City of Hamilton, Ohio
Landscape Guide for Developers, Businesses and Home Owners

August 2016

City of Hamilton
BUTLER COUNTY OHIO

TREE CITY USA®

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Landscape Guide for Developers, Businesses and Home Owners

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Introduction

The City of Hamilton has received a Tree City USA designation from the Arbor Day Foundation each of the last 12 years and has been a Growth Award recipient for 5 years. Because large trees provide energy conservation, cleaner air, stormwater management, carbon storage, wildlife habitat, and aesthetic beauty to the city, they are one of our community's greatest resources.

Trees located in a developed area, however, face many challenges. For example, native soils are dramatically impacted during the construction process; top soil is removed and set aside, while the remaining subsoil is graded and contoured to meet stormwater retention requirements. This negatively affects trees because most tree roots are located in the upper 18 inches of soil, and feeder roots that are responsible for taking up water and nutrients are located in the upper 6 inches of soil. Compacted soil is the number one reason for new tree planting mortality as tree roots can only grow where they can move through soil and receive oxygen. Another main cause of tree mortality during construction is damage to the critical root zone or to other living parts of the tree.

A developed area also includes underground utilities (natural gas, water, wastewater, cable TV/internet, telephone) in the public rights-of-way that extend to the home or business. Trees are often needlessly removed because they were planted above or in close proximity to an underground utility that requires maintenance or replacement.

One goal of the City of Hamilton's urban forestry program is to enhance the street tree program by planting the right tree in the right place. The urban forestry program also serves to provide long-term tree care and maintenance in order to keep trees healthy and functional. Doing so will provide trees with the best possible chance to survive the urban environment and live to maturity, thereby providing maximum benefits for generations to come.

The City of Hamilton also seeks to educate developers, businesses, and homeowners on the importance of trees in our community and to encourage commitment to their long-term care and maintenance.

Tree Selection

Street Tree List

A healthy community forest begins with careful planning. A proper landscape plan takes each tree into consideration in order to maximize benefits and minimize future maintenance costs. Choosing a tree should involve more than picking one you think looks good.

Characteristics such as height, canopy spread, form/shape, growth rate, sun/moisture requirements, fruit, and hardiness zone should all be considered.

Soil type in the planting area should also be determined. A poorly selected tree will be doomed if it is not suitable for the soil in which it is being planted. Soils in Hamilton are typically shallow, clay-based, high in pH, and poorly draining, although there are also pockets of sand moraines and sandy clay loam that were created from glaciers of the past. Most trees that grow native in Hamilton are able to tolerate high pH, high winds, drought, and flooding.

City Ordinance Chapter 915, Comprehensive Tree and Planting Plan, prohibits planting trees that are weak wooded, prone to storm damage, or produce fruit or nuts in public rights-of-way, public places or city-owned green spaces. For example, fruit tree varieties bred for fruit production, such as apple, pear, or peach trees, are not permitted. A list of prohibited trees that cannot be planted in public rights-of-way can be found in **Appendix A.**

The City of Hamilton has approximately 140 different species of trees growing in public rights-of-way and city-owned green spaces. Hamilton's approved Street Tree List is based on research and expertise from the Ohio State University Extension, Ohio Department of Natural Resources Division of Forestry, municipal arborists, and landscape nursery suppliers in Southwest Ohio. The approved Street Tree List can be found in **Appendix B.**

The approved Street Tree List includes three categories of trees based on size. Large tree species are defined as any tree that grows more than 40 feet in height. American elm, swamp white oak, and sugar maple are examples of large sized trees **(Figure 1)**. Large trees require a minimum space of 8 feet x 8 feet (64 square feet) in the public rights-of-way to grow properly, and shall be planted a minimum of 50 feet apart.

Medium tree species are trees that grow between 25 feet and 40 feet in height. Yellowwood, hedge maple, and hornbeam are examples of medium sized trees **(Figure 2)**. Medium trees require a minimum space of 6 feet x 6 feet (36 square feet) in the public rights-of-way to grow properly, and shall be planted a minimum of 40 feet apart.

Small tree species are trees that grow less than 25 feet tall. Redbud, serviceberry, and ivory silk lilac are examples of small sized trees **(Figure 3)**. Small trees require a minimum space of 4 feet x 4 feet (16 square feet) to grow properly, and shall be planted a minimum of 30 feet apart. Trees planted in public rights-of-way under or adjacent to utility lines are required to be small trees per City Ordinance Chapter 915.

Kentucky Coffee

American Elm

Honey Locust

Sugar Maple

Swamp White Oak

Sweetgum

Black Tupelo

Bald Cypress

Hackberry

Figure 1 – Examples of large trees (greater than 40 feet tall)

American Hornbeam

River Birch

Amur Corktree

Golden Rain Tree

Frontier Elm

Hardy Rubber Tree

Red Horsechestnut

Yellowwood

Pacific Sunset Maple

Figure 2 – Examples of medium trees (25 feet to 40 feet tall)

Serviceberry

Redbud

Ivory Silk Lilac

Thornless Hawthorn

Accolade Cherry

Paperbark Maple

Red Jade Crab Apple

Golden Raindrop Crab Apple

Amur Maple

Figure 3 – Examples of small trees (less than 25 feet tall)

New Development Street Trees

New development and subdivision construction involves the removal of native top soil and the use of heavy equipment to contour and grade subsoil to meet stormwater retention requirements. As a result, soils are severely compacted and have poor drainage when construction is complete. Trees planted in new development areas or subdivisions must tolerate high winds, drought, wet soil, and compaction. Recommended trees for new development areas and subdivisions are listed below and examples can be seen in **Figure 4**. Before planting, soil samples are recommended to determine soil nutrient level and pH.

American Elm or Lacebark Elm (Disease Resistant) – Many varieties exist in both species. The Frontier Elm variety has green leaves in the spring and red leaves in the fall. These trees are hardy and fast growing. 50-60 feet height and 40 feet spread at maturity.

Bald Cypress – Deciduous conifer that loses leaves in the fall. It has unique red bark that exfoliates in different shades. 60-70 feet height and 30 feet spread at maturity.

Redpointe Maple – This maple tree has green leaves in the spring and brilliant red/orange leaves in the fall. 45 feet height and 30 feet spread at maturity.

Oak – Oak species are slow growing trees with green leaves in the spring and brilliant red/orange/yellow leaves in the fall. Recommended oak tree types include Chestnut, Shingle, and Swamp White Oak. 50-60 feet height and 35-45 feet spread at maturity.

Linden – Many varieties available. These trees have green leaves in the spring and yellow leaves in the fall. Linden trees are susceptible to Japanese Beetle (Sterling Silver and American Sentry are the most resistant to Japanese Beetle). 40-50 feet height and 30-35 feet spread at maturity.

Exclamation Plane – This tree species looks similar to a wild Sycamore tree, but is grown for street tree planting. It has defoliating bark twice a year with green leaves in the spring and yellow leaves in the fall. 75-80 feet height and 75-80 feet spread at maturity.

River Birch – This is a native birch species to Ohio. This tree has green leaves in the spring and yellow leaves in the fall. Heritage and Dura Heat varieties recommended. 40-50 feet height and 30-35 feet spread at maturity.

Sweetgum –Three varieties available: American, Gold Dust, and Moraine. These trees have green leaves in the spring and red leaves in the fall, and they drop seed pods in fall. 60 feet height and 25 feet spread at maturity.

Zelkova – Village Green, Green Vase, or Green Veil varieties recommended. These trees have green leaves in the spring and yellow leaves in the fall. No fruit. 50 feet height and 40 feet spread at maturity.

American Elm

Bald Cypress

Redpointe Maple

Shingle Oak

Sterling Silver Linden

Exclamation Plane

River Birch

Sweetgum

Zelcova

Figure 4 – Examples of new development street trees

Memorial Tree Program

The Memorial Tree Program encourages tree donations to honor, memorialize, or celebrate a special person, place, or event. Memorial Tree donations are accepted any time of the year, however, trees will be planted during the appropriate planting season. Memorial Trees will be designated with a small brick or plaque. Monetary donations are also accepted and will be earmarked for future Memorial Tree projects.

The Hamilton Parks Conservancy is responsible for administering the Memorial Tree Program, while the City of Hamilton's Municipal Arborist coordinates the purchase and planting of trees on behalf of the Parks Conservancy. Please call 513-785-7055 for more information or to make a Memorial Tree donation. Refer to the Street Tree List provided in **Appendix B** for the list of approved trees for planting.

Figure 5 – Memorial Tree and plaque

Adopt-A-Tree Program

Residents interested in having a tree planted in the right-of-way in front of their home may participate in the Adopt-A-Tree Program. Through the program, residents purchase one (1) tree at a reduced price from a participating local nursery. The City also contributes $50 toward the cost of the tree.

The City of Hamilton Municipal Arborist coordinates the tree planting to ensure it is planted appropriately and in the right location, while ongoing watering is the responsibility of the resident. If special circumstances exist that prevent a resident from fulfilling this obligation, the Municipal Arborist must be notified.

In some instances, it may not be possible to plant a tree in the right-of-way. Size of the right-of-way, location of street lights and underground utilities, and visibility safety concerns must all be considered before an Adopt-A-Tree request will be granted. The Municipal Arborist will review each Adopt-A-Tree request on a case-by-case basis.

Please call 513-785-7285 or email dave.bienemann@hamilton-oh.gov to request an Adopt-A-Tree permit or to learn more about the program. Permits can also be picked up in person on the 4th floor of the Hamilton Municipal Building, 345 High Street, Suite 450, Hamilton, OH 45011.

Figure 6 – Adopt-A-Tree planted in the public right-of-way

Tree Planting and Maintenance

Reactive urban forestry programs result when resources are focused on new tree plantings, but not long-term maintenance. Eventually, major resources are required to remove public trees as they fail due to a lack of care. Planting the right tree in the right place and establishing a proactive maintenance routine are essential to reduce long-term care and maintenance costs. Proactive maintenance can lengthen a tree's life, maintain its safety, and maximize the benefits it provides to the community.

Planting

Tree planting is the most important component of long-term tree survival. For example, trees planted too deep will begin to decline from lack of oxygen and respiration issues. They will develop shallow roots and are prone to uprooting during major weather events such as thunderstorms. **Figure 7** depicts a tree planted eight inches below grade with the burlap and wire basket still intact. The roots visible in the picture are growing above the burlap and wire basket in shallow soil to get oxygen and nutrients.

Figure 7 – Tree planted too deep in the soil

To ensure proper tree planting, follow the steps outlined below.

1. Dig planting site 2 to 3 times the width of the root ball.
2. Plant tree no deeper than the original depth of the root ball. Root flare visible at the base of the tree trunk should be level with the soil surface (**Figure 8**).
3. Center tree in the planting site on solid subsoil.
4. After tree is positioned, cut and remove top 1/3 of wire basket.
5. Remove twine and roll down burlap to the bottom of the hole.
6. Backfill the planting site to 1/2 depth with gently packed soil and fill the hole with water.
7. After water has drained backfill the remaining area around the root ball with soil.
8. Create a saucer shaped ring in the soil outside of the root ball to enable water to drain toward the root ball in the future.
9. Place a 2 to 3 inch layer of mulch in a circle around the tree, beginning at least 3 inches away from the trunk and extending 3 to 4 feet in all directions. This will help prevent future lawn mower and weed trimmer damage to the trunk.

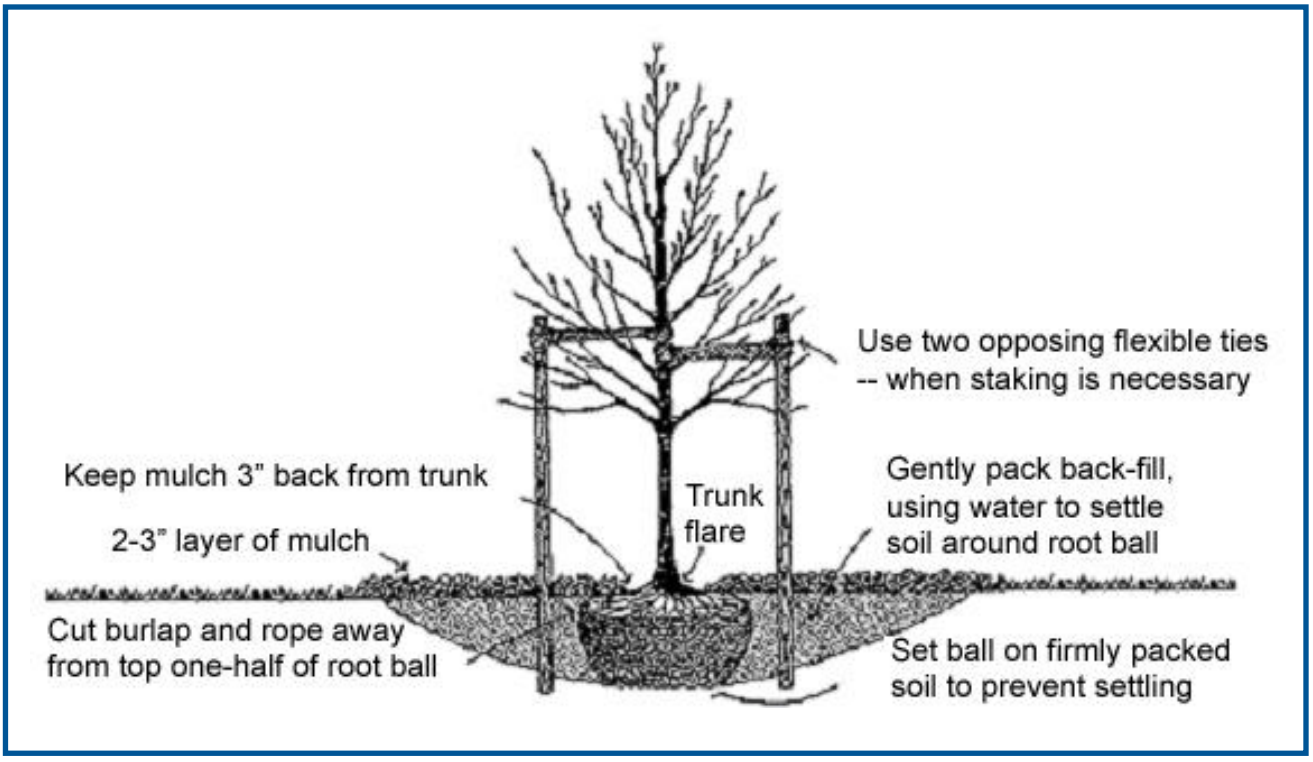


Figure 8 – Properly planted and staked tree

Mulching

Mulch is valuable for a tree's health and care. Mulch insulates the soil helping to provide a buffer from extreme temperatures, retains water helping to keep the roots moist, keeps weeds out to limit root competition, prevents soil compaction, and reduces lawn mower damage. Organic mulch such as wood chips or bark pieces is best as inorganic mulch can lead to a variety of problems. For example, rocks will heat up in the summer sun.

Place 2 to 3 inches of organic mulch around the tree, being sure to keep the mulch from touching the trunk of the tree. Mulch should be at least 3 inches away from the trunk and should extend out 3 to 10 feet depending on the size of the tree. Piling 6 to 12 inches of mulch at the base of the tree trunk is called volcano mulching. This causes CO_2 to build up and prevents the tree from completing respiration. As oxygen is depleted the tree will decline.

Figure 9 – Proper mulching

Watering

Tree watering is an essential part of tree care. New trees should be watered immediately after the tree is planted. During the first two growing seasons, new trees expend a lot of energy establishing their roots and have a difficult time dealing with heat and drought. For this reason, mulching and regular watering are important. Unless it rains 1 inch or more, rain water is not enough for newly planted trees.

While not enough water is harmful for trees, too much water is bad as well. Over-watering is a common tree care mistake. As a rule of thumb, soil should be moist, not soggy. A damp soil that dries for a short period will allow adequate oxygen to permeate the soil.

Treegator® Original bags typically hold 15 to 20 gallons of water, depending on bag setup and tree trunk diameter, and are helpful for maintaining moist soil around the tree. The bags should be filled during the first two growing seasons (May to November) according to the

watering schedule in **Table 1**. After two years, the tree will have an established root structure and will be able to withstand a wider range of water conditions on its own. Refer to **Table 2** for a step by step guide on how to properly install and fill Treegator® Original bags.

Table 1 – Recommended watering schedule with Treegator® Original bags based on commonly referenced guideline of 10 gallons of water applied per 1" of trunk diameter

Trunk Diameter	Treegator® Bag Setup	Approx. Water Capacity Per Bag	Recommended Fills per Week
1 to 2 inches	 Single Bag	15 gallons	1 Fill per Week
2 to 3 inches	 Single Bag	14 to 15 gallons	2 Fills per Week
4 to 5 inches	 Double Bag	23 to 24 gallons	1 Fill per Week
5 to 8 inches	 Double Bag	21 to 23 gallons	2 Fills per Week

Table 2 – Step by step guide for installing and filling Treegator® Original bags

STEP 1		• Place back of bag against trunk, with zippers on the uphill side of tree. • Wrap both sides around trunk until zippers meet together: > Use a single bag setup for trees from 1" to 3" in diameter. > Use a double bag setup for trees from 4" to 8" in diameter. • Zip both sides of bag together from bottom to top.
STEP 2		• Lift up tag at top of bag to expose fill opening. • OPTIONAL: For added root growth benefits, drop 1 (one) ROOTS® Solupak™ into fill opening. • Insert water hose (up to 3" diameter) into fill opening, turn on water supply and begin filling. • **IMPORTANT:** Fill bag to approximately 1/4 capacity then proceed to Step 3.
STEP 3		• Gently lift up on two black straps at top of bag in order to fully expand bottom. • If desired, add pre-mixed water soluble nutrients. Premix nutrients in separate container. (This step is not necessary with ROOTS® Solupak™)
STEP 4		• Fill with water to desired level. • Treegator® Original bag will be empty in approx. 5 to 9 hours. • Once empty, remove bag from tree. Move bag to another planting and re-fill, or store until needed again. • For most newly planted trees, follow the fill schedule outlined in Table 1.

Aeration

Aeration involves perforating the soil with small holes to allow air, water, and nutrients to penetrate deeper into the soil. Aeration can help add nutrients to depleted soils and alleviate soil compaction.

Large trees saturate the ground with feeder roots and can deplete the soil of nutrients. Compacted soils reduce the growth of shallow feeder roots and can lead to tree decline. Even foot traffic in populated areas can cause soil compaction. Soil aeration is recommended once every 5 years for large trees, for trees located in areas with compacted soils, or for trees planted in clay soils.

Fertilization

Trees that are planted properly and in the right location do not need fertilization and micronutrients. However, trees planted in urban environments, or clay or sandy soils, may need some help. To minimize future maintenance and care, always plant the right native tree in the right place.

Pruning

To develop a tree with a strong and desirable form, it is important to properly prune a tree. Ideally, branches should be at an angle between 30° and 60° and should be spaced every 12 to 18 inches. If trees are pruned properly when they are young, they will require less corrective pruning when they mature. Other common reasons for pruning a tree include removing dead branches, removing crowded or rubbing branches, and eliminating hazards (Figure 10).

If pruning is not done properly, it can cause damage that will last a tree's entire lifetime, stressing the tree and often weakening its structure (Figure 11). Know the purpose before making a cut on a tree because each cut can change the tree's entire growth pattern.

Follow these guidelines for proper maintenance pruning:

- Prune only broken, damaged, or diseased branches on newly planted trees.
- Beginning 2 to 3 years after a tree is planted, prune every 3 to 5 years until the tree is 10 feet clear above the ground. After that time, a tree can be pruned every 5 to 10 years.
- Do not remove more than 10% to 15% of the canopy on small trees, and more than 25% of the canopy on large trees.
- Large trees should be pruned by a professional trained in arboriculture.

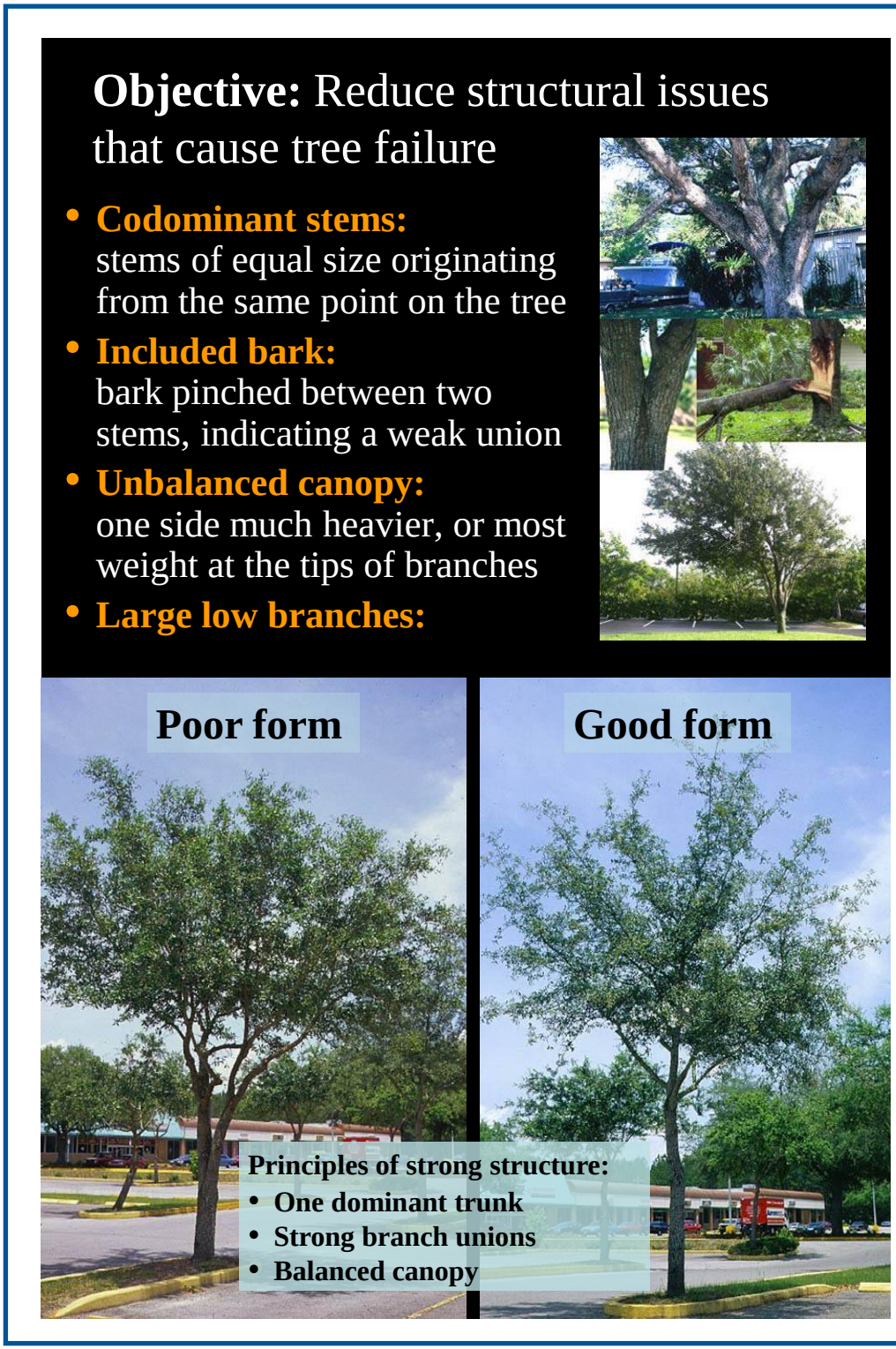
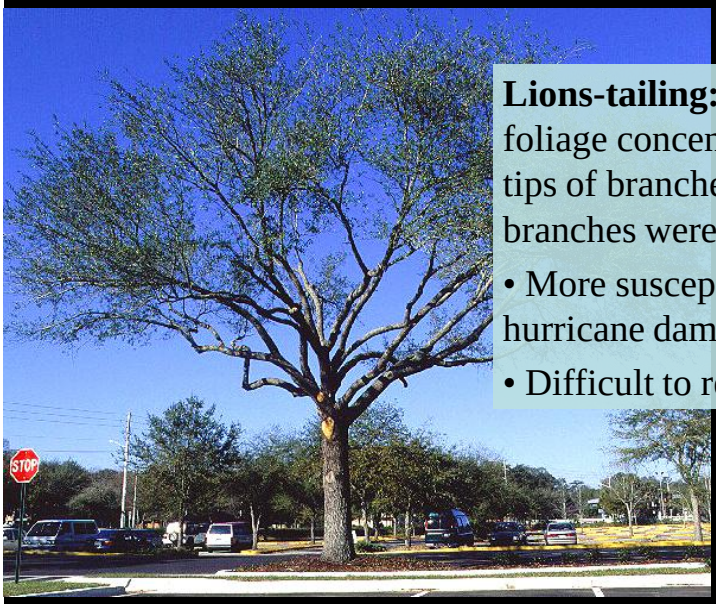


Figure 10 – Reasons for proper tree pruning (Dr. Edward Gilman, University of Florida)

Unbalanced canopy



Lions-tailing: trees with foliage concentrated at the tips of branches because inner branches were removed.

- More susceptible to hurricane damage
- Difficult to restore

Lions-tailed trees failed

Figure 11 – Examples of improperly pruned trees (Dr. Edward Gilman, University of Florida)

Proper pruning involves making cuts just outside of the branch collar (**Figure 12**). The branch collar should not be damaged or removed because it contains trunk/parent branch tissue. Cuts should not be made between buds and lateral branches because it may lead to sprout production, stem decay, and misdirected growth. If a permanent branch needs to be shortened, a cut should be made at a lateral branch with a diameter at least one-third the size of the parent branch.

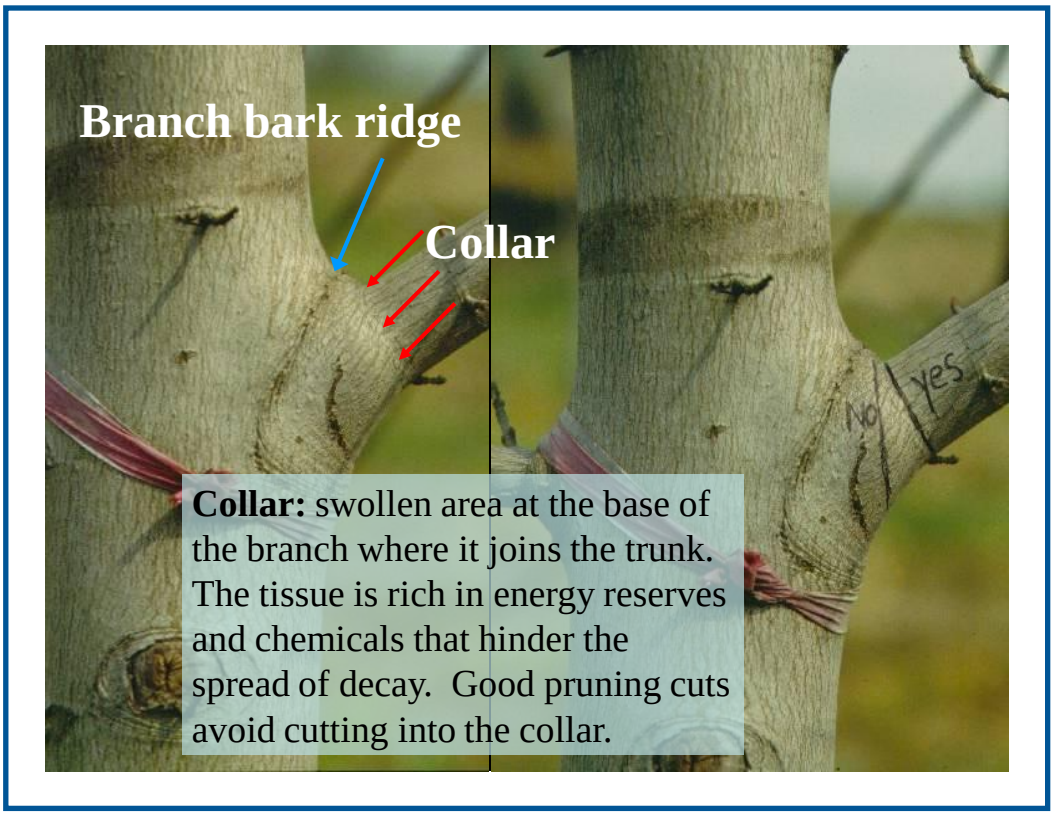


Figure 12 – Proper pruning cuts should be made outside of the branch collar (Dr. Edward Gilman, University of Florida)

When removing large limbs, it is important to first reduce limb weight (**Figure 13**). An undercut should be made approximately 12 to 18 inches from the point of attachment. A top cut should then be made several inches farther out on the limb. This will cause the limb to break off, significantly reducing its weight. Finally, the 12 to18 inch stub can be removed by cutting back to the branch collar. To prevent tearing the bark, make an undercut near the branch collar and then make a top cut on the 12 to 18 inch stub at a 45° angle.

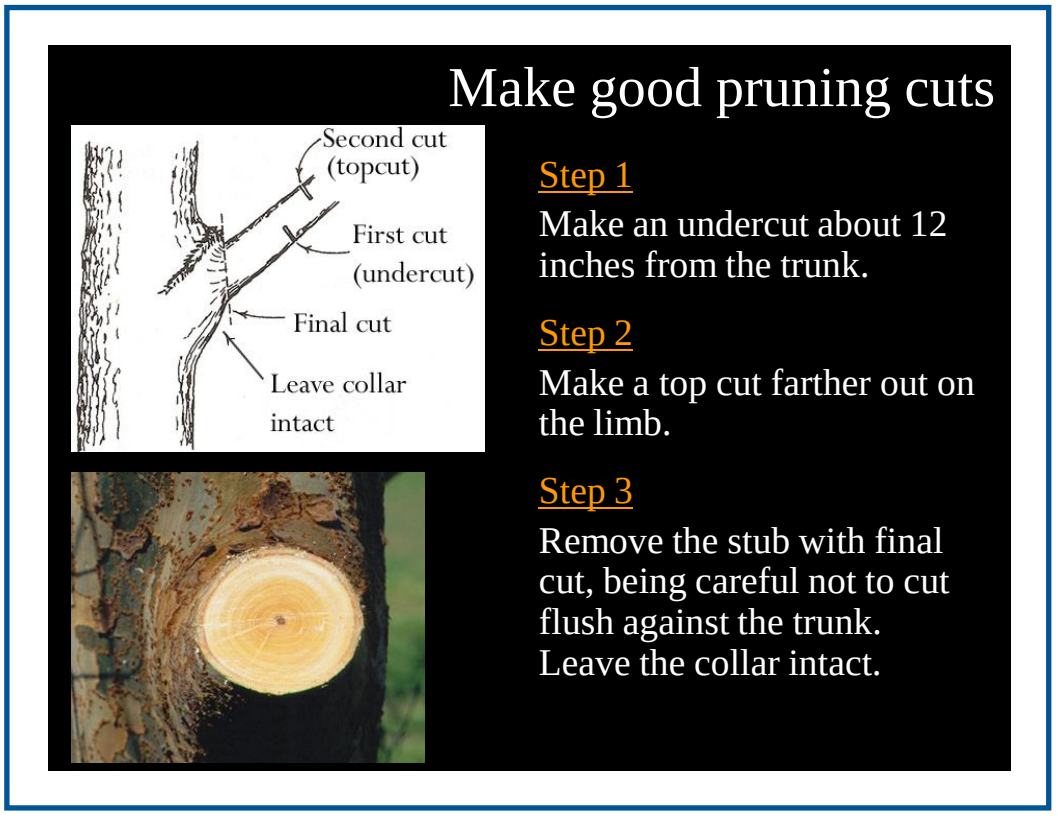


Figure 13 – Reducing limb weight with proper pruning cuts (Dr. Edward Gilman, University of Florida)

Along with proper pruning cuts, it is important to use the right pruning tools. For small trees, most cuts can be made with hand pruning shears. Cuts larger than one-half inch in diameter should be made with a pruning saw or loppers. Read the label when purchasing pruning tools to determine appropriate use, and keep all tools clean and sharp.

Construction Protection for Trees

Trees can be devastated by construction damage if no preventative measures are taken. While some injuries are visible, such as broken branches and wounded trunks, it is the damage to the root system that you cannot see that often results in the loss of the tree.

The most serious damage to trees caused by construction is underground. Fine, absorbing roots are located in the upper 6 to 12 inches of soil and are easily damaged or killed by heavy construction equipment. Soil compaction reduces pore space in the soil, diminishes root growth, and decreases the tree's ability to absorb water and nutrients. Trees may show slow decline symptoms within a few months of construction activity or the symptoms may not appear for a few years. Symptoms include small or yellow leaves, premature fall color, extensive water sprout development on the trunk and main limbs, dead twigs, and eventually, major branch death.

If trees are to be preserved on a construction site, the City of Hamilton Municipal Arborist should be involved in the planning and development process. Development projects should aim to satisfy all construction requirements with minimal impact to the trees that remain on site. It is important to consider the trees' tolerance for construction activity, and only preserve trees that are healthy and structurally sound. Also, the largest, most mature trees are not always the best candidates. Younger trees can usually survive and better adapt to the stress of construction.

The single most important action to preserve trees during construction is to setup construction fences before work begins around all trees that are to remain on site (**Figure 14**). Fences should be placed as far out from the trunk as possible, allowing at least 1.5 feet from the trunk in all directions for each inch in diameter of the trunk. This will not only protect the above ground portions of the tree, but also the root system. No digging, trenching, compaction, or other soil disturbance should be permitted within the fenced area, and these requirements should be clearly communicated to the developers and contractors working on site.

Figure 14 - Tree construction protection

Growing and Maintaining Lawns

New Lawn Area

First, determine which grass type to plant in your new lawn area. Common grasses native to Ohio include Kentucky Bluegrass, Perennial Ryegrass, Tall Fescue, and Fine Fescue. Next, determine when to plant your grass seed.

The best time to start new lawns from seed is just prior to the grass's season of most vigorous growth. The four grass types mentioned above are all cool season grasses and so it is best to plant these seeds in the late summer or early fall. The middle of August through the end of September is ideal for planting cool season grasses, when soil temperatures range between 50 and 65 degrees and air temperatures range between 60 and 75 degrees. The second best time to plant cool season grasses is during the spring, from the middle of March to the middle of April. Keep in mind that if planting in the spring, some new grass may not survive summer conditions. It may be necessary to reseed in the fall to fully establish the new lawn area.

Use a starter fertilizer on the same day the grass seeds are sewn to give the new grass seedlings a head start. Follow directions provided on the fertilizer package.

Once grass seeds and fertilizer have been spread, it is important to top-dress the newly seeded area to provide protection and to help retain moisture. With the first watering, make sure to apply enough water to wet the soil down to at least 6 to 8 inches. Apply the water gently to prevent puddles from forming and to keep seeds from washing away. It may be necessary to water several times in short intervals until the area is thoroughly wet.

During the first several weeks, water the newly seeded area a minimum of 10 to 15 minutes per day in the morning to keep the top inch or so of the seedbed moist. Be careful not to over water or allow water to stand as too much water will cause seeds to rot.

Within 10 to 15 days germination will appear, provided the soil remains moist and within an appropriate temperature range. The starter fertilizer applied at the time of seeding will soon be exhausted. Fertilize with new starter fertilizer according to the directions on the package.

If there has been a successful germination period, 1 to 2 inches of growth will be present within 2 to 3 weeks. When the new lawn area reaches mowing height, be careful not to cut the grass too short. Adjust the mower to a high setting (2 ½ to 3 ½ inches high) so that only the top third of the grass is cut. Continue to mow as needed.

If broadleaf weed herbicide application is necessary, DO NOT apply until the new lawn area has been mowed 3 or 4 times.

By week 3 or 4 after seeding, when mowing has taken place, watering frequency can be reduced. Watering should be done less often but for longer periods of time to allow root growth to penetrate deeper in the soil. Some areas may continue to appear sparse or thin as it will take a full growing season for the new lawn area to reach full maturity.

Continue to water at least once or twice per week through the first growing season, and establish an appropriate weed and feed regimen.

Existing Lawn Area

To determine how best to maintain an existing lawn, it is important to identify which grasses are present. Of the four common grasses native to Ohio, Tall Fescue and Fine Fescue are the most drought tolerant and will remain green through most summers without supplemental irrigation. Kentucky Bluegrass and Perennial Ryegrass, on the other hand, will turn brown at some point and go dormant. Supplemental, light irrigation is often necessary to ensure these grasses survive through the summer. Lawn quality can quickly decline in July and August with the arrival of hot, dry weather. A decision should be made by early summer whether to allow the lawn to go dormant or to irrigate to keep it green. Note that the lawn should not be taken in and out of dormancy.

If the choice is made to let the grass go dormant, a light irrigation of one-half inch of water every three to four weeks is recommended to keep the roots and crowns alive and ensure grass survival during hot, dry summers. However, this amount of water will not re-green the lawn.

If the choice is made to keep the lawn green all summer, approximately one inch of water per week is recommended to maintain lawn quality during rain-free periods. Irrigate every five days with one-half to three-quarters inch of water. If runoff is a problem, irrigate until runoff begins, delay irrigation for one to two hours to permit infiltration, and then resume watering until the desired amount of water has been applied.

Use straight-sided cans or rain gauges placed under the sprinkler pattern to monitor the amount and distribution of water being applied. Also, irrigate in the early morning before 9 a.m. - the lawn is already wet from dew, humidity is high, calm conditions usually exist, and temperatures are cooler, all of which favor maximum infiltration and utilization of water.

For most people, irrigating the entire lawn is not practical unless there is an in-ground irrigation system. It may be more practical to water priority areas such as the front and side yards. Even with an in-ground system, the volume of water necessary to properly irrigate large areas can be cost prohibitive and may be a burden on water resources.

Rain Gardens

Storm water runoff from rain and melted snow and ice typically moves from roofs, driveways, and other impermeable surfaces toward the street and into the municipal storm sewer system. Harmful substances such as road salt, heavy metals, and oils can be picked up along the way, and when this storm water runoff ends up in streams, lakes, or other bodies of water, it can negatively impact water quality and aquatic habitat. Rain gardens offer a relatively easy and attractive method to reduce storm water runoff and improve storm water management and use on your property.

Location

A rain garden is built in a natural or man-made depression designed to temporarily fill with storm water runoff in order to keep the water on site and out of the storm sewer system (**Figure 15**). Rain gardens allow the storm water to soak back into the ground and filter pollutants with the help of deeply-rooted native plants. Designed in all shapes and sizes, rain gardens can include formally arranged plants, fields of wildflowers, shrubs, stone culverts and paths, and/or other beautiful landscape features.

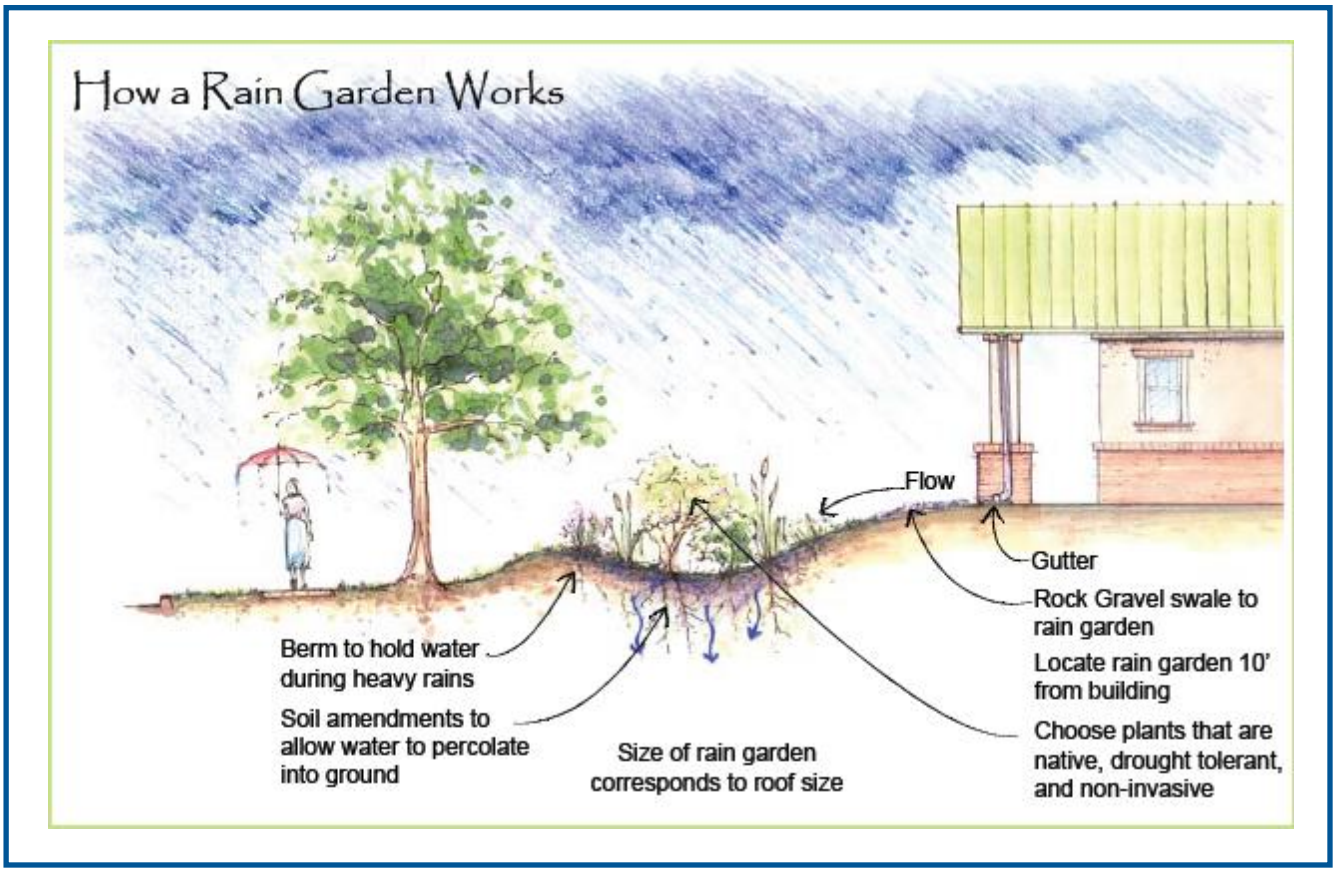


Figure 15 – How a rain garden works (Rain Garden Initiative, Toledo-Lucas County)

In order to determine the best location for your rain garden, here are some helpful tips.

- Rain gardens should be a minimum of ten (10) feet from any home or business, to prevent damage to basements and foundations from water infiltration.
- Rain gardens should not be placed over or near the drain field of a septic system.
- Rain gardens should not be placed where water stands in your lawn. This shows low permeability of the soils and will not accept the rain garden infiltration.
- Rain gardens should not be placed within existing drainage ways such as swales and ditches.
- Sunny or partly sunny locations are best for rain gardens, but shaded gardens are possible.
- Rain gardens should not be installed under large trees. Trees have extensive root systems that may be damaged in the rain garden excavation process. In addition, they may not be able to adapt to the extra moisture being held by your rain garden.
- Check with your local building department before installing your rain garden as some of the installation requirements may conflict with local ordinances or zoning regulations.
- Make yourself aware of underground service lines or utilities. Remember to "Call before you dig"! Call the Ohio Utilities Protection Service at 811 or 1-800-362-2764 at least 48 hours, but not more than 10 working days (excluding weekends and legal holidays), before beginning any digging on your property.

Size & Depth

A rain garden can be almost any size. A typical residential rain garden ranges from 100 to 300 square feet. Rain gardens can be smaller than 100 square feet, but very small gardens have little plant variety. If a rain garden is larger than 300 square feet it takes a lot more time to dig and is more difficult to make level. The size of the rain garden will depend on:

- How deep the garden will be,
- What type of soils the garden will be planted in, and
- How much roof and/or lawn will drain to the garden.

Using the slope of the lawn where the rain garden will be located (**Figure 16**), select the appropriate depth of the rain garden from the following options:

1. If the slope is less than 4%, it is easiest to build a 3 to 5-inch deep rain garden.
2. If the slope is between 5 and 7%, it is easiest to build one 6 to 7 inches deep.
3. If the slope is between 8 and 12%, it is easiest to build one about 8 inches deep.

A typical rain garden is between four and eight inches deep. A rain garden more than eight inches deep might pond water too long, while a rain garden much less than four inches deep will need an excessive amount of surface area to provide enough water storage to infiltrate larger storms. No matter what the depth of the rain garden, the goal is to keep the garden level. Allow the slope of the lawn to determine the depth of the rain garden.

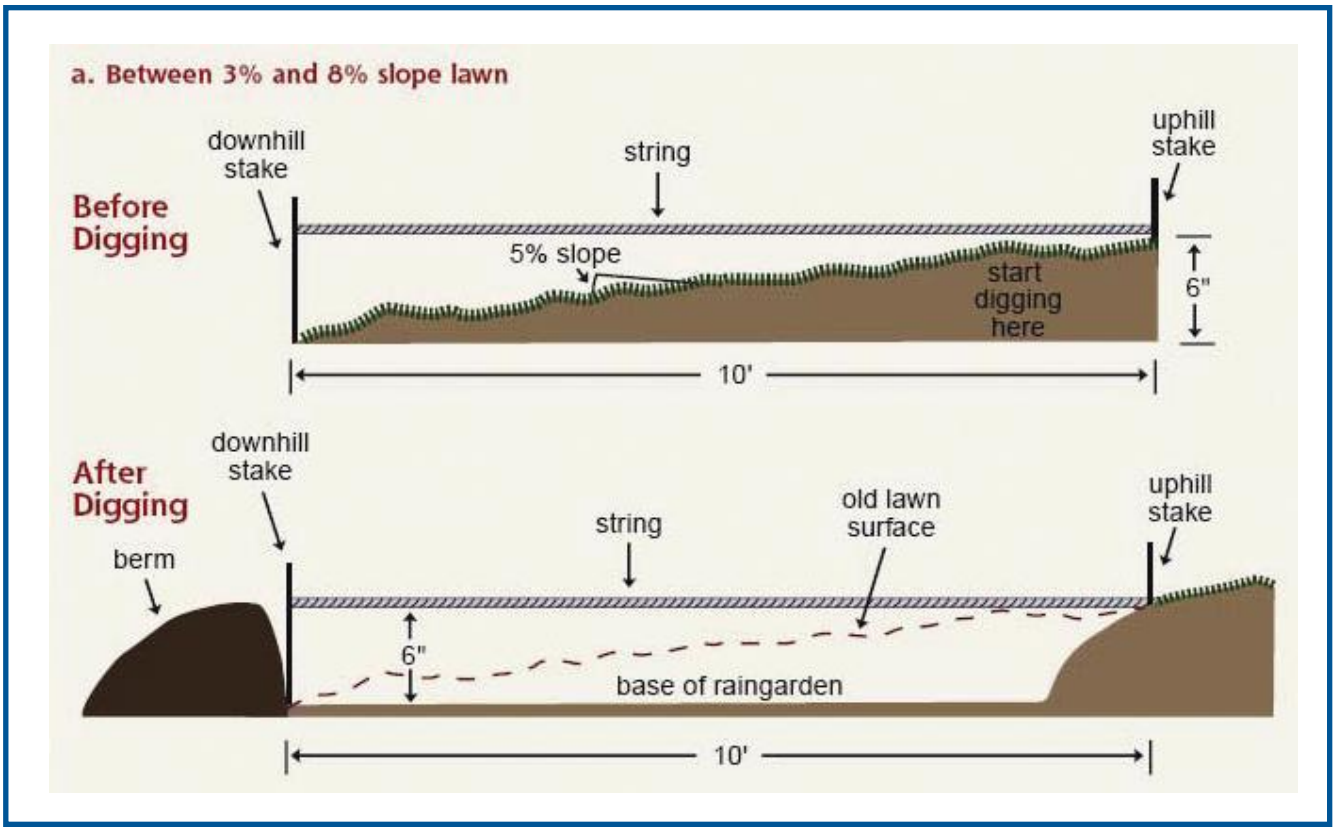


Figure 16 – Determining rain garden depth based on slope of the lawn (Rain Garden Initiative, Toledo-Lucas County)

Once soil type and depth have been determined, estimate the size of your impervious surface(s), or the drainage area, that will be directed to the rain garden by measuring the footprint, or the outside dimension of your building and/or driveway. A building's footprint will be relatively equal to the area of its roof, which can be determined by multiplying the width of the building (in feet) by its length (in feet).

Use **Table 3** or **Table 4** to determine the rain garden's size factor, depending how far the rain garden is located from the downspout. Use Table 3 if the rain garden is less than 30 feet from the downspout, and use Table 4 if it is more than 30 feet from the downspout. Multiply the appropriate size factor by the drainage area to determine the recommended size (in

square feet) of your rain garden. If the recommended rain garden area is much more than 300 square feet, divide it into smaller rain gardens.

Table 3 – Size factors for rain gardens less than 30 feet from downspout (Rain Garden Initiative, Toledo-Lucas County)

Soil Type	3-5 inches deep	6-7 inches deep	8 inches deep
Sandy Soil	0.19	0.15	0.08
Silty Soil	0.34	0.25	0.16
Clayey Soil	0.43	0.32	0.20

Table 4 – Size factors for rain gardens more than 30 feet from downspout (Rain Garden Initiative, Toledo-Lucas County)

Soil Type	All Depths
Sandy Soil	0.03
Silty Soil	0.06
Clayey Soil	0.10

Installation

Once the appropriate size of your rain garden has been determined, choose a shape that best fits your yard and the existing landscape. To help shape the garden, mark the perimeter by placing stakes, flags, or even a garden hose along the edge where you want the rain garden to be. Doing this will provide a defined area that you will dig and it will also allow you to better visualize the final size and shape of the rain garden so that any changes can be made before you start digging.

If the rain garden is located more than 30 feet from your home or building, it may be necessary to plan and construct an arrangement to route water from a downspout to the garden. Although it sounds elementary, remember that water flows downhill, so the garden should be planned downhill from the water source. Keeping this in mind, there are several options for routing runoff water from its source to your rain garden:

- A grassy swale (or flat grassy channel) will slow down the water and spread it out as it travels to the garden. This allows for some additional infiltration of the water.
- A creek bed or small waterfall feature using a rock-lined channel can create an attractive "babbling brook" when it rains and can slow down the water going into the garden, dissipating some of its force. A rocky channel requires little maintenance.
- A plastic downspout extender can connect a downspout to the rain garden; however, this will direct almost all water coming from the downspout directly into the garden so it is important to ensure the rain garden is sized appropriately. A 4-inch plastic downspout extender can be used effectively and can either be placed on top of the lawn or be buried.

Regardless of how the water is routed, some kind of diffuser should be used at the point where water enters the rain garden to ensure that plants in the immediate area will not be washed out by the force of the water and to prevent erosion. River rocks make an attractive diffusion structure.

When choosing plants for your rain garden it is important to select plants that can grown in various moisture levels. This is because rain gardens can be either dry or filled with water depending on the season and frequency of rain events. Be sure to place plants that can handle a lot of water towards the lowest part of the garden and plants that prefer drier areas towards the highest part of the garden.

Use plants that are native to the area because they are naturally adapted to the local climate conditions and have deep root systems that are good at absorbing water and filtering pollutants.

Maintenance

Maintaining a rain garden is much like maintaining any other new component to your landscaping. A properly maintained garden is not only more attractive, but will also function better in your landscape. Keep a 2 to 3-inch layer of aged, shredded hardwood mulch to maintain optimum soil moisture and reduce weeds. Also learn to identify unwelcome weeds that need to be removed. Plants in the rain garden will be more susceptible to stress when they are young. Water the rain garden plants regularly until they become established (usually one to two months). If you do not get consistent rain, a slow trickle of water from the hose for 30 minutes each week is usually sufficient. After the plants are established, you should not have to water them except during prolonged dry periods.

Rain Barrels

Rain barrels are another simple solution to help reduce storm water runoff and improve storm water management and use on your property. By capturing water from gutter down spouts, rain barrels collect and store water from your roof that would otherwise be lost to runoff and diverted to storm drains and streams. The captured water can then be used in a variety of ways around your property.

Residential water use typically increases 40 to 50% during summer months due to outdoor water use. A rain barrel collects water and stores it for when you need it most – during periods of drought – to water plants, wash your car, or to top a swimming pool. It provides an ample supply of free 'soft water', devoid of minerals, chlorine, fluoride, and other chemicals, making it ideal for gardens, flower pots, and car and window washing.

Butler Soil and Water Conservation District has 50 gallon rain barrels available for purchase in granite (gray) or terracotta (brown) **(Figure 17)**. The Butler SWCD rain barrel is a closed system with a lid to keep out mosquitoes and other insects searching for a breeding ground. Butler SWCD also has rain barrel kits available for purchase which can be used to turn any sturdy barrel into a rain barrel.

Stop by in person at the Butler SWCD office to purchase a rain barrel or kit at 1802 Princeton Road, Suite 300, Hamilton, Ohio 45011. To learn more, you can also visit www.butlerswcd.org, call 513-887-3720, or email butlerswcd@butlercountyohio.org.

Figure 17 – 50 gallon rain barrels available for purchase from Butler SWCD

Butterfly and Hummingbird Gardens

Gardens and landscaping can be purposely designed to attract butterflies and hummingbirds **(Figure 18)**. By planting a combination of flowering plants, native grasses, and leafy shrubs you can create a beautiful garden with color and balance that is pleasing to the human eye, and also attractive to butterflies and hummingbirds.

Many of the same colorful, fragrant, nectar-producing blooms attract butterflies as well as hummingbirds **(Figure 19).** Choose nectar and pollen-rich plants like wildflowers and old-fashioned varieties of flowers. A succession of blooming annuals, perennials, and shrubs is best so nectar and pollen will be available throughout the growing season. It is important to keep flowers blooming as long as possible to help butterflies and hummingbirds later in the season.

It is also important to create a host environment for larvae and caterpillars, which later transform into butterflies. Good host plants are leafy and can provide shelter and food for larvae and caterpillars.

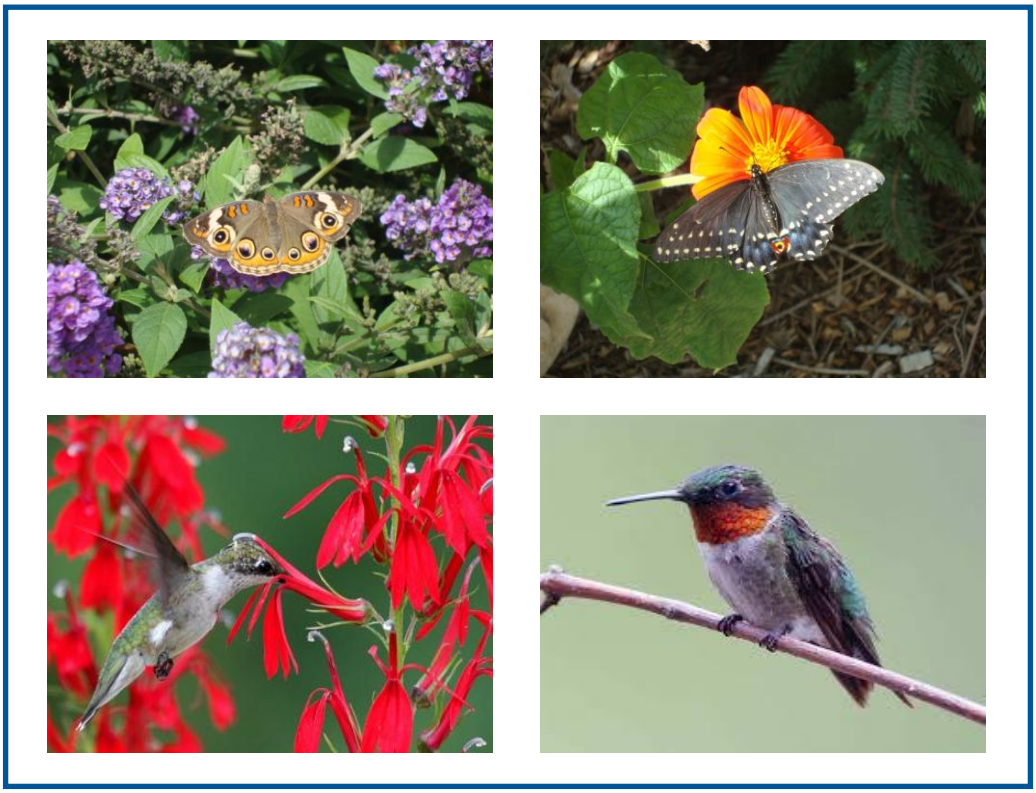


Figure 18 – (clockwise from top left) Buckeye butterfly, Black Swallowtail butterfly, female Ruby-throated hummingbird, male Ruby-throated hummingbird

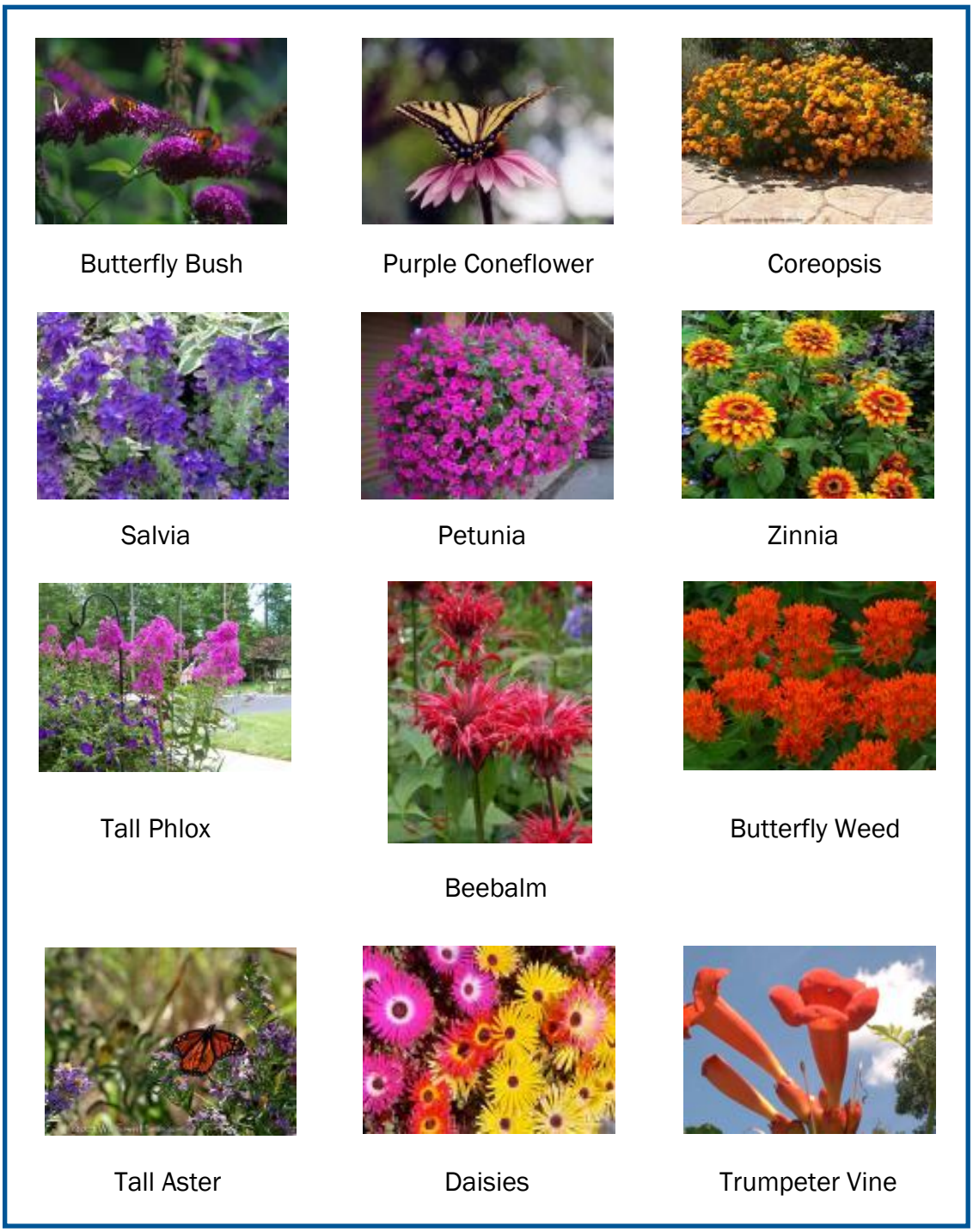


Figure 19 – Examples of flowers that attract butterflies and hummingbirds

Landscape Regulations

Call Before You Dig

Before doing any outdoor improvement project that involves digging or excavating, such as adding or removing trees, shrubs, or other plantings (including stumps), obtain free safe digging information to avoid disturbing buried lines. **By law, everyone – including homeowners – must contact the Ohio Utilities Protection Service at 811 or 1-800-362-2764, at least 48 hours, but not more than 10 working days (excluding weekends and legal holidays), before beginning any digging on their property.** The depth of utility lines may vary, and it is possible for multiple utility lines to be located together in a common area.

The Ohio Utilities Protection Service coordinates with local utilities to have underground utility equipment marked. Utility locate requests are required by law 48 hours before excavation starts. Marked utilities help prevent utility outages, repair costs, and serious or fatal injuries.

Tell the operator where you are planning to dig and what type of work you will be doing. Hamilton Utilities (and any other affected utilities companies) will be notified about your intent to dig. A locator will be sent to mark the location of the underground lines, pipes, and cables, enabling you to know where you can safely dig.

Learn more by visiting the Ohio Utilities Protection Service website at www.oups.org.

Electrical Equipment Specifications

In addition to identifying the location of underground utility lines, it is important to be aware of landscape clearance guidelines before installing any new landscaping, or maintaining existing landscaping, around utility equipment. For example, maintaining proper landscape clearances around electrical equipment allows utility crews to safely perform necessary inspections and maintenance work. Plantings located too close create a dangerous work area and may hamper efforts to restore power in an emergency. In addition, plants may be damaged by workers trying to access underground facilities.

During the installation of new landscaping, woody plants, ornamental grasses, shrubs, and trees must be planted at least eight feet from the front of the electrical pad (the side with enclosed doors) and at least three feet from the sides and back (Figure 20).

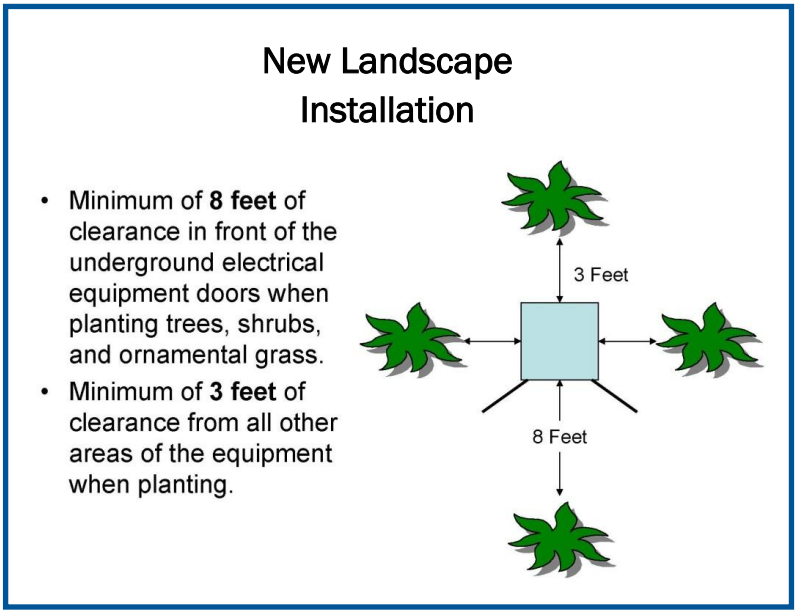


Figure 20 – New landscape installation specifications

Existing landscaping must be maintained to ensure at least four feet of clearance in front of the electrical pad (the side with enclosed doors) and at least one and a half feet of clearance on all other sides (Figure 21).

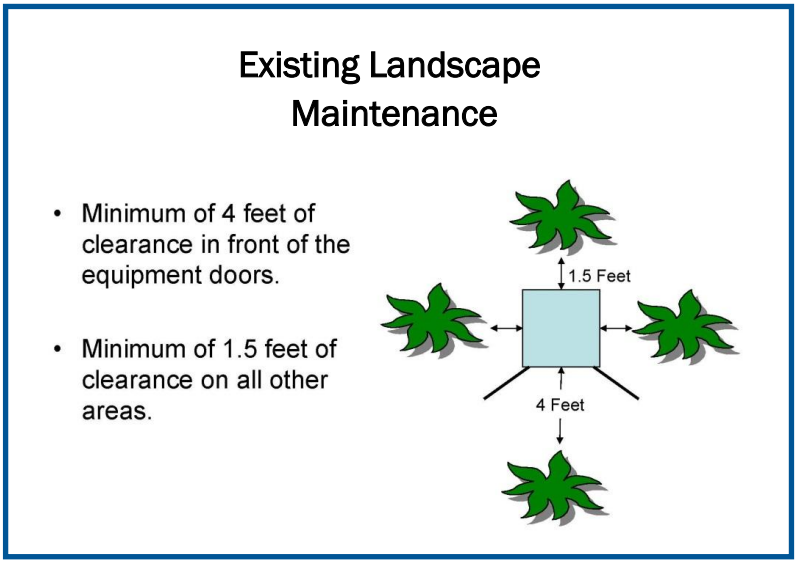


Figure 21 – Existing landscape maintenance specifications

Figure 22 illustrates improper landscaping that leaves a dangerous work area for electric crews and may hamper emergency restoration of service. Crews will need to prune and/or remove the landscape material to access the electrical padmount transformer.

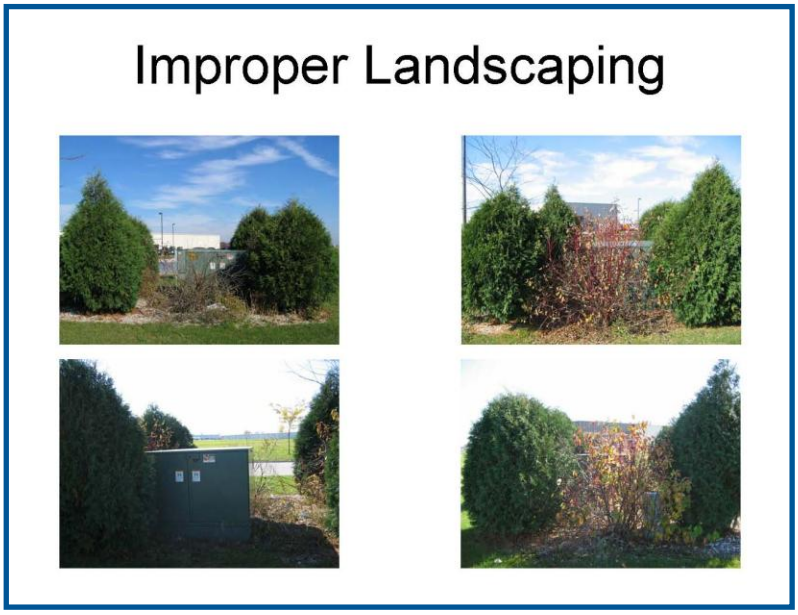


Figure 22 – Improper landscaping too close to electrical infrastructure

Proper landscape installation maintains access to the doors of the electrical equipment and allows for electric crews to work safely during emergencies and while performing routine inspections and maintenance (Figure 23).

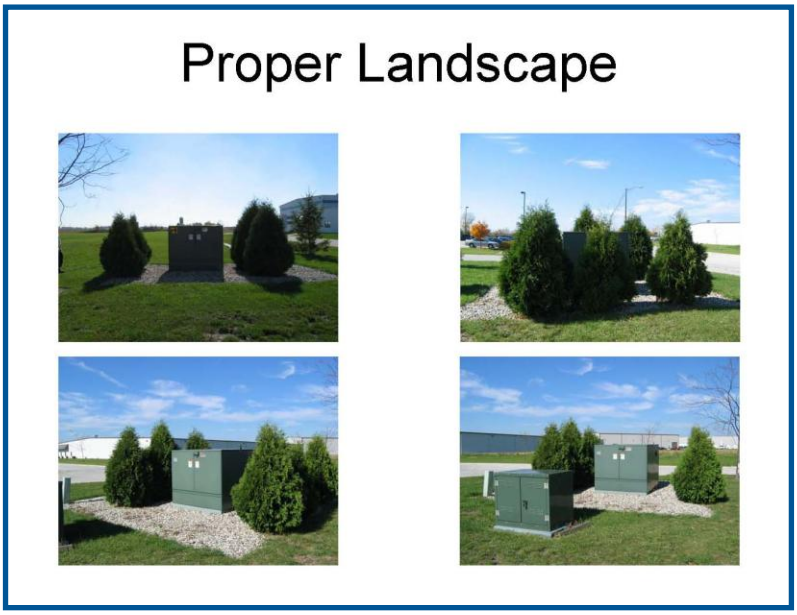


Figure 23 – Proper landscaping an appropriate distance from electrical infrastructure

Public Rights-of-Way

The exuberance of some residents has led them to plant trees, shrubs, flowers, and grasses in rights-of-way, easements, and other public places. For example, residents sometimes add landscaping to the tree lawn, the unpaved portion of a street right-of-way including the green space between the sidewalk and curb or edge of street pavement. While these private efforts are often beautiful, virtually all communities, including Hamilton, have ordinances in place that control the use of public places. These ordinances are designed to secure public safety and to assure aesthetic and practical uniformity.

A right-of-way is any strip of land - whether surface, overhead, or underground - that is granted by deed, plat, or easement for public use. They include properties owned or held by the city, as well as areas which the city has a right or easement to maintain. Roadways; sidewalks; ditches; electric power, telephone, and cable lines; and natural gas, water, and sewer lines are all examples of uses allowed in public rights-of-way by city ordinance.

Hamilton Utilities uses rights-of-way, easements, and other public places as a practical matter and the city has the right to restrict, manage, and control what is planted in these areas through city ordinance. The city also has the right to restrict the use of certain materials in these public places that inhibit tree roots from accessing air and water, such as stone, brick, or other similar items.

Additionally, the city has the responsibility to address safety issues in public places. Because traffic visibility is a major concern, especially at residential intersections, city ordinance outlines specific restrictions on plantings within the "visibility triangle" at intersections. The "visibility triangle" extends 25 feet from the corner in both directions, and then diagonally between these two points. No plantings of any kind – flowers, grasses, or trees – may be planted within this triangle.

Plans and species specifications for planting anything other than standard lawn grass in a tree lawn, cul-de-sac island, or boulevard island must be submitted by developers, businesses, and/or homeowners with the appropriate application form(s). These permits are available from the City of Hamilton Municipal Arborist located at 345 High Street, Suite 450, Hamilton, Ohio 45011, by calling 513-785-7285, or by emailing dave.bienemann@hamilton-oh.gov.

Information included with the application forms for public rights-of way specifies restrictions on what may be planted, as well as the maintenance responsibilities of adjacent property owners. For cul-de-sac islands, there are additional requirements for appropriate clearance around the surveyor's concrete monument near the island center. No alterations may be made to the approved planting plans without the written consent of the Municipal Arborist.

Appendix A - Codified Ordinance of the City of Hamilton, Ohio
Chapter 915, Comprehensive Tree and Planting Plan

915.01 TITLE AND STATEMENT OF PURPOSE.

a) This chapter shall constitute the Comprehensive Tree and Planting Plan for the City of Hamilton, Ohio. Its purpose is to establish policies and regulations that will promote and protect the urban forest and plantings of Hamilton. The statement of purpose for this chapter shall be as follows:

b) Ohio is a forest by nature. May we, the people of the City of Hamilton, unite in a collective mission to manage and protect our local urban forest. In doing so let us proceed with the knowledge that a forest is an interaction of living elements that are part of a greater ecological process. When we alter this process or its parts without knowledge and compassion we threaten the health and survivability of the immediate and larger landscape and the communities that live within them.

(Ord. 2013-6-52. Passed 6-26-13.)

915.02 DEFINITIONS.

For the purposes of this chapter, the following terms, phrases, words and their derivatives shall have the meaning given herein:

a) "Arborist" means a professional person whose certified area of expertise is forestry, horticulture and the selection and maintenance of trees, and other plantings.

b) "Basal clearance" means the distance from the center of a tree to the drip line of the tree at maturity. This distance will not change with time for any given tree, but it will vary from species to species.

c) "Canopy" means the cumulative horizontal crown at the widest point of a tree.

d) "Evergreen" means trees that remain green and do not lose their leaves.

e) "Critical Root Zone (hereinafter 'CRZ')" means the area surrounding a tree or planting wherein are the major roots of the tree or planting. In many, but not all species, this coincides with the extension of the tree canopy or basal clearance.

f) "Curb lawn" means the area in the public way between the sidewalk and curb or edge of roadway or between the abutting property lines where there is no sidewalk.

g) "Deciduous trees" means trees that lose their leaves in winter.

h) "Ground operated equipment" means any utility-related owned and operated devices or access points installed at or near ground level including but not limited to pad- mounted transformers, switch boxes, manhole covers, pull boxes, gas and/or water valves, and fire hydrants.

i) "Habitat" means a living environment that supports the survival needs of life, including shelter, water and food. Trees and plantings are a key component of the habitat of most species.

j) "Native trees" means trees that are indigenous and original to a particular geographical area.

k) "Person" means any person, firm, partnership, association, corporation, company, or organization of any kind.

l) "Plantings" means trees, shrubs, and any other vegetative materials that may exceed three (3) feet in height.

m) "Political subdivision" means a municipal corporation, county, school district, or other body corporate and politic responsible for governmental activities in a geographic area smaller than that of the State.

n) "Private land" means areas located within the City of Hamilton that are owned by a private person and/or entity and that are not owned by any political subdivision.

o) "Public land" means property or areas located within the City of Hamilton that are owned by the City of Hamilton or any other political subdivision, including but not limited to streets, rights-of-way, public ways and parks.

p) "Public nuisance" means any tree or other planting with an infectious disease or insect problem or dead or dying trees or plantings; or a tree or limb(s) or plantings that obstruct the sight triangle of street lights or traffic signs or the free passage of pedestrians or vehicles; or any tree or other planting that obstructs or interferes with public utilities; or a tree or planting that poses a threat to the public health, comfort, safety, and welfare, as determined by the City Manager's designee.

q) "Public way" means any public street, road, highway, public easement, sidewalk, alley, curb lawn, or public waterway, and includes the entire width of any right of way when

any part thereof is open to the use of the public, as a matter of right, for purposes of vehicular and/or pedestrian traffic.

r) "Shade trees" means woody plants having a single, well-defined stem, a more or less definite crown, a height of not less than thirty (30) feet and a trunk diameter at maturity of not less than six (6) inches, planted primarily for the purpose of providing shade.

s) "Shrubs" means woody plants generally with no single well-defined stem used as accent, border or foundation plants.

t) "Street trees" means trees planted in the public way.

u) "Tree" means woody plants having a single, well-defined stem, as indicated by subsequent provisions of this chapter.

v) “Topped or Dehorned trees" means trees with most or all of the crown removed.

w) "Tree inventory" means a summary of data collected to document the trees in the community using accepted statistical techniques. For purposes of this chapter, a tree inventory shall include the tree count and tree species, size and condition.

x) "Tree size" means:

1) Utility zone plantings. Any tree reaching a mature height of less than twenty-five (25) feet.
2) Small tree. Any tree reaching a mature height of less than thirty (30) feet.
3) Medium tree. Any tree reaching a mature height of thirty (30) to forty-five (45) feet.
4) Large tree. Any tree reaching a mature height of over forty-five (45) feet.

y) "Urban forest" means the sum of all trees, shrubs, and plantings found in and around dense human settlement, including all trees, shrubs, and plantings found in parks, cemeteries, public lands, private lands, and public ways.

z) "Utility zone" means the area under, over, and/or adjacent to owned utilities including but not limited to, utility poles, manhole covers, lighting fixtures, transformers, and switch enclosures.

(Ord. 2013-6-52. Passed 6-26-13.)

915.03 ADMINISTRATION OF PLAN.

a) In the case of trees standing on City grounds or easements, no person shall cut, trim, mutilate, injure or destroy any tree without first having obtained permission to do so from the City Manager or his designee or from the Director of Public Works. However, nothing in this section shall be construed to prohibit the trimming or cutting by the City of trees or parts thereof on or extending over any street or other ground belonging to the City when such trimming or cutting is necessary to prevent interference with any City-owned utility, or to remove any dangerous condition, or for any other City purpose.

b) The City Manager shall designate an individual to be responsible for the administration of the comprehensive Tree and Planting Plan. This individual may or may not be an arborist but shall have knowledge of the care and maintenance of urban forests.

c) In addition to the authority granted the City Manager, his designee, and the Transportation and Traffic Engineer in this chapter, the designee is hereby authorized to enforce Sections 915.04 through and including Section915.06 of this chapter.

(Ord. 2013-6-52. Passed 6-26-13.)

915.04 STANDARDS FOR PLANTING AND MAINTENANCE IN THE PUBLIC WAY.

a) All plantings shall be subject to the final approval of the City Manager's designee.

b) All plantings shall be in a live, healthy condition.

c) Specified varieties of any species shall be specimen-type trees or shrubs and shall be graded according to the applicable American National Standards Institute (ANSI) for Nursery Stock or better and shall be first class representatives of their normal species and varieties.

d) The approved and prohibited species and cultivars for planting in or adjacent to the public way are listed in Section 915.07 hereof. In order to maintain consistency with horticultural practices, the list set forth in Section915.07 may be reviewed by the Tree Advisory Board and may be revised by the Board without further legislative approval. Any such revision of the list of plantings by the Tree Advisory Board shall be effective only upon the written approval of the City Manager's designee.

e) Distances and Clearances.

1) Plantings within the public ways that impact traffic safety shall be coordinated with and approved by the City Transportation and Traffic Engineer. The following criteria shall be used as guidelines with regard to plantings that impact traffic safety:
   A. A minimum of thirty-five (35) feet from the nearest street corner measured from the point of the nearest intersecting curbs or curblines.
   B. A minimum of five (5) feet from driveways.
   C. A minimum of twenty (20) feet from alleyways.
   D. A minimum of one and one-half (1-1/2) feet from a curb or sidewalk for a small tree.
   E. A minimum of two (2) feet from a curb or sidewalk for a medium tree.
   F. A minimum of three (3) feet from a curb or sidewalk for a large tree.
   G. In accordance with the following illustration:
2) Plantings within the Utility Zone shall be installed using the following criteria:
   A. Only species listed for use in Utility Zones shall be planted under utility lines or within ten (10) lateral feet of said lines.
   B. A minimum of a ten (10) foot clearance from ground operated equipment.
   C. A minimum of a ten (10) foot clearance shall be maintained from streetlight fixtures to any plantings or portion thereof, which obstructs the path of light.
   D. A minimum of a ten (10) foot distance from fire hydrants.
3) Trees within the public ways shall be maintained so that:

A. Branch clearance above sidewalks shall be eight (8) feet or greater.

B. Branch clearance above streets shall be fifteen (15) feet or greater.

4) The Utilities are under no obligation to safeguard plantings made in the utility zone. However, compliance with these guidelines should minimize the effects of utility operations on subsequent additions to the urban forest.

f) Except for plantings planted and maintained by the City or other approved public authority, only the plantings listed in Section 915.07, or any other plantings that may be hereafter approved or prohibited by the Tree Advisory Board and approved in writing by the City Manager's designee, may be planted in the public ways.

g) All stumps and remnants of street trees must be removed 6 inches below the ground surface so that the top of the stump/remnant shall not project above the surface of the ground.

h) Sidewalk street repairs that will potentially endanger street trees shall require prior consultation with the City Manager's designee as to the best way to protect the tree roots where possible in the opinion of the City Manager's designee.

(Ord. 2013-6-52. Passed 6-26-13.)

915.05 RESPONSIBILITY FOR MAINTENANCE OF PLANTINGS IN OR OVERHANGING THE PUBLIC WAY.

a) Plantings shall be established and maintained in and adjacent to the public ways along streets in accordance with the provisions of this chapter. Plantings not so established and/or maintained are hereby declared to be public nuisances, except that existing plantings that are maintained in accordance with ordinances existing on the effective date of adoption of this chapter shall not be considered public nuisances.

b) It shall be the duty of all property owners and occupants to trim or remove plantings in the public ways abutting their property that are not maintained in accordance with the requirements of this chapter.

c) The City Manager's designee or any designated member of his staff shall have the authority to enter upon private land at any and all reasonable times to examine any tree, shrub or other planting located upon or over such private land and to carry out the provisions of this chapter.

d) The City Manager's designee under Section 915.03 shall cause written notice to the property owner(s) and occupant(s) to trim or remove any planting within, or adjacent to, the curb lawn area of the abutting public ways that do not conform with the provisions of this chapter. Such notice shall be sent by certified mail, return receipt requested, to the tax mailing address of the property owner(s) of record with the Butler County, Ohio, Auditor and to the occupant(s) at the address of the property. If certified mail is returned unclaimed, notice will be sent by regular mail.

e) If the planting is not trimmed or removed within the time period stated in the written notice, not less than ten (10) days from date of receipt of the notice, the City Manager's

designee may cause such trimming or removal to be undertaken and the costs thereof shall be the responsibility of the abutting property owner(s) and occupant(s).

f) In the event that the property owner(s) and occupant(s) fail to remit such costs to the City within thirty (30) days after written notice of the amount of such costs, the City Manager's designee or the Finance Director may certify such costs to the Butler County Auditor to be entered upon the tax duplicate for the abutting property as a lien and collected as other taxes and returned to the applicable City fund.

g) In the event that a planting within the public way presents imminent danger to public safety, it may be trimmed or removed by the City without written notice to the property owner. The property owner shall be responsible for the costs thereof as provided in subsection (e) hereof.

(Ord. 2013-6-52. Passed 6-26-13.)

915.06 PROHIBITIONS.

a) No person, firm or corporation shall do any of the following:
   1) Fail to perform any requirement contained in this chapter or commit any act prohibited in this chapter.
   2) Fail to trim or remove any planting within or abutting the public way to the property after receiving written notice in accordance with Section 915.05(d).
   3) Fail to pay the costs of trimming or removing any planting within the abutting curb lawn area of public way of the property.
   4) Excavate or significantly disturb the earth within a radius of ten feet of any tree within the public way or on public land without first obtaining written permission from the City Manager's designee under this chapter.
   5) Top (de-horn), remove or girdle any healthy tree in the public way or other public land without prior written approval from the City Manager or his designee. Trees severely damaged by storms and needing to be trimmed or removed in the interest of public safety are exempted from this section. Trees damaged by insects, diseases or certain trees under utility wires or other obstructions may be removed with the approval of the City Manager or his designee. Contractors involved in utility line pruning are exempted from this section; however, line pruning must be done in accordance with the guidelines set forth in the publication standard.
   6) Recklessly cause direct or indirect damage to a tree or other planting in the public way or on public land through any of the following means: cutting, carving, transplanting, removing, attaching rope, wire or nails or advertising posters; pouring harmful liquids or harmful chemicals on the tree or other planting or in or near CRZ; setting fire to or near a tree or other planting; impeding water, air or fertilizer to a tree or other planting.

b) This section does not apply to political subdivisions or their agents, employees or subcontractors.

(Ord. 2013-6-52. Passed 6-26-13.)

915.07 APPROVED AND PROHIBITED PLANTINGS IN OR ADJACENT TO THE PUBLIC WAY.

a) The following are the plant forms approved for planting in and adjacent to the public way:

1) Lawn grass, not to exceed 8".
2) Ornamental grasses or flowers not to exceed 18".

b) The species and varieties of deciduous shade trees approved and prohibited for planting in and adjacent to the public way are listed below.

List of Approved Trees (See Appendix B)

c) Trees Prohibited in Public Way Areas (Prohibited Street Trees). These are weak, messy, destructive, disease or insect prone, and/or are invasive pests.

Botanical Name	Common Name
Acer saccharinum	Silver maple (weak limbs that break in storms; shallow roots that damage sidewalks)
Ailanthus altissima	Tree-of-heaven (very weak, very invasive tree)
Elaeagnus angustifolia	Russian-olive (shrub or small tree, very invasive)
Fraxinus species	Ash (sadly, all ashes are potential victims of the deadly emerald ash borer)
F. americana	White ash
F. excelsior	European ash
F. pennsylvanica	Green ash
F. quadrangulata	Blue ash
Lonicera maackii	Bush honeysuckle (this large shrub is a very serious, destructive pest that should not be planted or permitted to grow anywhere in the US)
Pyrus calleryana	Flowering pear (including 'Aristocrat', 'Cleveland Select', 'Bradford' and other cultivars. All are weak and invasive).

d) Prohibited manipulations of plantings in or adjacent to the public way.

1) Espaliers or topiary: Forms achieved through trimming or pruning that are distorted or contrary to the natural shape of the species.

2) Shrubs: Shrubs that typically grow taller than three feet, yet not tall enough to be under trimmed to a height of six feet.

3) Topped or dehorned trees: Trees with most of or the entire crown removed.

e) The plantings listed in paragraphs (a) through (d) above may be modified or revised from time to time upon the approval of the Tree Advisory Board and the written approval of the City Manager's designee.

(Ord. 2013-6-52. Passed 6-26-13.)

915.08 GUIDELINES FOR REMOVAL OF TREES IN PUBLIC RIGHT OF WAY (CURB LAWNS).

a) A form, "Request for Removal of Live Tree(s) Located in the Public Way," must be completed with the necessary details for the City Manager's designee to do an inspection and render a decision. A form may be obtained from the City Health Department.

b) A tree that is dead or dying (50% or more) must be removed upon review and approval by the City Manager's designee.

c) Any tree that has outgrown its planted area and is causing damage to the bordering sidewalk or curb may be removed upon the review and approval of the City Manager's designee, who shall determine the reasonableness of replacing the sidewalk versus removing the tree. Replacement of either is responsibility of the property owner.

d) A tree that is affecting a sanitary sewer line from a building shall be considered for removal only after all other methods of sewer line maintenance have been attempted (i.e. root pruning, boring the line). Documented proof of such action has to be presented to the City Manager's designee before a request for removal will be considered.

e) A tree may be considered for removal if it is affecting other trees in such a way that the growth needs to be thinned or if the branches are affecting utility lines, is growing too close to a utility pole, or is growing too close to another immovable obstruction (e.g., a flagpole).

f) A tree that is a nuisance due to its natural state shall not serve as the basis for removal, subject to the appeals procedure set forth in Section 915.081.

(Ord. 2013-6-52. Passed 6-26-13.)

915.081 APPEALS.

a) Any person aggrieved (the "appellant") may appeal the denial of the request referenced in Section 915.08 to the Deputy City Manager/Managing Director of Operations by filing a written notice of appeal with the Deputy City Manager/Managing Director of Operations no later than ten days after the date of such denial. The notice of appeal shall include the complete name, address and telephone number of the appellant, the date and

description of the denial, and a statement of the grounds for appeal, which shall include the detailed reasons for reconsidering the request and overturning the denial. Upon receipt of the notice of appeal, the Deputy City Manager shall schedule a hearing to take place no later than thirty days after receipt of the notice of appeal. The Deputy City Manager shall notify the appellant, in writing, of the hearing date. The Deputy City Manager shall hear evidence and argument regarding the appeal and shall thereafter render a decision and so notify the appellant. As part of the hearing process, and in addition to any other witness and evidence, the Deputy City Manager may consult with one or more members of the City of Hamilton Tree Advisory Board. The appellant shall have the opportunity to question any member of the Tree Advisory Board who is present at the hearing for consultation.

b) The Deputy Manager shall render a written decision within thirty days of the hearing. The decision of the Deputy City Manager shall be final.

(Ord. 2013-6-52. Passed 6-26-13.)

915.09 DESTRUCTION OF SHRUBS, TREES, OR CROPS.

a) No person, without privilege to do so. shall recklessly cut down, destroy, girdle or otherwise injure a vine, bush, shrub, sapling, tree, or crop standing or growing on the land of another or upon public land.

b) In addition to any penalty provided, whoever violates this section is liable in treble damages for the injury caused.

(Ord. 2013-6-52. Passed 6-26-13.)

915.99 PENALTY.

Whoever violates any provision of this chapter is guilty of an unclassified misdemeanor and shall be fined not more than two hundred and fifty dollars ($250.00). A separate offense shall be deemed committed each day during or on which an offense occurs or continues.

(Ord. 2013-6-52. Passed 6-26-13.)

(EDITOR'S NOTE: See Section 501.99 for penalties applicable to any misdemeanor classification.)

Injury to trees - see GEN. OFF. 541.06

Hamilton Tree Advisory Board - see ADM. Ch. 154

Appendix B - Approved Street Tree List

Small Trees (< 25 feet tall)

Small Trees	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Trident Maple	20-30 feet	20-30 feet	Oval		Bronze - Green	Yellow, Orange, Red
Amur Maple	15-20 feet	15-20 feet	Oval	Yellow-white	Dark Green	Yellow, Orange, Red
Tartarian Maple	15-25 feet	15-25 feet	Oval	Greenish-white	Green	Yellow with reddish tints
Rocky Mtn. Glow Maple	20-25	15-20 feet	Oval		Dark Green	
David Maple	15-30 Feet	15-30 Feet	Upright	Greenish-white	Green	Yellow, Orange, Red
Sweetbay Magnolia	15-20 feet	15-20 Feet	Oval	White	Dark Green	Red
Serviceberry	15-30 feet	15-30 feet	Oval	White	Green	Yellow, Orange, Red
Redbud	25-30 feet	25-35 feet	Oval	Red	Dark Green	Yellow
Kousa Dogwood	20-30 feet	20-30 feet	Vase	White	Dark Green	Reddish purple, scarlet
Thornless Cockspur Hawthorn	15-20 feet	20-25 feet	Globose	White	Dark Green	Orange, Purple-red
Washington Hawthorn	20-25 feet	30-35 feet	Rounded Vase	White	Dark Green	Yellow, Orange, Red
Ohio Pioneer Hawthorn	25 feet	30-35 feet	Round	White	Gray Green	Yellow, Orange, Red
Winter King Hawthorn	20-25 feet	25-30 feet	Rounded Vase	White	Dark Green	Yellow, Orange, Red
Golden Raindrops Crab Apple	20 feet	15 feet	Upright	White	Green	Yellow
Adirondack Crab Apple	18-20 feet	10-16 feet	Upright	White	Dark Green	Brown
Harvest Gold Crab Apple	20-25 feet	15-20 feet	Columnar	White	Dark Green	Brown
Red Jewel Crab Apple	14-16 feet	10-14 feet	Ovate	White	Dark Green	Yellow
Sentinel Crab Apple	15 to 18 feet	12-15 feet	Columnar	White to Pink	Dark Green	Brown
Snowdrift Crab Apple	18-22 feet	18-22 feet	Ovate	White to Pink	Dark Green	Yellow
Sugartime Crab Apple	16-20 feet	14-16 feet	Ovate	White to Pink	Green	Brown

Small Trees Cont'd	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Prairiefire Crab Apple	18-22 feet	15-22 feet	Globose	Red, Deep Pink	Reddish Green	Bronze
Purple Prince Crab Apple	20-22 feet	20-22 feet	Globose	Rose Red, Pink	Purple	Bronze
Red Barron Crab Apple	18-22 feet	15-20 feet	Vase	Rose Red, Pink	Purple	Bronze
Royal Raindrop Crab Apple	20 feet	15 feet	Upright	Red to Pink	Purple	Bronze
Jack Callery Pear	15-20 feet	10-12 feet	Ovate	White	Dark Green	Gold
Jill Callery Pear	15-20 feet	10-12 feet	Ovate	White	Dark Green	Gold
Ivory Silk Lilac	20-30 feet	15-20 feet	Ovate	White	Dark Green	Brown
Red Buckeye	10-20 feet	10-20 feet	Round	Red	Dark Green	Brown
Accolade Cherry	20-25 Feet	20-25 Feet	Vase	Double Pink	Dark Green	Bronze
Kwanzan Cherry	20-25 feet	15-20 feet	Vase	Double Pink	Green	Bronze
Royal Burgundy Cherry	20-25 feet	15-20 feet	Vase	Double Pink	Green	Bronze
Yoshino Cherry	20-30 feet	25 feet	Vase	Double Pink	Green	Bronze
Camperdown Elm	15-25 feet	15-25 Feet	Vase	Green	Green	Yellow

Princess Diana Serviceberry

Medium Trees (25 to 40 feet tall)

Medium Trees	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Hedge Maple	25-35 feet	30-35 feet	Round		Dark Green	Brown
State Street Maple	45 feet	35 feet	Upright Oval		Dark Green	Red, Orange
Crimson King Maple	35 feet	35 feet	Oval		Dark Purple	Brown
East Street Norway Maple	40 feet	20 feet	Oval		Dark Green	Yellow
Princeton Gold Maple	35 feet	30 feet	Oval		Dark Green	Yellow
Royal Red Norway Maple	35-40 feet	30 feet	Oval		Dark Green	Yellow
Autumn Splender Buckeye	35-40 feet	30-35 feet	Oval-round	Yellow	Dark Green	Brown
Three Flower Maple	25-30 feet	25-30 feet	Dense-Oval		Green	Orange, red
Cork Tree	30-40 Feet	30-40 Feet	Rounded	White	Green	Yellow
Ohio Buckeye	20-40 feet	20-40 feet	Rounded	Yellow	Bright Green	Brown
Yellowwood	35 feet	35 feet	Round	White	Bright Green	Yellow
Perkins Pink Yellowwood	40 feet	20 feet	Round	White	Bright Green	Yellow
Shangri-La Ginkgo	40 feet	30 feet	Compact		Bright Green	Yellow
Sunburst Locust	35 feet	30-35 feet	Rounded		Yellow-green	Yellow
Golden Rain Tree	30 feet	20-25 feet	Rounded	Yellow	Green	Brown
Cherokee Seedless Sweetgum	40 feet	25 feet	Pyramidal		Dark Green	Reddish purple, scarlet
River Birch	35 feet	25 feet	Pyramidal		Dark Green	Yellow
American Hornbeam	20-30 feet	20-30 feet	Rounded		Dark Green	Brown
American Hophornbeam	40 feet	20 feet	Upright Oval		Dark Green	Brown
Osage Orange	20-40 feet	20-40 feet	Round		Dark Green	Yellow
Amur Cork Tree	30-45 feet	30-45 feet	Broad		Dark Green	Yellow
Aristocrat Pear	30-35 feet	20-25 feet	Pyramidal	White	Waxy Green	Brown

Medium Trees Cont'd	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Sawtooth Oak	40 feet	40 feet	Rounded		Dark Green	Brown
Prairie Cascade Weeping Willow	30 feet	40 feet	Weeping		Dark Green	Yellow
Paperbark Maple	20-35 feet	15-20 feet	Upright Oval		Dark Green	Red, Orange
Frontier Elm	40 feet	30 Feet	Upright Oval		Dark Green	Red
Emerald Sunshine Elm	35 Feet	25 Feet	Upright Oval		Dark Green	Yellow
Wild Fire Black Gum	40 Feet	25 Feet	Upright Oval	White	Dark Green	Red

Wildfire Black Gum

Large Trees (> 40 feet tall)

Large Trees	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Columnar Norway Maple	60 feet	15-20 feet	Upright Columnar	Yellow	Dark Green	Yellow
Deborah Norway maple	50 feet	45-60 feet	Round	Yellow	Dark Green	Yellow
Emerald Queen Norway Maple	60-80 feet	50-60 feet	Oval		Dark Green	Yellow
Emerald Lustre Norway Maple	60-80 feet	50-60 feet	Oval		Dark Green	Yellow
Commendation Sugar Maple	50 feet	35 feet	Oval rounded		Dark Green	Red, Orange, Yellow
Majesty Sugar Maple	50 feet	40 feet	Oval		Dark Green	Red, Orange, Yellow
Green Mountain Sugar Maple	50 feet	40 feet	Oval		Dark Green	Red, Orange, Yellow
Wright Brothers Maple	50 feet	35 feet	Oval		Dark Green	Red, Orange, Yellow
Emerald Lustre Norway Maple	60-80 feet	50-60 feet	Oval		Dark Green	Yellow
Northern Catalpa	50-60 feet	20-40 feet	Upright - Oval	White	Green	Yellow
Magnifica Hackberry	50 feet	40 feet	Oval		Medium Green	Yellow
Common Hackberry	50 feet	40 feet	Oval		Medium Green	Yellow
Heritage River Birch	40-60 feet	40-60 feet	Pyramidal		Dark Green	Yellow
Pyramidal European Hornbeam	30-40 feet	20-30 feet	Rounded		Dark Green	Brown
Turkish Filbert	40-50 feet	25-30 feet	Pyramidal	Catkins	Dark Green	Brown
Hardy Rubber Tree	40-60 feet	40-60 feet	Rounded		Dark Green	Brown
American Beech	50-70 feet	50 feet	Oval		Dark Green	Brown
Purple Beech	50-70 feet	50 feet	Oval		Dark Purple	Brown
Tricolor Beech	50-70 feet	50 feet	Oval		Pink, Green, Purple	Brown
Autmun Gold Ginkgo	40-60 feet	30-60 feet	Broad		Green	Gold
Princeton Sentry Ginkgo	60 feet	15 feet	Upright		Green	Yellow
Honey Locust	40-60 feet	20-40 feet	Round		Green	Yellow
Kentucky Coffee Tree	50 feet	35 feet	Oval		Dark Green	Brown

Large Trees Cont'd	Height	Width	Crown	Flower	Foliage Spring	Foliage Fall
Moraine Sweetgum	60 feet	18-25 feet	Pyramidal		Dark Green	Reddish, Purple, scarlet
Tulip Tree	70-90 feet	35-50 feet	Oval	Green-Yellow	Bright Green	Yellow
Dawn Redwood	70-80 feet	25 feet	Pyramidal		Bright Green	Brown
Bald Cypress	50-70 feet	20-30 feet	Pyramidal		Sage Green	Brown

Autumn Gold Ginkgo

Frontier Elm

Appendix C – Native Landscape Material

NATIVE FERNS	
Botanical Name	**Common Name**
Adiantum pedatum	Maidenhair Fern
Athyrium filix-femina	Lady Fern
Dennstaedtia punctiloba	Hay-scented Fern
Dryopteris marginalis	Marginal Shield Fern
Dryopteris spinulosa	Toothed Wood Fern
Matteuccia pensylvanica	Ostrich Fern
Onoclea sensibilis	Sensitive Fern
Osmunda cinnamomea	Cinnamon Fern
Osmunda regalis	Royal Fern
Polystichum acrostichoides	Christmas Fern

NATIVE GRASSES AND GRASS-LIKE PLANTS	
Botanical Name	**Common Name**
Carex flaccosperma	Blue Wood Sedge
Carex muskingumensis	Palm Sedge Grass
Carex pensylvanica	Pennsylvania Sedge
Carex plantaginea	Wide Leaf Sedge
Carex platyphylla	Blue Satin Sedge
Carex radiata	Eastern Star Wood Sedge
Chasmanthium latifolium	Northern Sea Oats
Diarrhena americana	Beak Grass
Eriophorum angustifolium	Cotton Grass
Panicum virgatum	Switch Grass
Schizachryium scoparium 'The Blues'	Little Blue Stem Grass
Spartina pectinata 'Aureo Marginata'	Cord Grass
Sporobolis heterolepis	Prarie Dropseed

NATIVE VINES	
Botanical Name	**Common Name**
Ampelopsis cordata	American Porcelianberry
Aristolochia durior	Dutchmans Pipe
Aristolochia tomentosa	Woolly Dutchmans Pipe
Campsis radicans	Trumpet Vine
Celastrus scandens	American Bittersweet
Lonicera dioica	Smooth Leaved Honeysuckle
Lonicera prolifera	Grape Honeysuckle
Parthenocissus quinquefolia	Virginia Creeper
Passiflora incarnata	Hardy Passion Vine
Wisteria frutescans	American Wisteria

NATIVE SHRUBS	
Botanical Name	**Common Name**
Aesculus parviflora	Bottlebrush Buckeye
Amelanchier stolonifera	Running Serviceberry
Andromeda glaucophyla	Blue Bog Rosemary
Aralia racemosa	American Spikewood
Aralia spinosa	Devils Walkingstick
Azalea arborescens	Sweet Azalea
Azalea calendulaceum	Flame Azalea
Azalea canescens	Piedmont Azalea
Azalea periclymenoides	Pinxterbloom Azalea
Azalea prinophyllum	Roseshell Azalea
Azalea prunifolium	Plumleaf Azalea
Azalea viscosum	Swamp Azalea
Calycanthus floridus	Sweetshrub
Ceanothus americanus	New Jersey Tea
Cephalanthus occidentalis	Buttonbush
Clethra alnifolia	Summersweet
Comptonia peregrina	Sweet Fern
Cornus amomum	Silky Dogwood
Cornus canadensis	Bunchberry
Cornus drummondii	Giant Gray Dogwood
Cornus racemosa	Gray Dogwood
Diervilla lonicera	Dwarf Bush Honeysuckle
Euonymus americanus	American Strawberry Bush
Euonymus atropurpureus	Eastern Wahoo
Fothergilla gardenii	Dwarf Fothergilla
Fothergilla major	Large Fothergilla
Fothergilla monticola	Mountain Fothergilla
Hamamelis vernalis	Vernal Witch Hazel
Hamamelis virginiana	Common Witch Hazel
Hydrangea quercifolia	Oakleaf Hydrangea
Hypericum kalmianum	Kalm's St. Johnswort
Ilex opaca 'Female'	American Holly
Ilex opaca 'Male'	American Holly
Ilex verticillata	Winterberry
Itea virginica	Virginia Sweetspire
Ledum palustre	Crystal Labrador Tea
Leucothoe axillaris	Dwarf Leucothoe
Lindera benzoin	Spicebush
Myrica pensylvanica	Northern Bayberry
Nemopanthus mucronatus	Mountian Holly
Neviusia alabamensis	Alabama Snow Wreath
Rhus aromatica	Fragrant Sumac
Rhus typhina	Staghorn Sumac

NATIVE SHRUBS CONTINUED	
Botanical Name	**Common Name**
Rubus odorata	Thimble Berry
Salix sericea	Silky Willow
Sambucus canadensis	American Elderberry
Sambucus pubens	Red Berried Elderberry
Staphylea trifolia	American Bladdernut
Symphoricarpos alba	Common Snowberry
Vaccinum angustifolium	Lowbush Blueberry
Vaccinum corymbosum	Highbush Blueberry
Vaccinium macrocarpon	American Cranberry
Viburnum acerifolium	Mapleleaf Viburnum
Viburnum cassinoides	Witherrod Viburnum
Viburnum dentatum	Arrowwood Viburnum
Viburnum lentago	Nannyberry
Viburnum nudum	Smooth Witherrod
Viburnum prunifolium	Blackhaw Viburnum
Viburnum rufidulum	Southern Blackhaw Viburnum
Viburnum trilobum	American Cranberrybush
Xanthorhiza simplicissima	Yellowroot
Zenobia pulverulenta	Dusty Zenobia

Lady Fern

Appendix D – Frequently Asked Questions

Why does the City plant trees under the power lines knowing they will need to be trimmed later?

The City plants utility compatible trees under or adjacent to power lines. High voltage power lines are 40 feet above the ground and so utility compatible trees grow no more than 25 feet tall. They also do not require trimming. Utility compatible trees species include Ivory Silk Lilac, Serviceberry, Crab Apple, Hawthorn, Flowering Cherry, Hedge Maple, Tartarian Maple, Redbud, Star Magnolia, and Kousa Dogwood.

What are the brown and/or green bags at the base of trees?

Treegator® bags are for watering newly planted trees. Each Treegator bag holds approximately 20 gallons of water. Refer to the section titled “Watering” on page 12.

Can the City of Hamilton Municipal Arborist look at trees in my yard?

The Municipal Arborist will review trees on private property by appointment only. Inquiries should be directed to 513-785-7285 or dave.bienemann@hamilton-oh.gov. You can also submit a request using the City of Hamilton’s Online 311 Citizen Request Center at http://hamilton-city.org/RequestTracker.aspx.

Does the City trim or remove trees?

Yes, the City of Hamilton does trim and remove trees located in public rights-of-way, City parks, and green spaces owned by the City if power lines are involved. The City does not trim or remove trees on private property or in the public rights-of-way where no power lines are located.

Why is the City trimming the trees in the subdivision?

The City does not trim or remove trees on private property or in the public rights-of-way where no power lines are located. However, the City of Hamilton will train residents on how to prune smaller trees to remove dead or diseased branches, crossing branches, and/or branches that impact pedestrian or motor vehicle visibility. Proper pruning is encouraged to promote good tree form and structure, which ultimately results in a stronger, healthier, and more storm resistant mature tree.

Can the City of Hamilton Municipal Arborist check my ash trees for the presence of Emerald Ash Borer?

The Municipal Arborist will inspect ash trees on private property by appointment only. Inquiries should be directed to 513-785-7285 or dave.bienemann@hamilton-oh.gov. You can also submit a request using the City of Hamilton's Online 311 Citizen Request Center at http://hamilton-city.org/RequestTracker.aspx.

Who do I call for a tree limb on the power lines?

The Municipal Arborist will review tree limbs on power lines during non-emergency situations. Please call 513-785-7285 or email dave.bienemann@hamilton-oh.gov. You can also submit a request using the City of Hamilton's Online 311 Citizen Request Center at http://hamilton-city.org/RequestTracker.aspx.

If you have lost power due to a downed power line or other hazardous situation, or are experiencing flickering lights, voltage problems, smoking or sparking from the power lines, contact the City's Emergency Utility Service immediately at 513-785-7550 – available 24 hours a day, 7 days a week.

Your safety is important to us. Stay away from all power lines. Assume they are live and dangerous.

What is the procedure for planting a tree in the tree lawn area (the green space between the sidewalk and curb or edge of street pavement)?

You can pick up an Adopt-A-Tree form from the City of Hamilton Municipal Arborist at 345 High Street, Suite 450, Hamilton, Ohio 45011, by calling 513-785-7285, or by emailing dave.bienemann@hamilton-oh.gov. Once the form is filled out and returned, the Municipal Arborist will review the species selection and planting site. The permit will be approved or not approved based on the planting site and surrounding public infrastructure.

What size of tree can I plant in the tree lawn?

City Ordinance Chapter 915, Comprehensive Tree and Planting Plan, states that the tree lawn area must have a minimum width of 4 feet to plant a small tree (< 25 feet tall at maturity), a minimum width 6 feet to plant a medium tree (25-40 feet tall at maturity), and a minimum width of 8 feet to plant a large tree (> 40 feet tall at maturity). Additionally, street trees must have a diameter of at least 1.75 inches when planted. The approved list of street tree species is provided in Appendix B (page 43).

City of Hamilton Mayor Pat Moeller giving the 2016 Arbor Day Proclamation at Riverview Elementary School