Village of Mount Kisco, NY Community Forest Management Plan | 2019



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Village of Mount Kisco Community Forest Management Plan

STATE OF THE MOUNT KISCO URBAN FOREST

There are many challenges and opportunities for the Mount Kisco and its urban forest, most of which are common among many cities and their urban forests:

- The urban forest impacts all individuals in the area, and vice versa. An urban forest management plan should be the starting point for the discussion between the city and its representatives, lawmakers, the public, and all other concerned stakeholders. The only way success will occur is if all parties have a say in the matter and an agreed upon plan is implemented, that is beneficial for all stakeholders.
- Tree removal and new tree plantings are key components to urban forest management. Tree removal recommendations should come from qualified arborists and there should be a process in place for those considerations. What trees to plant, and if new trees are needed, are also a vital part. Not every location or situation in a city is suitable for trees. It is also very important to consider what the current species makeup is to ensure diversity throughout the city, while balancing native and nonnative species.
- Soil compaction is a major issue in any urban forest. Festivals and tourism are vital for a city, but can create real problems when those activities occur in and around trees. There are numerous ways to try to alleviate those issues, one of which is the implementation of wide mulch rings around all trees. Restriction of parking underneath trees is another key component.
- Interactions between trees and infrastructure (sidewalks, pavement, buildings, lighting, etc.) are always an issue. The most effective way to prevent this is to evaluate designs and the site before construction begins. Proper pruning techniques, species selection, and at times, tree removal are also effective activities.
- Dedicating a staff or team to manage all tree related activities is a vital component. A
 dedicated staff relates to qualified and experienced individuals making tree related
 decisions to benefit the urban forest over the long term. Relying on a structure of inhouse and outside contractors and consultants is an effective way to manage the
 urban forest.

Who's Who

Those who conducted the inventory and prepared this document are members of the Bartlett Inventory Solutions team. They are also employees of Bartlett Tree Experts. The Bartlett Inventory Solutions team is overseen by four technical advisors out of the Bartlett Tree Research Laboratories in Charlotte, North Carolina. The advisors are primarily charged with client support, coordination, quality control, and documentation of inventories and the related data. Extensively trained Regional Inventory Arborists from local Bartlett Tree Experts offices are the primary data collectors and authors of the management plans. Readers may interpret the terms "Bartlett Tree Experts," "Bartlett," "the Inventory Team," "the team," "we," and "our" as the Bartlett company and those who conducted the inventory and prepared this management plan. In addition to the primary author(s) listed on the cover page, Team Member(s) involved in this project included:

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Subject Trees

In this document, the term "subject trees" refers (depending on context) to some or all of the 2,739 trees (some of them groupings of trees) included in the inventory.

Definitions & Bolded Terms

Some definitions or specifications are detailed within a given section to explain how readers should interpret certain terms or classifications. We have also appended a Glossary for other terms that appear throughout the document. The first reference to each of these terms appears in **bold** for the reader's convenience.

EXECUTIVE SUMMARY

In August 2018, the Bartlett Inventory Solutions (BIS) Team from Bartlett Tree Experts conducted an inventory of trees in the Village of Mount Kisco, NY. We identified 2,739 trees, including 99 groupings, which included 71 species. The attributes that we collected include tree latitude and longitude, size, age and condition class, and a visual assessment of tree structure, health, and **vigor**.

We conducted the attribute collection using a sub-meter accuracy Global Positioning Satellite Receiver (GPSr) device with an error-in-location potential of not greater than three meters. Our recommendations for the subject trees over the next 5-year period are outlined below. All tree work activities will comply with current American National Standards Institute (ANSI) Z133.1 requirements for safety.

Tree Risk Assessments and Mitigation

Perform the recommended tree risk mitigation activities for the 48 trees (2%) which we found defects or concerns that prompted the need to use the International Society of Arboriculture's (ISA) risk matrices in the field. Risk mitigation activities will comply with current ANSI A300 standard practices. Please see the Tree Risk Assessments, Limitations & Glossary section for more information.

Soil Sampling

Taking soil samples throughout planting beds and actively managed areas. Soil analysis provides information on the presence of soil nutrients, pH, organic matter, and cation exchange capacity.

Bulk Density Sampling

Taking bulk density samples throughout planting beds and actively managed areas to determine the amount of soil compaction.

Soil Rx®

Apply Bartlett's Soil Rx® program to 1,356 trees (50%) to correct nutrient deficiencies and optimize soil conditions for the designated trees.

Root Invigoration™

Perform Bartlett's patented Root Invigoration™ on 67 trees (2%) to improve aeration and promote more efficient root growth, especially for high-value trees in disturbed areas.

Mulching

Wherever possible, apply 2-4 inches of mulch within the root zone to help moderate soil temperatures, reduce soil moisture loss, reduce soil compaction, provide nutrients, improve soil structure, and keep mowers and string trimmers away from tree trunks. The best mulch materials are wood chips, bark nuggets, composted leaves, or pine needles. To avoid potential disease problems, mulch should not be placed directly against the trunk.

Root Collar Excavations

Perform **root collar** excavations to 1,414 trees (52%) to lower risk of damaging conditions such as **girdling roots**, basal cankers, masking of root decay and lower-stem decay, and predisposing trees to various insect and disease pests.

Plant Health Care (PHC)

Implement Bartlett's PHC program to monitor pests and diseases on the subject trees. Treatments are therapeutic and preventive, and treatment timing is based on pest life cycle.

Pruning

Prune 2,361 trees (86%) for safety, health, structure, and appearance. Pruning will comply with current ANSI A300 standard practices for pruning.

Structural Support

There are structural support system recommendations for 197 trees (7%) to reduce risk of branch or whole tree failure. All structural support systems will comply with current ANSI A300 standard practices for supplemental support systems.

Lightning Protection

There is a lightning protection system recommendation for 1 tree (< 1%) to try and intercept lightning strikes and conduct them to the ground. All Lightning protection systems will comply with current ANSI A300 standard practices for lightning protection systems.

Removals

Remove 156 trees (6%) due to condition or because of their location in relation to other trees to try and prevent competition or damage to infrastructure.

Tree Risk Advanced Assessments (Level 3)

Provide tree risk *advanced assessments* for 48 trees (2%) to evaluate the impact of wood decay that shows potential for failure.

Vine Removal

Remove vines from 99 trees (4%) to try and prevent them from hiding defects.

Environmental Services

Environmental services were estimated with results indicating that the trees are estimated to store 1,491 tons of carbon, sequester 23.92 tons of carbon per year, remove 1,205 pounds of air pollution per year, and have an air pollution removal value of \$6,130 per year.

Tree Planting Opportunities

We identified 393 sites where trees could be planted.

2018 VILLAGE OF MOUNT KISCO, NY TREE INVENTORY



Tree Species Identified

Our inventory revealed 71 species of trees, as detailed in the following table:

TREE SPECIES IDENTIFIED

Genus	Species	Common Name	Count	% Distribution Total
	griseum	Maple-Paperbark	2	< 1%
	palmatum	Maple-Japanese	19	1%
	platanoides	Maple-Norway	419	15%
Acer	pseudoplatanus	Maple-Sycamore	1	< 1%
	rubrum	Maple-Red	337	12%
	saccharinum	Maple-Silver	41	1%
	saccharum	Maple-Sugar	224	8%
Acer Total			1043	38%
Ailanthus	altissima	Tree of Heaven	20	1%
	lenta	Birch-Sweet	1	< 1%
D - 41	nigra	Birch-River	12	< 1%
Betula	papyrifera	Birch-Paper	2	< 1%
	populifolia	Birch-Gray	2	< 1%
Betula Total			17	1%
Carpinus	caroliniana	Hornbeam-American	1	< 1%
	glabra	Hickory-Pignut	1	< 1%
Carya	ovata	Hickory-Shagbark	7	< 1%
	tomentosa	Hickory-Mockernut	1	< 1%
Carya Total		9	< 1%	
Catalpa	speciosa	Catalpa-Northern	30	1%
Cercis	canadensis	Redbud-Eastern	1	< 1%
Cercis Total		1	< 1%	
C	florida	Dogwood-Flowering	25	1%
Cornus	kousa	Dogwood-Kousa	15	1%
Cornus Total			40	1%
Crataegus	sp.	Hawthorn	24	1%
Fagus	grandifolia	Beech-American	8	< 1%
T	americana	Ash-White	11	< 1%
Fraxinus	pennsylvanica	Ash-Green	47	2%
Fraxinus Total			58	2%
Ginkgo	biloba	Ginkgo	5	< 1%
	triacanthos	Honeylocust-Thornless		
Gleditsia	var. inermis	Common	78	3%
Hamamelis	virginiana	Witchhazel	1	< 1%
Ilex	aquifolium	Holly-English	11	< 1%
Juglans	nigra	Walnut-Black	7	< 1%
Juniperus	sp.	Juniper	12	< 1%

Genus	Species	Common Name	Count	% Distribution Total
Juniperus	virginiana	Redcedar-Eastern	45	2%
Juniperus Total			57	2%
Lagerstroemia	indica	Crapemyrtle-Common	1	< 1%
Liquidambar	styraciflua	Sweetgum	7	< 1%
Liriodendron	tulipifera	Tuliptree	8	< 1%
Magnolia	acuminata	Magnolia-Cucumbertree	1	< 1%
Magnolia	sp.	Magnolia	3	< 1%
Magnolia Total			4	< 1%
Malus	sp.	Crabapple	48	2%
Morris	alba	Mulberry-White	4	< 1%
Morus	sp.	Mulberry	10	< 1%
Morus Total		·	14	1%
	abies	Spruce-Norway	118	4%
Picea	glauca	Spruce-White	1	< 1%
	pungens	Spruce-Colorado Blue	34	1%
Picea Total	11 0	1 -	153	6%
	nigra	Pine-Austrian	10	< 1%
Pinus	sp.	Pine	7	< 1%
	strobus	Pine-Eastern White	87	3%
Pinus Total	<u> </u>	•	104	4%
Platanus	x acerifolia	Planetree-London	27	1%
Populus	deltoides	Poplar-Eastern	21	1%
	cerasifera	Plum-Purple Leaf	18	1%
	sargentii	Cherry-Sargent	24	1%
	serotina	Cherry-Black	20	1%
Prunus	serrulata	Cherry-Flowering	13	< 1%
	sp.	Cherry	32	1%
	subhirtella	Cherry-Weeping	4	< 1%
Prunus Total		J F - S	111	4%
	calleryana	Pear-Callery	339	12%
Pyrus	communis	Pear-Common	1	< 1%
Pyrus Total			340	12%
	alba	Oak-White	16	1%
	bicolor	Oak-Swamp White	3	< 1%
Quercus	palustris	Oak-Pin	81	3%
Q	robur	Oak-English	26	1%
	rubra	Oak-Northern Red	108	4%
Quercus Total		1.3.0.0	234	9%
Robinia	pseudoacacia	Locust-Black	15	1%
Salix	sp.	Willow	17	1%
Sciadopitys	verticillata	Pine-Umbrella	1	< 1%
Syringa	reticulata	Lilac-Japanese Tree	5	< 1%
Taxus	baccata	Yew-English	2	< 1%
Thuja	occidentalis	Cedar-White	24	1%
Tilia		Linden	66	2%
THU	sp.	Lillucii	00	2 /0

Genus	Species	Common Name	Count	% Distribution Total
Tsuga	canadensis	Hemlock-Canadian	54	2%
Ulmus	americana	Elm-American	18	1%
Zelkova	serrata	Zelkova-Japanese	54	2%
x Cupressocyparis	leylandii	Cypress-Leyland	1	< 1%
Grand Total			2739	100%

Tree Groupings

The following table displays inventoried trees that were recorded as groupings. Throughout the management plan, those trees recorded as groupings will be displayed with the number of plantings in parentheses after the common name.

TREE GROUPINGS

Tree ID	Common Name	Total Plants
371	Holly-English	3
373	Holly-English	3
385	Cedar-White	4
395	Holly-English	2
411	Holly-English	2
661	Pine	5
662	Pine	2
678	Maple-Norway	2
680	Pear-Callery	3
683	Tree of Heaven	5
691	Redcedar- Eastern	4
693	Elm-American	2
694	Maple-Norway	8
695	Maple-Norway	8
787	Pine-Eastern White	8
835	Spruce-Norway	3
849	Spruce-Norway	3
850	Spruce-Norway	3
903	Spruce-Norway	7
1000	Locust-Black	2
1056	Pine-Eastern White	6
1058	Pine-Eastern White	10

Tree ID	Common Name	Total Plants
		Flailts
1207	Pine-Eastern	10
120,	White	10
1311	Cherry-Sargent	5
1314	Spruce-Norway	6
1315	Maple-Norway	3
1325	Pine-Eastern	3
1325	White	3
4222	Spruce-Colorado	4
1333	Blue	4
1045	Redcedar-	2
1345	Eastern	3
4064	Redcedar-	2
1361	Eastern	2
1383	Pear-Callery	2
1390	Pear-Callery	7
1391	Pear-Callery	3
4202	Redcedar-	2
1392	Eastern	3
1393	Pear-Callery	4
4405	Hemlock-	2
1425	Canadian	2
1428	Plum-Purple Leaf	2
1457	Spruce-Norway	9
1462	Spruce-Norway	3
1471	Tree of Heaven	3
1472	Tree of Heaven	2

Tree ID	Common Name	Total Plants
1477	Maple-Norway	3
1487	Cherry-Sargent	2
1491	Maple-Norway	2
1514	Hemlock- Canadian	5
1520	Maple-Norway	18
1561	Maple-Red	2
1564	Maple-Red	2
1632	Redcedar- Eastern	4
1635	Maple-Norway	2
1663	Hemlock- Canadian	2
1669	Redcedar- Eastern	2
1683	Maple-Norway	2
1684	Maple-Norway	3
1697	Hemlock- Canadian	9
1711	Hemlock- Canadian	2
1723	Maple-Norway	5
1732	Maple-Norway	2
1735	Maple-Norway	2
1739	Maple-Norway	7
1740	Maple-Norway	6
1742	Maple-Norway	4
1743	Maple-Norway	2
1749	Maple-Norway	2
1757	Redcedar- Eastern	4
1792	Dogwood- Flowering	3
1891	Cedar-White	2
1900	Cedar-White	2
1904	Ash-Green	3

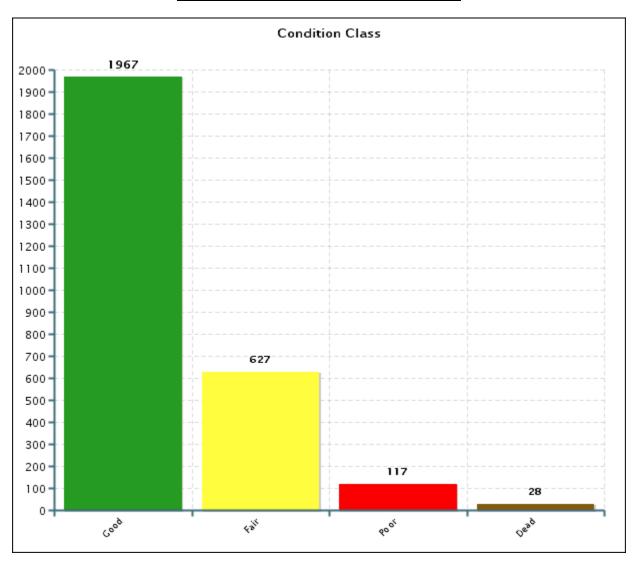
Tree ID	Common	Total
	Name	Plants
1928	Spruce-Norway	5
1950	Maple-Norway	4
1958	Ash-Green	2
1971	Maple-Norway	4
1986	Hemlock-	14
1900	Canadian	
1989	Cedar-White	10
1990	Maple-Sugar	2
1999	Maple-Norway	2
2029	Tree of Heaven	2
2043	Catalpa-Northern	2
2078	Crabapple	2
2094	Redcedar-	2
2094	Eastern	2
2148	Maple-Norway	3
2254	Juniper	12
2309	Spruce-Norway	4
2320	Mulberry	5
2334	Cedar-White	4
2348	Maple-Norway	6
2349	Cherry-Sargent	3
2350	Oak-Northern Red	3
2355	Hemlock- Canadian	2
2356	Pine-Eastern White	3
2360	Catalpa-Northern	2
2363	Spruce-Norway	4
2366	Elm-American	4
2380	Maple-Japanese	2
2381	Hemlock- Canadian	6
2421		8
2421 2426	Spruce-Norway	
	Maple-Norway	4
2431	Spruce-Norway	4

Condition Class

The breakdown of tree condition follows:

CONDITION CLASS BREAKDOWN

Condition Class	Quantity	% of Total
Good	1967	72%
Fair	627	23%
Poor	117	4%
Dead	28	1%

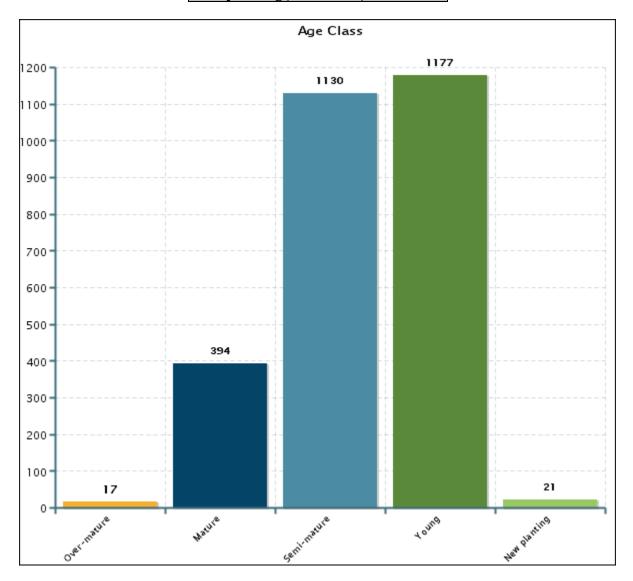


Age Class

The breakdown of tree age class follows:

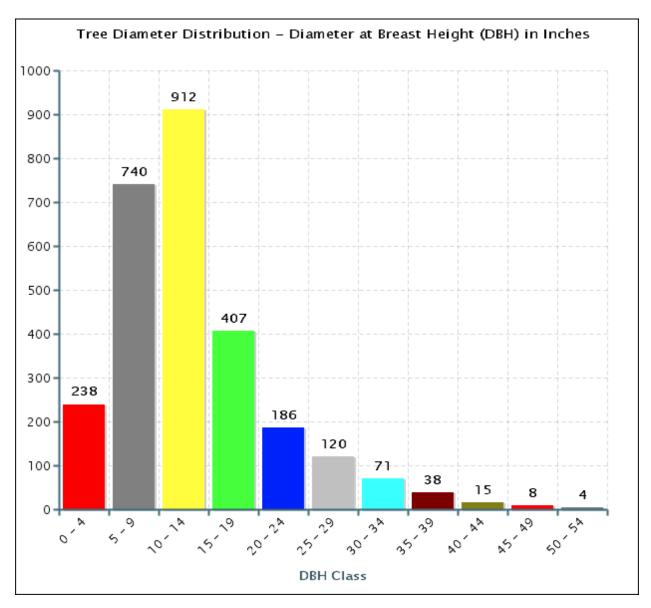
AGE CLASS BREAKDOWN

Age Class	Quantity	% of Total
Over-mature	17	1%
Mature	394	14%
Semi-mature	1130	41%
Young	1177	43%
New planting	21	1%



Tree Size (DBH)

The following chart illustrates numbers of trees according to size per DBH:



Estimated Tree Asset Value

As part of the Bartlett inventory process, we have included an Estimated Tree Asset Value for each tree and a cumulative total for all trees inventoried. We use an average per square inch nursery price, size (DBH), species factor, condition factor, and location factor to estimate the tree asset value. This is not intended to replace a tree appraisal.

The following data fields are used in this formula:

Data Field	Description
Average Per Square Inch Nursery Price	Based on the average nursery prices for two common tree species and one exotic tree species within a region, then taking the average of those three as the average per square inch price for the region
Size	Based on tree DBH (4.5 feet above grade)
Species Factor	Relative species desirability based on 100% for the tree in that geographical location. In most cases, species desirability ratings, published by the International Society of Arboriculture, are used for adjustment.
Condition Factor	Rating of the tree's structure and health based on 100%
Location Factor	Average rating for the site and the tree's contribution and placement, based on 100%

Estimated Tree Asset Value = (Average Per Square Inch Nursery Price*Size)*Species Factor*Condition Factor*Location Factor

The estimated cumulative total value for all trees inventoried is **\$12,324,611.23**. The following table lists the ten trees with the highest Tree Asset Values:

TOP TEN TREES - HIGHEST ESTIMATED TREE ASSET VALUE

Tree ID	Common Name	Genus	Species	DBH	Tree Asset Value
1835	Oak-Northern Red	Quercus	rubra	47	\$56,059.33
1969	Maple-Red	Acer	rubrum	42,30,26	\$55,323.97
1914	Maple-Sugar	Acer	saccharum	45	\$53,042.50
1677	Oak-Swamp White	Quercus	bicolor	47	\$50,453.40
1858	Oak-Northern Red	Quercus	rubra	42	\$48,320.27
1821	Oak-Northern Red	Quercus	rubra	42	\$48,320.27
1819	Oak-Northern Red	Quercus	rubra	41	\$46,693.67
1459	Oak-Northern Red	Quercus	rubra	48,13	\$44,806.30
1714	Maple-Sugar	Acer	saccharum	39	\$43,361.67
157	Oak-English	Quercus	robur	39	\$43,361.67

TOP TEN TREES - HIGHEST TREE ASSET VALUE



i-TREE ECO ECOSYSTEM ANALYSIS RESULTS



i-TREE ECO ECOSYSTEM ANALYSIS RESULTS

The i-Tree Eco Version 6 application was used to analyze the ecosystem benefits provided by the trees inventoried within the Village of Mount Kisco. The individual ecosystem benefits results are summarized in the following table:

Ecosystem Benefit	Amount	Value
Total Pollution Removal	1,205 pounds /year	\$6,128/year
• Ozone (03)	14,378 oz/year	\$2,024/year
Carbon Monoxide (CO)	267 oz/year	\$12/year
Nitrogen Dioxide (NO2)	3,705 oz/year	\$75/year
 Particulate Matter < 2.5 microns (PM2.5) 	630 oz/year	\$4,015/year
Sulfur Dioxide (SO2)	308 oz/year	\$2/year
Carbon Storage	1,491 tons	\$254,000
Carbon Sequestration	23,920 tons/year	\$4,080/year
Oxygen Production	63,780 tons/year	
Avoided Runoff	40,350 cubic feet/year	\$2,700/year
Total Volatile Organic Compound Emissions	669 lbs/year	
Monoterpene	191 lbs/year	
Isoprene	478 lbs/year	

The complete i-Tree Eco report is provided in the Appendix.

PRUNING INTERVAL MATRICES



PRUNING INTERVAL MATRICES

Tree Pruning

A commonly offered service among tree companies, pruning trees is one of the most poorly executed practices by tree workers who lack training in the basics of tree biology. "Lion's tailing," topping, and flush cuts are a few examples, and these can lead to hazardous conditions over time.

Because this practice is so misunderstood, and because specific standards exist to perform pruning correctly, the Inventory Team decided to include some explanation in the main body of this management plan.

Tree owners and tree-care practitioners should always keep in mind that any pruning cut is a wound. Informed tree-care professionals have learned to manage that wounding to preserve the health, safety, and integrity of the tree.

Improper Pruning Practices

A few of the most common pruning abuses are

- Lion's Tailing pruning that removes interior branches along the stem and scaffold branches. This encourages poor branch taper, poor wind load distribution, and risk of branch failure. It also deprives the tree of foliage it needs to produce photosynthates. See next page, top left
- Topping pruning cuts that reduce a tree's size by using heading cuts that shorten branches to a predetermined size. Topping substantially reduces the functional benefits a tree is capable of providing and predisposes trees to structural defects that can contribute to failures in the future. It also reduces the value of the trees substantially and deprives the tree of adequate foliage. See next page, top right.
- Flush Cuts pruning cut through the **branch collar**, flush against the trunk or parent stem, causing unnecessary injury. See next page, bottom.
- Using Climbing Spikes Inappropriately Using climbing spikes on a healthy tree, for example, wounds healthy stem tissues and can lead to infection by fungal pathogens.



Example of Lion's tailing.



Examples of topping.



Examples of flush cuts.

Correct Pruning Practices

We have included below some key pruning categories and diagrams to illuminate the goal of each.

Cleaning

Selective pruning to remove one or more of the following parts: dead, diseased, and/or broken branches.

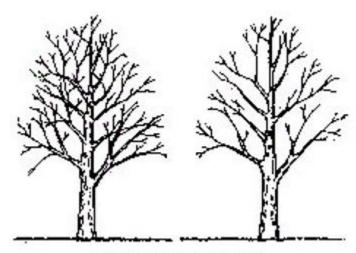


Illustration of crown cleaning.

Raising

Selectively pruning to provide vertical clearance.

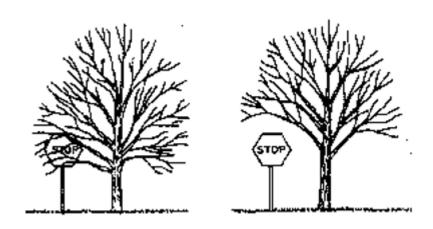


Illustration of crown raising.

Thinning

Selective pruning to reduce density of live branches.

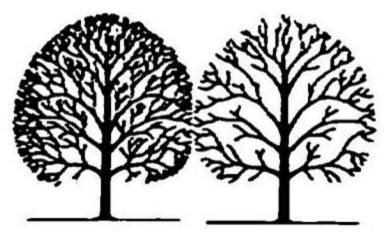
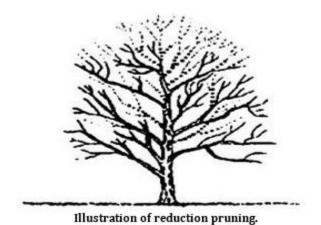


Illustration of thinning.

Reducing (Reduction Pruning)

Selective pruning to reduce height or spread.



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Structural

Selective pruning of live branches and stems to influence orientation, spacing, growth rate, strength of attachment, and ultimate size of branches and stems.

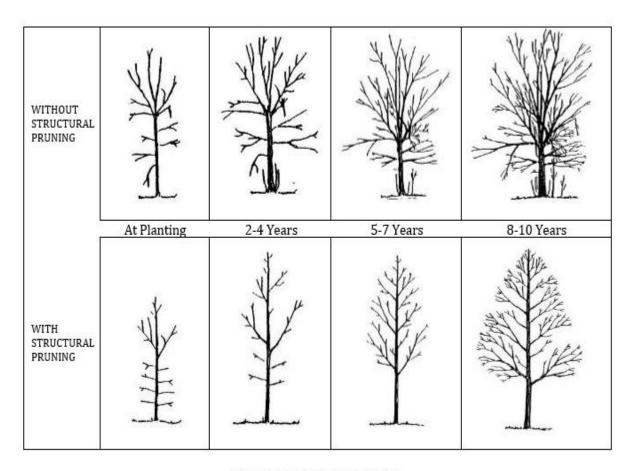


Illustration of structural pruning.

Vista Pruning

Vista pruning is a combination of thinning and reduction pruning to enhance the view from a vantage point to an area of interest while minimizing negative impacts on tree structure and health.

Two pruning interval matrices have been provided, the first is summarized by individual tree ID and the second is summarized by individual tree species.

Pruning interval matrix 1 lists trees that were recommended for Priority 1, 2, 3, 4 or 5 pruning based off recommendations made in the 2018 tree inventory. Specific reports relating to pruning priorities and locations can be created through the ArborScopeTM webbased management software.

INVENTORIED TREES RECOMMENDED FOR PRUNING (2,361 Trees)

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
643	Honeylocust- Thornless Common	21	High	1	 Clean Raise: Street, Building Reduce: Branch weight, Overhead lines
854	Willow	50	High	1	CleanReduce: Branch weight, PathThinStructural
996	Maple-Norway	17	High	1	CleanReduce: Overhead lines, SidewalkStructural
5	Oak-Northern Red	28	Moderate	1	CleanReduce: Overhead lines
166	Honeylocust- Thornless Common	22	Moderate	1	CleanRaise: Street, SidewalkReduce: Branch weight
168	Honeylocust- Thornless Common	19	Moderate	1	CleanReduce: Branch weight, Street
169	Honeylocust- Thornless Common	22	Moderate	1	CleanReduce: Branch weight, Street
180	Honeylocust- Thornless Common	21	Moderate	1	CleanRaise: Street, SidewalkReduce: Branch weight
375	Honeylocust- Thornless Common	25	Moderate	1	CleanRaise: Parking, Sidewalk
863	Willow	46	Moderate	1	CleanReduce: Branch weight, PathThinStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1328	Maple-Silver	32,21,12	Moderate	1	 Clean Reduce: Branch weight, Overhead lines Thin Structural
1459	Oak-Northern Red	48,13	Moderate	1	CleanReduce: Overhead lines, Branch weightStructural
1560	Maple-Red	20	Moderate	1	CleanReduce: Branch weight, StreetStructural
2187	Ash-Green	23	Moderate	1	CleanReduce: Branch weightStructural
2225	Oak-Pin	19	Moderate	1	CleanReduce: Branch weight, SidewalkStructural
1676	Maple-Norway	25	Moderate	2	Reduce: Branch weightStructural
2258	Catalpa-Northern	19	Moderate	2	Reduce: Branch weight, Overhead linesStructural
6	Oak-Northern Red	24	Low	1	Clean Structural
62	Maple-Norway	29	Low	1	CleanReduce: Overhead linesStructural
150	Maple-Red	16	Low	1	CleanRaise: Parking, SidewalkReduce: Branch weight
162	Oak-Pin	29	Low	1	CleanReduce: Branch weightStructural
273	Oak-Pin	20	Low	1	CleanRaise: Street, SidewalkReduce: Building
297	Maple-Red	20	Low	1	CleanReduce: Branch weight
419	Oak-Northern Red	13	Low	1	CleanRaise: LightingReduce: Branch weight, Building

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
618	Ash-White	37	Low	1	CleanReduce: Overhead lines, Branch weight
626	Ash-White	25	Low	1	CleanReduce: Overhead lines, Branch weight
672	Tuliptree	38	Low	1	CleanReduce: Branch weight, Street
1460	Maple-Silver	19,18,16	Low	1	CleanReduce: Overhead lines, Branch weight
1550	Maple-Red	24	Low	1	CleanReduce: Branch weight, Overhead lines
1847	Maple-Red	36	Low	1	Structural
2042	Poplar-Eastern	29	Low	1	CleanReduce: Branch weight, StreetStructural
2358	Maple-Norway	31	Low	1	CleanReduce: Branch weight, StreetStructural
631	Maple-Norway	28	Low	2	CleanReduce: Branch weight
889	Pear-Callery	22	Low	2	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Street Structural
991	Maple-Norway	25	Low	2	CleanReduce: Overhead lines, Branch weightStructural
1209	Maple-Norway	22	Low	2	• Clean
1415	Maple-Silver	31	Low	2	Reduce: Branch weight, Street
1713	Maple-Norway	32	Low	2	CleanReduce: Branch weight, Overhead linesStructural
1741	Maple-Silver	38,36	Low	2	CleanReduce: Branch weight, Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1761	Maple-Silver	42	Low	2	 Clean Reduce: Branch weight, Overhead lines Structural
1961	Maple-Silver	38	Low	2	• Clean
1993	Maple-Red	29	Low	2	CleanReduce: Branch weightStructural
2271	Maple-Norway	25	Low	2	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Overhead lines Structural
243	Maple-Norway	42	Low	3	Raise: StreetReduce: Branch weight
1488	Hickory-Shagbark	19,18	Low	3	Reduce: Branch weight, Street
2138	Linden	13	Low	3	Reduce: Sidewalk, Branch weightStructural
2364	Maple-Norway	21	Low	3	Reduce: Branch weightStructural
278	Zelkova-Japanese	13	Low	5	Raise: Street, SidewalkStructural
4	Oak-Northern Red	32		1	CleanReduce: Overhead lines, Branch weight
7	Oak-Northern Red	28		1	CleanReduce: Branch weight, Overhead lines
14	Maple-Norway	6		1	Reduce: BuildingStructural
17	Oak-Pin	12		1	Raise: SidewalkReduce: BuildingStructural
18	Oak-Pin	16		1	Raise: Sidewalk, ParkingReduce: BuildingStructural
20	Oak-Pin	18		1	CleanReduce: BuildingStructural
21	Oak-Pin	15		1	Reduce: Building, Overhead linesStructural
22	Oak-Northern Red	20		1	Reduce: BuildingStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
35	Cherry	14		1	CleanRaise: ParkingStructural
39	Pear-Callery	11		1	Raise: Parking, SidewalkStructural
41	Maple-Norway	14		1	CleanReduce: ParkingStructural
46	Maple-Red	2		1	CleanStructural
49	Maple-Sugar	9		1	CleanRaise: Parking, SidewalkReduce: Overhead linesStructural
50	Oak-Pin	28		1	CleanReduce: Overhead lines, ParkingStructural
51	Honeylocust- Thornless Common	22		1	 Clean Raise: Parking, Sidewalk Reduce: Overhead lines Thin Structural
55	Linden	13		1	Raise: SidewalkReduce: Overhead linesStructural
56	Oak-Pin	5		1	Raise: SidewalkReduce: Overhead lines, SidewalkStructural
57	Maple-Sugar	7		1	Reduce: Overhead linesStructural
58	Maple-Sugar	8		1	Raise: SidewalkReduce: Overhead linesStructural
59	Linden	10		1	Raise: Parking, SidewalkReduce: Overhead linesStructural
60	Linden	13		1	Raise: Parking, SidewalkReduce: Overhead linesStructural
61	Maple-Sugar	8		1	Reduce: Overhead lines, ParkingStructural
65	Oak-Pin	12		1	Raise: Sidewalk, DrivewayStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
72	Zelkova-Japanese	15		1	CleanReduce: Overhead linesStructural
73	Zelkova-Japanese	16		1	CleanReduce: Overhead lines, BuildingStructural
74	Honeylocust- Thornless Common	16		1	CleanReduce: Overhead lines, BuildingStructural
76	Honeylocust- Thornless Common	18		1	CleanReduce: BuildingStructural
78	Oak-Northern Red	14		1	CleanReduce: ParkingStructural
79	Oak-Northern Red	15		1	CleanReduce: BuildingStructural
80	Honeylocust- Thornless Common	10		1	CleanReduce: BuildingStructural
81	Oak-Northern Red	13		1	CleanReduce: BuildingStructural
83	Oak-Northern Red	16		1	CleanStructural
86	Oak-Northern Red	20		1	CleanReduce: BuildingStructural
87	Honeylocust- Thornless Common	12		1	CleanReduce: BuildingStructural
94	Pear-Callery	5		1	Raise: SidewalkReduce: Overhead linesStructural
95	Pear-Callery	5		1	Raise: SidewalkReduce: Overhead linesStructural
98	Pear-Callery	5		1	Raise: Parking, SidewalkStructural
102	Pear-Callery	14		1	• Clean

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
112	Linden	16		1	CleanRaise: SidewalkReduce: Branch weight
142	Oak-Pin	24		1	CleanRaise: StreetReduce: Branch weight
144	Oak-Northern Red	26		1	CleanReduce: Branch weight
165	Oak-Pin	22		1	CleanReduce: Branch weight, Street
167	Honeylocust- Thornless Common	21		1	CleanReduce: Branch weight
171	Honeylocust- Thornless Common	17		1	Clean Reduce: Street, Sidewalk
178	Honeylocust- Thornless Common	15		1	Clean Reduce: Street, Branch weight
179	Maple-Norway	18		1	CleanReduce: Street, Branch weight
181	Zelkova-Japanese	14		1	Clean Structural
184	Pine-Eastern White	23		1	CleanReduce: Parking, Branch weight
185	Pine-Eastern White	23		1	CleanReduce: Parking, Branch weight
186	Pine-Eastern White	21		1	CleanReduce: Path, Branch weight
189	Planetree-London	26		1	• Clean
204	Oak-Northern Red	13		1	Clean
210	Oak-Pin	20		1	CleanReduce: Building
211	Oak-Pin	23		1	CleanReduce: Overhead lines, Branch weight
216	Oak-Pin	20		1	CleanReduce: Overhead lines, Building
217	Oak-Pin	24		1	CleanReduce: Building, Overhead lines
222	Zelkova-Japanese	20		1	CleanReduce: Branch weight, Overhead lines
223	Maple-Norway	14		1	CleanReduce: Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
233	Ash-Green	36		1	CleanReduce: Branch weight
260	Ginkgo	10		1	• Clean
266	Ash-Green	10		1	CleanRaise: Street
267	Zelkova-Japanese	17		1	CleanReduce: Building
286	Maple-Norway	21		1	Clean Raise: Street
292	Maple-Norway	14		1	Clean
294	Maple-Norway	16		1	CleanRaise: Sidewalk
354	Maple-Red	11		1	Structural
377	Honeylocust- Thornless Common	20		1	CleanRaise: Parking
378	Honeylocust- Thornless Common	19		1	CleanRaise: Parking
384	Oak-Pin	25		1	CleanReduce: Building
453	Maple-Red	15		1	Reduce: Maintain shape, SidewalkStructural
454	Maple-Red	15		1	Raise: SidewalkStructural
456	Maple-Red	10		1	Raise: SidewalkStructural
457	Maple-Red	14		1	Raise: SidewalkStructural
458	Maple-Red	15		1	Raise: Sidewalk, DrivewayStructural
459	Maple-Red	13		1	Raise: Parking, SidewalkStructural
461	Maple-Red	13		1	Structural
462	Maple-Red	12		1	Raise: SidewalkStructural
463	Maple-Red	16		1	Raise: SidewalkStructural
464	Maple-Red	9		1	Raise: SidewalkStructural
465	Maple-Red	15		1	Raise: SidewalkStructural
467	Maple-Red	13		1	Raise: Sidewalk
469	Maple-Red	15		1	Raise: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
471	Maple-Sugar	12		1	Clean Structural
474	Maple-Red	14		1	Raise: Sidewalk Structural
475	Maple-Sugar	12		1	Raise: SidewalkStructural
476	Oak-Pin	21		1	CleanRaise: SidewalkStructural
477	Maple-Sugar	15		1	Raise: SidewalkReduce: Pole/postStructural
478	Maple-Red	14		1	Raise: SidewalkStructural
479	Maple-Sugar	13		1	CleanStructural
480	Maple-Red	13		1	Raise: SidewalkReduce: Pole/postStructural
482	Maple-Red	13		1	CleanRaise: ParkingStructural
484	Maple-Sugar	12		1	CleanStructural
488	Maple-Red	13		1	Raise: ParkingStructural
489	Maple-Red	7		1	Clean Structural
490	Maple-Red	8		1	Raise: ParkingStructural
492	Maple-Sugar	13		1	Clean Structural
494	Maple-Sugar	12		1	Clean Structural
495	Maple-Sugar	13		1	Raise: Driveway Structural
500	Maple-Sugar	15		1	Raise: Parking, DrivewayStructural
501	Maple-Sugar	15		1	CleanRaise: ParkingStructural
503	Maple-Sugar	10		1	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
504	Maple-Sugar	15		1	Raise: ParkingReduce: Pole/postStructural
505	Maple-Sugar	9		1	CleanRaise: ParkingStructural
506	Maple-Sugar	15		1	Raise: ParkingReduce: Pole/postStructural
508	Maple-Sugar	9		1	CleanReduce: Pole/postStructural
512	Maple-Sugar	14		1	Structural
517	Maple-Sugar	12		1	CleanStructural
518	Maple-Sugar	16		1	Structural
524	Maple-Sugar	12		1	CleanStructural
525	Maple-Sugar	14		1	Reduce: Pole/post, ParkingStructural
526	Maple-Sugar	12		1	Raise: ParkingStructural
530	Maple-Red	14		1	Raise: ParkingStructural
531	Maple-Sugar	16		1	Structural
532	Maple-Sugar	18		1	Structural
533	Maple-Sugar	13		1	Structural
534	Maple-Sugar	15		1	Structural
535	Maple-Sugar	13		1	Reduce: Maintain shapeStructural
537	Maple-Sugar	12		1	Structural
541	Maple-Sugar	11		1	CleanStructural
543	Maple-Sugar	12		1	CleanStructural
606	Maple-Norway	25		1	CleanReduce: Parking, Branch weight
607	Maple-Norway	17		1	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
608	Oak-Northern Red	28		1	 Clean Raise: Street Reduce: Branch weight, Overhead lines
613	Ash-White	31		1	CleanReduce: Overhead lines, Branch weight
627	Ash-White	30		1	 Clean Raise: Street Reduce: Branch weight, Overhead lines
640	Honeylocust- Thornless Common	13		1	CleanRaise: Street, SidewalkReduce: Building, Branch weight
641	Honeylocust- Thornless Common	16		1	CleanRaise: Street, SidewalkReduce: Branch weight, Building
642	Honeylocust- Thornless Common	15		1	CleanRaise: Street, SidewalkReduce: Branch weight, Building
667	Maple-Norway	17		1	CleanReduce: Branch weight, Sidewalk
668	Maple-Norway	21		1	 Clean Reduce: Branch weight, Overhead lines Thin
697	Maple-Norway	15,12,9		1	CleanReduce: Overhead lines, Branch weightStructural
883	Oak-Pin	18		1	CleanRaise: Street, Sidewalk
885	Maple-Silver	21		1	Clean Reduce: Branch weight
886	Oak-Pin	18		1	CleanRaise: Street, SidewalkReduce: Branch weight
887	Oak-Pin	21		1	CleanRaise: Street, SidewalkReduce: Branch weight, Sign blockage
1203	Honeylocust- Thornless Common	37		1	CleanReduce: Overhead lines, Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1250	Oak-Pin	22		1	CleanRaise: Sidewalk, Sign blockageStructural
1286	Maple-Norway	36		1	CleanReduce: Overhead lines, Branch weight
1288	Honeylocust- Thornless Common	18		1	Clean Raise: Street
1289	Honeylocust- Thornless Common	24		1	CleanRaise: Street
1290	Honeylocust- Thornless Common	20		1	CleanReduce: Street, Branch weight
1291	Honeylocust- Thornless Common	23		1	CleanReduce: Branch weight, Street
1461	Oak-Northern Red	39		1	 Clean Raise: Street Reduce: Branch weight, Overhead lines Structural
1540	Maple-Red	21		1	CleanReduce: Branch weight, Overhead lines
1570	Maple-Red	25		1	 Clean Reduce: Branch weight, Overhead lines Structural
1571	Maple-Red	24		1	 Clean Raise: Street Reduce: Overhead lines, Branch weight Structural
1624	Maple-Red	22		1	CleanReduce: Branch weight, StreetStructural
1647	Maple-Sugar	29		1	CleanReduce: Branch weight, StreetStructural
1649	Maple-Sugar	27		1	CleanReduce: Branch weight, StreetStructural
1665	Maple-Silver	32		1	CleanReduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1677	Oak-Swamp White	47		1	CleanReduce: Branch weightStructural
1714	Maple-Sugar	39		1	 Clean Reduce: Overhead lines, Branch weight Structural
1715	Maple-Sugar	33		1	CleanReduce: Branch weight, Overhead linesStructural
1724	Oak-Pin	29		1	CleanReduce: Branch weight, StreetStructural
1729	Spruce-Norway	29		1	CleanReduce: Street
1746	Oak-Northern Red	31		1	 Clean Reduce: Overhead lines, Branch weight Structural
1758	Maple-Silver	38		1	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight Structural
1759	Maple-Sugar	35		1	 Clean Reduce: Branch weight, Overhead lines Structural
1775	Oak-English	16		1	CleanStructural
1776	Oak-English	21		1	Clean Structural
1777	Oak-English	13		1	Clean Structural
1779	Oak-English	17		1	Clean Structural
1782	Oak-English	16		1	 Clean Raise: Street, Sidewalk Structural
1783	Oak-English	16		1	CleanStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1784	Oak-English	20		1	CleanRaise: Street, SidewalkStructural
1881	Poplar-Eastern	33		1	CleanReduce: Branch weight, StreetStructural
2020	Oak-Northern Red	32		1	CleanReduce: Street, Branch weight
2021	Oak-Northern Red	20		1	CleanReduce: Branch weight, Street
2022	Oak-Northern Red	22		1	CleanReduce: Branch weight, Street
2025	Oak-English	24		1	CleanReduce: Branch weight, StreetStructural
2035	Oak-English	15		1	CleanReduce: Branch weight, StreetStructural
2036	Oak-English	17		1	CleanReduce: Branch weight, StreetStructural
2039	Oak-English	18		1	CleanReduce: Branch weight, StreetStructural
2040	Oak-English	16		1	CleanReduce: Branch weight, StreetStructural
2098	Poplar-Eastern	22,14,9		1	CleanReduce: Branch weight, StreetStructural
2099	Poplar-Eastern	16		1	CleanStructural
2100	Poplar-Eastern	9		1	CleanReduce: Branch weight, StreetStructural
2132	Honeylocust- Thornless Common	13		1	CleanStructural
2222	Planetree-London	21		1	CleanReduce: Branch weight, LightingStructural
2223	Planetree-London	20		1	CleanReduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2235	Planetree-London	23		1	CleanReduce: Branch weight, LightingStructural
2236	Oak-Pin	24		1	CleanReduce: Branch weight, StreetStructural
2237	Maple-Norway	15		1	CleanReduce: Branch weight, StreetStructural
2241	Planetree-London	19		1	CleanReduce: Branch weight, StreetStructural
2242	Planetree-London	24		1	CleanReduce: Branch weight, StreetStructural
2243	Crabapple	17,14,14		1	CleanReduce: Branch weight, SidewalkStructural
2262	Maple-Norway	16		1	CleanRaise: SidewalkReduce: Branch weight, StreetStructural
2263	Maple-Norway	17		1	CleanReduce: Branch weight, StreetStructural
2273	Locust-Black	33		1	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, remove limb in wires to trunk Structural
2282	Oak-Northern Red	19		1	CleanReduce: Branch weight, SidewalkStructural
2293	Oak-Northern Red	35		1	CleanReduce: Branch weight, StreetStructural
2338	Locust-Black	30		1	CleanReduce: Branch weight, StreetStructural
2422	Tree of Heaven	17		1	CleanReduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2423	Maple-Norway	18,10		1	 Clean Raise: Sidewalk Reduce: Branch weight, Street Structural
3	Oak-Northern Red	24		2	Reduce: Overhead lines, Branch weight
10	Maple-Norway	8		2	Reduce: Overhead lines, BuildingStructural
12	Maple-Norway	5		2	Raise: ParkingStructural
15	Maple-Norway	5		2	Structural
16	Pear-Callery	4		2	Raise: Parking, SidewalkReduce: BuildingStructural
19	Cherry	6		2	Raise: StreetStructural
23	Pear-Callery	3		2	Raise: Street, SidewalkStructural
30	Ginkgo	7		2	Structural
31	Pear-Callery	5		2	Raise: Parking, SidewalkStructural
34	Pear-Callery	4		2	Raise: ParkingStructural
36	Pear-Callery	9		2	Raise: Parking, SidewalkStructural
37	Pear-Callery	9		2	Structural
38	Pear-Callery	9		2	Structural
42	Maple-Norway	16		2	• Structural
43	Pear-Callery	4		2	Raise: Parking, SidewalkStructural
44	Pear-Callery	5		2	Raise: Parking, SidewalkReduce: BuildingStructural
45	Pear-Callery	3		2	Structural
47	Pear-Callery	4		2	Raise: Parking, SidewalkStructural
48	Pear-Callery	3		2	Structural
54	Pear-Callery	2		2	Structural
63	Oak-Pin	7		2	Structural
64	Oak-Pin	11		2	Clean Structural
66	Pear-Callery	4		2	Raise: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
67	Pear-Callery	3		2	Structural
68	Hawthorn	2,2,2		2	Reduce: SidewalkStructural
69	Pear-Callery	5		2	Structural
70	Pear-Callery	4		2	Structural
75	Honeylocust- Thornless Common	16		2	CleanReduce: BuildingStructural
77	Zelkova-Japanese	6		2	Structural
82	Zelkova-Japanese	4		2	Clean Structural
84	Pear-Callery	2		2	Structural
85	Oak-Northern Red	22		2	Structural
88	Oak-Pin	19		2	CleanReduce: Building, Branch weight
91	Pear-Callery	4		2	Raise: Sidewalk
92	Pear-Callery	5		2	Reduce: Sidewalk Structural
93	Pear-Callery	5		2	Structural
96	Pear-Callery	4		2	Reduce: Overhead linesStructural
99	Hawthorn	4		2	Structural
101	Pear-Callery	13		2	• Clean
103	Pear-Callery	11		2	• Clean
104	Pear-Callery	16		2	• Clean
105	Pear-Callery	15		2	• Clean
106	Pear-Callery	16		2	CleanReduce: Lighting, Building
108	Pear-Callery	15		2	CleanReduce: Lighting
110	Pear-Callery	13		2	• Clean
111	Pear-Callery	13		2	• Clean
113	Linden	16		2	CleanRaise: Sidewalk, ParkingReduce: Branch weight, Building
114	Linden	15		2	CleanRaise: Street, ParkingReduce: Branch weight
115	Planetree-London	13		2	• Clean
123	Crabapple	11,7,6		2	CleanRaise: Path, ParkingReduce: Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
126	Mulberry-White	14,12,7		2	CleanRaise: ParkingReduce: Branch weight
152	Crabapple	14		2	CleanRaise: SidewalkReduce: Lighting, Branch weightStructural
153	Pine-Eastern White	24		2	CleanReduce: Branch weight
154	Pine-Eastern White	21		2	CleanReduce: Branch weight
164	Pine-Eastern White	19		2	CleanReduce: Branch weight
190	Planetree-London	9		2	• Clean
201	Oak-Northern Red	15		2	CleanReduce: Overhead lines
206	Oak-Northern Red	21		2	CleanReduce: Overhead lines, Building
207	Oak-Pin	17		2	CleanReduce: Overhead lines, Building
208	Oak-Pin	16		2	CleanReduce: Building
212	Pear-Callery	10		2	Raise: SidewalkReduce: Overhead linesStructural
234	Maple-Norway	17		2	CleanRaise: Street, Sidewalk
235	Maple-Norway	12		2	CleanRaise: Street, Sidewalk
245	Maple-Norway	13,12,11		2	CleanRaise: Street, Sidewalk
256	Maple-Norway	17		2	CleanRaise: Street, SidewalkReduce: Overhead lines
261	Ginkgo	14		2	CleanRaise: Street, SidewalkReduce: Branch weight, Building
270	Pear-Callery	4		2	Raise: SidewalkStructural
274	Oak-Pin	22		2	CleanRaise: Street, Building
284	Maple-Norway	9		2	Raise: Street, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
288	Dogwood- Flowering	10		2	• Clean
290	Maple-Norway	18		2	CleanRaise: Street, SidewalkReduce: Branch weight
291	Maple-Norway	10		2	• Clean
293	Maple-Norway	15		2	CleanRaise: Sidewalk
295	Maple-Norway	17		2	CleanRaise: Street, Sidewalk
296	Maple-Norway	13		2	CleanRaise: Sidewalk
309	Crabapple	8,7,5		2	CleanStructural
369	Maple-Red	12		2	CleanRaise: Street, SidewalkStructural
370	Maple-Red	14		2	CleanRaise: Street, SidewalkReduce: Branch weight, Sign blockageStructural
374	Pine-Austrian	22		2	CleanReduce: Branch weight
388	Dogwood- Flowering	11		2	• Clean
394	Pine-Austrian	20		2	• Clean
397	Ash-Green	24		2	CleanReduce: Branch weight, Building
418	Oak-Northern Red	21		2	CleanReduce: Branch weight, Building
451	Maple-Sugar	9		2	CleanRaise: SidewalkStructural
452	Maple-Red	6		2	Raise: SidewalkStructural
460	Maple-Red	13		2	Raise: Parking, SidewalkStructural
466	Oak-Northern Red	12		2	Structural
468	Maple-Sugar	13		2	Raise: SidewalkStructural
470	Maple-Red	13		2	Raise: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
472	Maple-Red	12		2	Raise: Sidewalk Structural
473	Maple-Sugar	15		2	Raise: Sidewalk Structural
481	Maple-Sugar	12		2	Clean Structural
483	Maple-Sugar	13		2	Raise: DrivewayStructural
485	Maple-Red	14		2	Reduce: ParkingStructural
487	Maple-Red	13		2	Structural
493	Maple-Sugar	7		2	Structural
496	Maple-Sugar	13		2	Structural
497	Maple-Sugar	13		2	Structural
499	Maple-Sugar	9		2	CleanStructural
502	Maple-Sugar	8		2	Raise: DrivewayStructural
510	Maple-Red	4		2	Structural
511	Maple-Sugar	10		2	Structural
513	Maple-Red	10		2	Structural
514	Maple-Red	5		2	Structural
515	Maple-Sugar	9		2	Structural
516	Maple-Sugar	14		2	Structural
520	Maple-Sugar	15		2	Raise: ParkingStructural
521	Maple-Sugar	12		2	Structural
527	Maple-Red	10		2	Raise: ParkingStructural
528	Maple-Red	11		2	Structural
536	Maple-Sugar	17		2	Structural
538	Maple-Sugar	13		2	Structural
539	Maple-Sugar	10		2	Structural
540	Maple-Sugar	9		2	Structural
542	Maple-Sugar	17		2	Structural
544	Maple-Red	15		2	Structural
548	Maple-Red	12		2	CleanStructural
549	Maple-Sugar	11		2	Clean Structural
601	Maple-Norway	23		2	Reduce: Overhead lines, Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
604	Elm-American	42		2	CleanReduce: Overhead lines, Branch weight
611	Maple-Red	34		2	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Overhead lines
614	Ash-White	35		2	CleanReduce: Branch weight, Overhead lines
615	Ash-White	30		2	CleanReduce: Overhead lines, Branch weight
616	Ash-White	32		2	CleanReduce: Overhead lines, Branch weight
617	Ash-White	21	:	2	CleanReduce: Overhead lines, Branch weight
619	Maple-Norway	32		2	 Clean Raise: Street Reduce: Overhead lines, Branch weight Thin Structural
622	Cherry-Sargent	21		2	 Clean Raise: Street Reduce: Branch weight, Overhead lines
624	Maple-Norway	30		2	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Overhead lines
639	Honeylocust- Thornless Common	17		2	CleanRaise: Street, SidewalkReduce: Building, Branch weight
644	Maple-Norway	31		2	CleanRaise: Sidewalk
655	Planetree-London	22		2	Clean Reduce: Branch weight, Parking
669	Maple-Norway	19		2	CleanReduce: Branch weight, Overhead lines

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
681	Maple-Silver	28		2	 Clean Reduce: Overhead lines, Branch weight Structural
682	Maple-Norway	20		2	CleanReduce: Overhead lines, StreetStructural
683	Tree of Heaven (5)	14		2	CleanReduce: Overhead lines, StreetStructural
685	Maple-Red	16,15		2	 Clean Reduce: Overhead lines, Branch weight Structural
686	Planetree-London	26		2	CleanReduce: Street, Branch weightStructural
687	Maple-Norway	31		2	 Clean Reduce: Overhead lines, Branch weight Structural
696	Oak-Northern Red	30		2	 Clean Reduce: Branch weight, Overhead lines Structural
803	Pear-Callery	10		2	Clean Structural
815	Catalpa-Northern	19		2	CleanReduce: Branch weight, SidewalkStructural
819	Maple-Red	20		2	 Clean Raise: Sidewalk, Sign blockage Reduce: Branch weight, Overhead lines
852	Willow	40		2	CleanReduce: Branch weightThinStructural
853	Willow	51		2	CleanReduce: Branch weightThinStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
856	Willow	40		2	CleanReduce: Branch weightThinStructural
862	Willow	54		2	CleanReduce: Branch weightThinStructural
871	Pear-Callery	14		2	Reduce: Branch weight, Overhead linesStructural
872	Pear-Callery	13		2	CleanStructural
873	Pear-Callery	11		2	CleanReduce: Branch weightStructural
888	Maple-Norway	20		2	CleanRaise: Street, Sidewalk
924	Pear-Callery	9		2	 Clean Raise: Sidewalk Reduce: Branch weight, Building Structural
925	Oak-Pin	11		2	CleanRaise: Street, SidewalkStructural
977	Maple-Norway	13		2	CleanReduce: Overhead lines, StreetStructural
994	Maple-Norway	19		2	CleanReduce: Overhead lines, Branch weight
995	Ash-Green	31		2	CleanRaise: StreetReduce: Overhead lines, Branch weight
997	Walnut-Black	33		2	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight
998	Ash-Green	19		2	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1079	Maple-Red	17,14,14,11		2	Clean Structural
1153	Willow	47		2	CleanReduce: PathStructural
1156	Willow	45		2	Clean Structural
1211	Zelkova-Japanese	16		2	Reduce: Street, Branch weightStructural
1222	Pear-Callery	14		2	CleanReduce: Street
1225	Pear-Callery	10		2	Clean Structural
1233	Pear-Callery	10		2	CleanReduce: BuildingStructural
1236	Maple-Norway	14		2	CleanReduce: BuildingStructural
1261	Oak-Pin	21		2	CleanRaise: Sign blockage, SidewalkReduce: Street
1263	Maple-Norway	16		2	CleanReduce: Branch weight, Street
1264	Maple-Norway	17		2	• Clean
1270	Locust-Black	16		2	CleanReduce: Branch weight, Street
1271	Ash-Green	7		2	CleanReduce: Branch weight, Street
1283	Ash-White	36		2	CleanReduce: Overhead lines, Branch weight
1287	Catalpa-Northern	25		2	CleanReduce: Overhead lines, Sign blockage
1292	Catalpa-Northern	13		2	CleanReduce: Branch weight
1296	Catalpa-Northern	18		2	CleanReduce: Branch weight, Street
1297	Catalpa-Northern	15,12		2	CleanReduce: Branch weight, Street
1332	Maple-Silver	17		2	CleanReduce: Branch weight, Street

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1358	Poplar-Eastern	20,16		2	CleanReduce: Branch weight, Street
1375	Maple-Red	27,10		2	 Clean Raise: Parking, Sidewalk Reduce: Street, Branch weight Structural
1386	Pear-Callery	16		2	Raise: StreetReduce: Branch weight, LightingStructural
1387	Maple-Red	21		2	Reduce: Branch weight, StreetThinStructural
1394	Locust-Black	32		2	CleanRaise: SidewalkReduce: Branch weight, StreetStructural
1406	Maple-Norway	14		2	CleanRaise: SidewalkStructural
1416	Maple-Silver	29		2	Reduce: Branch weight, Street
1419	Oak-Northern Red	16		2	CleanReduce: Branch weight, Sidewalk
1422	Maple-Norway	12,9		2	CleanReduce: Street, Sidewalk
1424	Pear-Callery	17		2	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight
1433	Maple-Norway	26		2	 Clean Raise: Street, Walking path Reduce: Overhead lines, Branch weight Structural
1434	Honeylocust- Thornless Common	18		2	CleanReduce: Street, Branch weightStructural
1435	Honeylocust- Thornless Common	15		2	CleanReduce: Branch weight, StreetStructural
1436	Honeylocust- Thornless Common	16		2	CleanReduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1437	Honeylocust- Thornless Common	15		2	CleanReduce: Branch weight, Sign blockageStructural
1438	Honeylocust- Thornless Common	15		2	 Clean Reduce: Overhead lines, Branch weight Structural
1439	Honeylocust- Thornless Common	14,9		2	CleanReduce: Sign blockage, Branch weight
1444	Maple-Norway	14,12		2	CleanReduce: Overhead lines, StreetStructural
1445	Maple-Red	37		2	CleanReduce: Branch weight, StreetStructural
1449	Maple-Norway	7		2	CleanRaise: StreetStructural
1451	Maple-Silver	36		2	 Clean Reduce: Overhead lines, Branch weight Structural
1458	Tree of Heaven	19,18		2	 Clean Reduce: Overhead lines, Branch weight Structural
1466	Oak-Pin	37		2	Clean Reduce: Branch weight, Street
1485	Oak-Northern Red	21		2	CleanReduce: Branch weight, Street
1493	Oak-Northern Red	30		2	CleanReduce: Overhead lines, Branch weight
1495	Oak-Northern Red	29		2	CleanReduce: Overhead lines, Branch weight
1527	Maple-Red	22		2	CleanReduce: Branch weight, Sidewalk
1528	Maple-Red	25		2	CleanReduce: Branch weight, SidewalkStructural
1529	Maple-Red	23		2	CleanReduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1535	Maple-Red	26		2	CleanReduce: Branch weightStructural
1559	Maple-Red	17		2	CleanRaise: Street, SidewalkReduce: Branch weightStructural
1563	Maple-Red	28		2	CleanRaise: SidewalkReduce: Branch weight, StreetStructural
1567	Maple-Red	32		2	CleanReduce: Overhead lines, Branch weightStructural
1568	Maple-Red	31		2	 Clean Reduce: Overhead lines, Branch weight Structural
1590	Maple-Silver	49		2	 Clean Raise: Street Reduce: Branch weight, Overhead lines Structural
1591	Maple-Silver	23		2	CleanReduce: Branch weight, Overhead linesStructural
1598	Cherry-Sargent	24		2	CleanReduce: Branch weight, Overhead linesStructural
1599	Maple-Silver	31		2	CleanReduce: Branch weight, StreetStructural
1600	Maple-Silver	32		2	CleanReduce: Branch weight, StreetStructural
1614	Maple-Red	27		2	 Clean Reduce: Overhead lines, Branch weight Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1634	Maple-Norway	22,22		2	CleanReduce: Branch weight, StreetStructural
1637	Maple-Norway	31		2	CleanReduce: Branch weight, StreetStructural
1640	Maple-Red	26		2	CleanReduce: Branch weight, StreetStructural
1641	Maple-Red	20		2	CleanReduce: Branch weight, StreetStructural
1646	Maple-Sugar	19		2	CleanReduce: Branch weight, StreetStructural
1650	Maple-Sugar	26		2	CleanReduce: Branch weight, StreetStructural
1661	Oak-Pin	27		2	CleanReduce: Branch weight, Overhead lines
1662	Maple-Norway	31		2	Clean Reduce: Branch weight, Overhead lines
1666	Maple-Norway	13		2	CleanReduce: Branch weight, SidewalkStructural
1671	Maple-Norway	14		2	CleanReduce: Branch weight, SidewalkStructural
1683	Maple-Norway (2)	10		2	CleanRaise: StreetStructural
1688	Maple-Sugar	26		2	CleanReduce: Branch weight, StreetStructural
1689	Maple-Sugar	32		2	CleanReduce: Branch weight, StreetStructural
1692	Maple-Silver	53		2	Reduce: Overhead lines, Branch weightStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1694	Maple-Norway	24		2	 Clean Reduce: Overhead lines, Branch weight Structural
1695	Maple-Norway	23		2	CleanReduce: Overhead lines, Branch weightStructural
1700	Maple-Norway	23		2	 Clean Reduce: Overhead lines, Branch weight Structural
1703	Catalpa-Northern	17		2	 Clean Raise: Street Reduce: Branch weight, Overhead lines Structural
1704	Linden	14		2	CleanRaise: Street, SidewalkReduce: Branch weightStructural
1726	Maple-Japanese	20,16,13		2	CleanReduce: Branch weight, StreetStructural
1728	Spruce-Norway	26		2	CleanReduce: Street
1732	Maple-Norway (2)	12,8		2	 Clean Reduce: Branch weight, Overhead lines Structural
1736	Locust-Black	24		2	CleanReduce: Branch weight, Overhead linesStructural
1737	Maple-Norway	18		2	CleanReduce: Branch weight, StreetStructural
1745	Maple-Norway	14,12		2	 Clean Reduce: Overhead lines, Branch weight Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1747	Maple-Norway	15,13		2	 Clean Reduce: Branch weight, Overhead lines Structural
1752	Maple-Norway	17		2	CleanReduce: Branch weight, Overhead linesStructural
1753	Maple-Norway	14,12		2	CleanReduce: Branch weight, StreetStructural
1762	Oak-Northern Red	24		2	CleanRaise: Street, SidewalkStructural
1766	Pine-Eastern White	23		2	• Clean
1769	Oak-Northern Red	16		2	CleanRaise: Street, SidewalkStructural
1772	Oak-English	14		2	CleanStructural
1773	Oak-English	19		2	CleanStructural
1774	Oak-English	16		2	CleanStructural
1778	Oak-English	12		2	CleanRaise: Street, SidewalkStructural
1780	Oak-English	11		2	CleanStructural
1781	Oak-English	13		2	CleanRaise: Street, SidewalkStructural
1803	Lilac-Japanese Tree	4,4,3		2	• Raise: Path
1820	Tuliptree	32		2	Reduce: Branch weightStructural
1835	Oak-Northern Red	47		2	Structural
1836	Tuliptree	26,26		2	Structural
1837	Oak-Northern Red	26		2	Structural
1838	Oak-Northern Red	34		2	Structural
1842	Tuliptree	34		2	Structural
1846	Oak-Northern Red	37		2	Structural
1853	Oak-Northern Red	21		2	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1855	Oak-Northern Red	34		2	Clean Structural
1858	Oak-Northern Red	42		2	Structural
1879	Poplar-Eastern	16		2	Clean Structural
1908	Maple-Red	26		2	CleanReduce: Overhead linesStructural
1914	Maple-Sugar	45		2	Clean Structural
1960	Pear-Callery	12		2	Raise: SidewalkReduce: Maintain shapeStructural
1964	Hickory-Shagbark	15		2	CleanStructural
1979	Maple-Sugar	27		2	Clean Structural
1980	Maple-Sugar	41		2	CleanStructural
1983	Maple-Sugar	28		2	CleanStructural
1989	Cedar-White (10)	6		2	Reduce: Overhead lines, StreetStructural
1997	Ash-Green	17		2	Clean Structural
2002	Oak-Northern Red	29		2	CleanRaise: StreetStructural
2004	Oak-Northern Red	23		2	CleanRaise: StreetStructural
2005	Oak-Northern Red	24		2	CleanReduce: Branch weightStructural
2008	Oak-Pin	23		2	CleanRaise: StreetThinStructural
2029	Tree of Heaven (2)	13		2	CleanReduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2030	Tree of Heaven	16		2	CleanReduce: Branch weight, StreetStructural
2031	Locust-Black	12,11		2	CleanReduce: Branch weight, StreetStructural
2033	Oak-English	23		2	CleanReduce: Branch weight, StreetStructural
2034	Oak-English	30		2	CleanReduce: Branch weight, StreetStructural
2037	Oak-English	21		2	 Clean Raise: Street Reduce: Branch weight, Lighting Structural
2052	Maple-Norway	22		2	CleanReduce: Branch weight, StreetStructural
2054	Planetree-London	17,14,13		2	CleanReduce: Branch weight, StreetStructural
2075	Honeylocust- Thornless Common	16		2	CleanReduce: Branch weight, StreetStructural
2076	Honeylocust- Thornless Common	18		2	CleanReduce: Branch weight, StreetStructural
2077	Pine-Eastern White	19		2	CleanReduce: Branch weight, StreetStructural
2087	Pine-Eastern White	12		2	CleanStructural
2088	Pine-Austrian	20		2	CleanReduce: Branch weight, StreetStructural
2096	Poplar-Eastern	23		2	CleanStructural
2125	Pear-Callery	10,9		2	Reduce: Sidewalk, Branch weightStructural
2129	Honeylocust- Thornless Common	17		2	CleanStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2130	Honeylocust- Thornless Common	13		2	Clean Structural
2131	Honeylocust- Thornless Common	13		2	CleanStructural
2133	Honeylocust- Thornless Common	12		2	CleanStructural
2134	Honeylocust- Thornless Common	12		2	CleanStructural
2136	Honeylocust- Thornless Common	15		2	CleanStructural
2137	Honeylocust- Thornless Common	14		2	CleanStructural
2142	Honeylocust- Thornless Common	15		2	CleanReduce: Overhead lines, StreetStructural
2143	Honeylocust- Thornless Common	16		2	CleanReduce: Overhead lines, StreetStructural
2146	Honeylocust- Thornless Common	13		2	CleanReduce: Overhead lines, StreetStructural
2147	Mulberry-White	15		2	CleanReduce: Overhead lines, SidewalkStructural
2148	Maple-Norway (3)	6		2	CleanReduce: SidewalkStructural
2155	Honeylocust- Thornless Common	17		2	Reduce: Branch weightStructural
2157	Honeylocust- Thornless Common	19		2	CleanReduce: Branch weightStructural
2166	Pear-Callery	21		2	Reduce: Branch weight, Overhead linesStructural
2167	Pear-Callery	11		2	Reduce: Branch weight, StreetStructural
2168	Pear-Callery	13		2	Reduce: Branch weight, StreetStructural
2170	Pear-Callery	13		2	Reduce: Overhead lines, Branch weightStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2177	Hawthorn	14		2	Raise: SidewalkStructural
2191	Ash-Green	14		2	 Clean Reduce: Branch weight, Overhead lines Structural
2192	Honeylocust- Thornless Common	14		2	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Overhead lines Structural
2197	Oak-Northern Red	17		2	CleanRaise: SidewalkStructural
2199	Maple-Sugar	12		2	CleanRaise: Sidewalk, ParkingStructural
2203	Honeylocust- Thornless Common	17		2	CleanStructural
2204	Honeylocust- Thornless Common	17		2	CleanReduce: Branch weight, SidewalkStructural
2205	Honeylocust- Thornless Common	15		2	Clean Structural
2207	Honeylocust- Thornless Common	16		2	CleanRaise: SidewalkStructural
2208	Honeylocust- Thornless Common	16		2	CleanReduce: Branch weight, SidewalkStructural
2220	Oak-Pin	20		2	CleanReduce: Branch weight, StreetStructural
2221	Crabapple	12,11,10		2	CleanStructural
2224	Planetree-London	21		2	Clean Structural
2227	Crabapple	14,12,10,9		2	CleanReduce: Branch weight, StreetStructural
2231	Planetree-London	15		2	CleanReduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2232	Planetree-London	16		2	Clean Structural
2234	Maple-Norway	9		2	CleanRaise: Street, SidewalkStructural
2253	Redcedar-Eastern	19		2	CleanReduce: Parking, Branch weightStructural
2267	Maple-Norway	15		2	CleanRaise: Street, SidewalkStructural
2272	Elm-American	15,10		2	Raise: SidewalkReduce: Branch weight, StreetStructural
2280	Oak-Pin	17		2	CleanReduce: Branch weight, SidewalkStructural
2283	Crabapple	18		2	CleanReduce: Branch weight, SidewalkStructural
2290	Pine-Eastern White	23		2	CleanReduce: Branch weight, SidewalkStructural
2294	Pine-Eastern White	22		2	CleanReduce: Branch weightStructural
2295	Pear-Callery	22		2	Reduce: Branch weight, StreetStructural
2302	Ash-Green	12,5		2	CleanStructural
2315	Oak-Northern Red	28		2	CleanStructural
2321	Maple-Norway	15		2	CleanReduce: Overhead lines, SidewalkStructural
2328	Pine-Eastern White	15		2	CleanReduce: Branch weight, Play areaStructural
2333	Maple-Norway	24		2	CleanReduce: Branch weight, Play areaStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2339	Maple-Norway	10,10		2	CleanReduce: Branch weight, StreetStructural
2341	Poplar-Eastern	22		2	CleanReduce: Branch weight, StreetStructural
2344	Maple-Norway	30,15		2	CleanRaise: SidewalkReduce: Branch weight, StreetStructural
2345	Yew-English	16,15,8		2	• Clean
2346	Maple-Norway	23		2	CleanReduce: Branch weight, StreetStructural
2349	Cherry-Sargent (3)	8		2	CleanReduce: Branch weight, StreetStructural
2365	Maple-Sugar	28,13		2	 Clean Raise: Street Reduce: Branch weight, Overhead lines Structural
2369	Hickory-Shagbark	18		2	CleanStructural
2371	Maple-Sycamore	17		2	CleanRaise: Street, SidewalkStructural
2374	Maple-Norway	13,13		2	CleanReduce: Branch weight, StreetStructural
2375	Walnut-Black	21		2	CleanReduce: Branch weight, StreetStructural
2390	Willow	27		2	CleanReduce: Branch weight, PathStructural
2391	Willow	22		2	CleanReduce: Branch weight, PathStructural
2392	Willow	23		2	CleanReduce: Branch weight, PathStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2393	Willow	23		2	CleanReduce: Branch weight, PathStructural
2407	Mulberry-White	10,9,7		2	CleanRaise: Sign blockageReduce: Branch weight, StreetStructural
2410	Sweetgum	14		2	CleanStructural
2420	Planetree-London	13		2	CleanStructural
2425	Maple-Norway	12		2	CleanReduce: Branch weight, StreetStructural
2426	Maple-Norway (4)	10		2	CleanReduce: Branch weight, StreetStructural
2430	Maple-Norway	16		2	CleanRaise: SidewalkReduce: Branch weight, StreetStructural
2	Maple-Norway	16,16		3	CleanReduce: Overhead lines
8	Cherry	13		3	Raise: SidewalkStructural
13	Maple-Norway	5		3	Structural
33	Pear-Callery	3		3	Raise: Parking, SidewalkStructural
40	Pear-Callery	5		3	Raise: Parking, SidewalkStructural
53	Pear-Callery	2		3	Structural
71	Pear-Callery	3		3	Structural
89	Honeylocust- Thornless Common	14		3	• Clean
97	Pear-Callery	5		3	Raise: SidewalkStructural
100	Pear-Callery	4		3	Structural
107	Pear-Callery	12		3	CleanRaise: Sidewalk
109	Pear-Callery	13		3	• Clean
125	Crabapple	6		3	CleanRaise: Parking, PathStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
137	Crabapple	7		3	Raise: SidewalkStructural
145	Dogwood-Kousa	7,6		3	• Clean
157	Oak-English	39		3	Reduce: Branch weight
159	Pine-Eastern White	24		3	CleanReduce: Branch weightStructural
160	Pine-Eastern White	28		3	CleanReduce: Branch weight
161	Crabapple	7		3	CleanReduce: Branch weightStructural
176	Ash-Green	11,9		3	CleanReduce: Branch weight
182	Maple-Norway	11		3	CleanRaise: Street
193	Zelkova-Japanese	13		3	Reduce: Overhead lines, BuildingStructural
194	Zelkova-Japanese	9		3	Reduce: Overhead lines, BuildingStructural
195	Zelkova-Japanese	13		3	Reduce: Overhead lines, BuildingStructural
196	Zelkova-Japanese	15		3	Reduce: Overhead lines, BuildingStructural
198	Cherry	16		3	Raise: SidewalkStructural
205	Oak-Northern Red	15		3	CleanReduce: Overhead lines
209	Oak-Pin	21		3	Clean Reduce: Building
214	Oak-Pin	28		3	CleanReduce: Branch weight, Overhead lines
215	Cherry	8		3	Reduce: BuildingStructural
253	Linden	14		3	Raise: Street, SidewalkReduce: Branch weight, Overhead linesStructural
254	Linden	13		3	Raise: Street, SidewalkReduce: Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
255	Linden	13		3	Raise: Street, SidewalkReduce: Overhead linesStructural
265	Ash-Green	14		3	CleanRaise: Street, SidewalkStructural
272	Pear-Callery	11		3	CleanRaise: Street, SidewalkReduce: Sign blockage
279	Zelkova-Japanese	10		3	• Clean
281	Zelkova-Japanese	11		3	Reduce: BuildingStructural
283	Zelkova-Japanese	14		3	CleanReduce: BuildingStructural
289	Maple-Norway	10		3	• Clean
302	Maple-Red	13		3	Reduce: Overhead linesStructural
304	Maple-Red	12		3	Structural
305	Maple-Red	12		3	Structural
318	Zelkova-Japanese	12		3	Reduce: LightingStructural
324	Pear-Callery	9		3	CleanStructural
349	Maple-Red	12		3	Reduce: Branch weightStructural
351	Maple-Red	11		3	Reduce: Branch weightStructural
352	Maple-Red	11		3	Reduce: Branch weightStructural
353	Maple-Red	11		3	Reduce: Branch weightStructural
359	Crabapple	11,7		3	Clean Structural
363	Pear-Callery	14		3	Reduce: Building, Branch weightStructural
368	Pear-Callery	8		3	Clean Structural
372	Oak-English	34		3	CleanReduce: Overhead lines
389	Dogwood- Flowering	7,5,5		3	• Clean

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
412	Pear-Callery	13		3	Reduce: Overhead lines, SidewalkStructural
413	Pear-Callery	12		3	Raise: ParkingReduce: Overhead lines, SidewalkStructural
414	Pear-Callery	13		3	Raise: ParkingReduce: Overhead lines, SidewalkStructural
415	Pear-Callery	13		3	 Raise: Path, Sidewalk Reduce: Overhead lines, Branch weight Structural
416	Pear-Callery	8		3	Raise: ParkingStructural
446	Pear-Callery	4		3	CleanStructural
486	Spruce-Colorado Blue	11		3	CleanStructural
491	Maple-Red	13		3	Structural
498	Maple-Sugar	9		3	Structural
509	Maple-Sugar	9		3	Structural
519	Maple-Sugar	10		3	Structural
522	Spruce-Norway	12		3	CleanStructural
523	Maple-Sugar	13		3	CleanStructural
551	Maple-Red	17		3	Structural
552	Maple-Sugar	10		3	CleanStructural
600	Maple-Sugar	17		3	Structural
602	Catalpa-Northern	32		3	• Reduce: Branch weight, Overhead lines
603	Walnut-Black	20		3	Reduce: Street, Branch weightStructural
612	Maple-Norway	20		3	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight
620	Dogwood- Flowering	10		3	 Clean Reduce: Overhead lines, Branch weight Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
621	Dogwood- Flowering	11		3	 Clean Reduce: Branch weight, Overhead lines Structural
623	Maple-Norway	26		3	CleanRaise: Street, SidewalkReduce: Branch weight
625	Ash-White	29		3	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight
652	Planetree-London	25		3	CleanReduce: Branch weight, Street
653	Planetree-London	22		3	CleanReduce: Branch weight, Sign blockage
654	Planetree-London	23		3	CleanReduce: Branch weight, Street
656	Planetree-London	25		3	CleanReduce: Branch weight, Street
670	Maple-Norway	21		3	CleanReduce: Branch weight, Street
671	Maple-Norway	14		3	CleanRaise: Street, SidewalkStructural
673	Maple-Norway	18,13,12		3	CleanReduce: Branch weight, Street
676	Linden	12		3	Raise: Street, SidewalkReduce: Overhead linesStructural
679	Ash-Green	17		3	CleanReduce: Branch weight, Overhead linesStructural
688	Maple-Norway	29		3	CleanReduce: Branch weight, StreetStructural
699	Maple-Norway	25		3	CleanReduce: Branch weight, StreetStructural
704	Maple-Sugar	11		3	Structural
726	Maple-Sugar	12		3	Reduce: Pole/postStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
801	Pear-Callery	6		3	Clean Structural
808	Linden	10		3	Reduce: Branch weight, Sidewalk Structural
810	Linden	12		3	Reduce: Sidewalk, Branch weightStructural
811	Linden	12		3	Reduce: Branch weight, SidewalkStructural
813	Linden	12		3	Raise: SidewalkStructural
833	Linden	12		3	Raise: Street, Sign blockageStructural
843	Plum-Purple Leaf	10		3	Raise: Parking, Sign blockageStructural
847	Oak-Northern Red	6		3	Raise: Parking, Sign blockageStructural
851	Willow	12		3	CleanReduce: Branch weightThinStructural
855	Willow	11		3	CleanReduce: Branch weightThinStructural
857	Spruce-Norway	20		3	• Clean
858	Oak-Pin	15		3	CleanReduce: Branch weight, Path
861	Pine-Austrian	19		3	• Clean
865	Cherry	12		3	CleanStructural
870	Pear-Callery	16		3	CleanReduce: Branch weight, LightingStructural
875	Pear-Callery	12		3	CleanRaise: Street, Sign blockageReduce: BuildingStructural
881	Maple-Silver	21		3	• Clean
894	Pear-Callery	16		3	Reduce: Branch weight, SidewalkStructural
912	Pear-Callery	9		3	Reduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
913	Pear-Callery	8		3	Raise: SidewalkStructural
914	Oak-Pin	11		3	Clean Structural
915	Oak-Pin	12		3	CleanRaise: Sign blockage, SidewalkStructural
916	Oak-Pin	9		3	CleanStructural
917	Oak-Pin	10		3	CleanReduce: Parking, Branch weightStructural
918	Oak-Pin	14		3	CleanReduce: Parking, Branch weightStructural
919	Oak-Pin	12		3	CleanRaise: ParkingStructural
920	Oak-Pin	11		3	CleanRaise: Parking, Sign blockageStructural
921	Pear-Callery	10		3	Raise: Street, SidewalkStructural
922	Pear-Callery	8		3	CleanRaise: Street, SidewalkStructural
923	Pear-Callery	8		3	Reduce: Branch weight, SidewalkStructural
943	Poplar-Eastern	35		3	CleanReduce: Branch weight, Overhead lines
980	Pear-Callery	10		3	Raise: SidewalkStructural
984	Pear-Callery	11		3	Raise: SidewalkStructural
985	Pear-Callery	12		3	Raise: SidewalkStructural
987	Pear-Callery	12		3	 Raise: Sidewalk Reduce: Overhead lines, Branch weight Structural
989	Pear-Callery	12		3	Raise: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1097	Oak-Northern Red	14		3	Structural
1100	Oak-Northern Red	27		3	Structural
1118	Oak-White	32		3	Reduce: Building Structural
1119	Oak-White	18		3	Reduce: Building Structural
1120	Oak-White	19		3	Reduce: PathStructural
1121	Oak-White	25		3	Structural
1122	Oak-White	19		3	Structural
1123	Oak-White	21		3	Structural
1124	Oak-White	20		3	Structural
1125	Oak-White	20		3	Structural
1126	Oak-Northern Red	27		3	Structural
1127	Oak-Northern Red	28		3	Structural
1128	Oak-White	18		3	Structural
1129	Oak-White	17,16		3	Structural
1130	Beech-American	11		3	Structural
1131	Birch-Sweet	20		3	Structural
1132	Beech-American	18		3	Reduce: Poor branch structureStructural
1133	Beech-American	20		3	Structural
1134	Oak-White	25		3	Structural
1138	Beech-American	22		3	Structural
1139	Oak-Northern Red	36		3	Structural
1140	Beech-American	19		3	Structural
1144	Maple-Norway	16		3	Structural
1145	Maple-Norway	16		3	Structural
1146	Maple-Norway	15		3	Structural
1147	Maple-Norway	14		3	Structural
1148	Maple-Norway	14		3	Structural
1159	Maple-Red	12		3	Structural
1163	Maple-Red	14		3	Structural
1164	Willow	40		3	Structural
1165	Willow	38		3	Structural
1167	Pine-Eastern White	28		3	Structural
1168	Pine-Eastern White	31		3	Structural
1169	Maple-Sugar	19		3	Structural
1181	Pine-Eastern White	29		3	CleanReduce: Pole/postStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1188	Maple-Red	26		3	Reduce: Maintain shapeStructural
1201	Maple-Sugar	24		3	Raise: StreetReduce: Branch weight, Overhead lines
1202	Maple-Sugar	29		3	CleanRaise: StreetReduce: Overhead lines, Branch weight
1206	Maple-Norway	19,17		3	 Clean Raise: Street Reduce: Branch weight, Overhead lines
1210	Pear-Callery	6		3	CleanReduce: Street, Branch weight
1213	Elm-American	17		3	CleanRaise: StreetReduce: Branch weight
1214	Pear-Callery	18		3	Reduce: Branch weight, StreetStructural
1215	Pear-Callery	18		3	CleanReduce: Street, Branch weight
1223	Pear-Callery	10		3	CleanReduce: Street
1226	Pear-Callery	14		3	CleanReduce: StreetStructural
1227	Pear-Callery	15		3	CleanReduce: Street, ParkingStructural
1228	Pear-Callery	17		3	CleanReduce: Street, Branch weightStructural
1248	Pear-Callery	13		3	CleanReduce: Street, Sidewalk
1249	Pear-Callery	11		3	CleanReduce: Overhead lines, Sidewalk
1251	Pear-Callery	15		3	Raise: Street, SidewalkStructural
1252	Pear-Callery	12		3	CleanRaise: Street, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1254	Pear-Callery	17		3	CleanReduce: Overhead lines, StreetStructural
1255	Pear-Callery	16		3	Reduce: Branch weight, SidewalkStructural
1256	Pear-Callery	16		3	Reduce: Branch weight, SidewalkStructural
1257	Pear-Callery	13		3	CleanReduce: Overhead lines, SidewalkStructural
1265	Maple-Norway	15		3	Reduce: Branch weight, Street
1268	Maple-Norway	12		3	CleanReduce: Branch weight, Street
1269	Maple-Norway	14		3	CleanReduce: Branch weight, Street
1274	Maple-Norway	11		3	CleanReduce: Branch weight, Street
1276	Maple-Norway	11		3	CleanReduce: Branch weight, Street
1279	Maple-Norway	23		3	CleanReduce: Overhead lines, Street
1285	Maple-Norway	18		3	Reduce: Branch weight, Overhead lines
1293	Catalpa-Northern	17		3	CleanReduce: Branch weight, Street
1294	Catalpa-Northern	13		3	CleanReduce: Branch weight, Street
1300	Cherry-Sargent	9		3	• Clean
1303	Maple-Norway	10		3	Raise: StreetStructural
1317	Maple-Norway	20		3	Raise: StreetReduce: Overhead lines, Branch weight
1323	Maple-Norway	31		3	CleanReduce: Overhead lines, Street
1330	Maple-Norway	15		3	CleanReduce: Lighting, StreetStructural
1351	Poplar-Eastern	23		3	CleanReduce: Street, Branch weight
1352	Maple-Norway	13,10		3	CleanReduce: Branch weight, Street

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1353	Poplar-Eastern	20,13		3	CleanReduce: Branch weight, StreetStructural
1355	Poplar-Eastern	19		3	CleanReduce: Branch weight, Street
1356	Poplar-Eastern	15		3	CleanReduce: Branch weight, StreetStructural
1357	Maple-Norway	13		3	CleanReduce: Branch weight, StreetStructural
1359	Maple-Norway	13		3	CleanStructural
1360	Maple-Norway	13		3	CleanReduce: Branch weight, StreetStructural
1376	Maple-Red	16		3	Reduce: Sign blockage, StreetStructural
1379	Maple-Red	17		3	CleanReduce: Branch weight, StreetStructural
1381	Maple-Red	20		3	Reduce: Branch weight, StreetStructural
1395	Maple-Norway	12		3	Clean Structural
1396	Maple-Norway	12		3	Clean Structural
1397	Maple-Norway	10		3	Clean Structural
1398	Maple-Norway	10		3	Clean Structural
1399	Maple-Norway	11		3	CleanRaise: SidewalkStructural
1400	Maple-Norway	10		3	CleanRaise: SidewalkStructural
1401	Maple-Norway	11		3	CleanRaise: SidewalkStructural
1402	Maple-Norway	12		3	CleanRaise: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1404	Maple-Norway	11		3	CleanRaise: SidewalkStructural
1405	Maple-Norway	13		3	CleanRaise: SidewalkStructural
1413	Maple-Norway	15,15		3	Reduce: Overhead lines, StreetStructural
1418	Maple-Norway	12		3	CleanReduce: Street, SidewalkStructural
1423	Pear-Callery	17		3	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight
1426	Poplar-Eastern	20		3	CleanRaise: Street, Sidewalk
1442	Honeylocust- Thornless Common	12		3	CleanReduce: StreetStructural
1443	Honeylocust- Thornless Common	9		3	CleanReduce: Street, Overhead linesStructural
1446	Maple-Norway	14		3	CleanStructural
1452	Maple-Silver	24		3	CleanReduce: Branch weight, Overhead linesStructural
1453	Maple-Silver	35		3	 Clean Reduce: Branch weight, Overhead lines Structural
1454	Maple-Silver	27		3	CleanReduce: Branch weight, Overhead linesStructural
1455	Maple-Norway	17		3	Reduce: Branch weight, Overhead linesStructural
1456	Maple-Norway	25		3	 Reduce: Branch weight, Overhead lines Thin Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1465	Maple-Norway	32		3	CleanReduce: Branch weight, Street
1467	Oak-Northern Red	15		3	CleanReduce: Branch weight, Street
1468	Elm-American	14		3	CleanReduce: Branch weight, Street
1469	Tree of Heaven	18		3	CleanReduce: Branch weight, StreetStructural
1470	Maple-Norway	8,8,7,6		3	CleanReduce: Branch weight, StreetStructural
1480	Oak-Swamp White	15		3	CleanRaise: StreetStructural
1481	Maple-Norway	15		3	CleanReduce: Branch weight, Street
1501	Oak-Northern Red	35		3	CleanReduce: Branch weight, Overhead lines
1504	Maple-Sugar	26		3	Structural
1521	Mulberry	13		3	Reduce: Overhead linesStructural
1523	Pine-Eastern White	6		3	Reduce: Overhead lines
1526	Maple-Red	24		3	Reduce: Branch weight, Sidewalk
1530	Maple-Red	12		3	CleanReduce: Branch weight, SidewalkStructural
1531	Maple-Red	10		3	Raise: Street, SidewalkStructural
1538	Maple-Red	22		3	CleanReduce: Branch weight, StreetStructural
1541	Maple-Red	15		3	CleanRaise: Street, SidewalkStructural
1554	Maple-Red	10		3	Raise: SidewalkStructural
1557	Maple-Red	18		3	CleanReduce: Branch weight, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1565	Maple-Red	14,12		3	CleanRaise: Street, SidewalkStructural
1579	Maple-Red	17		3	Raise: Street, SidewalkStructural
1580	Maple-Red	13		3	Raise: Street, SidewalkStructural
1581	Maple-Red	11		3	Raise: Street, SidewalkStructural
1582	Linden	15		3	Raise: Street, SidewalkStructural
1589	Maple-Silver	34		3	CleanReduce: Branch weight, StreetStructural
1596	Maple-Silver	35		3	Reduce: Branch weight, StreetStructural
1597	Cherry-Sargent	15,12,6		3	CleanRaise: StreetStructural
1601	Maple-Silver	26		3	Reduce: Branch weight, StreetStructural
1602	Maple-Silver	19,16,15,13		3	Reduce: Branch weight, StreetStructural
1612	Birch-Paper	10,8		3	CleanReduce: Branch weight
1616	Maple-Red	30		3	 Clean Reduce: Branch weight, Overhead lines Structural
1628	Redcedar-Eastern	25		3	CleanReduce: Branch weightStructural
1630	Redcedar-Eastern	18,16		3	Clean Structural
1633	Maple-Norway	26		3	Clean Structural
1643	Maple-Sugar	23		3	Reduce: Branch weight, StreetStructural
1644	Maple-Sugar	20		3	CleanReduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1648	Maple-Sugar	27		3	CleanReduce: Branch weight, StreetStructural
1657	Maple-Norway	16		3	CleanReduce: Branch weight, StreetStructural
1658	Maple-Silver	1		3	CleanStructural
1670	Maple-Norway	13		3	Reduce: SidewalkStructural
1673	Maple-Norway	19,13		3	Reduce: Overhead lines, SidewalkStructural
1675	Maple-Norway	26		3	 Clean Reduce: Overhead lines, Branch weight Structural
1678	Maple-Norway	18		3	CleanStructural
1680	Maple-Norway	15		3	Clean Structural
1685	Spruce-Norway	18		3	Clean Structural
1686	Maple-Sugar	35		3	Reduce: Branch weight, Sidewalk Structural
1687	Maple-Sugar	28		3	Reduce: Branch weight, StreetStructural
1691	Maple-Norway	22		3	 Clean Reduce: Overhead lines, Sidewalk Structural
1693	Maple-Norway	32		3	 Clean Reduce: Overhead lines, Branch weight Structural
1698	Cherry-Sargent	13		3	CleanStructural
1705	Maple-Norway	7		3	Reduce: Overhead lines, SidewalkStructural
1709	Maple-Norway	24		3	Reduce: Overhead lines, Branch weightStructural
1712	Maple-Norway	26		3	Reduce: Branch weight, Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1735	Maple-Norway (2)	6		3	CleanReduce: Branch weight, Street
1738	Ash-White	26		3	 Clean Reduce: Overhead lines, Branch weight Structural
1739	Maple-Norway (7)	8		3	Reduce: Street, Overhead linesStructural
1740	Maple-Norway (6)	15		3	CleanReduce: Branch weight, StreetStructural
1742	Maple-Norway (4)	10		3	 Clean Reduce: Branch weight, Overhead lines Structural
1743	Maple-Norway (2)	10		3	 Clean Reduce: Branch weight, Overhead lines Structural
1749	Maple-Norway (2)	12		3	Reduce: Branch weight, Street Structural
1760	Willow	13,6,5		3	Reduce: Branch weight, Overhead linesStructural
1802	Spruce-Norway	8		3	Raise: PathStructural
1810	Spruce-Norway	7		3	Reduce: BuildingStructural
1811	Crabapple	11		3	Structural
1821	Oak-Northern Red	42		3	Structural
1823	Maple-Red	25		3	Structural
1824	Birch-River	10,10		3	Reduce: Branch weightStructural
1839	Maple-Sugar	18		3	Structural
1841	Hickory-Pignut	25		3	Structural
1843	Hornbeam- American	8		3	Structural
1852	Maple-Red	12		3	Structural
1861	Maple-Red	26		3	Structural
1862	Oak-White	28		3	Structural
1863	Oak-White	27		3	Structural
1867	Oak-Northern Red	37		3	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1880	Poplar-Eastern	15		3	Clean Structural
1883	Cherry-Flowering	11		3	Reduce: Street Structural
1884	Cherry-Flowering	13		3	Reduce: Street Structural
1893	Maple-Norway	24		3	Reduce: Branch weight, StreetStructural
1903	Walnut-Black	29		3	Reduce: Overhead linesStructural
1907	Catalpa-Northern	13		3	Reduce: Sidewalk, DrivewayStructural
1910	Maple-Japanese	12,11,10,8		3	Structural
1922	Magnolia	10		3	Reduce: Overhead linesStructural
1929	Maple-Sugar	14,9,8		3	Reduce: Overhead linesStructural
1946	Maple-Red	8		3	Reduce: Overhead lines, BuildingStructural
1951	Maple-Norway	21		3	Structural
1963	Maple-Norway	14		3	Reduce: Overhead lines, Maintain shapeStructural
1968	Maple-Sugar	28		3	Clean Structural
1981	Plum-Purple Leaf	11		3	Raise: SidewalkReduce: Maintain shapeStructural
1982	Plum-Purple Leaf	12		3	Raise: SidewalkReduce: Maintain shapeStructural
1985	Redcedar-Eastern	17,12,11,4		3	CleanRaise: SidewalkReduce: ParkingStructural
1987	Maple-Red	42		3	CleanRaise: SidewalkReduce: Branch weightStructural
1988	Spruce-Colorado Blue	9		3	CleanRaise: SidewalkReduce: SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1991	Dogwood- Flowering	8		3	CleanReduce: ParkingStructural
1992	Maple-Norway	14		3	CleanReduce: Maintain shapeStructural
1994	Maple-Red	17		3	CleanStructural
1995	Maple-Red	28		3	 Clean Reduce: Branch weight, Overhead lines Structural
1996	Maple-Norway	26		3	CleanReduce: Branch weightStructural
2003	Oak-Northern Red	22		3	CleanRaise: StreetStructural
2010	Poplar-Eastern	30		3	• Reduce: Branch weight, Overhead lines
2018	Honeylocust- Thornless Common	14		3	CleanReduce: Branch weight, StreetStructural
2019	Honeylocust- Thornless Common	21		3	CleanReduce: Branch weight, StreetStructural
2023	Birch-Paper	3		3	Reduce: Sign blockage, SidewalkStructural
2024	Dogwood- Flowering	9,5		3	CleanReduce: Branch weight, SidewalkStructural
2027	Dogwood- Flowering	8		3	• Clean
2028	Tree of Heaven	8,8,3		3	CleanReduce: StreetStructural
2038	Oak-English	20		3	CleanReduce: Branch weight, StreetStructural
2071	Spruce-Colorado Blue	13		3	CleanReduce: StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2078	Crabapple (2)	12		3	Raise: SidewalkReduce: Street, Branch weightStructural
2079	Spruce-Colorado Blue	17		3	CleanStructural
2081	Crabapple	16,14,13		3	CleanReduce: Branch weight, StreetStructural
2085	Mulberry-White	17		3	CleanReduce: Branch weight, StreetStructural
2086	Pine-Austrian	15		3	Clean Structural
2097	Poplar-Eastern	13		3	Reduce: Branch weight, StreetStructural
2102	Maple-Red	17		3	Raise: Street Structural
2123	Maple-Norway	11		3	Raise: SidewalkStructural
2128	Maple-Red	17		3	Reduce: Branch weight, Sidewalk Structural
2139	Honeylocust- Thornless Common	14		3	CleanReduce: Overhead linesStructural
2140	Honeylocust- Thornless Common	13		3	CleanReduce: Overhead linesStructural
2141	Honeylocust- Thornless Common	11		3	CleanReduce: Overhead lines, Pole/postStructural
2144	Honeylocust- Thornless Common	14		3	CleanReduce: Overhead lines, StreetStructural
2152	Honeylocust- Thornless Common	16		3	Reduce: Branch weightStructural
2153	Honeylocust- Thornless Common	14		3	Reduce: Branch weight, Overhead linesStructural
2154	Honeylocust- Thornless Common	15		3	 Reduce: Overhead lines, Poor branch structure Structural
2156	Honeylocust- Thornless Common	17		3	Reduce: Branch weightStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2158	Honeylocust- Thornless Common	7		3	Raise: SidewalkStructural
2161	Pear-Callery	16		3	Reduce: Branch weight, SidewalkStructural
2169	Pear-Callery	11		3	Reduce: Overhead lines, SidewalkStructural
2171	Pear-Callery	12		3	Reduce: Overhead lines, Branch weightStructural
2172	Pear-Callery	13		3	Reduce: Overhead lines, Branch weightStructural
2176	Maple-Silver	15		3	Reduce: Branch weight, SidewalkStructural
2178	Hawthorn	9		3	Reduce: SidewalkStructural
2179	Honeylocust- Thornless Common	13		3	Reduce: Branch weight, Overhead linesStructural
2180	Honeylocust- Thornless Common	12		3	Reduce: Branch weight, Overhead linesStructural
2181	Honeylocust- Thornless Common	13		3	Reduce: Overhead lines, Branch weightStructural
2182	Hawthorn	12		3	Raise: SidewalkStructural
2183	Hawthorn	10		3	Structural
2186	Maple-Norway	15		3	 Raise: Sidewalk, Street Reduce: Overhead lines, Branch weight Structural
2189	Maple-Norway	16		3	 Clean Raise: Street, Sidewalk Reduce: Overhead lines, Branch weight Structural
2190	Maple-Norway	17		3	 Clean Raise: Street, Sidewalk Reduce: Branch weight, Overhead lines Structural
2195	Oak-Northern Red	19		3	CleanStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2196	Oak-Northern Red	18		3	CleanStructural
2198	Maple-Sugar	14		3	Raise: Sidewalk, Parking Structural
2215	Maple-Norway	13		3	CleanRaise: StreetStructural
2216	Maple-Norway	12		3	CleanRaise: StreetStructural
2218	Maple-Sugar	22		3	CleanReduce: Branch weight, StreetStructural
2219	Planetree-London	16,15,14,12		3	Reduce: Branch weight, SidewalkStructural
2226	Planetree-London	15,15,10		3	Reduce: Branch weight, Street Structural
2228	Planetree-London	17,15		3	Reduce: Branch weight, SidewalkStructural
2229	Planetree-London	18,17,16,15		3	Reduce: Branch weight, StreetStructural
2230	Planetree-London	13		3	CleanReduce: Branch weight, SidewalkStructural
2233	Maple-Norway	10		3	CleanRaise: Sidewalk, ParkingStructural
2238	Maple-Norway	15		3	CleanRaise: Street, SidewalkStructural
2239	Maple-Norway	14		3	Reduce: Branch weight, StreetStructural
2240	Maple-Norway	14		3	Reduce: Branch weight, StreetStructural
2245	Maple-Norway	13		3	Raise: Street, SidewalkStructural
2249	Spruce-Colorado Blue	13		3	CleanReduce: Overhead linesStructural
2250	Maple-Norway	14		3	Reduce: Overhead lines, SidewalkStructural
2251	Maple-Norway	8		3	Reduce: Overhead lines, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2252	Redcedar-Eastern	23		3	Reduce: Overhead linesStructural
2254	Juniper (12)	7		3	Reduce: Sidewalk
2257	Maple-Norway	16		3	Reduce: Branch weight, Overhead linesStructural
2259	Hawthorn	4		3	Raise: Street, SidewalkStructural
2264	Maple-Sugar	19		3	 Clean Raise: Sidewalk Reduce: Branch weight, Street Structural
2266	Maple-Sugar	16		3	Raise: SidewalkReduce: Branch weight, StreetStructural
2269	Maple-Norway	15		3	CleanReduce: Branch weight, StreetStructural
2270	Maple-Norway	16		3	CleanRaise: Street, SidewalkStructural
2281	Planetree-London	23		3	CleanRaise: Sidewalk, ParkingStructural
2285	Planetree-London	15,14,14,13		3	Raise: Street, SidewalkReduce: Branch weightStructural
2291	Maple-Norway	14		3	Reduce: Branch weight, SidewalkStructural
2292	Maple-Norway	21		3	Reduce: Branch weight, StreetStructural
2303	Maple-Norway	13		3	CleanReduce: Overhead linesStructural
2304	Tuliptree	31		3	Clean Structural
2310	Maple-Red	10		3	Clean Structural
2312	Oak-Pin	15		3	CleanReduce: Branch weightStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2313	Elm-American	14,11,8,8,10		3	CleanReduce: Branch weightStructural
2314	Ash-Green	12		3	CleanStructural
2327	Elm-American	13		3	Raise: ParkingStructural
2332	Catalpa-Northern	14,6		3	CleanStructural
2335	Maple-Silver	16		3	CleanReduce: Branch weight, BuildingStructural
2340	Maple-Norway	12		3	Reduce: Branch weight, StreetStructural
2348	Maple-Norway (6)	6		3	CleanReduce: Branch weight, StreetStructural
2350	Oak-Northern Red (3)	9		3	CleanReduce: Branch weight, StreetStructural
2356	Pine-Eastern White (3)	10		3	CleanStructural
2362	Spruce-Norway	10		3	Reduce: Overhead lines, StreetStructural
2372	Hickory-Shagbark	20		3	Raise: Street, SidewalkStructural
2376	Spruce-Colorado Blue	17		3	CleanReduce: Street, Branch weightStructural
2381	Hemlock-Canadian (6)	10		3	 Clean Reduce: Overhead lines, Branch weight Structural
2383	Pine-Eastern White	12		3	Clean Structural
2394	Ash-Green	15,14,12,10		3	CleanReduce: Branch weight, PathStructural
2399	Mulberry	10,6		3	CleanReduce: Branch weight, PathStructural
2405	Pear-Callery	11		3	Raise: StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2413	Sweetgum	9		3	CleanStructural
2427	Maple-Norway	13		3	 Raise: Sidewalk Reduce: Branch weight, Street Structural
2428	Maple-Norway	14		3	Raise: SidewalkReduce: Branch weight, StreetStructural
2429	Maple-Norway	12		3	Raise: SidewalkReduce: Branch weight, StreetStructural
2432	Walnut-Black	11,9		3	CleanReduce: Branch weight, StreetStructural
151	Crabapple	9,8		4	CleanStructural
203	Maple-Norway	7		4	Structural
218	Maple-Norway	7		4	Clean Structural
225	Linden	10		4	Raise: Street, SidewalkStructural
226	Linden	10		4	Raise: Street, SidewalkStructural
227	Linden	11		4	Raise: Street, SidewalkStructural
228	Linden	10		4	Raise: Street, SidewalkStructural
229	Linden	11		4	Raise: Street, SidewalkStructural
230	Linden	10		4	Raise: Street, SidewalkStructural
231	Linden	9		4	Raise: Street, SidewalkStructural
232	Linden	9		4	Raise: Street, SidewalkStructural
244	Linden	14		4	Raise: StreetStructural
246	Pear-Callery	9		4	Raise: Street, SidewalkStructural
247	Pear-Callery	9		4	Raise: Street, SidewalkStructural
248	Pear-Callery	8		4	Raise: Street, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
249	Pear-Callery	10		4	Raise: Street, SidewalkStructural
250	Pear-Callery	10		4	Raise: Street, SidewalkStructural
251	Pear-Callery	10		4	Raise: Street, SidewalkReduce: Sign blockageStructural
252	Pear-Callery	10		4	Raise: Street, SidewalkStructural
257	Linden	9		4	Raise: StreetStructural
263	Zelkova-Japanese	7		4	Clean Structural
277	Linden	3		4	Structural
282	Zelkova-Japanese	12		4	Reduce: Building Structural
285	Linden	10		4	Structural
298	Pear-Callery	3		4	Structural
299	Maple-Red	11		4	Reduce: Overhead linesStructural
307	Sweetgum	18		4	Reduce: Building, Branch weight
311	Zelkova-Japanese	12		4	CleanStructural
314	Zelkova-Japanese	12		4	CleanStructural
315	Zelkova-Japanese	13		4	CleanStructural
323	Pear-Callery	10		4	CleanStructural
325	Pear-Callery	9		4	CleanStructural
330	Pear-Callery	12		4	Structural
333	Pear-Callery	9		4	CleanStructural
335	Pear-Callery	11		4	Structural
336	Zelkova-Japanese	13		4	CleanStructural
337	Zelkova-Japanese	15		4	Structural
338	Zelkova-Japanese	12		4	Clean Structural
340	Zelkova-Japanese	13		4	CleanStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
341	Zelkova-Japanese	13		4	Clean Structural
342	Zelkova-Japanese	12		4	Clean Structural
357	Maple-Red	8		4	Clean Structural
360	Pear-Callery	12		4	Reduce: Lighting Structural
367	Pear-Callery	8		4	Clean Structural
398	Linden	12		4	Raise: StreetStructural
404	Linden	9		4	Raise: StreetStructural
405	Linden	10		4	Raise: StreetStructural
406	Linden	12		4	Raise: Sidewalk, Sign blockageStructural
407	Linden	10		4	Raise: Sidewalk, LightingStructural
408	Linden	9		4	Raise: SidewalkStructural
422	Pear-Callery	8		4	Raise: Sign blockageStructural
423	Pear-Callery	6		4	Clean Structural
430	Pear-Callery	6		4	Structural
431	Pear-Callery	4		4	Structural
432	Pear-Callery	9		4	Structural
433	Pear-Callery	10		4	Structural
434	Pear-Callery	8		4	Structural
435	Pear-Callery	9		4	Structural
436	Pear-Callery	8		4	• Structural
438	Pear-Callery	7		4	• Structural
442	Pear-Callery	8		4	• Structural
443	Pear-Callery	8		4	• Structural
447	Pear-Callery	6		4	• Structural
449	Pear-Callery	6	•••	4	• Structural
450	Pear-Callery	6		4	Structural Paige Parking Sidowalk
455	Maple-Red	13		4	Raise: Parking, SidewalkStructural
507	Maple-Red	2		4	• Structural
529	Maple-Sugar	16		4	Reduce: Pole/post

Tree	Common Name	DBH	Overall Risk	Tree Care	Pruning Recommended
ID	Common Name	וומע	Rating	Priority	Fruning Recommended
545	Maple-Sugar	10		4	Structural
546	Maple-Sugar	4		4	• Structural
547	Maple-Sugar	4		4	Structural
550	Maple-Red	11		4	Structural
553	Maple-Sugar	11		4	Structural
554	Maple-Sugar	9		4	Structural
555	Maple-Sugar	12		4	Structural
556	Maple-Red	4		4	Structural
557	Cherry	11		4	Structural
560	Maple-Sugar	10		4	Structural
561	Maple-Red	15		4	Structural
562	Maple-Sugar	12		4	Structural
563	Maple-Sugar	15		4	Structural
564	Maple-Sugar	13		4	Structural
565	Maple-Sugar	12		4	Structural
567	Maple-Sugar	10		4	Structural
568	Maple-Sugar	13	•••	4	Structural
569	Maple-Sugar	15		4	Structural
570	Maple-Sugar	10		4	Structural
571	Maple-Sugar	11		4	Structural
572	Maple-Sugar	12		4	Structural
573	Maple-Sugar	11		4	Structural
574	Maple-Sugar	12		4	Structural
575	Maple-Sugar	10		4	Structural
576	Maple-Sugar	16		4	Structural
577	Maple-Red	13		4	Structural
578	Oak-Northern Red	17		4	Structural
579	Oak-Northern Red	14		4	Structural
580	Maple-Red	18		4	• Structural
581	Oak-Northern Red	12		4	• Structural
582	Maple-Red	14		4	• Structural
583	Maple-Red	14		4	• Structural
584	Oak-Northern Red	11		4	• Structural
585	Maple-Red	19		4	• Structural
586	Maple-Red	10		4	• Structural
587	Birch-Gray	7,5,4,3		4	• Structural
588	Maple-Red	13		4	• Structural
589	Maple-Red	13		4	• Structural
590 591	Maple-Red	21		4	• Structural
591	Maple-Red	20 8		4	Structural Structural
	Maple-Sugar				
593	Maple-Sugar	14		4	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
594	Maple-Sugar	12		4	• Structural
595	Maple-Red	10		4	• Structural
596	Maple-Sugar	12		4	• Structural
597	Maple-Red	13		4	• Structural
598	Maple-Sugar	16		4	• Structural
599	Maple-Red	14		4	• Structural
605	Dogwood- Flowering	10		4	CleanRaise: SidewalkStructural
645	Planetree-London	25		4	CleanRaise: Sidewalk
684	Oak-English	38		4	Reduce: Branch weight, StreetStructural
689	Spruce-Norway	30		4	Clean Structural
691	Redcedar-Eastern (4)	12		4	CleanStructural
692	Spruce-Norway	27		4	CleanReduce: Overhead lines
695	Maple-Norway (8)	8		4	Reduce: StreetStructural
701	Maple-Red	14		4	Structural
702	Spruce-Colorado Blue	5		4	Structural
703	Maple-Red	11		4	Structural
705	Redbud-Eastern	8		4	Structural
706	Maple-Red	11		4	Structural
707	Maple-Red	11		4	Structural
708	Maple-Sugar	10		4	Structural
709	Maple-Red	10		4	Structural
710	Maple-Sugar	13		4	• Structural
711	Maple-Red	11		4	• Structural
713	Maple-Red	13		4	• Structural
714	Maple-Red	14		4	• Structural
715	Maple-Sugar	13		4	• Structural
716	Maple-Red	14		4	• Structural
717	Maple-Red	7		4	• Structural
718	Maple-Sugar	11		4	• Structural
719	Maple-Red	9		4	• Structural
720	Maple-Red	11		4	• Structural
721	Maple-Sugar	18		4	• Structural
724	Maple-Red	15		4	Structural

Tree			Overall	Tree	
ID	Common Name	DBH	Risk	Care	Pruning Recommended
			Rating	Priority	
725	Maple-Sugar	11		4	• Structural
727	Maple-Red	8		4	• Structural
728	Maple-Sugar	13		4	• Reduce: Pole/post
					Structural
729	Pear-Callery	13		4	Structural
732	Maple-Red	14		4	Structural
733	Maple-Red	4		4	Structural
734	Maple-Red	16		4	Structural
735	Maple-Red	16		4	Structural
736	Maple-Red	14		4	• Raise: Pole/post
	-				Structural
737	Maple-Sugar	13		4	Structural
738	Maple-Red	13		4	Structural
740	Maple-Sugar	11		4	Structural
741	Maple-Red	14		4	• Reduce: Pole/post
					• Structural
742	Maple-Sugar	13		4	• Structural
743	Maple-Red	13		4	Structural
745	Maple-Red	11		4	Structural
746	Maple-Sugar	14		4	• Structural
749	Maple-Red	13		4	• Structural
750	Maple-Sugar	11		4	Structural
751	Maple-Red	13		4	Structural
752	Maple-Sugar	13		4	Structural
753	Maple-Red	15		4	• Structural
754	Maple-Sugar	10		4	Structural
755	Maple-Red	14		4	Structural
756	Maple-Sugar	9		4	Structural
757	Maple-Red	11		4	Structural
758	Maple-Red	14		4	Structural
759	Maple-Sugar	10		4	• Structural
760	Maple-Red	14		4	Reduce: Pole/post
7.61	-	0		4	• Structural
761	Maple-Red	9		4	• Structural
762	Maple-Red		***	4	• Structural
763	Maple-Sugar	10	•••	4	• Structural
764	Maple-Red	13	***	4	• Structural
765	Maple-Sugar	8		4	• Structural
766	Maple-Red	13		4	• Structural
767	Maple-Sugar	14		4	• Structural
768	Maple-Red	12		4	• Raise: Pole/post
	1				• Structural

Tree	CN	DDII	Overall	Tree	D
ID	Common Name	DBH	Risk	Care	Pruning Recommended
760	Manla Cugan	9	Rating	Priority	c Characteristal
769	Maple-Sugar	12		4	• Structural
770	Maple-Red		***		• Structural
771	Maple-Sugar	13	•••	4	• Structural
772	Maple-Red	13		4	• Structural
773	Maple-Sugar	13	•••	4	• Structural
774	Maple-Red	11		4	• Structural
775	Maple-Sugar	14	•••	4	• Structural
776	Maple-Red	11		4	• Structural
777	Maple-Sugar	8		4	• Structural
778	Maple-Red	14		4	• Structural
779	Maple-Sugar	16		4	• Structural
780	Maple-Red	12		4	• Structural
781	Maple-Red	11		4	• Structural
782	Maple-Red	11		4	Structural
784	Maple-Red	10		4	Structural
786	Maple-Red	8		4	Structural
787	Pine-Eastern White (8)	14		4	Structural
788	Maple-Red	10		4	Structural
789	Maple-Sugar	9		4	Structural
790	Maple-Red	10		4	Structural
791	Maple-Sugar	13		4	Structural
792	Maple-Sugar	9		4	Structural
793	Maple-Sugar	16		4	Structural
794	Maple-Sugar	14		4	Structural
795	Maple-Sugar	12		4	Structural
796	Maple-Red	16		4	Reduce: Pole/post
790	Maple-Neu	10	•••	7	Structural
797	Maple-Sugar	10		4	Structural
798	Maple-Red	14		4	Structural
799	Maple-Sugar	7		4	Structural
800	Maple-Sugar	9		4	Structural
802	Pear-Callery	4		4	CleanStructural
804	Pear-Callery	7		4	Structural
007	_	0		4	• Clean
807	Pear-Callery	8		4	Structural
809	Linden	11		4	Reduce: Branch weight, Sidewalk
303	2.114011	11	***	•	Structural
812	Linden	11		4	Raise: Sidewalk, LightingStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
824	Hawthorn	8		4	CleanRaise: SidewalkStructural
832	Linden	10		4	Raise: Street, Sign blockageStructural
838	Hawthorn	8,7,6		4	Clean Structural
840	Plum-Purple Leaf	8		4	Raise: Parking Structural
841	Plum-Purple Leaf	9		4	Raise: ParkingStructural
842	Plum-Purple Leaf	8		4	Raise: Parking, Sign blockageStructural
844	Plum-Purple Leaf	10		4	Raise: Parking, Sign blockageStructural
866	Cherry	12		4	Clean Structural
867	Cherry	14		4	Reduce: Parking, Branch weightStructural
868	Cherry	13		4	Reduce: Branch weight, Lighting Structural
869	Pear-Callery	11		4	Structural
874	Pear-Callery	11		4	Structural
876	Pear-Callery	10		4	Clean Structural
877	Pear-Callery	11		4	CleanRaise: Street, Sign blockageStructural
884	Linden	14		4	Raise: SidewalkStructural
890	Pear-Callery	11		4	Structural
891	Pear-Callery	11		4	Structural
892	Pear-Callery	12		4	Reduce: Sidewalk, Branch weightStructural
893	Pear-Callery	13		4	Reduce: Branch weight, SidewalkStructural
895	Oak-Pin	12		4	CleanRaise: SidewalkStructural
896	Oak-Pin	15		4	CleanRaise: Street, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
897	Oak-Pin	14		4	Raise: Street, SidewalkStructural
900	Crabapple	10		4	Raise: Bench Structural
901	Crabapple	11		4	Reduce: Branch weightStructural
902	Crabapple	9		4	Reduce: Branch weight, BenchStructural
909	Pear-Callery	9		4	Raise: SidewalkStructural
910	Pear-Callery	9		4	Raise: SidewalkReduce: Branch weight, BuildingStructural
911	Pear-Callery	10		4	Raise: SidewalkStructural
926	Oak-Pin	9		4	Raise: ParkingStructural
948	Linden	12		4	Raise: SidewalkStructural
949	Linden	8		4	Raise: SidewalkStructural
950	Ash-Green	11		4	Reduce: Pole/postStructural
952	Oak-Northern Red	26		4	Structural
953	Cherry-Black	12		4	Structural
958	Pear-Callery	12		4	Raise: StreetReduce: Overhead linesStructural
959	Pear-Callery	15		4	Structural
960	Pear-Callery	20		4	Structural
961	Pear-Callery	19		4	Structural
962	Pear-Callery	18		4	Structural
963	Pear-Callery	20		4	Structural
964	Pear-Callery	20		4	• Structural
965	Pear-Callery	21		4	• Structural
966	Pear-Callery	19		4	• Structural
967	Pear-Callery	19 7		4	• Structural
968	Maple-Norway	14		4	• Structural
969 970	Pear-Callery Pear-Callery	11		4	Structural Structural
970	Pear-Callery Pear-Callery	13		4	Structural Structural
972	Pear-Callery	12		4	• Structural
973	Pear-Callery	11		4	• Structural
,,,	1 car carrery	11		1	- bu actarar

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
974	Pear-Callery	13		4	Structural
975	Pear-Callery	13		4	Structural
976	Maple-Norway	15		4	Structural
978	Pear-Callery	11		4	Raise: SidewalkStructural
981	Pear-Callery	12		4	Raise: SidewalkStructural
982	Pear-Callery	11		4	Raise: SidewalkStructural
983	Pear-Callery	9		4	Raise: SidewalkStructural
986	Pear-Callery	12		4	CleanRaise: SidewalkStructural
988	Pear-Callery	11		4	Raise: SidewalkStructural
990	Pear-Callery	13		4	 Raise: Sidewalk Reduce: Overhead lines, Branch weight Structural
1001	Maple-Red	12		4	Structural
1002	Maple-Red	13		4	Structural
1003	Pear-Callery	13		4	Structural
1004	Maple-Sugar	10		4	Structural
1005	Maple-Red	10		4	Structural
1006	Maple-Sugar	8		4	Structural
1007	Maple-Red	11		4	Structural
1009	Maple-Sugar	12		4	• Structural
1010	Maple-Sugar	12		4	Structural
1011	Maple-Sugar	8		4	Structural
1012	Maple-Sugar	12		4	Structural
1013	Cherry	9,6		4	Structural
1014	Maple-Sugar	12		4	Structural
1016	Maple-Sugar	10		4	Structural
1017	Maple-Red	9		4	Structural
1018	Maple-Sugar	11		4	• Structural
1019	Maple-Sugar	9		4	Structural
1020	Maple-Sugar	8		4	Reduce: Pole/postStructural
1021	Maple-Sugar	8		4	Structural
1022	Maple-Sugar	6		4	Structural
1024	Maple-Sugar	6		4	Reduce: Pole/postStructural

_			Overall	Tree	
Tree	Common Name	DBH	Risk	Care	Pruning Recommended
ID			Rating	Priority	3
1025	Maple-Sugar	6		4	Structural
1026	Maple-Sugar	8		4	Structural
1027	Maple-Sugar	7		4	Structural
1028	Manla Cugar	6		4	Reduce: Pole/post
1020	Maple-Sugar	0	•••	4	Structural
1029	Maple-Sugar	7		4	Structural
1030	Maple-Sugar	9		4	Structural
1031	Maple-Sugar	9		4	Structural
1033	Maple-Sugar	7		4	Structural
1034	Maple-Sugar	9		4	Structural
1035	Maple-Sugar	10		4	Structural
1036	Maple-Sugar	9		4	Structural
1038	Maple-Sugar	7		4	Structural
1039	Maple-Sugar	8		4	Structural
1040	Maple-Sugar	10		4	Structural
1041	Maple-Sugar	9		4	Structural
1042	Maple-Sugar	8		4	Structural
1043	Maple-Sugar	8		4	Structural
1044	Maple-Sugar	6		4	Structural
1045	Maple-Sugar	7		4	Structural
1046	Maple-Sugar	7		4	Structural
1047	Maple-Sugar	6		4	Structural
1051	Maple-Sugar	6		4	Structural
1052	Maple-Red	12		4	Structural
1053	Pine-Eastern White	13		4	Structural
1055	Maple-Sugar	10		4	Structural
1056	Pine-Eastern White (6)	15		4	Structural
1057	Maple-Sugar	10		4	Structural
1058	Pine-Eastern White (10)	16		4	• Clean
1059	Maple-Sugar	8		4	Structural
1060	Ash-Green	27,18		4	Structural
1061	Honeylocust- Thornless Common	17		4	Structural
1062	Honeylocust- Thornless Common	18		4	Structural
1067	Oak-Northern Red	31		4	Structural
1068	Oak-Northern Red	21		4	Structural
1069	Oak-Northern Red	35		4	Structural
1070	Oak-Northern Red	27		4	Structural
1071	Oak-Northern Red	23		4	Structural
1072	Oak-Northern Red	31		4	Structural

Tree ID	Common Name	DBH	Overall Risk	Tree Care	Pruning Recommended
			Rating	Priority	
1073	Oak-Northern Red	27		4	Structural
1074	Oak-Northern Red	32		4	Structural
1075	Oak-Northern Red	27		4	Structural
1076	Oak-Northern Red	34		4	Structural
1077	Oak-Northern Red	37		4	Structural
1078	Oak-Northern Red	27		4	Structural
1080	Ash-Green	24		4	Structural
1081	Ash-Green	28		4	Structural
1082	Ash-Green	35		4	Structural
1083	Ash-Green	21,18		4	Structural
1084	Maple-Sugar	24		4	Structural
1085	Maple-Sugar	19		4	Structural
1086	Locust-Black	17,11		4	Structural
1087	Maple-Red	12		4	Structural
1090	Ash-Green	32		4	Structural
1091	Ash-Green	17,16,15,14		4	Structural
1092	Ash-Green	15		4	Structural
1093	Ash-Green	17		4	Structural
1094	Oak-Northern Red	16		4	• Structural
1095	Oak-Northern Red	17		4	Reduce: Parking
1093	Oak-Northern Keu	17		4	Structural
1096	Oak-Northern Red	17		4	• Structural
1098	Oak-Northern Red	14		4	Structural
1099	Oak-Northern Red	23		4	Structural
1101	Oak-Northern Red	22		4	Structural
1102	Oak-Northern Red	22		4	• Structural
1103	Oak-Northern Red	24		4	Structural
1104	Oak-Northern Red	26		4	Structural
1105	Pine-Eastern White	32		4	Reduce: Parking
1103	rine-Lastern winte	32		4	Structural
1114	Spruce-Norway	16,15		4	Raise: Path
1114	Spi uce-Noi way	10,13		4	Structural
1160	Maple-Red	12		4	Structural
1170	Cherry-Flowering	9		4	Structural
1171	Maple-Red	6		4	Structural
1172	Cherry-Flowering	11		4	Structural
1173	Maple-Red	37		4	Structural
1174	Maple-Red	41		4	Structural
1175	Maple-Red	29		4	Structural
1179	Maple-Sugar	14		4	Structural
1180	Pine-Eastern White	29		4	Reduce: Pole/postStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1182	Pear-Callery	9		4	Raise: ParkingReduce: Pole/postStructural
1183	Pear-Callery	9		4	Raise: Parking, Pole/postStructural
1184	Pear-Callery	7		4	Raise: ParkingStructural
1186	Pear-Callery	11		4	Raise: ParkingReduce: Pole/postStructural
1187	Pear-Callery	11		4	Raise: ParkingReduce: Pole/postStructural
1189	Pear-Callery	9		4	Raise: ParkingStructural
1190	Catalpa-Northern	12,11,10		4	Structural
1191	Pear-Callery	8		4	Raise: ParkingStructural
1192	Pear-Callery	9		4	Reduce: ParkingStructural
1193	Pear-Callery	11		4	Raise: ParkingStructural
1200	Lilac-Japanese Tree	5,4,4		4	Reduce: Pole/post Structural
1204	Hemlock-Canadian	33		4	CleanReduce: Overhead lines, Branch weight
1212	Pear-Callery	6		4	Reduce: Street, Branch weight
1216	Pear-Callery	16		4	Reduce: Street
1217	Pear-Callery	14		4	Reduce: Street
1218	Pear-Callery	15		4	Reduce: Overhead lines, Street
1219	Pear-Callery	9		4	Reduce: StreetStructural
1220	Pear-Callery	9		4	Reduce: StreetStructural
1221	Pear-Callery	17		4	Reduce: Street, Branch weight
1224	Pear-Callery	14		4	Reduce: Branch weight, StreetStructural
1229	Pear-Callery	21		4	CleanReduce: Street, Branch weight
1230	Pear-Callery	13		4	Reduce: Branch weight, BenchStructural
1232	Pine-Eastern White	5		4	Reduce: Sidewalk

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1234	Pear-Callery	14		4	Reduce: Street, BuildingStructural
1235	Pear-Callery	14		4	 Clean Reduce: Maintain shape, Branch weight Structural
1239	Maple-Norway	15		4	CleanReduce: Overhead lines, BuildingStructural
1253	Pear-Callery	12		4	Raise: Sidewalk, StreetStructural
1258	Pear-Callery	13		4	CleanReduce: Branch weight, SidewalkStructural
1267	Maple-Norway	12		4	Reduce: Branch weight, Street
1277	Maple-Norway	11		4	Reduce: Branch weight, Street
1299	Catalpa-Northern	7		4	CleanReduce: Street, Branch weight
1313	Maple-Norway	33		4	Clean Structural
1316	Maple-Norway	20		4	 Raise: Street Reduce: Branch weight, Overhead lines
1324	Maple-Norway	12,10,9		4	Raise: StreetReduce: Branch weightStructural
1327	Oak-Pin	22		4	CleanRaise: StreetStructural
1331	Maple-Silver	13		4	CleanReduce: Branch weight, StreetStructural
1336	Crabapple	13		4	CleanReduce: Overhead lines, Walking pathStructural
1337	Maple-Norway	15		4	CleanReduce: Overhead lines, StreetStructural
1338	Maple-Norway	14		4	CleanReduce: Overhead lines, StreetStructural
1366	Pear-Callery	10		4	Clean Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1368	Pear-Callery	12		4	Reduce: StreetStructural
1369	Pear-Callery	12		4	Reduce: Branch weight, StreetStructural
1372	Maple-Red	11		4	Clean Structural
1378	Maple-Red	18		4	Reduce: Branch weight, StreetStructural
1380	Maple-Red	17		4	Reduce: Branch weight, StreetStructural
1385	Pear-Callery	10		4	Raise: StreetStructural
1390	Pear-Callery (7)	7		4	Reduce: StreetStructural
1391	Pear-Callery (3)	7		4	Reduce: StreetStructural
1420	Pear-Callery	6		4	Raise: SidewalkStructural
1427	Poplar-Eastern	16		4	CleanRaise: Street, SidewalkStructural
1429	Crabapple	17		4	CleanRaise: Walking path, StreetStructural
1432	Maple-Paperbark	8		4	 Raise: Sidewalk Reduce: Overhead lines, Branch weight Structural
1464	Cedar-White	9		4	Reduce: Overhead lines, Street
1471	Tree of Heaven (3)	9		4	CleanReduce: StreetStructural
1475	Maple-Norway	19		4	• Clean
1486	Oak-Northern Red	34		4	CleanReduce: Branch weight, Overhead lines
1487	Cherry-Sargent (2)	9		4	• Clean
1491	Maple-Norway (2)	7		4	Reduce: Overhead linesStructural
1498	Oak-Northern Red	12		4	• Clean
1499	Maple-Norway	14		4	Reduce: Overhead lines, Branch weightStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1502	Maple-Norway	18		4	CleanStructural
1503	Mulberry	16		4	CleanReduce: StreetStructural
1505	Redcedar-Eastern	7		4	Structural
1506	Redcedar-Eastern	28		4	• Clean
1507	Spruce-Norway	19		4	Structural
1508	Spruce-Norway	31		4	Structural
1509	Maple-Norway	13		4	Structural
1511	Maple-Sugar	29		4	Structural
1512	Cherry-Flowering	14		4	Reduce: Overhead linesStructural
1513	Cherry-Flowering	8		4	Reduce: Overhead linesStructural
1517	Ash-Green	27		4	Structural
1518	Maple-Norway	26		4	Reduce: Overhead lines Structural
1520	Maple-Norway (18)	5		4	Reduce: Overhead lines Structural
1522	Oak-Northern Red	13		4	Structural
1524	Maple-Norway	12		4	Raise: Street, Sidewalk Structural
1525	Oak-Northern Red	15,14		4	Reduce: Branch weight
1532	Maple-Red	6		4	Raise: Street, Sidewalk Structural
1542	Maple-Red	10		4	Raise: Street, SidewalkStructural
1543	Maple-Red	10		4	Raise: Street, SidewalkStructural
1547	Maple-Red	11		4	Raise: Street, SidewalkStructural
1553	Maple-Red	10		4	Raise: Street, SidewalkStructural
1555	Maple-Red	5		4	Raise: Street, SidewalkStructural
1561	Maple-Red (2)	6		4	Structural
1562	Maple-Red	10		4	Raise: SidewalkStructural
1566	Hickory-Shagbark	22		4	Reduce: Branch weight, Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1569	Maple-Silver	21		4	 Raise: Street Reduce: Overhead lines, Branch weight Structural
1572	Maple-Red	10		4	Raise: StreetStructural
1577	Maple-Red	13		4	Raise: Street, SidewalkStructural
1578	Maple-Red	9		4	CleanRaise: Street, SidewalkStructural
1584	Maple-Red	8		4	Raise: Street, SidewalkStructural
1586	Maple-Norway	12		4	CleanRaise: SidewalkStructural
1593	Maple-Red	10		4	Raise: StreetStructural
1594	Maple-Red	12		4	Raise: StreetStructural
1595	Maple-Red	14		4	Raise: StreetStructural
1603	Maple-Silver	33		4	Reduce: Branch weight, Street Structural
1604	Maple-Silver	43		4	Reduce: Branch weight, Street Structural
1605	Maple-Silver	39		4	CleanReduce: Branch weight, StreetStructural
1606	Magnolia	15		4	Raise: StreetStructural
1607	Maple-Silver	38		4	Reduce: Branch weight, StreetStructural
1626	Linden	14		4	Raise: Sign blockage, StreetStructural
1629	Maple-Norway	25		4	Structural
1635	Maple-Norway (2)	12		4	CleanReduce: Branch weight, StreetStructural
1636	Maple-Norway	22		4	CleanStructural
1642	Maple-Sugar	29		4	Reduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1645	Maple-Sugar	22		4	Reduce: Branch weight, Overhead linesStructural
1663	Hemlock-Canadian (2)	6		4	Reduce: Overhead lines, SidewalkStructural
1664	Maple-Silver	35		4	Reduce: Branch weight, StreetStructural
1667	Spruce-Norway	31		4	Reduce: Branch weight, Overhead linesStructural
1669	Redcedar-Eastern (2)	15		4	CleanReduce: SidewalkStructural
1672	Maple-Norway	18		4	Reduce: Overhead lines, SidewalkStructural
1674	Maple-Norway	15		4	Reduce: Branch weightStructural
1679	Maple-Norway	11		4	Structural
1682	Spruce-Norway	17		4	Clean Structural
1684	Maple-Norway (3)	7		4	CleanRaise: StreetStructural
1690	Maple-Red	16		4	Raise: Sidewalk, StreetStructural
1699	Cherry-Sargent	13		4	Reduce: Overhead lines, Branch weightStructural
1702	Catalpa-Northern	14		4	Reduce: Overhead lines, StreetStructural
1707	Maple-Norway	7,4		4	Reduce: Overhead lines, SidewalkStructural
1708	Maple-Norway	14		4	Reduce: Branch weight, Overhead linesStructural
1710	Maple-Norway	13		4	Reduce: Branch weight, Overhead linesStructural
1718	Maple-Norway	13		4	Clean Structural
1723	Maple-Norway (5)	9		4	Reduce: Branch weight, StreetStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1750	Maple-Norway	13		4	Reduce: Branch weight, StreetStructural
1751	Maple-Norway	25,19		4	Reduce: Branch weight, Overhead linesStructural
1763	Crabapple	8,6		4	CleanRaise: SidewalkStructural
1764	Cherry-Sargent	9		4	Reduce: Branch weight, Street
1801	Spruce-Norway	8		4	Reduce: Pole/postStructural
1804	Spruce-Norway	8		4	Reduce: BuildingStructural
1805	Spruce-Norway	7		4	Reduce: Building, Pole/postStructural
1806	Lilac-Japanese Tree	4,3,2,1		4	Reduce: Building, PathStructural
1808	Spruce-Norway	7		4	Structural
1809	Spruce-Norway	6		4	Structural
1815	Spruce-Norway	9		4	Structural
1816	Spruce-Norway	9		4	Structural
1819	Oak-Northern Red	41		4	Structural
1825	Birch-River	7		4	Structural
1848	Oak-White	31		4	Structural
1854	Beech-American	26		4	Structural
1857	Maple-Sugar	23		4	Structural
1859	Birch-River	11,9		4	Structural
1860	Oak-Northern Red	34		4	• Clean
	Oak-White	27		4	Structural
1865	Oak-White	23		4	• Structural
1885	Cherry-Flowering	6	•••	4	• Structural
1888	Dogwood- Flowering	5		4	Clean Structural
1889	Dogwood-Kousa	12		4	CleanStructural
1890	Dogwood-Kousa	8		4	Clean Structural
1894	Maple-Red	12		4	Structural
1901	Tree of Heaven	25		4	Reduce: Building Structural
1902	Mulberry	12,12		4	Reduce: Overhead lines
1909	Maple-Red	32		4	Reduce: Building Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1912	Dogwood Voyee	10	110101118		Reduce: Overhead lines
1912	Dogwood-Kousa	19		4	Structural
1913	Maple-Norway	25		4	Structural
1915	Cypress-Leyland	11		4	Reduce: Overhead lines
					• Structural
1931	Cherry-Black	9		4	Structural Deduces Overhead lines
1932	Maple-Red	6		4	Reduce: Overhead linesStructural
1933	Maple-Red	6		4	Reduce: Overhead linesStructural
1934	Maple-Red	6		4	Reduce: Overhead linesStructural
1935	Maple-Red	6		4	Reduce: Overhead lines Structural
1936	Maple-Red	6		4	Reduce: Overhead lines Structural
1937	Maple-Red	5		4	Structural
1938	Maple-Red	6		4	Reduce: Pole/postStructural
1939	Maple-Red	5		4	• Structural
1940	Maple-Red	5		4	Structural
1941	Maple-Red	5		4	Structural
1942	Maple-Red	5		4	Structural
1943	Maple-Red	5		4	Structural
1944	Maple-Red	5		4	Structural
1945	Maple-Red	6		4	Structural
1948	Maple-Norway	18		4	Structural
1950	Maple-Norway (4)	7		4	• Structural
1952	Maple-Norway	8		4	• Structural
1953	Oak-Northern Red	19		4	Reduce: Overhead linesStructural
1954	Locust-Black	8		4	• Structural
1955	Locust-Black	10		4	Structural
1956	Maple-Norway	12		4	Structural
1957	Maple-Red	13		4	Structural
1959	Maple-Sugar	6		4	Structural
1962	Maple-Norway	12		4	Reduce: Overhead linesStructural
1970	Maple-Norway	7		4	CleanStructural
1972	Redcedar-Eastern	7		4	Raise: SidewalkReduce: Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1973	Redcedar-Eastern	10,10		4	CleanReduce: SidewalkStructural
1976	Redcedar-Eastern	9		4	CleanReduce: Overhead linesStructural
1978	Spruce-White	13		4	• Structural
1984	Spruce-Colorado Blue	17		4	CleanRaise: SidewalkReduce: Overhead linesStructural
1986	Hemlock-Canadian (14)	6		4	Reduce: SidewalkStructural
2013	Maple-Norway	15		4	CleanReduce: Branch weightStructural
2015	Honeylocust- Thornless Common	19		4	CleanRaise: StreetStructural
2032	Maple-Japanese	11		4	CleanStructural
2041	Oak-English	10		4	CleanReduce: StreetStructural
2044	Cherry-Weeping	10		4	CleanStructural
2061	Pine-Eastern White	14		4	CleanStructural
2063	Cherry-Black	17		4	CleanStructural
2080	Pine-Eastern White	18		4	• Clean
2083	Cherry-Black	11,8		4	CleanStructural
2084	Cherry-Black	12		4	CleanStructural
2124	Maple-Norway	12		4	Structural
2145	Catalpa-Northern	14		4	Raise: SidewalkStructural
2159	Honeylocust- Thornless Common	6		4	Structural
2164	Pine-Austrian	16		4	Reduce: Overhead linesStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2188	Maple-Norway	15		4	 Raise: Sidewalk Reduce: Branch weight, Overhead lines Structural
2193	Oak-Northern Red	16		4	Clean Structural
2194	Oak-Northern Red	19		4	CleanRaise: SidewalkStructural
2201	Hawthorn	10		4	Structural
2202	Hawthorn	10		4	Structural
2206	Hawthorn	7		4	Structural
2211	Maple-Norway	14		4	Reduce: Branch weight, StreetStructural
2212	Maple-Norway	13		4	CleanRaise: StreetStructural
2244	Maple-Norway	16		4	Reduce: Branch weight, StreetStructural
2246	Maple-Norway	17		4	Raise: Street, SidewalkStructural
2248	Spruce-Norway	26		4	Reduce: Overhead linesStructural
2255	Crabapple	10,9,6		4	Reduce: Street, Sign blockageStructural
2260	Hawthorn	6		4	Raise: Street, SidewalkStructural
2261	Hawthorn	5		4	Raise: Street, SidewalkStructural
2268	Maple-Norway	17		4	Raise: Street, SidewalkStructural
2276	Pear-Callery	12		4	Raise: Street, ParkingStructural
2277	Pear-Callery	6		4	CleanStructural
2278	Pear-Callery	13		4	CleanReduce: Branch weight, ParkingStructural
2279	Pear-Callery	9		4	CleanStructural
2286	Crabapple	13		4	Clean Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2287	Crabapple	6		4	Clean Structural
2288	Pine-Eastern White	22		4	Reduce: Branch weightStructural
2300	Pear-Callery	10		4	Raise: StreetStructural
2316	Linden	6		4	Raise: Sidewalk, ParkingStructural
2317	Linden	6		4	Raise: Sidewalk, ParkingStructural
2318	Linden	9		4	Raise: Sidewalk, ParkingStructural
2319	Linden	8		4	Raise: Parking, FenceStructural
2322	Pine-Eastern White	9		4	Reduce: LightingStructural
2329	Catalpa-Northern	12		4	Structural
2330	Catalpa-Northern	7		4	Structural
2336	Maple-Silver	11,10		4	Reduce: Branch weight, BuildingStructural
2347	Yew-English	18		4	CleanStructural
2351	Pear-Callery	10		4	Reduce: Branch weight, StreetStructural
2353	Maple-Japanese	13		4	Reduce: Branch weight, StreetStructural
2363	Spruce-Norway (4)	8		4	Reduce: Overhead lines, StreetStructural
2370	Cherry-Sargent	15		4	CleanRaise: Street, SidewalkStructural
2379	Maple-Norway	9,6		4	Reduce: Overhead lines, Branch weightStructural
2389	Maple-Norway	26		4	CleanReduce: Branch weight, PathStructural
2395	Maple-Norway	16		4	Raise: PathStructural
2396	Catalpa-Northern	7		4	Clean Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2397	Maple-Norway	15		4	CleanRaise: PathStructural
2398	Maple-Norway	16		4	Raise: PathStructural
2401	Pear-Callery	10		4	Raise: StreetStructural
2408	Maple-Norway	10		4	Raise: Sign blockageReduce: Branch weight, SidewalkStructural
2411	Sweetgum	16		4	Raise: PathStructural
2412	Sweetgum	11		4	Raise: ParkingStructural
2421	Spruce-Norway (8)	9		4	Reduce: Play area, FenceStructural
9	Cherry	6		5	Raise: SidewalkStructural
11	Maple-Norway	5		5	Raise: SidewalkReduce: BuildingStructural
24	Pear-Callery	3		5	Reduce: Parking, SidewalkStructural
25	Pear-Callery	3		5	Structural
26	Pear-Callery	4		5	Structural
27	Pear-Callery	4		5	Reduce: Sign blockageStructural
28	Cherry	3		5	Structural
116	Maple-Red	3		5	Structural
117	Maple-Red	3		5	Structural
118	Maple-Red	3		5	• Structural
119	Maple-Red	3		5	Structural
120	Maple-Red	3		5	Structural
121	Maple-Red	3		5	Structural
122	Maple-Red	3		5	Structural
124	Crabapple	5		5	CleanRaise: PathStructural
127	Maple-Red	3		5	Structural
129	Maple-Red	3		5	Structural
131	Maple-Red	3		5	Structural
132	Maple-Red	3		5	Structural
133	Maple-Red	3		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
134	Maple-Red	3		5	Structural
135	Maple-Red	3		5	Structural
136	Crabapple	6		5	Structural
138	Maple-Red	9		5	Structural
139	Maple-Red	9		5	Structural
140	Maple-Red	10		5	Structural
141	Maple-Red	12		5	Reduce: Branch weightStructural
143	Maple-Red	12		5	Structural
146	Maple-Red	7		5	Structural
147	Maple-Red	8		5	Structural
148	Maple-Red	10		5	Structural
149	Maple-Red	10		5	Structural
155	Cherry	5,3,2		5	Structural
156	Dogwood-Kousa	11		5	Raise: PathStructural
188	Hawthorn	3		5	Structural
191	Hawthorn	3		5	• Structural
192	Hawthorn	3		5	• Structural
197	Maple-Red	3		5	• Structural
202	Maple-Norway	7		5	• Structural
213	Pear-Callery	3		5	Structural
219	Maple-Norway	8		5	Raise: Sidewalk Structural
220	Pear-Callery	3		5	Structural
221	Pear-Callery	3		5	Structural
224	Pear-Callery	4		5	Structural
236	Pear-Callery	3		5	Structural
237	Pear-Callery	3		5	Structural
238	Pear-Callery	3		5	Structural
239	Pear-Callery	3		5	Structural
240	Pear-Callery	3		5	Structural
241	Cherry	5		5	• Structural
242	Cherry	13		5	Structural
258	Ginkgo	10		5	• Clean
268	Pear-Callery	3		5	Structural
269	Pear-Callery	4		5	Structural
271	Pear-Callery	3		5	Structural
275	Maple-Red	3		5	Structural
276	Pear-Callery	4		5	Structural
280	Zelkova-Japanese	10		5	Structural
287	Hawthorn	4		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
300	Maple-Red	10		5	Structural
301	Maple-Red	12		5	Structural
303	Crabapple	8,7,6		5	Structural
306	Spruce-Colorado Blue	14		5	• Clean
308	Maple-Red	12		5	Structural
310	Zelkova-Japanese	14		5	Structural
312	Zelkova-Japanese	10		5	Structural
313	Zelkova-Japanese	8		5	Structural
316	Zelkova-Japanese	16		5	CleanStructural
317	Zelkova-Japanese	13		5	CleanStructural
319	Zelkova-Japanese	8		5	CleanStructural
320	Zelkova-Japanese	9		5	Structural
321	Zelkova-Japanese	9		5	CleanStructural
322	Pear-Callery	10		5	Structural
326	Pear-Callery	10		5	Clean Structural
327	Pear-Callery	10		5	Clean Structural
328	Pear-Callery	10		5	Structural
329	Pear-Callery	11		5	Structural
331	Pear-Callery	10		5	CleanStructural
332	Pear-Callery	10		5	CleanStructural
334	Pear-Callery	11		5	Structural
339	Zelkova-Japanese	9		5	Structural
343	Zelkova-Japanese	13		5	CleanStructural
344	Zelkova-Japanese	13		5	Clean Structural
345	Maple-Red	10		5	Structural
346	Maple-Red	8		5	Structural
347	Maple-Red	9		5	Structural
348	Maple-Red	12		5	Structural
350	Maple-Red	10		5	Structural
355	Maple-Red	9		5	Structural
356	Maple-Red	8		5	Structural
358	Maple-Red	9		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
361	Pear-Callery	12		5	Structural
362	Pear-Callery	14		5	Structural
364	Pear-Callery	8		5	Structural
365	Pear-Callery	12		5	Structural
376	Maple-Norway	11		5	Structural
380	Maple-Red	14		5	Structural
383	Dogwood- Flowering	12		5	Structural
386	Dogwood-Kousa	3		5	Structural
390	Cherry	4		5	Structural
391	Cherry	4		5	Structural
392	Lilac-Japanese Tree	13		5	CleanStructural
399	Linden	12		5	Structural
400	Linden	13		5	Structural
401	Linden	11		5	Structural
402	Linden	9		5	Structural
403	Linden	8		5	Structural
409	Linden	10		5	Structural
417	Pear-Callery	6		5	Structural
420	Pear-Callery	6		5	Structural
421	Pear-Callery	6		5	Structural
427	Pear-Callery	7		5	Structural
428	Pear-Callery	7		5	Structural
429	Pear-Callery	7		5	Structural
437	Pear-Callery	5		5	Structural
439	Pear-Callery	7		5	CleanStructural
441	Pear-Callery	4		5	Structural
444	Pear-Callery	6		5	Structural
445	Pear-Callery	9		5	Structural
448	Pear-Callery	5		5	Structural
609	Pear-Callery	4		5	Reduce: Sign blockageStructural
610	Cherry	4		5	Raise: Street, SidewalkStructural
628	Maple-Red	3		5	CleanStructural
629	Maple-Red	3		5	CleanStructural
632	Maple-Red	3		5	CleanStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
634	Maple-Red	3		5	Structural
635	Maple-Red	3		5	Structural
638	Maple-Red	3		5	Structural
646	Zelkova-Japanese	6		5	Structural
647	Zelkova-Japanese	5		5	Structural
648	Zelkova-Japanese	5		5	Structural
649	Zelkova-Japanese	6		5	Structural
650	Zelkova-Japanese	5		5	Structural
651	Zelkova-Japanese	5		5	Structural
657	Zelkova-Japanese	5		5	Structural
658	Zelkova-Japanese	5		5	Structural
659	Zelkova-Japanese	6		5	Structural
660	Zelkova-Japanese	6		5	Structural
661	Pine (5)	6		5	Reduce: Sidewalk
663	Linden	6		5	Raise: SidewalkStructural
					Raise: Sidewalk
664	Linden	6		5	Structural
					Raise: Sidewalk
665	Linden	6		5	• Structural
					Raise: Sidewalk
666	Linden	7		5	• Structural
674	Linden	11		5	Raise: SidewalkStructural
675	Linden	12		5	Raise: SidewalkStructural
678	Maple-Norway (2)	12		5	Raise: Street, SidewalkStructural
680	Pear-Callery (3)	5		5	Raise: Street, Sign blockageStructural
690	Maple-Japanese	3		5	Structural
693	Elm-American (2)	7		5	Reduce: Branch weight
694	Maple-Norway (8)	7		5	Reduce: Street Structural
698	Maple-Norway	7,6		5	Raise: Street Structural
748	Maple-Red	5		5	Structural
783	Maple-Red	3		5	Structural
785	Maple-Red	3		5	Structural
806	Pear-Callery	4		5	Structural
814	Cherry	10		5	Structural
816	Cherry	10		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
817	Cherry	7		5	Structural
820	Cherry	10		5	Clean Structural
821	Cherry	10		5	Structural
825	Dogwood-Kousa	5		5	Clean Structural
826	Crabapple	3		5	Structural
828	Linden	9		5	Structural
829	Linden	7		5	Structural
830	Linden	9		5	Structural
831	Linden	9		5	Structural
834	Linden	11		5	Structural
836	Plum-Purple Leaf	12		5	Structural
837	Plum-Purple Leaf	11		5	Clean Structural
839	Plum-Purple Leaf	7		5	Structural
864	Spruce-Colorado Blue	15		5	• Clean
882	Hawthorn	8		5	CleanStructural
898	Crabapple	12		5	Structural
899	Crabapple	11		5	Structural
903	Spruce-Norway (7)	13		5	• Clean
904	Cherry-Flowering	16		5	Structural
905	Cherry	17		5	CleanStructural
906	Cherry	20		5	Structural
907	Cherry	18		5	CleanStructural
927	Pear-Callery	9		5	Structural
928	Pear-Callery	8		5	Structural
929	Pear-Callery	7		5	Structural
932	Oak-Pin	11		5	Structural
933	Oak-Pin	12		5	Raise: StreetStructural
934	Oak-Pin	12		5	Raise: StreetStructural
935	Oak-Pin	14		5	Raise: StreetStructural
936	Oak-Pin	12		5	Raise: StreetStructural
937	Oak-Pin	11		5	Raise: StreetStructural

Т			Overall	Tree	
Tree ID	Common Name	DBH	Risk	Care	Pruning Recommended
ID			Rating	Priority	
938	Pear-Callery	4		5	Structural
939	Maple-Norway	18		5	• Clean
	Maple Horway				Reduce: Branch weight, Sidewalk
941	Dogwood-Kousa	8		5	• Clean
942	Hawthorn	8		5	• Structural
942	пажинин	0		5	Structural Raise: Sidewalk
979	Pear-Callery	11		5	Structural
					Raise: Sidewalk
992	Crabapple	5		5	Structural
000		-		-	Raise: Sidewalk
993	Crabapple	7		5	Structural
1008	Spruce-Norway	8		5	Structural
1023	Maple-Sugar	6		5	Structural
1037	Maple-Sugar	3		5	Structural
1048	Maple-Red	3		5	Structural
1049	Maple-Red	2		5	Structural
1050	Maple-Red	2		5	Structural
1054	Oak-Northern Red	9		5	Structural
1063	Cherry	4		5	Structural
1064	Cherry	2		5	Structural
1065	Cherry	5		5	Structural
1066	Crabapple	7		5	Structural
1106	Crabapple	11		5	Structural
1107	Crabapple	11		5	Structural
1108	Plum-Purple Leaf	4		5	• Structural
1109	Plum-Purple Leaf	7		5	• Structural
1110	Plum-Purple Leaf	7		5	• Structural
1111	Crabapple	7		5	• Structural
1113	Chapple	9		5	• Structural
1115	Cherry-Black	17		5	• Structural
1116	Cherry Black	10		5 5	• Structural
1117 1136	Cherry-Black Cherry-Weeping	10 15		5	• Structural
1136	Pine-Umbrella	15 	•••	5	Structural Structural
1137	Maple-Japanese	6		5	Structural Structural
1142	Maple-Japanese	<u></u>	***	5	Structural Structural
1143	Maple-Sugar	4		5	• Structural
1150	Maple-Sugar	5	•••	5	• Structural
1151	Maple-Sugar	4		5	• Structural
1152	Maple-Sugar	4		5	• Structural
1154	Maple-Sugar	5		5	• Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1155	Maple-Sugar	4		5	Structural
1157	Maple-Sugar	5		5	Structural
1158	Maple-Sugar	4		5	Structural
1161	Maple-Red	11		5	Structural
1162	Maple-Red	3		5	Structural
1166	Maple-Red	5		5	Structural
1176	Hemlock-Canadian	6,5,4,3,2		5	Structural
1177	Cherry-Flowering	9		5	Structural
1178	Cherry-Flowering	10		5	Structural
1185	Pear-Callery	6		5	Raise: ParkingStructural
1194	Spruce-Norway	7		5	Structural
1195	Spruce-Norway	8		5	Structural
1199	Lilac-Japanese Tree	3,2,2		5	Raise: PathStructural
1205	Pear-Callery	13		5	Reduce: Overhead linesStructural
1207	Pine-Eastern White (10)	10		5	Reduce: Overhead lines
1238	Maple-Norway	14		5	Reduce: Overhead lines, BuildingStructural
1241	Pear-Callery	8	•••	5	Structural
1242	Pear-Callery	7		5	Structural
1243	Pear-Callery	8		5	Structural
1244	Pear-Callery	7		5	Structural
1245	Pear-Callery	7		5	Structural
1246	Pear-Callery	8		5	Structural
1247	Pear-Callery	9		5	Structural
1259	Pear-Common	4		5	Reduce: SidewalkStructural
1260	Maple-Norway	7		5	CleanStructural
1262	Maple-Japanese	5		5	Clean Structural
1278	Maple-Norway	19		5	Reduce: Branch weight, Street
1280	Redcedar-Eastern	15		5	Reduce: Overhead lines, StreetStructural
1281	Maple-Japanese	16		5	Structural
1282	Dogwood- Flowering	13		5	Clean Structural
1298	Catalpa-Northern	5		5	Structural
1301	Catalpa-Northern	6		5	Clean Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1302	Catalpa-Northern	6		5	CleanRaise: StreetStructural
1304	Crabapple	13		5	CleanStructural
1305	Pear-Callery	8		5	Structural
1306	Maple-Norway	9		5	Raise: StreetStructural
1307	Walnut-Black	11		5	CleanRaise: StreetStructural
1308	Dogwood- Flowering	13		5	CleanRaise: StreetStructural
1309	Dogwood- Flowering	13		5	• Raise: Street
1310	Dogwood- Flowering	14		5	CleanRaise: StreetStructural
1311	Cherry-Sargent (5)	4		5	Raise: StreetStructural
1312	Beech-American	9		5	Raise: StreetStructural
1315	Maple-Norway (3)	7		5	Raise: StreetStructural
1318	Spruce-Norway	6		5	Reduce: Overhead lines, Street
1319	Dogwood-Kousa	14		5	Raise: StreetStructural
1322	Hickory-Shagbark	10		5	Reduce: Sign blockageStructural
1325	Pine-Eastern White (3)	13		5	CleanReduce: StreetStructural
1326	Maple-Red	16,11		5	CleanReduce: StreetStructural
1329	Crabapple	14		5	CleanReduce: StreetStructural
1334	Redcedar-Eastern	9,8,8		5	Reduce: StreetStructural
1335	Hawthorn	5		5	Reduce: Overhead lines, Walking pathStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1339	Maple-Norway	13		5	CleanReduce: Parking, StreetStructural
1340	Maple-Norway	8		5	Reduce: StreetStructural
1341	Maple-Norway	7		5	CleanReduce: StreetStructural
1342	Maple-Norway	9		5	CleanReduce: StreetStructural
1343	Maple-Norway	13		5	CleanReduce: StreetStructural
1345	Redcedar-Eastern (3)	7		5	Reduce: Street
1346	Birch-River	6,6,5,3		5	Reduce: Street
1347	Maple-Red	5		5	Structural
1348	Maple-Red	5		5	Structural
1349	Birch-River	7,5,5,2		5	Reduce: StreetStructural
1350	Maple-Norway	12		5	Reduce: Street
1362	Maple-Norway	15		5	CleanReduce: StreetStructural
1363	Pear-Callery	9		5	Structural
1364	Pear-Callery	10		5	Structural
1365	Pear-Callery	9		5	Structural
1367	Pear-Callery	11		5	Structural
1370	Pear-Callery	11		5	Structural
1371	Maple-Red	10		5	Structural
1373	Maple-Red	12		5	Structural
1374	Maple-Red	12		5	Structural
1377	Maple-Red	16		5	Structural
1382	Maple-Red	16		5	Reduce: StreetStructural
1384	Maple-Red	16		5	Reduce: Branch weight, Street
1388	Pear-Callery	7		5	Structural
1389	Locust-Black	7		5	Structural
1392	Redcedar-Eastern (3)	6		5	Reduce: Street

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1393	Pear-Callery (4)	4		5	Reduce: SidewalkThinStructural
1408	Redcedar-Eastern	8,8		5	Reduce: SidewalkStructural
1414	Oak-Swamp White	9		5	Structural
1417	Magnolia- Cucumbertree	15		5	Reduce: Branch weight, SidewalkStructural
1425	Hemlock-Canadian (2)	12		5	CleanRaise: Sidewalk
1428	Plum-Purple Leaf (2)	7		5	Reduce: SidewalkStructural
1430	Pear-Callery	6		5	Structural
1431	Pear-Callery	4		5	Structural
1441	Honeylocust- Thornless Common	12		5	CleanReduce: StreetStructural
1450	Maple-Norway	13		5	CleanStructural
1462	Spruce-Norway (3)	7		5	CleanStructural
1478	Plum-Purple Leaf	3,3		5	Raise: StreetStructural
1479	Elm-American	8		5	Raise: StreetStructural
1482	Maple-Norway	12		5	Clean Reduce: Overhead lines
1484	Maple-Norway	9		5	Raise: StreetStructural
1489	Maple-Norway	7,7		5	Reduce: Overhead linesStructural
1510	Maple-Japanese	7		5	Structural
1514	Hemlock-Canadian (5)	9		5	Reduce: Maintain shapeStructural
1519	Hemlock-Canadian	6		5	Structural
1533	Maple-Red	3		5	Clean Structural
1534	Maple-Red	3		5	CleanStructural
1536	Maple-Red	3		5	Clean Structural
1537	Maple-Red	3		5	Clean Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1539	Maple-Red	6		5	Raise: Street, SidewalkStructural
1545	Maple-Red	4		5	Raise: Street, SidewalkStructural
1546	Maple-Red	6		5	Raise: Street, SidewalkStructural
1548	Maple-Red	14		5	Raise: Street, SidewalkStructural
1549	Maple-Red	6		5	Structural
1551	Maple-Red	7		5	Raise: Street, SidewalkStructural
1552	Maple-Red	8		5	Raise: Street, SidewalkStructural
1556	Maple-Red	3		5	Structural
1558	Maple-Red	7		5	Raise: Street, SidewalkStructural
1564	Maple-Red (2)	7		5	Raise: SidewalkStructural
1583	Maple-Red	7		5	Raise: Street, SidewalkStructural
1585	Maple-Norway	9		5	Raise: Street, SidewalkStructural
1587	Maple-Norway	11		5	Structural
1588	Maple-Red	10		5	Raise: StreetStructural
1592	Pear-Callery	7		5	Raise: Street
1608	Maple-Norway	14		5	Raise: StreetStructural
1609	Crabapple	14,11		5	CleanRaise: StreetStructural
1611	Maple-Silver	23		5	Reduce: Branch weight, Overhead linesStructural
1615	Hemlock-Canadian	13		5	Structural
1617	Linden	12		5	Raise: Street Structural
1618	Maple-Red	12		5	Raise: StreetStructural
1619	Maple-Norway	14		5	Structural
1620	Maple-Red	12		5	Structural
1621	Redcedar-Eastern	19		5	Reduce: Path, SidewalkStructural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1625	Linden	15		5	Raise: Street Structural
1631	Redcedar-Eastern	26		5	Clean Structural
1632	Redcedar-Eastern (4)	8		5	Reduce: Street, Branch weight Structural
1638	Cherry-Sargent	4		5	Raise: Street Structural
1639	Pear-Callery	4		5	Raise: Street Structural
1660	Plum-Purple Leaf	6		5	Raise: Street Structural
1668	Dogwood- Flowering	7,4		5	Clean Structural
1681	Maple-Norway	13		5	Raise: StreetStructural
1711	Hemlock-Canadian (2)	12		5	Reduce: Overhead lines, StreetStructural
1716	Maple-Red	6		5	Reduce: Street Structural
1717	Hickory-Shagbark	16		5	Reduce: Street Structural
1719	Dogwood- Flowering	8		5	Clean Structural
1721	Maple-Norway	11		5	Clean Structural
1722	Maple-Norway	7		5	Clean Structural
1725	Maple-Norway	7		5	Reduce: Overhead lines
1731	Crabapple	8		5	CleanReduce: StreetStructural
1748	Maple-Norway	8		5	Reduce: Branch weight, StreetStructural
1755	Crabapple	6		5	Structural
1756	Crabapple	5		5	Structural
1757	Redcedar-Eastern (4)	5		5	Reduce: Overhead lines
1770	Dogwood-Kousa	12		5	CleanStructural
1789	Maple-Norway	9		5	Structural
1790	Maple-Norway	9		5	Structural
1791	Maple-Norway	10		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1792	Dogwood- Flowering (3)	4		5	Structural
1795	Maple-Paperbark	7		5	Structural
1797	Dogwood- Flowering	6		5	Structural
1799	Witchhazel	14		5	Structural
1800	Pine-Eastern White	23		5	Raise: SidewalkStructural
1807	Spruce-Norway	6		5	Structural
1812	Spruce-Norway	7		5	Structural
1813	Spruce-Norway	8		5	Structural
1814	Spruce-Norway	8		5	Structural
1817	Spruce-Norway	9		5	Structural
1818	Spruce-Norway	10		5	• Structural
1829	Tuliptree	9,6		5	Structural
1830	Tuliptree	10		5	• Structural
1831	Tuliptree	12,4		5	Structural
1832	Birch-River	9		5	Structural
1833	Birch-River	5		5	Structural
1834	Birch-River	8		5	Structural
1840	Maple-Sugar	5		5	Structural
1844	Maple-Sugar	9		5	• Structural
1845	Maple-Sugar	6		5	Structural
1849	Hemlock-Canadian	4		5	Structural
1850	Hemlock-Canadian	6		5	Structural
1851	Hemlock-Canadian	6,2		5	• Structural
1856	Oak-Northern Red	23		5	Structural
1866	Spruce-Norway	9		5	Structural
1868	Spruce-Norway	9		5	Structural
1870	Spruce-Norway	9		5	Structural
1871	Spruce-Norway	12		5	Structural
1872	Spruce-Norway	9		5	Structural
1874	Spruce-Norway	11		5	Structural
1875	Spruce-Norway	12		5	Structural
1876	Spruce-Norway	12		5	Structural
1877	Spruce-Norway	10		5	Structural
1878	Spruce-Norway	9		5	Structural
1891	Cedar-White (2)	6,3		5	• Clean
1892	Redcedar-Eastern	13		5	Reduce: StreetStructural
1895	Maple-Red	12		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
1898	Maple-Red	13		5	Reduce: Branch weight, StreetStructural
1900	Cedar-White (2)	6		5	Reduce: SidewalkStructural
1911	Spruce-Norway	33		5	Structural
1917	Spruce-Colorado Blue	14		5	Structural
1918	Spruce-Norway	26		5	Structural
1919	Spruce-Norway	29		5	Structural
1920	Spruce-Colorado Blue	10		5	Structural
1921	Ash-Green	22		5	Structural
1923	Cherry-Weeping	13		5	Structural
1924	Pine-Eastern White	9,6		5	Structural
1925	Pine-Eastern White	16		5	Structural
1926	Pine-Eastern White	6		5	Structural
1927	Pine-Eastern White	13,10		5	Structural
1928	Spruce-Norway (5)	7		5	Structural
1930	Cherry-Black	26		5	Structural
1958	Ash-Green (2)	5		5	Reduce: Maintain shapeStructural
1974	Redcedar-Eastern	7		5	Structural
1977	Redcedar-Eastern	16		5	CleanReduce: Overhead lines
1998	Cedar-White	3		5	Reduce: Overhead linesStructural
2000	Hemlock-Canadian	6		5	Reduce: Maintain shapeStructural
2001	Dogwood- Flowering	8		5	Raise: Sidewalk Structural
2006	Maple-Norway	16		5	Structural
2011	Maple-Norway	11		5	Structural
2012	Maple-Norway	14		5	Structural
2014	Maple-Norway	21		5	Structural
2016	Honeylocust- Thornless Common	17		5	Structural
2017	Honeylocust- Thornless Common	20		5	Reduce: Branch weight, StreetStructural
2067	Spruce-Colorado Blue	9		5	CleanStructural
2101	Maple-Red	10		5	Structural
2160	Honeylocust- Thornless Common	6		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2163	Maple-Norway	15		5	Reduce: Overhead lines Structural
2175	Maple-Red	7		5	Raise: Sidewalk Structural
2185	Hawthorn	10		5	• Structural
2209	Maple-Norway	15		5	Structural
2210	Maple-Norway	8		5	Structural
2274	Pear-Callery	6		5	Structural
2275	Pear-Callery	7		5	Structural
2289	Maple-Red	12,8,4		5	Reduce: Branch weight, SidewalkStructural
2296	Pear-Callery	11		5	Structural
2306	Ash-Green	4		5	CleanStructural
2307	Ash-Green	13,6		5	CleanStructural
2308	Spruce-Colorado Blue	9		5	Clean Structural
2309	Spruce-Norway (4)	8		5	CleanRaise: ParkingReduce: SidewalkStructural
2311	Maple-Red	16		5	CleanStructural
2337	Dogwood-Kousa	6		5	Reduce: Building Structural
2352	Maple-Japanese	11		5	CleanReduce: StreetStructural
2355	Hemlock-Canadian (2)	10		5	Clean Structural
2373	Elm-American	6		5	Raise: Street, SidewalkStructural
2377	Maple-Japanese	16		5	CleanReduce: Overhead lines, StreetStructural
2378	Maple-Norway	15		5	Raise: StreetStructural
2380	Maple-Japanese (2)	6		5	Reduce: Overhead lines, StreetStructural
2382	Maple-Japanese	8		5	Reduce: Overhead lines, StreetStructural
2384	Pear-Callery	4		5	Structural

Tree ID	Common Name	DBH	Overall Risk Rating	Tree Care Priority	Pruning Recommended
2385	Pear-Callery	3		5	Structural
2386	Pear-Callery	4		5	• Structural
2387	Pear-Callery	4		5	• Structural
2388	Pear-Callery	3		5	Structural
2400	Sweetgum	9		5	Raise: PathStructural
2406	Spruce-Colorado Blue	15		5	CleanStructural
2409	Sweetgum	12		5	Raise: PathStructural
2415	Maple-Norway	10		5	Raise: PathStructural
2416	Maple-Norway	8		5	Raise: PathStructural
2417	Maple-Norway	9		5	Raise: PathStructural
2418	Maple-Norway	8		5	Raise: PathStructural
2431	Spruce-Norway (4)	7		5	Reduce: StreetStructural

Pruning interval matrix 2 is summarized by age class within an individual species. For a given species, if any trees were noted with the corresponding age classification, the recommended pruning interval is provided.

Common Name	New planting	Young	Semi-mature	Mature	Over- mature
Maple-Norway		Biennial	Triennial	On an As-needed Basis	Biennial
Pear-Callery		Biennial	Triennial	On an As-needed Basis	Biennial
Maple-Red		Biennial	Triennial	On an As-needed Basis	Biennial
Maple-Sugar		Biennial	Triennial	On an As-needed Basis	Biennial
Spruce-Norway		Triennial	On an As-needed Basis	On an As-needed Basis	
Oak-Northern Red		Biennial	Triennial	On an As-needed Basis	Biennial
Pine-Eastern White		Triennial	On an As-needed Basis	On an As-needed Basis	
Oak-Pin	Biennial	Biennial	Triennial	On an As-needed Basis	
Honeylocust-Thornless Common		Biennial	Triennial	On an As-needed Basis	
Linden		Biennial	Triennial		
Hemlock-Canadian		Triennial	On an As-needed Basis	On an As-needed Basis	Biennial
Zelkova-Japanese		Biennial	Triennial	On an As-needed Basis	
Crabapple		Biennial	Triennial	On an As-needed Basis	
Ash-Green		Biennial	Triennial	On an As-needed Basis	
Redcedar-Eastern		Triennial	On an As-needed Basis	On an As-needed Basis	
Maple-Silver		Biennial	Triennial	On an As-needed Basis	
Spruce-Colorado Blue		Triennial	On an As-needed Basis	On an As-needed Basis	
Cherry		Biennial	Triennial	On an As-needed Basis	
Catalpa-Northern		Biennial	Triennial	On an As-needed Basis	Biennial
Planetree-London		Biennial	Triennial	On an As-needed Basis	
Oak-English		Biennial	Triennial	On an As-needed Basis	
Dogwood-Flowering		Biennial	Triennial		
Hawthorn		Biennial	Triennial		
Cherry-Sargent		Biennial	Triennial	On an As-needed Basis	
Cedar-White		Triennial	On an As-needed Basis	On an As-needed Basis	
Poplar-Eastern		Biennial	Triennial	On an As-needed Basis	
Tree of Heaven		Biennial	Triennial	On an As-needed Basis	
Cherry-Black		Biennial	Triennial	On an As-needed Basis	
Maple-Japanese		Biennial	Triennial	On an As-needed Basis	
Plum-Purple Leaf		Biennial	Triennial	On an As-needed Basis	
Elm-American		Biennial	Triennial	On an As-needed Basis	
Willow		Biennial	Triennial	On an As-needed Basis	Biennial
Oak-White				On an As-needed Basis	
Dogwood-Kousa	Biennial	Biennial	Triennial	On an As-needed Basis	
Locust-Black		Biennial	Triennial	On an As-needed Basis	
Cherry-Flowering		Biennial	Triennial	On an As-needed Basis	
Birch-River		Biennial	Triennial		

Common Name	New planting	Young	Semi-mature	Mature	Over- mature
Juniper		Triennial			
Ash-White			Triennial	On an As-needed Basis	
Holly-English		Biennial			
Mulberry		Biennial	Triennial		
Pine-Austrian		Triennial	On an As-needed Basis	On an As-needed Basis	
Beech-American		Biennial	Triennial	On an As-needed Basis	
Tuliptree		Biennial	Triennial	On an As-needed Basis	
Hickory-Shagbark		Biennial	Triennial	On an As-needed Basis	
Walnut-Black		Biennial	Triennial	On an As-needed Basis	
Sweetgum		Biennial	Triennial		
Pine		Triennial			
Ginkgo		Triennial	On an As-needed Basis		
Lilac-Japanese Tree			Triennial		
Mulberry-White		Biennial	Triennial		
Cherry-Weeping		Biennial	Triennial		
Magnolia		Biennial	Triennial		
Oak-Swamp White		Biennial	Triennial		Biennial
Maple-Paperbark		Biennial			
Birch-Paper		Biennial	Triennial		
Birch-Gray			Triennial		
Yew-English			On an As-needed Basis	On an As-needed Basis	
Maple-Sycamore			Triennial		
Birch-Sweet				On an As-needed Basis	
Hornbeam-American			Triennial		
Hickory-Pignut				On an As-needed Basis	
Hickory-Mockernut		Biennial			
Redbud-Eastern			Triennial		
Witchhazel			Triennial		
Crapemyrtle-Common		Biennial			
Magnolia-Cucumbertree			Triennial		
Spruce-White			On an As-needed Basis		
Pear-Common		Biennial			
Pine-Umbrella		Triennial			
Cypress-Leyland			On an As-needed Basis		

STORM PREPAREDNESS AND RESPONSE PLANNING



STORM PREPARDNESS AND RESPONSE PLANNING

Storms happens, that's a fact. Being prepared can help make an overwhelming and uncontrollable situation, seem a lot more manageable. Having an Emergency Operations Plan (EOP) in place will help reduce the confusion and streamline the logistics of keeping the Village of Mount Kisco safe during severe weather. Significant weather events can cause trees to fail unexpectedly. Trees that have been identified with an *Overall risk rating* during the *Level 2 basic assessment* should be addressed right away to reduce any obvious risks. Mitigating known risks is a very important step to keeping people, infrastructure, and other trees safe during severe weather. The following section will give you guidelines on what should be a part of storm response plan.

An EOP created specifically for the community trees needs to be in place prior to any severe weather event to be effective. Below is information cited from Smart Trees Pacific "Urban Forestry Emergency Operations Planning Guide for Storm Response" (2013). A few topics that should be included in your EOP include:

- Planning- proper equipment, personnel and protocols.
- Safety- public safety and contractors with qualified EHAP personnel.
- Communications- chain of command.
- Contracts- storm response as well as proactive prevention.
- Inventory- managing and updating post event.
- Training- DPW crews and others involved in cleanup.
- Vegetative Debris- locations and methods for disposal.
- Vulnerability- removing largest risk trees.

Below is a detailed resource document to help create an Emergency Operations Plan:

• Smart Trees Pacific – "Urban Forestry Emergency Operations Planning Guide for Storm Response"

 $\frac{https://smarttreespacific.org/wp-content/uploads/UrbanForestry-EOP-Guide-printable-11-2013.pdf$

Tree Risk Assessment Report and Mitigation

As part of the inventory process, the Inventory Team conducts a *basic assessment (Level 2)* from the ground. While every tree poses a risk, typically *Low*, the trees in the following table were assigned *likelihood of failure, likelihood of the failed tree part impacting a target, and consequences* ratings in the field. The Inventory Team found conditions with these trees that posed a hazardous situation, prompting the arborists to go through the steps outlined in the Tree Risk Assessments, Limitations, and Glossary section of this plan. *Overall risk ratings* were then assigned to these trees.

The Tree Risk Table below summarizes the inventoried trees that were observed posing a hazardous situation during the course of the inventory. The table is organized first by *Overall Risk Rating* (highest to lowest), then by Tree Care Priority (ascending order), and finally by Tree ID (ascending order).

TREE RISK ASSESSMENT REPORT AND MITIGATION (48 Trees)

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
643	Honeylocust- Thornless Common	21	Good	High	Sidewalk	1	• Crown	Clean, Reduce, Raise		:	 Broken branch(s) Hanger Dead branches <=2 Overextended branch
854	Willow	50	Fair	High	Picnic table	1	• Crown • Stem	Clean, Reduce, Structural, Thin		ij	 Cavity-stem Cavity-branch Overextended branch Poor branch structure

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
996	Maple- Norway	17	Poor	High	Sidewalk	1	• Crown • Stem	Clean, Reduce, Structural			 Dead branches <=2 Hanger Broken branch(s) Cavity-branch Dieback (moderate) Overextended branch
5	Oak- Northern Red	28	Good	Moderate	Overhead lines	1	• Root	Clean, Reduce		Yes	Decay-Root flareDead branches >2Fungi/conks
166	Honeylocust- Thornless Common	22	Fair	Moderate	Street	1	• Crown • Root	Clean, Reduce, Raise	Cable		 Overextended branch Dead branches <= 2 Dieback (moderate) Decay-Root flare
168	Honeylocust- Thornless Common	19	Fair	Moderate	Street	1	• Crown	Clean, Reduce			 Dead branches <=2 Broken branch(s) Dieback (moderate) Overextended branch Wound-root
169	Honeylocust- Thornless Common	22	Fair	Moderate	Street	1	• Crown	Clean, Reduce			 Dead branches <=2 Dieback (moderate) Overextended branch Broken branch(s)
180	Honeylocust- Thornless Common	21	Good	Moderate	Street	1	• Crown	Clean, Reduce, Raise			Dead branches <=2Dieback (moderate)Overextended branch

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
375	Honeylocust- Thornless Common	25	Good	Moderate	Path	1	• Crown	Clean, Raise			Dead branches <=2Dieback
863	Willow	46	Fair	Moderate	Path	1	• Crown • Stem	Clean, Reduce, Structural, Thin			 Overextended branch Cavity-branch Cavity-stem Dead branches <=2 Co-dominant leaders Decay-Stem
1328	Maple-Silver	32,21,12	Good	Moderate	Overhead lines	1	• Stem	Clean, Reduce, Structural, Thin	Cable		 Included bark Co-dominant stems Cavity-root flare Decay-Stem Dead branches <=2 Cavity-branch
1459	Oak- Northern Red	48,13	Good	Moderate	Overhead lines	1	• Crown • Stem	Clean, Reduce, Structural	Cable		 Co-dominant stems Co-dominant leaders Overextended branch Dead branches <=2 Wound-branch Cavity-branch

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
1560	Maple-Red	20	Fair	Moderate	Overhead lines	1	• Stem • Root	Clean, Reduce, Structural		Yes	 Buried root collar Girdling roots present (moderate) Uneven crown Lean Included bark Co-dominant leaders
2187	Ash-Green	23	Good	Moderate	Overhead lines	1	CrownStemRoot	Clean, Reduce, Structural		Yes	 Low live crown ratio Cavity-branch Co-dominant leaders Dead branches <= 2 Hanger
2225	Oak-Pin	19	Good	Moderate	Sidewalk	1	• Crown	Clean, Reduce, Structural		Yes	 Broken branch(s) Hanger Dead branches <=2 Overextended branch Poor branch structure
1676	Maple- Norway	25	Good	Moderate	Building	2	• Stem • Root	Reduce, Structural			 Cavity-root flare Uneven crown Overextended branch Poor branch structure

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
2258	Catalpa- Northern	19	Good	Moderate	Building	2	• Stem • Root	Reduce, Structural		Yes	 Growing against object Girdling roots suspected Buried root collar Poor branch structure Uneven crown Overextended branch
6	Oak- Northern Red	24	Fair	Low	Sidewalk	1	• Root	Clean, Structural		Yes	 Overextended branch Low live crown ratio Girdling roots present
62	Maple- Norway	29	Fair	Low	Sidewalk	1	• Stem	Clean, Reduce, Structural			Cavity-branchCavity-stemDieback
150	Maple-Red	16	Fair	Low	Sidewalk	1	• Stem • Root	Clean, Reduce, Raise	Cable	Yes	 Wound-root flare Wound-stem Dead branches <=2 Overextended branch Girdling roots suspected Uneven crown

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
162	Oak-Pin	29	Fair	Low	Sidewalk	1	• Crown	Clean, Reduce, Structural			 Girdling roots present Poor branch structure Overextended branch Included bark Dead branches <=2 Uneven crown
273	Oak-Pin	20	Fair	Low	Street	1	• Stem • Root	Clean, Reduce, Raise		Yes	 Girdling roots present (severe) Wound-root flare Dead branches <=2 Dieback (moderate) Poor branch structure
297	Maple-Red	20	Fair	Low	Sidewalk	1	• Crown • Stem	Clean, Reduce			 Topping/heading cuts Broken branch(s) Hanger Cavity-branch Cavity-stem Overextended branch
419	Oak- Northern Red	13	Fair	Low	Sidewalk	1	• Stem • Root	Clean, Reduce, Raise		Yes	 Dead branches <=2 Buried root collar Girdling roots suspected Overextended branch Hanger

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
618	Ash-White	37	Good	Low	Overhead lines	1	• Stem • Root	Clean, Reduce		::	 Cavity-root flare Cavity-root Dead branches <=2 Overextended branch Included bark
626	Ash-White	25	Fair	Low	Overhead lines	1	• Crown • Stem	Clean, Reduce			Cavity-stemCavity-branchDead branches <=2
672	Tuliptree	38	Good	Low	Sidewalk	1	• Crown	Clean, Reduce			 Dead branches <=2 Co-dominant leaders Overextended branch Dieback (moderate)
1460	Maple-Silver	19,18,16	Good	Low	Overhead lines	1	• Crown • Stem	Clean, Reduce	Cable		 Cavity-stem Co-dominant stems Cavity-branch Dead branches <=2 Hanger Overextended branch
1550	Maple-Red	24	Fair	Low	Overhead lines	1	• Crown • Stem	Clean, Reduce	Cable		 Dead branches <=2 Cavity-branch Overextended branch Included bark Co-dominant leaders Cavity-stem

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
1847	Maple-Red	36	Good	Low	Parking	1	• Stem	Structural	Cable		 Butt swell Overextended branch Hanger Dead branches <= 2 Co-dominant stems Decay-Root flare
2042	Poplar- Eastern	29	Fair	Low	Street	1	• Stem • Root	Clean, Reduce, Structural		Yes	 Uneven crown Decay-Root flare Decay-Stem Overextended branch Poor branch structure Dead branches <=2
2358	Maple- Norway	31	Good	Low	Street	1	• Crown • Stem	Clean, Reduce, Structural			 Overextended branch Included bark Co-dominant leaders Cavity-branch Sweep Dead branches <=2
631	Maple- Norway	28	Good	Low	Street	2	• Crown • Stem	Clean, Reduce			Cavity-stemCavity-branchDead branches <=2Poor branch structure

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
889	Pear-Callery	22	Good	Low	Sidewalk	2	• Crown • Stem	Clean, Reduce, Raise, Structural	Cable	Yes	 Overextended branch Included bark Wound-stem Cavity-stem Broken branch(s)
991	Maple- Norway	25	Good	Low	Overhead lines	2	• Stem • Root	Clean, Reduce, Structural		 .	 Overextended branch Co-dominant leaders Uneven crown Broken branch(s) Wound-root flare Poor branch structure
1209	Maple- Norway	22	Good	Low	Parking	2	• Stem • Root	Clean		Yes	 Girdling roots present (moderate) Decay-Root flare Decay-Stem Co-dominant leaders Dead branches <=2 Included bark

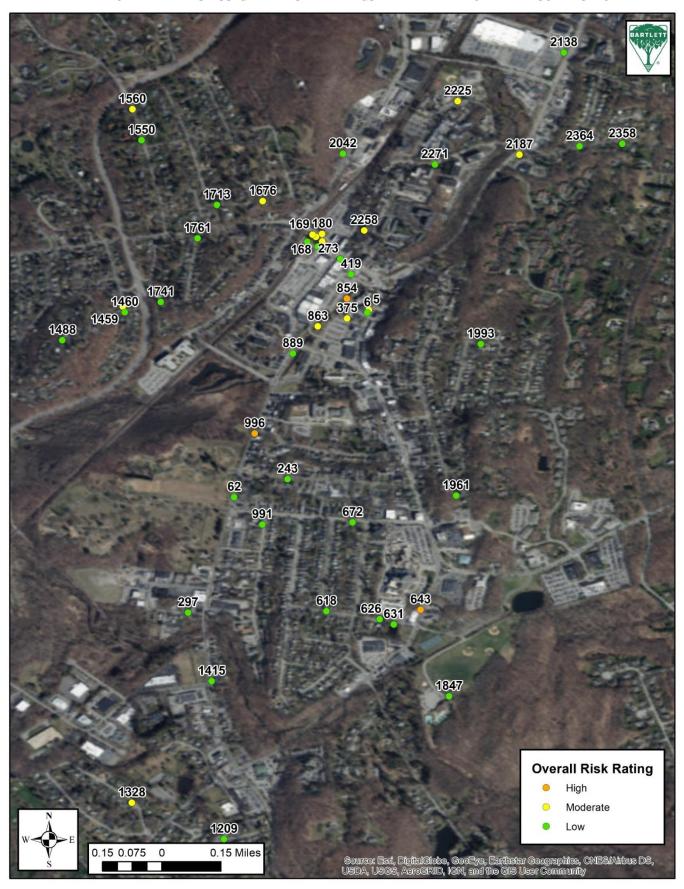
Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
1415	Maple-Silver	31	Good	Low	Street	2	• Stem • Root	Reduce	Cable	;	 Construction damage Wound-root Cavity-branch Co-dominant leaders Overextended branch Cavity-stem
1713	Maple- Norway	32	Good	Low	Overhead lines	2	• Crown • Stem	Clean, Reduce, Structural	Cable		 Overextended branch Co-dominant leaders Cavity-branch Cavity-stem Seam Dead branches <=2
1741	Maple-Silver	38,36	Fair	Low	Building	2	• Crown • Stem	Clean, Reduce, Structural	Cable		 Overextended branch Dead branches <= 2 Co-dominant stems Decay-Stem Cavity-branch Uneven crown

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
1761	Maple-Silver	42	Fair	Low	Overhead lines	2	• Crown • Stem	Clean, Reduce, Structural			 Overextended branch Cavity-branch Topping/heading cuts Dead branches <=2 Co-dominant leaders
1961	Maple-Silver	38	Good	Low	Driveway	2	• Stem	Clean			Cavity-stemDead branches <=2Girdling rootspresentStorm damage
1993	Maple-Red	29	Good	Low	Parking	2	• Crown • Stem	Clean, Reduce, Structural	Cable	Yes	 Cavity-stem Dead branches <=2 Hanger Included bark Girdling roots present
2271	Maple- Norway	25	Fair	Low	Overhead lines	2	• Stem • Root	Clean, Reduce, Raise, Structural		Yes	 Buried root collar Poor branch structure Overextended branch Included bark Cavity-branch Dead branches >2

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Structural Support	Root Collar Excavation	Defect(s) or Observation(s)
243	Maple- Norway	42	Good	Low	Street	3	• Stem • Root	Reduce, Raise	Cable		 Poor branch structure Overextended branch Cavity-stem Growing against object Pavement/curbing damage
1488	Hickory- Shagbark	19,18	Good	Low	Street	3	• Stem • Root	Reduce		Yes	 Buried root collar Included bark Co-dominant stems Overextended branch Cavity-root flare
2138	Linden	13	Fair	Low	Sidewalk	3	• Root	Reduce, Structural		Yes	LeanUneven crownOverextended branchIncluded bark
2364	Maple- Norway	21	Good	Low	Building	3	• Stem • Root	Reduce, Structural		Yes	 Buried root collar Poor branch structure Overextended branch Uneven crown Sweep

Tree ID	Common Name	DBH	Condition	Overall Risk Rating	Primary Target	Tree Care Priority	Advanced Assessment	Pruning	Sunnari	Root Collar Excavation	Defect(s) or Observation(s)
278	Zelkova- Japanese	13	Good	Low	Street	5	• Stem • Root	Raise, Structural		Yes	 Girdling material Growing against object Decay-Root flare Poor branch structure

INVENTORIED TREES ASSIGNED RISK RATINGS AT THE TIME OF DATA COLLECTION



INVASIVE SPECIES PREPAREDNESS AND RESPONSE



INVASIVE SPECIES PREPARDNESS AND RESPONSE

The tree species below are listed as invasive by the New York Department of Environmental Conservation website. The invasive species identified in the inventory were:

Genus	Species	Common Name	Number of Trees
Acer	platanoides	Maple-Norway	419
Acer	pseudoplatanus	Maple-Sycamore	1
Robinia	psuedoacacia	Locust-Black	15
Grand Total			435

The i-Tree Eco application was also able to summarize the number of trees potentially at risk for known pests and diseases for the species identified in the Village of Mount Kisco. i-Tree Eco analyzes 36 pests and diseases, not all of which had a host tree species in the Village of Mount Kisco. Below is a table that includes a summary of potential pests in this area:

Scientific Name	Common Name	Trees at Risk (#)
Anoplophora glabripennis	Asian Longhorned Beetle	1,072
Lymantria dispar	Gypsy Moth	735
Ceratocystis fagacearum	Oak Wilt	232
Dendroctonus frontalis	Southern Pine Beetle	188
Tomicus piniperda	Pine Shoot Beetle	136
Dendroctonus rufipennis	Spruce Beetle	103
Dendroctonus ponderosae	Mountain Pine Beetle	71
Sirex noctilio	Sirex Wood Wasp	65
Agrilus planipennis	Emerald Ash Borer	55
Cronartium ribicola	White Pine Blister Rust	53
Discula destructiva	Dogwood Anthracnose	38
Euwallacea nov. sp.	Polyphagous Shot Hole Borer	26
Adelges tsugae	Hemlock Woolly Adelgid	20
Ophiostoma novo-ulmi	Dutch Elm Disease	14
Neonectria faginata	Beech Bark Disease	8
Geosmithia morbida	Thousand Canker Disease	7
Ips perturbatus	Northern Spruce Engraver	1

Below are resources document to help create a plan for managing invasive plants:

- U.S. Fish & Wildlife Service "Plans for Managing Invasive Plants" https://www.fws.gov/invasives/staffTrainingModule/planning/plans.html
 - New York State Department of Environmental Conservation "Invasive Species Regulations"

https://www.dec.ny.gov/animals/99141.html

• New York State Prohibited and Regulated Plants – "Invasive Plants" https://www.dec.ny.gov/docs/lands forests pdf/isprohibitedplants2.pdf

TREE PLANTING OPPORTUNITIES



TREE PLANTING OPPORTUNITIES

Tree planting is essential for sustaining the economic, environmental, and social benefits provided by the Village of Mount Kisco's urban forest. In a traditional forest setting, natural regeneration and succession allow young trees to take over when over-mature trees decline and fall. In the urban forest, city infrastructure and understory landscaping typically prevent this natural process from occurring. As a result, it is the responsibility of urban forest managers to plant the next generation. This can happen reactively by planting a new tree whenever another is removed, or it can happen proactively by starting new cohorts around damaged or declining trees that will soon need to be replaced. Either way, it is important to note that the benefits of a mature tree far outweigh those of a recently planted tree, so a 1:1 ratio of removal to planting is not a sustainable way to maintain the benefits provided by the total urban forest.

Volunteer tree planting events are a great way to engage the community and offset the loss of multiple tree removals. However, any planting event should be carefully planned and plant material should be carefully selected. All of the following factors should be considered when selecting tree species for new plantings: soil type, soil volume, proximity to infrastructure and overhead lines, design intent, desired benefits, etc.

Native vs. non-native is another key element to consider in planting efforts. Native trees have significant value in the landscape, especially in natural areas large enough to sustain wildlife populations. However, non-native trees can sometimes be hardier and more apt to survive in tough urban conditions. Bottom line: a diverse landscape is usually healthier and less susceptible to widespread pest or disease outbreaks.

Below are links to a few resources that can help select an appropriate species for a given site:

- University of Florida "Tree selection for urban and suburban landscapes" http://hort.ifas.ufl.edu/woody/selection.shtml
- Virginia Tech "Urban Street Tree Selector" <u>http://dendro.cnre.vt.edu/dendrology/treeselector.cfm</u>

To assist with where new plantings may be needed or warranted, several summaries and maps are provided below.

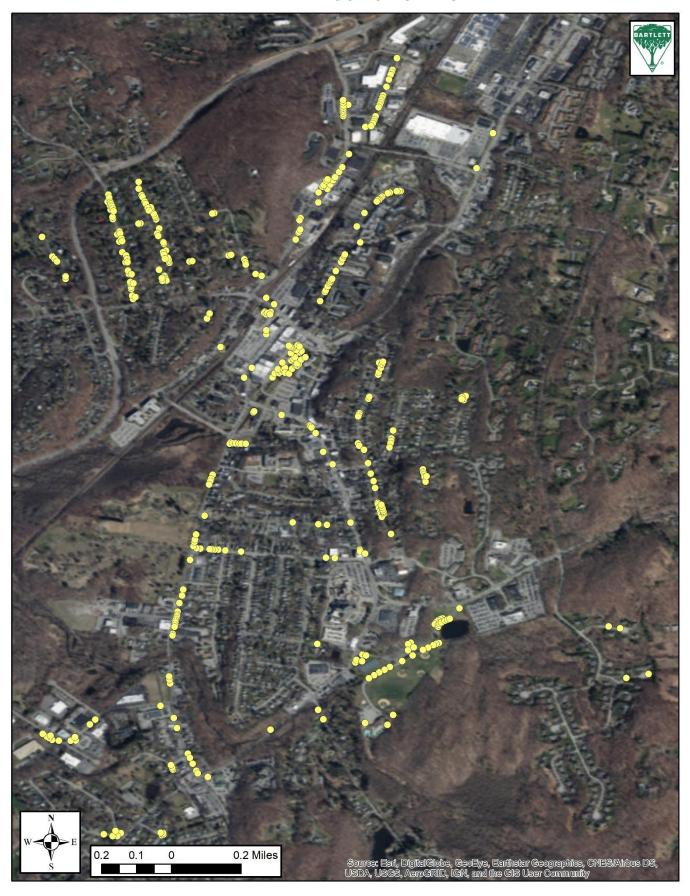
TREES OF CONCERN

Reason for Concern	Quantity	% of Total
Dead	27	<1%
Over-mature in Poor Condition	2	< 1%
Mature in Poor Condition	20	<1%
Trees Recommended for Removal	156	5%

A relative performance index (RPI) was calculated for all tree species inventoried in the Village of Mount Kisco. This protocol was adopted from Vibrant Cities Lab (www.vibrantcitieslab.com) and provides a metric of the benefits a tree species provides in a community. For a single species, the percenage of all the trees in good condition are summed, and then divided by the percentage of all trees in good condition throughout the entire population. This system states that for tree species with an RPI of 1.0 or higher will generally provide more benefits to the community, which may make them better candidites for species selection for new plantings. The RPI for all species that make up 2% or more of the total number of tree inventoried for the Village of Mount Kisco are summarized below (excluding most cultivars):

Genus	Species	Common Name	% Distribution Total	Relative Performance Index
Acer	platanoides	Maple-Norway	15%	0.99
Acer	rubrum	Maple-Red	12%	1.11
Acer	saccharum	Maple-Sugar	8%	1.13
Fraxinus	pennsylvanica	Ash-Green	2%	0.71
Gleditsia	triacanthos	Honeylocust- Thornless Common	3%	0.91
Juniperus	virginiana Redcedar-Eastern		2%	0.8
Malus	sp	Crabapple	2%	0.78
Picea	abies	Spruce-Norway	4%	1.16
Picea	strobus	Pine-Eastern White	3%	0.93
Pyrus	calleryana	Pear-Callery	12%	1.17
Quercus	palustris	Oak-Pin	3%	1.03
Quercus	rubra	Oak-Northern Red	4%	1.07
Tilia	sp	Linden	2%	1.27
Tsuga	canadensis	Hemlock-Canadian	2%	0.54
Zelkova	serrata	Zelkova-Japanese	2%	1.01

TREE PLANTING OPPORTUNITIES



TREE PRESERVATION STANDARDS



TREE PRESERVATION

Tree preservation typically takes place in the urban forest because of a development project or there is a tree with significant value. Simple preventative measures can be taken to help ensure that a tree has an opportunity to thrive long after a construction project or a high value tree in a prominent location can continue to grow. Chapter 99 Article 1 and Article 2 of the Village of Mount Kisco, NY Code, states current ordinaces pertaining to tree preservation. Below are recommendations that should be considered during a tree preservation project.

Restrict Public Access

During a tree preservation project whether it is a historical site or a construction zone, the best way to keep the tree as healthy as possible is to keep as many people and machines away as possible. Simply restricting public access to the tree can reduce the chances of many potential negative effects to the tree, such as soil compaction and mechanical damage.

Crown Reduction

When trees start to the reach the over-mature age they may start to show signs of retrenchment throughout the exterior of the crown. The tree may not be as vigorous as it was many years ago, so it starts to naturally decline and reduce its overall size. Arborists can help encourage this process by doing selective crown reduction. By reducing the specific branches of an over-mature tree, it can reduce the potential of failure of any overextended branches, effectively keeping the tree from injuring other tree parts.

Critical Root Zones

The critical root zone is identified as the area under the tree that extends from the trunk to the furthest branch. This area contains the network of roots that keep the tree healthy. Disrupting the critical root zone will eventually cause decline symptoms in the future. During tree preservation, it is important that the critical root zone remain undisturbed.

Tree Protection Zones

Installing a tree protection zone can limit the amount of foot or vehicle traffic over a trees critical root zone. This will lead to a reduction in soil compaction at the base of the tree. A tree protection zone can be as simple as an orange construction fence or as permanent as a decorative iron fence. The goal of the tree protection zone is to limit the access and disturbance of the trees root system. In the event that a fence cannot be installed, one simple way to protect a critical root zone is to apply an 8 to 12-inch thick layer of arborist chips under the trees dripline.

Permanent Fencing and Signage

Installing signage to educate the public or construction workers about tree preservation goes a long way. Once people understand basic facts about trees and their root system, they will be more likely to cooperate with the tree preservation process.

Pre and Post-care

Managing tree preservation needs to happen at the beginning of any development project. Installing tree protection zones and educating construction workers of the importance of the critical root zone needs to be a part of every project before it starts. Managing the tree after the site is completed is also important. Preserved trees should have the surrounding soil managed with complete prescription soil management to increase vigor. Supplemental irrigation may be necessary during dry periods due to the root loss. As trees age they become less vigorous and more susceptible to insects and diseases. Preserved trees should be monitored and sometimes preventatively treated for species-specific insects and diseases.

- Plant Native http://www.plantnative.org/rpl-ncsc.htm
- Mount Kisco, NY Code, Chapter 99 Tree Preservation https://ecode360.com/10862673

TREE REMOVAL CRITERIA



TREE REMOVAL CRITERIA

All efforts should be exhausted before tree removal is decided upon. The Village of Mount Kisco Tree Preservation Board requiring an arborist report from an ISA Certified Arborist and/or ASCA Registered Consulting Arborist for tree removal permits as they deem necessary is an excellent way to ensure an objective decision. Chapter 99-4 of the Mount Kisco Code state all the current regulations pertaining to tree removal.

Tree Removal

Trees may be removed for several reasons including but not limited to:

- The tree is dead:
- The tree is in poor condition and thought to be beyond rehabilitation;
- The tree has significant structural weaknesses that cannot be addressed;
- The tree is already or will interfere with infrastructure (overhead lines for example) and no tree related activities can be performed without irreversible damage to tree health:
- The tree species has been declared an invasive for the Village of Mount Kisco area and under regulation must be removed.

Cities where utility lines are overhead and not buried create unique challenges when it comes to trees, especially large maturing trees, are in close proximity to them. Utility lines have to have so much clearance from other objects, so, oftem times the trees close to them conitue to be pruned back. This reoccurring pruning can cause damage to trees and leave trees with uneven crowns. In situations in the Village of Mount Kisco where there are large maturing trees underneath or next to overhead utility lines, and they have to be continually pruned back, planning for tree removal may be the best option. Removing the tree can help eliminate the amount of time and money spent to prune the same tree time and time again, provides an opportunity to plant smaller maturing trees, and end up with a more aesthetically pleasing specimen.

Steps to Take Before Tree Removal

Provide a Level 2 Basic Assessment as defined in the International Society of Arboriculture's (ISA) Best Management Practices for Tree Risk Assessment and ANSI A300 Tree Risk Assessment Standard on the subject tree. This process should include documentation using the International Society of Arboriculture (ISA) Basic Tree Risk Assessment Form.

Provide a Level 3 Advanced tree risk assessment as defined in the International Society of Arboriculture's (ISA) Best Management Practices for Tree Risk Assessment and ANSI A300 Tree Risk Assessment Standard on the subject tree. This process should include documentation using the International Society of Arboriculture (ISA) Basic Tree Risk Assessment Form. Level 3 Advanced tree risk assessments may include climbing inspections, examination of the root system using a compressed-air tool (that avoids damage to roots and underground

utilities), or one or more of the following: resistance drilling, using a resistograph (a precision drilling instrument that provides graphical output), or sonic tomography (produces a visual representation of internal conditions based on how sound moved through the tree).

Potential Alternatives to Tree Removal

Transplanting

If the identified tree has been planted in a poor location and is healthy, transplanting the tree may be an option. If the City Arborist deems it as a practical alternative, relocating the tree should be discussed. Any relocation of a tree should follow the guidelines set forth in the *International Society of Arboriculture's (ISA) Best Management Practices for Tree Planting* and *American National Standards Institute A300 Transplanting Standard – Part 6*.

Root Pruning/Root Barriers

If the interaction between a tree's roots are negatively affecting a structure's foundation or utility, recommendations for root pruning should be considered to reduce the future conflict between the roots and infrastructure. The installation of root barriers may be considered to help reduce future damage.

Site/Pedestrian Restriction

In the event that a tree is located in a high traffic area is identified for removal, but is healthy or its value is significant, restricting access to the site should be considered before removal.

Redesign Current Infrastructure

In specific circumstances, a tree's value may take precedence over an infrastructure's current location. If an infrastructure interaction is unable to be remedied by any other approach, redesign of the current infrastructure should be considered. This includes, but is not limited to, utilities, sidewalks, and building structures.

The trees listed in the table below are recommended for removal from the 2018 Tree Inventory: $\frac{1}{2}$

INVENTORIED TREES RECOMMENDED FOR REMOVAL (156 Trees)

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
32	Maple- Norway	15		Poor	1	 Crack-stem Lean Overextended branch
52	Maple- Norway	16		Poor	1	Dead branches <= 2Girdling roots present (severe)Decay-Stem
90	Oak-Pin	18		Poor	1	 Girdling material Dead branches <= 2 Dieback (severe)
170*	Pine-Eastern White	14		Poor	1	
174	Ash-Green	12		Fair	1	 Co-dominant stems Dead branches <= 2 Dieback (severe) Broken branch(s)
177	Ash-Green	10		Fair	1	Low live crown ratioDead branches <=2Crack
264	Ash-Green	14		Poor	1	 Girdling material Growing against object Dead branches <=2 Dieback (severe)
379	Pine-Austrian	19		Poor	1	Dead branches <= 2Dieback (moderate)Hanger
633	Maple- Norway	18		Poor	1	Decay-Root flareDieback (severe)Dead branches <=2
1822	Oak-Northern Red	34		Poor	1	Wound-root flareDieback (severe)Flush cutsTopping/heading cuts
1905	Elm- American	11		Dead	1	
1906	Elm- American	7		Dead	1	

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
1947	Maple-Red	25		Fair	1	 Buried root collar Crack-stem Decay-Branch Cavity-stem Lean Dieback
1965*	Maple- Norway	11		Good	1	 Lean Wound-stem Uneven crown Topping/heading cuts Uneven crown Flush cuts
1966*	Maple- Norway	8		Good	1	 Wound-root flare Girdling roots present Poor branch structure Lean Uneven crown
1967*	Maple- Norway	7		Good	1	LeanWound-stemPoor branch structureUneven crown
1969	Maple-Red	42		Fair	1	 Cavity-stem Storm damage Included bark Wound-stem Co-dominant leaders
1971*	Maple- Norway (4)	3		Good	1	• Suppressed
1975	Spruce- Norway	19		Good	1	Wound-stemDecay-Root flareDecay-StemLean
1990*	Maple-Sugar (2)	4		Good	1	Topping/heading cutsCo-dominant stemsPoor branch structure
1999*	Maple- Norway (2)	4		Good	1	Co-dominant leadersIncluded bark
2066	Maple- Norway	13		Dead	1	
2082	Poplar- Eastern	17		Dead	1	
2165	Ash-Green	21		Poor	1	Dieback (severe)Dead branches <=2

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
2284	Pine-Eastern White	25		Poor	1	 Uneven crown Dead branches <=2 Dieback (moderate) Broken branch(s) Overextended branch
2301	Maple- Norway	12		Good	1	 Crack-stem Flush cuts Buried root collar
2305*	Elm- American	23		Poor	1	Dieback (severe)HangerIncluded bark
2424	Tree of Heaven	16		Dead	1	Dead branches <=2Hanger
163	Pine-Eastern White	18		Poor	2	Low live crown ratioUneven crownOverextended branch
175	Ash-Green	12		Fair	2	 Dead branches <=2 Co-dominant stems Broken branch(s) Dieback (severe)
183	Maple- Norway	13		Poor	2	Dead branches >2Dieback (severe)Decay-Stem
187*	Maple- Norway	12		Fair	2	 Uneven crown Low live crown ratio
262	Zelkova- Japanese	7		Poor	2	Dead branches >2Dieback (severe)Suppressed
366	Pear-Callery	7		Poor	2	Dieback (moderate)Poor branch structureDead branches <=2
677	Maple- Norway	22		Fair	2	 Decay-Stem Crack Overextended branch Dead branches <=2 Poor branch structure Uneven crown
700	Spruce- Norway	12		Poor	2	Dead branches <=2Dieback (severe)
822	Cherry	13		Dead	2	Wound-root flareWound-stem

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
860	Pine-Austrian	13		Poor	2	Dieback (severe)Dead branches <=2Suppressed
878	Pear-Callery	10		Poor	2	Broken branch(s)Dead branches <=2Dieback (severe)
879	Pear-Callery	10		Poor	2	Dieback (severe)Dead branches <=2
880	Pear-Callery	10		Poor	2	Dieback (severe)Dead branches <=2
951*	Ash-Green	31		Poor	2	DiebackDecay-Root flareDecay-Stem
954*	Ash-Green	42		Poor	2	 Buried root collar Co-dominant stems Dieback Dead branches <=2 Decay-Branch Decay-Stem
955*	Ash-Green	32		Poor	2	Co-dominant stemsDiebackBuried root collar
956*	Ash-Green	38		Poor	2	Cavity-branchDecay-StemDieback
957*	Ash-Green	35		Poor	2	Buried root collarDieback (moderate)Co-dominant stemsPoor branch structure
1032	Maple-Sugar	7		Dead	2	
1088	Maple-Sugar	16		Poor	2	 Girdling roots present (severe) Dieback (severe)
1112	Crabapple	9		Poor	2	Decay-Root flareLeanWound-root flare
1135*	Beech- American	31		Poor	2	 Decay-Branch Dieback (severe) Decay-Stem Decay-Root flare Uneven crown

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
1240	Maple- Norway	18		Poor	2	 Dead branches <=2 Dieback (severe) Included bark Co-dominant stems Uneven crown
1266*	Locust-Black	16		Poor	2	 Buried root collar Decay-Root flare Decay-Stem Low live crown ratio Overextended branch Sweep
1272	Elm- American	17		Poor	2	 Dead branches <=2 Dieback (moderate) Included bark Overextended branch
1273	Plum-Purple Leaf	11		Poor	2	 Girdling roots present Uneven crown Sweep Low live crown ratio
1354	Poplar- Eastern	17		Poor	2	Low live crown ratioDead branches <=2Overextended branch
1421	Cherry- Sargent	12		Dead	2	• Cavity-stem
1490	Maple- Norway	12		Dead	2	
1515	Hemlock- Canadian	11		Dead	2	
1516	Hemlock- Canadian	8		Dead	2	
1573	Maple- Norway	16		Fair	2	Cavity-branchDead branches >2Decay-StemIncluded bark
1623	Maple-Red	15		Fair	2	 Pavement/curbing damage Lean Soil heaving Decay-Root Decay-Stem Dead branches <=2
1627	Redcedar- Eastern	29		Poor	2	Included barkDead branches <=2Co-dominant leadersDecay-Stem

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
1651	Ash-Green	9		Poor	2	Dead branches <=2Dieback (moderate)
1696*	Maple- Norway	10		Fair	2	 Uneven crown Overextended branch Cavity-branch
1701*	Maple- Norway	12		Fair	2	 Uneven crown Overextended branch Cavity-branch Broken branch(s) Topping/heading cuts
1744	Maple- Norway	12		Fair	2	 Overextended branch Uneven crown Included bark Dead branches <=2
1754	Maple-Silver	27		Fair	2	 Overextended branch Low live crown ratio Cavity-stem Lean Wound-root
1765	Pine-Eastern White	15		Poor	2	• Dieback (severe)
1767	Oak-Northern Red	14		Poor	2	Decay-StemPoor branch structurePavement/curbing damage
1768	Oak-Northern Red	13		Poor	2	 Dead branches <=2 Dieback (moderate) Poor branch structure Pavement/curbing damage
1904*	Ash-Green (3)	4		Fair	2	Topping/heading cutsPoor branch structureOverextended branch
1916	Maple- Norway	11		Poor	2	Co-dominant stemsDecay-StemGirdling roots present (severe)
1949	Hemlock- Canadian	29		Poor	2	Dieback (severe)
2026	Dogwood- Flowering	6		Dead	2	
2056	Pine-Eastern White	8		Dead	2	
2059	Pine-Eastern White	11		Dead	2	

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
2068	Pine-Eastern White	11		Dead	2	
2070	Pine-Eastern White	7		Dead	2	
2072	Spruce- Colorado Blue	6		Dead	2	
2073	Cherry-Black	20		Poor	2	Dead branches <=2Dieback (severe)
2074	Pine-Eastern White	10		Dead	2	
2162	Maple- Norway	15		Poor	2	 Buried root collar Dieback (moderate) Dead branches <=2 Uneven crown
2200	Maple-Sugar	13		Dead	2	
2247	Maple- Norway	15		Poor	2	Dieback (severe)Dead branches <=2
2265	Maple- Norway	12		Poor	2	Dead branches <=2Dieback (severe)
2323	Maple- Norway	11		Fair	2	 Cavity-branch Cavity-stem Dead branches <=2 Dieback (moderate)
2325	Maple-Silver	21		Poor	2	 Included bark Co-dominant stems Poor branch structure Dead branches <=2 Dieback (severe) Cavity-branch
2326*	Maple-Silver	7		Poor	2	Dead branches <=2DiebackGrowing against object
2342	Maple- Norway	9		Dead	2	
2343*	Ash-Green	16		Fair	2	 Growing against object Girdling roots present (severe) Poor branch structure Low live crown ratio Dead branches <=2
2354	Spruce- Colorado Blue	12		Poor	2	LeanDead branches <=2Dieback (moderate)

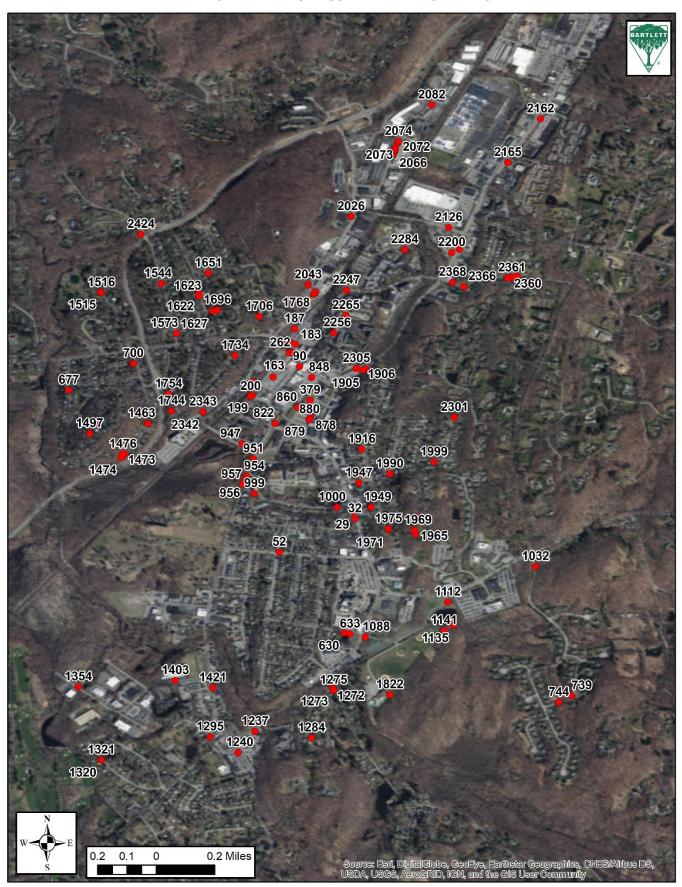
Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
2357*	Maple- Norway	21		Fair	2	 Growing against object Cavity-stem Cavity-branch Overextended branch Uneven crown Dead branches <=2
2359*	Maple- Norway	14		Fair	2	 Uneven crown Lean Overextended branch Dead branches >2 Cavity-branch
29	Cherry	3		Poor	3	Buried root collarDieback (severe)
130	Maple-Red	3		Dead	3	
199	Catalpa- Northern	28		Fair	3	Cavity-root flareCavity-stemBroken branch(s)Cavity-branch
200	Maple- Norway	8		Fair	3	 Growing against object Uneven crown Poor branch structure Wound-stem
744	Maple-Sugar	10		Poor	3	Buried root collarDieback (severe)Fungi/conks
848	Oak-Northern Red	5		Poor	3	Decay-StemDead branches >2Buried root collar
999	Maple- Norway	11		Poor	3	Broken branch(s)Topping/heading cutsGrowing against object
1000	Locust-Black (2)	18		Dead	3	Decay-StemTopping/heading cutstwo dead 12' trunks
1141	Birch-River	12		Dead	3	
1231	Pear-Callery	11		Fair	3	Wound-root flareDecay-Root flareDecay-Stem
1237	Maple- Norway	12		Poor	3	Decay-StemCavity-branchUneven crownOverextended branch

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
1275*	Locust-Black	10		Good	3	Low live crown ratioDead branches <=2SweepOverextended branch
1295	Catalpa- Northern	8		Fair	3	 Buried root collar Cavity-stem Poor branch structure Dead branches <=2 Cavity-branch
1463	Spruce- Norway	8		Dead	3	
1472	Tree of Heaven (2)	16		Poor	3	Dead branches <=2Dieback (moderate)
1473	Maple- Norway	18		Poor	3	Dead branches <=2Dieback (moderate)Broken branch(s)
1497	Oak-Northern Red	12		Fair	3	 Buried root collar Sweep Low live crown ratio Dead branches <=2 Cavity-branch
1544	Maple-Red	7		Poor	3	Cavity-branchTopping/heading cuts
1706*	Walnut-Black	11		Fair	3	Poor branch structureCo-dominant leadersSuppressed
2043*	Catalpa- Northern (3)	5		Fair	3	• Suppressed
2058	Cherry-Black	17		Poor	3	
2064	Pine-Eastern White	6		Dead	3	
2065	Pine-Eastern White	5		Poor	3	
2126	Maple- Norway	6		Poor	3	Cavity-stemCavity-root flareCavity-branchDieback (moderate)
2184	Hawthorn	4		Poor	3	Dieback (severe)
2256*	Maple- Norway	6		Fair	3	Uneven crown
2320*	Mulberry (5)	3		Fair	3	SuppressedUneven crown
2360*	Catalpa- Northern (2)	5		Fair	3	Overextended branchPoor branch structure

Tree ID	Common Name	DBH	Overall Risk Rating	Condition	Tree Care Priority	Defect(s) or Observation(s)
2361	Maple- Norway	6		Fair	3	 Topping/heading cuts Poor branch structure Suppressed
2366*	Elm- American (4)	3		Good	3	
2368*	Hemlock- Canadian	7		Poor	3	
739	Birch-Gray	4		Good	4	Co-dominant leadersOverextended branchLean
940*	Catalpa- Northern	4		Good	4	
947	Pear-Callery	10		Fair	4	Poor branch structureBroken branch(s)Wound-stemCavity-branch
1320	Pine-Austrian	11		Poor	4	Low live crown ratioDead branches <=2Broken branch(s)
1321*	Cherry- Sargent	5		Good	4	SuppressedGrowing against objectOverextended branch
1403	Maple- Norway	10		Poor	4	Cavity-root flareCavity-stemCavity-branchLow live crown ratio
1474	Maple- Norway	17		Fair	4	 Wound-stem Decay-Stem Dead branches <=2 Uneven crown Buried root collar
1476	Tree of Heaven	6		Dead	4	
1622*	Mulberry	5		Fair	4	• Suppressed
1734*	Locust-Black	3		Fair	4	Poor branch structure
2331*	Maple- Norway	11		Fair	4	 Growing against object Poor branch structure Uneven crown
630	Maple-Red	3		Dead	5	
1284*	Cherry- Sargent	6		Fair	5	 Girdling roots present (severe) Uneven crown Suppressed

^{*} Trees that were assigned a poor or unacceptable location value.

INVENTORIED TREES RECOMMENDED FOR REMOVAL



PROPOSED URBAN FOREST MANAGEMENT PLAN BUDGET



PROPOSED URBAN FOREST MANAGEMENT PLAN BUDGET

An estimated budget was created based on information and recommendations made during the 2018 Tree Inventory as well as other factors. The estimated budget for the next 5-year period is provided below and based on work on all priorities included in inventoried trees: Pricing is estimated based on common unit pricing and specific numbers of tree in the inventory under priority and condition. Specific work lists can be made to meet budgets as directed.

Tree Care Recommendation	Budget
Removal Priority 1	\$27,750
Removal Priority 2	\$56,050
Removal Priority 3	\$17,600
Pruning Priority 1	\$65,304
Pruning Priority 2	\$91,680
Pruning Priority 3	\$95,684
Pruning Priority 4	\$99,640
Pruning Priority 5	\$49,600
Emerald Ash Borer - Biannual	\$13,189
Systemic Rootflare Injection	
Dutch Elm Disease Treatment - Annual Systemic Rootflare Injection	\$1,760
Root Collar Excavation 1	\$31,740
Root Collar Excavation 2	\$72,420
Root Collar Excavation 3	\$66,190
Lightning Protection	\$1,600
Advanced Assessmnets	\$21,230

RECOMMENDATIONS FOR ADDRESSING HARDSCAPE & UTILITY CONFLICTS



RECOMMENDATIONS FOR ADDRESSING HARDSCAPE & UTILITY CONFLICTS

Interactions between trees and hardscapes, including utilities, is a major concern and issue in municipalities. Issues will always develop, but there are numerous techniques that can be used to minimize interactions. Resolutions to these issues and interactions can be grouped into three categories: tree-based resolutions, infrastructure-based resolutions, and site-based resolutions.

Tree-based Resolutions

Tree Species: The correct tree species should be selected for the planting site. Tall
maturing trees should not be planted in proximity to utility lines. Wide spreading
trees should not be planted in close proximity to any kind of infrastructure. Some
species have very large buttress roots, and should not be planted next to pavement
or other hardscapes. Species that are known to have aggressive root systems should
not be planted next to pavement, and if at all possible, away from underground water
and sewer infrastructure.

In situations where a tree already exists, crown raising or reduction pruning can be used to eliminate the interaction. A regular pruning schedule may also need to be implemented to manage the tree and infrastructure interaction. Plant growth regulators can also be used to slow tree growth to delay the possible interaction or increase the amount of time between pruning cycles. Transplanting may also be an option to eliminate interaction. In situations where certain species of trees are already growing, tree removal may be the best course of action.

- Size of Planting Space: Planting spaces, or pits, should be large enough to accommodate the mature size of the species that will be planted. Large maturing trees will need a larger planting space than a small maturing tree. Planting space sizes range from 4 feet by 10 feet to providing at least 100 cubic feet of growing space. It is recommended that planting strips be used instead of individual planting pits to create more growing space for tree root systems.
- Root Pruning: Root pruning can be employed in situations where a tree can't be transplanted, removal is not an option, and it is determined that the root pruning won't have an irreversible impact on the tree. The root pruning process should involve low-impact soil excavation techniques (i.e. air spading) and proper pruning tools and techniques.

Infrastructure-based Resolutions

• Hardscape and Infrastructure Design: Evaluating hardscape and infrastructure designs before implementation is on the best ways to manage conflicts. Hardscapes and infrastructure can be placed farther away from existing trees, or where trees will be planted. Infrastructure footprints can be shifted to accommodate existing trees.

- Hardscapes can also be curved to accommodate existing trees. Raised sidewalks or bridges can also be used. Designing hardscapes closer to infrastructure and not planting trees in those areas can also work.
- Hardscape and Infrastructure Materials: New materials and methods continue to be developed for tree growth in and around infrastructure. Suspended pavement methods are effective at creating a lot of rooting space underneath hardscapes. Hardscapes can be reinforced to prevent cracking and flexible material can be used as well. Materials such as rock, crushed stone, or mulch could be used instead of concrete or asphalt.
- Hardscape and Infrastructure Maintenance: Damaged hardscapes and infrastructure (cracks, missing sections, broken pipes) can create opportunities for tree root growth due to increased moisture or growing space. Cracks in water or sewer lines create a great opportunity for tree roots to penetrate, proliferate, and cause blockages. Properly maintained hardscapes and infrastructure can limit the opportunities for conflicts with trees. In situations where trees already exist and conflicts with hardscape are present, ramping or grinding of the hardscape material may be the best option.

Site-based Resolutions

- Soil Condition: Soil condition plays a key role with tree root development. Compacted and poorly drained soils can cause tree roots to grow close to the soil surface, increasing the possibility of hardscape conflicts. Proper soil management including aeration and proper drainage can help alleviate or prevent conflicts.
- Root Barriers: Physical root barriers (metal, plastic, fabric, etc.) can be installed to try and direct root growth away from existing hardscapes. Proper root barrier installation would have to be ensured for them to be effective, and root barriers are not always a permanent solution.
- Site Restriction: Conflicts between trees and hardscape, infrastructure, and utilities can be prevented by restricting those structures from proximity to trees. Sidewalks can be eliminated from underneath trees, infrastructure footprints can be placed outside of tree root zones, etc., preventing conflicts from occurring.

Other Considerations

Numerous activities can occur underneath or within close proximity to trees that may not be a direct infrastructure conflict, but may still create a conflict with the trees. Some potential resolutions are provided below:

- Underground Boring of Utilities: Implementing the practice of underground boring
 of utilities is an effective way to limit the conflict with trees via eliminating the use of
 trenching machines. Boring can be achieved without having to cut roots or create
 open trenches, both of which cause harm to trees.
- Curbing of Parkways: Traffic (vehicles and pedestrians) underneath trees creates compacted soils, root damage, and possibly damage to tree trunks and branches.

- Adding concrete curbing around the parkways and other planting areas may serve to prevent or diminish the amount of traffic underneath trees, therefor reducing damage.
- Restriction of Access: The Village of Mount Kisco hosts numerous events throughout the year which create situations where large numbers of pedestrians and vehicles may be in close proximity to the trees. Restricting access or blocking/roping off the area underneath the trees could be an effective way of reducing conflicts.
- Proper Pruning Cycles: Employing proper pruning techniques and pruning trees
 when they are young to establish good structure can help reduce the amount of
 pruning necessary in the future. The less pruning that needs to be done can lead to
 longer pruning cycles which means interactions between tree/utility workers and
 trees is reduced, reducing the number of potential conflicts.
- Mulching: The installation of properly sized mulch rings underneath trees creates numerous benefits. Mulch can help create a more favorable environment for root growth, can help reduce or eliminate competition from other plants, help moderate soil temperatures, etc. Mulch can also help reduce possible conflicts with the trees from maintenance personnel and equipment during mowing and weed trimming activities, and can also reduce the amount of time spent on those activities. Mulch can also create a buffer around the tree that can help reduce pedestrian traffic.

COMMUNITY TREE BOARD



COMMUNITY TREE BOARD

Trees cannot advocate for themselves, which is why a community tree broad needs to be utilized. Tree boards are typically made up citizens and local government liaisons, usually volunteer, charged by the Board of Trustees to develop and govern a comprehensive city tree management program. Community tree boards need work with local government to become a recognized and follow local regulations. Tree boards are typically appointed by the governing body.

It is important for the community tree board to have a direction to follow. First, tree board should start with a mission statement. It is used to give direction on future decisions made regarding the urban forest. Second, a regular meeting schedule needs to be established to review any business related to the urban forest. Third, an organizational structure needs to be established. Including, but limited to, titles, term length, and roles/responsibilities of each board members position.

The current Mount Kisco Tree Preservation Board should be promoting special programs such as Arbor Day, Earth Day, Tree City USA and community-wide tree plantings. Providing information and resources relating to the urban forest is the responsibility of the community tree board. The tree board should also review tree ordinances and expand the Chapter 99 Article 1 and Article 2 of the Mount Kisco, NY Code. Topics in this Community Forest Management Plan should all be considered being a part of the Tree Ordinance.

- Village of Mount Kisco, NY Code "Tree Preservation Board" http://www.mountkiscony.gov/government/boards and commissions/tree preservation board.php
- Village of Mount Kisco, NY Code "Chapter 99" https://ecode360.com/10862576
- Georgia Forestry Commission "Tree Ordinance Development Guidebook" http://www.gfc.state.ga.us/community-forests/planning-policy/tree-ordinances/2005TreeOrdinance-100.pdf
- Georgia Forestry Commission "The Framework of Community Tree Ordinances" http://www.gfc.state.ga.us/community-forests/planning-policy/tree-ordinances/FrameworkofOrdinances2004-revised.pdf

RECOMMENDED BEST MANAGEMENT PRACTICES



RECOMMENDED BEST MANAGEMENT PRACTICES

The arboriculture industry has several organizations established to maintain and enforce industry practices, standards, and safety. The main organizations are the International Society of Arboriculture (ISA) and the Tree Care Industry Association, Inc. (TCIA). The ISA publishes and maintains the Best Management Practices (BMP) documents for the industry. TCIA publishes the American National Standards [American National Standards Institute, (ANSI)] for the industry, which accompany most BMPs. These standards and BMPs should be followed by all individuals performing tree care operations and activities in the Village of Mount Kisco. Recommended Standards and Best Management Practices are summarized below:

Recommended Safety Standards

American National Standards Institute (ANSI) Z133 Safety Standard

Refer to ANSI Z133 Safety Standard.

Recommended Best Management Practices & American National Standards

Integrated Vegetation Management

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Integrated Vegetation Management and American National Standards Institute A300 Integrated Vegetation Management Standard – Part 7.

Lightning Protection

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Lightning Protection Systems and American National Standards Institute A300 Lightning Standard – Part 4.

Managing Trees During Construction

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Managing Trees During Construction and American National Standards Institute A300 Construction Management Standard – Part 5.

Pest Management

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Integrated Pest Management and American National Standards Institute A300 Integrated Pest Management Standard – Part 10.

Planting

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Tree Planting and American National Standards Institute A300 Transplanting Standard – Part 6.

Pruning

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Tree Pruning and American National Standards Institute A300 Pruning Standard – Part 1.

Root Management

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Root Management and American National Standards Institute A300 Root Management Standard – Part 8

Soil Management for Urban Trees

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Soil Management and American National Standards Institute A300 Soil Management Standard – Part 2.

Support Systems

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Tree Support Systems and American National Standards Institute A300 Support Systems Standard – Part 3.

Tree and Shrub Fertilization

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Tree and Shrub Fertilization and American National Standards Institute A300 Soil Management Standard – Part 2.

Tree Risk Assessment

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Tree Risk Assessment and American National Standards Institute A300 Tree Risk Assessment Standard a. Tree Failure – Part 9.

Utility Pruning

Refer to International Society of Arboriculture's (ISA) Best Management Practices for Utility Pruning of Trees.

APPENDIX



APPENDIX

TREE RISK ASSESSMENTS

Limitations of Tree Risk Assessments

It is important for the tree owner or manager to know and understand that all trees pose some degree of risk from failure or other conditions. The information and recommendations within this report have been derived from the level of tree risk assessment identified in this report, using the information and practices outlined in the *International Society of Arboriculture's Best Management Practices for Tree Risk Assessment*, as well as the information available at the time of the inspection. However, the overall risk rating, the mitigation recommendations, or any other conclusions do not preclude the possibility of failure from undetected conditions, weather events, or other acts of man or nature. Trees can unpredictably fail even if no defects or other conditions are present. It is the responsibility of the tree owner or manager to schedule repeat or advanced assessments, determine actions, and implement follow up recommendations, monitoring and/or mitigation.

Bartlett Tree Experts can make no warranty or guarantee whatsoever regarding the safety of any tree, trees, or parts of trees, regardless of the level of tree risk assessment provided, the risk rating, or the residual risk rating after mitigation. The information in this report should not be considered as making safety, legal, architectural, engineering, landscape architectural, land surveying advice or other professional advice. This information is solely for the use of the tree owner and manager to assist in the decision making process regarding the management of their tree or trees. Tree risk assessments are simply tools which should be used in conjunction with the owner or tree manager's knowledge, other information and observations related to the specific tree or trees discussed, and sound decision making.

Glossary

Tree risk assessment has a unique set of terms with specific meanings. Definitions of all specific

terms may be found in the International Society of Arboriculture's *Best Management Practice for Tree Risk Assessment*. Definitions of some of these terms used in this report are as follows:

The *likelihood of failure* may be categorized as imminent meaning that failure has started or could occur at any time; probable meaning that failure may be expected under normal weather conditions within the next 3 years; possible meaning that failure could occur, but is unlikely under normal weather conditions during that time frame; and improbable meaning that failure is not likely under normal weather conditions, and may not occur in severe weather conditions during that time frame.

The *likelihood of the failed tree part impacting a target* may be categorized as high meaning that a failed tree or tree part will most likely impact a target; medium meaning that a failed tree or

tree part may or may not impact a target with equal likelihood; low meaning that the failed tree or tree part is not likely to impact a target; and very low meaning that the chance of a failed tree or tree part impacting the target is remote.

The *Likelihood of Failure and Impact* is defined by Table 1, the Likelihood Matrix:

Likelihood of Failure	Likelihood of Impacting Target				
	Very Low	Low	Medium	High	
Imminent	Unlikely	Somewhat likely	Likely	Very likely	
Probable	Unlikely	Unlikely	Somewhat likely	Likely	
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely	
Improbable	Unlikely	Unlikely	Unlikely	Unlikely	

The *consequences* of a known target being struck may be categorized as severe meaning that impact could involve serious personal injury or death, damage to high value property, or disruption to important activities; significant meaning that the impact may involve personal injury, property damage of moderate to high value, or considerable disruption; minor meaning that impact could cause low to moderate property damage, small disruptions to traffic or a communication utility, or minor injury; and negligible meaning that impact may involve low value property damage, disruption that can be replaced or repaired, and do not involve personal injury.

Targets are people, property, or activities that could be injured, damaged or disrupted by a tree failure.

Levels of assessment 1) Limited visual assessments are conducted to identify obvious defects. 2) Basic assessments are visual inspections done by walking around the tree looking at the site, buttress roots, trunk and branches. It may include the use of simple tools to gain information about the tree or defects. 3) Advanced assessments are performed to provide detailed information about specific tree parts, defects, targets of site conditions. Drilling to detect decay is an

advanced assessment technique.

Tree Risk Ratings are terms used to communicate the level of risk rating. They are defined in Table 2, the Risk Matrix, as a combination of Likelihood and Consequences:

Likelihood of	Consequences of the Tree Failure				
Failure & Impact	Negligible	Minor	Significant	Severe	
Very likely	Low	Moderate	High	Extreme	
Likely	Low	Moderate	High	High	
Somewhat likely	Low	Low	Moderate	Moderate	
Unlikely	Low	Low	Low	Low	

Overall tree risk rating is the highest individual risk identified for the tree.

The *residual risk* is the level of risk the tree should pose after the recommended mitigation.

GLOSSARY OF TERMS

air pollution removal: removal of pollutants from the air by plants through natural processes

arborist: 1. An individual engaged in the profession of arboriculture who, through experience, education and related training, possesses the competence to provide for, or supervise the management of, trees and other woody ornamentals. [ANSI A300 (Part 1, 2, 4, 5, 6)] 2. An individual engaged in the profession of arboriculture. [ANSI Z133.1-2000 Safety Requirements for Arboricultural Operations]

bracing: The installation of lag-thread screw or threaded-steel rods in limbs, leaders, or trunks to provide supplemental support. [ANSI A300 (Part 3)-2000 Support Systems]

branch: An outgrowing shoot, stem or twig that grows from the main stem or trunk. [ANSI Z60.1–2004 Nursery Stock]

buttress roots: Lateral surface roots that aid in stabilizing the tree.

cable: 1) Zinc coated strand per ASTM A-475 for dead-end grip applications. 2) Wire rope or strand for general applications. 3) Synthetic-fiber rope or synthetic-fiber webbing for general applications. [ANSI A300 (Part 3)-2000 Support Systems]

cabling: The installation of a steel wire rope, steel strand, or synthetic-fiber system within a tree between limbs or leaders to limit movement and provide supplemental support. [ANSI A300 (Part 3)-2000 Support Systems]

canopy: collective branches and foliage of a tree or group of trees' crowns

carbon sequestration: removal of carbon from the air by plants through natural processes

carbon storage: storage of carbon removed from the air in plant tissues

cation exchange capacity(CEC): The ability of soil to absorb nutrients.

cavity: An open wound characterized by the presence of decay and resulting in a hollow.

cleaning: Selective pruning to remove one or more of the following parts: dead, diseased, and/ or broken branches (5.6.1). [ANSI A300 (Part 1)-2001 Pruning]

co-dominant branches: Equal in size and importance, usually associated with either the trunks, stems, or scaffold limbs.

conk: fruiting body or nonfruiting body of a fungus. Often associated with decay. critical root zone(CRZ): area of soil around a tree trunk where roots are located that provide stability and uptake of water and minerals required for tree survival.

crown: 1. The leaves and branches of a tree measured from the lowest branch on the trunk to the top of the tree. [ANSI A300 (Part 1)-2001Pruning] [ANSI A300 (Part 6)-2005 Transplanting] 2. The portion of a tree comprising the branches. [ANSI Z60.1-2004 Nursery Stock]

D.B.H. [diameter at breast height]: Measurement of trunk diameter taken at 4.5 feet (1.4 m) off the ground. [ANSI A300 (Part 6)- 2005 Transplanting]

decay: The degradation of woody tissue caused by microorganisms. [ANSI A300 (Part 1)-2001 Pruning]

Geographic Information System (GIS): is any system for capturing, storing, analyzing and managing data and associated attributes which are spatially referenced to earth.

girdling root: A root that may impede proper development of other roots, trunk flare, and/or trunk. [ANSI A300 (Part 6)-2005 Transplanting]

Global Positioning System (GPS): A constellation of at least 24 Medium Earth Orbit satellites that transmit precise microwave signals, the system enables a GPS receiver to determine its location, speed, direction, and time.

Global Positioning System receiver (GPSr): A receiver that receives its input from GPS satellites to determine location, speed, direction, and time.

heading: cutting a shoot back to a bud o cutting branches back to buds, stubs, or lateral branches not large enough to assume apical dominance. Cutting an older branch or stem back to meet a structural objective

integrated pest management (IPM): A pest control strategy that uses an array of complementary methods: mechanical devices, physical devices, genetic, biological, legal, cultural management, and chemical management. These methods are done in three stages of prevention, Observation, and finally Intervention. It is an ecological approach that has its main goal is to significantly reduce or eliminate the use of pesticides.

lateral branch: A shoot or stem growing from a parent branch or stem. [ANSI A300 (Part 1)- 2001 Pruning]

leader: A dominant or co-dominant, upright stem. [ANSI A300 (Part 1)-2001 Pruning]

lean: Departure from vertical of the stem, beginning at or near the base of the trunk.

limb: A large, prominent branch. [ANSI A300 (Part 1)-2001 Pruning] lion's tailing: The removal of an excessive number of inner, lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice (5.5.7). [ANSI A300 (Part 1)-2001 Pruning]

macronutrient: Nutrient required in relatively large amounts by plants, such as nitrogen (N), phosphorus (P), potassium (K), and sulfur (S). [ANSI A300 (Part 2)-2004 Fertilization]

micronutrient: Nutrient required in relatively small amounts by plants, such as iron (Fe), manganese (Mn), zinc (Zn), copper (Cu), and boron (B). [ANSI A300 (Part 2)-2004 Fertilization]

noise attenuation: reducing sound levels via materials, structures, plants, etc.

nutrient: Element or compound required for growth, reproduction or development of a plant. [ANSI A300 (Part 2)-2004 Fertilization]

organic matter: material derived from the growth (and death) of living organisms. The organic components of soil.

parent branch or stem: A tree trunk, limb, or prominent branch from which shoots or stems grow. [ANSI A300 (Part 1)-2001 Pruning]

pH: unit of measurement that describes the alkalinity or acidity of a solution. Measured on a scale of 0 to 14. Greater than 7 Is alkaline, less than 7 is acid, and 7 is neutral (pure water).

pruning: The selective removal of plant parts to meet specific goals and objectives. [ANSI A300 (Part 1)-2001 Pruning]

qualified arborist: An individual who, by possession of a recognized degree, certification, or professional standing, or through related training and on-the-job experience, is familiar with the equipment and hazards involved in arboricultural operations and who has demonstrated ability in the performance of the special techniques involved. [ANSI Z133.1-2000 Safety Requirements for Arboricultural Operations]

raising: Selective pruning to provide vertical clearance (5.6.3). [ANSI A300 (Part 1)-2001 Pruning]

reduction: Selective pruning to decrease height and/or spread (5.6.4). [ANSI A300 (Part 1)-2001 Pruning]

risk assessment: process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

root collar: 1. The transition zone between the trunk and the root system. [ANSI A300 (Part 6)-2005 Transplanting] 2. See COLLAR. [ANSI Z60.1-2004 Nursery Stock]

root flare or trunk flare: The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the

stem or trunk. [ANSI Z60.1-2004 Nursery Stock] [ANSI A300 (Part 6)-2005 Transplanting]

root zone: The volume of soil containing the roots of a plant. [ANSI A300 (Part 5)-2005

secondary nutrient: Nutrient required in moderate amounts by plants, such as calcium (Ca) and magnesium (Mg). [ANSI A300 (Part 2)-2004 Fertilization]

seam: Vertical line that appears where two edges of wound wood or callus ridge meet.

soil amendment: Any material added to soil to alter its composition and structure, such as sand, fertilizer, or organic matter. [ANSI A300 (Part6)-2005 Transplanting]

soil pH: A measure of the acidity or alkalinity of the soil.

stormwater runoff: water (generally from rain or snow melt) that flows over the ground after storm events.

structural support system: hardware installed in tree, may be; cables, braces, or guys, to provide supplemental support.

sweep: Departure from vertical of the stem, beginning above the base of the trunk.

thinning: Selective pruning to reduce density of live branches (5.6.2). [ANSI A300 (Part 1)-2001 Pruning]

tree risk assessment: Closer inspection of visibly damaged, dead, defected, diseased, leaning or dying tree to determine management needs.

topping: The reduction of a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit. Topping is not acceptable pruning practice. (5.5.7). [ANSI A300 (Part 1)-2001 Pruning]

tree inventory: A comprehensive list of individual trees providing descriptive information on all or a portion of the project area. [ANSI A300 (Part 5)-2005 Management during site planning, site development, and construction]

tree protection zone: A space above and belowground within which trees are to be retained and protected. [ANSI A300 (Part 5)-2005 Management during site planning, site development, and construction]

trunk: That portion of a stem or stems of a tree before branching occurs. [ANSA Z60.1-2004 Nursery Stock]

vigor : Overall health. Capacity to grow and resist stress. [ISA Municipal Specialist Certification Study Guide 2008]

wound: An opening that is created when the bark of a living branch or stem is penetrated, cut, or removed. [ANSI A300 (Part 1)-2001 Pruning]				

i-Tree Ecosystem Analysis

Village of Mount Kisco, NY



Urban Forest Effects and Values January 2019

Summary

Understanding an urban forest's structure, function and value can promote management decisions that will improve human health and environmental quality. An assessment of the vegetation structure, function, and value of the Village of Mount Kisco, NY urban forest was conducted during 2018. Data from 2432 trees located throughout Village of Mount Kisco, NY were analyzed using the i-Tree Eco model developed by the U.S. Forest Service, Northern Research Station.

Number of trees: 2,432

Tree Cover: 24.2 acres

Most common species of trees: Norway maple, Red maple, Callery pear

Percentage of trees less than 6" (15.2 cm) diameter: 15.7%

Pollution Removal: 1205 pounds/year (\$6.13 thousand/year)

Carbon Storage: 1.491 thousand tons (\$254 thousand)

Carbon Sequestration: 23.92 tons (\$4.08 thousand/year)

Oxygen Production: 63.78 tons/year

Avoided Runoff: 40.35 thousand cubic feet/year (\$2.7 thousand/year)

Building energy savings: N/A – data not collected

Avoided carbon emissions: N/A – data not collected

• Structural values: \$5.5 million

Ton: short ton (U.S.) (2,000 lbs)

Monetary values \$ are reported in US Dollars throughout the report except where noted.

Ecosystem service estimates are reported for trees.

For an overview of i-Tree Eco methodology, see Appendix I. Data collection quality is determined by the local data collectors, over which i-Tree has no control.

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I. Tree Characteristics of the Urban Forest

The urban forest of Village of Mount Kisco, NY has 2,432 trees with a tree cover of Norway maple. The three most common species are Norway maple (13.9 percent), Red maple (13.8 percent), and Callery pear (13.4 percent).

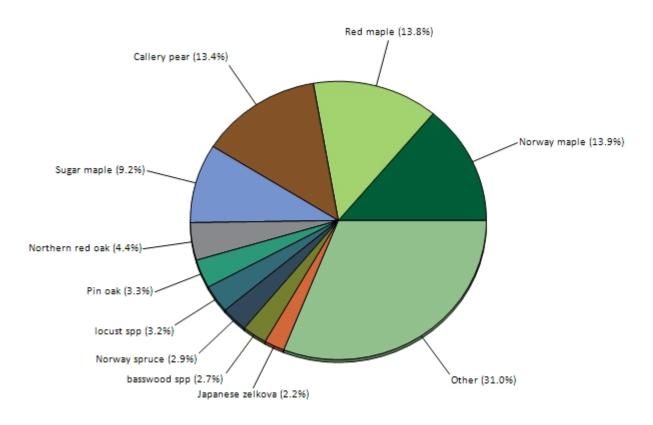


Figure 1. Tree species composition in Village of Mount Kisco, NY

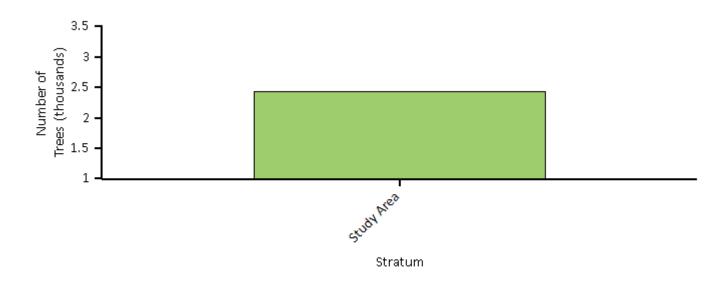


Figure 2. Number of trees in Village of Mount Kisco, NY by stratum

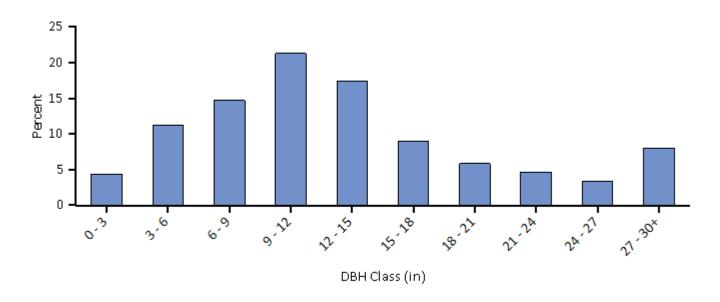


Figure 3. Percent of tree population by diameter class (DBH - stem diameter at 4.5 feet)

Urban forests are composed of a mix of native and exotic tree species. Thus, urban forests often have a tree diversity that is higher than surrounding native landscapes. Increased tree diversity can minimize the overall impact or destruction by a species-specific insect or disease, but it can also pose a risk to native plants if some of the exotic species are invasive plants that can potentially out-compete and displace native species. In Village of Mount Kisco, NY, about 53 percent of the trees are species native to North America, while 45 percent are native to New York. Species exotic to North America make up 47 percent of the population. Most exotic tree species have an origin from Asia (20 percent of the species).

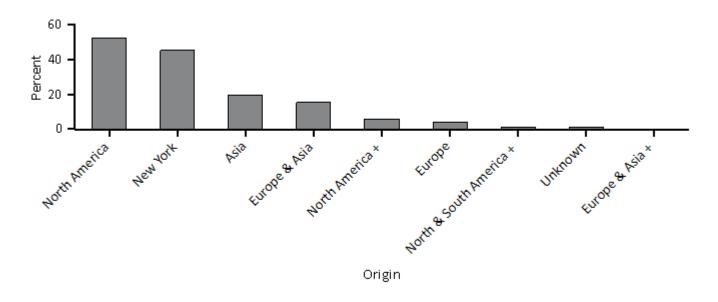


Figure 4. Percent of live tree population by area of native origin, Village of Mount Kisco, NY

The plus sign (+) indicates the tree species is native to another continent other than the ones listed in the grouping.

Invasive plant species are often characterized by their vigor, ability to adapt, reproductive capacity, and general lack of natural enemies. These abilities enable them to displace native plants and make them a threat to natural areas. Four of the 71 tree species in Village of Mount Kisco, NY are identified as invasive on the state invasive species list (). These invasive species comprise 28.4 percent of the tree population though they may only cause a minimal level of impact. The three most common invasive species are Norway maple (13.9 percent of population), Callery pear (13.4 percent), and Black locust (0.6 percent) (see Appendix V for a complete list of invasive species).

II. Urban Forest Cover and Leaf Area

Many tree benefits equate directly to the amount of healthy leaf surface area of the plant. Trees cover about 24.2 acres of Village of Mount Kisco, NY and provide 110.3 acres of leaf area.

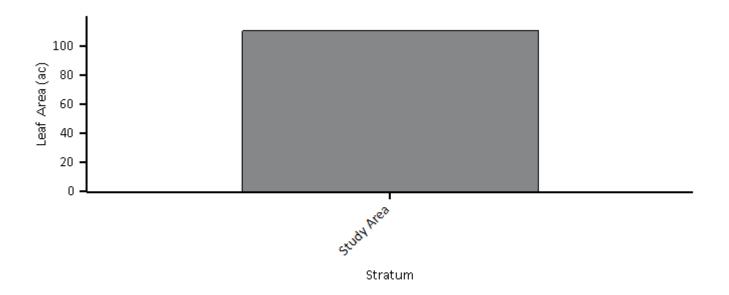


Figure 5. Leaf area by stratum, Village of Mount Kisco, NY

In Village of Mount Kisco, NY, the most dominant species in terms of leaf area are Norway maple, Red maple, and Sugar maple. The 10 species with the greatest importance values are listed in Table 1. Importance values (IV) are calculated as the sum of percent population and percent leaf area. High importance values do not mean that these trees should necessarily be encouraged in the future; rather these species currently dominate the urban forest structure.

Table 1. Most important species in Village of Mount Kisco, NY

	Percent	Percent	
Species Name	Population	Leaf Area	IV
Norway maple	13.9	20.1	34.1
Red maple	13.8	14.3	28.1
Sugar maple	9.2	10.6	19.8
Callery pear	13.4	5.2	18.5
Northern red oak	4.4	7.9	12.3
Pin oak	3.3	3.2	6.5
Norway spruce	2.9	3.2	6.1
Silver maple	1.7	3.9	5.6
locust spp	3.2	1.7	4.9
basswood spp	2.7	2.0	4.7

Common ground cover classes (including cover types beneath trees and shrubs) in Village of Mount Kisco, NY are not available since they are configured not to be collected.

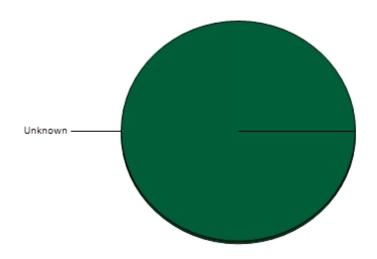


Figure 6. Percent of land by ground cover classes, Village of Mount Kisco, NY

III. Air Pollution Removal by Urban Trees

Poor air quality is a common problem in many urban areas. It can lead to decreased human health, damage to landscape materials and ecosystem processes, and reduced visibility. The urban forest can help improve air quality by reducing air temperature, directly removing pollutants from the air, and reducing energy consumption in buildings, which consequently reduces air pollutant emissions from the power sources. Trees also emit volatile organic compounds that can contribute to ozone formation. However, integrative studies have revealed that an increase in tree cover leads to reduced ozone formation (Nowak and Dwyer 2000).

Pollution removal¹ by trees in Village of Mount Kisco, NY was estimated using field data and recent available pollution and weather data available. Pollution removal was greatest for ozone (Figure 7). It is estimated that trees remove 1205 pounds of air pollution (ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter less than 2.5 microns (PM2.5)², and sulfur dioxide (SO2)) per year with an associated value of \$6.13 thousand (see Appendix I for more details).

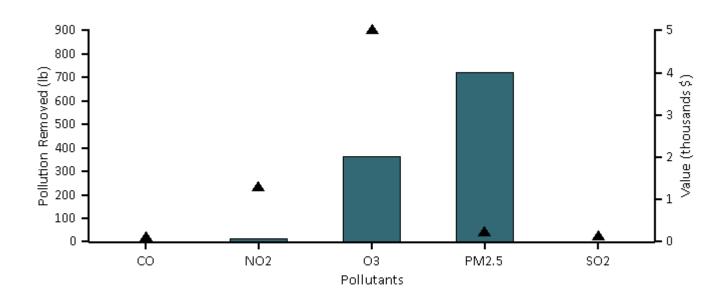


Figure 7. Annual pollution removal (points) and value (bars) by urban trees, Village of Mount Kisco, NY

¹ Particulate matter less than 10 microns is a significant air pollutant. Given that i-Tree Eco analyzes particulate matter less than 2.5 microns (PM2.5) which is a subset of PM10, PM10 has not been included in this analysis. PM2.5 is generally more relevant in discussions concerning air pollution effects on human health.

² Trees remove PM2.5 when particulate matter is deposited on leaf surfaces. This deposited PM2.5 can be resuspended to the atmosphere or removed during rain events and dissolved or transferred to the soil. This combination of events can lead to positive or negative pollution removal and value depending on various atmospheric factors (see Appendix I for more details).

In 2018, trees in Village of Mount Kisco, NY emitted an estimated 668.9 pounds of volatile organic compounds (VOCs) (478.5 pounds of isoprene and 190.4 pounds of monoterpenes). Emissions vary among species based on species characteristics (e.g. some genera such as oaks are high isoprene emitters) and amount of leaf biomass. Forty-four percent of the urban forest's VOC emissions were from Northern red oak and Pin oak. These VOCs are precursor chemicals to ozone formation.³

General recommendations for improving air quality with trees are given in Appendix VIII.

³ Some economic studies have estimated VOC emission costs. These costs are not included here as there is a tendency to add positive dollar estimates of ozone removal effects with negative dollar values of VOC emission effects to determine whether tree effects are positive or negative in relation to ozone. This combining of dollar values to determine tree effects should not be done, rather estimates of VOC effects on ozone formation (e.g., via photochemical models) should be conducted and directly contrasted with ozone removal by trees (i.e., ozone effects should be directly compared, not dollar estimates). In addition, air temperature reductions by trees have been shown to significantly reduce ozone concentrations (Cardelino and Chameides 1990; Nowak et al 2000), but are not considered in this analysis. Photochemical modeling that integrates tree effects on air temperature, pollution removal, VOC emissions, and emissions from power plants can be used to determine the overall effect of trees on ozone concentrations.

IV. Carbon Storage and Sequestration

Climate change is an issue of global concern. Urban trees can help mitigate climate change by sequestering atmospheric carbon (from carbon dioxide) in tissue and by altering energy use in buildings, and consequently altering carbon dioxide emissions from fossil-fuel based power sources (Abdollahi et al 2000).

Trees reduce the amount of carbon in the atmosphere by sequestering carbon in new growth every year. The amount of carbon annually sequestered is increased with the size and health of the trees. The gross sequestration of Village of Mount Kisco, NY trees is about 23.92 tons of carbon per year with an associated value of \$4.08 thousand. See Appendix I for more details on methods.

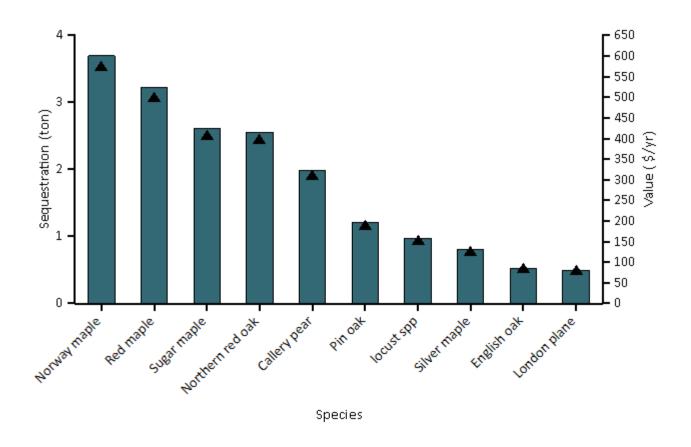


Figure 8. Estimated annual gross carbon sequestration (points) and value (bars) for urban tree species with the greatest sequestration, Village of Mount Kisco, NY

Carbon storage is another way trees can influence global climate change. As a tree grows, it stores more carbon by holding it in its accumulated tissue. As a tree dies and decays, it releases much of the stored carbon back into the atmosphere. Thus, carbon storage is an indication of the amount of carbon that can be released if trees are allowed to die and decompose. Maintaining healthy trees will keep the carbon stored in trees, but tree maintenance can contribute to carbon emissions (Nowak et al 2002c). When a tree dies, using the wood in long-term wood products, to heat buildings, or to produce energy will help reduce carbon emissions from wood decomposition or from fossilfuel or wood-based power plants.

Trees in Village of Mount Kisco, NY are estimated to store 1490 tons of carbon (\$254 thousand). Of the species sampled, Norway maple stores and sequesters the most carbon (approximately 14.1% of the total carbon stored and 14.7% of all sequestered carbon.)

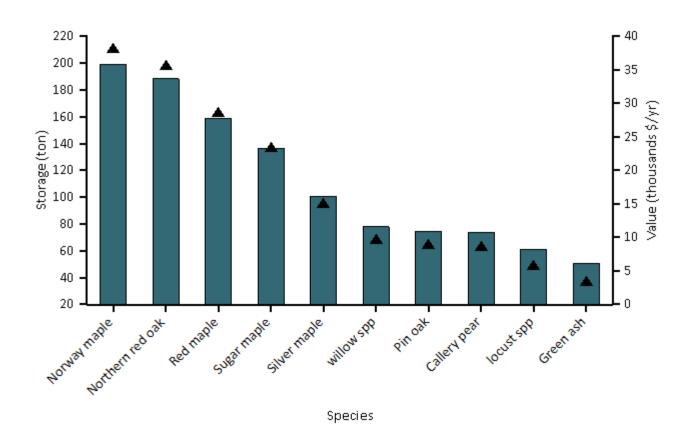


Figure 9. Estimated carbon storage (points) and values (bars) for urban tree species with the greatest storage, Village of Mount Kisco, NY

V. Oxygen Production

Oxygen production is one of the most commonly cited benefits of urban trees. The annual oxygen production of a tree is directly related to the amount of carbon sequestered by the tree, which is tied to the accumulation of tree biomass.

Trees in Village of Mount Kisco, NY are estimated to produce 63.78 tons of oxygen per year.⁴ However, this tree benefit is relatively insignificant because of the large and relatively stable amount of oxygen in the atmosphere and extensive production by aquatic systems. Our atmosphere has an enormous reserve of oxygen. If all fossil fuel reserves, all trees, and all organic matter in soils were burned, atmospheric oxygen would only drop a few percent (Broecker 1970).

Table 2. The top 20 oxygen production species.

		Gross Carbon		
Species	Oxygen	Sequestration	Number of Trees	Leaf Area
	(ton)	(pound/yr)		(acre)
Norway maple	9.39	7,046.10	339	22.21
Red maple	8.17	6,130.91	335	15.75
Sugar maple	6.65	4,989.69	223	11.73
Northern red oak	6.49	4,868.79	106	8.74
Callery pear	5.04	3,781.79	325	5.70
Pin oak	3.06	2,292.74	81	3.50
locust spp	2.47	1,849.92	78	1.84
Silver maple	2.04	1,531.33	41	4.32
English oak	1.34	1,007.28	26	1.65
London plane	1.27	952.49	27	3.09
Norway spruce	1.22	916.45	71	3.55
White oak	1.12	840.70	16	1.20
willow spp	0.96	718.44	17	1.00
Japanese zelkova	0.95	709.01	54	1.56
White ash	0.94	702.80	11	0.92
Green ash	0.87	654.79	44	2.49
apple spp	0.87	653.21	47	0.97
basswood spp	0.79	595.50	66	2.22
Eastern cottonwood	0.76	571.08	21	1.71
Eastern white pine	0.74	556.78	53	1.67

VI. Avoided Runoff

Surface runoff can be a cause for concern in many urban areas as it can contribute pollution to streams, wetlands, rivers, lakes, and oceans. During precipitation events, some portion of the precipitation is intercepted by vegetation (trees and shrubs) while the other portion reaches the ground. The portion of the precipitation that reaches the ground and does not infiltrate into the soil becomes surface runoff (Hirabayashi 2012). In urban areas, the large extent of impervious surfaces increases the amount of surface runoff.

Urban trees and shrubs, however, are beneficial in reducing surface runoff. Trees and shrubs intercept precipitation, while their root systems promote infiltration and storage in the soil. The trees and shrubs of Village of Mount Kisco, NY help to reduce runoff by an estimated 40.3 thousand cubic feet a year with an associated value of \$2.7 thousand (see Appendix I for more details). Avoided runoff is estimated based on local weather from the user-designated weather station. In Village of Mount Kisco, NY, the total annual precipitation in 2015 was 44.8 inches.

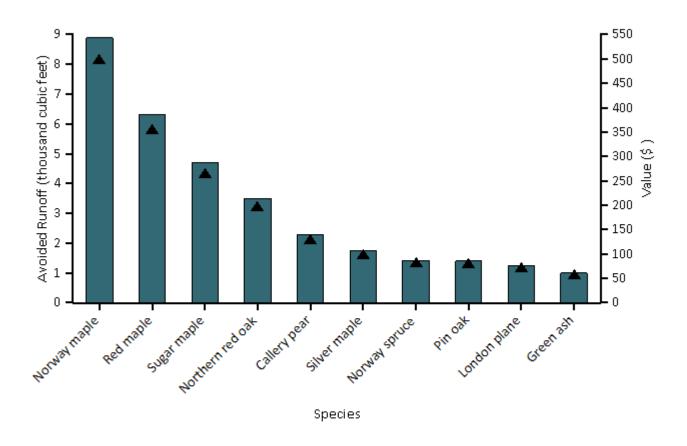


Figure 10. Avoided runoff (points) and value (bars) for species with greatest overall impact on runoff, Village of Mount Kisco, NY

VII. Trees and Building Energy Use

Trees affect energy consumption by shading buildings, providing evaporative cooling, and blocking winter winds. Trees tend to reduce building energy consumption in the summer months and can either increase or decrease building energy use in the winter months, depending on the location of trees around the building. Estimates of tree effects on energy use are based on field measurements of tree distance and direction to space conditioned residential buildings (McPherson and Simpson 1999).

Because energy-related data were not collected, energy savings and carbon avoided cannot be calculated.

Table 3. Annual energy savings due to trees near residential buildings, Village of Mount Kisco, NY

	Heating	Cooling	Total
MBTU ^a	0	N/A	0
MWH ^b	0	0	0
Carbon Avoided (pounds)	0	0	0

^aMBTU - one million British Thermal Units

Table 4. Annual savings ^a(\$) in residential energy expenditure during heating and cooling seasons, Village of Mount Kisco, NY

	Heating	Cooling	Total
MBTU ^b	0	N/A	0
MWH ^c	0	0	0
Carbon Avoided	0	0	0

 $^{^{\}mathrm{b}}$ Based on the prices of \$176.366666666667 per MWH and \$15.8378446412362 per MBTU (see Appendix I for more details)

^bMWH - megawatt-hour

^cMBTU - one million British Thermal Units

^cMWH - megawatt-hour

⁵ Trees modify climate, produce shade, and reduce wind speeds. Increased energy use or costs are likely due to these tree-building interactions creating a cooling effect during the winter season. For example, a tree (particularly evergreen species) located on the southern side of a residential building may produce a shading effect that causes increases in heating requirements.

VIII. Structural and Functional Values

Urban forests have a structural value based on the trees themselves (e.g., the cost of having to replace a tree with a similar tree); they also have functional values (either positive or negative) based on the functions the trees perform.

The structural value of an urban forest tends to increase with a rise in the number and size of healthy trees (Nowak et al 2002a). Annual functional values also tend to increase with increased number and size of healthy trees. Through proper management, urban forest values can be increased; however, the values and benefits also can decrease as the amount of healthy tree cover declines.

<u>Urban trees in Village of Mount Kisco, NY have the following structural values:</u>

Structural value: \$5.5 millionCarbon storage: \$254 thousand

Urban trees in Village of Mount Kisco, NY have the following annual functional values:

Carbon sequestration: \$4.08 thousand

Avoided runoff: \$2.7 thousand

· Pollution removal: \$6.13 thousand

Energy costs and carbon emission values: \$0

(Note: negative value indicates increased energy cost and carbon emission value)

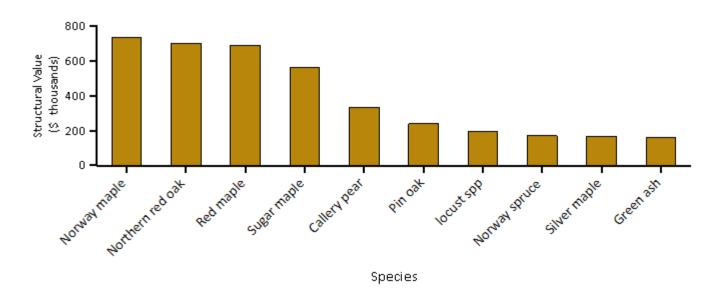


Figure 11. Tree species with the greatest structural value, Village of Mount Kisco, NY

IX. Potential Pest Impacts

Various insects and diseases can infest urban forests, potentially killing trees and reducing the health, structural value and sustainability of the urban forest. As pests tend to have differing tree hosts, the potential damage or risk of each pest will differ among cities. Thirty-six pests were analyzed for their potential impact and compared with pest range maps (Forest Health Technology Enterprise Team 2014) for the conterminous United States to determine their proximity to Westchester County. Thirteen of the thirty-six pests analyzed are located within the county. For a complete analysis of all pests, see Appendix VII.

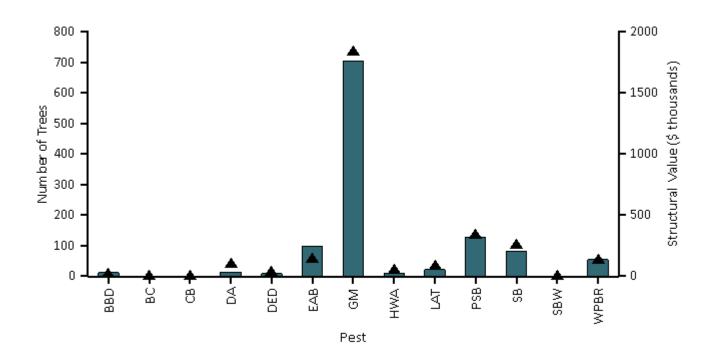


Figure 12. Number of trees at risk (points) and associated compensatory value (bars) for most threatening pests located in the county, Village of Mount Kisco, NY

Beech bark disease (BBD) (Houston and O'Brien 1983) is an insect-disease complex that primarily impacts American beech. This disease threatens 0.3 percent of the population, which represents a potential loss of \$29.9 thousand in structural value.

Butternut canker (BC) (Ostry et al 1996) is caused by a fungus that infects butternut trees. The disease has since caused significant declines in butternut populations in the United States. Potential loss of trees from BC is 0.0 percent (\$0 in structural value).

The most common hosts of the fungus that cause chestnut blight (CB) (Diller 1965) are American and European chestnut. CB has the potential to affect 0.0 percent of the population (\$0 in structural value).

Dogwood anthracnose (DA) (Mielke and Daughtrey) is a disease that affects dogwood species, specifically flowering and Pacific dogwood. This disease threatens 1.6 percent of the population, which represents a potential loss of \$34.9 thousand in structural value.

American elm, one of the most important street trees in the twentieth century, has been devastated by the Dutch

elm disease (DED) (Northeastern Area State and Private Forestry 1998). Since first reported in the 1930s, it has killed over 50 percent of the native elm population in the United States. Although some elm species have shown varying degrees of resistance, Village of Mount Kisco, NY could possibly lose 0.6 percent of its trees to this pest (\$21.5 thousand in structural value).

Emerald ash borer (EAB) (Michigan State University 2010) has killed thousands of ash trees in parts of the United States. EAB has the potential to affect 2.3 percent of the population (\$245 thousand in structural value).

The gypsy moth (GM) (Northeastern Area State and Private Forestry 2005) is a defoliator that feeds on many species causing widespread defoliation and tree death if outbreak conditions last several years. This pest threatens 30.2 percent of the population, which represents a potential loss of \$1.76 million in structural value.

As one of the most damaging pests to eastern hemlock and Carolina hemlock, hemlock woolly adelgid (HWA) (U.S. Forest Service 2005) has played a large role in hemlock mortality in the United States. HWA has the potential to affect 0.8 percent of the population (\$21.5 thousand in structural value).

Quaking aspen is a principal host for the defoliator, large aspen tortrix (LAT) (Ciesla and Kruse 2009). LAT poses a threat to 1.4 percent of the Village of Mount Kisco, NY urban forest, which represents a potential loss of \$54.3 thousand in structural value.

The pine shoot beetle (PSB) (Ciesla 2001) is a wood borer that attacks various pine species, though Scotch pine is the preferred host in North America. PSB has the potential to affect 5.6 percent of the population (\$321 thousand in structural value).

Spruce beetle (SB) (Holsten et al 1999) is a bark beetle that causes significant mortality to spruce species within its range. Potential loss of trees from SB is 4.2 percent (\$208 thousand in structural value).

Spruce budworm (SBW) (Kucera and Orr 1981) is an insect that causes severe damage to balsam fir. SBW poses a threat to 0.0 percent of the Village of Mount Kisco, NY urban forest, which represents a potential loss of \$0 in structural value.

Since its introduction to the United States in 1900, white pine blister rust (Eastern U.S.) (WPBR) (Nicholls and Anderson 1977) has had a detrimental effect on white pines, particularly in the Lake States. WPBR has the potential to affect 2.2 percent of the population (\$136 thousand in structural value).

Appendix I. i-Tree Eco Model and Field Measurements

i-Tree Eco is designed to use standardized field data and local hourly air pollution and meteorological data to quantify urban forest structure and its numerous effects (Nowak and Crane 2000), including:

- Urban forest structure (e.g., species composition, tree health, leaf area, etc.).
- Amount of pollution removed hourly by the urban forest, and its associated percent air quality improvement throughout a year.
- Total carbon stored and net carbon annually sequestered by the urban forest.
- Effects of trees on building energy use and consequent effects on carbon dioxide emissions from power sources.
- Structural value of the forest, as well as the value for air pollution removal and carbon storage and sequestration.
- Potential impact of infestations by pests, such as Asian longhorned beetle, emerald ash borer, gypsy moth, and Dutch elm disease.

Typically, all field data are collected during the leaf-on season to properly assess tree canopies. Typical data collection (actual data collection may vary depending upon the user) includes land use, ground and tree cover, individual tree attributes of species, stem diameter, height, crown width, crown canopy missing and dieback, and distance and direction to residential buildings (Nowak et al 2005; Nowak et al 2008).

During data collection, trees are identified to the most specific taxonomic classification possible. Trees that are not classified to the species level may be classified by genus (e.g., ash) or species groups (e.g., hardwood). In this report, tree species, genera, or species groups are collectively referred to as tree species.

Tree Characteristics:

Leaf area of trees was assessed using measurements of crown dimensions and percentage of crown canopy missing. In the event that these data variables were not collected, they are estimated by the model.

An analysis of invasive species is not available for studies outside of the United States. For the U.S., invasive species are identified using an invasive species list ()for the state in which the urban forest is located. These lists are not exhaustive and they cover invasive species of varying degrees of invasiveness and distribution. In instances where a state did not have an invasive species list, a list was created based on the lists of the adjacent states. Tree species that are identified as invasive by the state invasive species list are cross-referenced with native range data. This helps eliminate species that are on the state invasive species list, but are native to the study area.

Air Pollution Removal:

Pollution removal is calculated for ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide and particulate matter less than 2.5 microns. Particulate matter less than 10 microns (PM10) is another significant air pollutant. Given that i-Tree Eco analyzes particulate matter less than 2.5 microns (PM2.5) which is a subset of PM10, PM10 has not been included in this analysis. PM2.5 is generally more relevant in discussions concerning air pollution effects on human health.

Air pollution removal estimates are derived from calculated hourly tree-canopy resistances for ozone, and sulfur and nitrogen dioxides based on a hybrid of big-leaf and multi-layer canopy deposition models (Baldocchi 1988; Baldocchi et al 1987). As the removal of carbon monoxide and particulate matter by vegetation is not directly related to transpiration, removal rates (deposition velocities) for these pollutants were based on average measured values from the literature (Bidwell and Fraser 1972; Lovett 1994) that were adjusted depending on leaf phenology and leaf area. Particulate removal incorporated a 50 percent resuspension rate of particles back to the atmosphere (Zinke 1967).

Recent updates (2011) to air quality modeling are based on improved leaf area index simulations, weather and pollution processing and interpolation, and updated pollutant monetary values (Hirabayashi et al 2011; Hirabayashi et al 2012; Hirabayashi 2011).

Trees remove PM2.5 when particulate matter is deposited on leaf surfaces (Nowak et al 2013). This deposited PM2.5 can be resuspended to the atmosphere or removed during rain events and dissolved or transferred to the soil. This combination of events can lead to positive or negative pollution removal and value depending on various atmospheric factors. Generally, PM2.5 removal is positive with positive benefits. However, there are some cases when net removal is negative or resuspended particles lead to increased pollution concentrations and negative values. During some months (e.g., with no rain), trees resuspend more particles than they remove. Resuspension can also lead to increased overall PM2.5 concentrations if the boundary layer conditions are lower during net resuspension periods than during net removal periods. Since the pollution removal value is based on the change in pollution concentration, it is possible to have situations when trees remove PM2.5 but increase concentrations and thus have negative values during periods of positive overall removal. These events are not common, but can happen.

For reports in the United States, default air pollution removal value is calculated based on local incidence of adverse health effects and national median externality costs. The number of adverse health effects and associated economic value is calculated for ozone, sulfur dioxide, nitrogen dioxide, and particulate matter less than 2.5 microns using data from the U.S. Environmental Protection Agency's Environmental Benefits Mapping and Analysis Program (BenMAP) (Nowak et al 2014). The model uses a damage-function approach that is based on the local change in pollution concentration and population. National median externality costs were used to calculate the value of carbon monoxide removal (Murray et al 1994).

For international reports, user-defined local pollution values are used. For international reports that do not have local values, estimates are based on either European median externality values (van Essen et al 2011) or BenMAP regression equations (Nowak et al 2014) that incorporate user-defined population estimates. Values are then converted to local currency with user-defined exchange rates.

For this analysis, pollution removal value is calculated based on the prices of \$1,380 per ton (carbon monoxide), \$4,503 per ton (ozone), \$647 per ton (nitrogen dioxide), \$179 per ton (sulfur dioxide), \$204,025 per ton (particulate matter less than 2.5 microns).

Carbon Storage and Sequestration:

Carbon storage is the amount of carbon bound up in the above-ground and below-ground parts of woody vegetation. To calculate current carbon storage, biomass for each tree was calculated using equations from the literature and measured tree data. Open-grown, maintained trees tend to have less biomass than predicted by forest-derived biomass equations (Nowak 1994). To adjust for this difference, biomass results for open-grown urban trees were multiplied by 0.8. No adjustment was made for trees found in natural stand conditions. Tree dry-weight biomass was converted to stored carbon by multiplying by 0.5.

Carbon sequestration is the removal of carbon dioxide from the air by plants. To estimate the gross amount of carbon sequestered annually, average diameter growth from the appropriate genera and diameter class and tree condition was added to the existing tree diameter (year x) to estimate tree diameter and carbon storage in year x+1.

Carbon storage and carbon sequestration values are based on estimated or customized local carbon values. For international reports that do not have local values, estimates are based on the carbon value for the United States (U.S. Environmental Protection Agency 2015, Interagency Working Group on Social Cost of Carbon 2015) and converted to local currency with user-defined exchange rates.

For this analysis, carbon storage and carbon sequestration values are calculated based on \$171 per ton.

Oxygen Production:

The amount of oxygen produced is estimated from carbon sequestration based on atomic weights: net O2 release (kg/yr) = net C sequestration $(kg/yr) \times 32/12$. To estimate the net carbon sequestration rate, the amount of carbon sequestered as a result of tree growth is reduced by the amount lost resulting from tree mortality. Thus, net carbon sequestration and net annual oxygen production of the urban forest account for decomposition (Nowak et al 2007). For complete inventory projects, oxygen production is estimated from gross carbon sequestration and does not account for decomposition.

Avoided Runoff:

Annual avoided surface runoff is calculated based on rainfall interception by vegetation, specifically the difference between annual runoff with and without vegetation. Although tree leaves, branches, and bark may intercept precipitation and thus mitigate surface runoff, only the precipitation intercepted by leaves is accounted for in this analysis.

The value of avoided runoff is based on estimated or user-defined local values. For international reports that do not have local values, the national average value for the United States is utilized and converted to local currency with user-defined exchange rates. The U.S. value of avoided runoff is based on the U.S. Forest Service's Community Tree Guide Series (McPherson et al 1999; 2000; 2001; 2002; 2003; 2004; 2006a; 2006b; 2006c; 2007; 2010; Peper et al 2009; 2010; Vargas et al 2007a; 2007b; 2008).

For this analysis, avoided runoff value is calculated based on the price of \$0.07 per ft³.

Building Energy Use:

If appropriate field data were collected, seasonal effects of trees on residential building energy use were calculated based on procedures described in the literature (McPherson and Simpson 1999) using distance and direction of trees from residential structures, tree height and tree condition data. To calculate the monetary value of energy savings, local or custom prices per MWH or MBTU are utilized.

For this analysis, energy saving value is calculated based on the prices of \$176.37 per MWH and \$15.84 per MBTU.

Structural Values:

Structural value is the value of a tree based on the physical resource itself (e.g., the cost of having to replace a tree with a similar tree). Structural values were based on valuation procedures of the Council of Tree and Landscape Appraisers, which uses tree species, diameter, condition, and location information (Nowak et al 2002a; 2002b). Structural value may not be included for international projects if there is insufficient local data to complete the valuation procedures.

Potential Pest Impacts:

The complete potential pest risk analysis is not available for studies outside of the United States. The number of trees at risk to the pests analyzed is reported, though the list of pests is based on known insects and disease in the United States.

For the U.S., potential pest risk is based on pest range maps and the known pest host species that are likely to experience mortality. Pest range maps for 2012 from the Forest Health Technology Enterprise Team (FHTET) (Forest Health Technology Enterprise Team 2014) were used to determine the proximity of each pest to the county in which

the urban forest is located. For the county, it was established whether the insect/disease occurs within the county, is within 250 miles of the county edge, is between 250 and 750 miles away, or is greater than 750 miles away. FHTET did not have pest range maps for Dutch elm disease and chestnut blight. The range of these pests was based on known occurrence and the host range, respectively (Eastern Forest Environmental Threat Assessment Center; Worrall 2007).

Relative Tree Effects:

The relative value of tree benefits reported in Appendix II is calculated to show what carbon storage and sequestration, and air pollutant removal equate to in amounts of municipal carbon emissions, passenger automobile emissions, and house emissions.

Municipal carbon emissions are based on 2010 U.S. per capita carbon emissions (Carbon Dioxide Information Analysis Center 2010). Per capita emissions were multiplied by city population to estimate total city carbon emissions.

Light duty vehicle emission rates (g/mi) for CO, NOx, VOCs, PM10, SO2 for 2010 (Bureau of Transportation Statistics 2010; Heirigs et al 2004), PM2.5 for 2011-2015 (California Air Resources Board 2013), and CO2 for 2011 (U.S. Environmental Protection Agency 2010) were multiplied by average miles driven per vehicle in 2011 (Federal Highway Administration 2013) to determine average emissions per vehicle.

Household emissions are based on average electricity kWh usage, natural gas Btu usage, fuel oil Btu usage, kerosene Btu usage, LPG Btu usage, and wood Btu usage per household in 2009 (Energy Information Administration 2013; Energy Information Administration 2014)

- CO2, SO2, and NOx power plant emission per KWh are from Leonardo Academy 2011. CO emission per kWh assumes 1/3 of one percent of C emissions is CO based on Energy Information Administration 1994. PM10 emission per kWh from Layton 2004.
- CO2, NOx, SO2, and CO emission per Btu for natural gas, propane and butane (average used to represent LPG), Fuel #4 and #6 (average used to represent fuel oil and kerosene) from Leonardo Academy 2011.
- CO2 emissions per Btu of wood from Energy Information Administration 2014.
- CO, NOx and SOx emission per Btu based on total emissions and wood burning (tons) from (British Columbia Ministry 2005; Georgia Forestry Commission 2009).

Appendix II. Relative Tree Effects

The urban forest in Village of Mount Kisco, NY provides benefits that include carbon storage and sequestration, and air pollutant removal. To estimate the relative value of these benefits, tree benefits were compared to estimates of average municipal carbon emissions, average passenger automobile emissions, and average household emissions. See Appendix I for methodology.

Carbon storage is equivalent to:

- Amount of carbon emitted in Village of Mount Kisco, NY in 9 days
- Annual carbon (C) emissions from 1,050 automobiles
- Annual C emissions from 432 single-family houses

Carbon monoxide removal is equivalent to:

- Annual carbon monoxide emissions from 0 automobiles
- Annual carbon monoxide emissions from 0 single-family houses

Nitrogen dioxide removal is equivalent to:

- · Annual nitrogen dioxide emissions from 17 automobiles
- Annual nitrogen dioxide emissions from 7 single-family houses

Sulfur dioxide removal is equivalent to:

- Annual sulfur dioxide emissions from 103 automobiles
- Annual sulfur dioxide emissions from 0 single-family houses

Annual carbon sequestration is equivalent to:

- Amount of carbon emitted in Village of Mount Kisco, NY in 0.2 days
- Annual C emissions from 0 automobiles
- Annual C emissions from 0 single-family houses

Appendix III. Comparison of Urban Forests

A common question asked is, "How does this city compare to other cities?" Although comparison among cities should be made with caution as there are many attributes of a city that affect urban forest structure and functions, summary data are provided from other cities analyzed using the i-Tree Eco model.

I. City totals for trees

				Carbon	
City	% Tree Cover	Number of Trees	Carbon Storage	Sequestration	Pollution Removal
			(tons)	(tons/yr)	(tons/yr)
Toronto, ON, Canada	26.6	10,220,000	1,221,000	51,500	2,099
Atlanta, GA	36.7	9,415,000	1,344,000	46,400	1,663
Los Angeles, CA	11.1	5,993,000	1,269,000	77,000	1,975
New York, NY	20.9	5,212,000	1,350,000	42,300	1,676
London, ON, Canada	24.7	4,376,000	396,000	13,700	408
Chicago, IL	17.2	3,585,000	716,000	25,200	888
Baltimore, MD	21.0	2,479,000	570,000	18,400	430
Philadelphia, PA	15.7	2,113,000	530,000	16,100	575
Washington, DC	28.6	1,928,000	525,000	16,200	418
Oakville, ON , Canada	29.1	1,908,000	147,000	6,600	190
Boston, MA	22.3	1,183,000	319,000	10,500	283
Syracuse, NY	26.9	1,088,000	183,000	5,900	109
Woodbridge, NJ	29.5	986,000	160,000	5,600	210
Minneapolis, MN	26.4	979,000	250,000	8,900	305
San Francisco, CA	11.9	668,000	194,000	5,100	141
Morgantown, WV	35.5	658,000	93,000	2,900	72
Moorestown, NJ	28.0	583,000	117,000	3,800	118
Hartford, CT	25.9	568,000	143,000	4,300	58
Jersey City, NJ	11.5	136,000	21,000	890	41
Casper, WY	8.9	123,000	37,000	1,200	37
Freehold, NJ	34.4	48,000	20,000	540	22

II. Totals per acre of land area

City	Number of Trees/ac	Carbon Storage	Carbon Sequestration	Pollution Removal
		(tons/ac)	(tons/ac/yr)	(lb/ac/yr)
Toronto, ON, Canada	64.9	7.8	0.33	26.7
Atlanta, GA	111.6	15.9	0.55	39.4
Los Angeles, CA	19.6	4.2	0.16	13.1
New York, NY	26.4	6.8	0.21	17.0
London, ON, Canada	75.1	6.8	0.24	14.0
Chicago, IL	24.2	4.8	0.17	12.0
Baltimore, MD	48.0	11.1	0.36	16.6
Philadelphia, PA	25.1	6.3	0.19	13.6
Washington, DC	49.0	13.3	0.41	21.2
Oakville, ON , Canada	78.1	6.0	0.27	11.0
Boston, MA	33.5	9.1	0.30	16.1
Syracuse, NY	67.7	10.3	0.34	13.6
Woodbridge, NJ	66.5	10.8	0.38	28.4
Minneapolis, MN	26.2	6.7	0.24	16.3
San Francisco, CA	22.5	6.6	0.17	9.5
Morgantown, WV	119.2	16.8	0.52	26.0
Moorestown, NJ	62.1	12.4	0.40	25.1
Hartford, CT	50.4	12.7	0.38	10.2
Jersey City, NJ	14.4	2.2	0.09	8.6
Casper, WY	9.1	2.8	0.09	5.5
Freehold, NJ	38.3	16.0	0.44	35.3

Appendix IV. General Recommendations for Air Quality Improvement

Urban vegetation can directly and indirectly affect local and regional air quality by altering the urban atmosphere environment. Four main ways that urban trees affect air quality are (Nowak 1995):

- Temperature reduction and other microclimate effects
- Removal of air pollutants
- Emission of volatile organic compounds (VOC) and tree maintenance emissions
- Energy effects on buildings

The cumulative and interactive effects of trees on climate, pollution removal, and VOC and power plant emissions determine the impact of trees on air pollution. Cumulative studies involving urban tree impacts on ozone have revealed that increased urban canopy cover, particularly with low VOC emitting species, leads to reduced ozone concentrations in cities (Nowak 2000). Local urban management decisions also can help improve air quality.

Urban forest management strategies to help improve air quality include (Nowak 2000):

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Strategy	Result
Increase the number of healthy trees	Increase pollution removal
Sustain existing tree cover	Maintain pollution removal levels
Maximize use of low VOC-emitting trees	Reduces ozone and carbon monoxide formation
Sustain large, healthy trees	Large trees have greatest per-tree effects
Use long-lived trees	Reduce long-term pollutant emissions from
	planting and removal
Use low maintenance trees	Reduce pollutants emissions from maintenance
	activities
Reduce fossil fuel use in maintaining vegetation	Reduce pollutant emissions
Plant trees in energy conserving locations	Reduce pollutant emissions from power plants
Plant trees to shade parked cars	Reduce vehicular VOC emissions
Supply ample water to vegetation	Enhance pollution removal and temperature
	reduction
Plant trees in polluted or heavily populated areas	Maximizes tree air quality benefits
Avoid pollutant-sensitive species	Improve tree health
Utilize evergreen trees for particulate matter	Year-round removal of particles

Appendix V. Invasive Species of the Urban Forest

The following inventoried tree species were listed as invasive on the New York invasive species list ():

Species Name ^a	Number of Trees	% of Trees	Leaf Area	Percent Leaf Area
			(ac)	
Norway maple	339	13.9	22.2	20.1
Callery pear	325	13.4	5.7	5.2
Black locust	14	0.6	0.5	0.5
Tree of heaven	12	0.5	0.4	0.3
Total	690	28.37	28.79	26.11

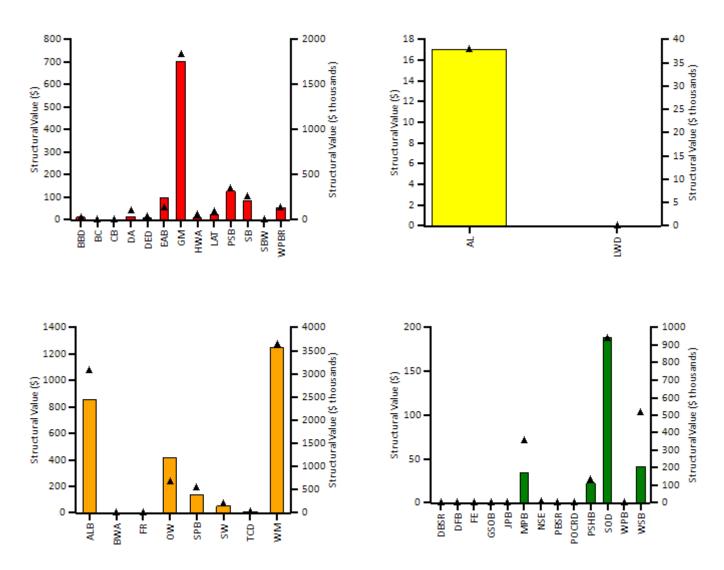
^aSpecies are determined to be invasive if they are listed on the state's invasive species list

Appendix VI. Potential Risk of Pests

Thirty-six insects and diseases were analyzed to quantify their potential impact on the urban forest. As each insect/ disease is likely to attack different host tree species, the implications for {0} will vary. The number of trees at risk reflects only the known host species that are likely to experience mortality.

Code	Scientific Name	Common Name	Trees at Risk	Value
			(#)	(\$ thousands)
AL	Phyllocnistis populiella	Aspen Leafminer	17	37.84
ALB	Anoplophora glabripennis	Asian Longhorned Beetle	1,072	2,453.47
BBD	Neonectria faginata	Beech Bark Disease	8	29.95
ВС	Sirococcus clavigignenti juglandacearum	Butternut Canker	0	0.00
BWA	Adelges piceae	Balsam Woolly Adelgid	0	0.00
СВ	Cryphonectria parasitica	Chestnut Blight	0	0.00
DA	Discula destructiva	Dogwood Anthracnose	38	34.90
DBSR	Leptographium wageneri var. pseudotsugae	Douglas-fir Black Stain Root Disease	0	0.00
DED	Ophiostoma novo-ulmi	Dutch Elm Disease	14	21.48
DFB	Dendroctonus pseudotsugae	Douglas-Fir Beetle	0	0.00
EAB	Agrilus planipennis	Emerald Ash Borer	55	245.47
FE	Scolytus ventralis	Fir Engraver	0	0.00
FR	Cronartium quercuum f. sp. Fusiforme	Fusiform Rust	0	0.00
GM	Lymantria dispar	Gypsy Moth	735	1,759.17
GSOB	Agrilus auroguttatus	Goldspotted Oak Borer	0	0.00
HWA	Adelges tsugae	Hemlock Woolly Adelgid	20	21.48
JPB	Dendroctonus jeffreyi	Jeffrey Pine Beetle	0	0.00
LAT	Choristoneura conflictana	Large Aspen Tortrix	34	54.28
LWD	Raffaelea lauricola	Laurel Wilt	0	0.00
MPB	Dendroctonus ponderosae	Mountain Pine Beetle	71	170.84
NSE	lps perturbatus	Northern Spruce Engraver	1	1.96
OW	Ceratocystis fagacearum	Oak Wilt	232	1,184.52
PBSR	Leptographium wageneri var. ponderosum	Pine Black Stain Root Disease	0	0.00
POCRD	Phytophthora lateralis	Port-Orford-Cedar Root Disease	0	0.00
PSB	Tomicus piniperda	Pine Shoot Beetle	136	320.73
PSHB	Euwallacea nov. sp.	Polyphagous Shot Hole Borer	26	113.30
SB	Dendroctonus rufipennis	Spruce Beetle	103	208.08
SBW	Choristoneura fumiferana	Spruce Budworm	0	0.00
SOD	Phytophthora ramorum	Sudden Oak Death	187	941.73
SPB	Dendroctonus frontalis	Southern Pine Beetle	188	379.46
SW	Sirex noctilio	Sirex Wood Wasp	65	149.89
TCD	Geosmithia morbida	Thousand Canker Disease	7	29.75
WM	Operophtera brumata	Winter Moth	1,271	3,576.37
WPB	Dendroctonus brevicomis	Western Pine Beetle	0	0.00
WPBR	Cronartium ribicola	White Pine Blister Rust	53	136.49
WSB	Choristoneura occidentalis	Western Spruce Budworm	103	208.08
				Page 27

In the following graph, the pests are color coded according to the county's proximity to the pest occurrence in the United States. Red indicates that the pest is within the county; orange indicates that the pest is within 250 miles of the county; yellow indicates that the pest is within 750 miles of the county; and green indicates that the pest is outside of these ranges.



Note: points - Number of trees, bars - Structural value

Based on the host tree species for each pest and the current range of the pest (Forest Health Technology Enterprise Team 2014), it is possible to determine what the risk is that each tree species in the urban forest could be attacked by an insect or disease.

Spp. Risk	Risk Weight	Species Name	٩٢	ALB	BBD	BC	BWA	8	DA	DBSR	DED	DFB	EAB	뿐	뜐	₩	GSOB	HWA	JPB	LAT	LWD	MPB	NSE	ΜO	PBSR	POCRD	PSB	PSHB	SB	SBW	gos	SPB	SW	5	WM W	WPB	WPBR	WSB
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	11	Northern red oak																																				
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	10	Green ash																																			П	٦
	10	White oak																																				\Box
	10	American elm																																				
	10	Austrian pine																																				
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3	Black walnut																
3	Paperbark maple																
3	Sycamore maple																

Note:

Species that are not listed in the matrix are not known to be hosts to any of the pests analyzed.

Species Risk:

- Red indicates that tree species is at risk to at least one pest within county
- Orange indicates that tree species has no risk to pests in county, but has a risk to at least one pest within 250 miles from the county
- Yellow indicates that tree species has no risk to pests within 250 miles of county, but has a risk to at least one pest that is 250 and 750 miles from the county
- Green indicates that tree species has no risk to pests within 750 miles of county, but has a risk to at least one pest that is greater than 750 miles from the county

Risk Weight:

Numerical scoring system based on sum of points assigned to pest risks for species. Each pest that could attack tree species is scored as 4 points if red, 3 points if orange, 2 points if yellow and 1 point if green.

Pest Color Codes:

- Red indicates pest is within Westchester county
- Red indicates pest is within 250 miles county
- Yellow indicates pest is within 750 miles of Westchester county
- Green indicates pest is outside of these ranges

References

Abdollahi, K.K.; Ning, Z.H.; Appeaning, A., eds. 2000. Global climate change and the urban forest. Baton Rouge, LA: GCRCC and Franklin Press. 77 p.

Baldocchi, D. 1988. A multi-layer model for estimating sulfur dioxide deposition to a deciduous oak forest canopy. Atmospheric Environment. 22: 869-884.

Baldocchi, D.D.; Hicks, B.B.; Camara, P. 1987. A canopy stomatal resistance model for gaseous deposition to vegetated surfaces. Atmospheric Environment. 21: 91-101.

Bidwell, R.G.S.; Fraser, D.E. 1972. Carbon monoxide uptake and metabolism by leaves. Canadian Journal of Botany. 50: 1435-1439.

British Columbia Ministry of Water, Land, and Air Protection. 2005. Residential wood burning emissions in British Columbia. British Columbia.

Broecker, W.S. 1970. Man's oxygen reserve. Science 168(3939): 1537-1538.

Bureau of Transportation Statistics. 2010. Estimated National Average Vehicle Emissions Rates per Vehicle by Vehicle Type using Gasoline and Diesel. Washington, DC: Burea of Transportation Statistics, U.S. Department of Transportation. Table 4-43.

California Air Resources Board. 2013. Methods to Find the Cost-Effectiveness of Funding Air Quality Projects. Table 3 Average Auto Emission Factors. CA: California Environmental Protection Agency, Air Resources Board.

Carbon Dioxide Information Analysis Center. 2010. CO2 Emissions (metric tons per capita). Washington, DC: The World Bank.

Cardelino, C.A.; Chameides, W.L. 1990. Natural hydrocarbons, urbanization, and urban ozone. Journal of Geophysical Research. 95(D9): 13,971-13,979.

Ciesla, W. M. 2001. Tomicus piniperda. North American Forest Commission. Exotic Forest Pest Information System for North America (EXFOR).

Ciesla, W. M.; Kruse, J. J. 2009. Large Aspen Tortrix. Forest Insect & Disease Leaflet 139. Washington, DC: U. S. Department of Agriculture, Forest Service. 8 p.

Diller, J. D. 1965. Chestnut Blight. Forest Pest Leaflet 94. Washington, DC: U. S. Department of Agriculture, Forest Service. 7 p.

Eastern Forest Environmental Threat Assessment Center. Dutch Elm Disease. http://threatsummary.forestthreats.org/threats/threatSummaryViewer.cfm?threatID=43

Energy Information Administration. 1994. Energy Use and Carbon Emissions: Non-OECD Countries. Washington, DC: Energy Information Administration, U.S. Department of Energy.

Energy Information Administration. 2013. CE2.1 Fuel consumption totals and averages, U.S. homes. Washington, DC: Energy Information Administration, U.S. Department of Energy.

Energy Information Administration. 2014. CE5.2 Household wood consumption. Washington, DC: Energy Information Administration, U.S. Department of Energy.

Federal Highway Administration. 2013. Highway Statistics 2011. Washington, DC: Federal Highway Administration, U.S. Department of Transportation. Table VM-1.

Forest Health Technology Enterprise Team. 2014. 2012 National Insect & Disease Risk Maps/Data. Fort Collins, CO: U.S. Department of Agriculture, Forest Service. http://www.fs.fed.us/foresthealth/technology/nidrm2012.shtml

Georgia Forestry Commission. 2009. Biomass Energy Conversion for Electricity and Pellets Worksheet. Dry Branch, GA: Georgia Forestry Commission.

Heirigs, P.L.; Delaney, S.S.; Dulla, R.G. 2004. Evaluation of MOBILE Models: MOBILE6.1 (PM), MOBILE6.2 (Toxics), and MOBILE6/CNG. Sacramento, CA: National Cooperative Highway Research Program, Transportation Research Board.

Hirabayashi, S. 2011. Urban Forest Effects-Dry Deposition (UFORE-D) Model Enhancements, http://www.itreetools.org/eco/resources/UFORE-D enhancements.pdf

Hirabayashi, S. 2012. i-Tree Eco Precipitation Interception Model Descriptions, http://www.itreetools.org/eco/resources/iTree_Eco_Precipitation_Interception_Model_Descriptions_V1_2.pdf

Hirabayashi, S.; Kroll, C.; Nowak, D. 2011. Component-based development and sensitivity analyses of an air pollutant dry deposition model. Environmental Modeling and Software. 26(6): 804-816.

Hirabayashi, S.; Kroll, C.; Nowak, D. 2012. i-Tree Eco Dry Deposition Model Descriptions V 1.0

Holsten, E.H.; Thier, R.W.; Munson, A.S.; Gibson, K.E. 1999. The Spruce Beetle. Forest Insect & Disease Leaflet 127. Washington, DC: U.S. Department of Agriculture, Forest Service. 12 p.

Houston, D. R.; O'Brien, J. T. 1983. Beech Bark Disease. Forest Insect & Disease Leaflet 75. Washington, DC: U. S. Department of Agriculture, Forest Service. 8 p.

Interagency Working Group on Social Cost of Carbon, United States Government. 2015. Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866. http://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf

Kucera, D. R.; Orr, P. W. 1981. Spruce Budworm in the Eastern United States. Forest Pest Leaflet 160. Washington, DC: U.S. Department of Agriculture, Forest Service. 8 p.

Layton, M. 2004. 2005 Electricity Environmental Performance Report: Electricity Generation and Air Emissions. CA: California Energy Commission.

Leonardo Academy. 2011. Leonardo Academy's Guide to Calculating Emissions Including Emission Factors and Energy Prices. Madison, WI: Leonardo Academy Inc.

Lovett, G.M. 1994. Atmospheric deposition of nutrients and pollutants in North America: an ecological perspective. Ecological Applications. 4: 629-650.

McPherson, E.G.; Maco, S.E.; Simpson, J.R.; Peper, P.J.; Xiao, Q.; VanDerZanden, A.M.; Bell, N. 2002. Western Washington and Oregon Community Tree Guide: Benefits, Costs, and Strategic Planting. International Society of

Arboriculture, Pacific Northwest, Silverton, OR.

McPherson, E.G.; Simpson, J.R. 1999. Carbon dioxide reduction through urban forestry: guidelines for professional and volunteer tree planters. Gen. Tech. Rep. PSW-171. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 237 p.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Crowell, A.M.N.; Xiao, Q. 2010. Northern California coast community tree guide: benefits, costs, and strategic planting. PSW-GTR-228. Gen. Tech. Rep. PSW-GTR-228. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Gardner, S.L.; Vargas, K.E.; Maco, S.E.; Xiao, Q. 2006a. Coastal Plain Community Tree Guide: Benefits, Costs, and Strategic Planting PSW-GTR-201. USDA Forest Service, Pacific Southwest Research Station, Albany, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Gardner, S.L.; Vargas, K.E.; Xiao, Q. 2007. Northeast community tree guide: benefits, costs, and strategic planting.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Maco, S.E.; Gardner, S.L.; Cozad, S.K.; Xiao, Q. 2006b. Midwest Community Tree Guide: Benefits, Costs and Strategic Planting PSW-GTR-199. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Maco, S.E.; Gardner, S.L.; Vargas, K.E.; Xiao, Q. 2006c. Piedmont Community Tree Guide: Benefits, Costs, and Strategic Planting PSW-GTR 200. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Maco, S.E.; Xiao Q.; Mulrean, E. 2004. Desert Southwest Community Tree Guide: Benefits, Costs and Strategic Planting. Phoenix, AZ: Arizona Community Tree Council, Inc. 81:81.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Scott, K.I.; Xiao, Q. 2000. Tree Guidelines for Coastal Southern California Communities. Local Government Commission, Sacramento, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Xiao, Q. 1999. Tree Guidelines for San Joaquin Valley Communities. Local Government Commission, Sacramento, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Xiao, Q.; Maco, S.E.; Hoefer, P.J. 2003. Northern Mountain and Prairie Community Tree Guide: Benefits, Costs and Strategic Planting. Center for Urban Forest Research, USDA Forest Service, Pacific Southwest Research Station, Albany, CA.

McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Xiao, Q.; Pittenger, D.R.; Hodel, D.R. 2001. Tree Guidelines for Inland Empire Communities. Local Government Commission, Sacramento, CA.

Michigan State University. 2010. Emerald ash borer. East Lansing, MI: Michigan State University [and others].

Mielke, M. E.; Daughtrey, M. L. How to Identify and Control Dogwood Anthracnose. NA-GR-18. Broomall, PA: U. S. Department of Agriculture, Forest Service, Northeastern Area and Private Forestry.

Murray, F.J.; Marsh L.; Bradford, P.A. 1994. New York State Energy Plan, vol. II: issue reports. Albany, NY: New York State Energy Office.

National Invasive Species Information Center. 2011. Beltsville, MD: U.S. Department of Agriculture, National Invasive Species Information Center. http://www.invasivespeciesinfo.gov/plants/main.shtml

Nicholls, T. H.; Anderson, R. L. 1977. How to Identify White Pine Blister Rust and Remove Cankers. St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry

Northeastern Area State and Private Forestry. 1998. How to identify and manage Dutch Elm Disease. NA-PR-07-98. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry.

Northeastern Area State and Private Forestry. 2005. Gypsy moth digest. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry.

Nowak, D.J. 1994. Atmospheric carbon dioxide reduction by Chicago's urban forest. In: McPherson, E.G.; Nowak, D.J.; Rowntree, R.A., eds. Chicago's urban forest ecosystem: results of the Chicago Urban Forest Climate Project. Gen. Tech. Rep. NE-186. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station: 83-94.

Nowak, D.J. 1995. Trees pollute? A "TREE" explains it all. In: Proceedings of the 7th National Urban Forestry Conference. Washington, DC: American Forests: 28-30.

Nowak, D.J. 2000. The interactions between urban forests and global climate change. In: Abdollahi, K.K.; Ning, Z.H.; Appeaning, A., eds. Global Climate Change and the Urban Forest. Baton Rouge, LA: GCRCC and Franklin Press: 31-44.

Nowak, D.J., Hirabayashi, S., Bodine, A., Greenfield, E. 2014. Tree and forest effects on air quality and human health in the United States. Environmental Pollution. 193:119-129.

Nowak, D.J., Hirabayashi, S., Bodine, A., Hoehn, R. 2013. Modeled PM2.5 removal by trees in ten U.S. cities and associated health effects. Environmental Pollution. 178: 395-402.

Nowak, D.J.; Civerolo, K.L.; Rao, S.T.; Sistla, S.; Luley, C.J.; Crane, D.E. 2000. A modeling study of the impact of urban trees on ozone. Atmospheric Environment. 34: 1601-1613.

Nowak, D.J.; Crane, D.E. 2000. The Urban Forest Effects (UFORE) Model: quantifying urban forest structure and functions. In: Hansen, M.; Burk, T., eds. Integrated tools for natural resources inventories in the 21st century. Proceedings of IUFRO conference. Gen. Tech. Rep. NC-212. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station: 714-720.

Nowak, D.J.; Crane, D.E.; Dwyer, J.F. 2002a. Compensatory value of urban trees in the United States. Journal of Arboriculture. 28(4): 194 - 199.

Nowak, D.J.; Crane, D.E.; Stevens, J.C.; Hoehn, R.E. 2005. The urban forest effects (UFORE) model: field data collection manual. V1b. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station, 34 p. http://www.fs.fed.us/ne/syracuse/Tools/downloads/UFORE_Manual.pdf

Nowak, D.J.; Crane, D.E.; Stevens, J.C.; Ibarra, M. 2002b. Brooklyn's urban forest. Gen. Tech. Rep. NE-290. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 107 p.

Nowak, D.J.; Dwyer, J.F. 2000. Understanding the benefits and costs of urban forest ecosystems. In: Kuser, John, ed. Handbook of urban and community forestry in the northeast. New York, NY: Kluwer Academics/Plenum: 11-22.

Nowak, D.J.; Hoehn, R.; Crane, D. 2007. Oxygen production by urban trees in the United States. Arboriculture & Urban Forestry. 33(3):220-226.

Nowak, D.J.; Hoehn, R.E.; Crane, D.E.; Stevens, J.C.; Walton, J.T; Bond, J. 2008. A ground-based method of assessing urban forest structure and ecosystem services. Arboriculture and Urban Forestry. 34(6): 347-358.

Nowak, D.J.; Stevens, J.C.; Sisinni, S.M.; Luley, C.J. 2002c. Effects of urban tree management and species selection on atmospheric carbon dioxide. Journal of Arboriculture. 28(3): 113-122.

Ostry, M.E.; Mielke, M.E.; Anderson, R.L. 1996. How to Identify Butternut Canker and Manage Butternut Trees. U. S. Department of Agriculture, Forest Service, North Central Forest Experiment Station.

Peper, P.J.; McPherson, E.G.; Simpson, J.R.; Albers, S.N.; Xiao, Q. 2010. Central Florida community tree guide: benefits, costs, and strategic planting. Gen. Tech. Rep. PSW-GTR-230. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

Peper, P.J.; McPherson, E.G.; Simpson, J.R.; Vargas, K.E.; Xiao Q. 2009. Lower Midwest community tree guide: benefits, costs, and strategic planting. PSW-GTR-219. Gen. Tech. Rep. PSW-GTR-219. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

U.S. Environmental Protection Agency. 2010. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards. Washington, DC: U.S. Environmental Protection Agency. EPA-420-R-10-012a

U.S. Environmental Protection Agency. 2015. The social cost of carbon. http://www.epa.gov/climatechange/EPAactivities/economics/scc.html

U.S. Forest Service. 2005. Hemlock Woolly Adelgid. Pest Alert. NA-PR-09-05. Newtown Square, PA: U. S. Department of Agriculture, Forest Service, Northern Area State and Private Forestry.

van Essen, H.; Schroten, A.; Otten, M.; Sutter, D.; Schreyer, C.; Zandonella, R.; Maibach, M.; Doll, C. 2011. External Costs of Transport in Europe. Netherlands: CE Delft. 161 p.

Vargas, K.E.; McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Gardner, S.L.; Xiao, Q. 2007a. Interior West Tree Guide.

Vargas, K.E.; McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Gardner, S.L.; Xiao, Q. 2007b. Temperate Interior West Community Tree Guide: Benefits, Costs, and Strategic Planting.

Vargas, K.E.; McPherson, E.G.; Simpson, J.R.; Peper, P.J.; Gardner, S.L.; Xiao, Q. 2008. Tropical community tree guide: benefits, costs, and strategic planting. PSW-GTR-216. Gen. Tech. Rep. PSW-GTR-216. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Albany, CA.

Worrall, J.J. 2007. Chestnut Blight. Forest and Shade Tree Pathology. http://www.forestpathology.org/dis_chestnut.html

Zinke, P.J. 1967. Forest interception studies in the United States. In: Sopper, W.E.; Lull, H.W., eds. Forest Hydrology. Oxford, UK: Pergamon Press: 137-161.