

B

LOT DESIGN: FOREST PATCHER

Would you like to transform a woody neighborhood lot into an enchanted forest?

GRANT AMOUNT UP TO: \$8,000

The Forest Patcher Lot Design is great for properties with an unruly woodland or collection of small trees. The design pairs an investment of time and labor — to remove dense understory growth and dying trees and to plant new trees or wildflowers — with a set of maintenance strategies to help you create a well-maintained forest patch that has the potential to increase biodiversity and be a naturalized amenity in your neighborhood. This lot design is ideal for a group wanting to beautify a grouping of forested lots and attract birds and other friendly wildlife.

DETAILS:

- Anticipated installation: Spring 2019
- A professional tree-artisan is required
- There is the potential for a workforce development component to be integrated into the installation


REQUIREMENTS:

- An existing forested lot
- Educational programming around the benefits of forests and biodiversity

IDEAL FIT:

- The preferred site would be three contiguous forested lots (or 90' of frontage)





Volunteer

Professional

Volunteer + Professional

Forest Patcher

Image Source: Lambert, Rotherstien & Associates, "IMG_2104." Used with permission



**working
with lots**

A FIELD GUIDE



The Forest Patcher emphasizes working with the resources at hand and on-site. This lot design is great for properties with an unruly woodland or a collection of small trees. The design pairs an investment of time and volunteer labor with a set of maintenance strategies to help you create a well-maintained forest patch.

The Forest Patcher’s guiding principles will help you manage your existing woodland through the removal of dense understory growth and dying or diseased trees, as well as with the addition of a few new trees or wildflowers. This management plan has the potential to welcome habitat, biodiversity, shade, and a naturalized aesthetic to your neighborhood.

For more information refer to [DFC-lots.com](https://dfc-lots.com)

What is the lot design likely to cost?

The estimated cost of the Forest Patcher is low (\$50 – \$1,000) and based on utilizing volunteer labor with possible professional assistance for tree removal. The number of trees you decide to remove or plant may impact cost. The cost assumes that residents or volunteers have access to basic safety gear and garden tools.

How much upkeep will this lot design require?

This lot design requires a medium level of maintenance to thrive. Maintenance will include watering plants and trees, particularly during times of drought and excess heat. The lot should be cleaned up once a year to remove any unwanted scrub plants or damaged trees.

Will the installation of this lot design require a professional?

The installation of the Forest Patcher lot design is unlikely to require professional assistance if you, with the help and support from friends, family, or neighbors, would like to construct it; however, if you decide to remove large trees or do not have experience in handling a chain saw, the Field Guide recommends seeking professional assistance. Please refer to the Step-By-Step section for guidance on implementing this lot design. If you do not have the required support or feel unable to tackle this lot design, please seek professional assistance.

How long will it take to install this lot design?

While people tackle projects in different ways and at different speeds, the Field Guide estimates the installation time of this lot design to be one full weekend with the help of at least three healthy adults or youth. The Field Guide assumes the lot is ‘construction ready,’ and all equipment and materials required for lot design have been acquired and are ready to use.

Cost	\$50 - 1,000	\$1,000 - 2,500	\$2,500 - 5,500	\$5,500 +
People	Volunteer	Professional	Volunteer + Professional	
Experience	Beginner	Intermediate	Advanced	
Upkeep	Low	Medium	High	
Stormwater	Good	Better	Best	
Location	Any Lot With Existing Trees in Sun or Shade			

Forest Patcher

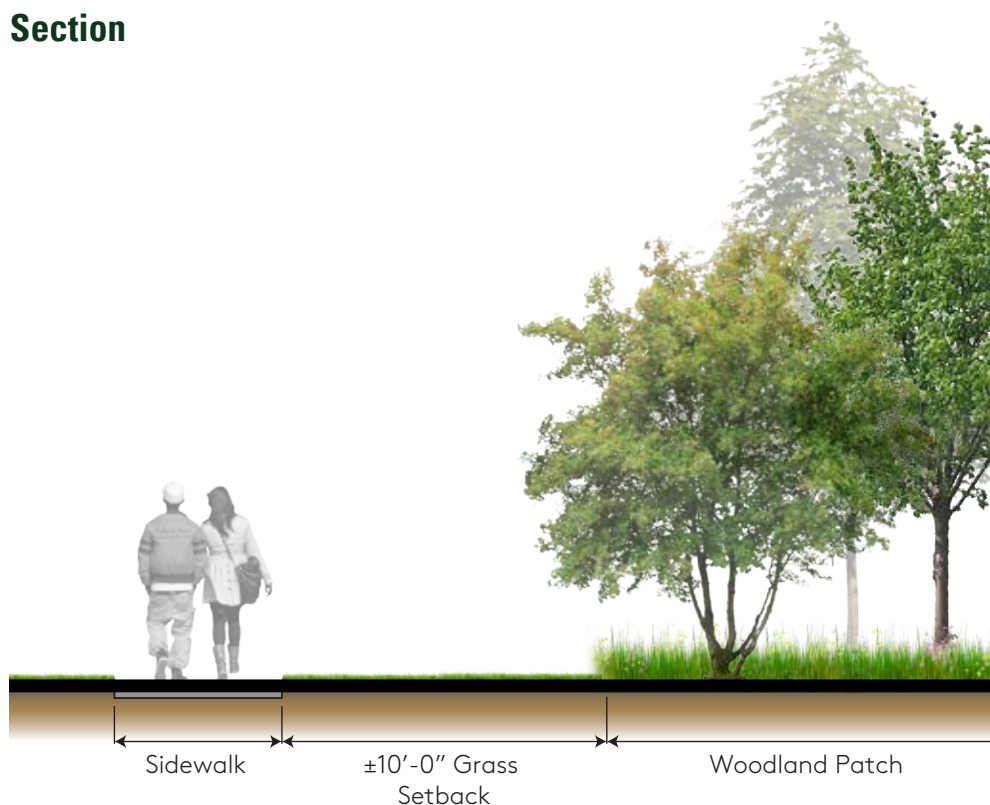
Examples of Woodland Edges



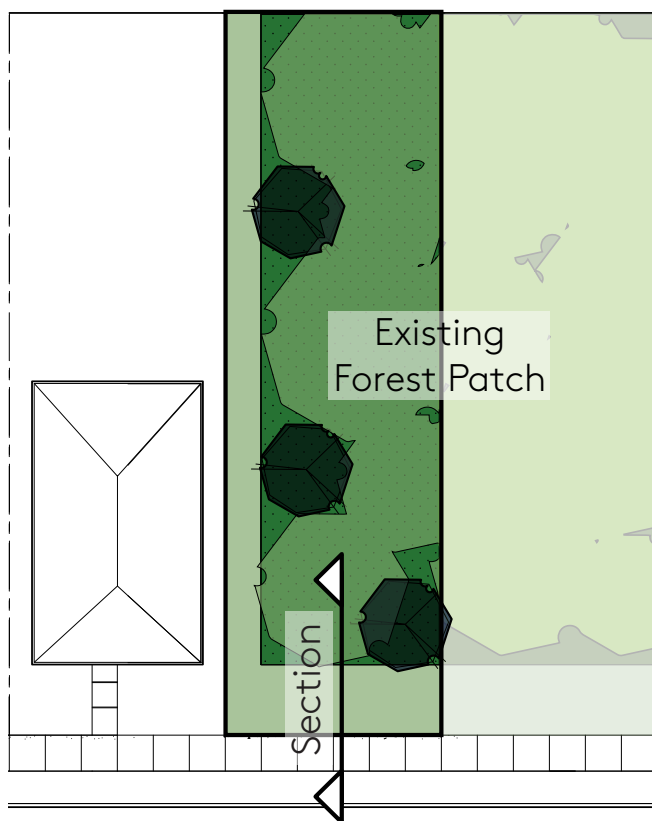
1 - Scrub Along Fence







2 - Forest Patch



Where Do I Grow?



The Forest Patcher can be constructed on single or multiple lots and is suitable for properties with an existing woodland.

-  Existing Forest Patch
-  Woodland Floor
-  Additional Trees (Optional)
-  Grass or Optional Groundcover

What You Need: Shopping List

Shopping List

The shopping list provides a breakdown of potential materials, tools, and resources required to construct this lot design.

This shopping list is designed for a single lot (30 by 100 feet).

Tools

Suggested Tools

- **Marking Paint**
- **Safety Gear:** Gloves, heavy work boots, tall socks, pants, long sleeve shirts, protective eye wear, dust masks, ear plugs, and hard hats. Additional safety gear, such as hard hat with attached face guard and leg protection/chaps, is recommended when using heavy machinery, such as a chainsaw.
- **Garden Tools:** Spades, shovels, rakes, trash bags, and wheelbarrows.
- **Woodland Management Tools:** Clippers, loppers, pruning saw, chainsaw, pick axe, knife, and ball cart (for moving heavy trees).

Potential Water Sources

- Garden Hose with potential extension hose
- Sprinkler
- Rain Barrel in addition to other water source

Waste Removal

- **Yard Waste Removal:** Contact your local refuse service to set-up yard waste removal or make sure you have a place on your site for unwanted scrub, brush, logs, and vegetation to be legally dumped. Refer to page 8 for more information.

Materials List

Materials

- **Mulch or Wood Chips**, recommended if planting new trees but not required
- **Low-Maintenance Fescue Mix**, 7.5 pounds of seed
- **Germination Blankets**, 2 rolls (8 by 112.5 feet)

Planting Options

The Field Guide offers a variety of woodland plants for the three categories listed below. Refer to page 10 and decide if any of these planting options are right for your Forest Patcher design.

- **Understory Trees**
- **Large Trees**
- **Groundcovers and Perennials**

Resources

Field Guide Resources

Resources are available on the Field Guide's web site.

- **Clean + Green**
- **Tree Planting Detail**

There are numerous resources and classes available to help guide you. The Greening of Detroit offers a great Citizen Forester program to interested residents.

You can also access the "Backyard Woods Guide" provided by the Arbor Day Organization. The guide is full of useful information, including [Working Safely with a Chain Saw](#), [Identify and Manage Hazardous Defects in Your Trees](#), and [Prune Your Trees to Keep Your Woods Healthy](#).

Forest Patcher Step-By-Step

Let's Start

Want to create the Forest Patcher? The Field Guide recommends hiring a professional for some tasks. Here are a few guiding principles to help you understand the tasks involved in the lot design, and the steps volunteers can construct themselves.

☒ Check off tasks as you go along.

Lot Design Steps

Volunteer Opportunities:

- ☐ Assess Woodland Condition
- ☐ Create A Clean Edge
- ☐ Remove Understory Scrub

Professional Recommended:

- ☐ Remove Dead or Dying Trees

Volunteer Opportunities:

- ☐ Add Trees
- ☐ Add Perennials
- ☐ Maintain Your Lot Design
- ☐ Sow Clean Edge

☐ Assess Woodland Condition

Spend an afternoon assessing the existing trees and vegetation on your lot. Here are a few questions to ask as you examine your lot. Considering these questions will help you begin to develop a maintenance plan for your lot.

What types of trees or plants are growing in your woodland? Can you name the species?

Are there any trees or vegetation that you would like to keep?

Do you notice any trees or vegetation that should be removed? Do you notice any trees that are dead, have dead wood, cracks, disease, decay, are tilting, or have poor form, structural defects, or anything that looks dangerous?

Does your woodland have scrub or unwanted brambles growing?

Do you see any endangered wildflowers or wildlife? If so, how are you going to protect them in your management plan?

Forest Patcher Step-By-Step

○ Create A Clean Edge

The Field Guide recommends approximately ten feet or the existing length from the front of the house to the sidewalk to be clean and clear of unwanted scrub, trees, and vegetation, helping to keep your neighborhood looking tidy. A five foot strip clear of vegetation is also recommended along your lot's side property lines if your lot is adjacent to any houses. This will help keep branches from falling on neighboring houses or becoming a public nuisance.

It is okay to clear around a 'feature' tree (a tree you want to keep) if it is located within the front or side areas being cleared of other vegetation.

You should have a variety of tools on hand to assist you with removing scrub vegetation and removing roots from the property. Recommended tools and safety gear are listed on page 5.

Be careful when removing scrub to avoid poison ivy, beehives, or other hidden dangers. The Field Guide recommends that two people work together to remove unwanted scrub and vegetation.

○ Removing Understory Scrub

After creating the clean edge around your lot, you may need to remove additional scrub, smaller woody growth, or other grasses and brambles from your forest patch site. Removing this smaller, unwanted vegetation can enhance views through your woodland ("clearing the understory").

Clearing the understory will create open space and prepare your lot for planting new trees.

○ Remove Dead or Dying Trees

Are there trees on your lot that should be removed? These might be trees that are unhealthy, unsafe, or are species you do not wish to have on your lot.

Removing trees can be dangerous to you and other volunteers as well as to adjacent properties and nearby trees. The Field Guide recommends working with someone who has prior experience with tree removal. **A great reference is Working Safely with a Chain Saw in the Backyard Woods Guide provided by the Arbor Day Organization.**

If taking on the tree removal yourself, be sure to wear the suggested safety gear listed on page 5. This list includes additional safety gear that is especially important for operating a chain saw. When selecting a chain saw, make sure it has the proper safety features, including a chain brake, throttle safety latch, and chain with guard and links in good condition. If you are cutting a large tree, it will likely require guide ropes and one or two hired professionals.

Tree felling can be unpredictable. Before beginning to cut trees, make sure children and adults are a safe distance away and that trees are a safe distance from houses, roads, power lines, bodies of water, and cars. Also be sure to contact nearby neighbors before removing a large tree.

Experience in tree cutting and tree felling is required before removing large trees. The Field Guide does not recommend the removal of trees larger than 6 inches in diameter without professional assistance or support.

Call Before You Dig

Locate underground utilities before beginning your lot design. MISS DIG provides a free service to Michigan residents by locating and marking utilities on requested properties. Call (800) 482-7171 or 811 at least three days before you plan to start digging on your lot.

Forest Patcher Step-By-Step

○ Add Trees

Does your forest patch have small clearings from removed trees or existing open space where you would like to plant a new tree? When adding trees, it is best if your new tree species adds diversity to your woodland and making sure the existing clearing is large enough for the tree you wish to plant. Consider the sun and shade tolerance of the tree species you are considering. Research tree spread to ensure it will have enough space to stay healthy as your tree grows. If your planting area is deep within your lot, consider if or how you will be able to bring the new tree to the selected site.

The Field Guide recommends a variety of trees as potential additions to your Forest Patcher woodland; however, each woodland is unique. The Field Guide encourages you to learn more and discuss your woodland with an arborist or someone knowledgeable about trees.

Trees can be purchased in pots or balled and burlapped. Identify the location where you wish to plant the trees. Dig a hole three times the width of the root ball and equal to the depth.

Pots should be removed before placing the tree in the planting hole. Balled and burlapped root balls should remain wrapped until placed in hole. Unwrap the top 1/3 of the root ball and peel back the burlap once planted. Remove any twine, nails, or stakes. The root flare should be level with the ground when you place the tree in the hole.

Water the root ball, then backfill the hole with the soil previously removed from planting. Add water to the tree every six inches as you backfill the hole. Compact the soil lightly after each watering until the hole is filled with soil and level with the adjacent ground.

Plant trees as soon as possible on lot. If you cannot plant them the same day, do not leave unplanted trees in direct sunlight. Keep them in shade and well-watered until you can plant them. (Trees dry out fast!)

For more guidance on tree planting, refer to the [Tree Planting Detail](#).

○ Add Perennials

Would you like to add additional or new planting to the forest floor? This lot design suggests a few shade-loving groundcovers and perennials for your forest patch. If your lot is in full sun, seek alternative planting options. The suggested plants are Michigan wildflowers and require moist soil and shade.

Place plants in desired location, then remove plastic pots, loosen roots, and plant. **Woodland plants do not require mulch. Mix plants in with existing woodland plantings or scatter across the forest floor.**

If you are looking for additional woodland plants, a great reference is the [Native Plants Database](#) provided by The Native Plant Nursery LLC in Ann Arbor, Michigan.

○ Maintain Your Lot Design

This lot design requires an ongoing series of maintenance strategies. Over time and through the seasons, your 'maintenance' will be to continually evaluate the condition of your woodland, remove any unwanted species, manicure the edges, and add new species as desired. Monitoring your woodland will help keep it healthy and enjoyable throughout the year.

The Field Guide recommends connecting with an arborist or taking a workshop on tree health and maintenance if you need more information on woodland management.



Visit the Resources page on the Field Guide's web site (DFC-lots.com) to discover other vendors and places to purchase plants.

Forest Patcher Step-By-Step

Brush and Bulk Collection:

Advanced Disposal (Detroit's West Side)

(844) 2-DETROIT (338764)

12255 Southfield Road

Detroit, MI 48228

Rizzo Services (East Side and South of I-94)

(866) 772-8900

6200 Elmridge

Sterling Heights, MI 48313

Detroit Waste Disposal:

The locations listed below are only open to Detroit residents with proper identification. Residents are limited to one load per household per day, not to exceed one cubic yard or 1,000 pounds. The City does not accept demolition, construction, or remodeling debris, household or commercial garbage, or tree stumps.

Davison Yard: 8221 West Davison

Southfield Yard: 12255 Southfield Service Dr.

State Farm Yard: 19715 John R

J. Fons Transfer Station: 6451 E. McNichols

○ Sow Clean Edge

After removing scrub and unwanted vegetation from the edges of your property, do you need a new groundcover? If you are seeking a lower maintenance alternative to a traditional lawn, the Field Guide recommends a fescue seed mix. **If you follow the Forest Patcher lot design you will need approximately 7.5 pounds of fescue seed mix for urban edge areas (refer to plan on page 10) and two 8 by 112.5 foot rolls of single net germination blankets.**

This family of floppy grasses is very drought-resistant and requires one cutting (in August or September) per year. Fescue can be established in full sun to shade and should be seeded in spring (mid-March to mid-May) or fall (August to September).

Soil should be prepared for seeding by scarifying, raking, or tilling the soil four to six inches deep to loosen any compaction, allowing for easier seed germination and better water infiltration. Apply seed mix to a damp lot.

Sow seed across the remaining lot by using a seed spreader or by hand. A seed rate of five pounds per 1,000 square feet is recommended. Gently water seedlings daily until they are four to six inches in height. Placing a thin layer of straw or a germination blanket over seeded areas will help ensure that your seed establishes by keeping seeds from blowing away and protecting them from birds. Germination blankets or straw can be purchased at most nurseries and garden stores.

Once established, grass will not require supplemental watering except during unusually dry periods. Eco-Turf Low Maintenance Fescue Mix is one recommended seed mix and can be purchased through the Michigan Wildflower Farm.

Other Field Guide lot designs can be used as groundcovers. Check out the web site for additional options and ideas.

Next Level: If you would like to bring additional color to your grass, you can plant bluebells, crocuses and/or daffodils to create a decorative show in spring. Bulbs should be planted in the fall.

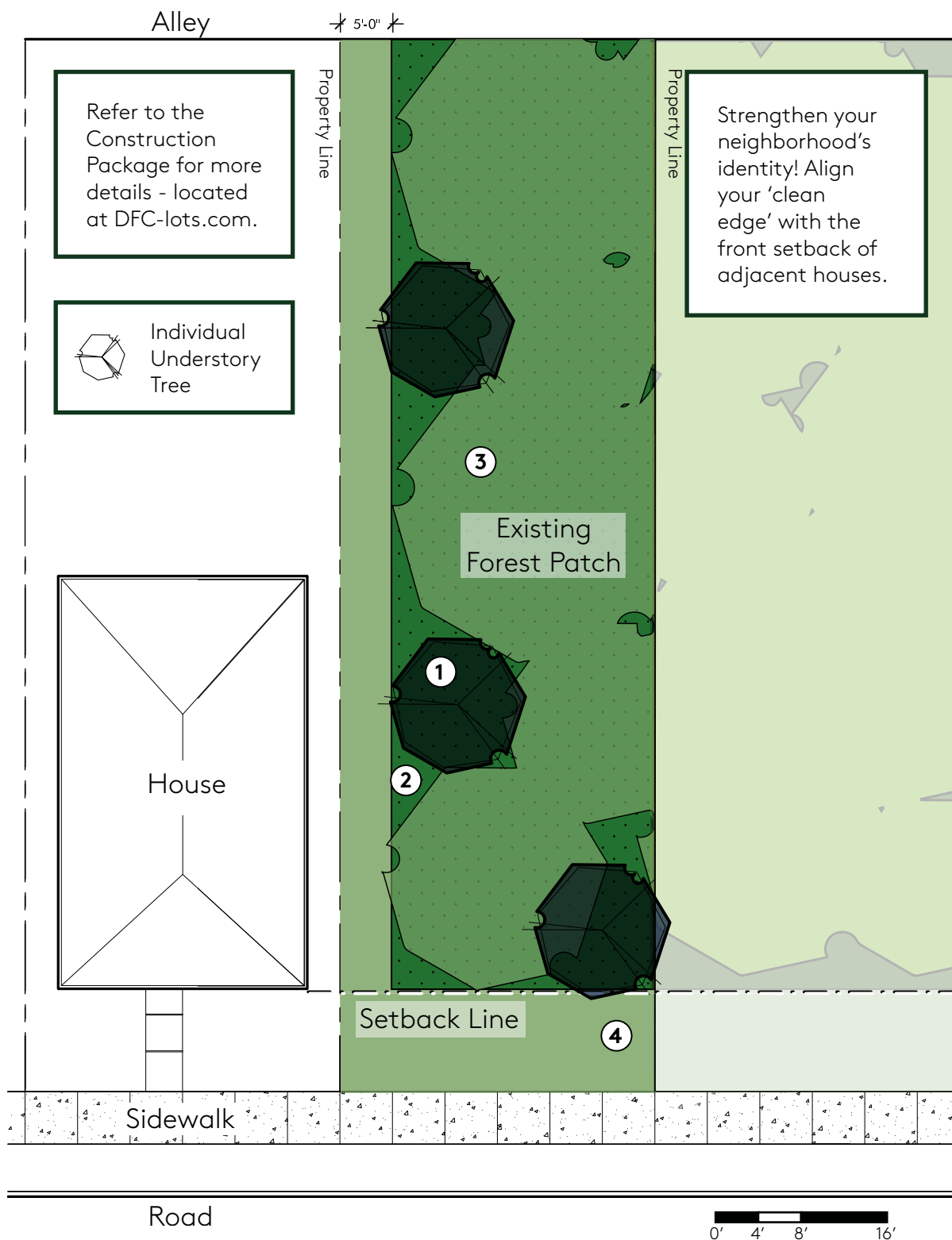
For more guidance on bulb planting refer to the [Bulb Planting Detail](#).

Average Height of Plants



Trees, Grasses, Perennials, and Bulbs

Forest Patcher Lot Design



- 1** Additional Trees (Optional)
- 2** Woodland Floor
- 3** Existing Forest Patch
- 4** Grass or Optional Groundcover

Planting Options

Plant Options

Select the trees, perennials, and groundcovers that best suit your lot's site conditions and space requirements.

Understory Trees

Serviceberry *Amelanchier canadensis*
20' Height x 20' Width

River Birch *Betula nigra*
40' Height x 40' Width

American Hornbeam *Carpinus caroliniana*
20' Height x 20' Width

Redbud *Cercis canadensis*
25' Height x 25' Width

Pagoda Dogwood *Cornus alternifolia*
15' Height x 20' Width

Larger Trees

Black Gum *Nyssa sylvatica*
40' Height x 30' Width

Red Oak *Quercus rubra*
60' Height x 60' Width

American Sycamore *Platanus occidentalis*
75' Height x 75' Width

Perennials

Some species available at White Flower Farm.

White Trillium *Trillium Grandiflorum*

Dog Tooth Lily *Erythronium pagoda*

Spring Beauty *Claytonia virginica*

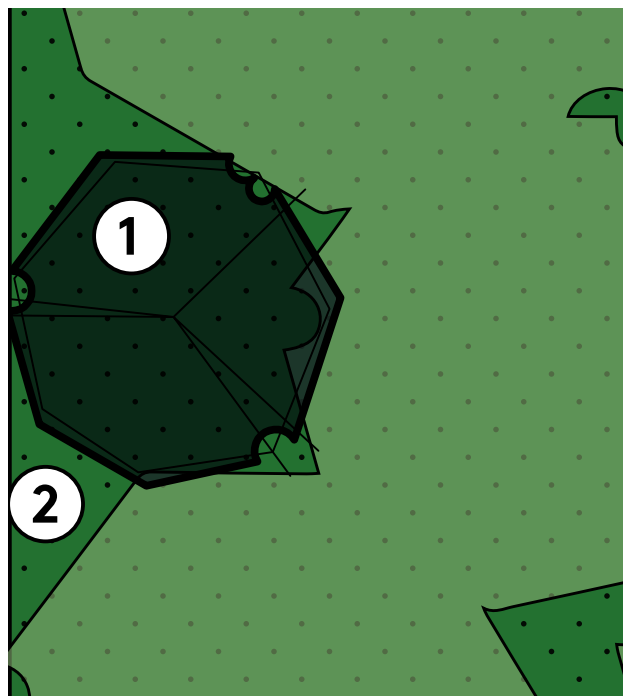
Liverleaf *Hepatica*

Wild Columbine *Aquilegia canadensis*

Jack-in-the-Pulpit *Arisaema triphyllum*

Christmas Fern *Polygonum virginianum*

Bloodroot *Sanguinaria canadensis*



Key

1 **Additional Tree(s)** (Use understory trees in openings less than 20 feet in width. Use large trees for openings larger than 20 feet in width.)

2 **Additional Groundcovers + Perennials** (Use groundcovers and perennials in the list provided or alternative shade-tolerant species.)

Plant Sizes



Pots: 1.5 inch diameter trees are available at commercial landscape supply stores in pots or balled and burlapped (B & B).



Perennials can be purchased in one to five gallon pots or bulbs. Size of pots can change based on availability.

Did You Know?

Professionals Can Help!

The Field Guide to Working With Lots provides a Construction Package for each lot design. The Construction Package includes information and details required for a professional to construct this design. On the Field Guide web site, use the [Construction Package](#) link located near the top of this lot design page to download and print. Your selected professional will then be able to provide a cost estimate and schedule based on the condition of your lot and the design you select.

Want to Hire Locally?

DFC-lots.com has a growing list of Detroit-based professionals and suppliers of landscape materials and services.

Still unsure of where to start?

Call (313) 294-LOTS or email fieldguide@detroitfuturecity.com for assistance.

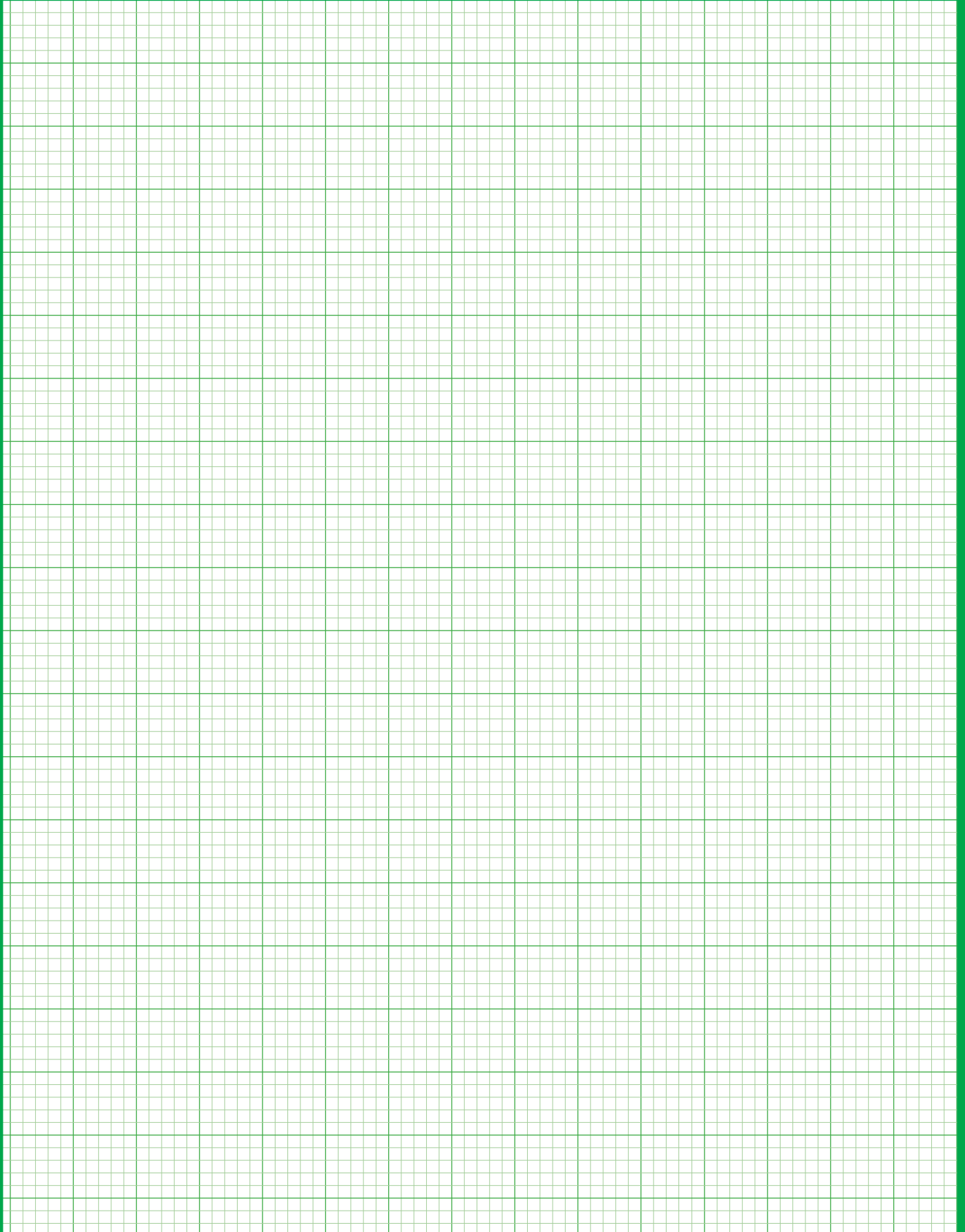
Helpful Facts

- The United States has the same acreage of woodland area today as in the year 1920 (Fact from Arbor Day Organization).
- Woodlands make and conserve fertile topsoil.
- Woodlands provide habitat and can increase wildlife population.
- If you plant Trillium, do not pick it as it can weaken the whole patch.
- Use extreme caution when operating a chain saw. Each year in the United States, 40,000 injuries or deaths are caused by chain saw use (Fact from Arbor Day Organization).

Planting Tips

- Call ahead to make sure the nursery or garden store has the plants you need for your lot design.
- Water after planting and as needed.
- The best time to plant trees and shrubs is in the spring or fall.
- Do not plant in extreme heat.
- Make sure the open space within your woodland is large enough for any new trees you wish to add.
- Not all open spaces within a woodland need to be planted. Allow some sunlight to reach the forest floor.
- Plant understory planting after all scrub brush or trees have been removed.
- You do not need to pick up all fallen branches or logs as they provide homes and habitat for wildlife and fungi.
- If you decide to plant larger trees, speak with a professional or an educational group as older trees can be more difficult to establish.

Draw Your Lot



Forest Patcher Field Notes



**DETROIT
FUTURE
CITY**

**working
with lots**
A FIELD GUIDE

**Visit DFC-lots.com
#DFClots**

Image Source: Bostonian13, "Nyssa_sylvatica_Bark.jpg." 08 June 2013 via Wikimedia, CC BY-SA 3.0.