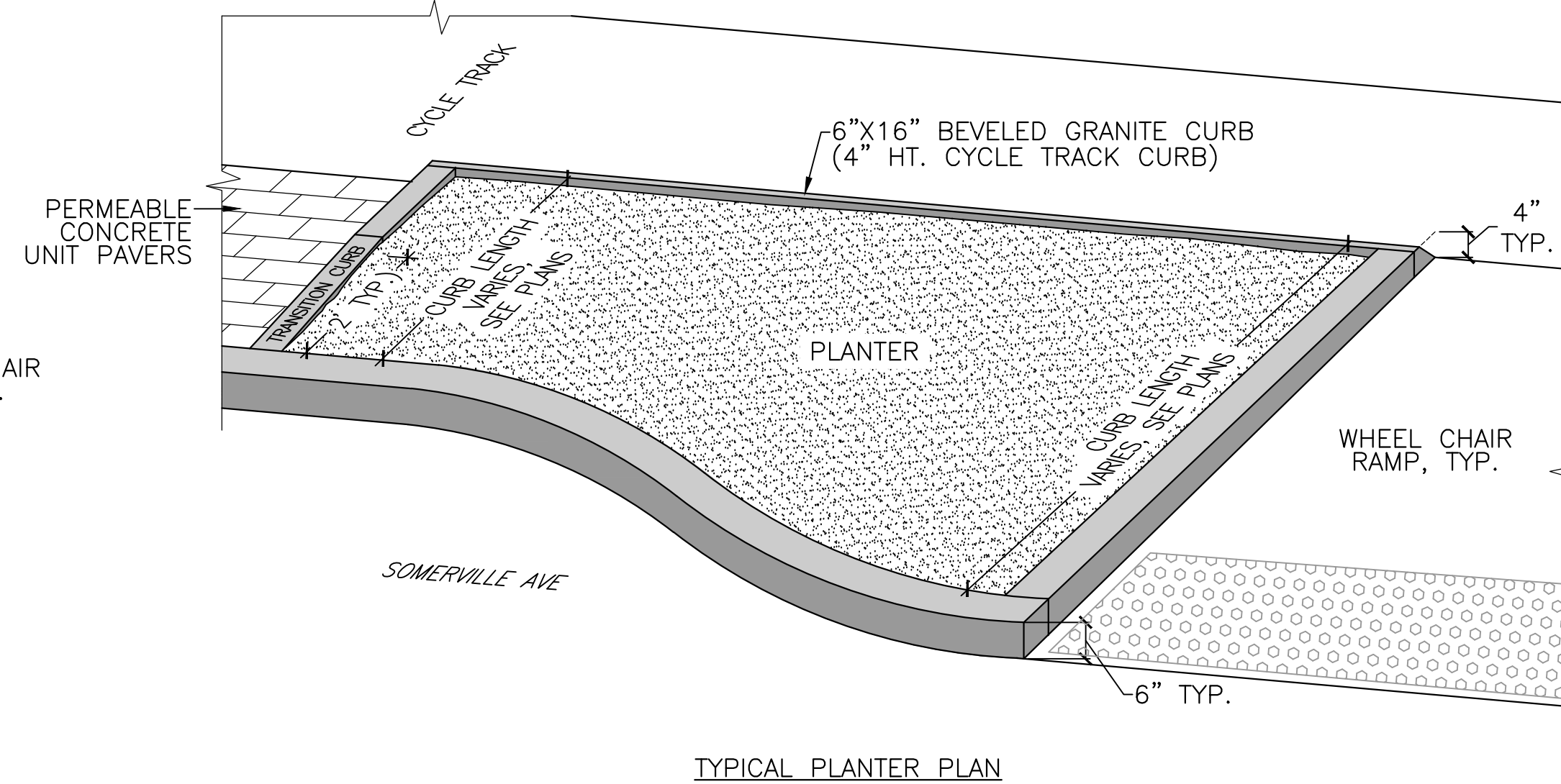
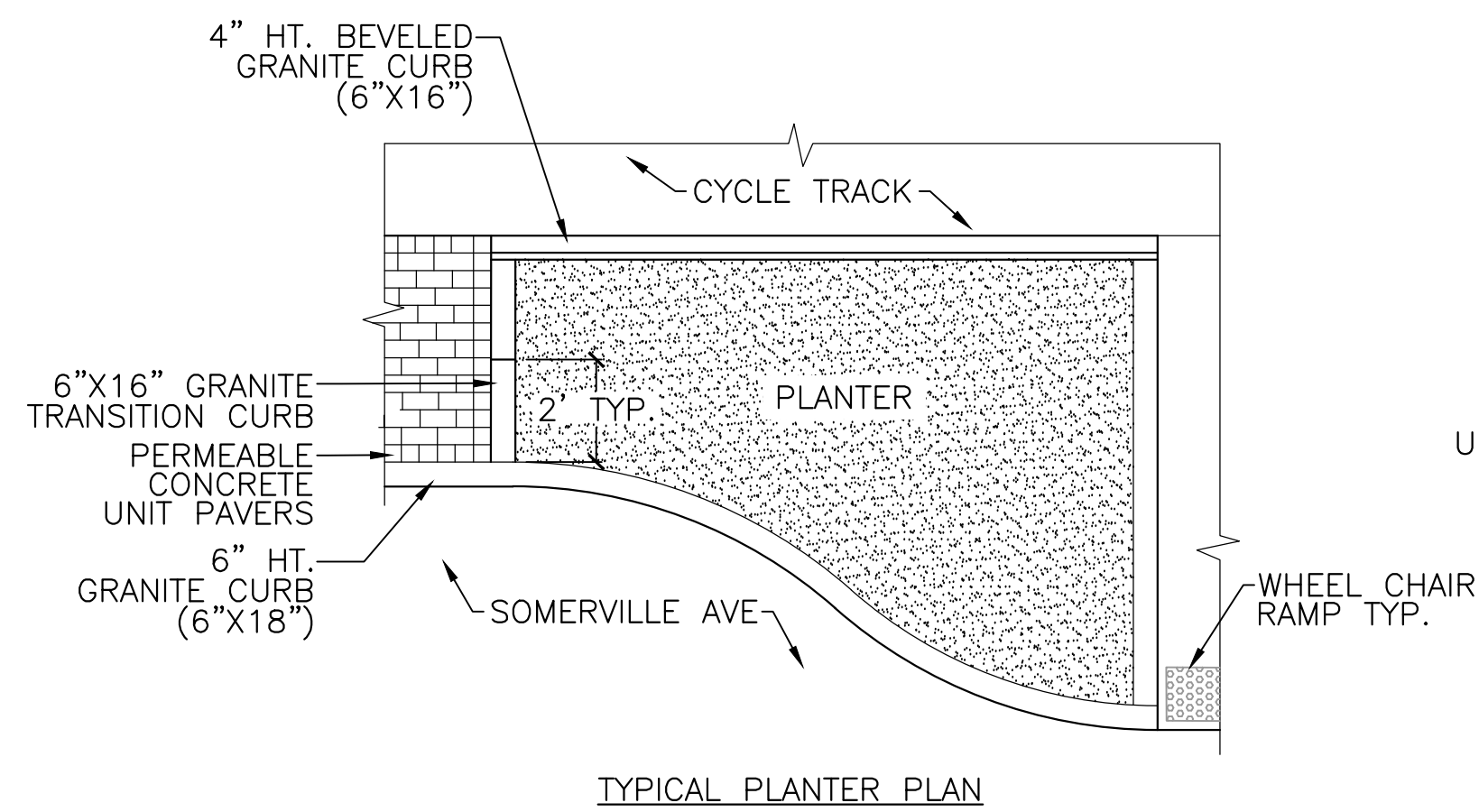
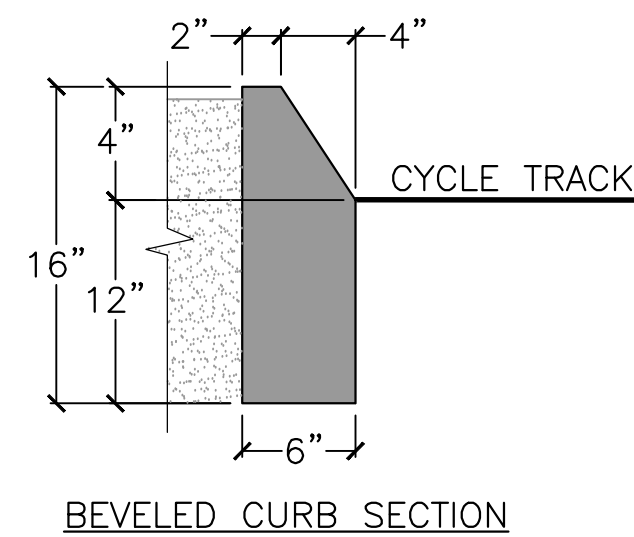
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

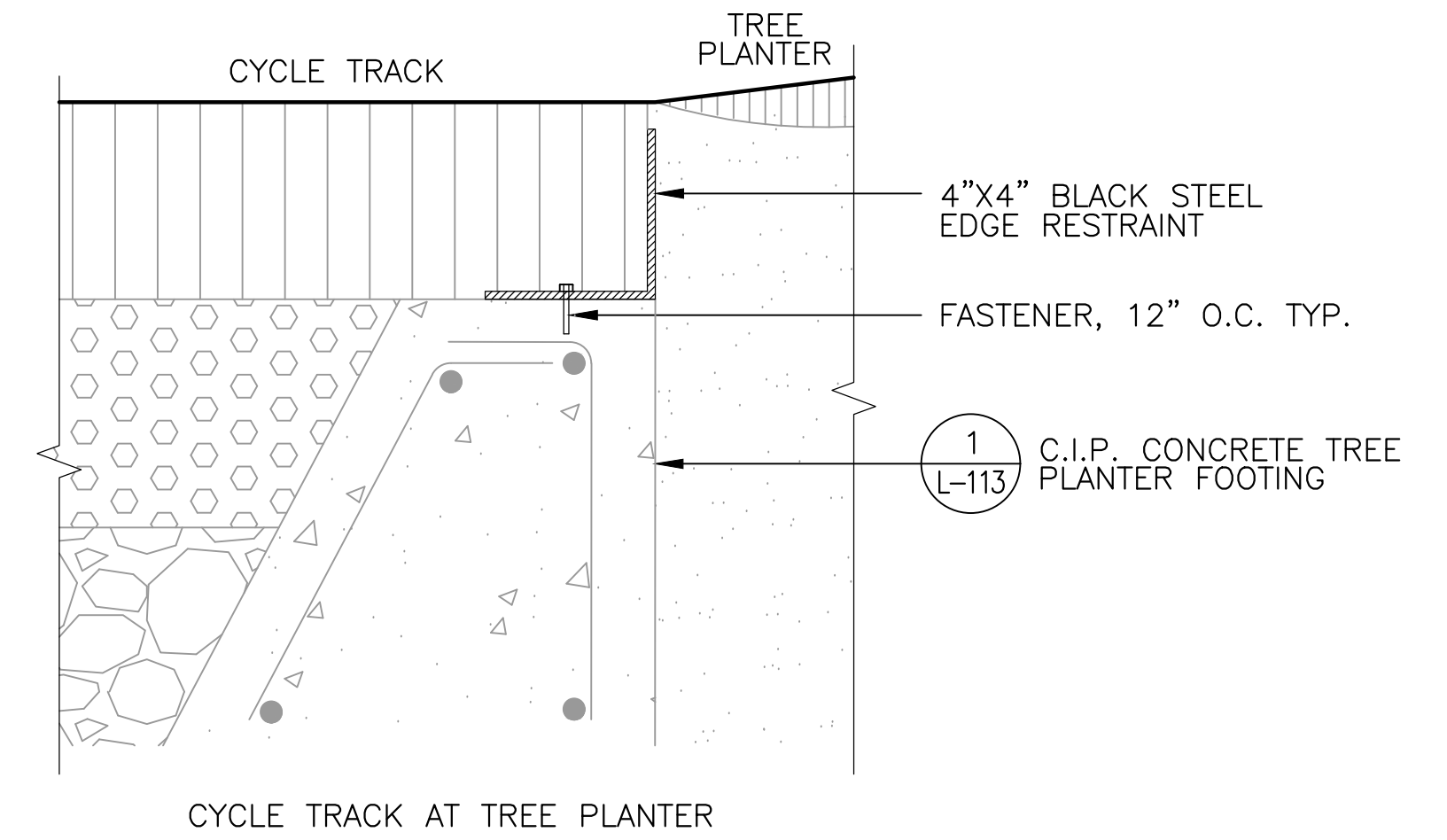
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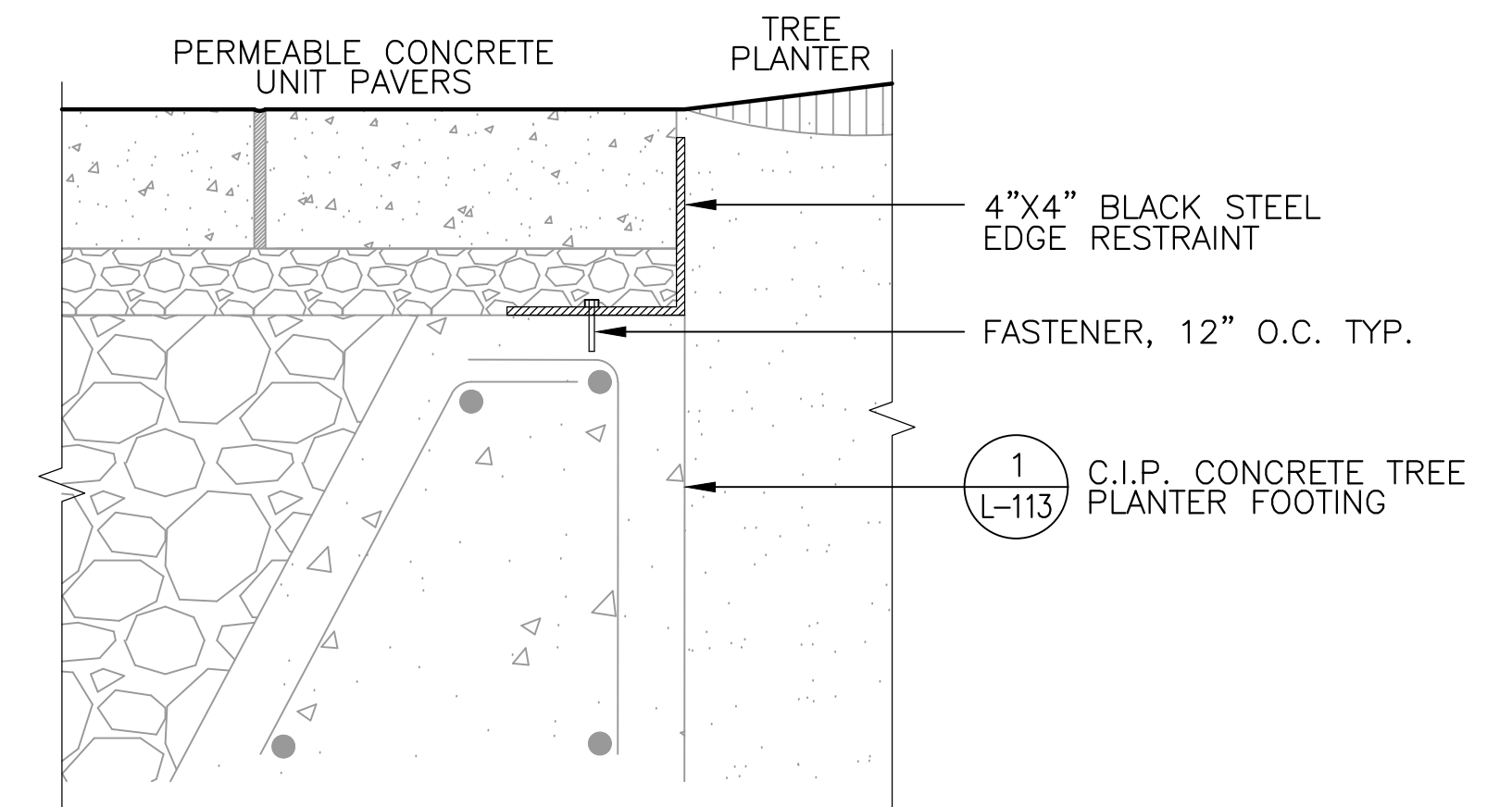
1 CAST-IN-PLACE CONCRETE TREE PLANTER FOOTING
SCALE: NTS



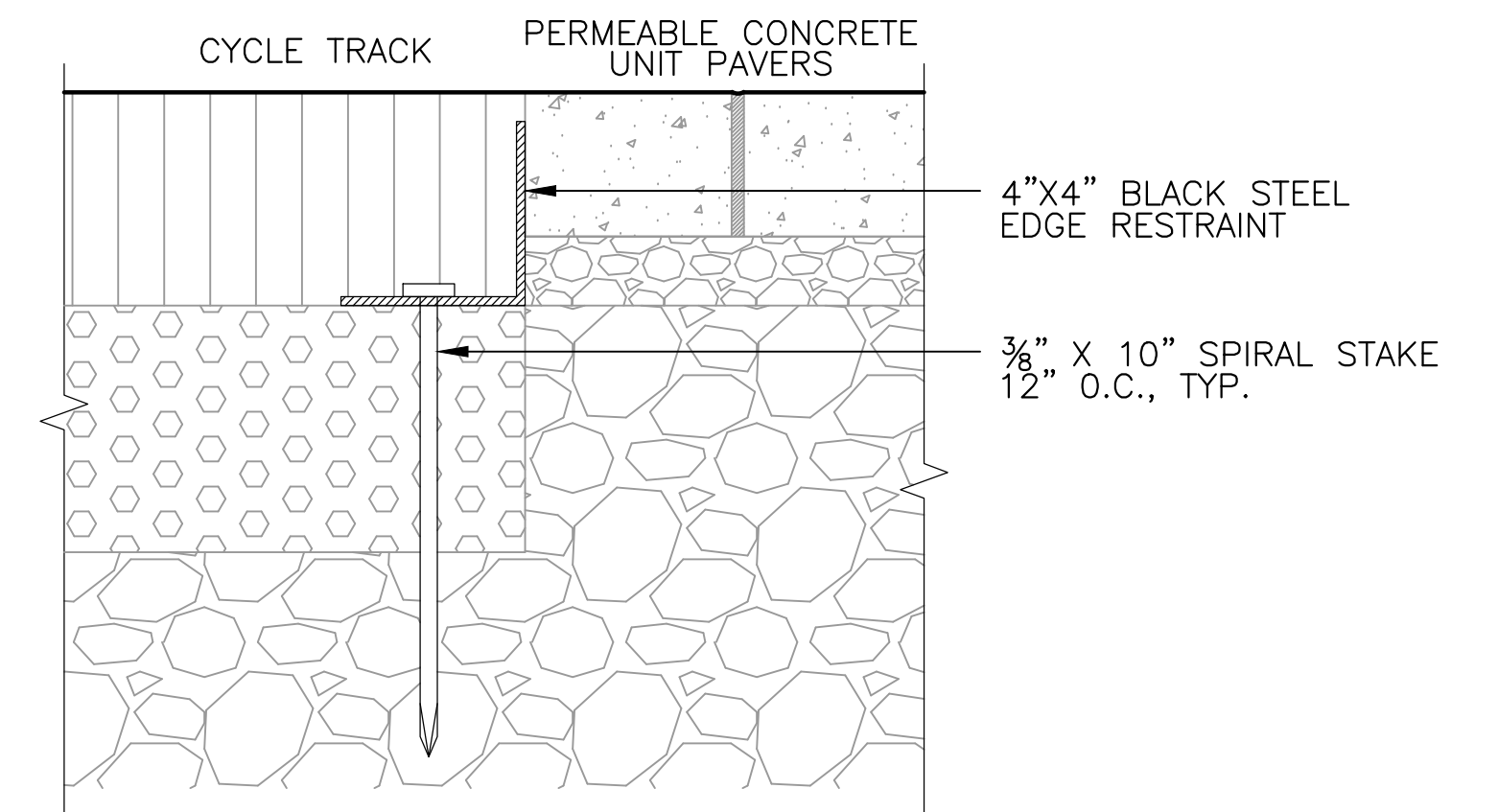
2 PLANTER TRANSITION CURB
SCALE: NTS



CYCLE TRACK AT TREE PLANTER



PERMEABLE CONCRETE UNIT PAVERS AT TREE PLANTER



PERMEABLE CONCRETE UNIT PAVERS AT CYCLE TRACK

3 EDGE RESTRAINT
SCALE: NTS



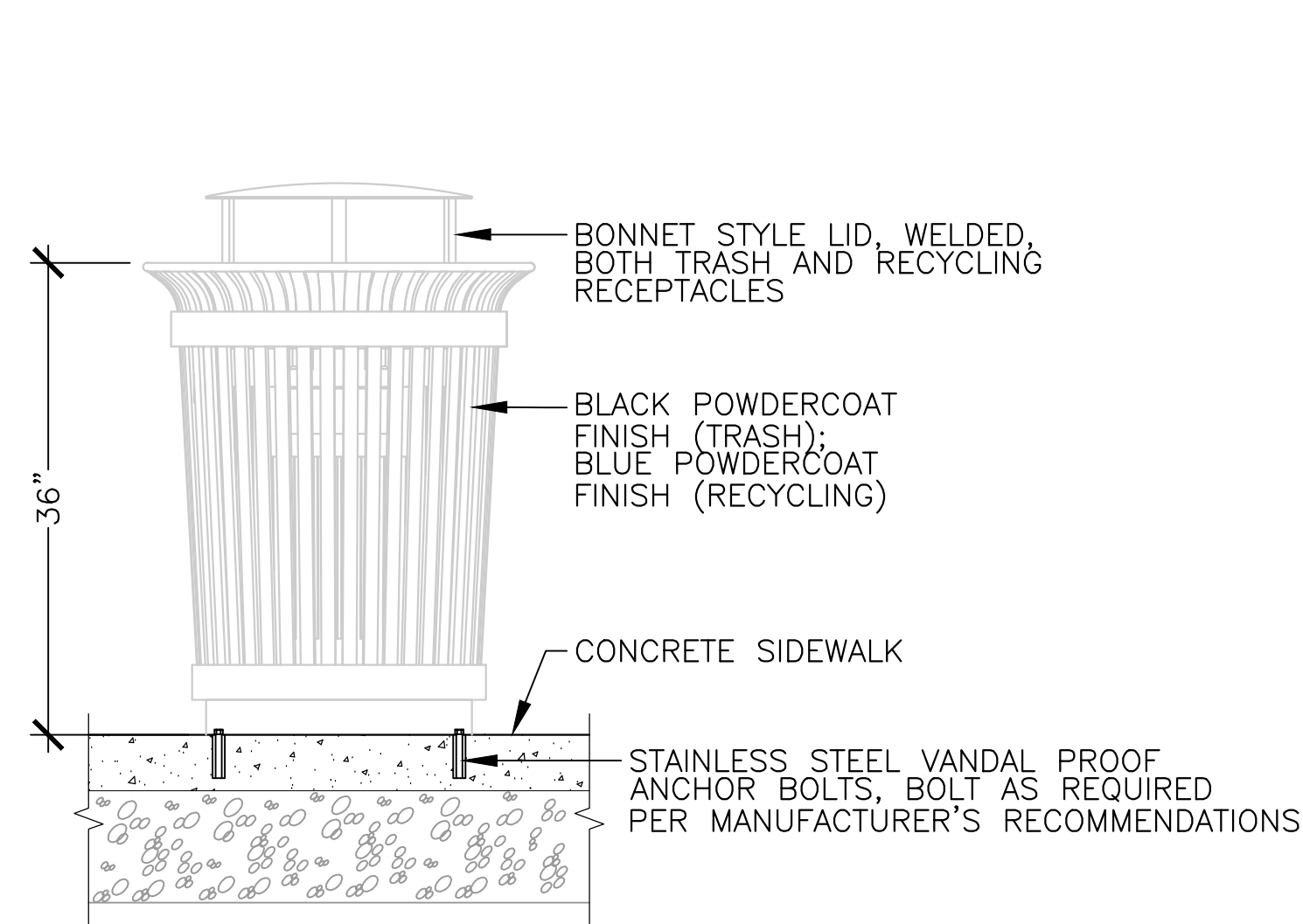
ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTER CURBING AND EDGING DETAILS

DESIGNED: JB	 75 Arlington St. Boston, MA 02116 PH. (617)428-7330 FAX (617)462-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET L-113
CHECKED: DB			
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED DATE: DEC 2017
CHECKED: GJ	ACC.		

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93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

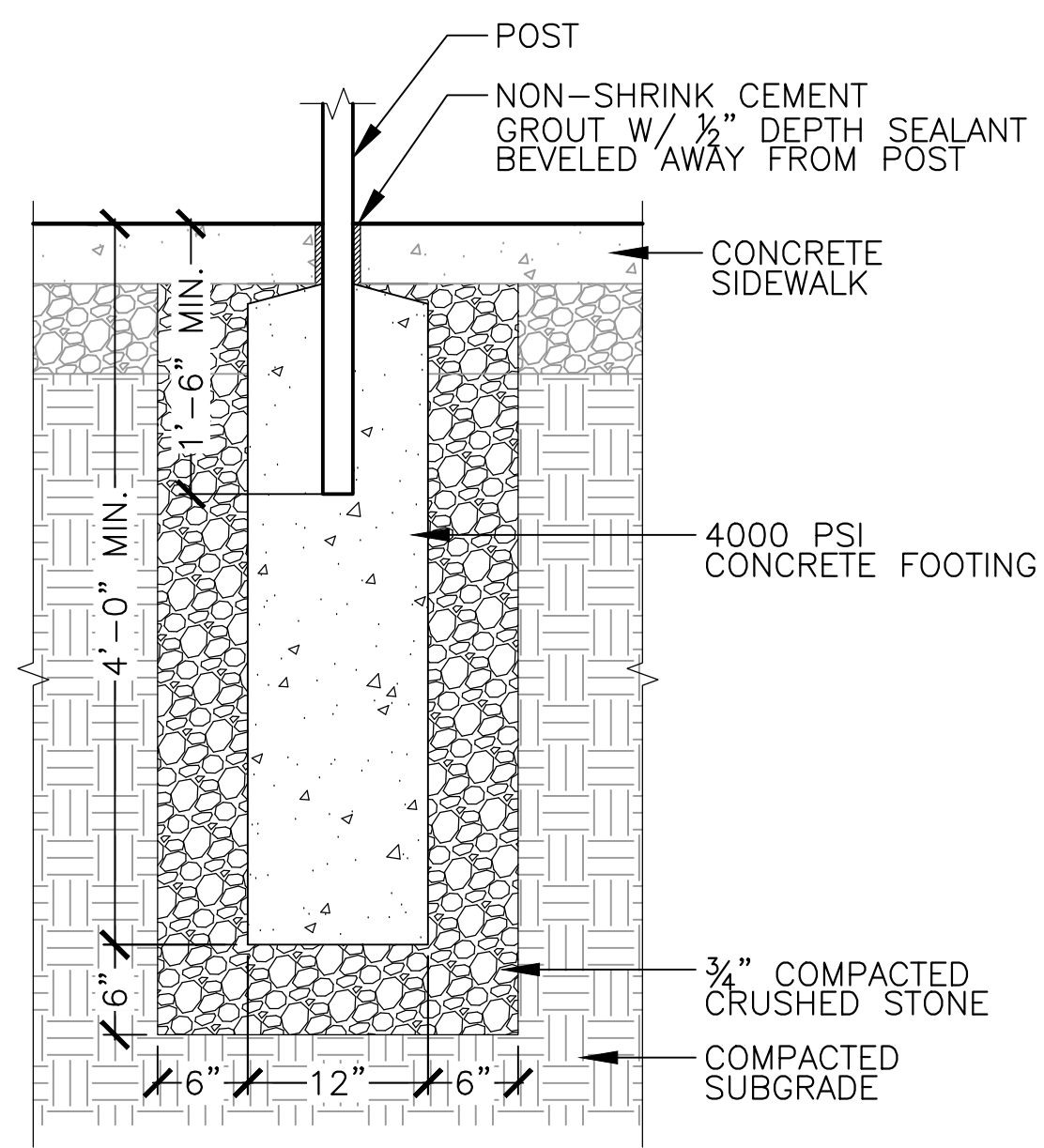
NO.	DATE	REVISIONS	BY



- NOTES:
1. RECEPTACLES SHALL INCLUDE (1) LOCKABLE SIDE OPENING DOOR.
 2. RECEPTACLES SHALL INCLUDE (1) 32 GALLON RUBBER LINER.
 3. ALL ASSEMBLY HARDWARE TO BE STAINLESS STEEL.
 4. PROVIDE SHOP DRAWINGS.

1 TRASH & RECYCLING RECEPTACLES

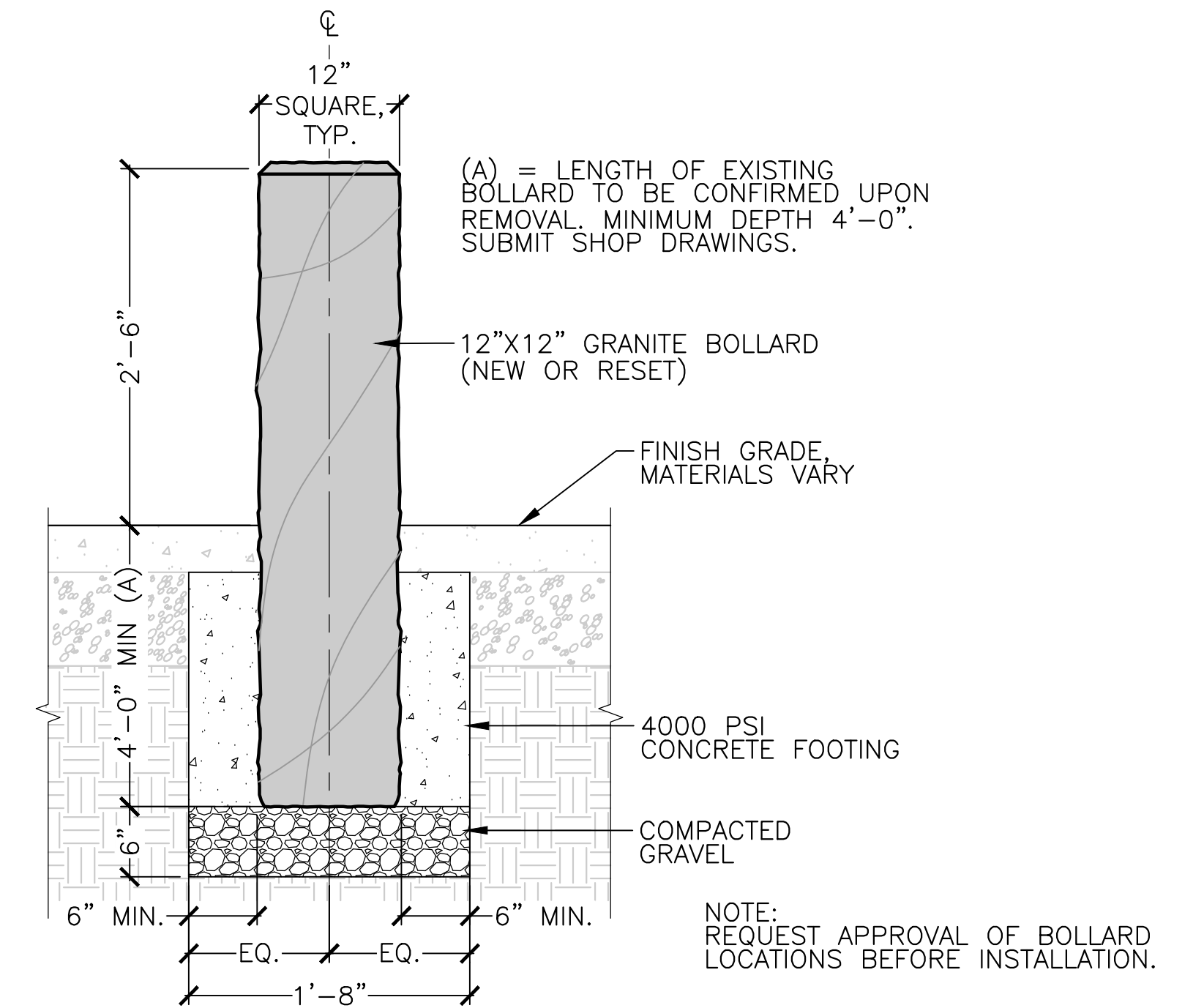
SCALE: NTS



- NOTES:
1. RESET BUS SHELTER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND CITY STANDARDS.
 2. REQUEST APPROVAL OF BUS SHELTER LOCATIONS BEFORE INSTALLATION.

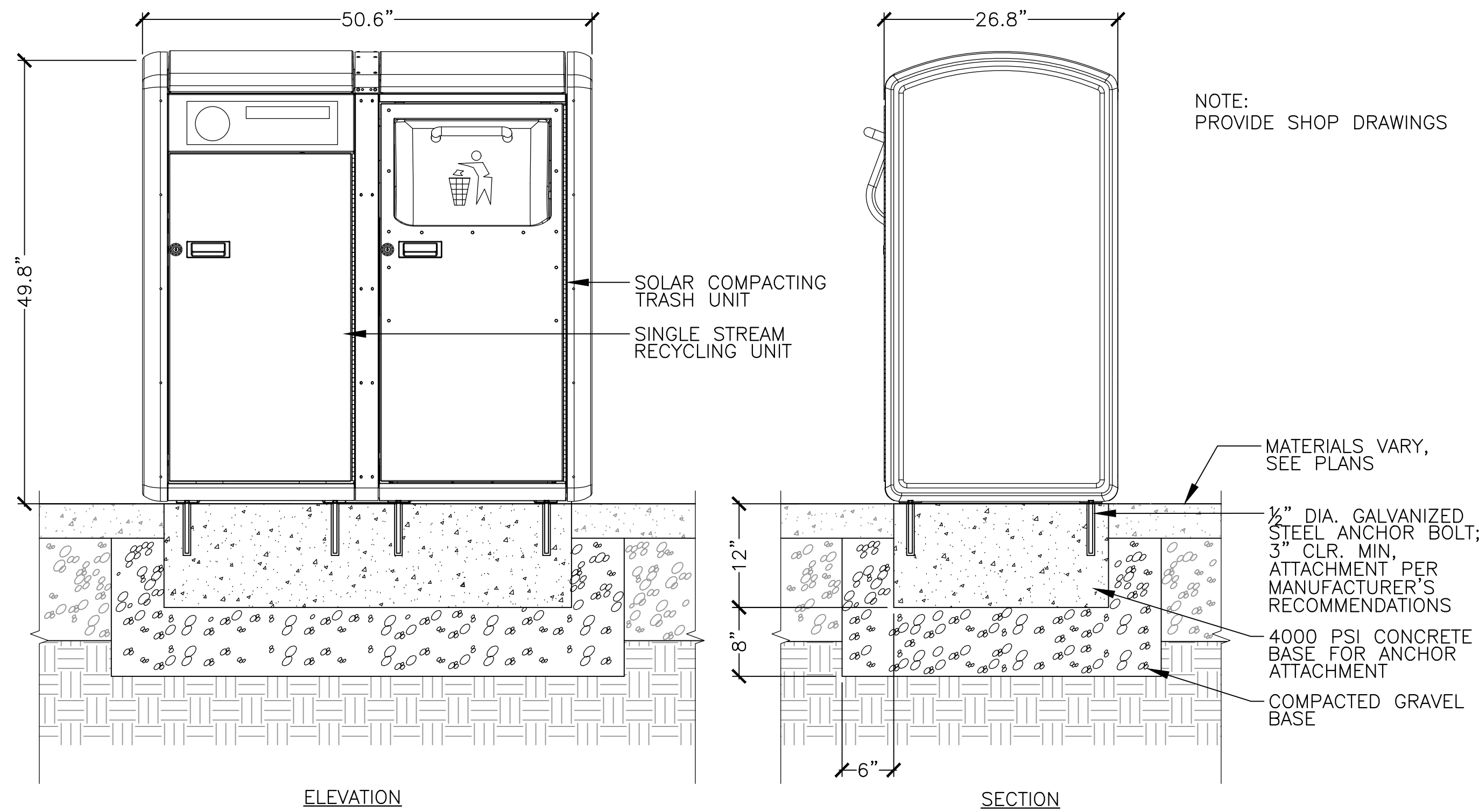
3 RESET BUS SHELTER FOOTING, TYP.

SCALE: NTS



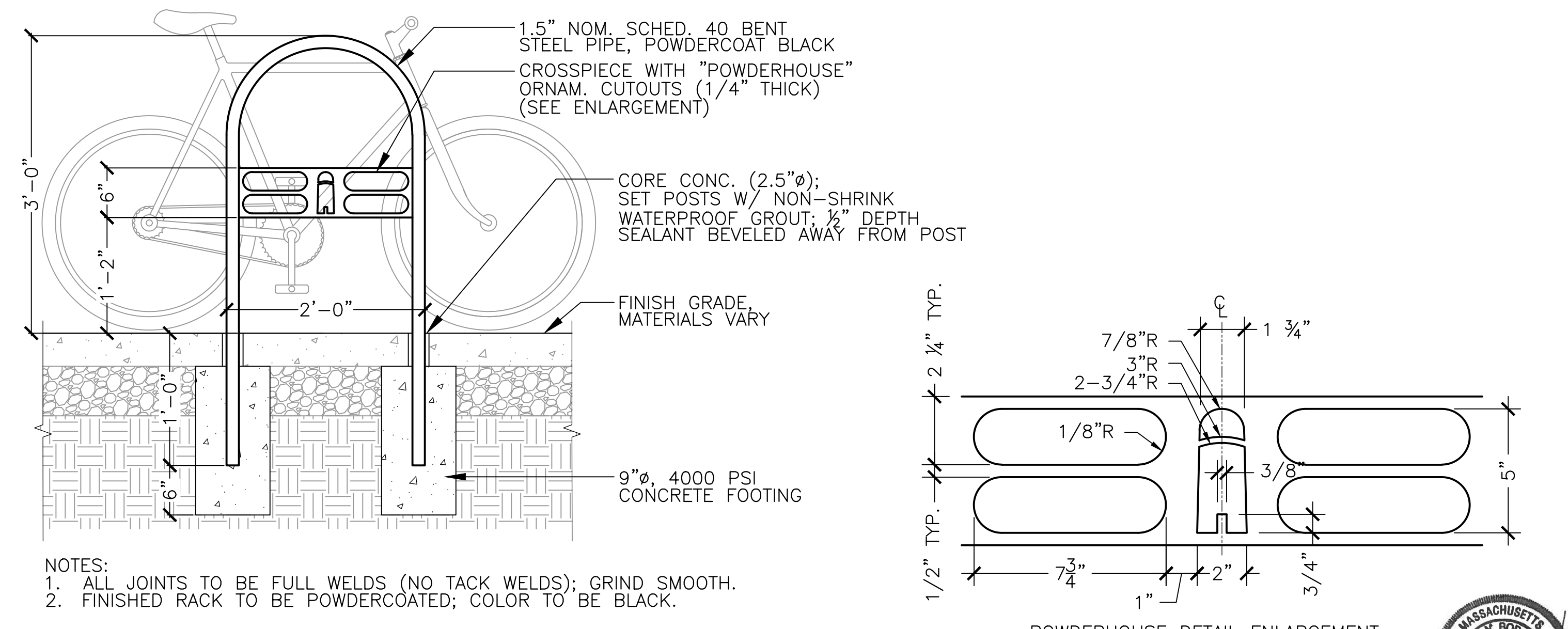
5 NEW OR RESET GRANITE BOLLARD

SCALE: NTS



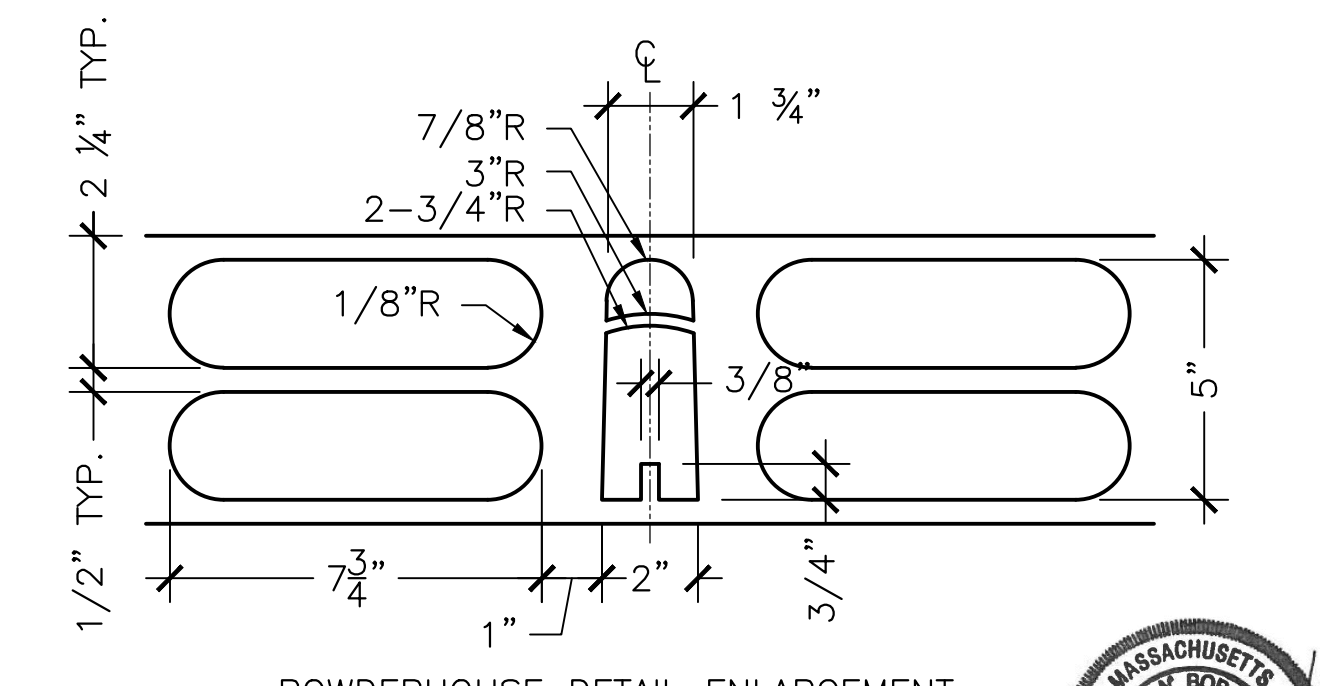
2 TRASH & RECYCLING STATION - SOLAR COMPACTOR

SCALE: NTS



4 BICYCLE RACK

SCALE: NTS



2 TRASH & RECYCLING STATION - SOLAR COMPACTOR

SCALE: NTS

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT STREET FURNITURE DETAILS

SHEET 1 OF 2

DESIGNED: JB			SHEET
CHECKED: DB			
DRAWN: AK/NB	REF.	CONT.	SCALE: AS NOTED
CHECKED: GJ	ACC.		DATE: DEC 2017

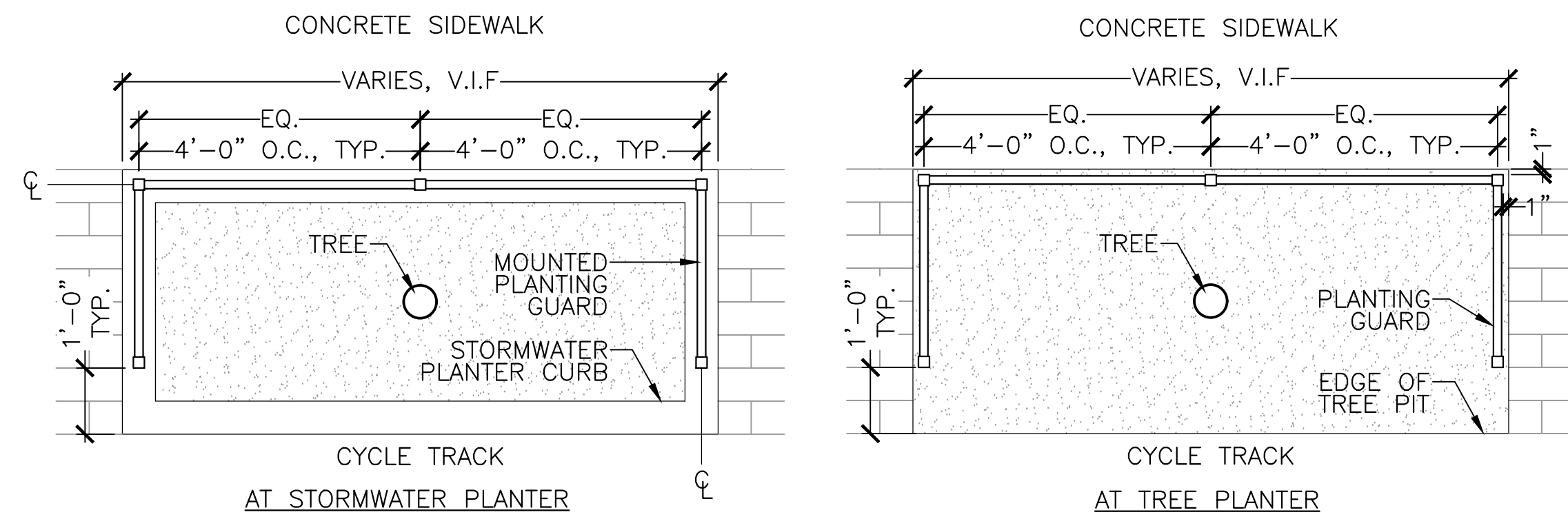
CITY OF SOMERVILLE
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SOMERVILLE, MA 02143

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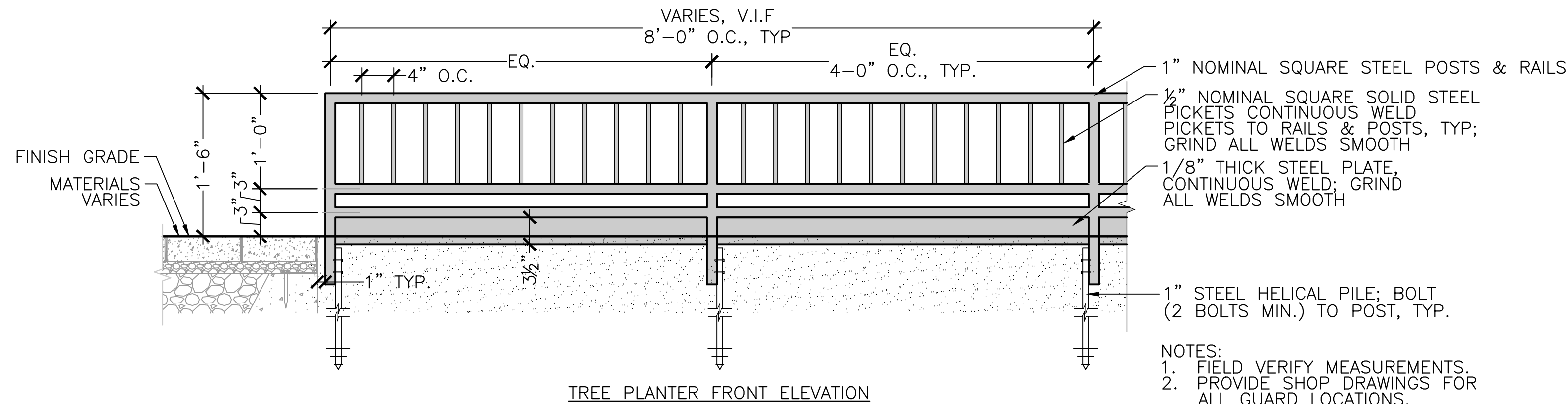
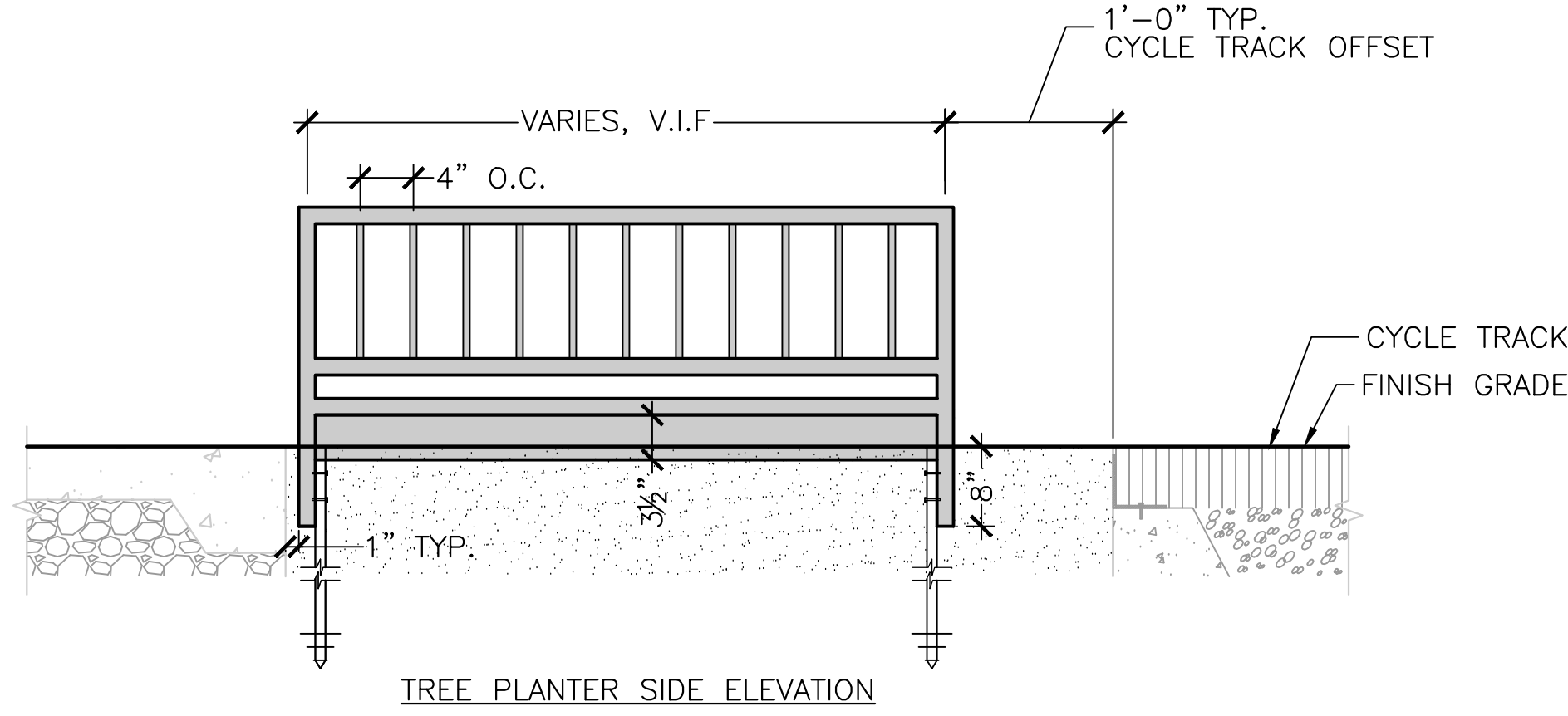
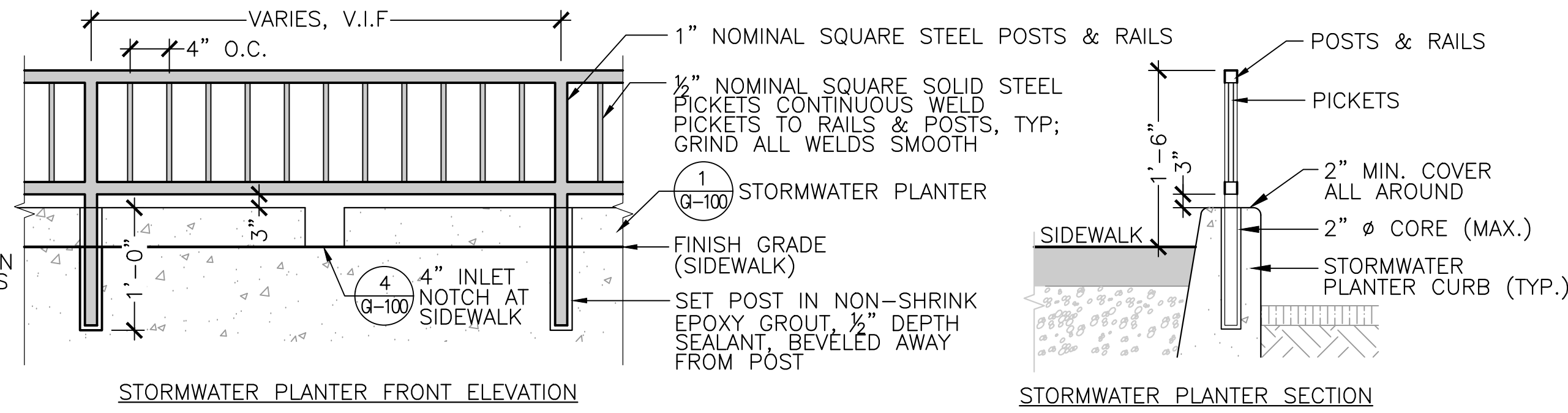
NO.	DATE	REVISIONS	BY



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NOTE:
COORDINATE LOCATION
OF POST HOLES TO
AVOID CURB INLETS ON
STORMWATER PLANTERS



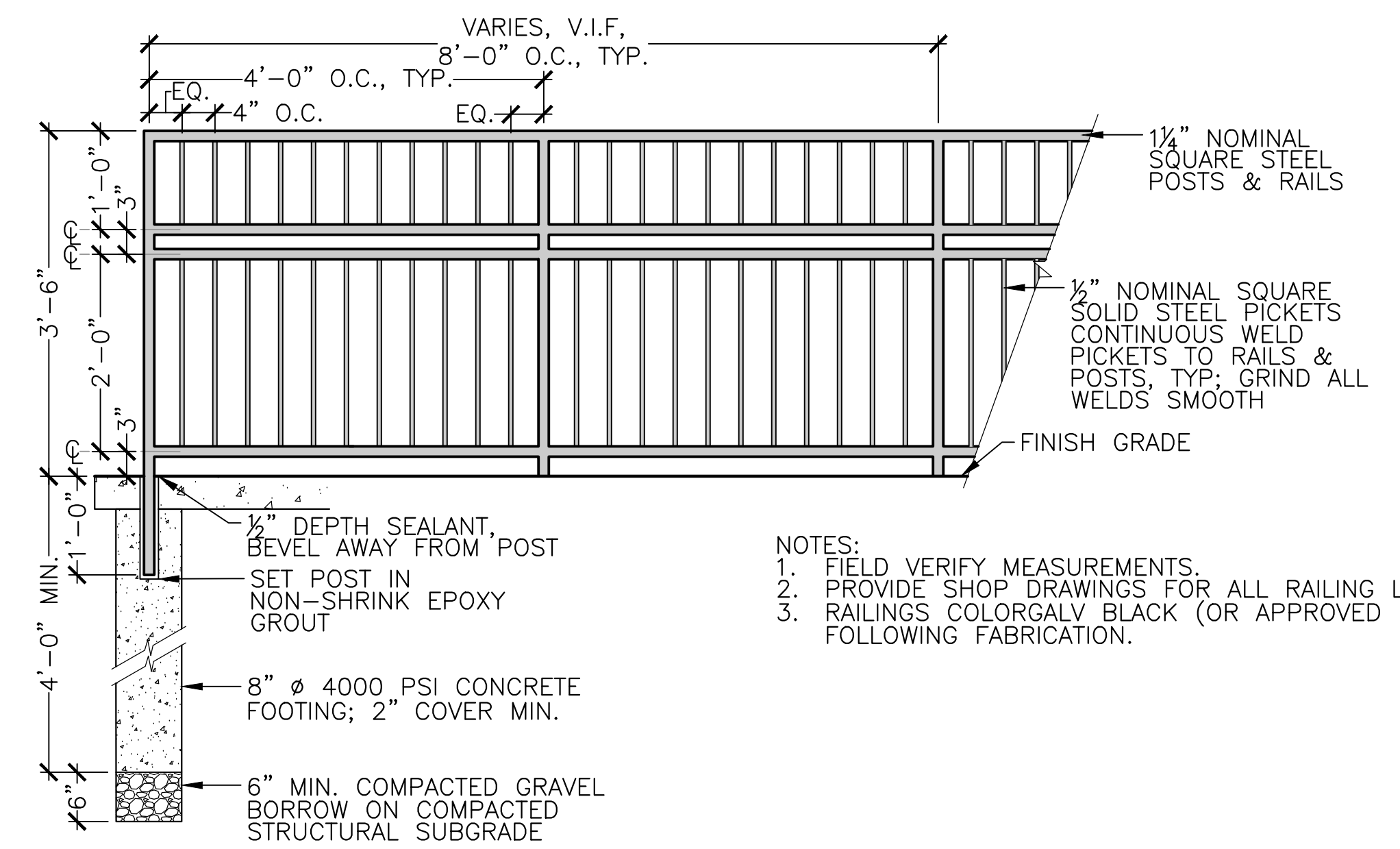
NOTES:
1. FIELD VERIFY MEASUREMENTS.
2. PROVIDE SHOP DRAWINGS FOR ALL GUARD LOCATIONS.
3. GUARDS COLOR GALV BLACK (OR APPROVED EQUAL), FOLLOWING FABRICATION.

1 18" HT. TREE/PLANTING GUARD
SCALE: NTS

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

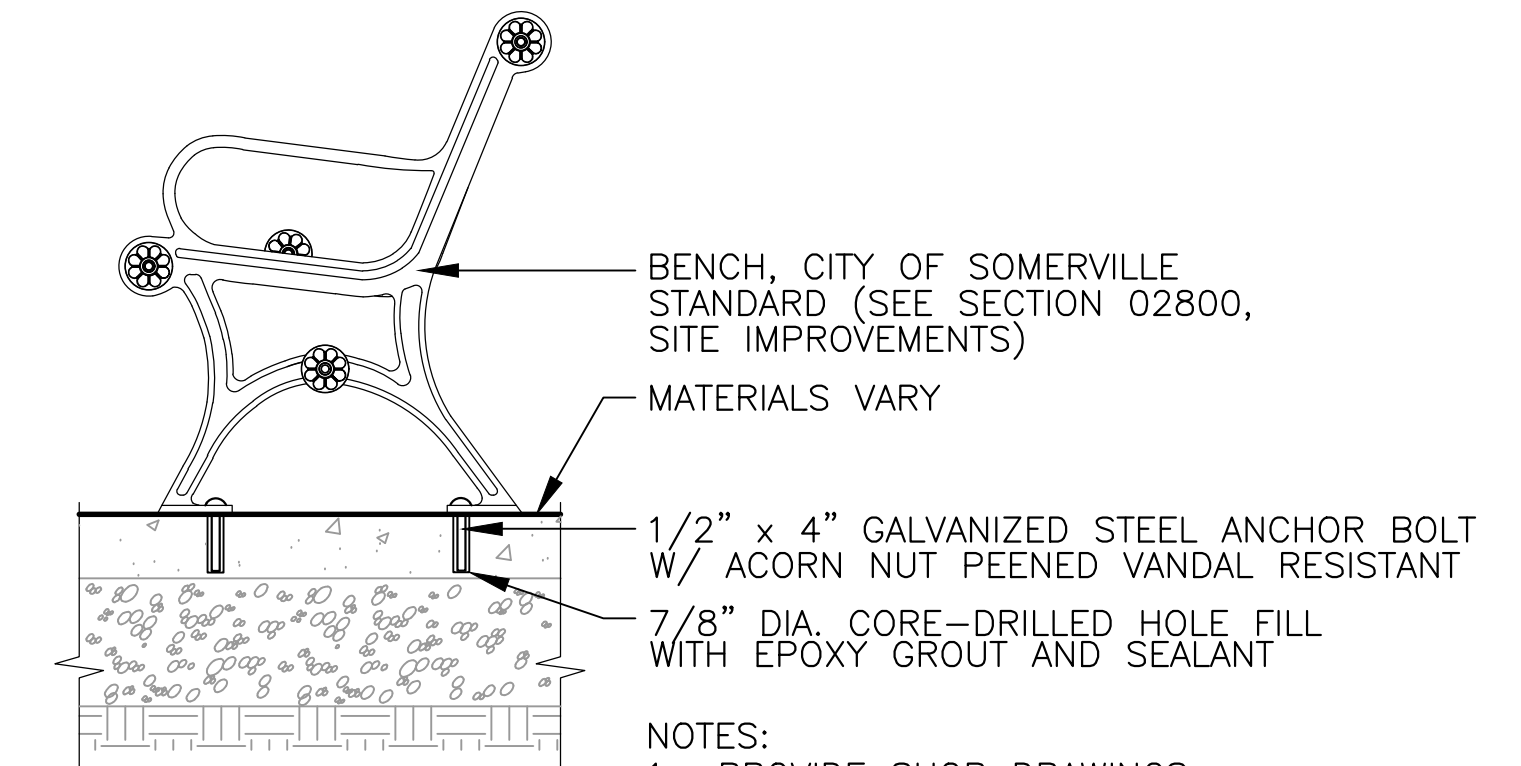
NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
STREET FURNITURE DETAILS
SHEET 2 OF 2



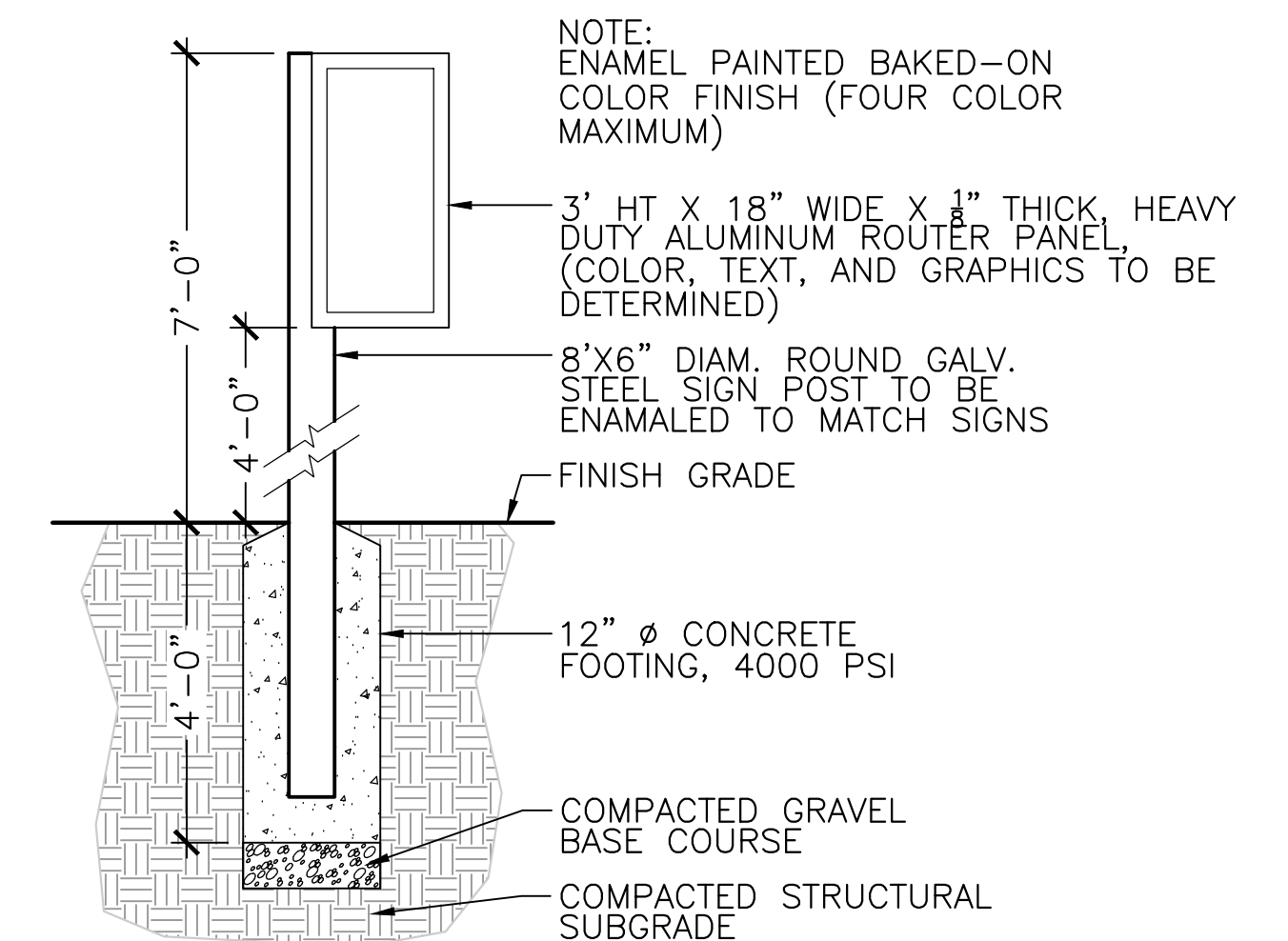
NOTES:
1. FIELD VERIFY MEASUREMENTS.
2. PROVIDE SHOP DRAWINGS FOR ALL RAILING LOCATIONS.
3. RAILINGS COLOR GALV BLACK (OR APPROVED EQUAL), FOLLOWING FABRICATION.

2 42" HT. RAILING
SCALE: NTS



NOTES:
1. PROVIDE SHOP DRAWINGS.
2. REQUEST APPROVAL OF BENCH LOCATIONS BEFORE INSTALLATION.

3 BENCH
SCALE: NTS



NOTE:
ENAMEL PAINTED BAKED-ON COLOR FINISH (FOUR COLOR MAXIMUM)

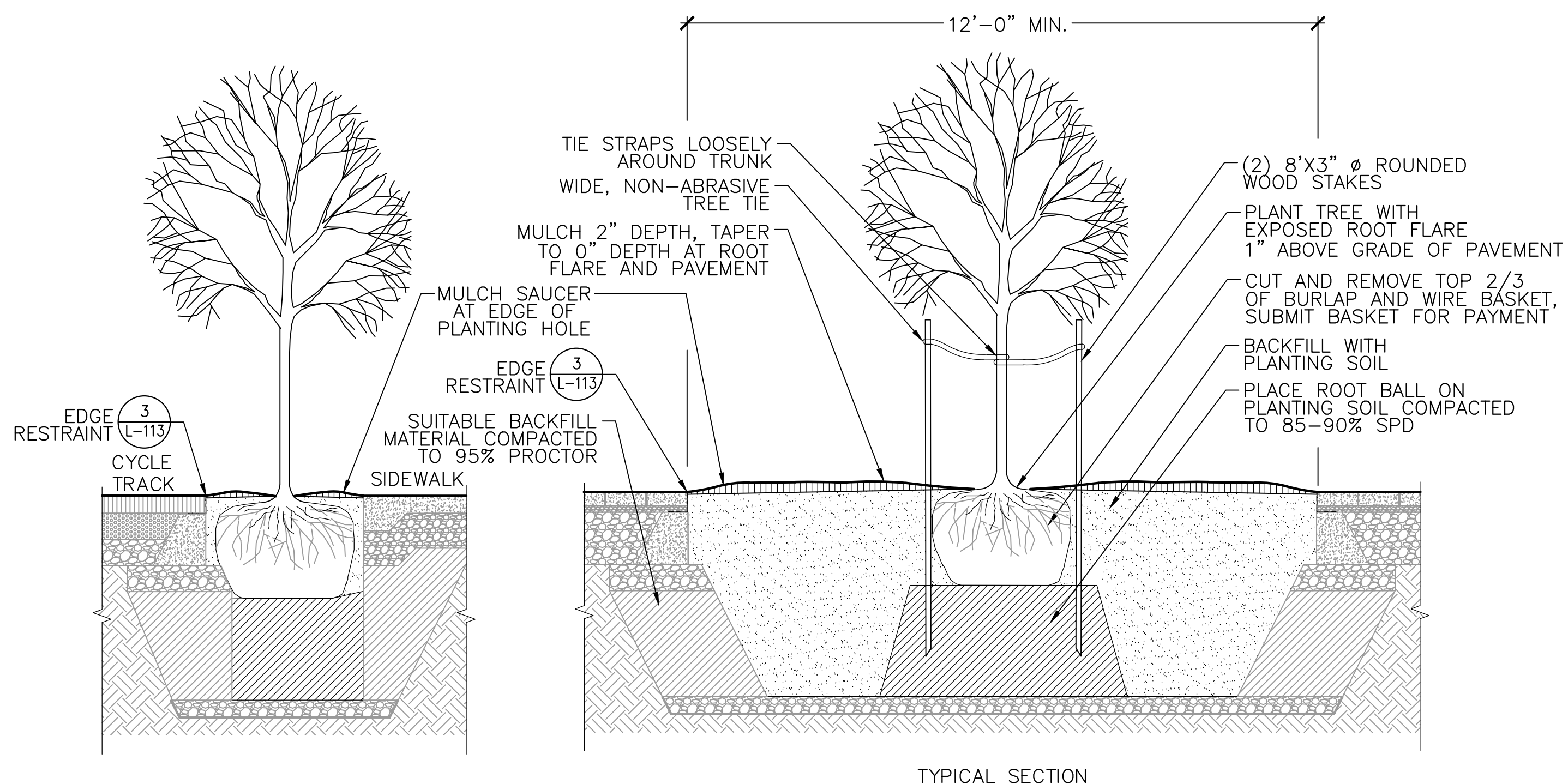
3 EDUCATIONAL SIGNAGE
SCALE: NTS



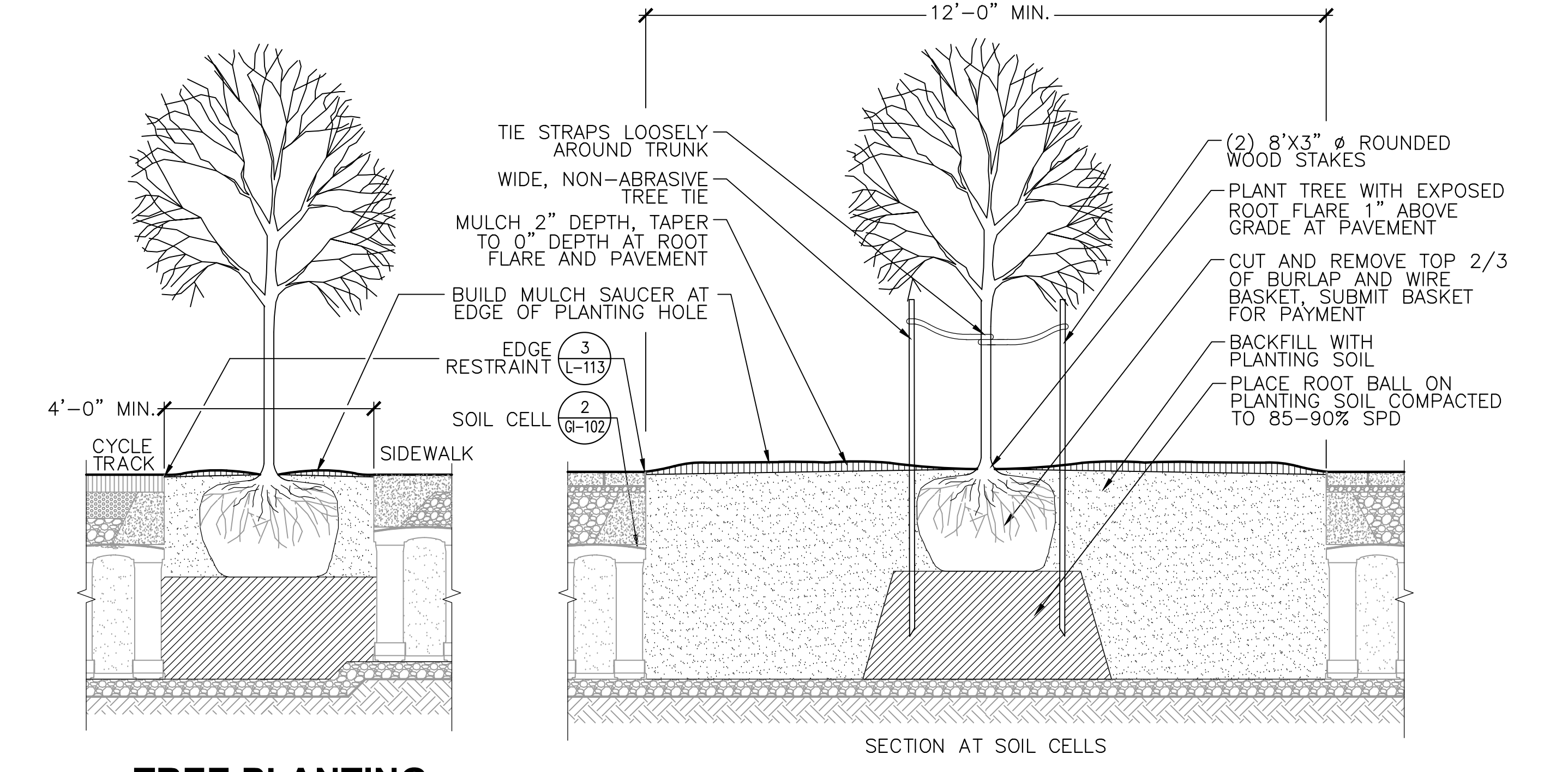
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CHECKED: DB			L-116
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CHECKED: GJ	ACC.		DATE: DEC 2017

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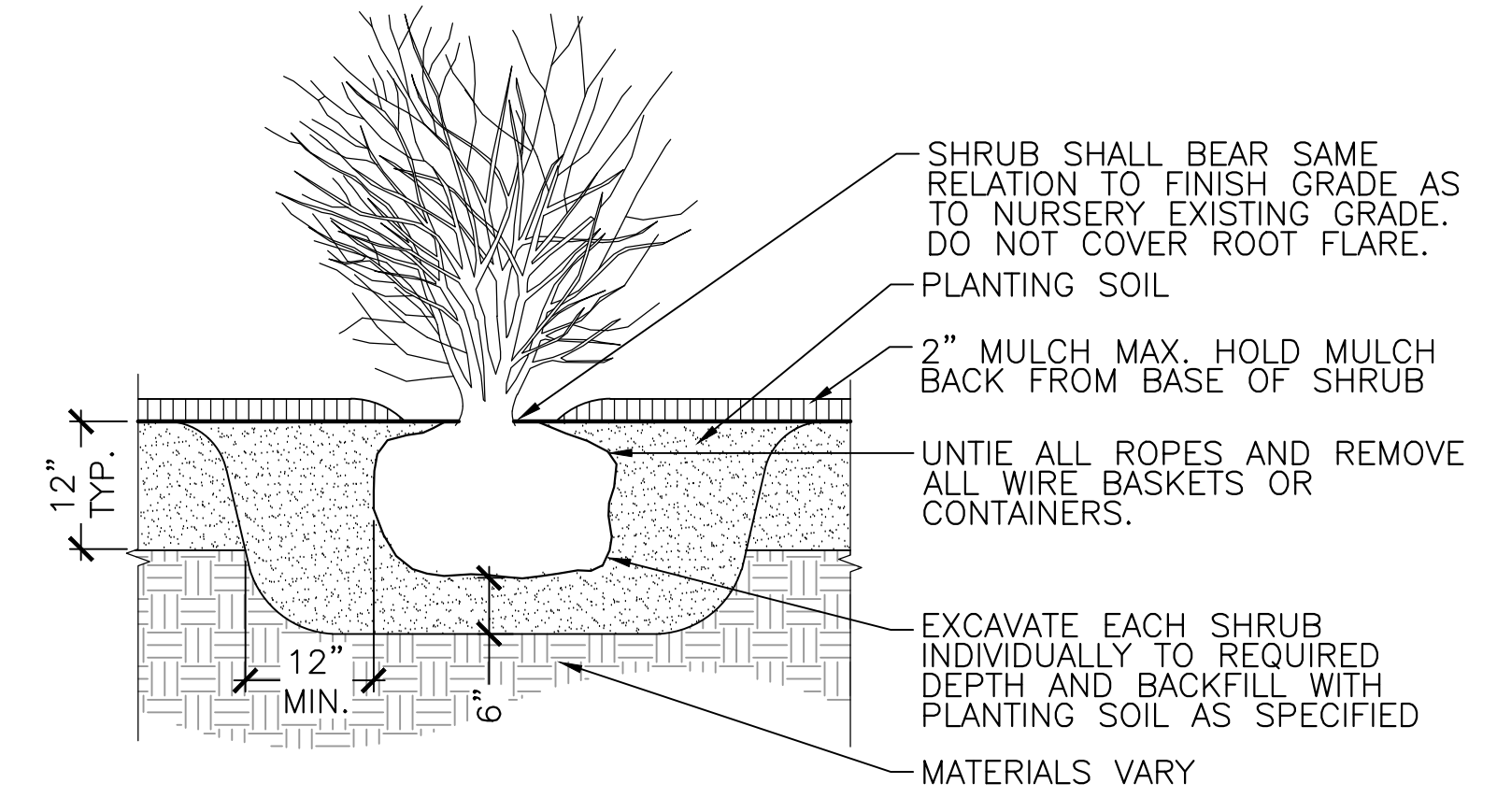
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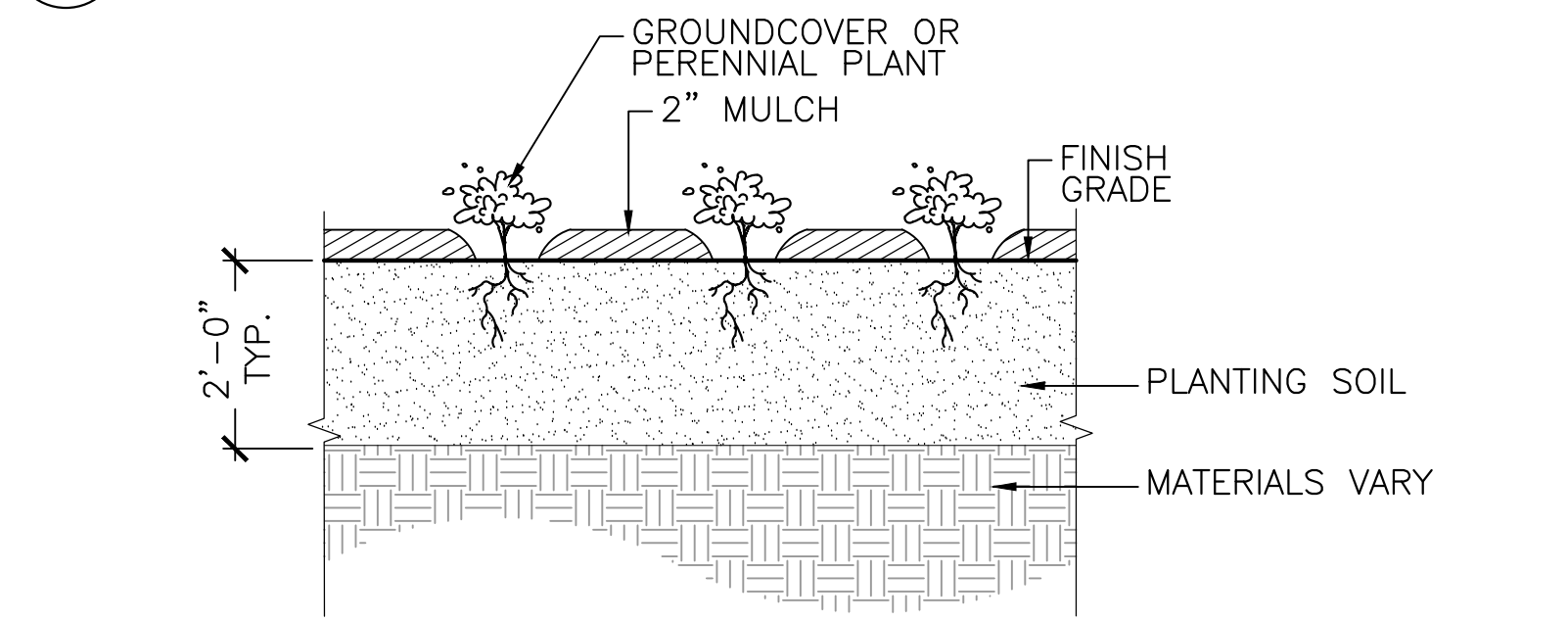
1 TREE PLANTING
SCALE: NTS



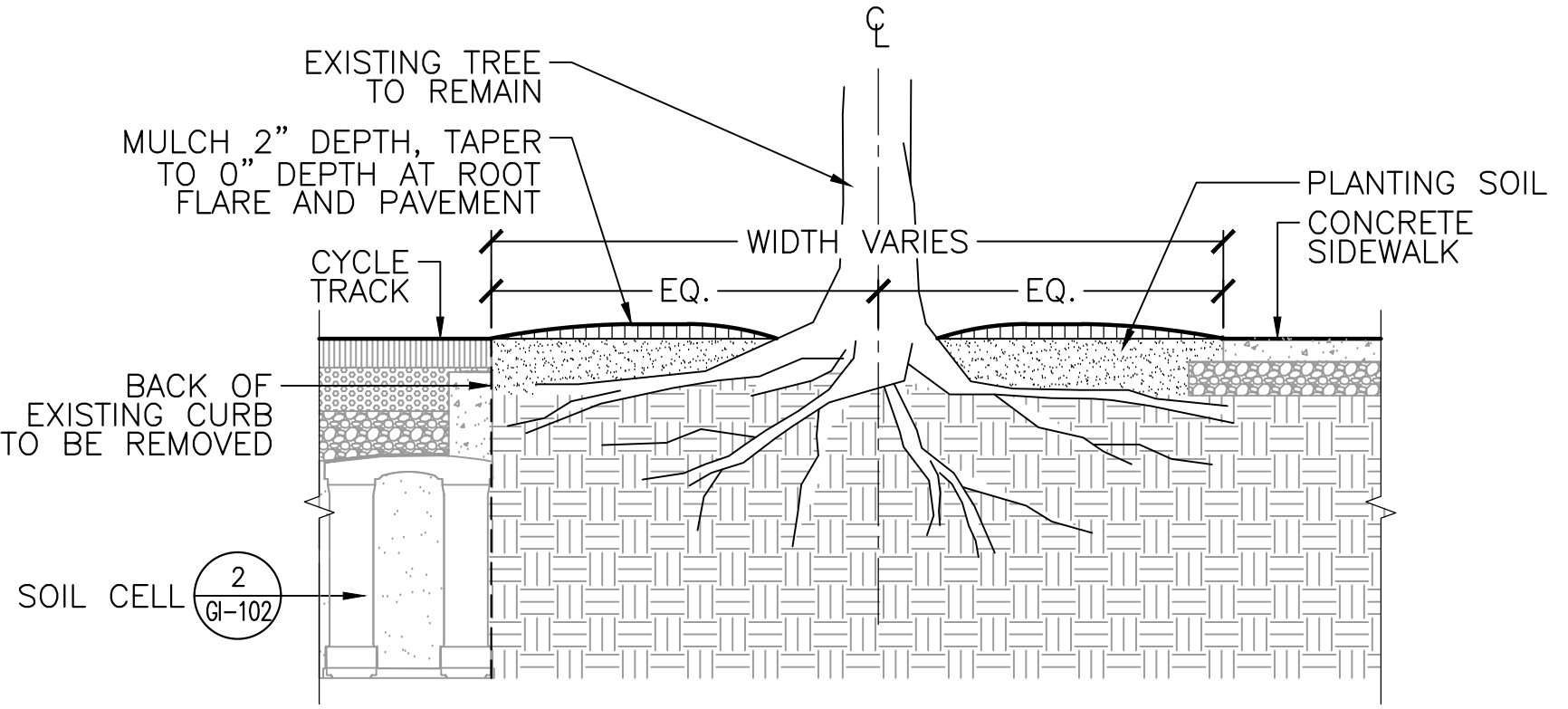
2 EXISTING STREET TREE TREATMENT
SCALE: NTS



3 SHRUB PLANTING
SCALE: NTS

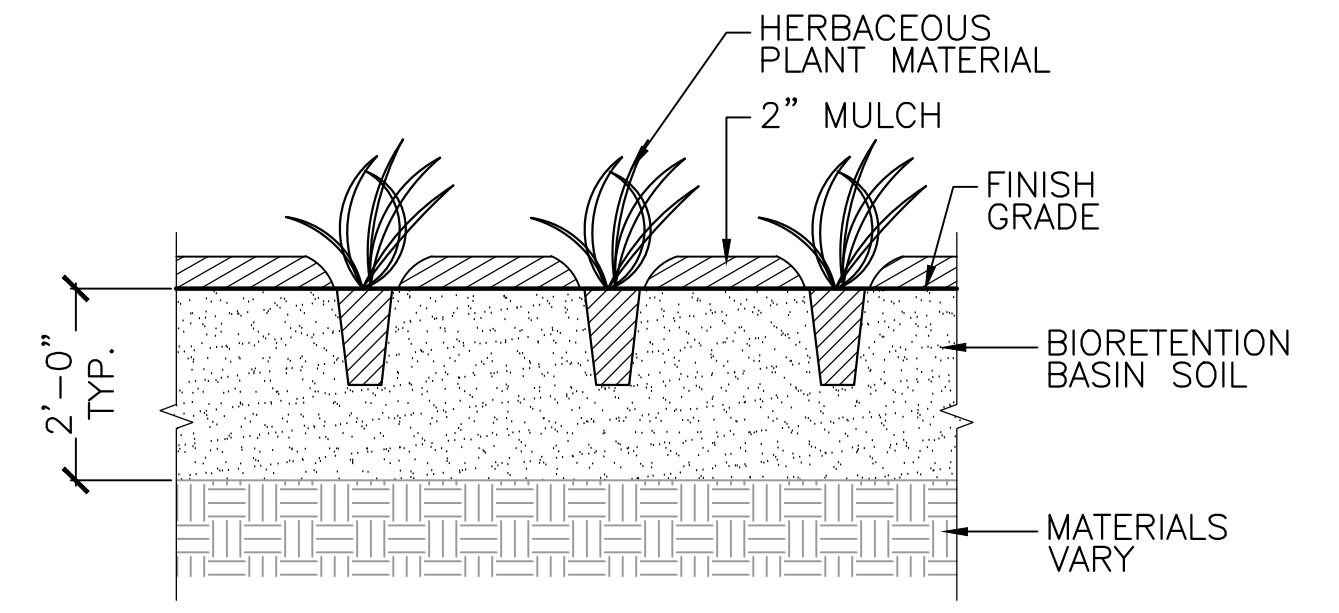


4 PERENNIAL/GROUNDCOVER PLANTING
SCALE: NTS



- NOTES:
- AIRSPADE SOIL FROM AROUND EXISTING ROOTS WITHIN LIMITS OF CANOPY TO A DEPTH ACCOMMODATING NEW SIDEWALK MATERIALS. CLEAN CUT ROOTS ≤ 1 " DIA. WITH SHARP PRUNERS. ROOTS > 1 " DIA. REQUIRE ARBORIST APPROVAL PRIOR TO REMOVAL.
 - AIRSPADE SOIL WITHIN PROPOSED TREE PIT TO LOOSEN SOIL AROUND EXISTING ROOTS. AMEND EXISTING SOIL WITH APPROVED PLANTING SOIL AND BACKFILL PER SPECIFICATIONS.
 - NEW TREE WELLS FOR EXISTING TREES SHALL BE 4' MIN. WIDTH AND 8' MIN. LENGTH UNLESS OTHERWISE NOTED.

5 BIORETENTION BASIN PLANTING
SCALE: NTS



- NOTES:
- REFER TO GI DRAWINGS FOR BIORETENTION BASIN SECTION.
 - SEE PLANT SCHEDULE FOR PLANT SIZING AND SPACING.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
PLANTING DETAILS
SHEET 1 OF 1

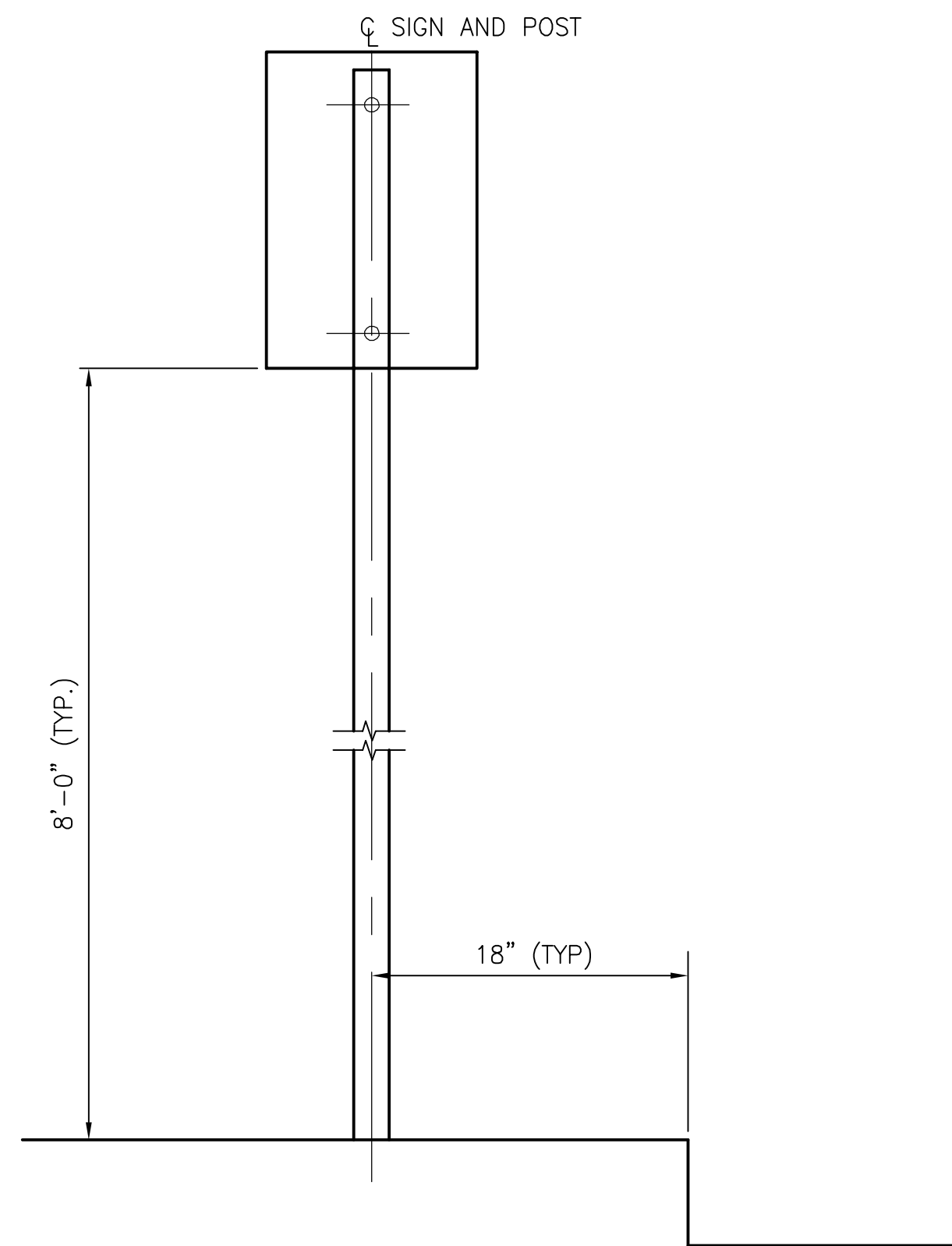
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CHECKED: DB			
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CHECKED: GJ	ACC.		DATE: DEC 2017

NO.	DATE	REVISIONS	BY

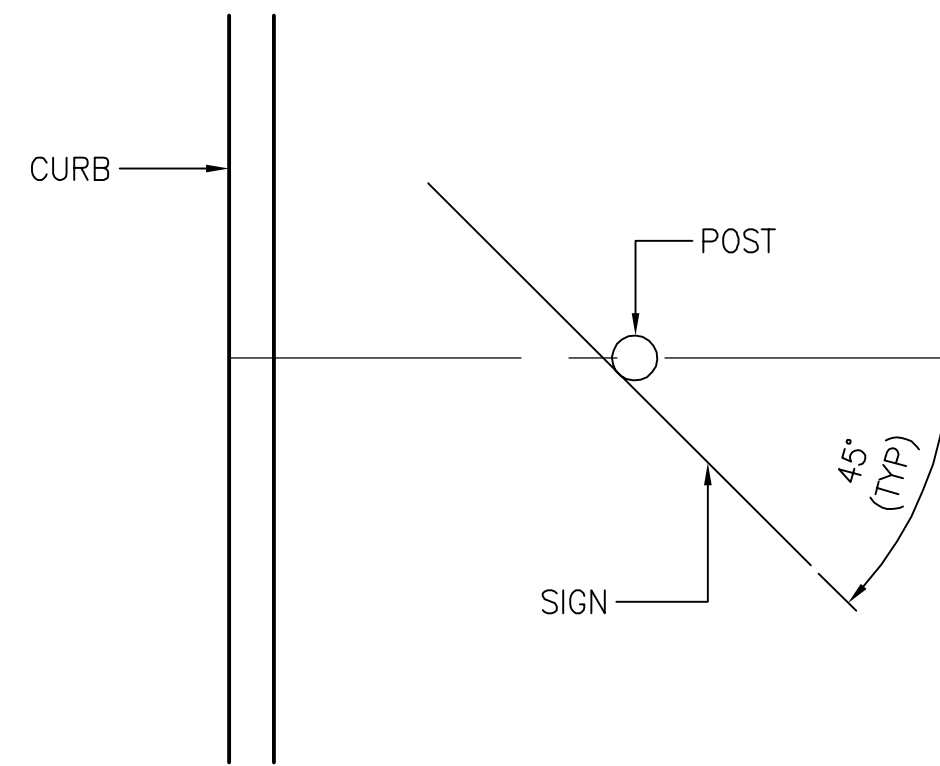
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93 HIGHLAND AVENUE
SOMERVILLE, MA 02143



2017-11-16 7:06 PM T:\52647LS Union Square Study and Design\SH\DWG\CP-2_CP-3 Sewer Separation\Civil\L-125 SIGNAGE DETAILS.dwg



1 SINGLE SIGN MOUNTING DETAIL
SCALE: NTS

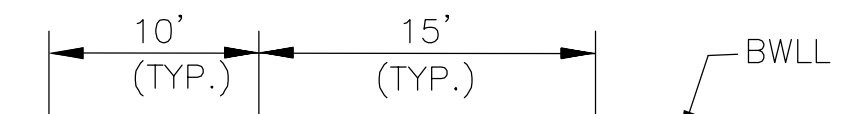


2 PLAN - PARKING SIGN ONLY
SCALE: NTS

ABBREVIATIONS:

- BWGL BROKEN WHITE GUIDE LINE
- BWLL BROKEN WHITE LANE LINE
- DYCL DOUBLE YELLOW CENTER LINE
- SWEL SOLID WHITE EDGE LINE
- SWGL SOLID WHITE GUIDE LINE
- SWLL SOLID WHITE LANE LINE
- DWBLL DOUBLE WHITE BROKEN LANE LINE
- SYCL SOLID WHITE CENTER LINE
- SYGL SOLID YELLOW GORE LINE
- BDYGL BROKEN DOUBLE YELLOW GUIDE LINE

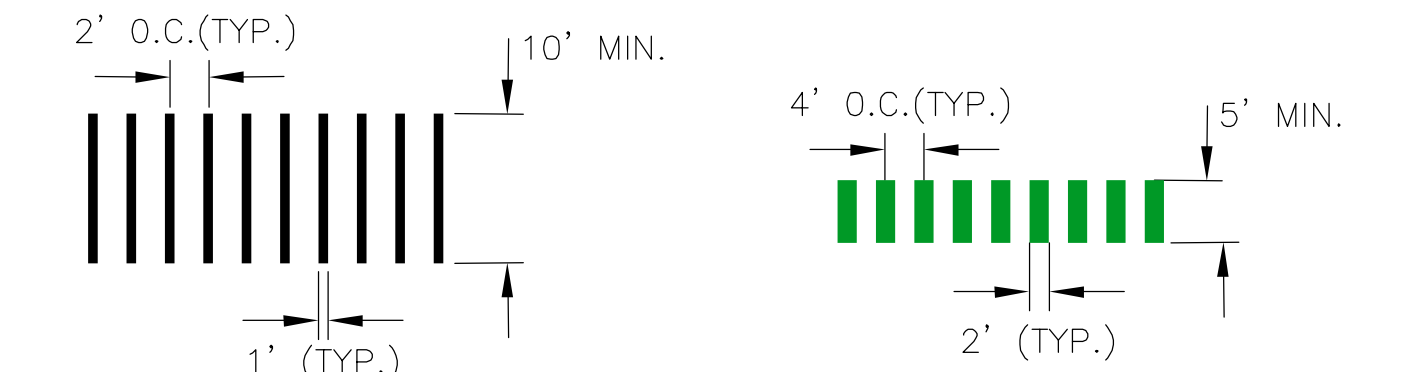
STRIPING DETAILS



LANE STRIPING



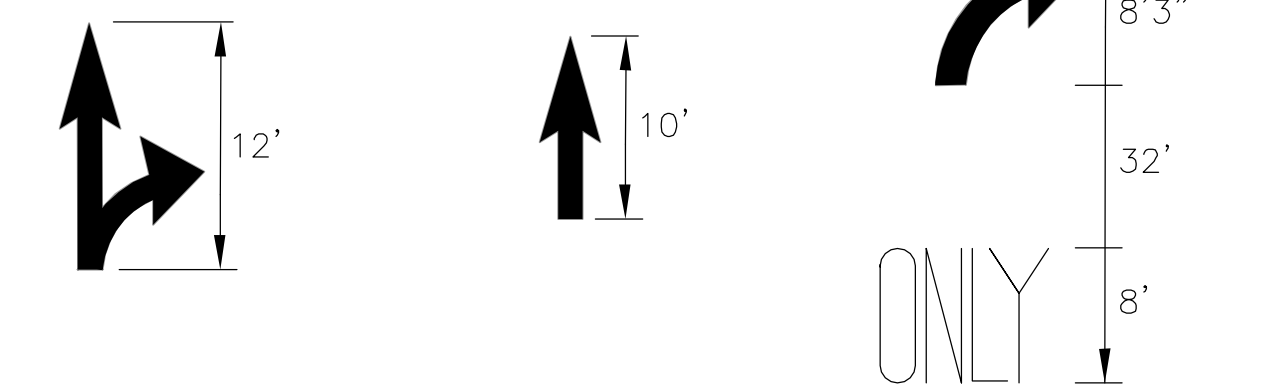
GUIDE LINES



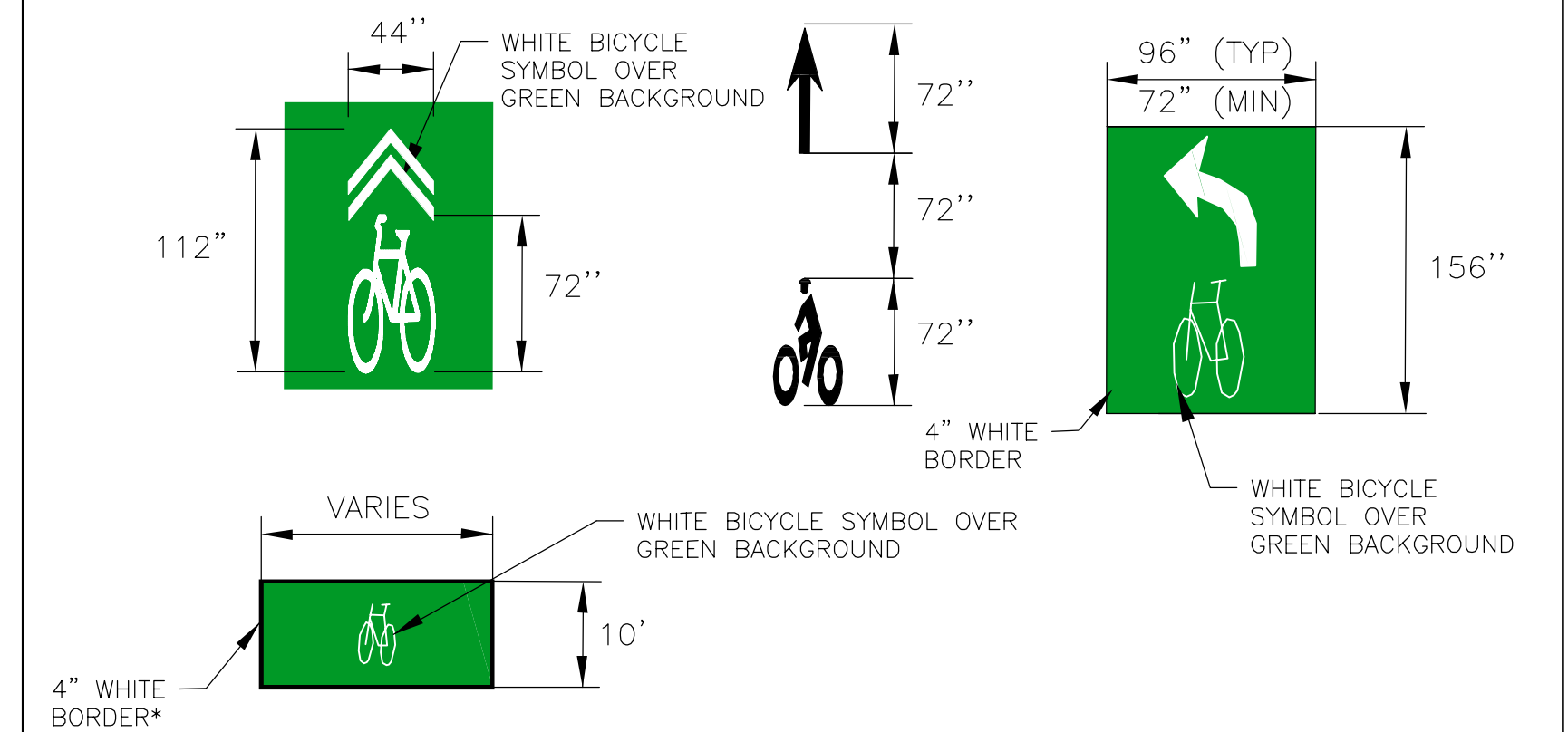
PEDESTRIAN

BICYCLE

CROSSWALKS



TURNING MARKINGS



*NOTE REQUIRED WHEN ADJACENT TO CROSSWALK OR STOP LINE

BICYCLE MARKINGS

NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE SHEET G-4.
2. FOR GENERAL NOTES, SEE SHEET G-5.
3. FOR TRAFFIC SIGN SUMMARY, SEE SHEETS L-56 THRU L-57.
4. PRIOR TO INSTALLATION OF PERMANENT PAVEMENT MARKINGS, PROVIDE A SPRAY PAINT LAYOUT FOR APPROVAL BY THE ENGINEER.
5. EXACT LOCATION OF EACH SIGN WILL BE AS DETERMINED IN THE FIELD BY THE ENGINEER.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SIGNAGE AND STRIPING DETAILS

DESIGNED: LAC
CHECKED: RJB
DRAWN: LAC
CHECKED: RJB

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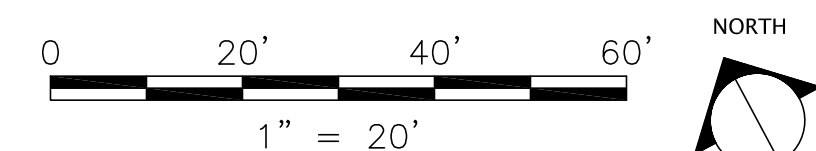
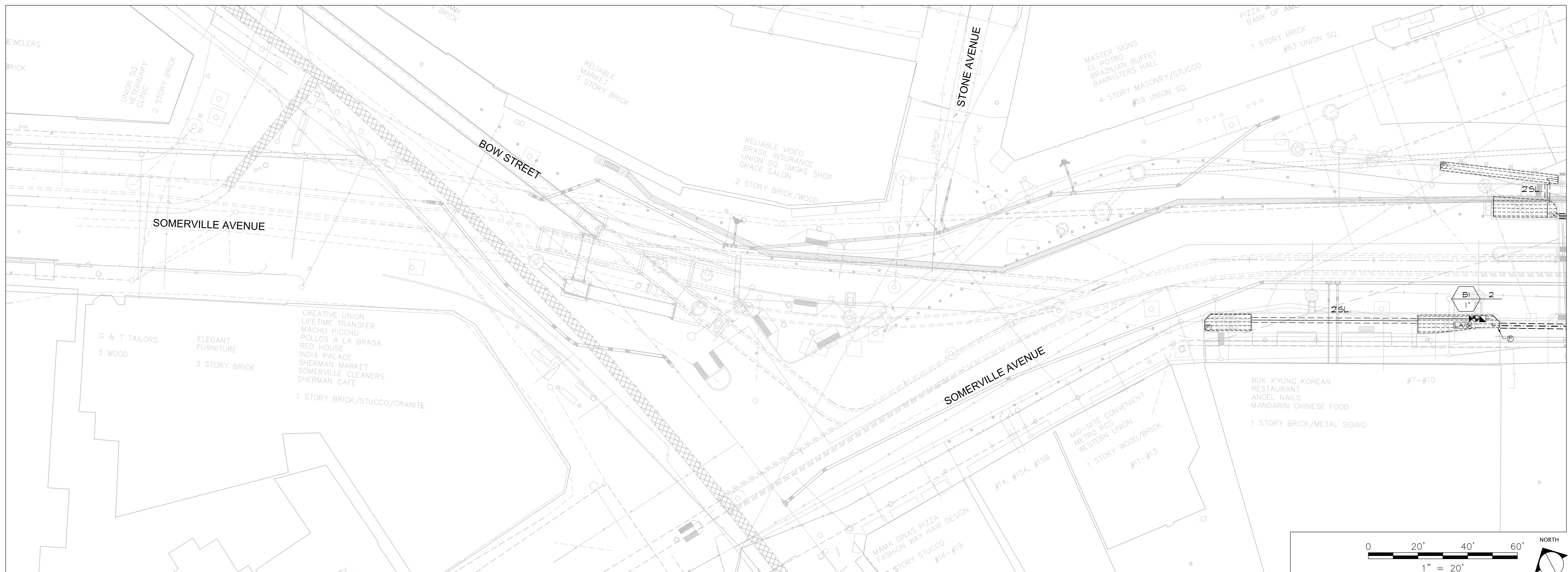
SHEET
L-125

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ACC. DATE: DEC 2017

CITY OF SOMERVILLE
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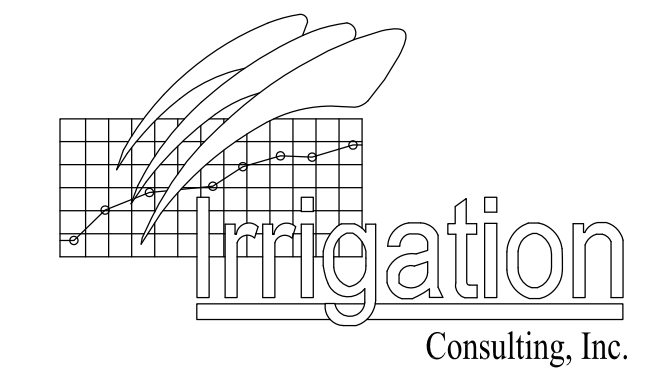
NOTE:
SEE DETAIL SHEET I-8 FOR ADDITIONAL NOTES,
APPLICABLE TO SHEETS I-1 THROUGH I-5.

IRRIGATION LEGEND			
SYMBOL	PSI	SPACING	DESCRIPTION
	30	15'	12-INCH POP UP SPRAY SPRINKLER WITH CHECK VALVE AND PRESSURE REGULATION
	30	8'	Q = FIXED QUARTER PATTERN NOZZLE H = FIXED HALF PATTERN NOZZLE V = VARIABLE ARC NOZZLE
	30	5'	
	30	5'	
	30	4'x30'	
	30	4'x15'	
			36" DIAMETER BLANK DRIP TUBING TREE RING. USE WITH 1 GPH DEEP DRIP STAKES. CONNECT STAKE DISTRIBUTION TUBING TO A 1 GPH POINT SOURCE EMITTER AND TO A SELF PIERCING BARBED TRANSFER FITTING (PROVIDE 4 STAKES PER INDIVIDUAL STREET TREE)
	45	12"x10"	IN-LINE EMITTER DRIP TUBING WITH 0.6 GPH EMITTERS
	40	12"	IN-LINE EMITTER DRIP TUBING (IN AERATION PIPE) WITH 0.9 GPH EMITTER

IRRIGATION LEGEND	
SYMBOL	DESCRIPTION
	1" 24 VOLT ELECTRIC ZONE VALVE (SEE VALVE DESIGNATOR FOR FLOWS)
	1-1/2" ISOLATION GATE VALVE
	1" QUICK COUPLING VALVE
	MANUAL FLUSHING VALVE
	1" 24 VOLT ELECTRIC ZONE VALVE W/ DISK FILTER (DRIP) (SEE VALVE DESIGNATOR FOR FLOWS)
	CLASS-200 PVC LATERAL PIPING (SEE LATERAL PIPE SCHEDULE)
	1-1/2" CLASS-200 PVC MAINLINE PIPING
	CLASS-160 PVC PIPE SLEEVE (SIZE AS INDICATED)
	INSTALL SCH-40 PVC WIRE CONDUIT ADJACENT TO ALL MAINLINE PIPE SLEEVES. MINIMUM WIRE CONDUIT SIZE TO BE 2-INCH. SEE SLEEVING DETAIL.

LATERAL PIPE SCHEDULE	
FLOW	PIPE SIZE / TYPE
0-12 GPM	1 INCH 100 PSI POLYETHYLENE OR CLASS-200 PVC
12-22 GPM	1-1/4 INCH 100 PSI POLYETHYLENE OR CLASS-200 PVC

IRRIGATION LEGEND	
SYMBOL	DESCRIPTION
	AUTOMATIC WIRELESS RAIN SENSOR, ONE FOR EACH CONTROLLER
	AUTOMATIC CONTROLLER
	LIGHTING SURGE WITH GROUND
	IRRIGATION WATER METER
	BACK FLOW PREVENTION DEVICE IN ENCLOSURE
	MASTER VALVE AND FLOW METER, EACH WATER SOURCE LOCATIONS
	SERVICE BOX WITH GRATED COVER FOR AERATION/DRIP PIPE MAINTENANCE
ABBREVIATION:	
	SIZE OF SLEEVE INCH SLEEVE
VALVE DESIGNATION:	
	CONTROLLER 'A' STATION NUMBER
	CONTROLLER 'B' STATION NUMBER
	FLOW GPM
	CONTROL VALVE SIZE

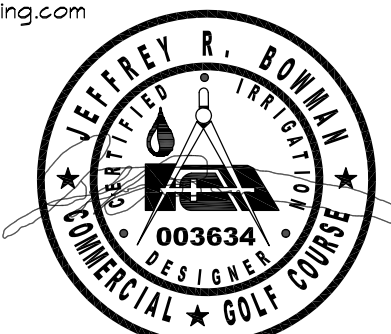


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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3 SEWER SEPARATION AND WATER REPLACEMENT IRRIGATION PLAN SHEET 1 OF 5

DESIGNED: JB/GD
CHECKED: JB
DRAWN: JB/GD
CHECKED: JB



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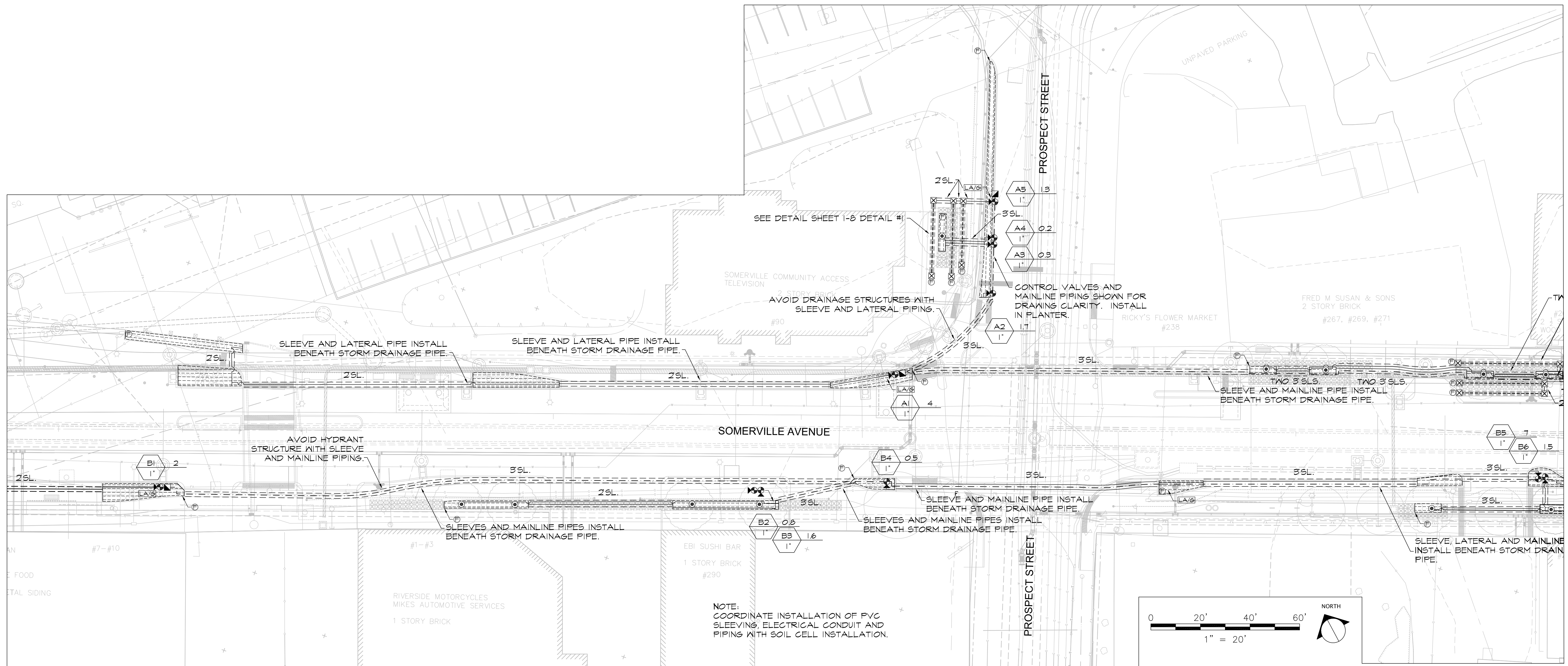
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SHEET
I-1

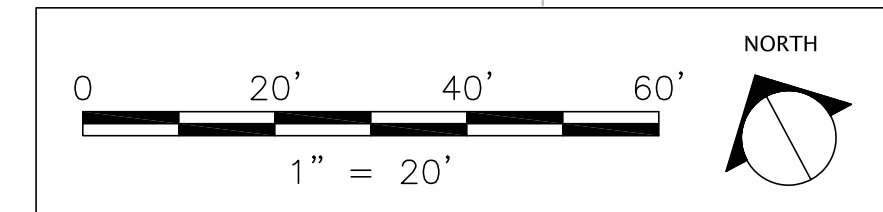
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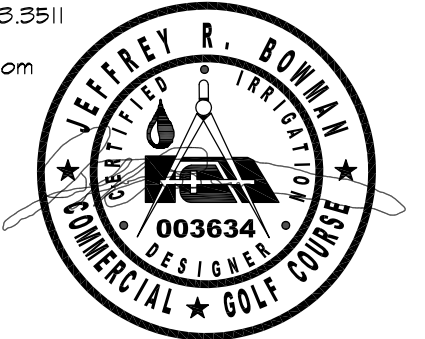


NOTE:
COORDINATE INSTALLATION OF P.V.G.
SLEEVING, ELECTRICAL CONDUIT AND
PIPING WITH SOIL CELL INSTALLATION.



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NOTE:
SEE PLAN SHEET I-1 FOR LEGEND.
SEE DETAIL SHEET I-8 FOR ADDITIONAL NOTES.

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SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

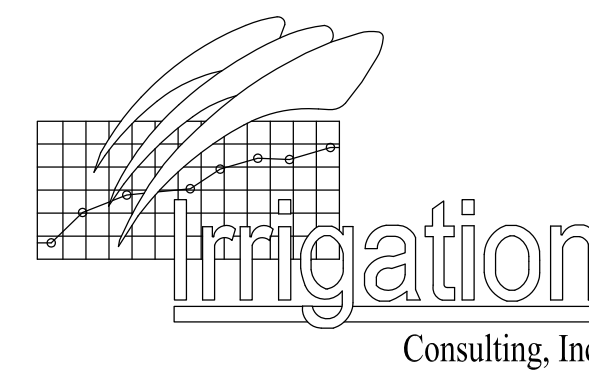
CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

IRRIGATION PLAN

SHEET 2 OF 5

DESIGNED: JB/GD CHECKED: JB	<p>Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487</p>	SHEET
DRAWN: JB/GD CHECKED: JB		I-2
REF. ACC.	CONT.	SCALE: AS NOTED DATE: DEC 2017
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143		

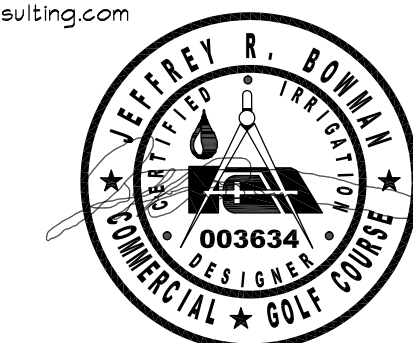


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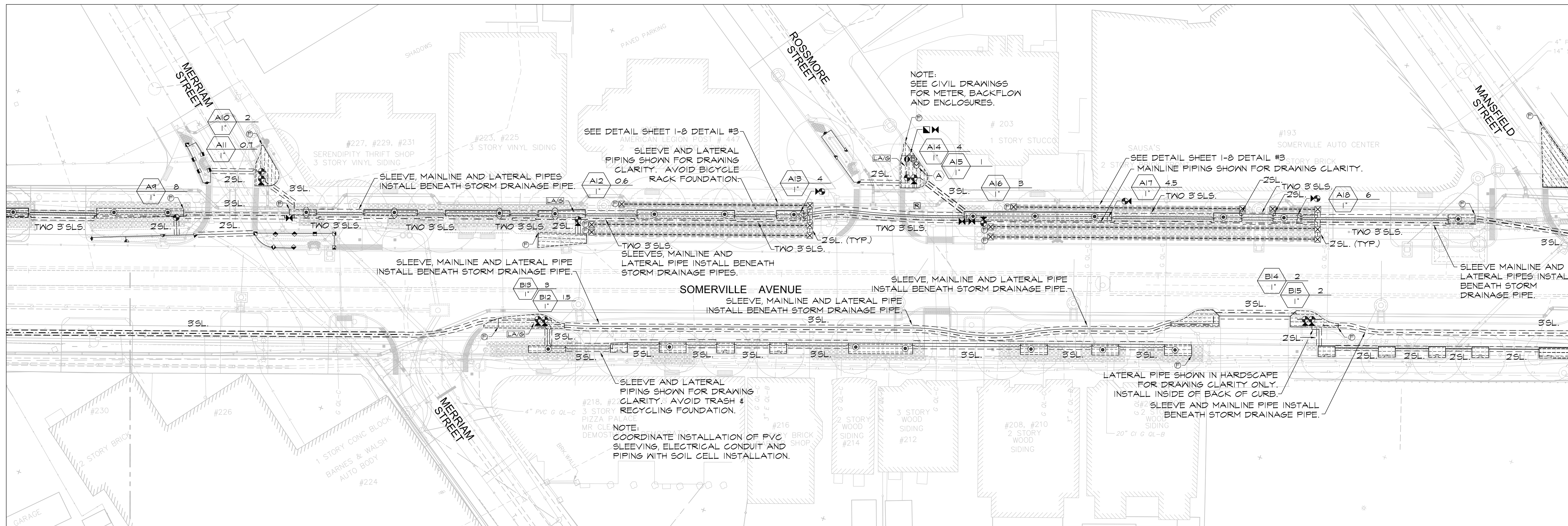
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NOTE:
SEE PLAN SHEET I-1 FOR LEGEND.
SEE DETAIL SHEET I-8 FOR ADDITIONAL NOTES.

0 20' 40' 60' NORTH
1" = 20'

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
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SHEET 4 OF 5

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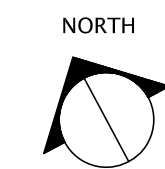
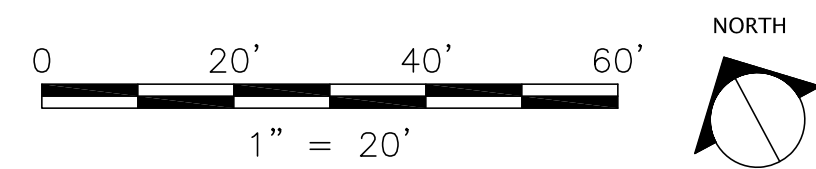
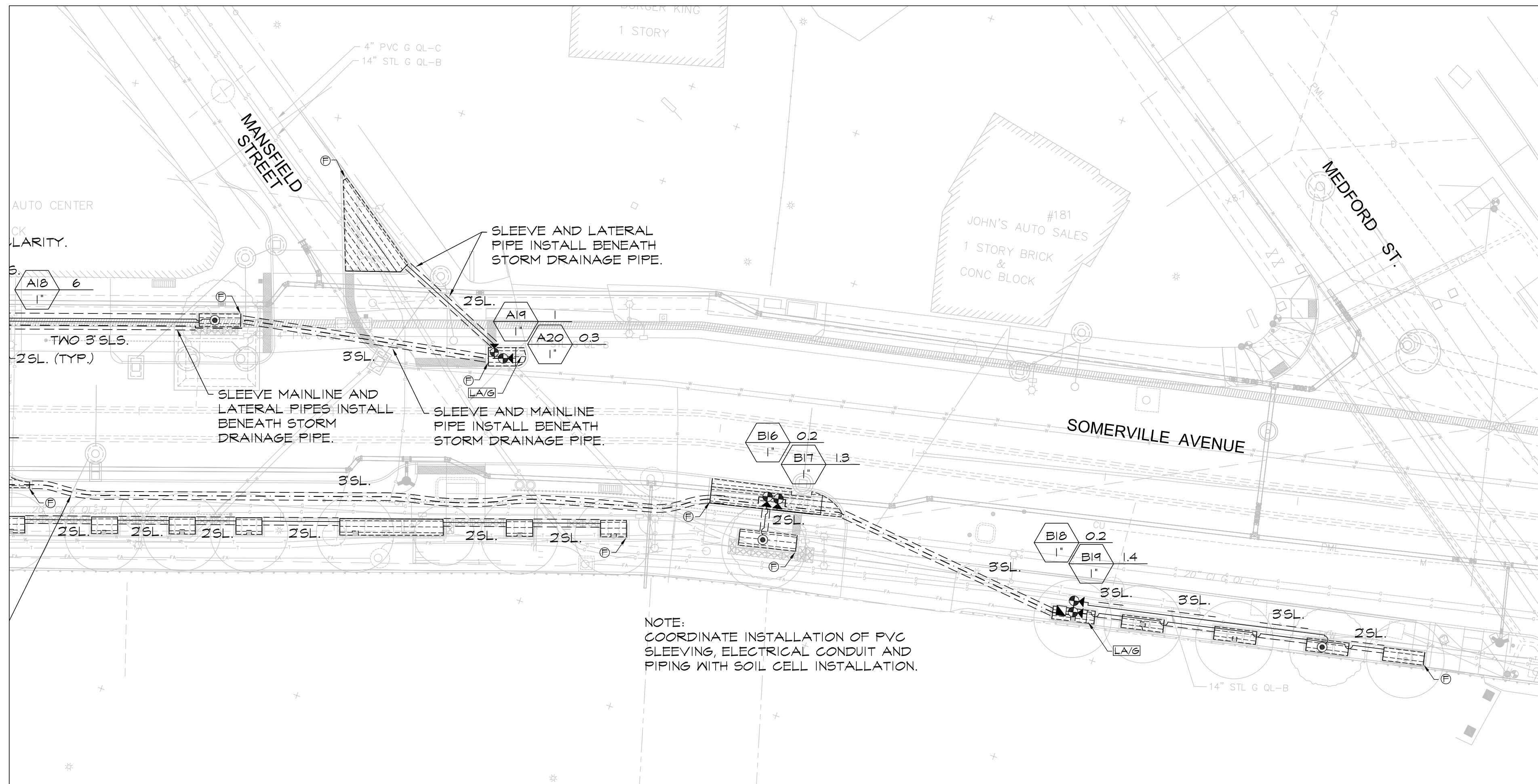
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ACC.		DATE: DEC 2017

SHEET
I-4

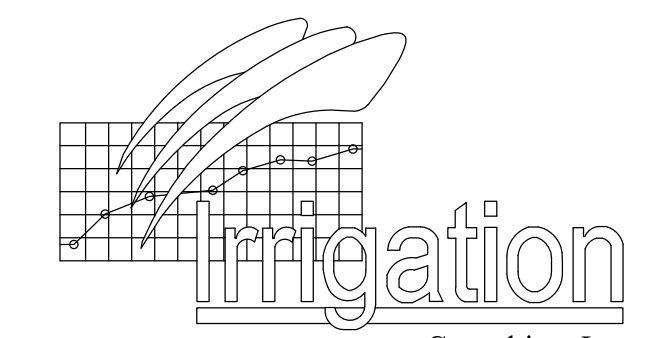
CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

K:\Hatch Chester\Union Square Somerville\06 Final Design CD\IR-41\IR-45_ST_TREE_and_PL_ENLG_PLANS_120617.dwg



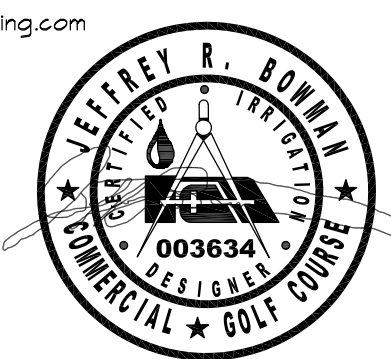
NOTE:
COORDINATE INSTALLATION OF PVC SLEEVING, ELECTRICAL CONDUIT AND PIPING WITH SOIL CELL INSTALLATION.



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NOTE:
SEE PLAN SHEET I-1 FOR LEGEND.
SEE DETAIL SHEET I-8 FOR ADDITIONAL NOTES.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

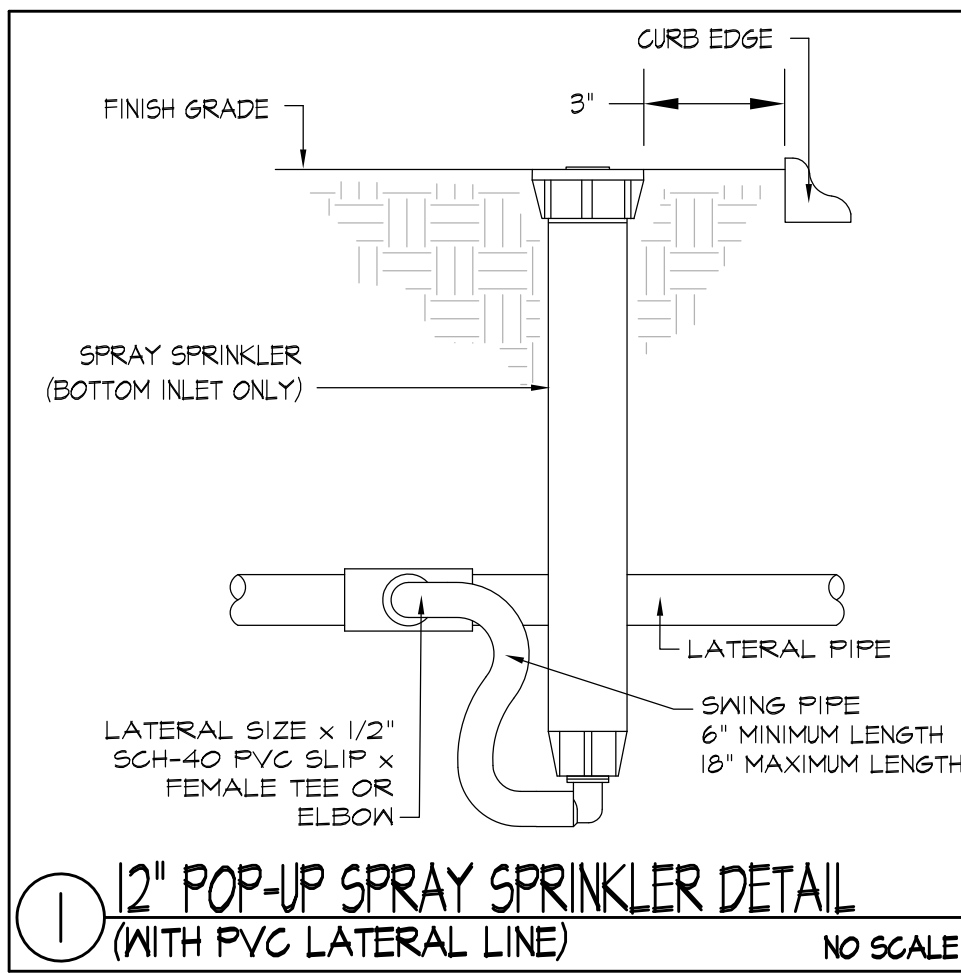
IRRIGATION PLAN

SHEET 5 OF 5

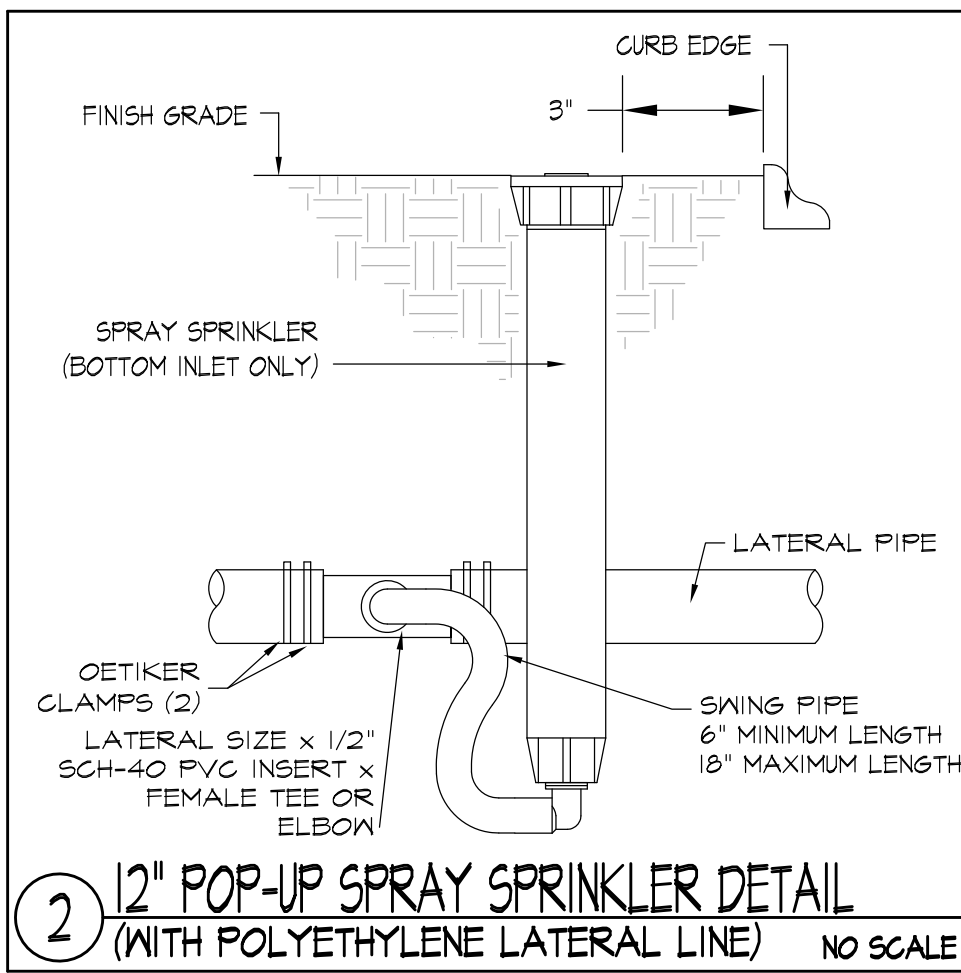
DESIGNED: JB/GD		Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487		SHEET			
CHECKED: JB		<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">REF.</td> <td style="width: 50%;">CONT.</td> </tr> <tr> <td>ACC.</td> <td> </td> </tr> </table>	REF.	CONT.	ACC.		SCALE: AS NOTED DATE: DEC 2017
REF.	CONT.						
ACC.							
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143							

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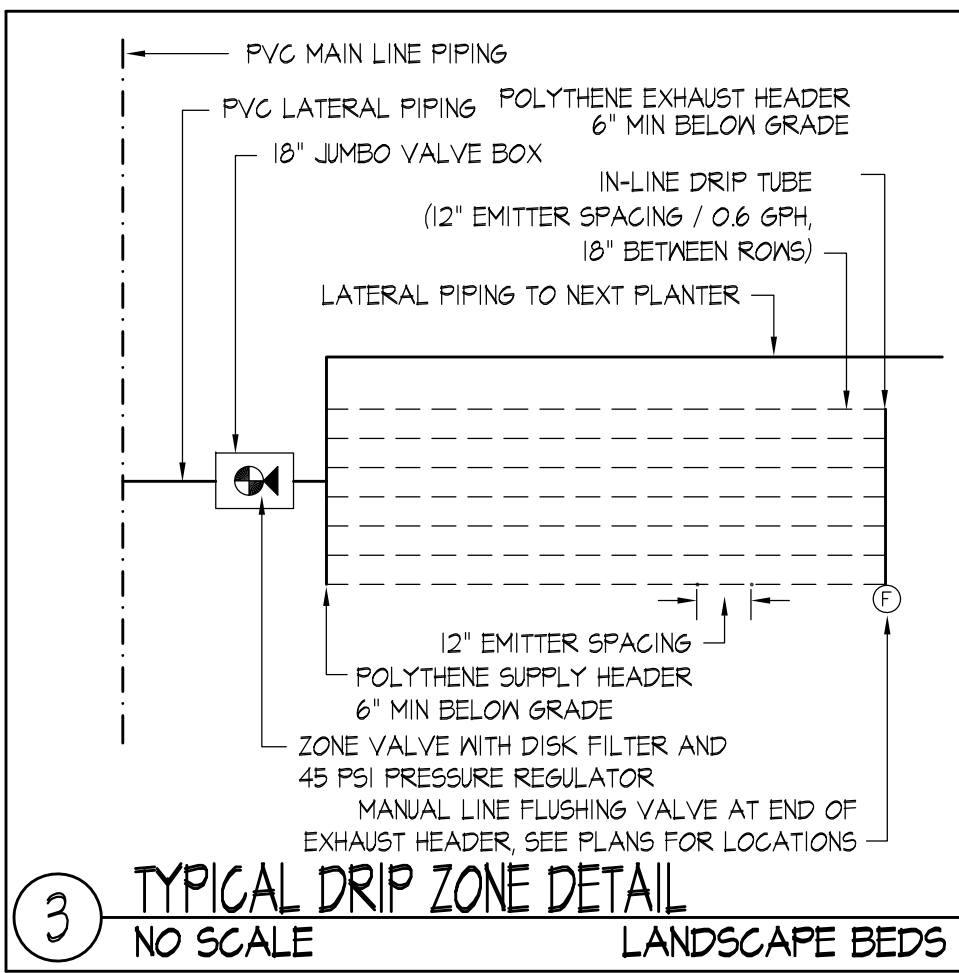
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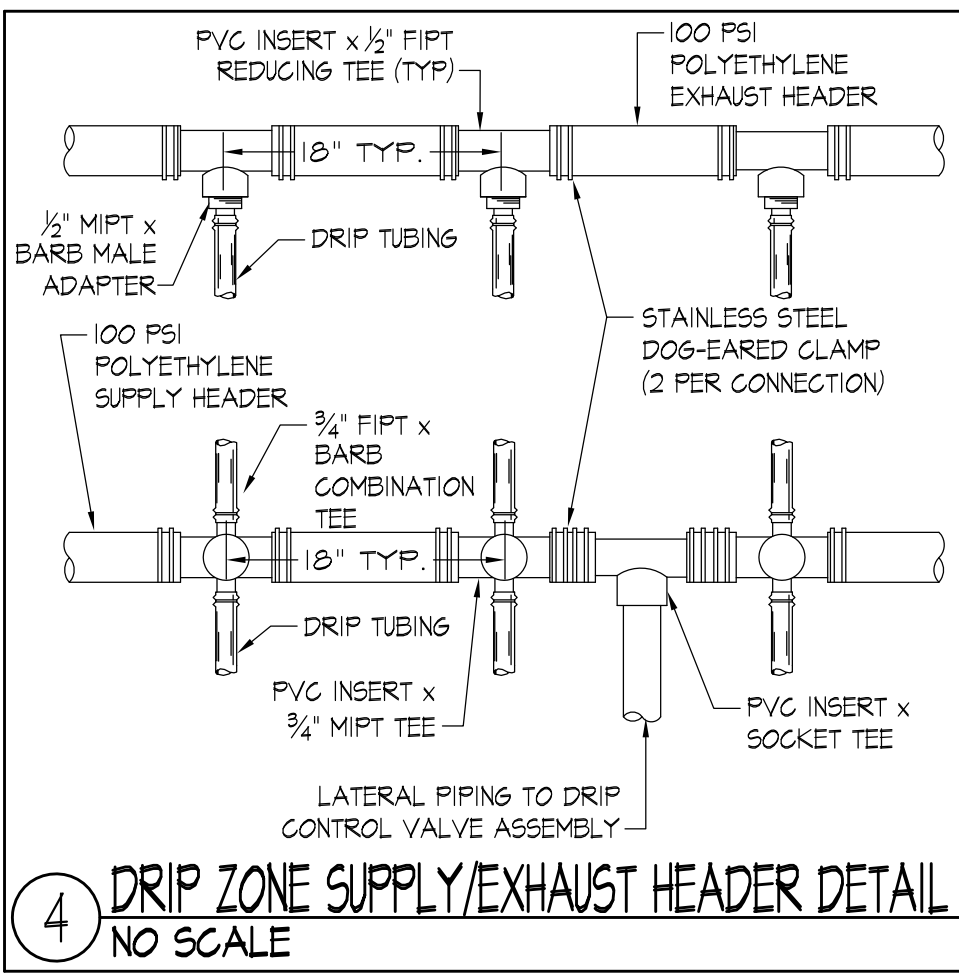
1 12" POP-UP SPRAY SPRINKLER DETAIL (WITH PVC LATERAL LINE)
NO SCALE



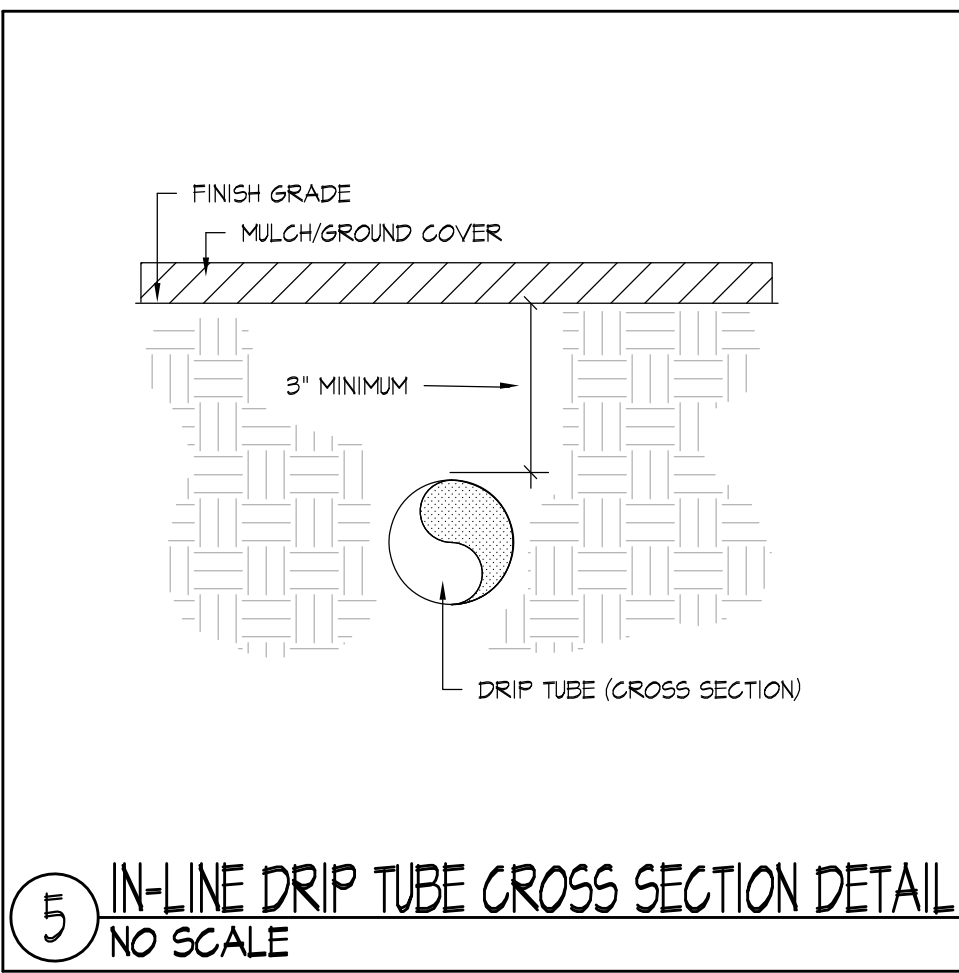
2 12" POP-UP SPRAY SPRINKLER DETAIL (WITH POLYETHYLENE LATERAL LINE)
NO SCALE



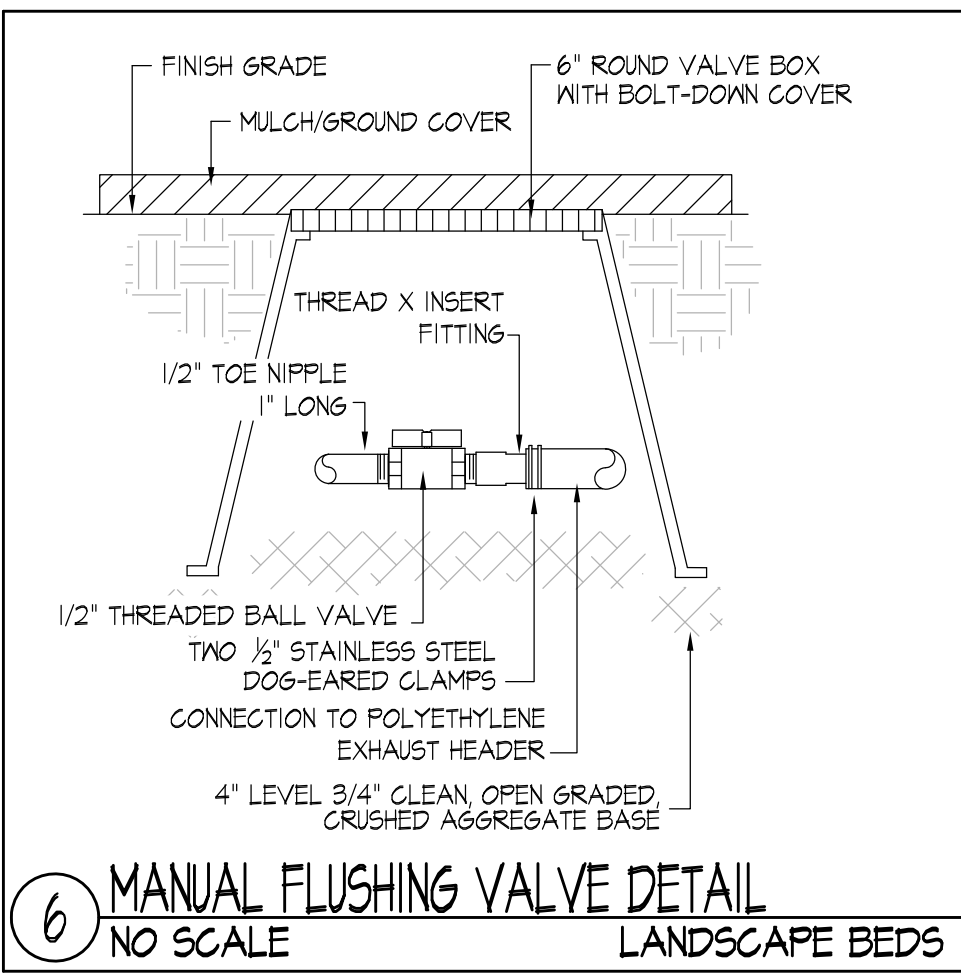
3 TYPICAL DRIP ZONE DETAIL
NO SCALE LANDSCAPE BEDS



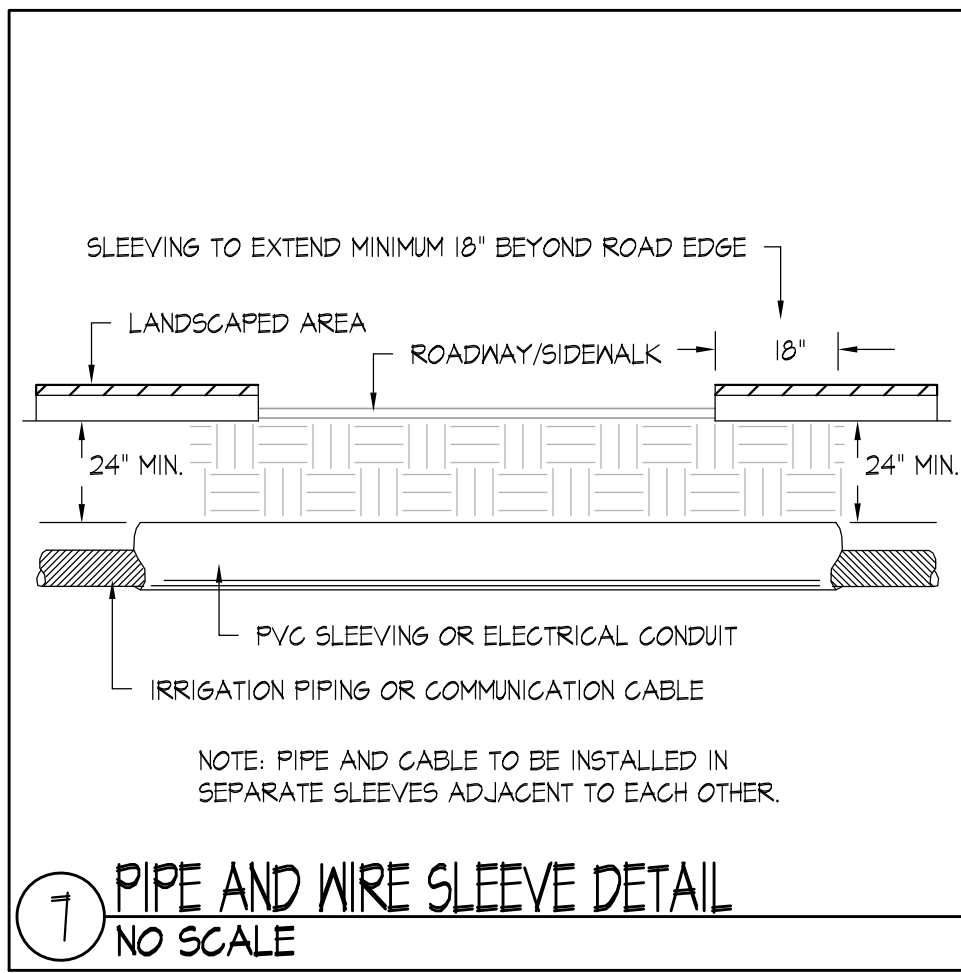
4 DRIP ZONE SUPPLY/EXHAUST HEADER DETAIL
NO SCALE



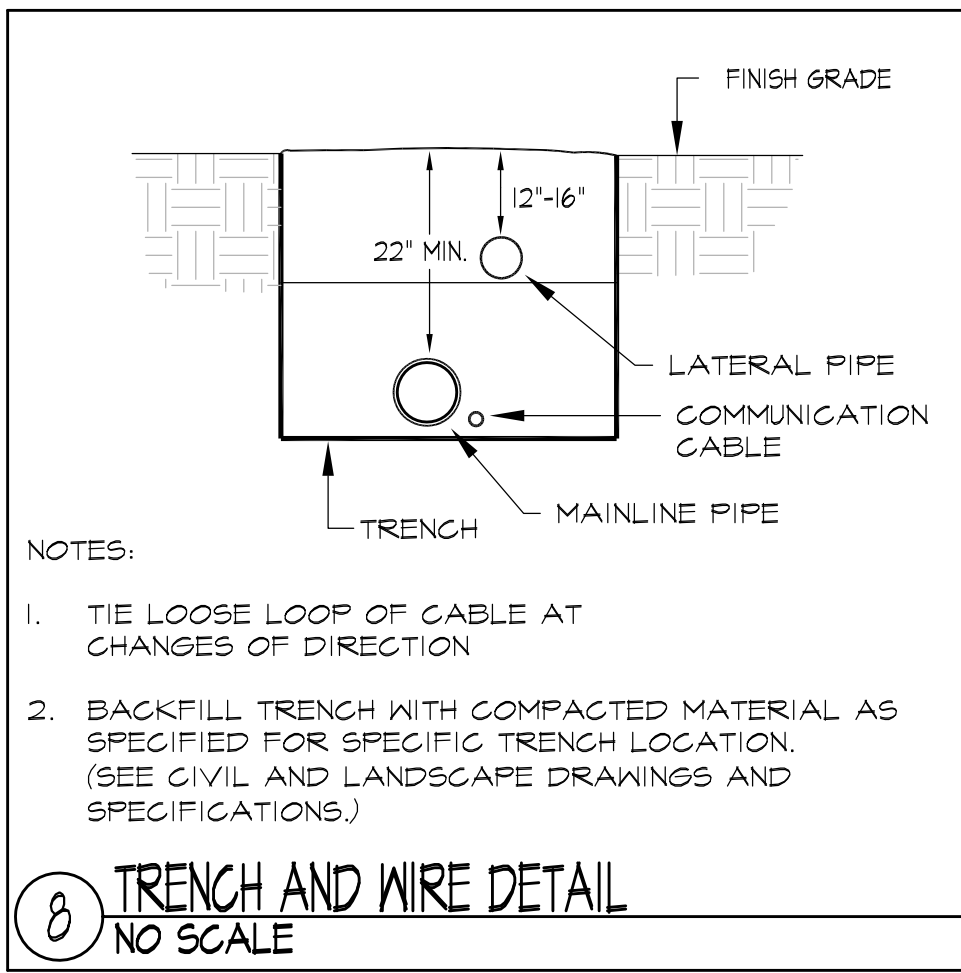
5 IN-LINE DRIP TUBE CROSS SECTION DETAIL
NO SCALE



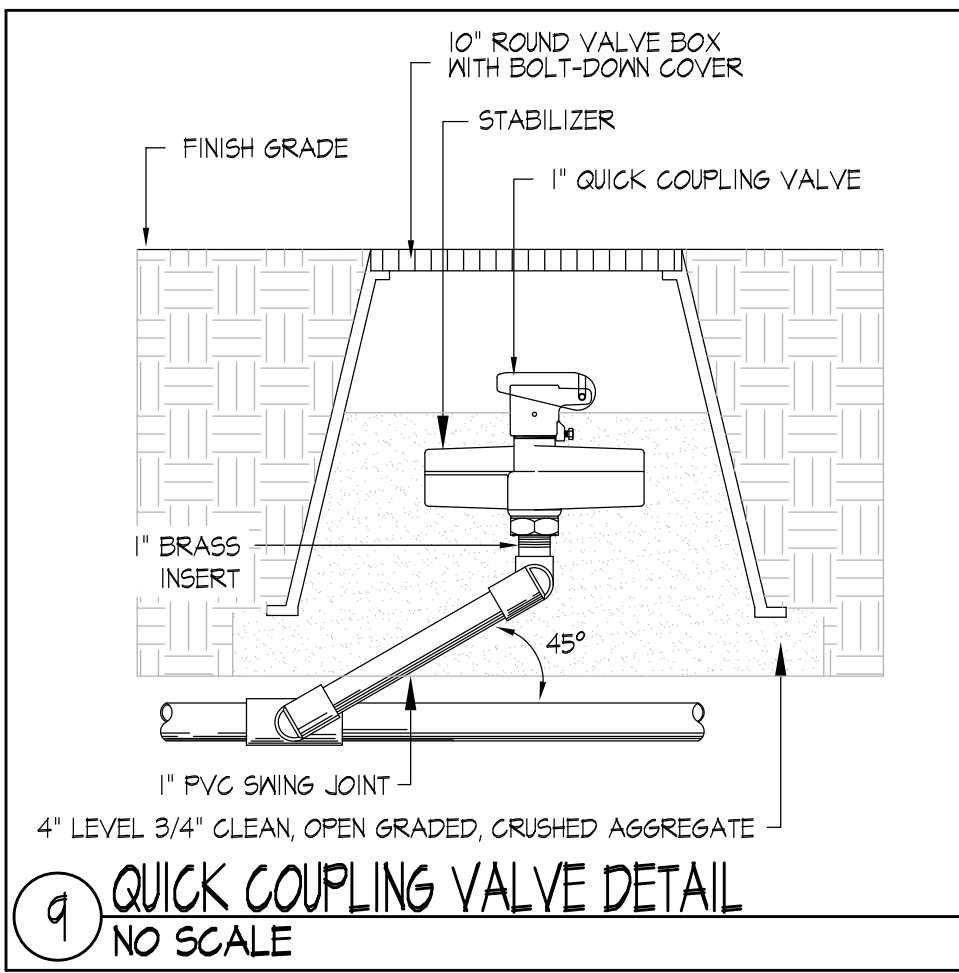
6 MANUAL FLUSHING VALVE DETAIL
NO SCALE LANDSCAPE BEDS



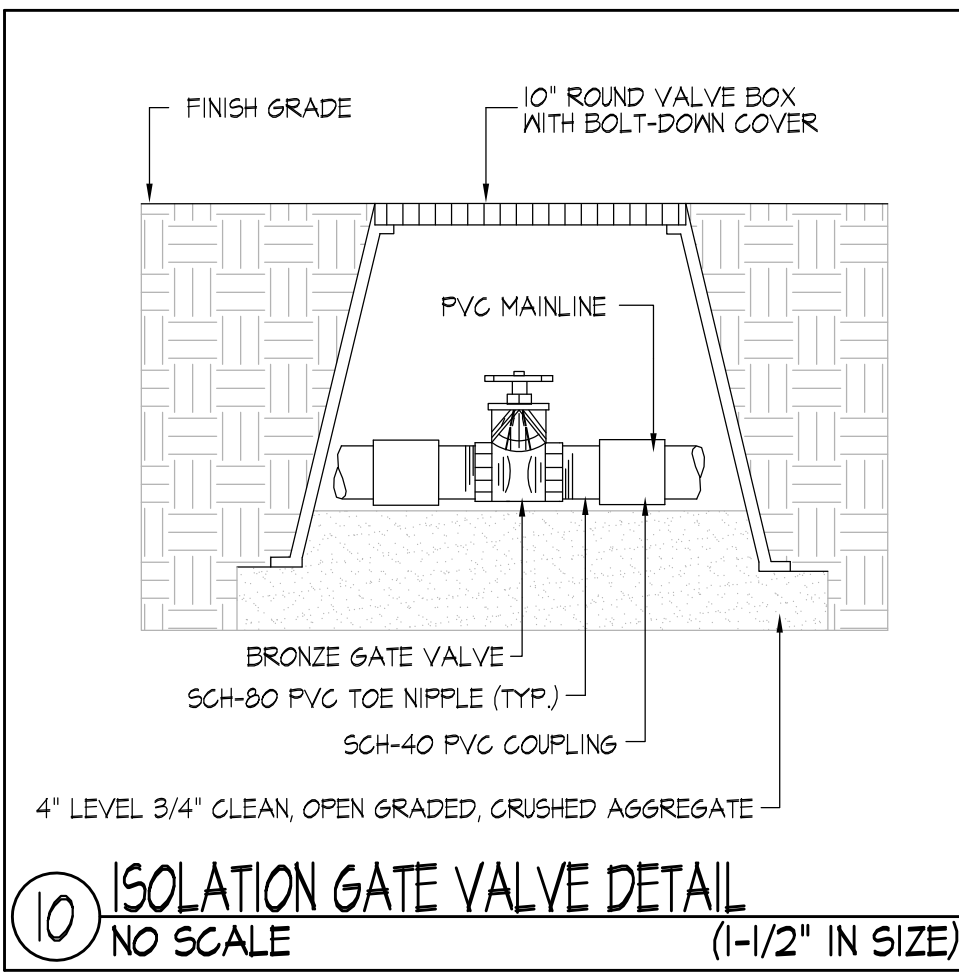
7 PIPE AND WIRE SLEEVE DETAIL
NO SCALE



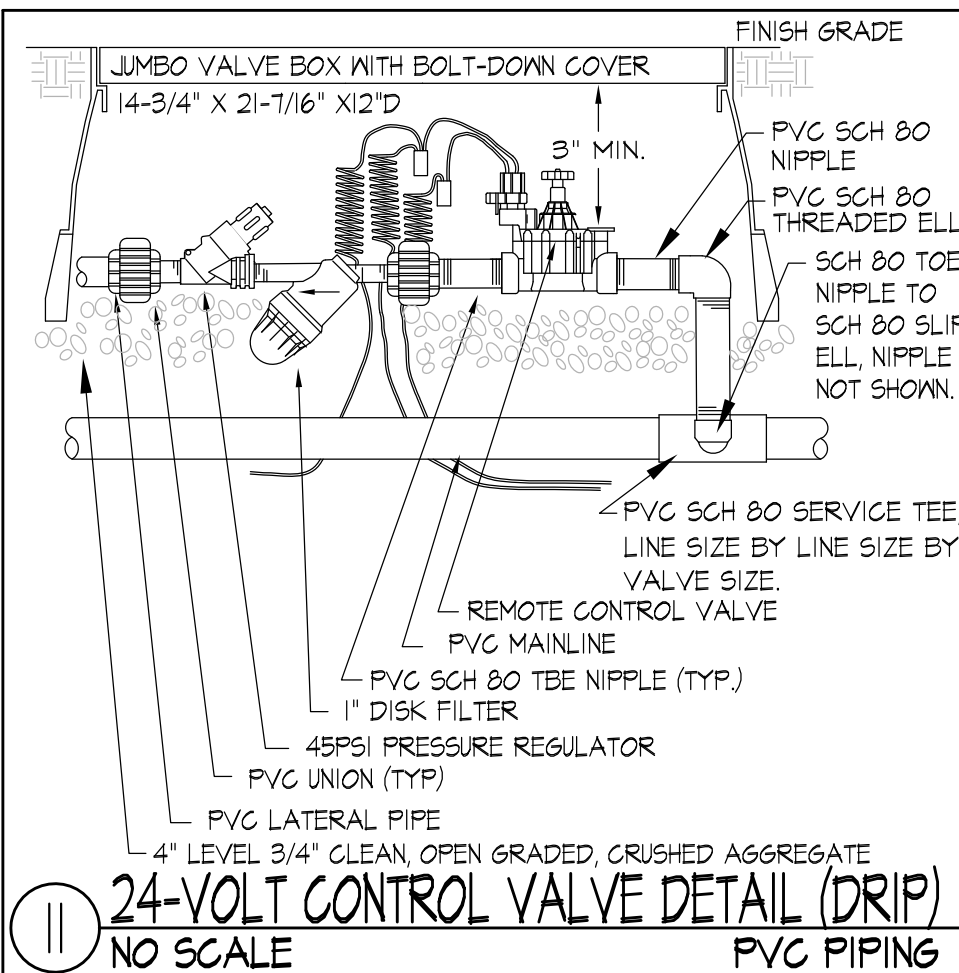
8 TRENCH AND WIRE DETAIL
NO SCALE



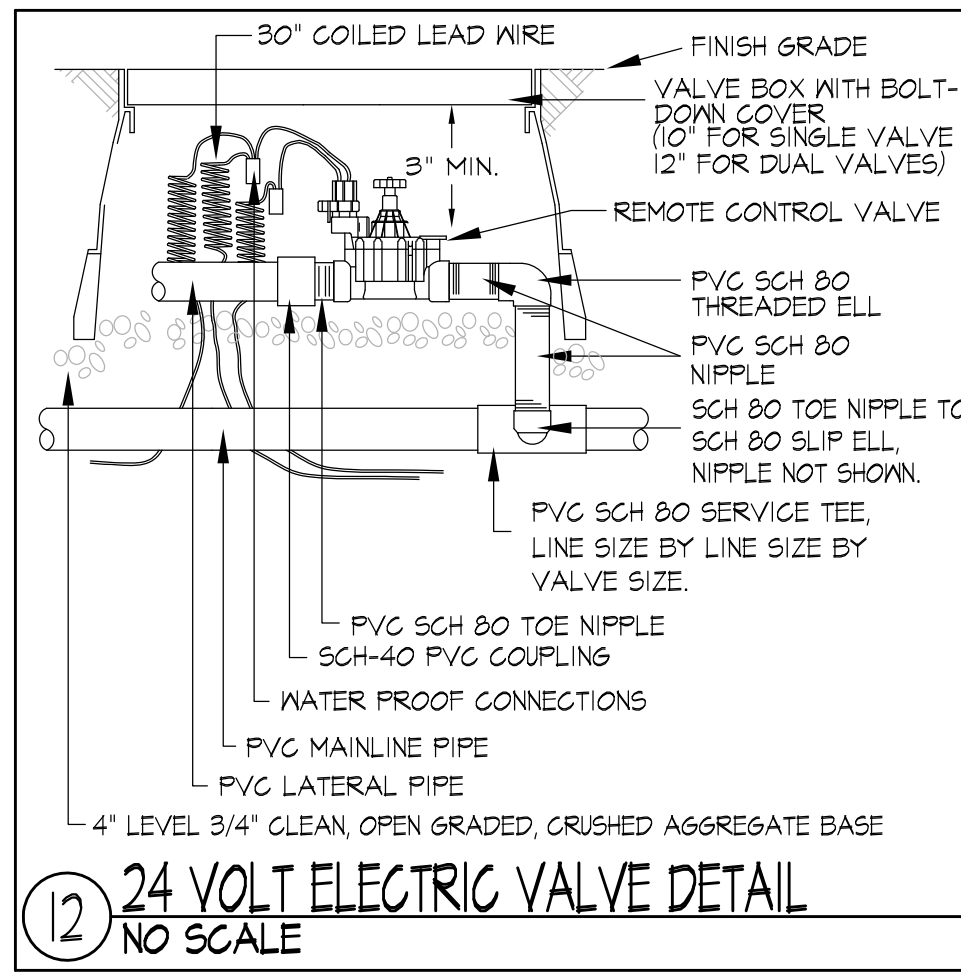
9 QUICK COUPLING VALVE DETAIL
NO SCALE



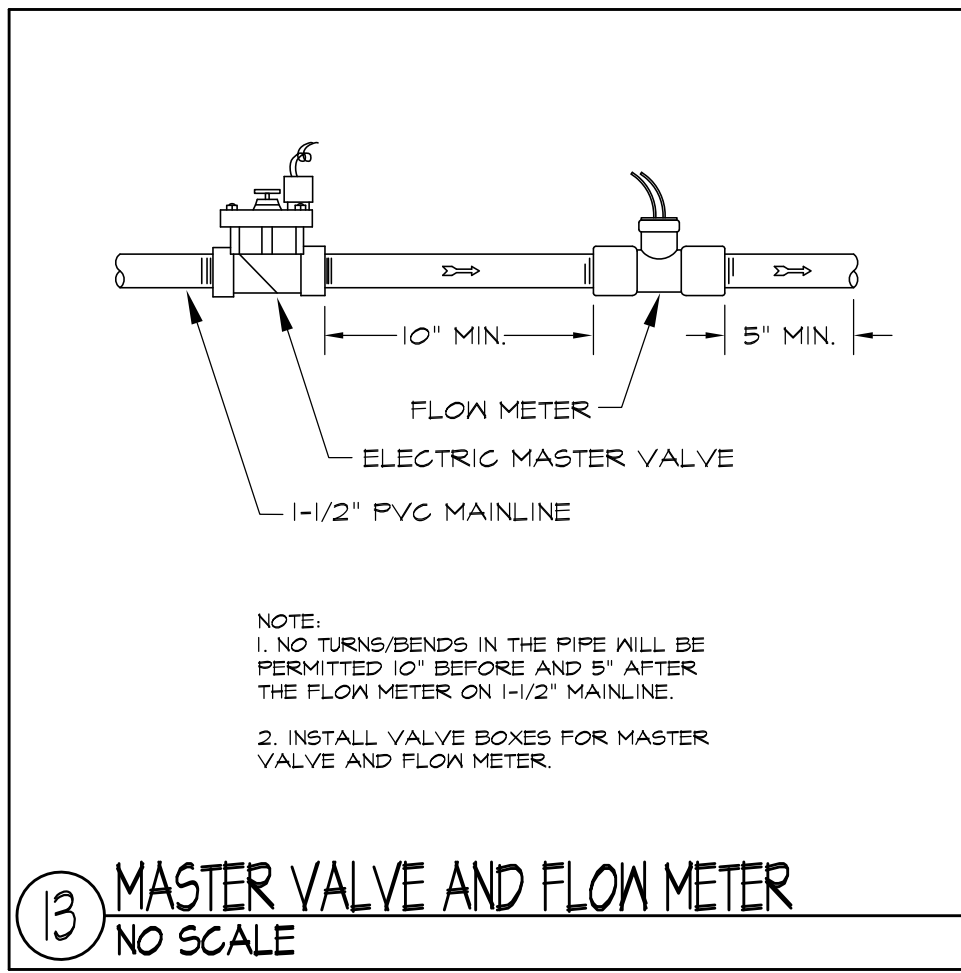
10 ISOLATION GATE VALVE DETAIL
NO SCALE (1-1/2 inch IN SIZE)



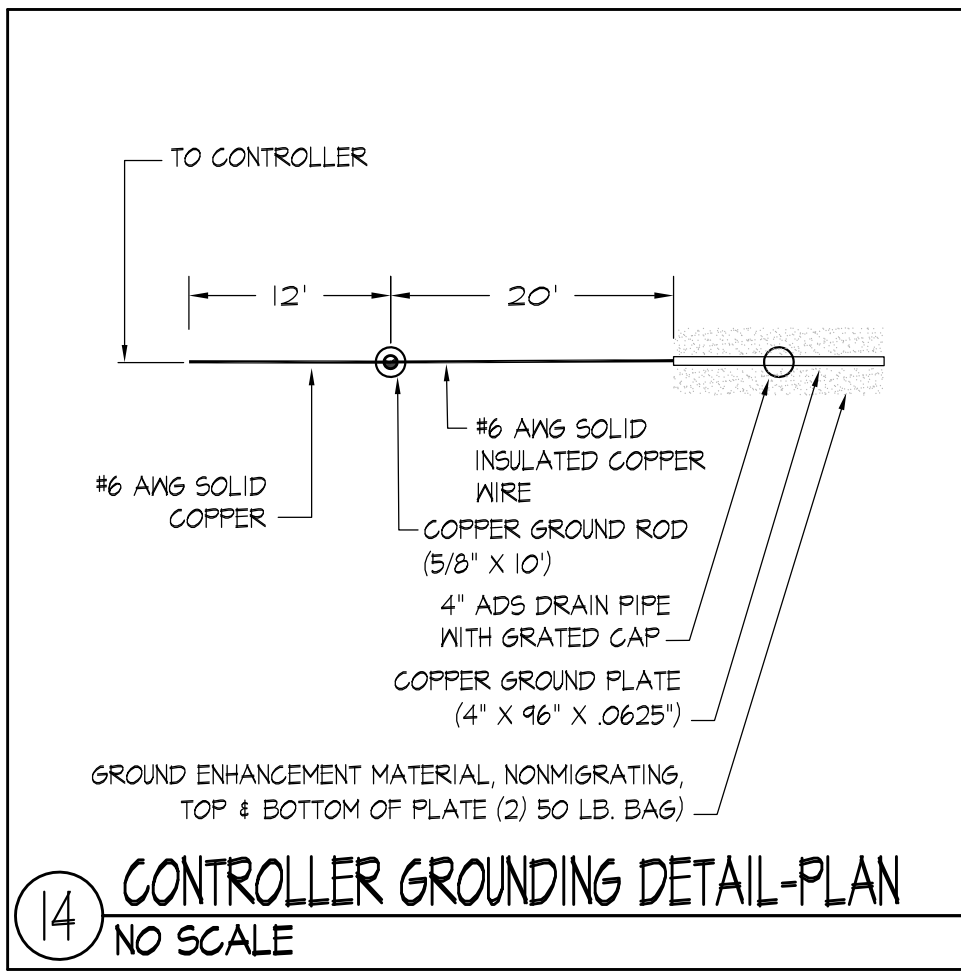
11 24-VOLT CONTROL VALVE DETAIL (DRIP)
NO SCALE PVC PIPING



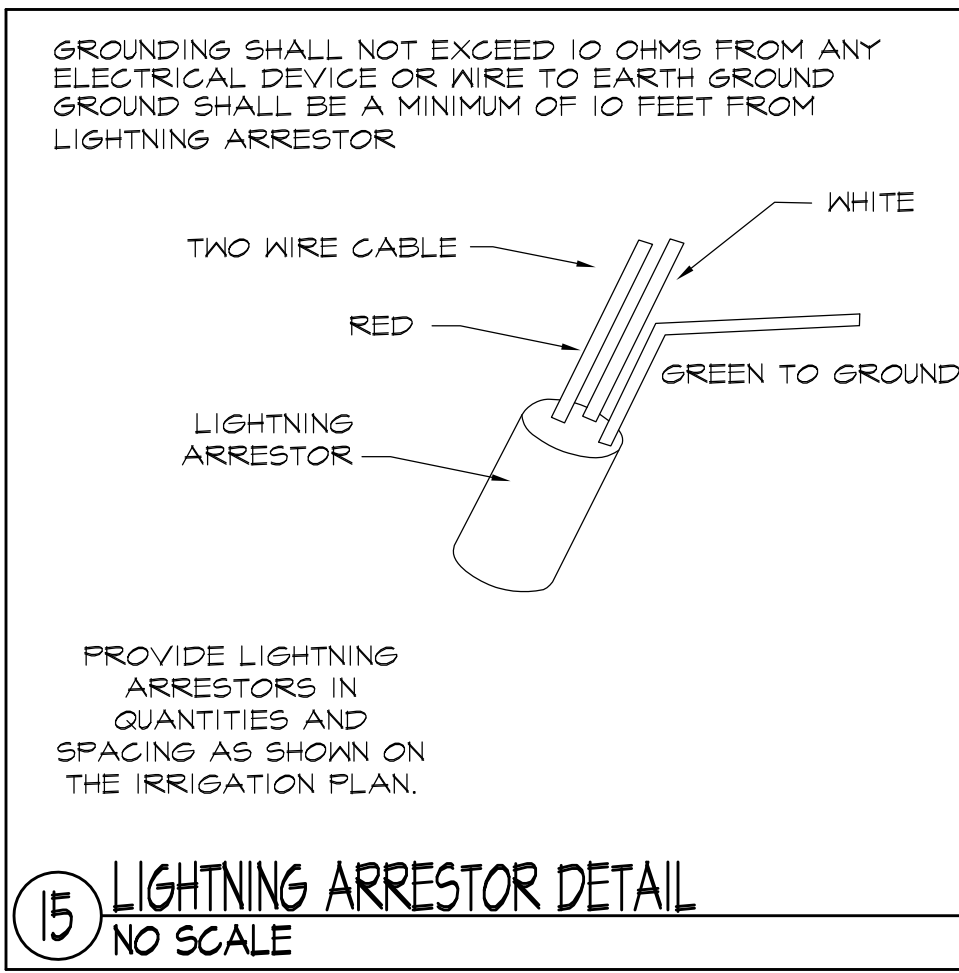
12 24 VOLT ELECTRIC VALVE DETAIL
NO SCALE



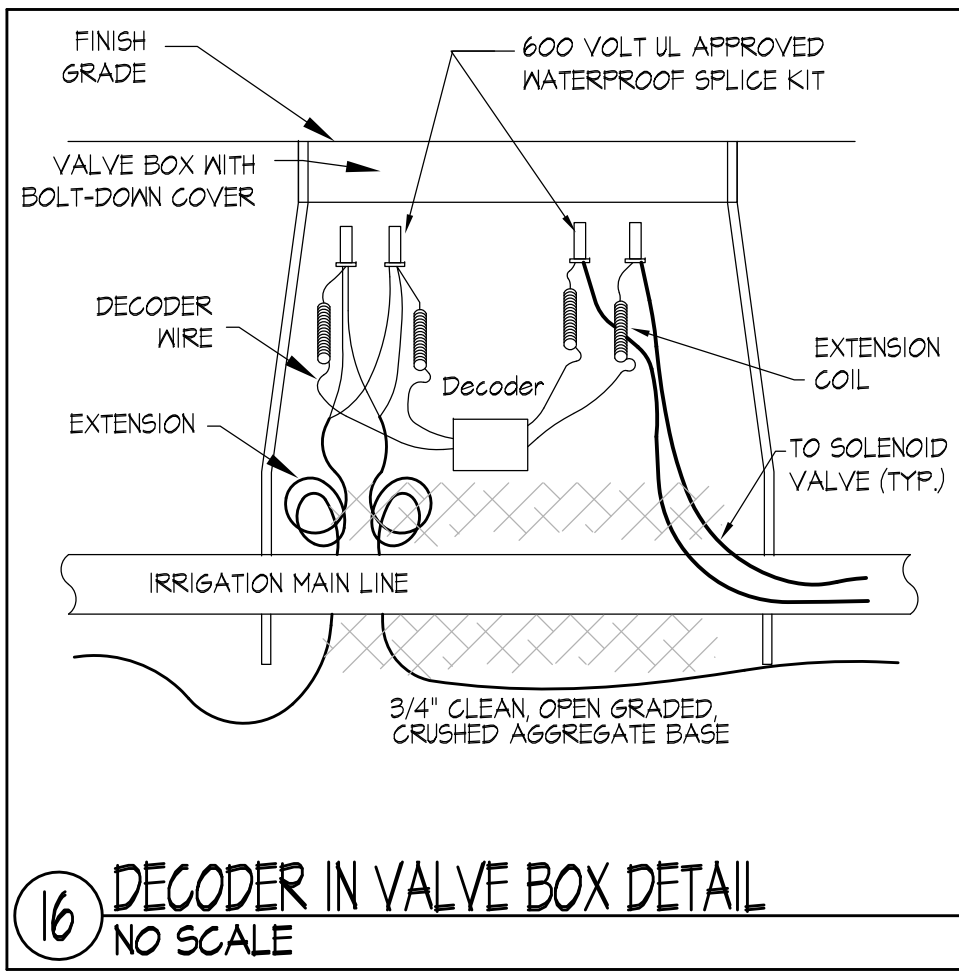
13 MASTER VALVE AND FLOW METER
NO SCALE



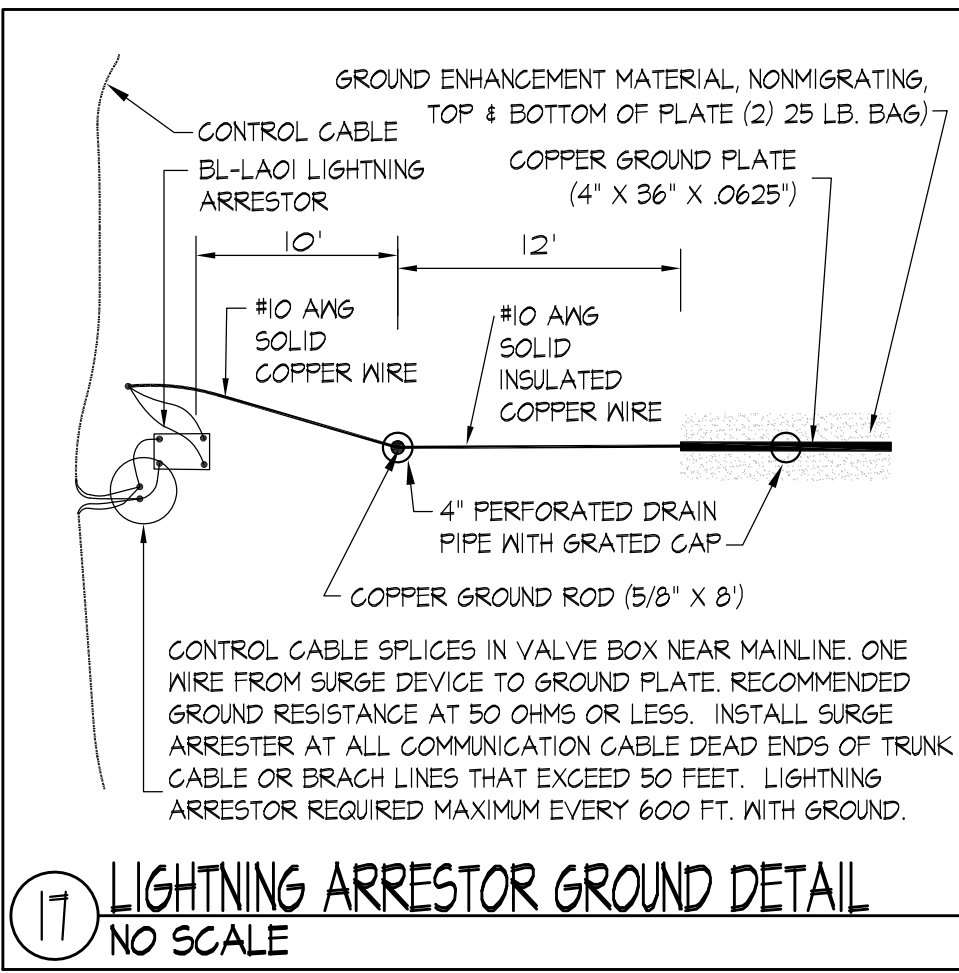
14 CONTROLLER GROUNDING DETAIL-PLAN
NO SCALE



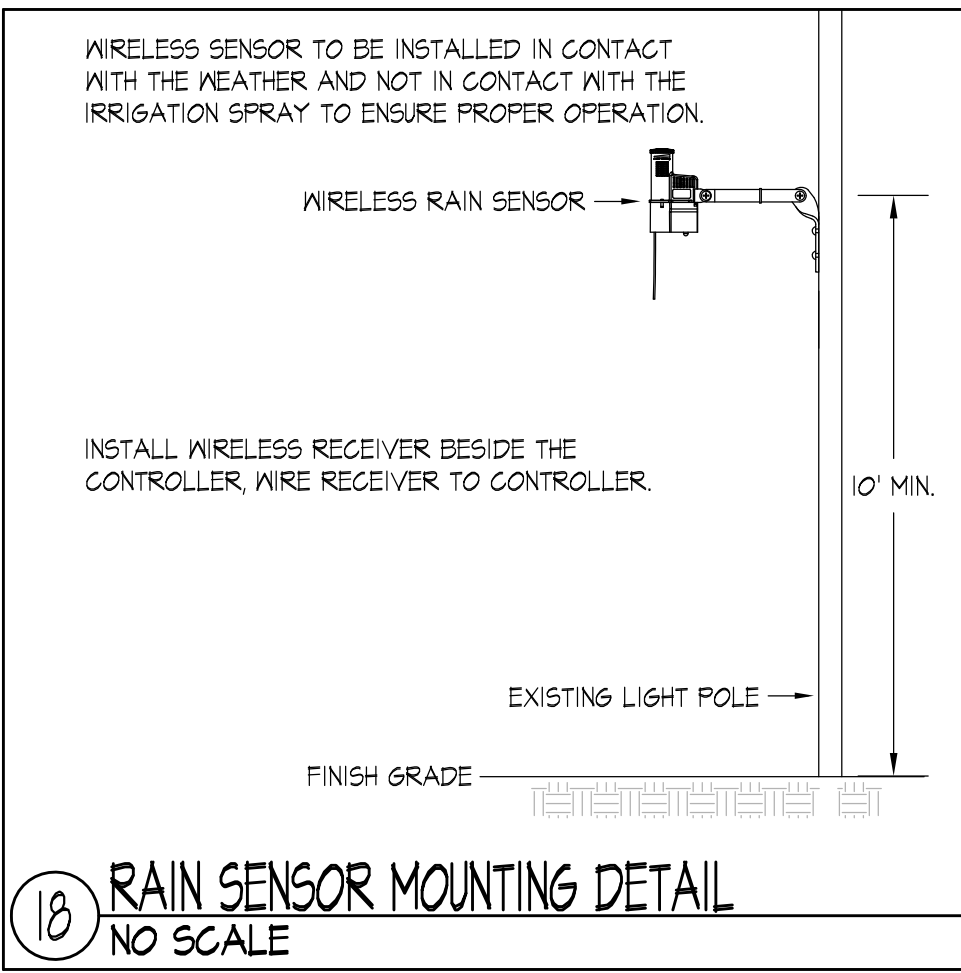
15 LIGHTNING ARRESTOR DETAIL
NO SCALE



16 DECODER IN VALVE BOX DETAIL
NO SCALE



17 LIGHTNING ARRESTOR GROUND DETAIL
NO SCALE



18 RAIN SENSOR MOUNTING DETAIL
NO SCALE

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SOMERVILLE AVENUE UTILITY & STREETSCAPE IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
IRRIGATION DETAILS
SHEET 1 OF 3

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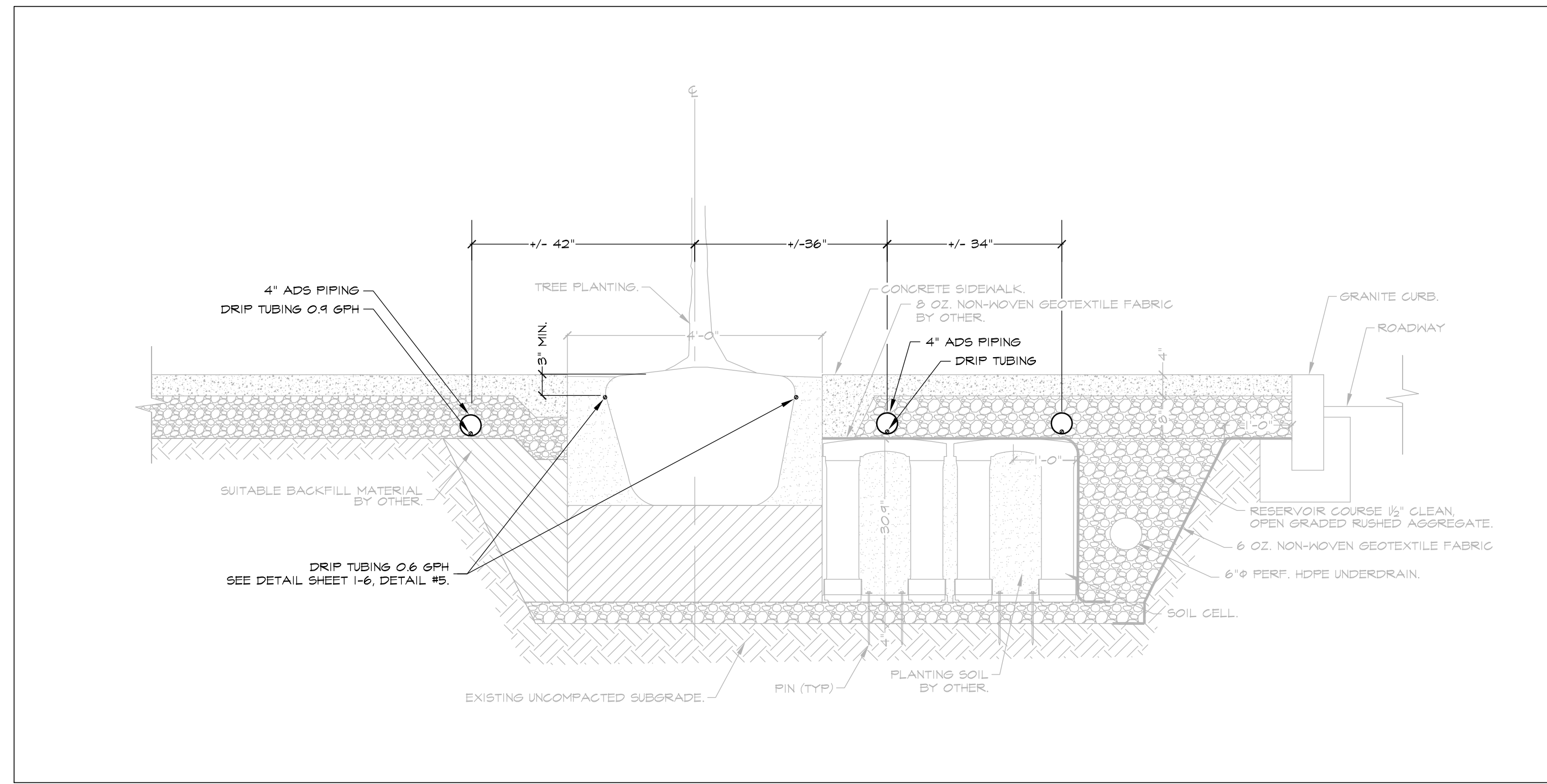
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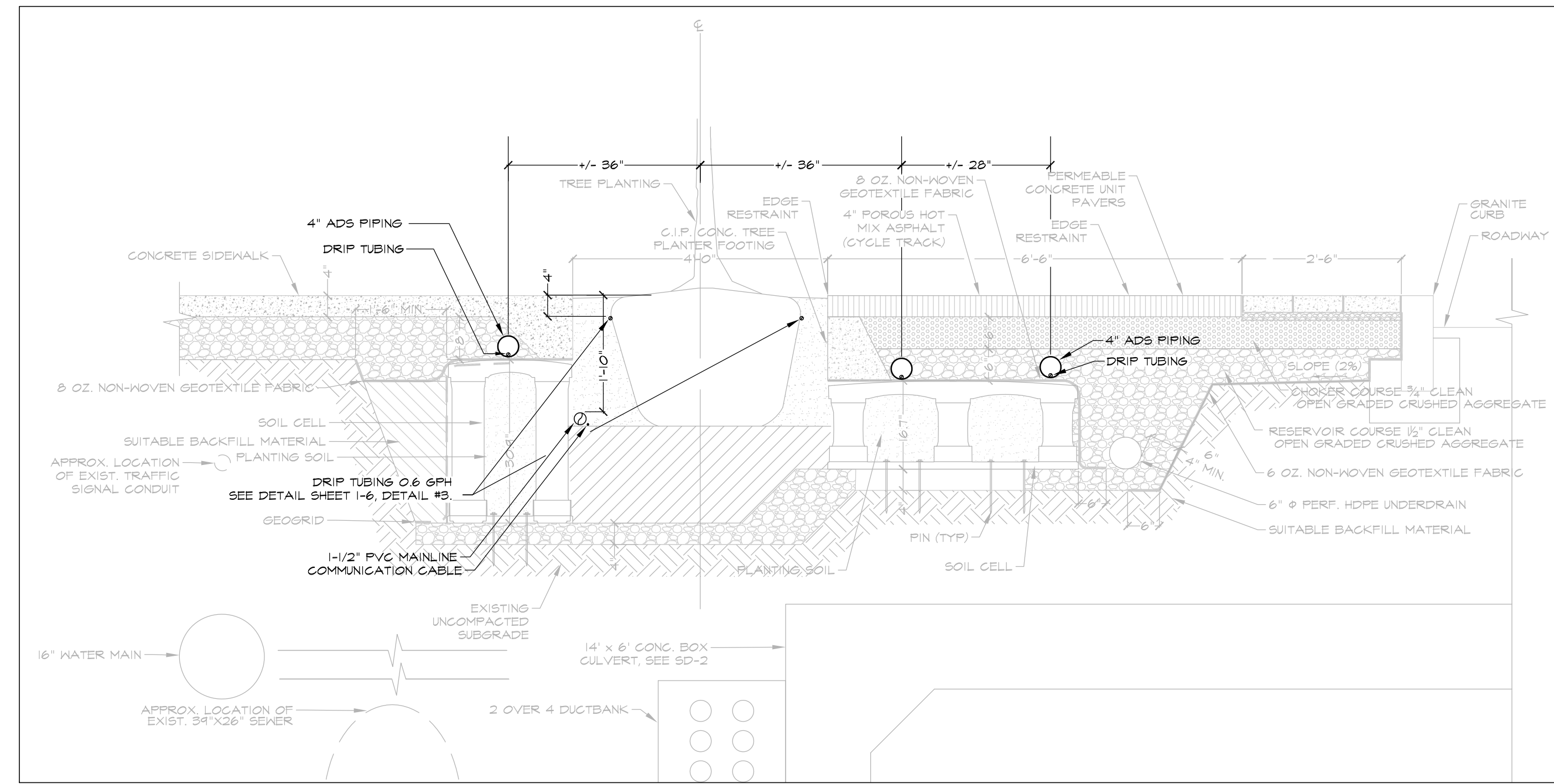
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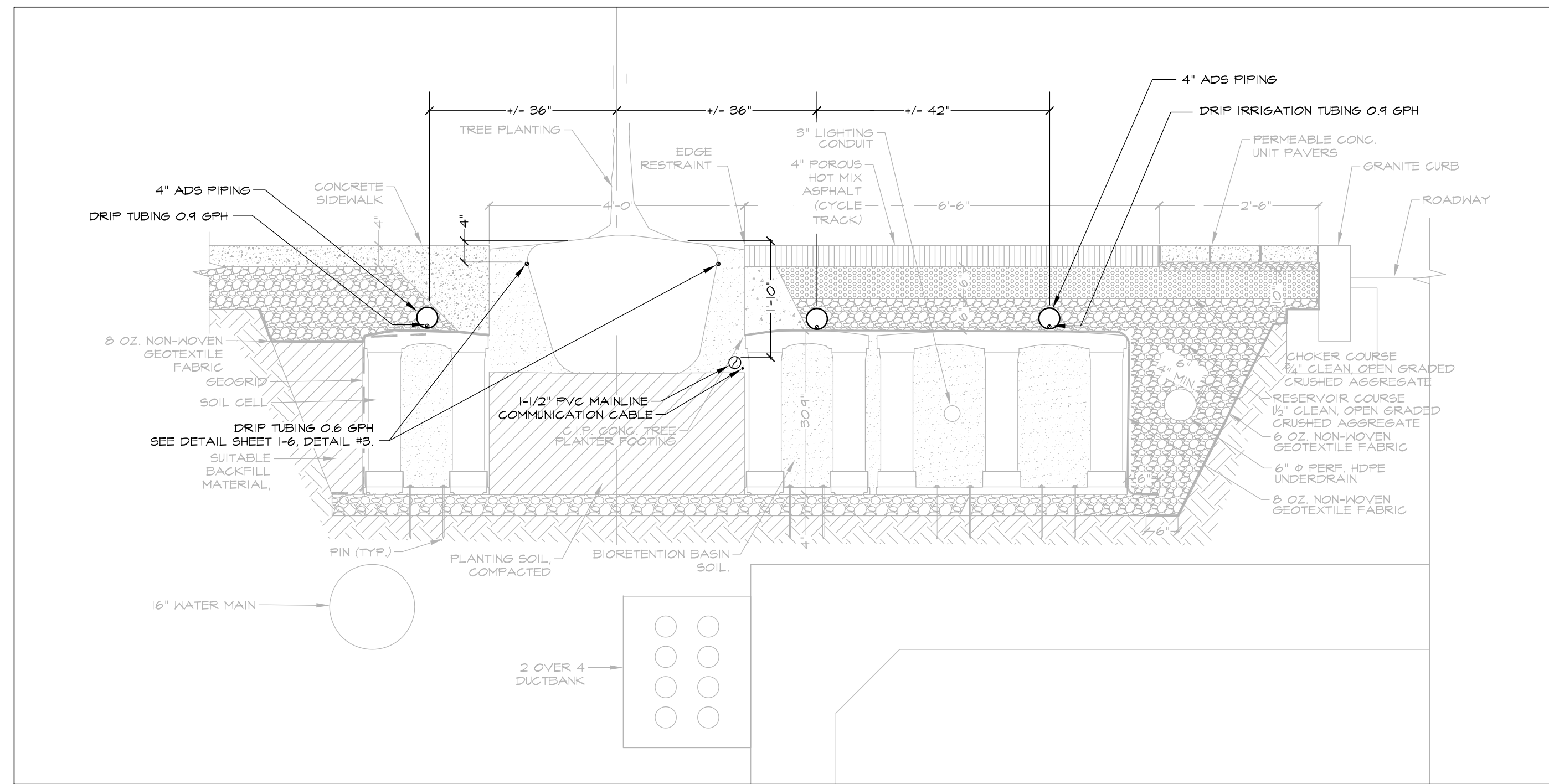
K:\Hatch Chester\Union Square Somerville\06 Final Design CD\IR-41\IR-45_ST_TREE_and_PL_ENLG_PLANS_120617.dwg



1 SOIL CELL NORTH WEST PROSPECT STREET
1" = 20'



2 SOIL CELL NORTH SOMERVILLE AVENUE AND CYCLE TRACK
1" = 20'



3 SOIL CELL NORTH SOMERVILLE AVENUE EAST ROSSMORE STREET
1" = 20'

- IRRIGATION NOTES**
- COORDINATE FINAL LOCATION OF ALL DRIP TUBING, SPRINKLERS AND NOZZLE SELECTION WITH FINAL APPROVED LANDSCAPE AND SOIL CELL SECTIONS.
 - ALL PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY.
 - ALL VALVES AND VALVE BOXES SHALL BE PLACED, IN PLANTED AREAS UNDER MULCH.
 - INSTALL ALL PIPING AND COMMUNICATION CABLE AS FAR FROM TREES AND ROOT BALLS AS POSSIBLE WHILE MAINTAINING SPRINKLER AND DRIP TUBE SPACING.
 - TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO DECODERS SHALL BE POLYETHYLENE DOUBLE JACKETED OR UF-B UL PVC DOUBLE JACKETED TWO CONDUCTOR SOLID CORE DESIGNED FOR DIRECT BURIAL. SUFFICIENT SLACK SHOULD BE LEFT IN COMMUNICATION CABLE AT ALL DECODER LOCATIONS TO BRING DECODERS ABOVE GRADE.
 - QUICK COUPLING VALVES SHALL BE INSTALLED ON 1 INCH PVC SWING JOINTS WITH BRASS INSERTS AND STABILIZERS. (SEE DETAIL)
 - ALL SPRAY SPRINKLERS SHALL BE INSTALLED ON SWING PIPE ASSEMBLIES, MINIMUM LENGTH TO BE 6 INCHES, 18 INCH MAXIMUM.
 - IRRIGATION SYSTEMS ARE DESIGNED FOR SEPARATE WATER SUPPLIES TO PROVIDE 15 GPM MAX FROM NEW WATER SUPPLIES. SYSTEMS TO PRODUCE 60-PSI DYNAMIC PRESSURE AT IRRIGATION CONTRACTOR'S POINT OF CONNECTION IN LANDSCAPED AREAS.
 - COORDINATE LOCATION OF ALL EXISTING AND FUTURE UTILITIES ON SITE AND CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF WORK.
 - INSTALL CONTROLLERS IN ENCLOSURES, GENERALLY WHERE SHOWN ON THE DRAWINGS, HARD WIRE TO 120 VOLT, DEDICATED 20 AMP CIRCUIT, POWER SUPPLY USING LICENSED ELECTRICIAN. ROUTE COMMUNICATION CABLE TO CONTROLLER VIA CONDUIT THROUGH ENCLOSURE BASE.
 - INSTALL WIRELESS RAIN SENSOR ON LIGHT POLE AS DIRECTED BY ENGINEER.
 - ALL ABOVE GROUND WIRING SHALL BE INSTALLED IN RIGID, METALLIC CONDUIT FOR VANDALISM PROTECTION.
 - IN-LINE DRIP TUBING TO BE INSTALLED 6" FROM PLANTER SIDE WALLS ON AN 18" CENTER TO CENTER ROW SPACING FOR LANDSCAPE BEDS.
 - FLUSH ALL LATERAL LINES BEFORE INSTALLING IN-LINE DRIP TUBING OR SPRINKLERS.

- IRRIGATION NOTES**
- STAKE IN-LINE DRIP TUBING IN LANDSCAPE BEDS AT MINIMUM 5 FOOT INTERVALS IN LANDSCAPE TO PREVENT MOVEMENT.
 - IN-LINE DRIP TUBING TO BE INSTALLED 3" BELOW GRADE UNDER MULCH. NO DRIPPER LINE TUBING SHALL BE VISIBLE.
 - INSTALL MANUAL FLUSH VALVES AT LOWEST POINT OF EXHAUST HEADER, GENERALLY WHERE SHOWN ON THE DRAWINGS.
 - SPRAY SPRINKLERS SHALL HAVE 12 INCH POP UP HEIGHT FOR LANDSCAPE.
 - CONTRACTOR MUST SUBMIT SHOP PRODUCT DRAWINGS AS PER THE WRITTEN SPECIFICATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.
 - ANY AND ALL MATERIAL SUBSTITUTIONS WHICH VARY FROM THE SPECIFIED PRODUCTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL AS PART OF THE SUBMITTAL PROCESS.
 - ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. THE ENGINEER MUST BE NOTIFIED A MINIMUM OF 7-DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE SUPERVISION AND ADMINISTRATION.
 - SEE IRRIGATION DETAILS AND SPECIFICATIONS SECTION FOR ADDITIONAL REQUIRED INFORMATION.



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NO.	DATE	REVISIONS	BY

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

IRRIGATION DETAILS

SHEET 3 OF 3

DESIGNED: JB/GD		Parsons Brinckerhoff, Inc.		SHEET
CHECKED: JB		75 Arlington St. Boston, MA 02116		
DRAWN: JB/GD	REF.	CONT.	SCALE: AS NOTED	1-8
CHECKED: JB	ACC.		DATE: DEC 2017	

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

2017-12-07 10:34 AM T:\52647LS Union Square Study and Design\SHD DWG\CP-2_CP-3 Sewer Separation\Lighting\E-1_E-5 Lighting_Details.dwg

GENERAL ELECTRICAL NOTES:

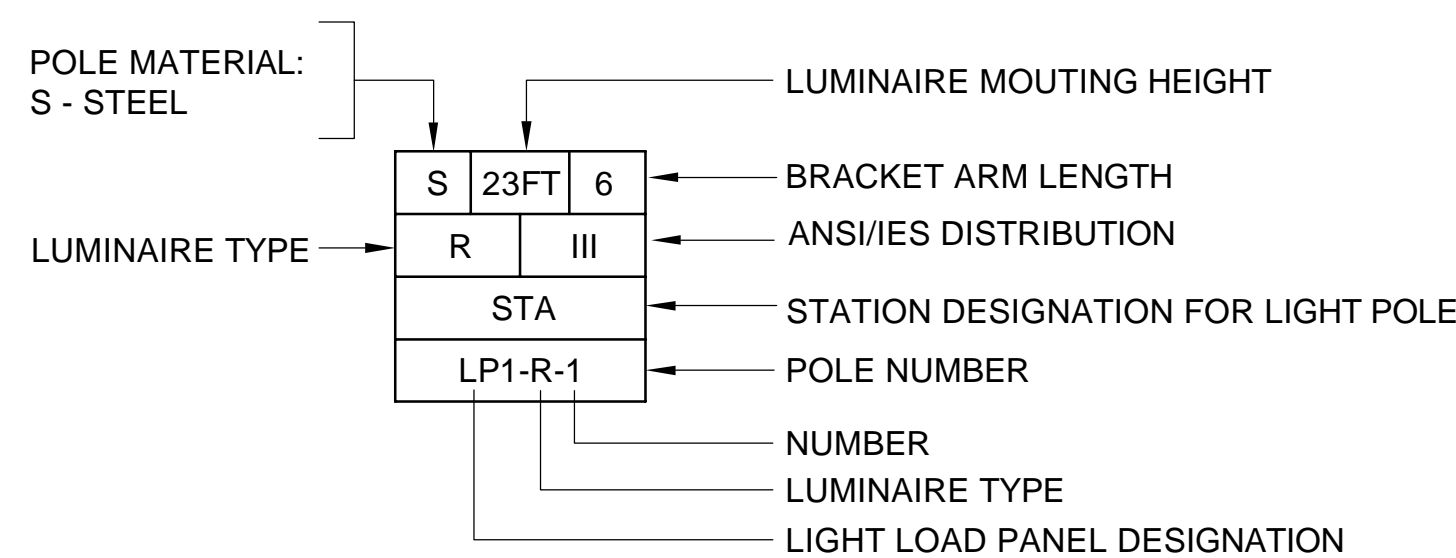
1. THE ELECTRICAL DWGS ARE DIAGRAMMATIC; THE CONTRACTOR SHALL FIELD VERIFY THE EXACT PLACEMENT OF ALL EQUIPMENT. THE CONTRACTOR SHALL NOT STATION A POLE MORE THAN THREE(3) FEET FROM THE LOCATION INDICATED ON THE DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
2. ALL UNDERGROUND CONDUITS, JUNCTION BOXES AND THEIR CONNECTIONS SHALL BE WATERPROOF.
3. THE CONTRACTOR SHALL PROVIDE A GROUND ROD AT EACH HANDHOLE AS INDICATED IN THE LIGHTING DETAILS AND SHALL BOND ALL HANDHOLE FRAMES AND COVERS PER NEC 250.
4. THE CONTRACTOR IS RESPONSIBLE TO ASSURE THAT UPON COMPLETION OF THE PROJECT, ALL LIGHTS SHALL BE OPERABLE. THE CONTRACTOR SHALL PROVIDE ALL INSTRUMENTS AND LABOR TO PERFORM ALL TESTS AS SPECIFIED IN THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR SHALL ORGANIZE THEIR WORK SO THAT ALL PORTIONS OF THE ROADWAY REMAIN LIGHTED. THE CONTRACTOR CAN PROVIDE TEMPORARY LIGHTING, PER IESNA RP-8-14 CRITERIA. IF THE CONTRACTOR CHOOSES TO REMOVE THE OLD LIGHTING SYSTEM BEFORE THE NEW LIGHTING SYSTEM IS OPERATIONAL; ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE INITIAL BID PRICE.

LEGEND:

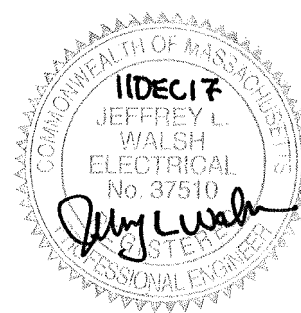
- ⊙—☆ ROADWAY POLE & FIXTURE
- ☆—☆ PEDESTRIAN POLE & FIXTURES
- HAND HOLE
- SL — STREET LIGHTING CONDUIT
2 - 3" SCHD80 PVC (1-SPARE)
- LP-X LIGHT LOAD CENTER

ABBREVIATION:

- G GROUND
- PVC POLYVINYL CHLORIDE
- LED LIGHT EMITTING DIODE
- JB JUNCTION BOX
- CKT CIRCUIT
- AWG AMERICAN WIRE GAUGE
- GFCI GROUND-FAULT CIRCUIT INTERRUPTER



LUMINAIRE TYPE	WATTS/LAMP	LUMINAIRE DESCRIPTION
R	128W	L.E.D. STREET LIGHTING (SINGLE ARM)
RR	128W	L.E.D. STREET LIGHTING (TWIN ARM)
S	79.1W	L.E.D. PEDESTRIAN LIGHTING (TWIN ARM)



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
GENERAL NOTES, ABBREVIATION AND LEGEND

DESIGNED: OS
 CHECKED: JF
 DRAWN: KLN
 CHECKED: RJB

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 75 Arlington St. Boston, MA 02116
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SHEET
E-1

REF.	CONT.	SCALE: N.T.S.
ACC.		DATE: DEC 2017

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NO.	DATE	REVISIONS	BY

2017-12-07 10:34 AM T:\52647LS Union Square Study and Design\SHD\CP-2_CP-3 Sewer Separation\Lighting\E-1_E-5 Lighting_Details.dwg

DESIGNATION: LP-1				FEEDER ENTRANCE: TOP			
SERVICE: 240V/120V, 1PH, 3W				MOUNTING: SURFACE			
MAINS: 100A MLO				LOCATION: STA. 5006+50			
NEUTRAL BUS: 125A				MAIN CIRCUIT BREAKER MIN. INTERRUPTING RATING: 14,000 A			
GROUND BUS: CU				BRANCH CIRCUIT BREAKER MIN. INTERRUPTING RATING: 10,000 A			

CKT. NO.	SERVES	LOAD (KVA)		BREAKER		CKT. NO.
		AØ	BØ	TRIP	POLE	
1	TOTAL 5 LED LIGHTS, LP1-R-31, 33, 35, 37	0.40		20	2	2
3			0.40			4
5	TOTAL 3 LED LIGHTS, LP1-R-32, 34, 36	0.24		20	2	6
7			0.24			8
9	LIGHT FIXTURE AND RECEPTACLE	0.24		10	1	10
11	GFCI OUTLETS ON LP1-R-31 to 38		1.26	20	1	12
13	FAN HEATER	0.20		10	1	14
15	SPARE			20	1	16
17	SPARE			20	1	18
19	SPARE			20	1	20
SUB-TOTAL CONNECTED		1.08	1.90			

CKT. NO.	SERVES	LOAD (KVA)		BREAKER		CKT. NO.
		AØ	BØ	TRIP	POLE	
2	TOTAL 3 LED STREET LIGHTS, LP1-R-21, 23, 25	0.24		20	2	2
4			0.24			4
6	TOTAL 2 LED STREET LIGHTS, LP1-R-22, 24	0.16		20	2	6
8			0.16			8
10	GFCI OUTLETS ON LP1-R-21 to 25	1.00		1	20	10
12	SPARE			1	20	12
14	SPARE			1	20	14
16	SPARE			1	20	16
18	SPARE			2	30	18
20	SPARE			2	30	20
SUB-TOTAL CONNECTED		1.40	0.40			

GND. BUS			
"AØ" SUB-TOTAL CONNECTED (KVA):	2.48		
"BØ" SUB-TOTAL CONNECTED (KVA):	2.3		
TOTAL CONNECTED (KVA):	4.78		

DESIGNATION: LP-2				FEEDER ENTRANCE: TOP			
SERVICE: 240V/120V, 1PH, 3W				MOUNTING: SURFACE			
MAINS: 100A MLO				LOCATION: STA. 5015+66			
NEUTRAL BUS: 125A				MAIN CIRCUIT BREAKER MIN. INTERRUPTING RATING: 14,000 A			
GROUND BUS: CU				BRANCH CIRCUIT BREAKER MIN. INTERRUPTING RATING: 10,000 A			

CKT. NO.	SERVES	LOAD (KVA)		BREAKER		CKT. NO.
		AØ	BØ	TRIP	POLE	
1	TOTAL 15 LED LIGHTS, LP2-S-08, R-06, S-11, S-07, R-04, S-04, S-03, S-02, R-01	0.74		20	2	2
3			0.74			4
5	TOTAL 14 LED LIGHTS, LP2-S-09, S-10, R-07, R-05, S-06, S-05, R-03, R-02, S-01	0.84		20	2	6
7			0.84			8
9	GFCI OUTLETS ON LP2-R-06, R-07	0.36		20	1	10
11	GFCI OUTLETS ON LP2-R-05, R-04, R-03, R-02, R-01		0.90	20	1	12
13	LIGHT FIXTURE AND RECEPTACLE	0.24		10	1	14
15	SPARE			20	1	16
17	FAN HEATER	0.20		10	1	18
19	SPARE			20	1	20
SUB-TOTAL CONNECTED		2.38	2.48			

CKT. NO.	SERVES	LOAD (KVA)		BREAKER		CKT. NO.
		AØ	BØ	TRIP	POLE	
2	TOTAL 17 LED LIGHTS, LP2-S-20, S-21, R-17, S-24, R-15, S-17, S-16, R-13, S-13, S-12	0.94		20	2	2
4			0.94			4
6	TOTAL 17 LED LIGHTS, LP2-R-16, S-22, S-24, R-18, S-19, S-18, R-14, S-15, S-14, R-12, R-11	1.00		20	2	6
8			1.00			8
10	GFCI OUTLETS ON LP2-R-16, 17, 18	0.54		1	20	10
12	GFCI OUTLETS ON LP2-R-15, 14, 13, 12, 11		0.90	1	20	12
14	SPARE			1	20	14
16	SPARE			1	20	16
18	SPARE			2	30	18
20	SPARE			2	30	20
SUB-TOTAL CONNECTED		2.48	2.84			

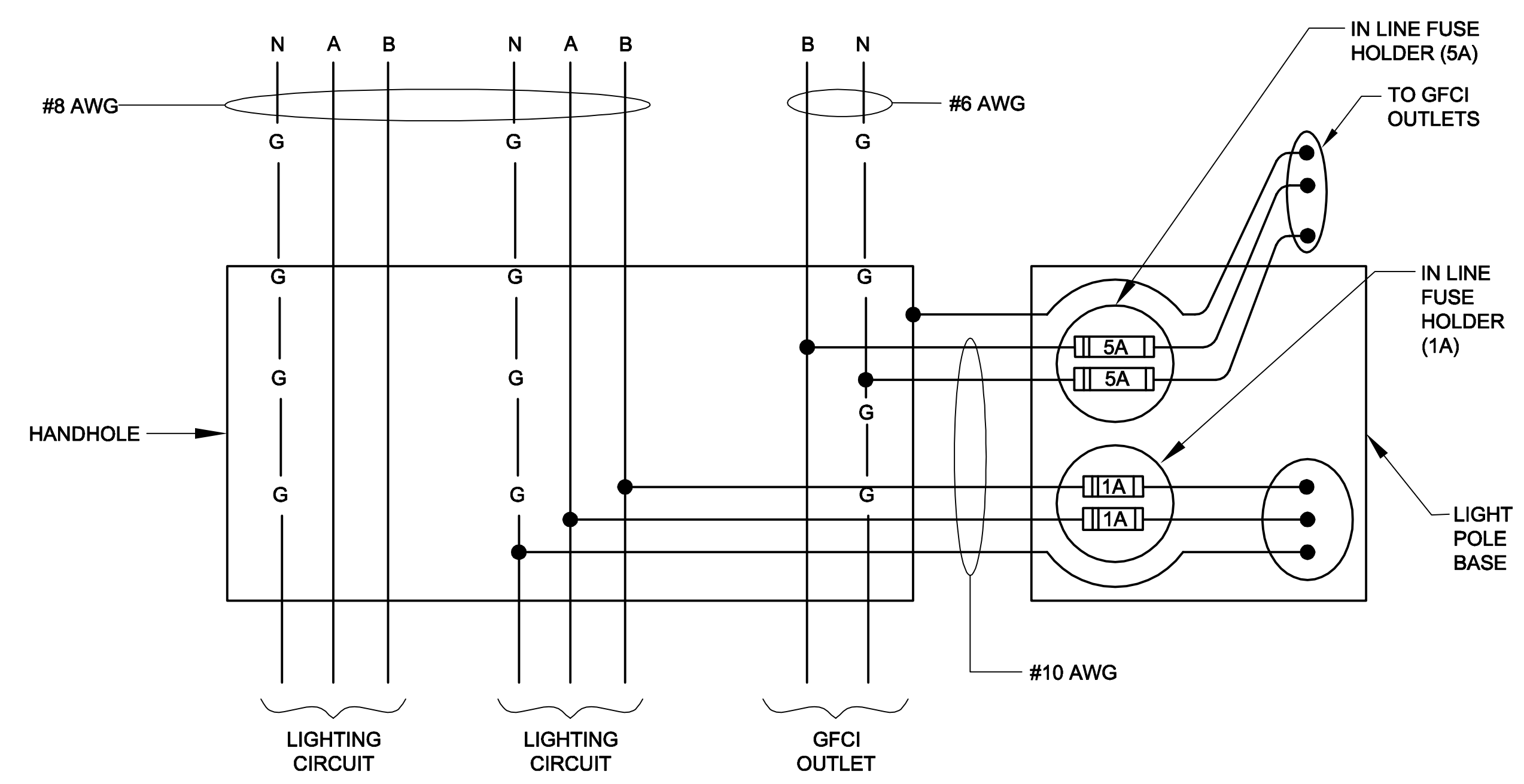
GND. BUS			
"AØ" SUB-TOTAL CONNECTED (KVA):	4.86		
"BØ" SUB-TOTAL CONNECTED (KVA):	5.32		
TOTAL CONNECTED (KVA):	10.18		

1 LIGHTING LOAD PANEL SCHEDULES LP-1 AND LP-2

SCALE: NTS

- NOTES:**
- SEE SHEET E-1 FOR LEGEND AND GENERAL ELECTRICAL NOTES.
 - LIGHT FIXTURES SHALL BE POWERED AT 240V SINGLE PHASE.
 - NEUTRAL CONDUCTOR SHALL BE GROUNDED AT SERVICE POINT ONLY.

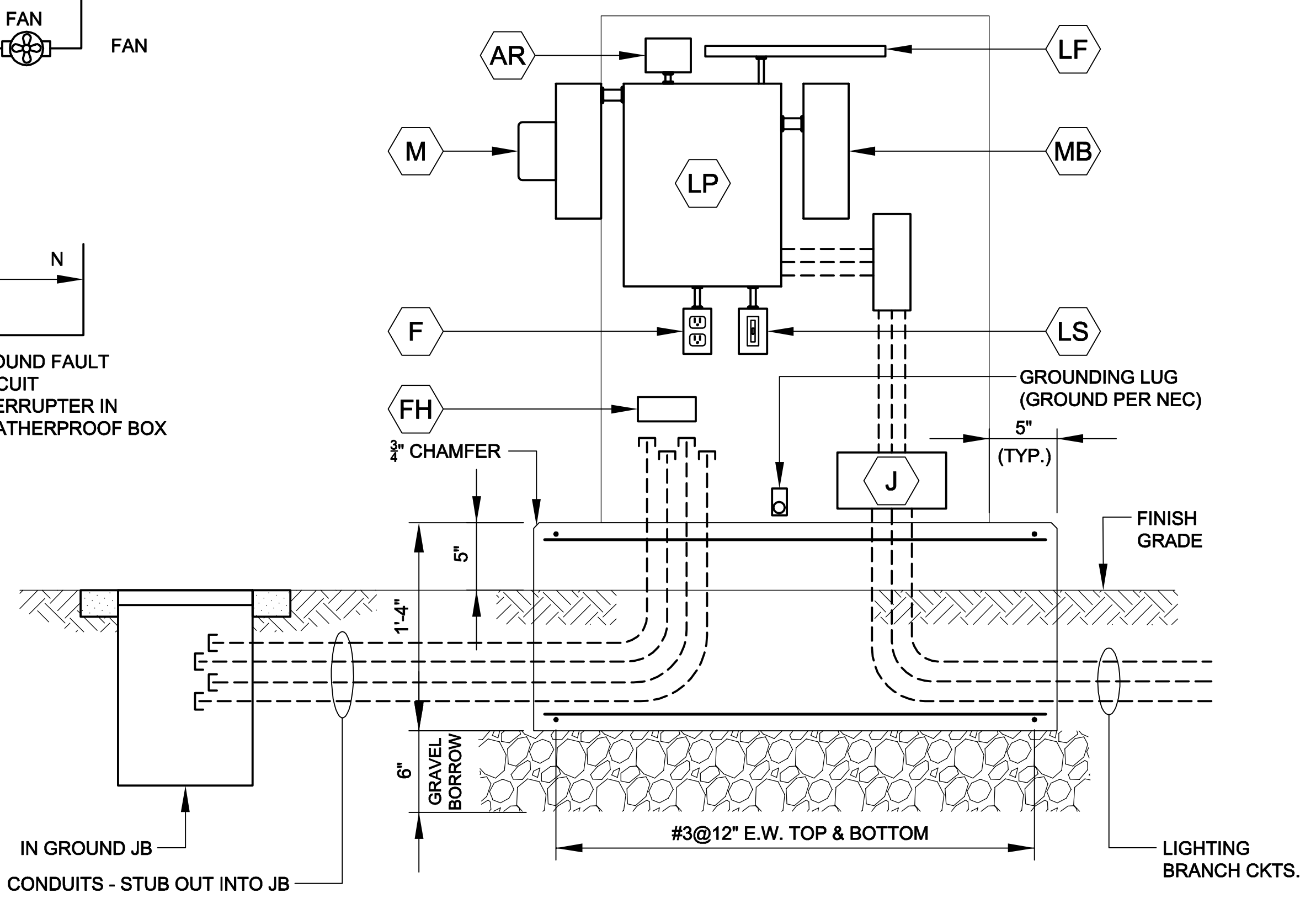
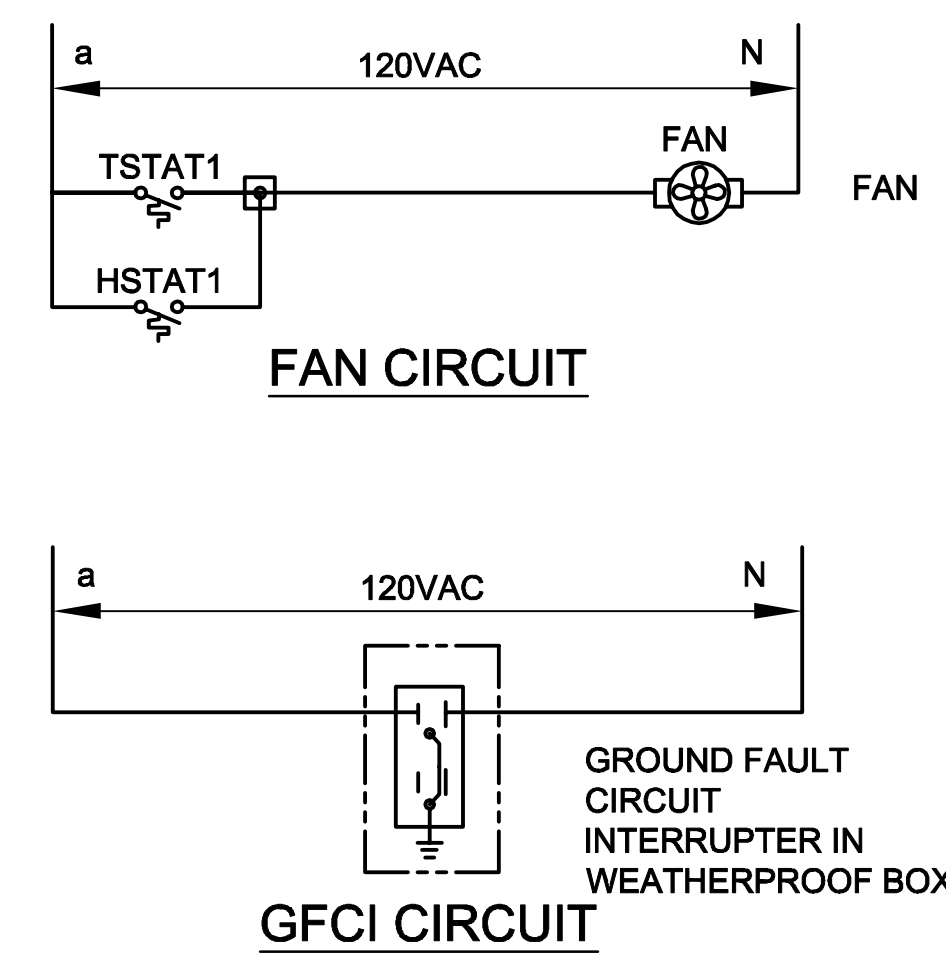
- AR** LIGHTNING ARRESTOR
- J** JUNCTION BOX WITH TERMINAL STRIPS (SIZE AS REQUIRED)
- F** GFCI RECEPTACLE
- LF** LIGHT FIXTURE
- LP** LIGHTING DISTRIBUTION PANEL
- LS** LIGHT SWITCH
- M** METER (BY UTILITY) AND METER SOCKET (BY CONTRACTOR)
- MB** MAIN BREAKER, 100A 2-POLE, 240V
- FH** FAN HEATER



2 LIGHT POLE CIRCUIT DIAGRAM

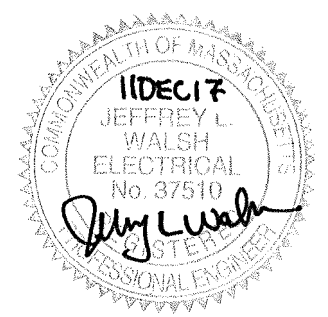
SCALE: NTS

CONTACTOR CONTROL CIRCUIT



3 LIGHTING CONTROL CABINET ELEVATION

SCALE: NTS



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

CONTRACT CP-2/CP-3

SEWER SEPARATION AND WATER REPLACEMENT

LIGHTING DETAILS

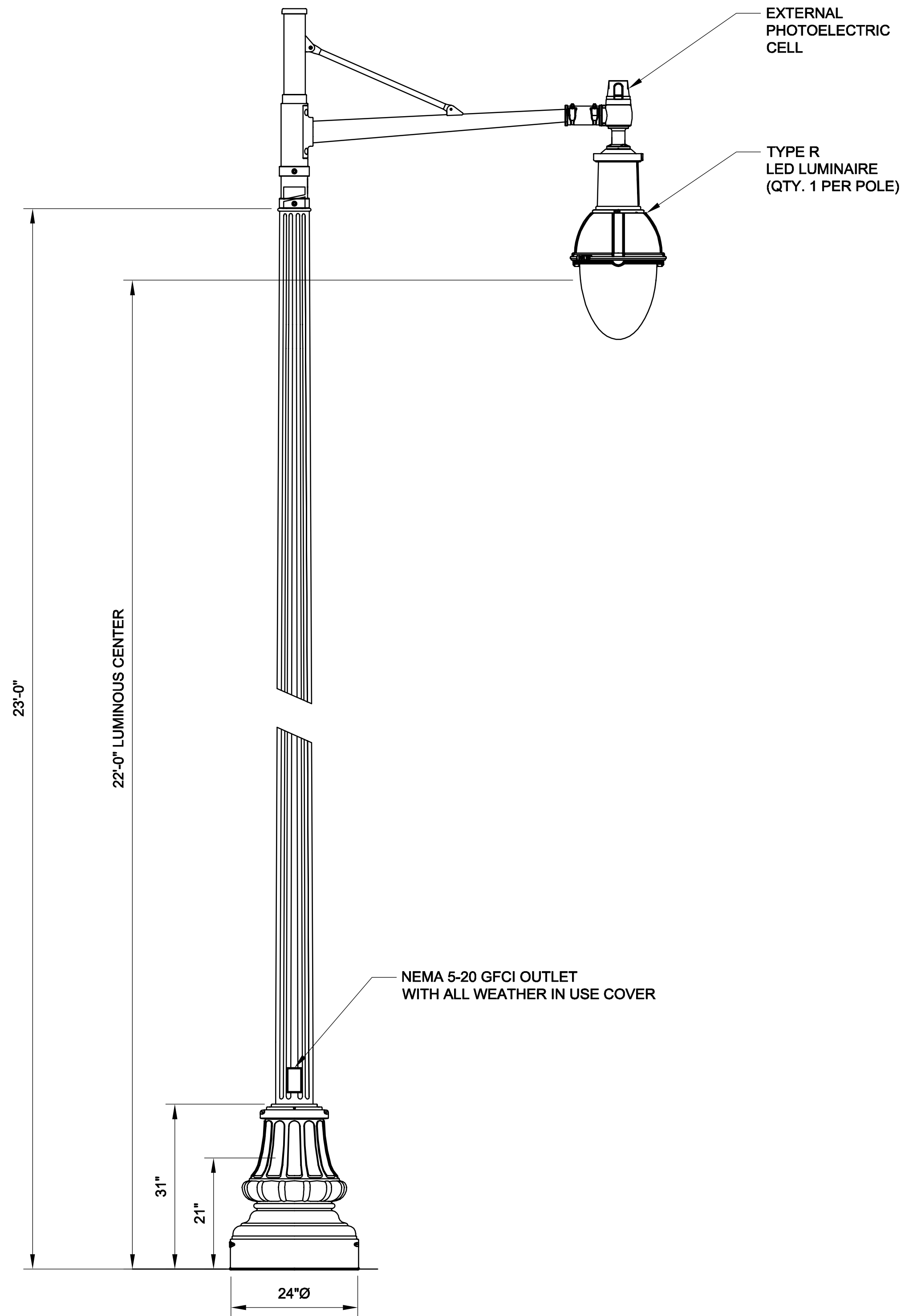
SHEET 2 OF 5

DESIGNED: OS	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET
CHECKED: JF		E-3
DRAWN: KLN	REF. CONT.	SCALE: N.T.S.
CHECKED: RJB	ACC.	DATE: DEC 2017

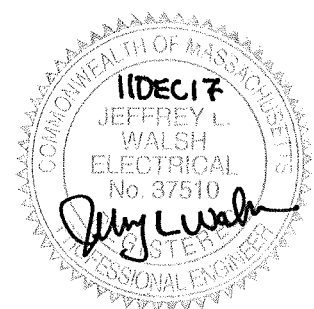
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

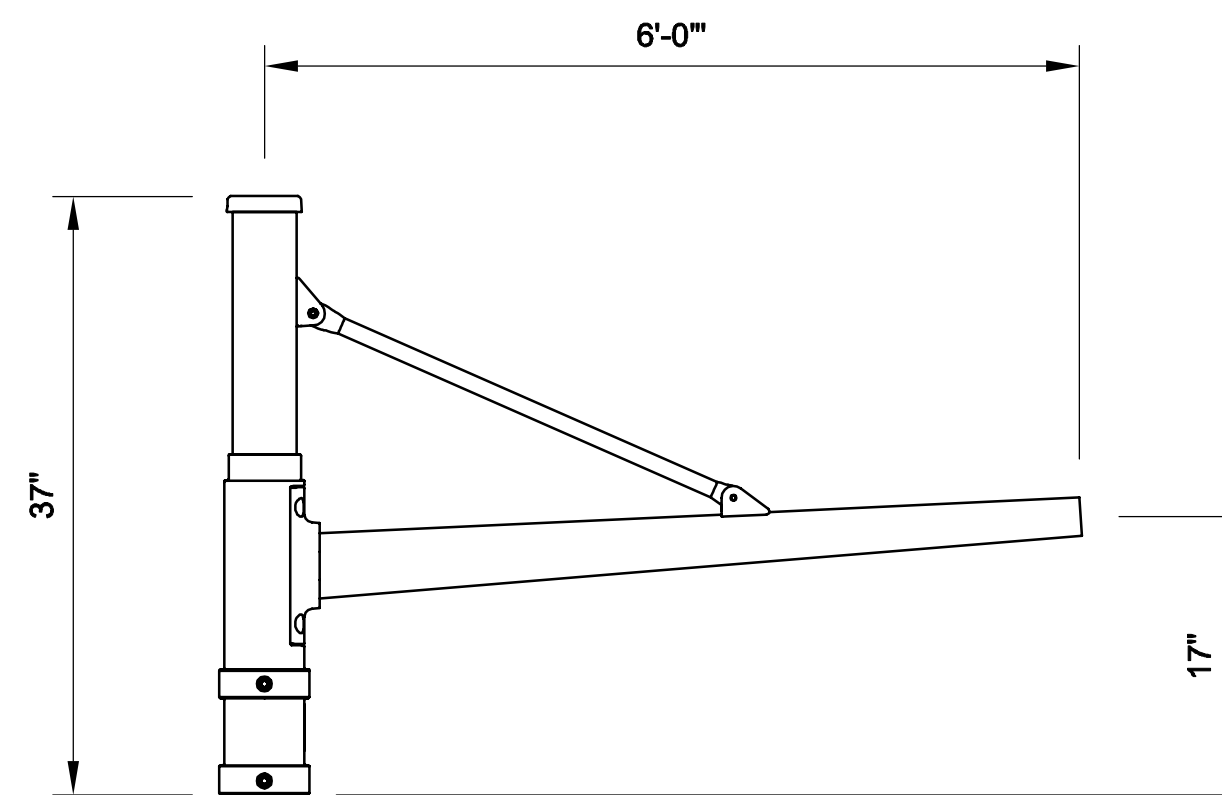
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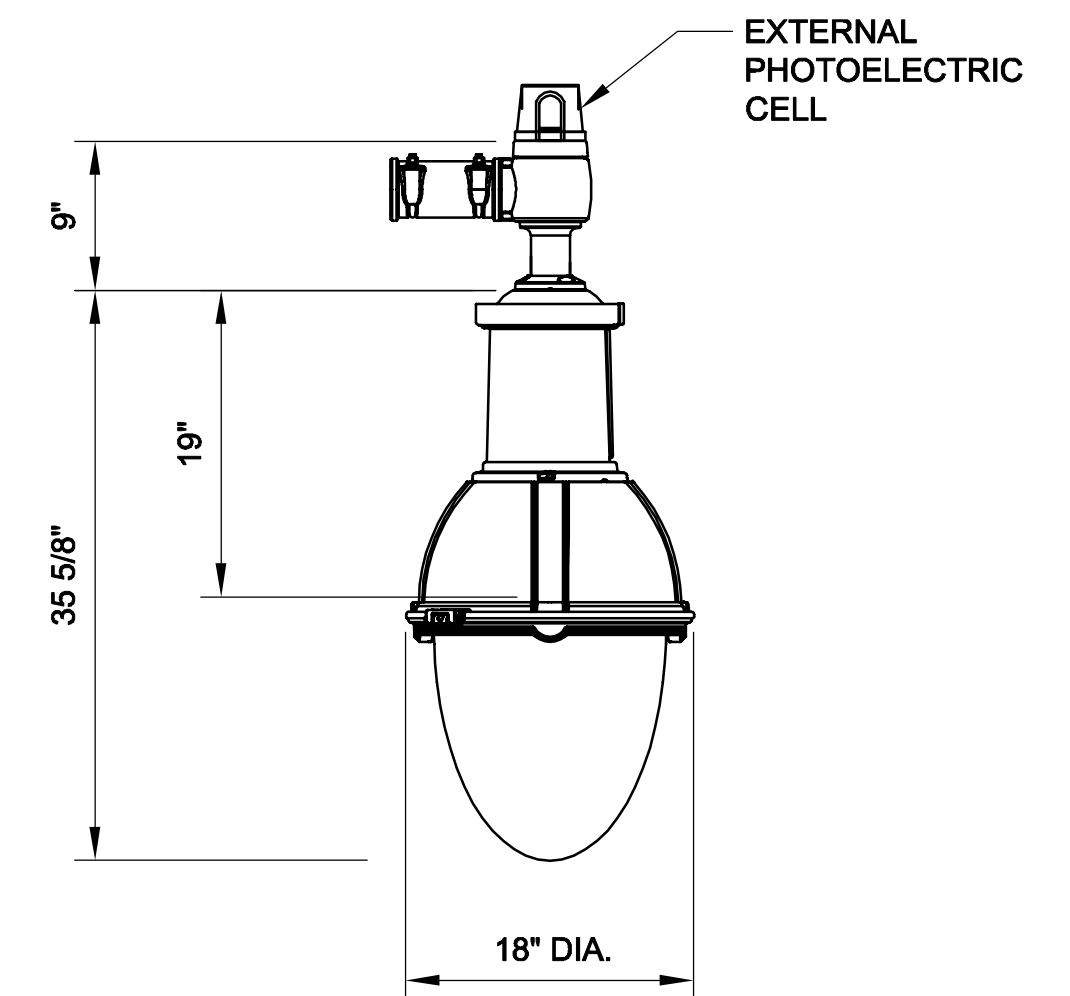
1 TYPE R LIGHTPOLE
SCALE: NTS



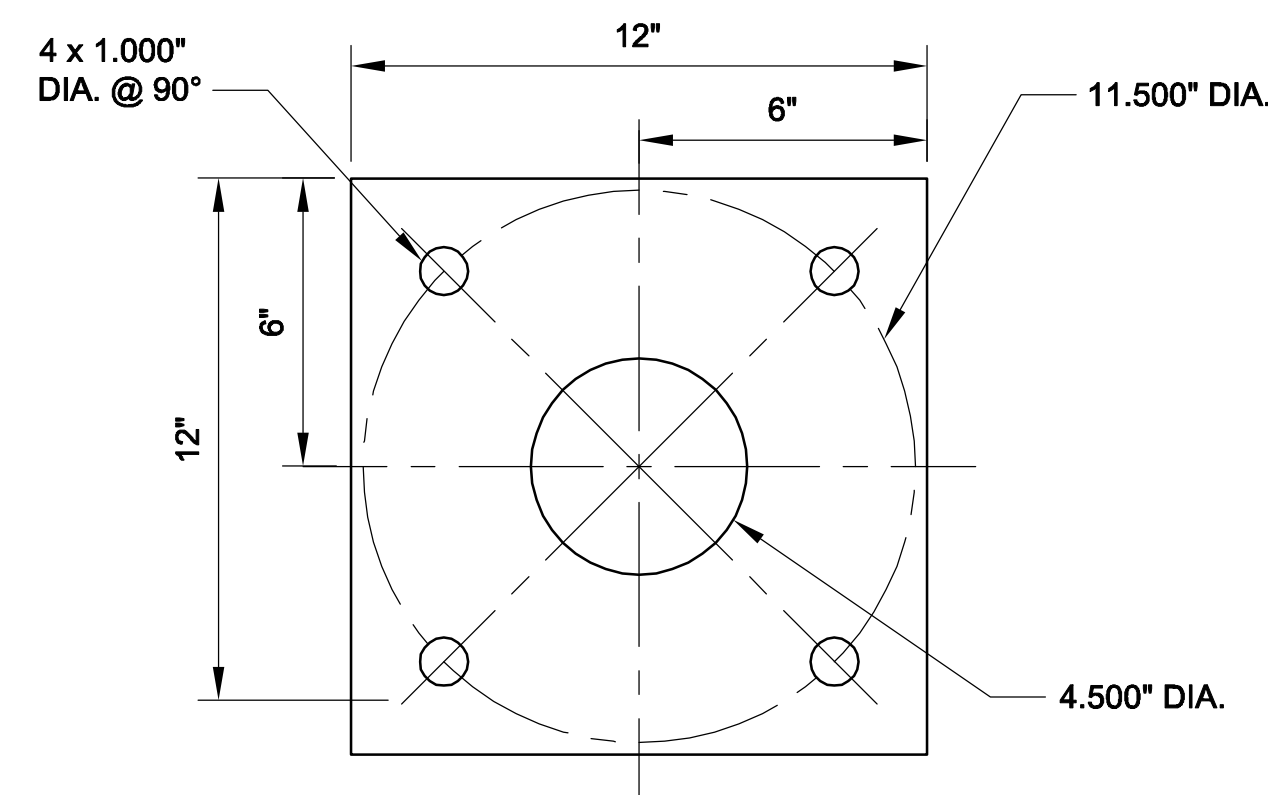
LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER (OR APPROVED EQUAL)	LAMP WATTAGE	VOLTAGE	LAMP TYPE	DESCRIPTION
R	PHILLIPS LUMEC RN20-90W49LED3K-ACDR-LE3F-VOLT-SMB-DE1-RCD7-BKTX	128W	240V	LED	SINGLE ARM-1 LUMINAIRE, IES TYPE III DISTRIBUTION



2 BRACKET ARM DETAIL
SCALE: NTS



4 LUMINAIRE DETAIL - TYPE R
SCALE: NTS



3 MOUNTING PLATE DETAIL
SCALE: NTS

NOTES:

- SEE DWG. E-1 FOR LEGEND AND GENERAL ELECTRICAL NOTES.

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
LIGHTING DETAILS FIXTURE TYPE R
SHEET 3 OF 5**

DESIGNED: MJS
CHECKED: KMM
DRAWN: KLN
CHECKED: RJB

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75 Arlington St. Boston, MA 02116
PH. (617)426-7330 FAX (617)482-8487

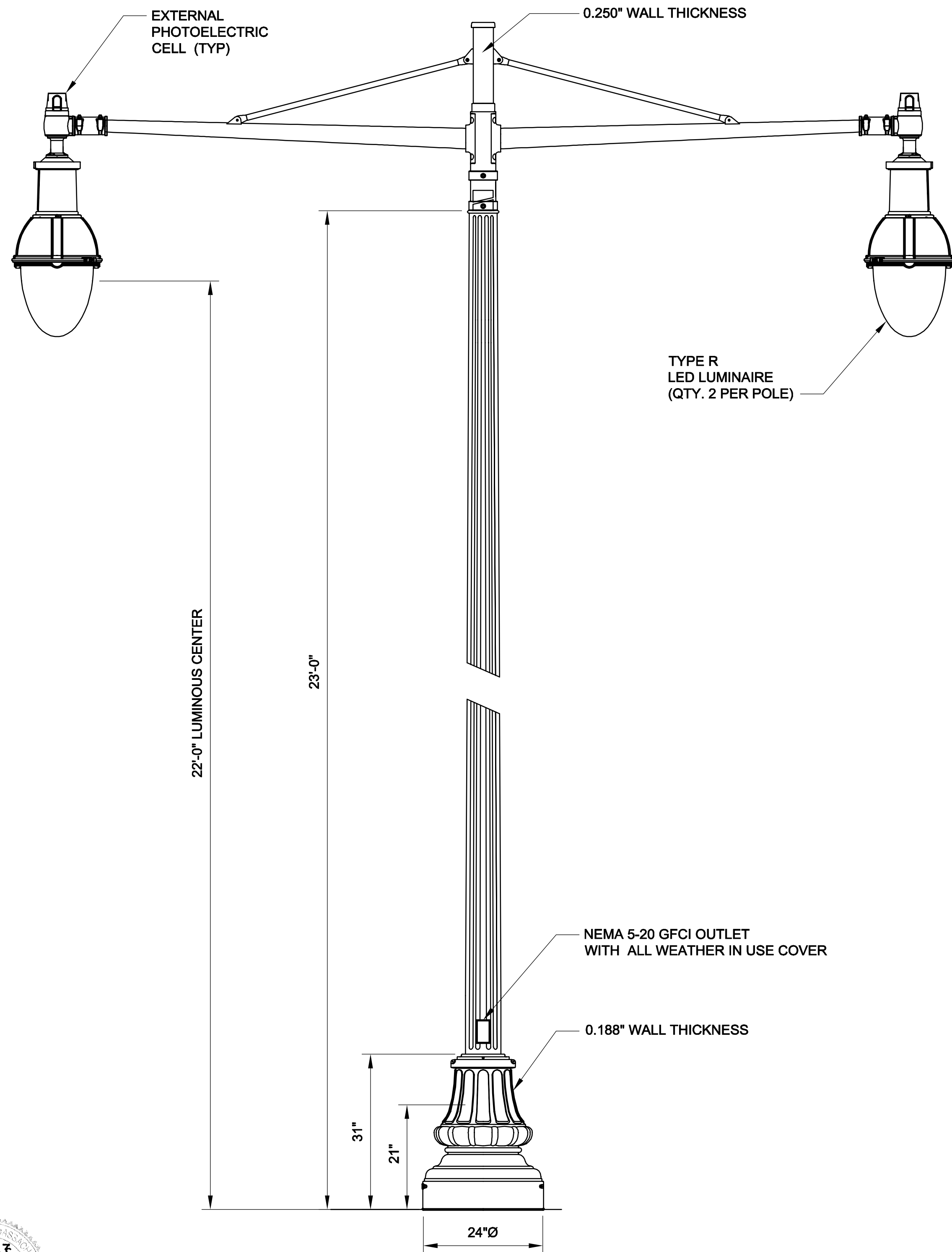
SHEET
E-4

REF.	CONT.	SCALE: N.T.S.
ACC.		DATE: DEC 2017

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

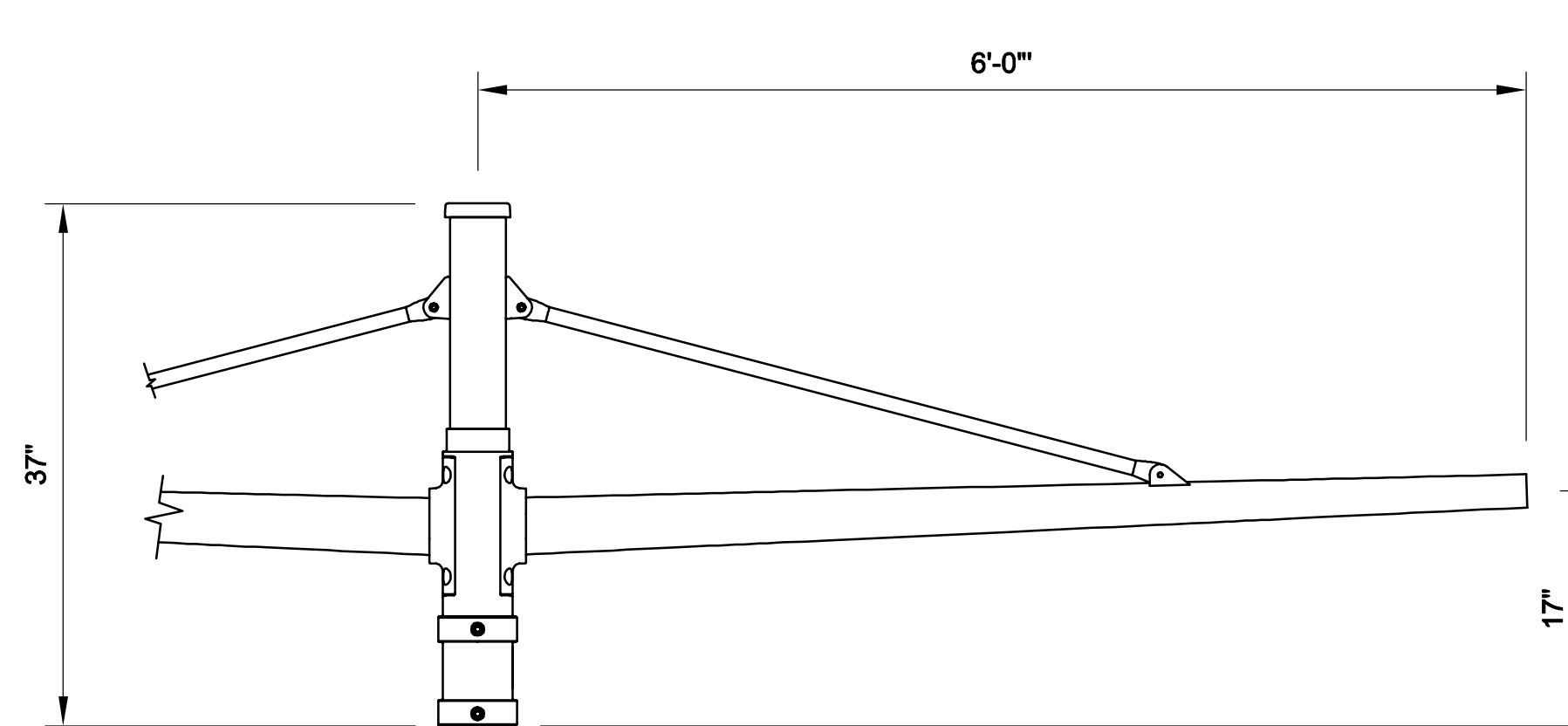
NO.	DATE	REVISIONS	BY

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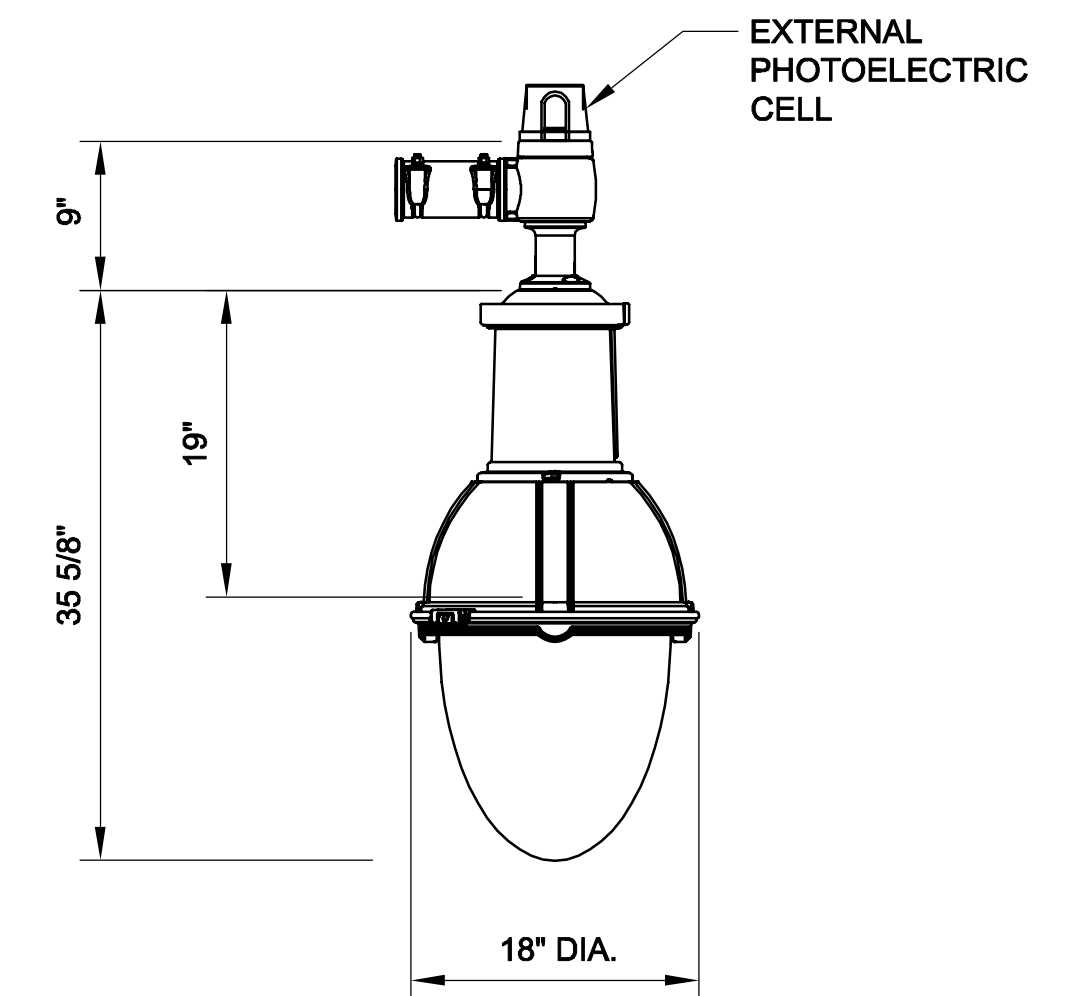


1 TYPE RR LIGHTPOLE
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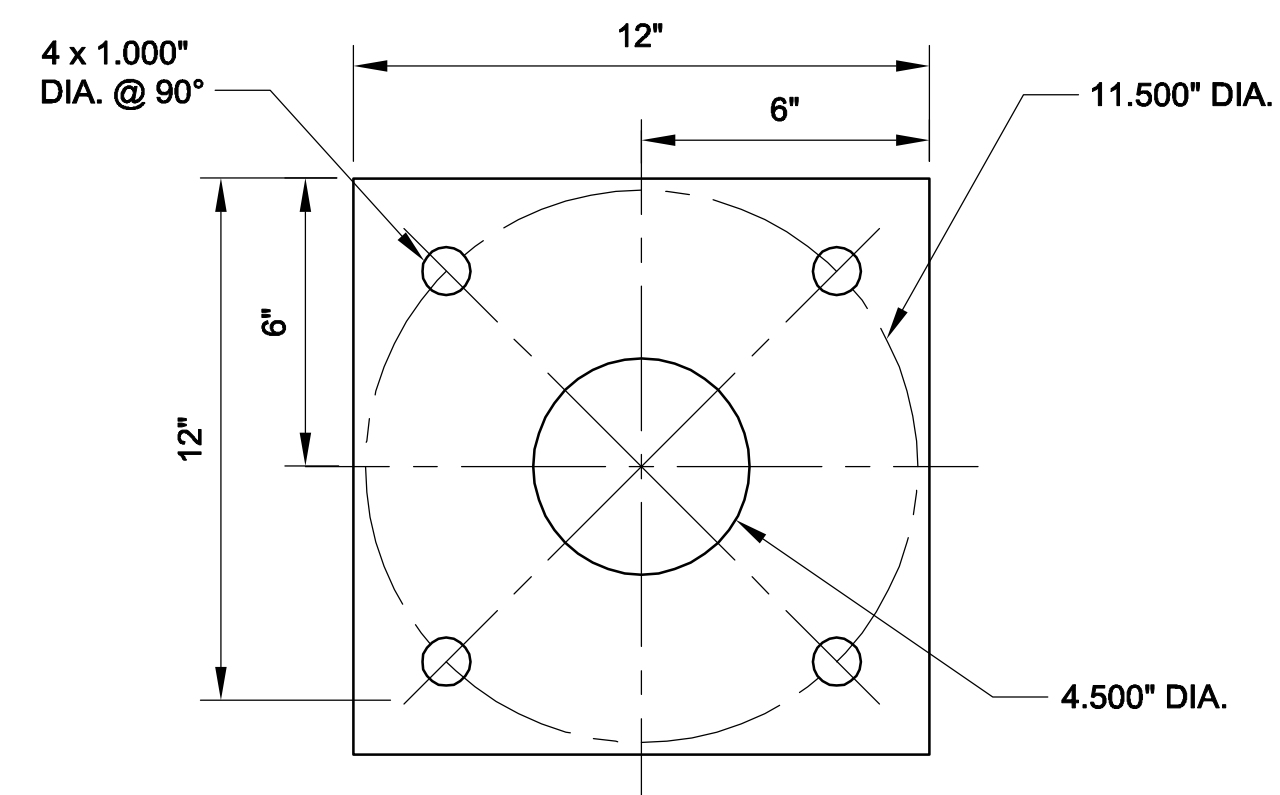
LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER (OR APPROVED EQUAL)	LAMP WATTAGE	VOLTAGE	LAMP TYPE	DESCRIPTION
RR	PHILLIPS LUMEC RN20-90W49LED3K-ACDR-LE3F-VOLT-SMB-DE1-RCD7-BKTX	128W	240V	LED	TWIN ARM-2 LUMINAIRE, IES TYPE III DISTRIBUTION



2 BRACKET ARM DETAIL
SCALE: NTS



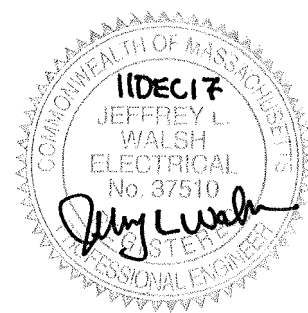
4 LUMINAIRE DETAIL - TYPE R
SCALE: NTS



3 MOUNTING PLATE DETAIL
SCALE: NTS

NOTES:

- SEE DWG. E-1 FOR LEGEND AND GENERAL ELECTRICAL NOTES.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
LIGHTING DETAILS FIXTURE TYPE RR
SHEET 4 OF 5

DESIGNED: MJS
CHECKED: KMM
DRAWN: KLN
CHECKED: RJB



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SHEET
E-5

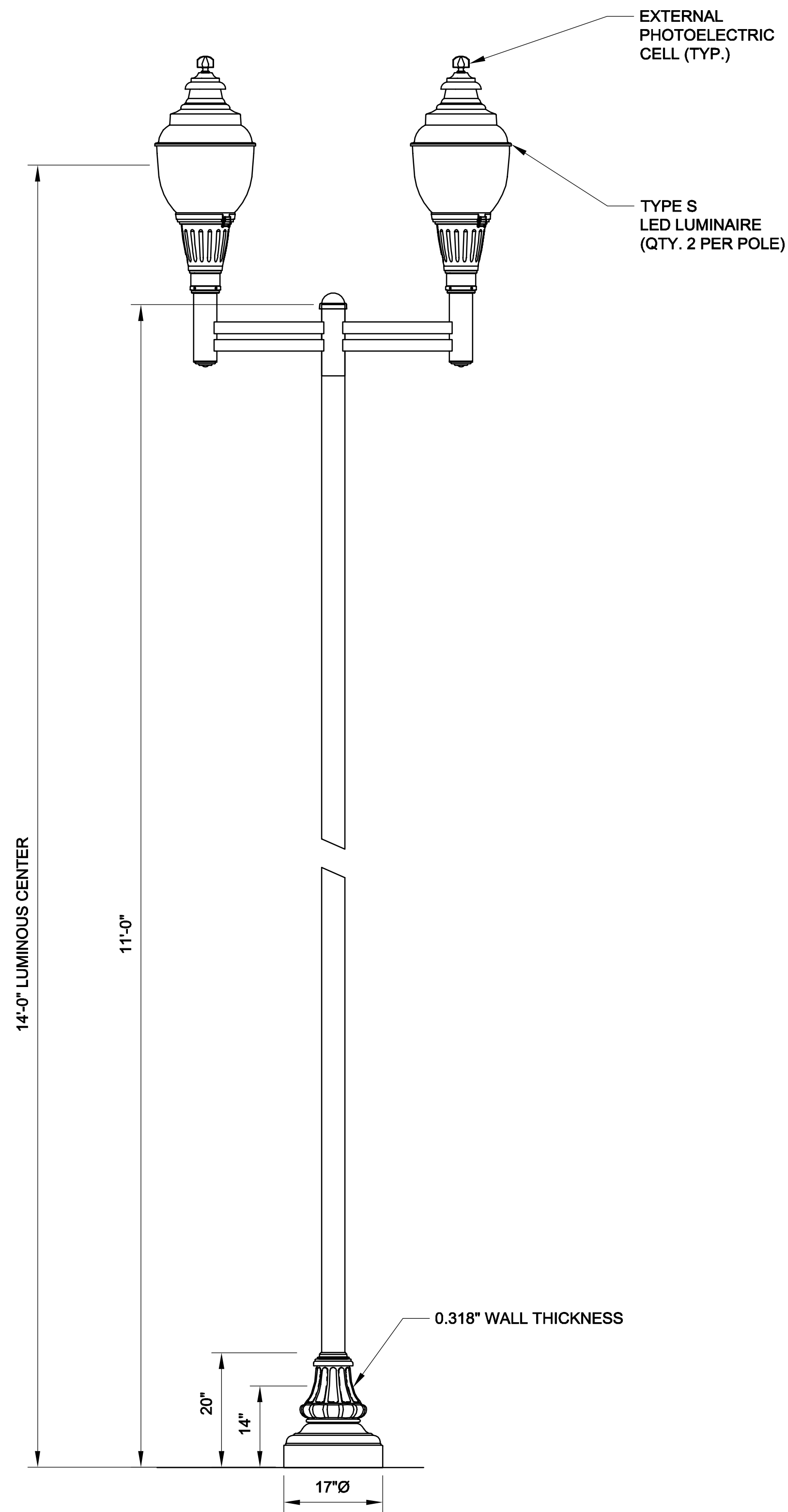
REF. CONT.
ACC.

SCALE: N.T.S.
DATE: DEC 2017

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93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

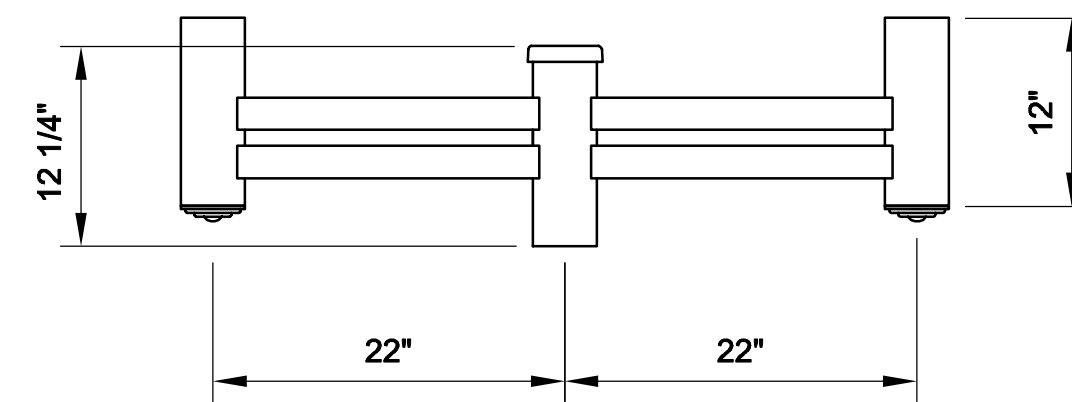
NO.	DATE	REVISIONS	BY

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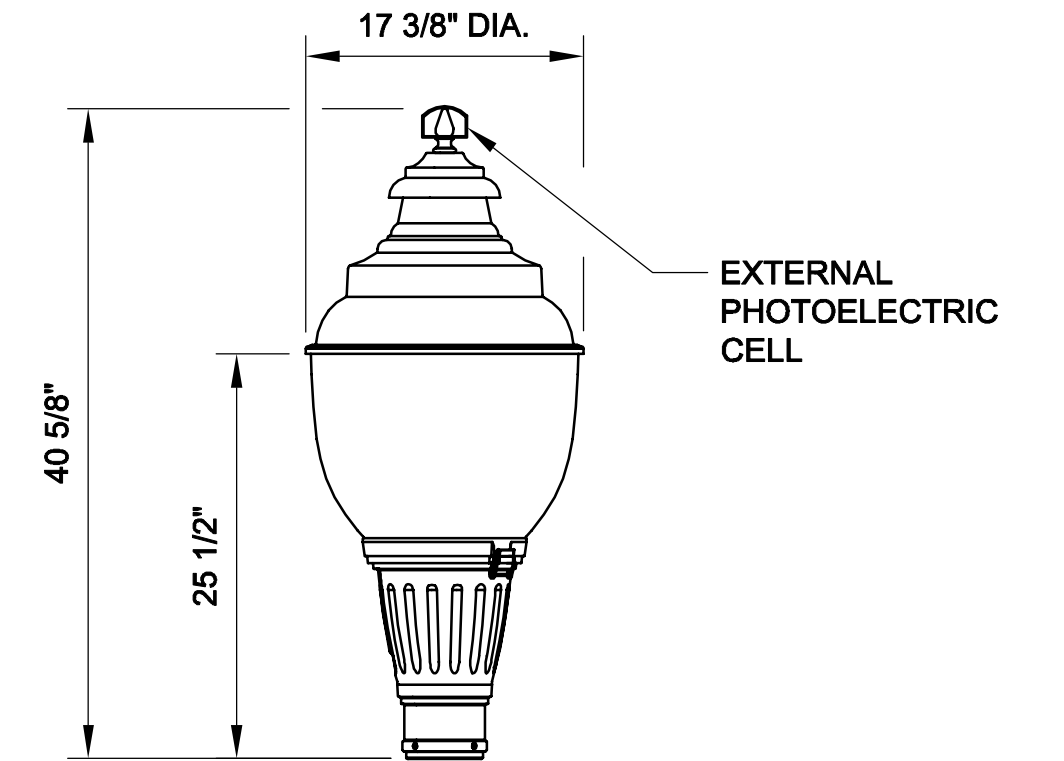


1 TYPE S LIGHTPOLE
SCALE: NTS

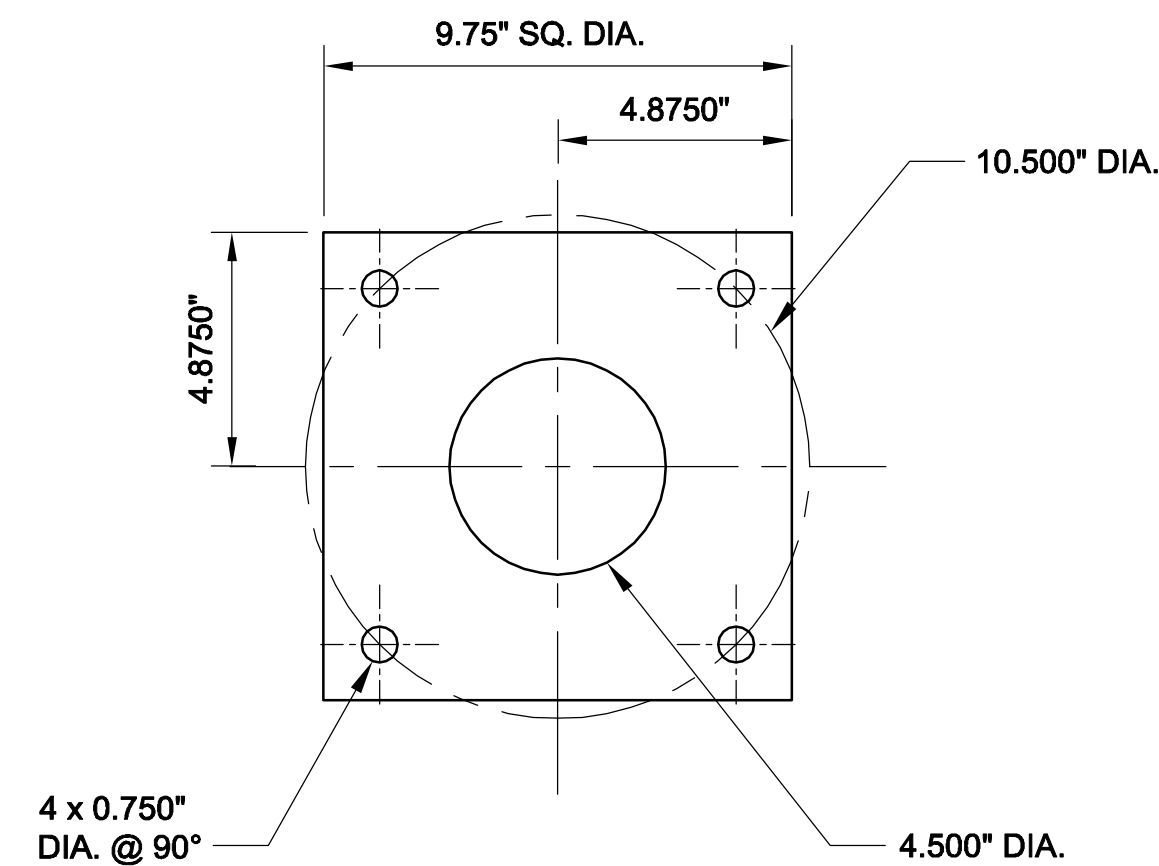
LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER (OR APPROVED EQUAL)	LAMP WATTAGE	VOLTAGE	LAMP TYPE	DESCRIPTION
S	PHILLIPS LUMEC S55-65W49LED3K-ACDR-LE3-VOLT-SFX-RCD7-BKTX	79W	240V	LED	TWIN ARM-2 LUMINAIRES, IES TYPE II DISTRIBUTION



2 TWIN BRACKET ARM DETAIL
SCALE: NTS



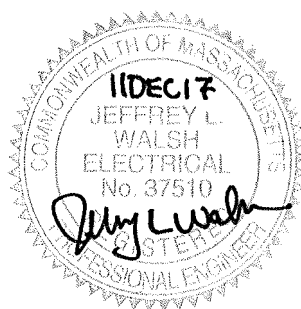
4 LUMINAIRE DETAIL - TYPE S
SCALE: NTS



3 MOUNTING PLATE DETAIL
SCALE: NTS

NOTES:

- SEE DWG. E-1 FOR LEGEND AND GENERAL ELECTRICAL NOTES.



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS

**CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
LIGHTING DETAILS FIXTURE TYPE S
SHEET 5 OF 5**

DESIGNED: MJS
CHECKED: KMM
DRAWN: KLN
CHECKED: RJB

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PH. (617)426-7330 FAX (617)482-8487

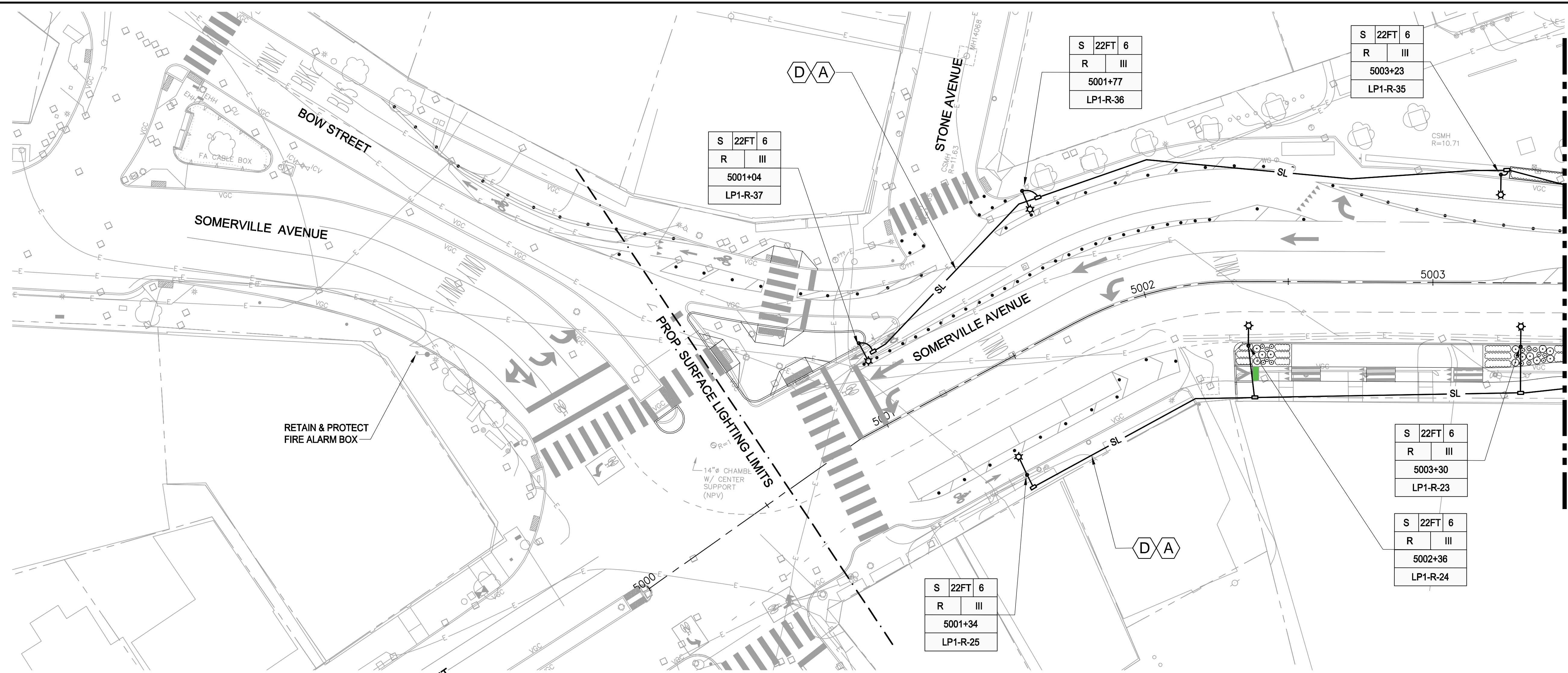
SHEET
E-6

REF.	CONT.	SCALE: N.T.S.
ACC.		DATE: DEC 2017

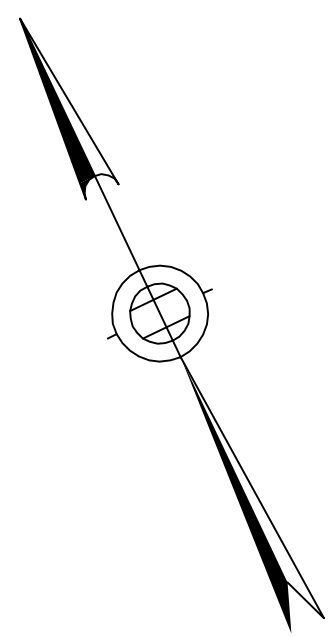
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93 HIGHLAND AVENUE
SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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MATCH LINE - SEE SHEET E-12

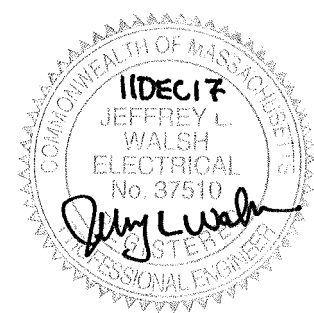
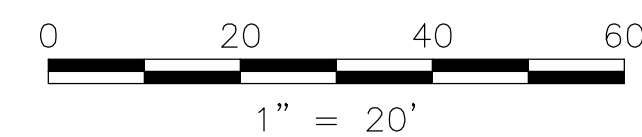


LEGEND

- ⊙⊙ ROADWAY POLE & FIXTURE
- ⊙⊙ PEDESTRIAN POLE & FIXTURE
- HAND HOLE
- SL — STREET LIGHTING CONDUIT
2 - 3" SCH80 PVC (1 - SPARE)

NOTES:

1. FOR LEGEND AND ABBREVIATION, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-1.
3. FOR UTILITY PLAN, SEE SHEET U-1.
4. FOR SURFACE DRAINAGE, SEE SHEET SD-61.
5. FOR LAYOUT OF POLES, COORDINATE WITH STREETScape LAYOUT. SEE SHEETS L-11 AND L-12.



CONDUCTOR SCHEDULE *

ID NO.	CONDUCTORS
A	2 #8 & 1 #8G
B	4 #8 & 1 #8G
C	8 #8 & 1 #8G
D	2 #6 & 1 #6G
E	4 #6 & 1 #6G
F	8 #6 & 1 #6G

ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SURFACE LIGHTING PLANS
SHEET 1 OF 5

DESIGNED: RJB
 CHECKED: LAC
 DRAWN: JD
 CHECKED: RJB



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 PH. (617)426-7330 FAX (617)482-8487

REF.
 ACC.

CONT.

SCALE: 1"=20'
 DATE: DEC 2017

SHEET
E-11

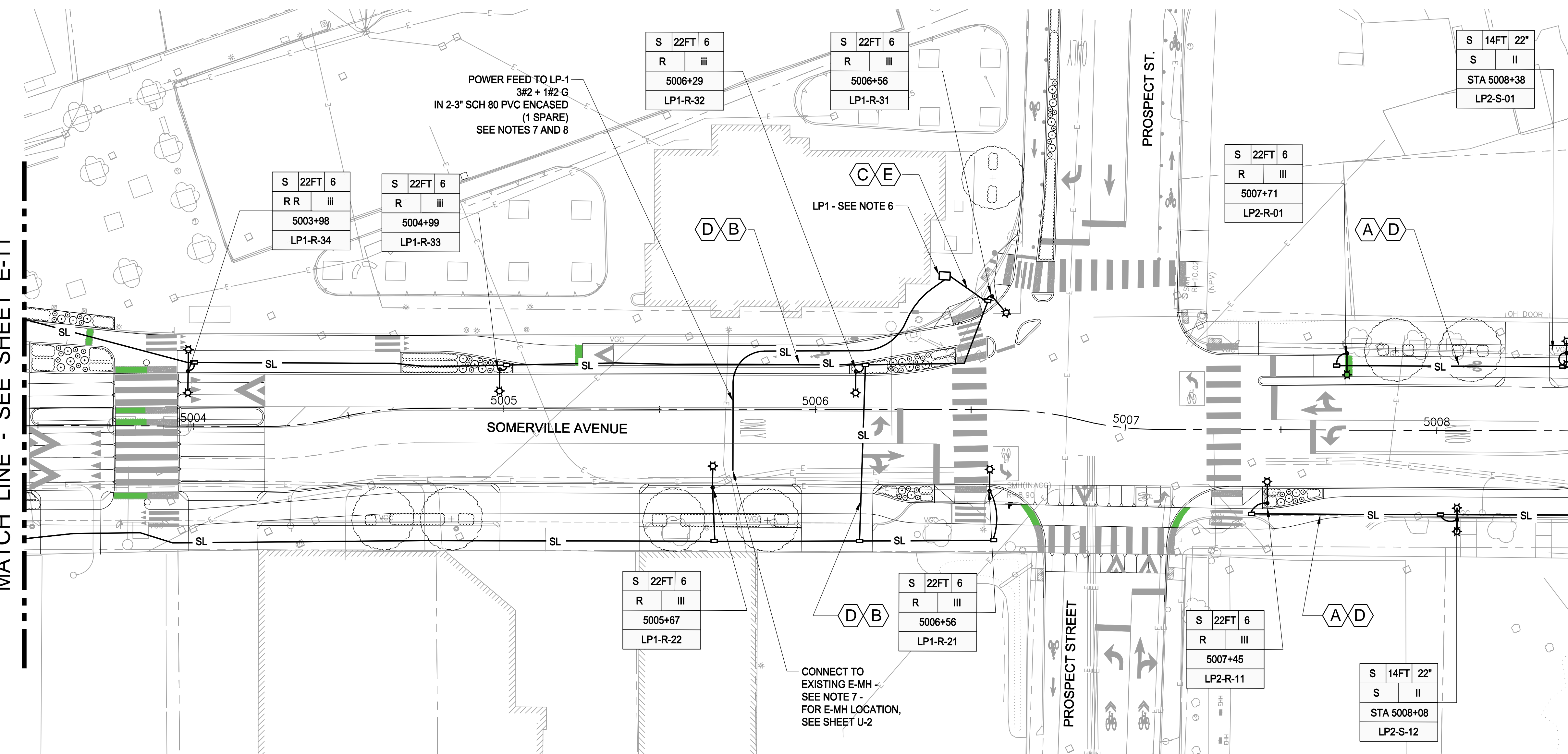
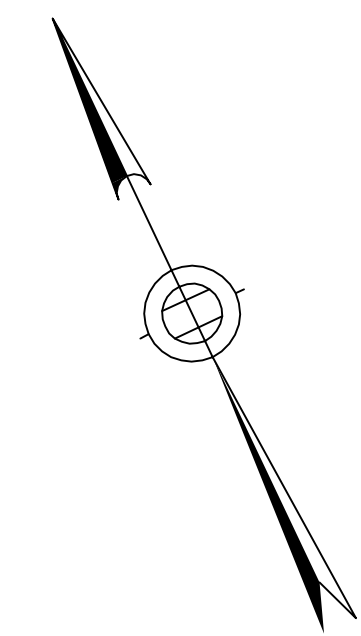
CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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MATCH LINE - SEE SHEET E-11

MATCH LINE - SEE SHEET E-13

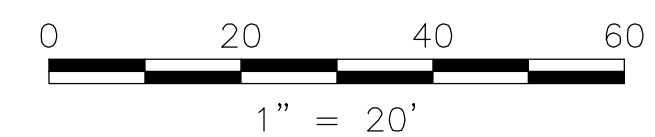


LEGEND

- ⊙ ROADWAY POLE & FIXTURE
- ⊙ PEDESTRIAN POLE & FIXTURE
- HAND HOLE
- SL — STREET LIGHTING CONDUIT
2 - 3" SCH80 PVC (1 - SPARE)

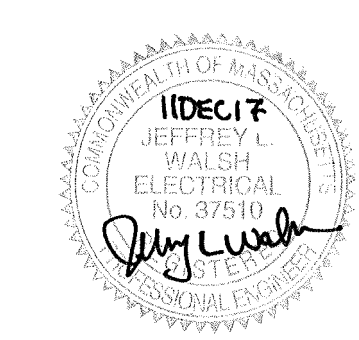
NOTES:

1. FOR LEGEND & ABBREVIATION, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-1.
3. FOR UTILITY PLAN, SEE SHEET U-1.
4. FOR SURFACE DRAINAGE, SEE SHEET SD-61.
5. FOR LAYOUT OF POLES, COORDINATE WITH STREETScape LAYOUT. SEE SHEETS L-12 AND L-13.
6. MOUNT LOAD PANEL AT THE PLACE OF REMOVED TRAFFIC CONTROL CENTER. REMOVE EXISTING MOUNTING BASE AND CONDUITS. REFER TO E-3 FOR LOAD CENTER DETAILS.
7. THE CONTRACTOR SHALL SUBMIT WORK ORDER REQUEST TO EVERSOURCE FOR POWER CONNECTION.
8. UTILITY SERVICE CHARACTERISTICS WOULD BE UNDERGROUND. 1 PHASE 3 WIRE 120/240V AND TERMINATION AT CONNECTION BOX.



CONDUCTOR SCHEDULE *

ID NO.	CONDUCTORS
A	2 #8 & 1 #8G
B	4 #8 & 1 #8G
C	8 #8 & 1 #8G
D	2 #6 & 1 #6G
E	4 #6 & 1 #6G
F	8 #6 & 1 #6G



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SURFACE LIGHTING PLANS
SHEET 2 OF 5

DESIGNED: MJS	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET E-12
CHECKED: KMM		
DRAWN: LAC	REF.	CONT.
CHECKED: RJB	ACC.	SCALE: 1"=20'
		DATE: DEC 2017

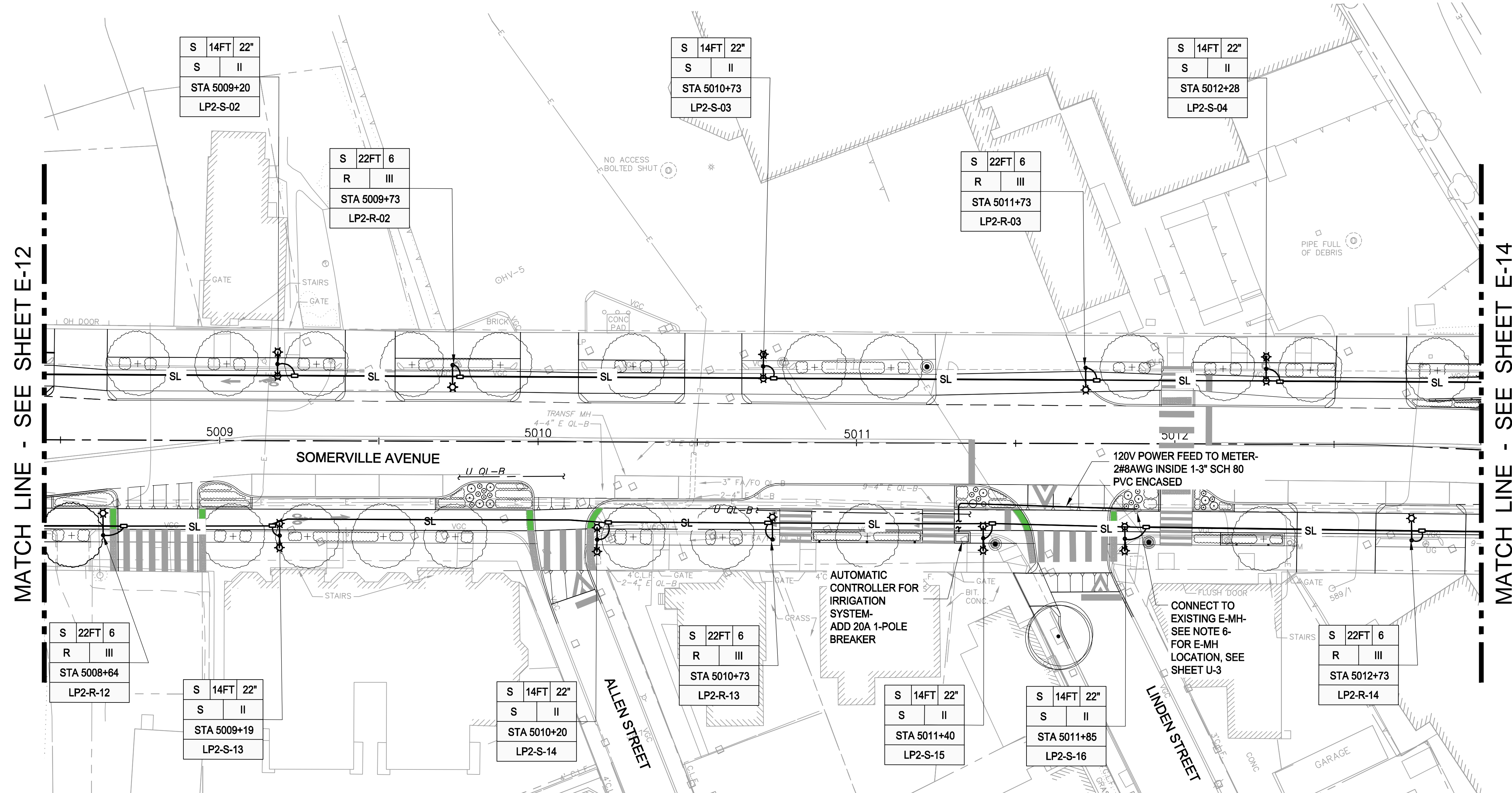
CITY OF SOMERVILLE
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 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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MATCH LINE - SEE SHEET E-12

MATCH LINE - SEE SHEET E-14



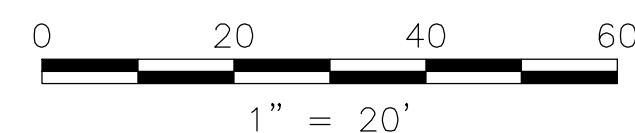
LEGEND

- ⊙⊙ ROADWAY POLE & FIXTURE
- ⊙⊙ PEDESTRIAN POLE & FIXTURE
- HAND HOLE
- SL — STREET LIGHTING CONDUIT
2 - 3" SCH80 PVC (1 - SPARE)

NOTES:

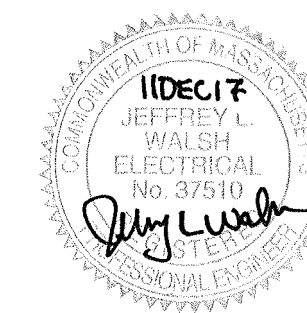
1. FOR LEGEND & ABBREVIATION, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-1.
3. FOR UTILITY PLAN, SEE SHEET U-3.
4. FOR SURFACE DRAINAGE, SEE SHEET SD-63.
5. FOR LAYOUT OF POLES, COORDINATE WITH STREETScape LAYOUT. SEE SHEETS L-14 AND L-15.

6. THE CONTRACTOR SHALL SUBMIT WORK ORDER REQUEST TO EVERSOURCE FOR POWER CONNECTION.



CONDUCTOR SCHEDULE *

ID NO.	CONDUCTORS
A	2 #8 & 1 #8G
B	4 #8 & 1 #8G
C	8 #8 & 1 #8G
D	2 #6 & 1 #6G
E	4 #6 & 1 #6G
F	8 #6 & 1 #6G



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SURFACE LIGHTING PLANS
SHEET 3 OF 5

DESIGNED: MJS
 CHECKED: KMM
 DRAWN: LAC
 CHECKED: RJB



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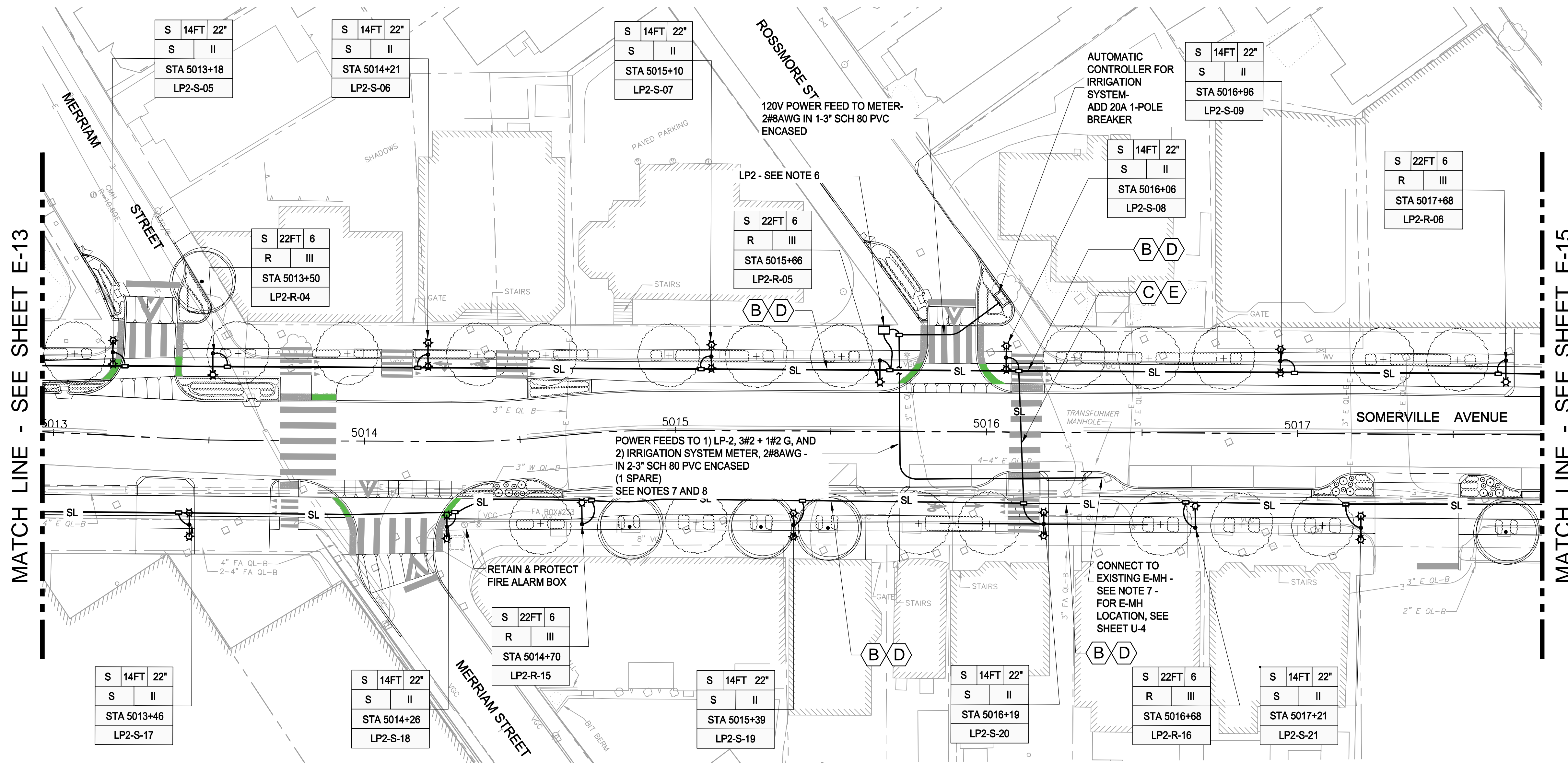
SHEET
E-13

REF. CONT. SCALE: 1"=20'
 ACC. DATE: DEC 2017

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 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

NO.	DATE	REVISIONS	BY

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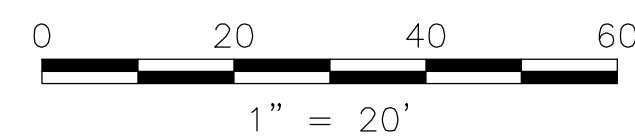


LEGEND

- ⊙ — ROADWAY POLE & FIXTURE
- ⊙ — PEDESTRIAN POLE & FIXTURE
- — HAND HOLE
- SL — STREET LIGHTING CONDUIT
2 - 3" SCH80 PVC (1 - SPARE)

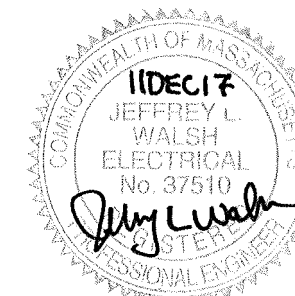
NOTES:

1. FOR LEGEND & ABBREVIATION, SEE SHEET E-1.
2. FOR GENERAL NOTES, SEE SHEET E-1.
3. FOR UTILITY PLAN, SEE SHEET U-4.
4. FOR SURFACE DRAINAGE, SEE SHEET SD-64.
5. FOR LAYOUT OF POLES, COORDINATE WITH STREETScape LAYOUT. SEE SHEETS L-15, L-16 AND L-17.
6. VERIFY EXACT LOCATION OF LP-2 WITH THE ENGINEER BEFORE INSTALLING. REFER TO SHEET E-3 FOR LOAD CENTER DETAILS.
7. THE CONTRACTOR SHALL SUBMIT WORK ORDER REQUEST TO EVERSOURCE FOR POWER CONNECTION.
8. UTILITY SERVICE CHARACTERISTICS WOULD BE UNDERGROUND. 1 PHASE 3 WIRE 120/240V AND TERMINATION AT CONNECTION BOX.



CONDUCTOR SCHEDULE *

ID NO.	CONDUCTORS
A	2 #8 & 1 #8G
B	4 #8 & 1 #8G
C	8 #8 & 1 #8G
D	2 #6 & 1 #6G
E	4 #6 & 1 #6G
F	8 #6 & 1 #6G



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SURFACE LIGHTING PLANS
SHEET 4 OF 5

DESIGNED: MJS
 CHECKED: KMM
 DRAWN: LAC
 CHECKED: RJB

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 PH. (617)426-7330 FAX (617)482-8487

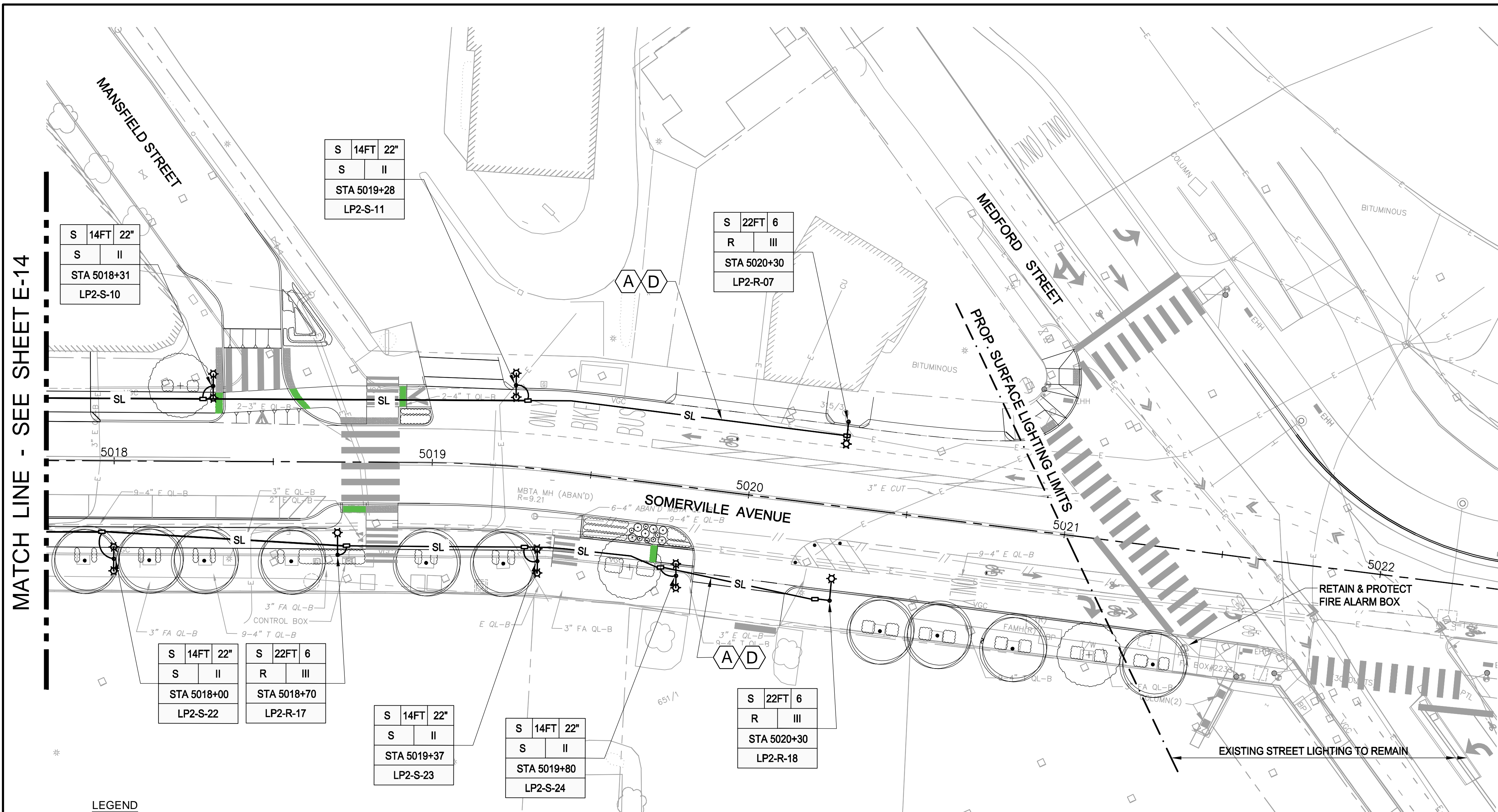
SHEET
E-14

REF. _____ CONT. _____
 ACC. _____ SCALE: 1"=20'
 DATE: DEC 2017

CITY OF SOMERVILLE
 93 HIGHLAND AVENUE
 SOMERVILLE, MA 02143

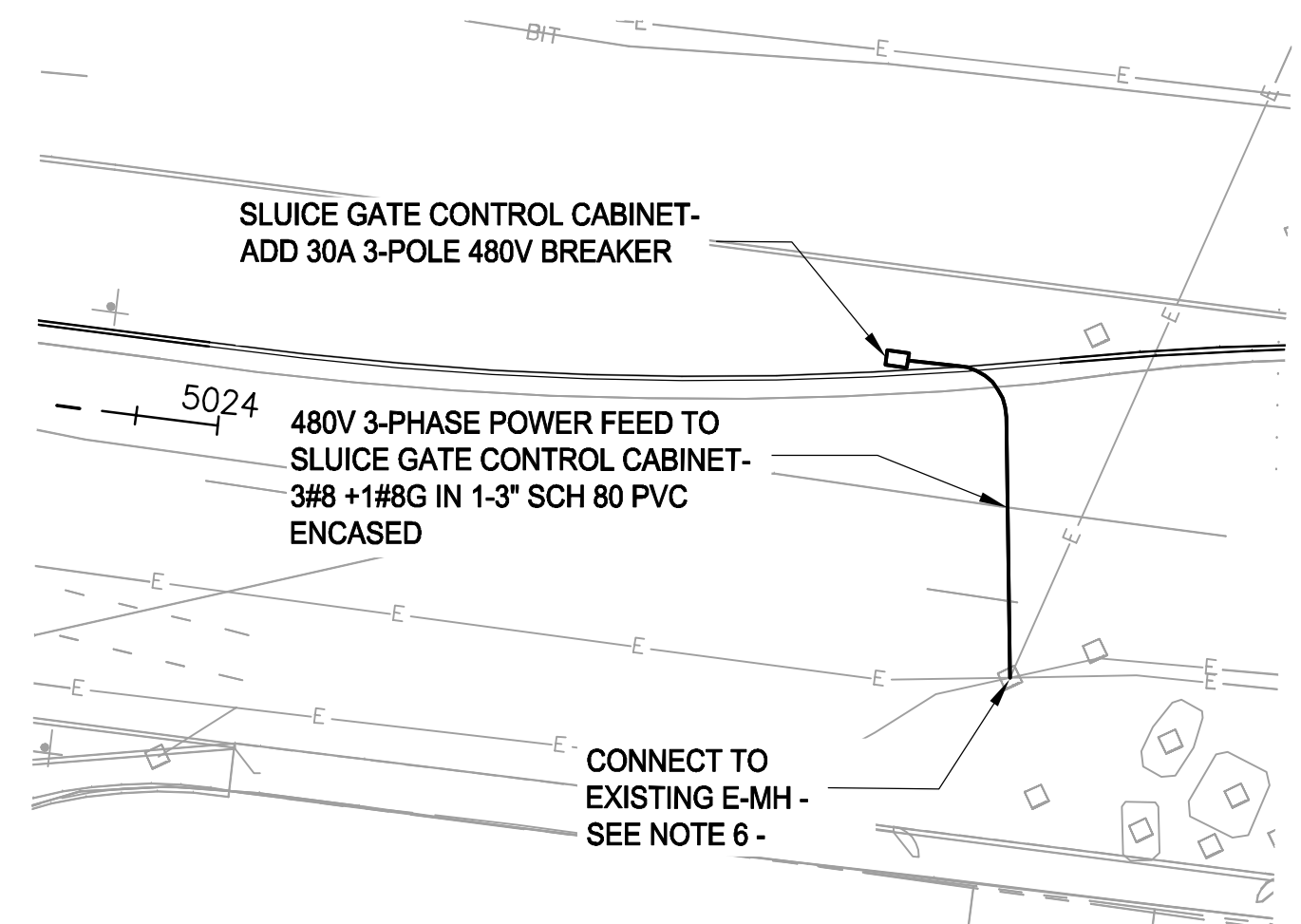
NO.	DATE	REVISIONS	BY

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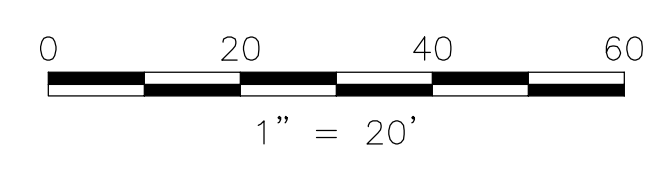
MATCH LINE - SEE SHEET E-14

INSET: SEE SD-6 AND SD-28



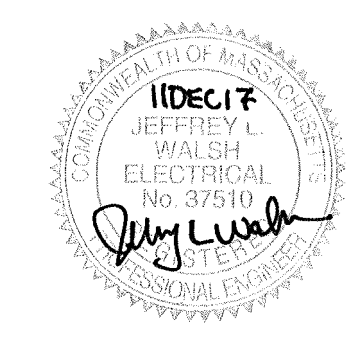
- LEGEND**
- ⊙ ☆ ROADWAY POLE & FIXTURE
 - ☆ ☆ PEDESTRIAN POLE & FIXTURE
 - HAND HOLE
 - SL — STREET LIGHTING CONDUIT
2 - 3" SCH80 PVC (1 - SPARE)

- NOTES:**
1. FOR LEGEND & ABBREVIATION, SEE SHEET E-1.
 2. FOR GENERAL NOTES, SEE SHEET E-1.
 3. FOR UTILITY PLAN, SEE SHEET U-5.
 4. FOR SURFACE DRAINAGE, SEE SHEET SD-65.
 5. FOR LAYOUT OF POLES, COORDINATE WITH STREETScape LAYOUT. SEE SHEETS L-17 AND L-18.
 6. THE CONTRACTOR SHALL SUBMIT WORK ORDER REQUEST TO EVERSOURCE FOR POWER CONNECTION.



CONDUCTOR SCHEDULE *

ID NO.	CONDUCTORS
A	2 #8 & 1 #8G
B	4 #8 & 1 #8G
C	8 #8 & 1 #8G
D	2 #6 & 1 #6G
E	4 #6 & 1 #6G
F	8 #6 & 1 #6G



ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM

SOMERVILLE AVENUE UTILITY & STREETScape IMPROVEMENTS
CONTRACT CP-2/CP-3
SEWER SEPARATION AND WATER REPLACEMENT
SURFACE LIGHTING PLANS
SHEET 5 OF 5

DESIGNED: MJS	Parsons Brinckerhoff, Inc. 75 Arlington St. Boston, MA 02116 PH. (617)426-7330 FAX (617)482-8487	SHEET				
CHECKED: KMM		E-15				
DRAWN: LAC						
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ACC.	DATE: DEC 2017					
CITY OF SOMERVILLE 93 HIGHLAND AVENUE SOMERVILLE, MA 02143						

NO.	DATE	REVISIONS	BY