



Perry Park Work Plan

Somerville, MA

April 2021

Prepared for:

City of Somerville, MA
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Purpose

In an effort to promote the health of existing trees within Perry Park, all trees and soils within the park were assessed and the following maintenance recommendations are provided.

Key Recommendations

- 1 Tree recommended for removal
- 9 Trees recommended for pruning (see Appendix III for pruning specifications)
- Mulching recommended for 10 trees
- 1 Stump recommended for removal
- Soil Amendments recommended for 4 trees

Pruning

All pruning activities shall adhere to the following specifications:

1. All pruning work will conform to the latest revision of the American National Standards Institute (ANSI): Standard A300, developed by the Tree Care Industry Association.
2. Tree pruning work may include any or all of the following:
 - a. **Young Tree Training:** pruning of young trees to correct or eliminate wrak, interfering, or objectionable branches to improve structure. These trees can be up to 20 feet tall and can be worked with a pole pruner by a person standing on the ground.
 - b. **Crown Cleaning:** selective removal of dead, dying, damaged, diseased, and broken branches from the tree crown. Shall include removal of all deadwood >2" diameter.
 - c. **Canopy Thinning:** selective removal of live branches to provide light or air penetration through the tree or to lighten the weight of the remaining branches.
 - d. **Clearance Pruning:** The heading back or removal of specific limbs to provide clearance from buildings, wires, lights, etc.
 - e. **Crown Raising:** selective removal of lower branches from a tree crown to provide clearance. Trees impeding vehicle or pedestrian traffic should be raised up at least 13 feet over streets and 8 feet over sidewalks. Tree obstructing control devices should be trimmed for adequate visibility.
 - f. **Structural Pruning:** pruning to develop strong tree structure. This includes maintaining a dominant leader by reducing the length or removing any competing leaders, suppressing growth on branches with bark inclusions, ensuring appropriate spacing of main branches along a dominant trunk, and keeping all branches less than one-half the trunk diameter.
 - g. **Aesthetic pruning:** selective removal of downward growing limbs, limbs growing backwards toward the trunk, and other limbs that are making the tree unsightly.
 - h. **Pruning of crossing or rubbing limbs.**
3. All pruning cuts shall be made as close as possible to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub. Bark at the edge of all pruning cuts should remain firmly attached. Sharp tools shall be used so that clean cuts will be made at all times.
4. All branches too large to support with one hand shall be precut to avoid splitting or tearing of the bark. Where necessary, ropes or other equipment should be used to lower branches or stubs to the ground.
5. Treatment of cuts and wounds with wound dressing or paints is prohibited.

6. Equipment that will damage the bark and cambium layer shall NOT be used on or in the trees. For example, the use of climbing spurs (hooks or irons) is not an acceptable work practice for pruning operations on live trees.
7. All cut limbs shall be removed from the crown upon completion of the pruning. Clean-up of branches, logs, or any other debris resulting from any tree pruning shall be promptly and properly accomplished.
8. The work area shall be kept safe at all times until the clean-up operation is completed. Under no condition shall the accumulation of brush, branches, logs, or other debris be allowed upon a public property in such a manner as to result in public hazard.

The following trees are recommended for Structural Pruning, Clearance Pruning, and Pruning of Crossing Rubbing Branches:

#42710, 42703, #42695, #42686, #42677, #42668, #42659, #42650, #42826, #42791, #42783, #42773, #42744 - 7", 7", 8", 7", 7", 7", 7", 8", 7", 8", 7", 6", 7" European hornbeam, respectively - Fair condition. These trees have become very dense and contain crossing/rubbing limbs. Additionally, Limbs are growing into the fence and should be pruned back.



The following trees are recommended for Structural Pruning:

#42767 - 19" littleleaf linden. Fair condition. This tree has developed several codominant limbs with included bark.



#42817 - 25" Japanese zelkova. Fair condition. Wire is embedded in some limbs. Other limbs have wounds from previously being wrapped with wire.



The following trees are recommended for Clearance Pruning and Crown Cleaning:

#42724 - 16" red maple. Good condition. Limbs are currently touching the building next door and should be pruned back.



The following trees are recommended for Clearance Pruning:

#42728 - 8" cherry spp. Good condition. Limbs are beginning to block the lamp post and should be pruned back.



The following trees are recommended for Pruning of Crossing/Rubbing Branches:

#42802 - 12" katsuratree. Good condition.



The following trees are recommended for Crown Cleaning and Crown Raising:

#42812 - 20" London Planetree. Good condition. Lowest branch should be removed as it is rubbing against the trunk of the tree next to it.



#42822 - 18" American sweetgum. Good condition. Limbs are hanging low over play area and should be raised.



The following trees are recommended for Crown Cleaning:

#42804 - 19" London planetree. Fair condition.

#42878 - 20" London planetree. Fair condition. Vines should be removed.

#42796 - 23" London planetree. Fair condition. Vines should be removed.

#42779 - 20" London planetree. Fair condition. Vines should be removed.

#42770 - 26" London planetree. Good condition.

#42761 - 23" London planetree. Good condition.

#42754 - 20" London planetree. Fair condition.

#42742 - 25" London planetree. Good condition.

#42727 - 23" London planetree. Good condition.

#42718 - 21" London planetree. Fair condition. Downward growing limb should be removed.

#42735 - 24" London planetree. Fair condition.

#42810 - 20" London planetree. Good condition.

#42806 - 19" London planetree. Good condition.

#42758 - 17" littleleaf linden. Fair condition.

#42750 - 15" littleleaf linden. Fair condition.

#42732 - 16" red maple. Fair condition.

#42814 - 14" American sweetgum. Fair condition.

The following trees are recommended for Aesthetic Pruning:

#42736 - 6" katsuratree. Fair condition.

#42720 - 8" cherry spp. Fair condition

#42713 - 9" cherry spp. Fair condition

#42705 - 7" American sweetgum. Fair condition

#42697 - 13" katsuratree. Fair condition.

#42829 - 14" red maple. Good condition. Correct previous stub cuts.

#42690 - 11" tuliptree. Good condition. Correct previous stub cuts.

#42684 - 14" tuliptree. Fair condition. Correct previous stub cuts.

#42675 - 13" tuliptree. Good condition.

#42666 - 12" tuliptree. Good condition. Correct previous stub cuts.

#42797 - 7" tuliptree. Good condition.

#42789 - 9" tuliptree. Fair condition. Correct previous stub cuts.

#42741 - 7" American sweetgum. Tree is possibly diseased (sample has been sent to the lab and the results are pending).

#42717 - 14" red maple. Good condition.

Root Pruning

Root pruning shall adhere to the following specifications:

1. Pruning of girdling or circling roots that have the potential to become girdling may be considered. Only roots less than two (<2) inches in diameter should be cut. Cutting larger roots is only possible after explicit approval from the City Urban Forester.
2. The removal of any girdling root will be completed in a manner that will minimize injury to the trunk cambium located beneath the root.
 - a. First, soil will be excavated from around the girdling root, uncovering the entire length to be removed. Using a chisel or saw, roots will be cut at a point 6"-12" out from the trunk. The final cut will be made where the root attaches to the trunk. This prevents the root from being pulled violently away from the embedded area, causing extensive cambium injury if the root happens to be under tension. It is important to note that occasionally it is best to leave the girdled root where it is after it has been cut as the trunk cambium would be damaged severely by gouging out the deeply embedded roots. Roots will be detached and removed if they are not embedded very deeply or roots will be allowed to decay away over time.
3. All root pruning will be completed with sharp, clean tools.
4. Structural roots will NEVER be pruned.

The following trees are recommended for Root Pruning:

#42728 - 8" cherry spp. Good condition. Some small girdling roots should be removed.



#42720 - 8" cherry spp. Fair condition. Some small girdling roots should be removed.



Mulching

Mulching is recommended for all trees in Perry Park. Mulch shall be applied according to the following procedures:

1. Mulch shall be applied to trees for moisture retention in soil abatement of dust and weeds, and for nutrient enrichment of the soil.
2. Mulched area shall be six feet in diameter around the trunk of the tree unless otherwise specified by the City Urban Forester. A three inch layer of mulch (after settlement) will be applied around the tree, tapering towards the trunk. Mulch shall NOT come in contact with the trunk of the plant or the root flare. No mulch shall be placed within 2 to 3 inches of the trunk. "Volcano" mulching is strictly prohibited.
3. Mulch shall be high quality, premium course-grade bark mulch, 15 mm minimum length, consisting of clean organic plant material. Mulch shall conform to the following:
 - a. Must be uniform, natural wood color, without dyes, which shall not exhibit a noticeable degree of color change characteristic when wet.
 - b. Must not have an unpleasant odor.
 - c. Must be free of dirt, insects, disease, and extraneous debris that would be harmful to the trees being planted.
 - d. pH: between 4.0 and 8.0
 - e. Particle size: 100% passing through a 50 mm (2 inch) screen
 - f. Soluble salt content: less than 4.0 mmhos/cm

Soil Recommendations

One soil sample was taken at Perry Park. The following recommendations are given:

1. The soil pH of the tree pit sample was determined to be 6.1 and is considered outside of the desirable range (too acidic). Soil aeration and the incorporation of dolomitic lime is recommended. This will help correct soil pH by adding magnesium. Phosphorus and Nitrogen levels were in the Medium range and the addition of Arbor Green Pro fertilizer is recommended to maintain optimum levels of soil nutrients. The texture of the sample was determined to be sandy loam.

It is recommended that soil be added to the following trees:

#42713 - 9" katsuratree. Fair condition. This tree is planted too shallow and much of the root system is exposed.



#42732 - 16" red maple. Fair condition. This tree is planted too shallow and much of the root system is exposed.



The following trees are recommended for Soil Aeration due to compacted soils:

Soil Decompaction will adhere to the following specifications:

1. Heavily compacted soil may require decompaction to promote health. Particular consideration will be given to the soil within the critical root zone.
2. Soil decompaction will be done in such a way as to promote a healthy soil development without damaging roots.
3. Soil decompaction will be accomplished through soil aeration (using an air spade) and the addition of compost to the soil.

#42717 - 14" red maple. Good condition. Tree has developed an extremely fibrous root system.

#42750 - 18" littleleaf linden. Fair condition.

#42758 - 17" littleleaf linden. Fair condition.

#42767 - 18" littleleaf linden. Fair condition.

#42789 - 9" tuliptree. Fair condition.

#42797 - 7" tuliptree. Good condition.

#42806 - 19" London planetree. Good condition.

Park Closure, Traffic Management, and Sequence of Events

Work will likely take approximately one week and will require the park to be closed during operations. Police detail will not be required for this work. However, pedestrian/bicycle traffic and parking will need to be restricted in front of the park during operations.

Tree pruning will take place first. Once the tree work is complete, compacted soil will be aerated, roots pruned, and soil amendments and fertilizer will be incorporated to the soil. Finally, mulch will be added to all trees.

Crew and Equipment

Access to the park will be via Washington St. Work crew will consist of 3 individuals and will require the following heavy equipment:

- Bucket Truck
- Chipper


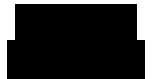





All wood material removed from trees will be chipped on site and removed. All effort will be made to protect city and playground infrastructure. All playground equipment will be protected with plywood and moving blankets to prevent damage.

Maintenance Schedule

Tree Number	Species	DBH	Maintenance Recommendation	Priority	Cost
42724	red maple	16	Clearance Pruning and Crown Cleaning	Medium	
42728	cherry spp.	8	Clearance Pruning	Medium	
42767	littleleaf linden	19	Structural Pruning	Medium	
42817	Japanese zelkova	25	Structural Pruning	Low	
42812	London planetree	20	Crown Cleaning and Crown Raising	Low	
42822	American sweetgum	18	Crown Cleaning and Crown Raising	Low	
42710	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42703	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42695	European hornbeam	8	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42686	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42677	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42668	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	

42659	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42650	European hornbeam	8	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42826	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42791	European hornbeam	8	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
442783	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42773	European hornbeam	6	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42774	European hornbeam	7	Structural Pruning, Clearance Pruning, and Pruning of Crossin/Rubbing Branches	Low	
42804	London planetree	19	Crown Cleaning	Low	
42878	London planetree	20	Crown Cleaning	Low	
42796	London planetree	23	Crown Cleaning	Low	
42779	London planetree	20	Crown Cleaning	Low	
42770	London planetree	26	Crown Cleaning	Low	
42761	London	23	Crown Cleaning	Low	

	planetree				
42754	London planetree	20	Crown Cleaning	Low	
42742	London planetree	25	Crown Cleaning	Low	
42727	London planetree	23	Crown Cleaning	Low	
42718	London planetree	21	Crown Cleaning	Low	
42735	London planetree	24	Crown Cleaning	Low	
42810	London planetree	20	Crown Cleaning	Low	
42806	London planetree	19	Crown Cleaning	Low	
42758	littleleaf linden	17	Crown Cleaning	Low	
42750	littleleaf linden	15	Crown Cleaning	Low	
42732	red maple	16	Crown Cleaning	Low	
42814	American sweetgum	14	Crown Cleaning	Low	
42736	katsuratree	6	Aesthetic Pruning	Low	
42720	cherry spp.	8	Aesthetic Pruning	Low	
42713	cherry spp.	9	Aesthetic Pruning	Low	
42705	American sweetgum	7	Aesthetic Pruning	Low	
42697	katsuratree	13	Aesthetic Pruning	Low	
42829	red maple	14	Aesthetic Pruning	Low	
42690	tuliptree	11	Aesthetic Pruning	Low	
42684	tuliptree	14	Aesthetic Pruning	Low	
42675	tuliptree	13	Aesthetic Pruning	Low	
42666	tuliptree	12	Aesthetic Pruning	Low	
42797	tuliptree	7	Aesthetic Pruning	Low	
42789	tuliptree	9	Aesthetic Pruning	Low	
42741	American sweetgum	7	Aesthetic Pruning	Low	
42717	red maple	14	Aesthetic Pruning	Low	
42728	cherry spp.	8	Root Pruning	Low	
42720	cherry spp.	8	Root Pruning	Low	
42713	katsuratree	9	Add soil	Medium	

42732	red maple	16	Add Soil		
7 Trees			Soil Decompaction	Low	
55 Trees			Lime and Fertilizer soil amendments	Low	
55 Trees			Mulch	Low	
			Posting of No Parking Signs		
					

APPENDIX I

Tree Location Map



APPENDIX II

Soil Test Results

Turf and Ornamental Soil Analysis Report

Spectrum Analytic

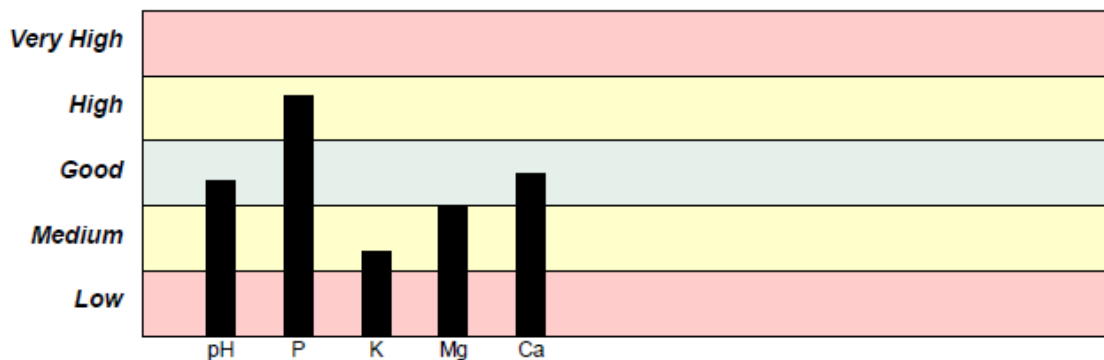
1087 Jamison Road NW
Washington Court House, OH 43160-8748

www.spectrumanalytic.com

THE DAVEY TREE EXPERT CO-SOIL LAB
PO BOX 5193
KENT, OH 44240

Prepared For	Sample Information
SOMMERVILLE-104550 SOMMERVILLE, MA	Sample 178 Lab Number G19934 Sampled 03-23-2021 Tested 03-26-2021

Analysis	Result	Optimal	Analysis	Result	Optimal
Soil pH	6.1	5.8-6.6	Clay	% 10	
Buffer pH	6.9		Sand	% 78	
Organic Matter	% 3.1		Silt	% 12	
CEC	6.1		Texture	Sandy Loam	
K Saturation	% 3.0	2.0-4.0			
Mg Saturation	% 16.5	10-20			
Ca Saturation	% 60.7	50-70			
K/Mg Ratio	0.6				
Ca/Mg Ratio	7.2				
Phosphorus	m3-ppm 134	60-80			
Potassium	m3-ppm 83	120-210			
Magnesium	m3-ppm 136	140-270			
Calcium	m3-ppm 980	700-1200			



Recommendations		Nutrients expressed in broadcast lbs/1000 sqft, except Fe (foliar) and Mn (row)										
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn
21	Trees, Deciduous-Undefined	15D	3.0	0.0	2.9	0.2						

Lime expressed in 100% pure CaCO3. Adjust accordingly. D=Dolomitic. C=Calcitic.

Trees, Deciduous-Undefined: Limit N to 1 lb./1000 sq. ft. within dripline in year 1. Split N 50% early spring and 50% late summer. Fertilized area under tree starts 2 ft. from trunk, to 3 ft. outside of dripline. Adjust future fertilizer rates based on annual leaf analysis.

Analyzed by Spectrum Analytic Inc.
www.spectrumanalytic.com

HID:0561-0939-2671-0006

APPENDIX III

Tree Condition Definitions

Condition: Condition indicates the current state of a tree's health and structural soundness. As adapted from the Council of Tree and Landscape Appraiser's "Guide for Plant Appraisal", condition is determined through a visual evaluation of the roots, trunk, and scaffold branches, as well as branches, twigs, foliage and buds. The overall health of any given tree is essentially the sum of the condition for all of these woody and vegetative components. The Council's condition rating system returns a numerical value (1-4) that can then be characterized as "Dead", "Poor", "Fair", and "Good", respectively, as represented in i-Tree Streets v5. General characteristics of overall health are provided below; however, it is important to remember that these ratings account for the sum of a tree's parts. Also, condition may change at any time for any number of factors including exacerbation of known and unknown defects, introduction or advancement of insects and disease, environmental stress, and adverse site factors, among others.

Good

The tree has no major structural problems, no significant mechanical damage, no insect or disease issues of concern, and minimal to no signs of stress.

Fair

The tree may exhibit minor structural problems; mechanical damage that decreases the stability of a tree's roots, trunk, or scaffold branches; presence of and/or damage from harmful insects and diseases; and general signs of stress such as wilting or minor twig dieback.

Poor

The tree may have major structural defects, extensive wounds or decay (localized or widespread), mechanical damage that increases the likelihood of failure, significant crown dieback, and insect or disease issues that result in a noticeable decline in tree health.

Dead

Trees in this category are dead.