



Tree Health Assessment Report

Lincoln Park

Somerville Parks Tree Health Program

IFB 25-26

Prepared by Robbie Barwick, MCA, ISA, TRAQ

Alden Johnson, MCA, ISA, TRAQ

February 8, 2025

Overview:

Lincoln Park is a large, recreational site with basketball courts, ballfields, walking paths, a playground, dog park, skate park, and benches/sitting areas. The site includes almost (300) trees ranging from recently-planted specimens that are on a Young Tree Training (YTT) program to large, mature trees. Our focus for this project is on the establishing and mature trees throughout the park that are not within the scope of YTT. For clarity, we have split the park into a west zone and east zone, as depicted on the Tree ID maps.

General Tree Health

With this site being a heavily-used recreational park, most trees here are subject to a variety of stressors including limited root zones, compaction from foot traffic, reflected heat from pavement/structures, construction activity, and an observed prevalence of dogs urinating on the base of trees. Many of the mature trees here are tolerant species such as Pin Oaks and Honeylocusts that require some canopy cleaning while other specimens, including a grouping of construction-damaged Red Maples may need more attention, including a soil amendment to increase vitality.



*Honeylocusts
near Playground*



*Signs of prevalent
dog-walking activity*

Soil Health

The soils within the park are typical urban soils consisting of a pale to dark gray sandy appearance with a very light organic matter presence and no distinct horizons. Trees along the perimeter of the park are in less compacted soil where we could submerge the soil-sample probe in fully. Many of the interior trees are in compacted soil due to foot traffic, and we could only penetrate the probe in 3-5 inches. At some point in the near future, we recommend adding mulch rings to all trees where one does not exist and where it's practical to do so to alleviate compaction and to cycle some organic matter into the soil, although that work is beyond scope of this maintenance cycle. No odor was detected in any of these soils. The lab report from our Soil Test indicated above-optimum amounts of Phosphorous in the park. We recommend not adding any fertilizers that include significant amounts of phosphorous to these tree root zones until

further testing shows optimum levels. Excessive phosphorous can induce some micronutrient deficiencies in some plants. It is possible that these elevated levels are the result of runoff from lawn fertilization in the park if fertilizers with phosphorus have been applied heavily in the past (this is unlikely to be a current practice).

Due to a limited budget, we have selected two small groups of trees that we recommend receive a soil amendment of organic biostimulant to increase vitality following stress from construction damage or to help them establish from being recently planted. This would be a soil injection with a liquid blend of humic acids, kelp extract and natural compounds to enhance soil structure, microbial activity and nutrient availability within these tree's root zones. Both groups are in the southern portion of the Eastern Zone and have been marked in green on the Tree ID map. One group includes (4) young/mature Red Maples (41483, 41496, 41505, 41517) along Lincoln Parkway that have seen some recent construction activity and are exhibiting approximately 15-25% dieback within their canopies. The other group includes (3) recently-planted Sugar Maples (41522, 41538, 41554) all with an approximately 4" DBH that are prone to compaction and mechanical injury in the heavily trafficked perimeter of Argenziano Field. A fourth Sugar Maple in this area is declining, likely due to mechanical injury and stress, and will be addressed in the removal section below.

Pests and Diseases

The only observed pest/disease at the time of assessment was possible *Cytospora* cankering on the trunk of a Colorado Spruce (41909, pictured below) located in the southeastern corner of the West Zone, marked in blue on the Tree ID Map. *Cytospora* is a fungal disease that is common on Spruce species, mainly infecting trees under stress such as soil compaction or trees with mechanical injuries such as bark wounds. We recommend applying a systemic bark spray of Phosphite to help manage the disease and increase immunity within the tree.



Colorado Spruce 41909 with possible Cytospora cankering on trunk

This same corner located just south of the Skate Park in the Western Zone contains an over-crowded grouping of trees, both evergreen and deciduous. It is our concern that these deciduous



trees may shade out the small evergreens in this area, including White Pines and Red Spruce which could make them more susceptible to needle-cast diseases that favor hosts with less light and air getting to them. Therefore, we recommend raising the canopies of the Crabapple 41918 and the White Mulberry 41938 and other small, unlisted deciduous trees (Pin Oak, Linden, etc) in this immediate area to promote sunlight penetration for screening growth and air circulation to help prevent damaging fungal diseases from infecting the adjacent Evergreens. Note: this is in addition to pruning specs detailed in the Excel spreadsheet.

Over-crowded corner with Deciduous and Evergreen species

There is (1) Slippery Elm 41516 located at the northern border of the Eastern Zone, along Washington Street. The UMass Extension Program calls this species “susceptible to somewhat resistant” to Dutch Elm Disease (DED), a lethal vascular wilt disease that is spread by Elm bark beetles. We recommend monitoring the upper canopy for scattered branches with wilting or yellowing leaves, known as flagging, which is an early symptom of DED.

Other Corrections of Adverse Conditions

Along the southern border of the West Zone, invasive vines from neighboring properties are starting to encroach onto the park’s trees, especially onto Honeylocust 41910 and the immediate area around this tree. We recommend cutting these vines at their base or where we have access and leaving them to desiccate to prevent further interference with planted trees. See photo below.



Invasive vines are encroaching from neighboring residential properties

Removal Needs

Sugar Maple 41471 located in the southwest portion of the Eastern Zone and highlighted in pink on the Tree ID map has been selected for removal. The recently planted tree is showing extensive trunk wounding with approximately 60% dieback in the canopy, including a dead top. We recommend removing this tree now to prevent future safety or maintenance issues, and grinding the stump to make space for a replacement in the future. See photo below.



Sugar Maple #41471 with trunk wounds and significant dieback

We also recommend removing (3) stumps along the southern border of the Western zone to prevent a tripping hazard and to make space for new plantings in the future. Tree 41934 is an existing stump and is highlighted in brown on our Tree ID map. And just to the west of this stump, a Kousa Dogwood 41925 and an Eastern Hemlock 41935 have been removed and need to be updated in the inventory. We have also highlighted these in brown on the Tree ID map. We recommend removing these stumps as well to prevent a tripping hazard and make space for new plantings.

Pruning Needs

With the exception of some smaller Evergreens, we are recommending that most trees within the scope of this project receive canopy cleaning to remove dead or diseased limbs, clearance from park structures and raising from sidewalks and streets. We will mention some specific trees or groups of trees that may require more attention. The (9) Pin Oaks located along Perry St on the western border of the park are mature street trees that have been recently pruned but do have some noticeable deadwood in the canopies. We recommend pruning these to remove dead/broken branches and to provide clearance from the street and ballfield. This will require permitting to prevent cars from parking along Perry St during work days, accounted for in the work plan.

There are (6) Honeylocusts (41951, 41952, 41904, 41750, 41748, 41941) located over the playground depicted on the eastern side of the West Zone on the Tree ID Map that have been relatively unmaintained. We recommend pruning to remove deadwood greater than 2 inches and any crossing or damaged limbs and also raising these 4-6' from playground structures, 8-10' off sidewalks and 14' over the street. There are (4) Red Maples (41483, 41496, 41505, 41517) with 15-22" DBHs located along the southern portion of the eastern zone. As mentioned in previous

section these trees have moderate dieback likely linked to past site construction damage and will need heavy deadwood pruning.

The Slippery Elm 41516 located at the northern border of the Eastern Zone, along Washington Street, is a large sprawling tree with portions of the canopy over neighboring private residences and the entrance to Argenziano Middle School. We recommend canopy cleaning, raising 8-10' off the house and fence, and 14' over the street.



Slippery Elm 41516 near entrance to Argenziano Middle School

2025 Priorities:

- Pruning: Canopy cleaning, raising, and clearance of most trees
- Removing small, declining Sugar Maple
- Biostimulant soil amendment to establishing Sugar Maples and construction-damaged Red Maples
- Systemic bark spray to Colorado Spruce with bark cankers
- Separation from invasive vines

5-10 Year Priorities:

- Maintaining mulch rings around all trees where practical
- Monitoring of Elm for disease and Spruce for Cytospora
- For young trees outside of the scope of this report: Structural pruning, protection from dog urine, and summer monitoring for Beech Leaf Disease in young Beeches
- Replacing Sugar Maple and replanting where we removed stumps
- Biostimulant to other featured trees to improve soil structure
- Monitor soil Phosphorous levels
- Maintenance pruning on a 3-5 year cycle



Accredited Tree Care by Certified Arborists

Malik Drayton
City of Somerville
1 Franey Rd
Somerville, MA 02143

Home:
Mobile:
Office: 617-625-6600
e-mail: mdrayton@Somervillema.gov
Alt e-mail: jhoward@somervillema.gov

February 8, 2025
Proposal #: 85913

Job Site: 37
Malik Drayton
IFB 25-26 Somerville Parks Tree Health
Program
Lincoln Park
290 Washington St
Somerville, MA 02143

Phone:
Email:
Alt Phone:

Tree and Shrub Care Recommendations on 2/8/2025

Description of Services

- Work Plan for Lincoln Park/Perry Street Pin Oaks Tuesday April 29, 2025.

We will post permits and arrange for sidewalk closing and police detail as needed on public street. Equipment access will be limited to sidewalk /street and to paths/weight dispersal matting over lawn areas.

- Pruning on Large Mature Pin Oaks along Perry Street. Individual tree specs listed on the attached Lincoln Park 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.

- Post No Parking signs:

- Police detail



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.



- Work Plan for Lincoln Park and Playground Pruning/Plant Healthcare Winter/Spring 2025, Starting April 23, 2025.

Park/Playground will need to be closed from 7AM- 4PM for 3 business days on Tuesday, April 23-Thursday April 25 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.

- 4.5" diameter declining Sugar Maple (#41471)

Tree Removal & Stump Grinding - Take down, dispose of brush, logs and chipped debris generated from removal operations. Grind stump and exposed flare deep for replant grade; backfill with topsoil and remove excess grinding debris.

- 21" diameter Stump (#41934)

Stump Grinding - Grind stump and exposed flare deep for replant grade; backfill with topsoil and remove excess grinding debris.

- 14.3" diameter Stump (#41935)

Stump Grinding - Grind stump and exposed flare deep for replant grade; backfill with topsoil and remove excess grinding debris.



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 2/8/2025

Description of Services

- **6.4" diameter Stump (#41925)**
Stump Grinding - Grind stump and exposed flare deep for replant grade; backfill with topsoil and remove excess grinding debris.
[Redacted]
- **Bio-stimulant Application** - Early season. Treat soils within the critical root zone (typically within the dripline) of select trees detailed in park list with an organic liquid blend of humic acids, kelp extract and natural compounds to enhance soil structure, microbial activity and nutrient availability.
[Redacted]
- **12.5" Colorado Blue Spruce (#41909)**
Cytospora Canker Control - Early season. Apply a systemic phosphite fungicide to the lower trunk and flare to help manage canker damage.
[Redacted]
- **Post No Parking signs:** [Redacted]
- **Debris Disposal:** Costs include removal and disposal of brush, logs and chipped debris generated from tree care operations.

[Redacted] [Redacted] Total: [Redacted]

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

Alden Johnson
Certified Arborist



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.

[Redacted]



Lincoln Park Tree list

Site ID	Species	DBH	Recommendations	Condition	TRAQ-Risk	GTC Cost	PHC
41922	oak: pin (Quercus palustris)	18.8	Street tree. Declining canopy 40% dieback. Recently pruned. Prune to remove dead/broken branches. Clear Road, baseball field	Poor-Fair	Mod		
41843	oak: pin (Quercus palustris)	23.5	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Mod		
41850	oak: pin (Quercus palustris)	23	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Mod		
41861	oak: pin (Quercus palustris)	23.9	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Mod		
41890	oak: pin (Quercus palustris)	25.8	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Mod		
41900	oak: pin (Quercus palustris)	15.6	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Mod		
41908	oak: pin (Quercus palustris)	22.9	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Good	Mod		
41906	oak: pin (Quercus palustris)	18.3	Prune to remove dead/broken branches. Clear Road, baseball field	Fair	Low		
41916	oak: pin (Quercus palustris)	16.5	Street tree. Prune to remove dead/broken branches. Clear Road, baseball field.	Fair	Low		
41380	honeylocust: thornless (Gleditsia triacanthos inermis)	9.8	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low		
41516	elm: slippery (Ulmus rubra)	36	Large tree over private residence. Prune to remove deadwood, crossing limbs, raise 8-10' off house and fence, 14' over street.	Good	Low-Moderate		
41527	honeylocust: thornless (Gleditsia triacanthos inermis)	8.6	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low		
41386	honeylocust: thornless (Gleditsia triacanthos inermis)	10.2	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low		
41391	planetree: London (Platanus x acerifolia)	17.2	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low		
41398	honeylocust: thornless (Gleditsia triacanthos inermis)	9.6	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	Low		

Lincoln Park Tree list

41421	thornless (Gleditsia triacanthos inermis)	7.7	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low	
41440	thornless (Gleditsia triacanthos inermis)	8.7	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Good	Low	
41461	serviceberry: spp. (Amelanchier)	5.2	Multistem. Prune to improve structure, properly spaced limbs and stems.	Good	Low	
41471	maple: sugar (Acer saccharum)	4	60% dieback, decay in stem. Remove, grind stump	Poor	Low	
41483	maple: red (Acer rubrum)	21.3	Prune to remove deadwood greater than 2", crossing limbs, raise 3-6' off surrounding utilities, fences, streetlights, 8-10' off sidewalks, 14' over street. Biostim.	Fair	Low-Mod	
41496	maple: red (Acer rubrum)	14.7	Extensive deadwood/decline. Prune to remove deadwood greater than 2", crossing limbs, raise 3-6' off surrounding utilities, fences, streetlights, 8-10' off sidewalks, 14' over street. Biostim.	Poor	Low-Mod	
41505	maple: red (Acer rubrum)	18.5	Prune to remove deadwood greater than 2", crossing limbs, raise 3-6' off surrounding utilities, fences, streetlights, 8-10' off sidewalks, 14' over street. Biostim.	Fair	Low	
41506	honeylocust: thornless (Gleditsia triacanthos inermis)	8.7	Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	Low	
41508	pine: eastern white (Pinus strobus)	5.9	Prune to raise off fence	Good	Low	
41517	maple: red (Acer rubrum)	17.2	Prune to remove deadwood greater than 2", crossing limbs, raise 3-6' off surrounding utilities, fences, streetlights, 8-10' off sidewalks, 14' over street. Biostim.	Fair	Low	
41522	maple: sugar (Acer saccharum)	4	Prune to remove deadwood, improve structure. Biostim	Fair	Low	
41531	pine: eastern white (Pinus strobus)	4.7	Prune to raise off fence	Fair	Low	
41538	maple: sugar (Acer saccharum)	4	Prune to remove deadwood, improve structure. Biostim	Fair	Low	
41554	maple: sugar (Acer saccharum)	4	Prune to remove deadwood, improve structure. Biostim	Fair	Low	
41748	honeylocust: thornless (Gleditsia triacanthos inermis)	18.9	Unmaintained, over playground. Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	Mod	

Lincoln Park Tree list

41750	honeylocust: thornless (Gleditsia triacanthos inermis)	18.7	Unmaintained, over playground. Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	Mod		
41753	pine: eastern white (Pinus strobus)	4.5	none.	Poor	Low		
41761	pine: eastern white (Pinus strobus)	5.4	none.	Good	Low		
41763	maple: red (Acer rubrum)	7.5	Declining top. Prune to remove deadwood, raise 8-10' off sidewalk, 14' out of street.	Fair-poor	Low		
41770	zelkova: Japanese (Zelkova serrata)	12.4	Declining top. Prune to remove deadwood, raise 8-10' off sidewalk, 14' out of street.	Fair	Low		
41773	stump (Stump)	12	Grown into fence. Remove fence to grind	N/A	N/A		
41775	pear: callery (Pyrus calleryana)	4.9	Poor structure, typical callery. Raise 8' off sidewalk, 14' off street, 2' from wires	Fair	Low		
41783	pear: callery (Pyrus calleryana)	5.5	Poor structure, typical callery. Raise 8' off sidewalk, 14' off street, 2' from wires	Fair	Low		
41798	oak: pin (Quercus palustris)	34.4	Gone. Remove from inventory.	NA	NA		
41799	pear: callery (Pyrus calleryana)	6.4	Poor structure, typical callery. Raise 8' off sidewalk, 14' off street, 2' from wires	Fair	Low		
41801	pine: eastern white (Pinus strobus)	5.2	Prune to contain spread, clear shed and fence.	Fair	Low		
41803	stump (Stump)	4		N/A	N/A		
41805	pear: callery (Pyrus calleryana)	7.4	Poor structure, typical callery. Raise 8' off sidewalk, 14' off street, 2' from wires	Fair	Low		
41807	pine: eastern white (Pinus strobus)	4.6	Prune to contain spread, clear shed and fence.	Good	Low		
41816	pear: callery (Pyrus calleryana)	8	Poor structure, typical callery. Raise 8' off sidewalk, 14' off street, 2' from wires	Good	Low		
41838	pine: eastern white (Pinus strobus)	4.6	none.	Fair	Low		
41865	spruce: red (Picea rubens)	4.3	none.	Fair	Low		
41877	pine: eastern white (Pinus strobus)	5.1	none.	Fair	Low		
41904	thornless (Gleditsia triacanthos inermis)	15	remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	good	Low		
41907	pine: Austrian (Pinus nigra)	24.8	Codominant. Good condition	good	Low		
41909	spruce: Colorado (Picea pungens)	12.5	Cytospora canker. Treat w systemic fungicide	Fair	Low		

Lincoln Park Tree list

41910	honeylocust: thornless (Gleditsia triacanthos inermis)	23.6	Unmaintained, overgrown with bittersweet vines. Prune to remove low deadwood greater than 3" over park only, cut vines at base, leave to desiccate.	Fair	Low	
41914	honeylocust: thornless (Gleditsia triacanthos inermis)	15.8	Unmaintained, over playground. Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	good	low-mod	
41918	crabapple: flowering (Malus spp.)	12.2	Prune to remove low deadwood, crossing limbs greater than 2" in diameter, then raise 8-10' to allow more light and airflow to the surrounding evergreens and ornamentals	Fair	Low	
NA	Various	NA	multiple young-establishing trees in the southern corner of the skate park area: prune to raise canopy to limit encroachment onto surrounding evergreens, allow light and airflow into area.	good	Low	
41924	pine: eastern white (Pinus strobus)	5.2	none.	Fair	Low	
41925	dogwood: Kousa (Cornus kousa)	6.4	Stump. Stump grind	NA	NA	
41934	stump (Stump)	21	Stump. Stump grind	N/A	NA	
41935	hemlock: eastern (Tsuga)	14.3	Stump. Stump grind	Fair	NA	
41938	mulberry: white (Morus alba)	14.4	Prune to remove low deadwood, crossing limbs greater than 2" in diameter, then raise 8-10' to allow more light and airflow to the surrounding evergreens and ornamentals, note this includes raising unlisted deciduous trees (Pin Oak, Linden, etc...)	Fair	Low	
41943	dogwood: Kousa (Cornus kousa)	5.8	prune to improve structure, remove deadwood, raise off ground	Fair	Low	
41946	spruce: red (Picea rubens)	5.4	none.	Fair	Low	
41951	honeylocust: thornless (Gleditsia triacanthos inermis)	15.8	Unmaintained, over playground. Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	low-mod	
41952	honeylocust: thornless (Gleditsia triacanthos inermis)	18	Unmaintained, over playground. Prune to remove deadwood greater than 2", crossing limbs, raise 4-6' off surrounding play structures, fences, streetlights, 8-10' off sidewalks, 14' over street.	Fair	low-mod	
41796	pine: eastern white (Pinus strobus)	4.9	none.	Fair	Low	

Lincoln Park Tree list

41821	cherry/plum: spp. (Prunus spp.)	17.8	Prune to remove deadwood, reduce 3-4', shape to match, raise 6-8' off pathways, surrounding fences	Fair	Low		
41913	oak: pin (Quercus palustris)	27.7	Declining. Recently prune heavily, evidence of construction damage. Monitor, further pruning/removal in next 2-4 years.	Poor	Low-mod		
	 (Stump)	7	must remove fence prior to grinding	N/A	N/A		

Lincoln Park Tree Map: Zone 1



Lincoln Park Tree Map: Zone 2

