



Tree Health Assessment Report

Bailey Park

Somerville Parks Tree Health Program

IFB 25-26

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Overview:

Bailey Park is a medium-sized pocket park with lawn areas, concrete pathways, and benches. It is home to (5) mature trees (a Linden, Pear, Silver Maple, Sycamore Maple, & Norway Maple) that are all in need of significant pruning to address poor structure, decay, or past storm damage. It also contains several establishing trees, mostly Pears and Cherry Trees, as well as trees overhanging from neighboring properties that need attention over park grounds.

General Tree Health

A major stress factor here is the prevalence of lawn over the root zones of most trees. It is difficult or impractical to maintain mulch rings around these trees due to heavy foot traffic and an uneven or sloped ground surface. Due to a lack of maintenance, most of the mature specimens mentioned above require significant canopy cleaning, in addition to some root pruning where practical and cabling in one tree. The Sycamore Maple 40160 is declining and in need of significant retrenchment pruning. We also noted that dog-walking traffic is heavy in the park, and we observed many dogs urinating on the base of trees during our assessment. Several trees show some possible basal decay from this activity. Storm damage has also been a factor here.

Soil Health

The soil here is typical urban soil, dark gray in appearance with no distinct horizons and little obvious organic matter present. Despite heavy traffic and dog walkers, the soils here are relatively less compacted than most parks likely due to sidewalks that cross the park. We could submerge our probe in at least 5 inches under most trees when collecting soil samples. No odor was detected in any of these soils. Soil Test results show a slightly low average pH of 5.0 on site at the low end of the optimal range of the species here. It also showed low calcium levels and elevated iron levels. We recommend topdressing the park with granular Calcitic lime in the spring of 2025 to raise the PH and calcium levels and continuing to monitor these levels in the future.

Due to the presence of lawn, which evidence shows significantly reduces fine root density of trees planted in/around them, we recommend treating the soils within the critical root zone of most trees with an injection of organic liquid biostimulant. This is a blend of humic acids, kelp extract and natural compounds that will aid in enhancing soil structure and nutrient availability, properties that are sometimes deficient in soils under turf or lawn.

Pests and Diseases

The small Colorado Spruce 40169 located near the southern border has evidence of spruce spider mite damage on older needles. We do not recommend corrective measures other than monitoring for future, more significant infestations.

The (5) Pears throughout the site are very susceptible to common foliar fungal infections including scab and rust. Prophylactic foliar sprays are not practical in this public park, therefore

we recommend monitoring these trees for future infections that may lead to early leaf drop which may introduce added stress to these trees.

There is evidence of decay in both the Sycamore Maple 40160 (pictured below) located near the southern border near Belmont Street and in the Norway Maple 40211 located near the western border along Lowell Street. We recommend adding a Phosphite solution to the biostimulant application of these (2) trees and to the (1) mature Pear 40222 located on the western border. This will help these trees manage future disease infection by increasing their natural immunity, especially after significant pruning or retrenchment that we will propose below in these trees.



Sycamore Maple 40160 showing multiple cankers and decay in trunk

Other Corrections of Adverse Conditions

The Littleleaf Linden 40180 located near the northern border closer to Belmont St has a compromised, poor main union with included bark. Therefore, we recommend installing a 1/4" cable in the canopy to support this union.

Removal Needs

All trees within the park were issued a "low" or "low-moderate" risk rating based on a Level 1 TRAQ assessment. No removal recommendations at this time, maintenance pruning is appropriate to reduce risk to low.

Pruning Needs

For all deciduous shade trees on this site, we recommend canopy-cleaning and raising off of the park where necessary. The (3) smaller Callery Pears (40104, 40120, 40130), all located near the eastern border by Belmont Street, will also be getting a structural prune to encourage a central leader and properly spaced lateral branches. In addition, we recommend that (2) storm-damaged trees, the Sycamore Maple 40160 located in the southeast portion of the site and the Callery Pear 40222 located in the northwest portion of the site, receive retrenchment pruning as detailed in the

spreadsheet. The Sycamore Maple 40160 has multiple cankers in stems and so the goal of retrenchment would be to reduce the weight and leverage of the cankered stems by 30-40%. The goal for retrenchment on the Pear 40222 would be to reduce the weight and leverage on main unions and to encourage sprouting.

There are (2) trees with exposed girdling roots near the trunk that we recommend pruning out. These are the Littleleaf Linden 40180 near the northern border and the mature Callery Pear 40222 located near the western border.



Pear 40222 showing girdling roots and likely basal discoloration from dog urine

Finally, there are (2) trees north of the park whose trunks are on neighboring private properties but whose canopies overhang the park. They both contain significant hazardous deadwood that presents a possible hazard to pedestrians in the park. We recommend removing deadwood of the neighbor's approximately 32" Ash (see photo below) located on the northeast border near Belmont Street. We also recommend removing deadwood from a different neighbor's Black Cherry located on the northwest border closer to Lowell Street.



Neighbor's Ash tree with canopy overhanging the park and sidewalk

2025 Priorities:

- Pruning: Canopy cleaning, raising, structural
- (2) Retrenchment prunes
- Deadwooding (2) neighboring trees
- Root pruning on (2) trees

- Cabling in the Littleleaf Linden
- Biostimulant to all trees in the park
- Phosphite soil application to (3) trees
- Lime Topdressing to raise PH and Calcium levels

5-10 Year Priorities:

- Monitor Pears and Colorado spruce for disease/pests
- Protection from or signage for dog urine on base of trees
- Monitor/maintain cable in Linden
- Monitor declining mature trees, remove/replace if needed
- Mulch rings around trees where practical
- Monitoring soil pH, calcium, and iron



Accredited Tree Care by Certified Arborists

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Tree and Shrub Care Recommendations on 12/18/2024

Description of Services

- Work Plan for Bailey Park Pruning/Plant Healthcare Winter/Spring 2025, Starting March 27.

Park will need to be closed from 7AM- 4PM for 1 business day on Tuesday March 27 2025 for the pruning work. We will post permits and arrange for sidewalk closing and police detail as needed on public streets. Equipment access will be limited to sidewalk /street and to paths/weight dispersal matting over lawn areas.

- Pruning on Young-Mature deciduous shade trees throughout the park. Individual tree specs listed on the attached spreadsheet.

Structural Pruning - Selective pruning to improve branch architecture; select, develop and maintain strong, properly spaced scaffold branches by reducing or removing interfering, overextended, defective and poorly attached limbs as specified

Canopy Cleaning - Selective pruning to remove declining, dead and broken branches as specified

Canopy Raising - Selective pruning to provide and envelope of clearance of walkways, roadways, utilities, structures, as specified.



This proposal is valid for 45 days, assuming there are no changes to the site (driveway, plantings, buildings etc. remain unchanged).
All work performed in accordance with ANSI A300 Standards.

Payment due upon completion of work. 1 ½% per month, 18% per year on unpaid balances.



Tree and Shrub Care Recommendations on 12/18/2024

Description of Services

- **Mature Linden (#40180) At the north edge of the park and Mature pear (40222) close to Lowell St.**

Prune to sever/remove sections of girdling surface roots

- **Mature Linden (#40180) At the north edge of the park:**

Supplemental Cable System - Install hardware with anchors to provide additional support of main union with included bark utilizing drop forged closed eyebolts, washers, thimbles, dead-end grips and 1/4" EHS 7 strand galvanized wire rope.

- Topdress all porous areas in the park with granular calcitic lime to raise low PH and Calcium levels

- **Bio-stimulant Application** - Early season. Treat soils within the critical root zone (typically within the dripline) of young trees in the park (detailed in attached sheet) an organic liquid blend of humic acids, kelp extract and natural compounds to enhance soil structure, microbial activity and nutrient availability.

- **Post No Parking signs:**

- **Debris Disposal:** Costs include removal and disposal of brush, logs and chipped debris generated from tree care operations.

Thank you for considering Barrett Tree Service East, Inc. Sincerely,

Alden Johnson
Certified Arborist



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Bailey Park Tree List

Site ID	Species	DBH	Recommendations	Condition - Overall	TRAQ Risk Rating
40104	pear: callery (Pyrus calleryana)	4.7	Prune to remove deadwood, broken branches, crossing/rubbing/redundant. Structural prune to encourage central leader, properly placed lateral branches. Biostim.	Fair	Low
40117	pear	1.2	structural prune: pick one sprout and remove others.	Fair	Low
40120	pear: callery (Pyrus calleryana)	4.9	Prune to remove deadwood, broken branches, crossing/rubbing/redundant. Structural prune to encourage central leader, properly placed lateral branches. Biostim.	Fair	Low
40130	pear: callery (Pyrus calleryana)	2.9	Prune to remove deadwood, broken branches, crossing/rubbing/redundant. Structural prune to encourage central leader, properly placed lateral branches. Biostim.	Fair	Low
40141	cherry/plu m: spp. (Prunus spp.)	8.3	Prune to remove dead, diseased, broken branches greater than 1" in diameter. Raise 4-6' off the park, reduce to contain overall spread by 3-5', encourage interior layers through a series of 1-2" reduction/thinning cuts. Biostim.	Fair	Low
40149	cherry/plu m: spp. (Prunus spp.)	9	Prune to remove dead, diseased, broken branches greater than 1" in diameter. Raise 4-6' off the park, reduce to contain overall spread by 3-5', encourage interior layers through a series of 1-2" reduction/thinning cuts. Biostim.	Fair	Low
40160	maple: sycamore (Acer pseudoplat anus)	16.9	Multiple cankers and evident trunk decay. Significant retrenchment pruning needed. Reduce overall spread and cankered stems by 30-40% through a series of 3-10" cuts. Prune to remove deadwood. Biostim/phosphite	Poor	Low-moderate
40180	linden: littleleaf (Tilia cordata)	22.5	Poor main union. Girdling roots. Prune to remove dead, diseased, broken branches greater than 2" in diameter. Raise 10-12' off the park, remove interior crossing and redundant branches. (\$600) Install 1/4" cable to support main union (\$380). Root pruning(\$125). Biostim.	Good	Low - Moderate

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40169	Spruce (Picea pungens)	3.8	biostim	Good	Low
40192	Silver Maple	21.5	Prune to remove dead, diseased, broken branches greater than 2" in diameter over the park. Raise 15-20' off the park. Biostim	Fair	Low
40201	yew	3	gone	Dead	NA
40211	maple: Norway (Acer platanoide s)	33.7	Some decay at base, history of storm damage. Prune to remove dead, diseased, broken limbs greater than 2" diameter. Prune to limit spread and weight over the walking paths through a series of (15-20) 2-5" diameter weight reduction cuts. Biostim/Phosphite	Fair	Low-Moderate
40222	pear: callery (Pyrus calleryana)	19.1	Prune to remove deadwood, broken branches, crossing/rubbing/redundant. Retrenchment pruning to reduce overall spread by 4-6' limit weight on main unions and encourage sprouting. Root Pruning (\$125). Biostim/Phosphite	Fair	Low-moderate
40231	rose of sharon (Hibiscus syriacus)	3.1	Prune to improve struture. thin/rejuvate stems	Good	Low
NA	Neighborin g ASH	30"	This tree is on the northeast border (Belmont Street) of the park, trunk is on neighboring private property but canopy overhangs the park. Significant hazardous deadwood over the park. Prune to remove deadwood great than 2" diameter over the park and walking paths only.	Poor	moderate
NA	Neighborin g Cherry		This tree is on the northeast border of the park, trunk is on neighboring private property but canopy overhangs the park. Significant hazardous deadwood over the park. Prune to remove deadwood great than 2" diameter over the park.	poor	moderate
NA	ALL		Topdress all porous area with Lime	NA	

Bailey Park Map

