



MEMORANDUM

TO: Jessica Fosbrook, PE, Project Manager, City of Somerville
FROM: Rachel Burckardt, PE, WSP
Jason Bobowski, PLA, Hatch
**SUBJECT: Somerville Avenue Utility and Streetscape Improvements
Tree Removals**
DATE: May 17, 2018

The scope of this project includes new major storm drainage facilities, water main replacement and improvements, sewer relocations, sewer lining, a new communications duct bank, and street restoration including new sidewalks, separated cycle tracks, curb, crosswalks and wheelchair ramps, green stormwater facilities, street furniture, planters, and 51 new trees with tree cells. The project also includes the removal of 37 street trees while preserving 40 street trees along Somerville Avenue from Union Square to Medford Street. The trees proposed to be removed include some for health reasons and others whose health will be jeopardized by the proposed construction, including some that are simply in conflict with the required locations of the new infrastructure improvements. Following are descriptions of each tree to be removed, with street location, DBH (namely, the tree diameter measured at 4.5 feet above the ground), species and the reason(s) for removal. See attached plan for locations of the trees to be removed.

Tree No. 1: 16" Callery Pear at 9 Union Square, Somerville Ave. (south side)

This tree is in poor condition and its continuing decline is anticipated. In addition, the tree is proposed to be removed to allow for the new protected cycle track.

Tree No. 2: 11" Callery Pear at 9 Union Square, Somerville Ave. (south side)

This tree is in poor condition and its continuing decline is anticipated. In addition, the tree is proposed to be removed to allow for the new protected cycle track.

Tree No. 3: 12" Callery Pear at 9 Union Square, Somerville Ave. (south side)

This tree is in poor condition and its continuing decline is anticipated. In addition, the tree is proposed to be removed to allow for the new protected cycle track.



Tree No. 4: 3" Littleleaf Linden 66 Union Square Plaza (north side)

This tree in the Union Square Plaza is in poor condition, showing severe decline. It is anticipated it will continue to decline. In addition, the trench excavation needed to relocate the existing 24-inch sanitary sewer requires the removal of this tree.

Tree No. 5: 3" Littleleaf Linden at 66 Union Square Plaza (north side)

This tree in the Union Square Plaza is in poor condition and its continuing decline is anticipated. In addition, the trench excavation needed to relocate the existing 24-inch sanitary sewer requires the removal of this tree.

Tree No. 6: 4" Littleleaf Linden at 66 Union Square Plaza (north side)

This tree in the Union Square Plaza is in poor condition, showing severe decline. It is anticipated it will continue to decline. In addition, the trench excavation needed to relocate the existing 24-inch sanitary sewer requires the removal of this tree.

Tree No. 7: 10" Callery Pear at 66 Union Square Plaza (north side)

This tree in the Union Square Plaza will need to be removed in order to excavate the trench needed to relocate the existing 24-inch sanitary sewer. As this loss of root structure would result in a significant loss of tree canopy leading to decline, it is proposed to remove the tree at this time.

Tree No. 8: 18" Callery Pear at 290 Somerville Ave. (south side)

This tree is proposed to be removed to allow for the new protected cycle track. In addition, the adjacent sidewalk will be regraded to meet accessibility design regulations. This regrading would impact the root system of the tree and be detrimental to its continued health and compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is preferable to remove the tree at this time.

Tree No. 9: 20" Callery Pear at 290 Somerville Ave. (south side)

This tree is in poor condition due to trunk damage, and it is also leaning. It is anticipated that its health will continue to decline and will eventually become a public safety risk and need to be removed. Therefore, it is preferable to remove the tree at this time.

Tree No. 10: 13" Linden at 90 Union Square – Prospect Street (west side)

This tree is in poor health with dieback in its top growth. It is anticipated that its health will continue to decline and will eventually need to be removed. Therefore, it is preferable to remove the tree at this time.



Tree No. 11: 7" Red Maple at 267-271 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. As this loss of root structure would result in a significant loss of tree canopy leading to decline, it is proposed to remove the tree at this time.

Tree No. 12: 5" Red Maple at 267-271 Somerville Ave. (north side)

This tree is nearly dead and its necessary removal is imminent. Furthermore, this tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree.

Tree No. 13: 7" Red Maple at 267-271 Somerville Ave. (north side)

This tree is just north of the northerly curb line and is in decline and has trunk damage. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. As this loss of root structure would result in a significant loss of tree canopy leading to decline, it is proposed to remove the tree at this time.

Tree No. 14: 10" Honey locust at the D2 Parcel (south side of Somerville Avenue)

This tree is just south of the southerly curb line. The existing water main, located in the sidewalk just south of this tree is to be replaced with a new main in the same location. The trench excavation would remove a considerable portion of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 15: 10" Honey locust at the D2 Parcel (south side of Somerville Avenue)

This tree is just south of the southerly curb line. The existing water main, located in the sidewalk just south of this tree is to be replaced with a new main in the same location. The trench excavation would remove a considerable portion of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 16: 12" Norway Maple at 4 Milk Pl. (south side of Somerville Avenue)

This tree is in severe decline and it is anticipated that its health will continue to decline, leading to its eventual removal. In addition, this tree is just south of the southerly curb line. The existing water main, located in the sidewalk just south of this tree is to be replaced with a new main in the same location. The trench excavation would remove a considerable portion of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to



decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 17: 11" Norway Maple at 261 Somerville Ave. (north side)

This tree, located just north of the northerly curb line, is in decline due to trunk damage and it is anticipated that its health will continue to decline. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 18: 13" Norway Maple at 248 Somerville Ave. (south side)

This tree is just north of the northerly curb line and is in decline due to trunk damage. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 19: 12" Norway Maple at 244 Somerville Ave. (south side)

This tree is in severe decline and it is anticipated that its health will continue to decline, leading to its eventual removal. In addition, this tree is just south of the southerly curb line. The existing water main, located in the sidewalk just south of this tree is to be replaced with a new main in the same location. The trench excavation would remove a considerable portion of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 20: 3" Zelkova at 255 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. As this loss of root structure would result in a significant loss of tree canopy leading to decline, it is proposed to remove the tree at this time.

Tree No. 21: 12" London Plane at 227 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.



Tree No. 22: 10" London Plane at 227 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 23: 15" London Plane at 229 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 24: 6" Callery Pear at 218 Somerville Ave. (south side)

This tree is in a row of trees that can be retained through construction. However, this tree is exhibiting stunted growth and habit, construction will further impact its health. Therefore, it is proposed to remove the tree at this time and replace it with new trees enhanced by soil cells.

Tree No. 25: 4" Callery Pear at 218 Somerville Ave. (south side)

This tree is in a row of trees that can be retained through construction. However due to its stunted growth and habit, it is proposed to remove the tree at this time and replace it with new trees enhanced by soil cells.

Tree No. 26: 13" London Plane at 217 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 27: 11" London Plane at 217 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.



Tree No. 28: 11" London Plane at 217 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 29: 9" London Plane at 217 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 30: 9" London Plane at 217 Somerville Ave. (north side)

This tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. This loss of root structure would result in a significant loss of tree canopy leading to decline and also compromise the stability of the tree, thus resulting in a safety risk. Therefore, it is proposed to remove the tree at this time.

Tree No. 31: 13" Linden at 203 Somerville Ave. (north side)

This tree is proposed for removal due to construction of the new sidewalk, which needs to be regraded to meet accessibility design regulations. This tree has large girdling roots, and its lifespan is limited. In addition, it is leaning towards a building and would soon become a risk to that property, requiring its eventual removal. The regrading would further impact the root system of the tree, further degrading the health of the tree, while also compromising the stability of the tree even more than its current leaning condition. and resulting in a safety risk. Therefore, it is preferable to remove the tree at this time.

Tree No. 32: 4" Tree Lilac at 203 Somerville Ave. (north side)

This tree is in poor health and it is anticipated that its health will continue to decline, leading to its eventual removal. In addition, this tree is just north of the northerly curb line. The trench to install the new storm drain box culvert will extend to the curb line and would remove approximately half of the root structure of the tree. As this loss of root structure would result in a significant loss of tree canopy leading to decline, it is proposed to remove the tree at this time.

Tree No. 33: 10" Shingle Oak at 212 Somerville Ave. (south side)

This tree is proposed for removal due to construction of the new sidewalk, which needs to be regraded approximately 6 inches to meet accessibility design regulations. This regrading would



impact the root system of the tree and be detrimental to its continued health, therefore it is preferable to remove the tree at this time.

Tree No. 34: 10" Shingle Oak at 210 Somerville Ave. (south side)

This tree is proposed for removal due to construction of the new sidewalk, which needs to be regraded approximately 4.5 inches to meet accessibility design regulations. This regrading would impact the root system of the tree and be detrimental to its continued health, therefore it is preferable to remove the tree at this time.

Tree No. 35: 8" Callery Pear at 206 Somerville Ave. (south side)

This tree is proposed for removal due to construction of the new sidewalk, which needs to be regraded approximately 5.5 inches to meet accessibility design regulations. This regrading would impact the root system of the tree and be detrimental to its continued health, therefore it is preferable to remove the tree at this time.

Tree No. 36: 6" Honey locust at 174 Somerville Ave. (south side)

This tree is one of a row of Honey locust. However, while the other trees in this row are in good health, this one is in decline and anticipated to continue to decline resulting in its eventual removal. Rather than wait for the tree to be removed after its health further deteriorates or it dies, it is proposed to remove it at this time.

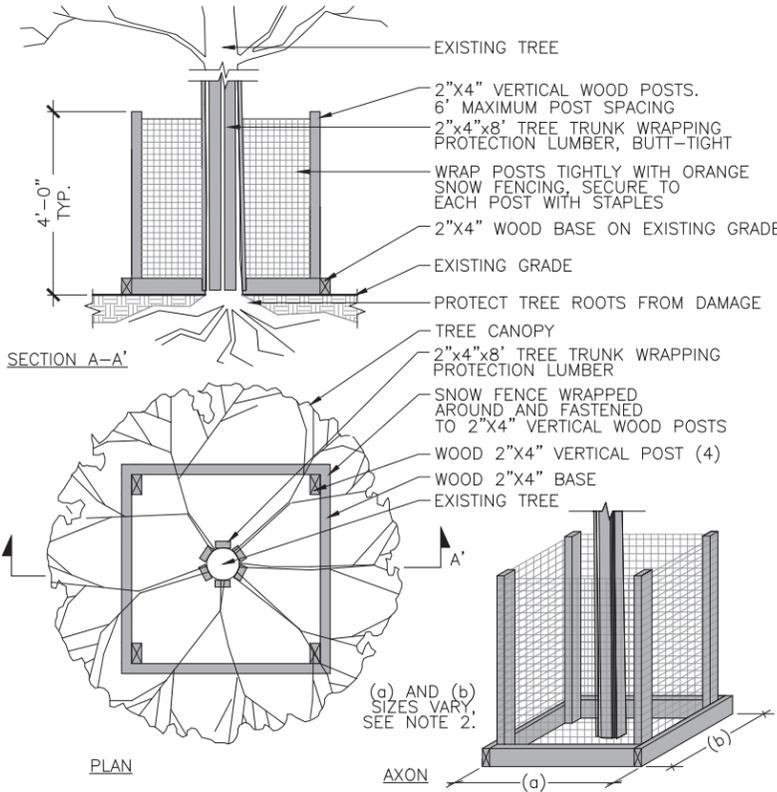
Tree No. 37: 11" Honey locust at 174 Somerville Ave. (south side)

This tree is one of a row of Honey locust. However, while the other trees in this row are in good health, this one is in decline with approximately 30% of the tree already dead, including tips of branches. Its health implies root issues that would be exacerbated during construction. The tree is anticipated to continue to decline, resulting in its eventual removal. Rather than wait for the tree to be removed after its health further deteriorates or it dies, it is proposed to remove it at this time.

Conclusion

The project design team has considered each existing street tree within the project area with the aim of preserving as many as possible. A total of 40 of the 77 street trees will be retained and protected during construction. The 37 trees proposed to be removed include some for health reasons and others whose health will be jeopardized by the proposed construction, including some that are simply in conflict with the required locations of the new infrastructure improvements.

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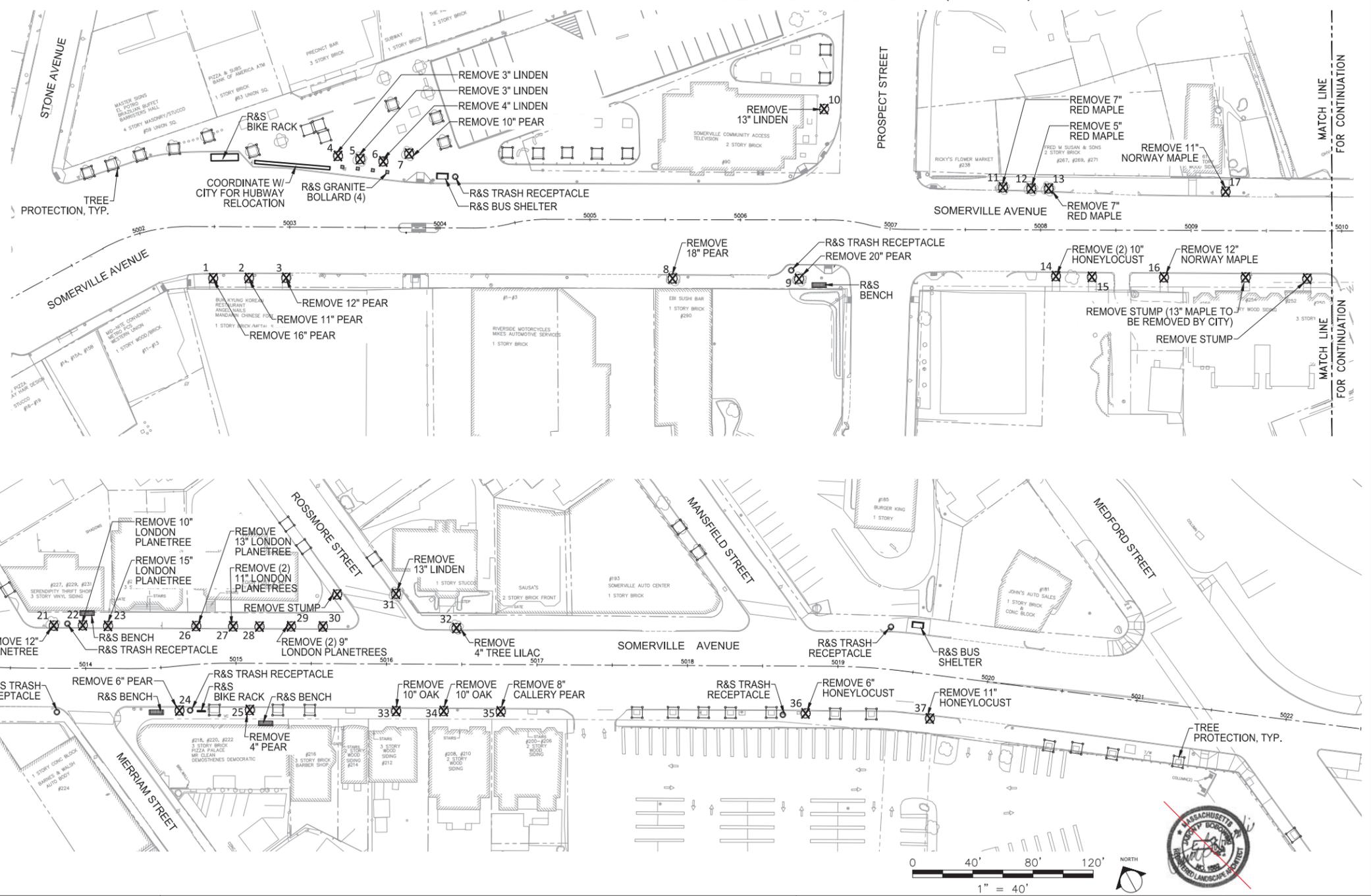
- NOTES:**
1. TREE BOX RESTS ON EXISTING GRADE AND IS NOT ANCHORED TO THE GROUND.
 2. SIZE OF TREE BOX VARIES BASED UPON TRUNK SIZE AND LIMITS OF SURFACE ROOTS. FINAL SIZE TO BE DETERMINED BY CITY ARBORIST IN FIELD DURING PRE-CONSTRUCTION SITE WALK.
 3. TREE BOX SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION 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					
SYM.	DESCRIPTION	DETAIL	SYM.	DESCRIPTION	DETAIL
	TREE/STUMP 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			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)482-8487	 27 Congress St. Salem, MA 01970 PH. (978)750-0096 FAX (978)740-0097	SHEET
CHECKED: DB			L-0
DRAWN: AK/NB	REF.	CONT.	SCALE: 1" = 40'
CHECKED: GJ	ACC.		DATE: DEC 2017

NO.	DATE	REVISIONS	BY
2	5/9/18	TREE REMOVAL NUMBERING	NB
1	4/5/18	UPDATED TREE REMOVAL CALLOUTS	JB

CITY OF SOMERVILLE
93 HIGHLAND AVENUE
SOMERVILLE, MA 02143