

Use the tree ID numbers and the map to see which trees are being pruned, removed, etc.



Tree Health Assessment Report
Edward L. Leathers Park

Somerville Parks Tree Health Program

IFB #20-19

Prepared by Alden Johnson, MCA, ISA

Keith Bernard MCA, ISA, TRAQ

December 10, 2019

Overview:

Ed Leathers site is a passive city park with off-leash dog park that is currently home to 80 deciduous ornamental and shade trees.

Soil Health

The soil throughout the park is not overly compacted: low to moderate compaction. Moisture is adequate due to robust irrigation system. Soil is pale colored sandy-gravel with some organic matter in the top 2 inches. Does not stick together. No odor noted. Soil test results showed average PH of 6.2. Macronutrient levels OK, on the lower end and did show lower than optimum Calcium and Phosphorus levels. We do not generally target these for treatment/amendment in urban soils. Monitor for signs of chlorosis or nutrient deficiencies.

Pest treatment

See notes below about Gall Wasp in Pin Oaks under Zone 2 notes. There are (3) Ash trees (#42260, #42091, #42242) in this park which are host species to the serious invasive insect Emerald Ash Borer, but no sign of infestation at the time of this report. These trees should be monitored and treated regularly to protect from EAB infestation. It is my understanding that they are currently included in the city-wide EAB protection plan under a separate contract.

Other correction of adverse conditions

Evidence of recent storm damage to several of the Poplar trees- large main trunk failure in several trees. It is our opinion that these trees are near the end of their useful life cycle in this setting and present a moderate risk. Select removal of the worst specimens and aggressive pruning of the remaining trees is recommended as part of the attached work plan. Long term plan should account for replanting and removal of all Poplar trees on the south side of the park. The River Birch trees on the north side were planted in very close proximity to each other and are outgrowing their space. Select removal or aggressive pruning of the River Birch on the north side should be planned for in the coming decade. Our Level 1 TRAQ assessment of all trees results in a “low” risk rating, with the exception of all Poplars which pose a “moderate” risk due to prevalence of cankers and large dead sections and proximity to train tracks and walking path.

Pruning and removal

The park’s tree planting layout is separated into 4 distinct zones. Current pruning a removal needs are evaluated by zone as follows:

Zone 1: Poplars and Ash along the train tracks, dog park, and elevated walkway along the southwest border of the park. (45 Trees total)

Zone 2: Pin Oaks lining the central walkway (8 trees total)

Zone 3: Row of River Birch along the north side (15 trees total)

Zone 4: Flowering Cherries at the northern point of the park (6 trees total)

Zone 1: Poplars and Ash along the train tracks:

General tree health

Poplars are a fast-growing, deciduous tree with soft structural wood and are short life cycle. The majority of poplar trees in the park are heavily infested with large stem cankers on main trunks visible from the ground. These cankers create weak points in the structure of the tree, as evidenced by multiple trees that have broken in half and fallen into the park in recent years. The prevalence of cankers and proximity of the trees to the walking path and MBTA property make them a moderate risk. Stem cankers also appear to be interrupting vascular transport in the trees, leading to dieback in the upper canopy of most of the trees. Various degrees of canopy dieback is evident in 80-90% of the poplar trees in the park. There is no effective treatment available to reverse cankers in trees at this stage. In addition to aggressive weight-reduction pruning and removals recommended below I advise gradual removal and replacement of all infected poplars in this zone with a more appropriate species over the next 5-10 years. This process has already begun with the Urban Forestry department planting several young Osage Orange and Oak trees in this zone in April 2019.

Pruning/Removal needs

In several cases where canker infection and necrotic tissue makes up more than 50% of a tree's canopy removal is appropriate. For the remaining trees my recommendation would be pruning to reduce the weight and canopy mass in the upper 1/2 of the canopy and remove cankered sections, dieback and weakly attached limbs. Note this aggressive height reduction may negatively impact the aesthetic value of the trees in the short term and lead to sprouting. It is designed to reduce the incidence of whole stem failure and preserve low screening from the railway tracks until replacement trees can establish

Zone 2: Pin Oaks lining the central walkway

General tree health

These trees appear to be in good health and are appropriately spaced for future growth. Pin Oak is a large deciduous tree with strong wood and structure with a long life cycle. The trees closest to Walnut st have a number of Gall Wasp galls visible on the lower twigs. Galls in Pin Oaks are considered more of an aesthetic concern and should not impact the overall health of the tree significantly unless populations become significant. I advise pruning out some heavily infested lower branches, followed by monitoring. Chemical control is not advised at this time. Mulch should be added around the base of the trees per contract specs to limit soil compaction, weed growth and mower damage

Pruning needs

Trees #42190 and #42155 have significant codominant stems which should be addressed with structural pruning to help establish a dominant central leader. For all trees prune low deadwood greater than 1" in diameter. Prune to raise canopy to provide 10' of clearance off the pathway

and lawn, and 3-5' out of the streetlights. Prune out heavily-gall infested branches in the lowest 12' of tree #42155.

Zone 3: Row of River Birch along the north side

General tree health

River Birch are fast-growing deciduous trees that expand laterally into space. The trees in this planting are in good overall biological health, however the close proximity of the plantings to each other will likely result in continued long leggy growth with sub-optimal trunk taper. This will lead these trunks to bend and lean into surrounding area in coming years. Close proximity to the buildings and ornamental trees on the north side will require frequent pruning. In addition to the pruning recommended below, over the next 5-10 years these trees should be thinned out through select removal of stems and heavy weight reduction pruning in the upper half of the canopy.

Pruning needs

Trees should be pruned provide 6-8' of clearance off the buildings and ornamental trees, as well as 10' off the walkway. This includes the removal of several larger 2-5" branches. Canopy clean to remove dead and broken branches 1" and larger.

Zone 4: Flowering Cherries at the northern point of the park

General tree health

These ornamental trees appear to be in general good health. Monitor for fungal leaf disease after the heavy disease pressure this past season. Recent defoliating caterpillars such as winter moth should not be a factor with this pest's population's way down but trees should be monitored and treated if necessary. Thick canopy and redundant limbs as a result of long interval in between pruning. Mulch should be added around the base of the tree per contract specs to limit soil compaction, weed growth and mower damage.

Pruning needs

Prune to remove dead, diseased, crossing branches. Thin canopy to allow light penetration and improved airflow, remove redundant branches and encourage strong scaffolding branches and compact ornamental form.

2020 Priorities:

- Remove dead/severely cankered Poplar trees
- Aggressive pruning to remove dead and cankered sections of remaining poplars,
- Canopy cleaning, raising of Oaks, Birch
- Canopy cleaning, thinning, structural pruning of flowering *Prunus*

10-Year Priorities:

- Gradual removal of all cankered Poplars make room for a replacement generation
- Replacement of Poplars with more suitable shade trees
- Thinning, select removal of River Birch to limit legginess and stem failure, improve structure
- Monitoring of Oak Gall



Accredited Tree Care by Certified Arborists

City of Somerville
93 Highland Ave
Somerville, MA 02143

Home:
Mobile:
Office: 617-625-6600
e-mail: sestrela@somervillema.gov
Alt e-mail: SMacEachern@somervillema.gov

December 10, 2019
Proposal #: 37224

Job Site:
Somerville Parks Tree Health Program
IFB#20-19
Various Locations
Somerville, MA 02143

Phone: 617-625-6600 x2514
Email: mdayton@somervillema.gov
Alt Phone:

Tree and Shrub Care Recommendations on 11/11/2019

Description of Services

- Ed Leathers Work Plan

Map: See attached

Schedule and sequence: We plan to complete the pruning and removal work proposed during the hours of 7AM-3PM over the course 6 consecutive business days to be named in February-March 2020.

Crew and Equipment:

Pruning work: 2 person crew, including a certified arborist, wood chipper and truck-mounted aerial lift for pruning work.

Removal work: 3 person crew with a certified arborist, chipper and truck-mounted aerial lift for removal work.

Park Closures: No need to close the park. We will cordon off each zone as we work and leave at least (1) walking path through the park open to the public.

Traffic and Pedestrian Management plan: Allow for vehicular traffic and pedestrians to safely pass the work site. Use proper signage, cones and caution tape to clearly identify the work site, and utilize a police detail to ensure safety. Written plan to be submitted to city traffic engineer for approval prior to work.

Equipment access and matting: Weight dispersal matting will be used for equipment access to minimize impact and soil compaction on non-paved surfaces. No digging or stump grinding will be done due to proximity to buried utilities.

- Zone 1: Poplars



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

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



- **Remove diseased/dead Poplars, (5 trees 10-20" diameter) #42223, #42207, #42188, #42143, #41299.**

Tree Removal - Take down and cut stump low to grade as equipment allows, dispose of brush, logs and chipped debris generated from removal operations.

- **Remove diseased/dead Poplars (2 trees, 4-10" diameter) #42159, #41659**

Tree Removal - Take down and cut stump low to grade as equipment allows, dispose of brush, logs and chipped debris generated from removal operations.

- **Pruning remaining Poplars along the raised walkway on the south side:**

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

Canopy Cleaning - Selective pruning to remove declining, dead and broken branches (including cankered and declining tops)

Canopy Reduction - Selective pruning to decrease height and/or canopy spread by 30-40% through a series of large diameter reduction cuts

Canopy Raising - Selective pruning to provide adequate envelope of clearance from fences, walkways and light fixtures.

- **Multi-stem Boxelder close to the railroad bridge #42196**

Young Tree Training - Selective pruning to improve branch architecture; select, develop and maintain strong, properly spaced scaffold branches by reducing or removing interfering, overextended, defective and poorly attached limbs. Includes removing several whole stems.

- **Zone 2: Oaks**

- **Pruning (8) Pin Oaks on either side of the central walkway**

Structural Pruning - Selective pruning subdue codominant stems in trees #42190 and #42155 through a series of (2-5) 2-4" diameter cuts in the upper canopy.

Canopy Cleaning - Selective pruning to remove declining, dead and broken branches greater than 1.5" in diameter (focused on lower canopy). For tree #42155 prune out heavily gall-infested branches in the bottom 15' of the tree.

Canopy Raising - Selective pruning to provide a 3-5 foot envelope of clearance from all street lights, and 10' off walkway and lawn.

- Add 3' radius rings of course organic mulch 2-3" deep at base of all Oaks.

- **Zone 3: Birches**



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

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



- Pruning River Birches along the north pathway:

Canopy Cleaning - Selective pruning to remove declining, dead and broken branches greater than 1" in diameter.

Canopy Raising - Selective pruning to provide 6-8' of clearance off the buildings and ornamental trees, as well as 10' off the walkway. This includes the removal of several larger 2-5" branches and stems.

- 4.2" Diameter dead/broken Poplar in the Birch grove:

Tree Removal - Take down and cut stump low to grade as equipment allows, dispose of brush, logs and chipped debris generated from removal operations.

- Multi-stem volunteer Boxelder growing in the Hydrangea near the concrete meeting circle.

Weed Tree Removal - Take down and cut stump low to grade as equipment allows, dispose of brush, logs and chipped debris generated from removal operations.

- Zone 4: Ornamental Cherries

- Ornamental Tree Pruning on Flowering *Prunus*:

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

Canopy Cleaning - Selective pruning to remove declining, dead and broken branches greater than 1" in diameter

Canopy Thinning - Selective pruning to reduce density of live interior limbs by 10-15%.

- Add 3' radius rings of coarse organic mulch 2-3" deep at base of all Cherries.

- Posting of "No Parking" signs on Walnut St and Skilton Ave.

- Police Detail

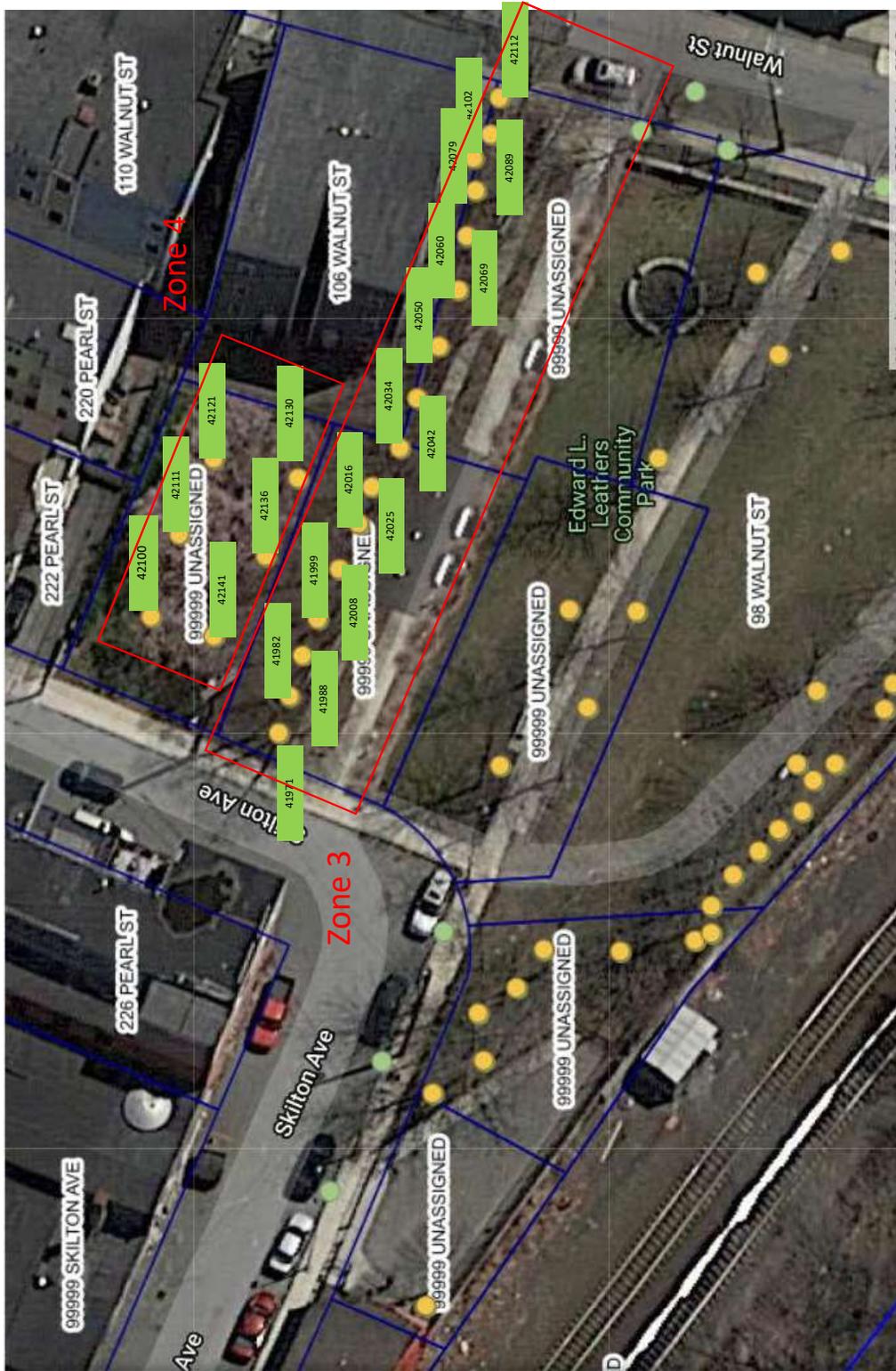
- **Debris Disposal:** include removal and disposal of brush, logs and chipped debris generated from tree care operations.



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

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





Ed Leathers North Frame

Edward Leathers Park

Site ID	Species	DBH	Work Recommended	Overall Condition	risk rating
Zone 1:					
42091	ash: green (Fraxinus pennsylvanica)	9.2	none included in work plan	Good	Low
42234	poplar: balsam (Populus balsamifera)	17.4	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42225	poplar: balsam (Populus balsamifera)	12.2	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42199	poplar: balsam (Populus balsamifera)	14.9	Removal, cut stump low	Fair	Moderate
42205	poplar: balsam (Populus balsamifera)	Stump	none included in work plan	N/A	N/A
42215	poplar: balsam (Populus balsamifera)	17.5	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42242	ash: green (Fraxinus pennsylvanica)	7.1	none included in work plan	Good	Low
42143	poplar: balsam (Populus balsamifera)	11.9	Removal, cut stump low	Fair	Moderate
42144	poplar: balsam (Populus balsamifera)	13.9	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Poor	Moderate
42145	poplar: balsam (Populus balsamifera)	11	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Good	Moderate

42147	poplar: balsam (Populus balsamifera)	6.2	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42149	poplar: balsam (Populus balsamifera)	9.8	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42153	poplar: balsam (Populus balsamifera)	9.7	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42157	poplar: balsam (Populus balsamifera)	10.4	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42192	poplar: balsam (Populus balsamifera)	10.7	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Poor	Moderate
42251	ash: green (Fraxinus pennsylvanica)	6	none included in work plan	Fair	Low
42198	poplar: balsam (Populus balsamifera)	15.1	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	fair/poor	Moderate
42206	poplar: balsam (Populus balsamifera)	12.6	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42216	poplar: balsam (Populus balsamifera)	12.5	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42224	poplar: balsam (Populus balsamifera)	10.5	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42233	poplar: balsam (Populus balsamifera)	9.4	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate

42243	poplar: balsam (Populus balsamifera)	6.9	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42252	poplar: balsam (Populus balsamifera)	7.6	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42261	poplar: balsam (Populus balsamifera)	8	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42270	poplar: balsam (Populus balsamifera)	8.3	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42278	poplar: balsam (Populus balsamifera)	9.6	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Good	Moderate
42289	poplar: balsam (Populus balsamifera)	8	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42146	poplar: balsam (Populus balsamifera)	8.5	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42148	poplar: balsam (Populus balsamifera)	10.7	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42154	poplar: balsam (Populus balsamifera)	10.6	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Moderate
42207	poplar: balsam (Populus balsamifera)	13.8	Removal, cut stump low	Fair	Moderate
42159	poplar: balsam (Populus balsamifera)	8.8	Removal, cut stump low	Poor	Low

42214	poplar: balsam (Populus balsamifera)	14.7	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Low
42223	poplar: balsam (Populus balsamifera)	12	Removal, cut stump low	Fair	Low
42146	poplar: balsam (Populus balsamifera)	8.5	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Low
42175	poplar: balsam (Populus balsamifera)	9.9	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Poor	Low
42181	poplar: balsam (Populus balsamifera)	10.7	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Low
42241	ash: green (Fraxinus pennsylvanica)	5.2	none included in work plan	Good	Low
42232	poplar: balsam (Populus balsamifera)	15	Structural Pruning, Canopy Cleaning Canopy Reduction, Canopy Raising	Fair	Low
42188	poplar: balsam (Populus balsamifera)	10.2	Removal, cut stump low	Poor	Low
42196	boxelder (Acer negundo)	2.5	Young tree train	Good	Low
Zone 2:					
42190	oak: pin (Quercus palustris)	13.6	Canopy Cleaning, Canopy raising, Structural pruning	Good	Low
42182	oak: pin (Quercus palustris)	13.2	Canopy Cleaning, Canopy raising	Good	Low
42177	oak: pin (Quercus palustris)	12	Canopy Cleaning, Canopy	Good	Low

42170	oak: pin (Quercus palustris)	12.7	Canopy Cleaning,Canopy raising	Good	Low
42166	oak: pin (Quercus palustris)	14.3	Canopy Cleaning,Canopy	Good	Low
42162	oak: pin (Quercus palustris)	11.8	Canopy Cleaning,Canopy	Good	Low
42155	oak: pin (Quercus palustris)	13.9	Canopy Cleaning,Canopy	Good	Low
42151	oak: pin (Quercus palustris)	12.4	Canopy Cleaning,Canopy raising	Good	Low
Zone 3:					
41971	birch: river (Betula nigra)	8.8	Canopy Cleaning,Canopy raising	Good	Low
41982	birch: river (Betula nigra)	7.2	Canopy Cleaning,Canopy raising	Good	Low
41988	birch: river (Betula nigra)	8.3	Canopy Cleaning,Canopy raising	Good	Low
41999	birch: river (Betula nigra)	8.2	Canopy Cleaning,Canopy raising	Good	Low
42008	birch: river (Betula nigra)	7	Canopy Cleaning,Canopy raising	Good	Low
42016	birch: river (Betula nigra)	6.4	Canopy Cleaning,Canopy raising	Good	Low
42025	birch: river (Betula nigra)	7	Canopy Cleaning,Canopy raising	Good	Low
42034	birch: river (Betula nigra)	7	Canopy Cleaning,Canopy raising	Good	Low
42042	birch: river (Betula nigra)	7.2	Canopy Cleaning,Canopy	Good	Low
42050	birch: river (Betula nigra)	5.8	Canopy Cleaning,Canopy	Good	Low
42060	birch: river (Betula nigra)	6.5	Canopy Cleaning,Canopy	Good	Low
42069	birch: river (Betula nigra)	5.6	Canopy Cleaning,Canopy	Good	Low
42079	birch: river (Betula nigra)	6.9	Canopy Cleaning,Canopy	Good	Low

42102	poplar: balsam (Populus balsamifera)	4.2	Removal	Dead	Low
42089	birch: river (Betula nigra)	8.1	Canopy Cleaning, Canopy raising	Good	Low
42112	maple: red (Acer rubrum)	11.5	none included in work plan	Good	Low
Zone 4:					
42100	cherry/plum: spp. (Prunus spp.)	7.6	Structural Pruning, Canopy Cleaning, Canopy Raising	Good	Low
42141	cherry/plum: spp. (Prunus spp.)	5.9	Structural Pruning, Canopy Cleaning, Canopy Raising	Fair	Low
42111	cherry/plum: spp. (Prunus spp.)	9.6	Structural Pruning, Canopy Cleaning, Canopy Raising	Good	Low
42136	cherry/plum: spp. (Prunus spp.)	6.9	Structural Pruning, Canopy Cleaning, Canopy Raising	Good	Low
42121	cherry/plum: spp. (Prunus spp.)	8.2	Structural Pruning, Canopy Cleaning, Canopy Raising	Good	Low
42130	cherry/plum: spp. (Prunus spp.)	6.2	Structural Pruning, Canopy Cleaning, Canopy Raising	Good	Low

