





Design + Planting + Maintenance:

Understanding the correct way to plant a tree, shrub or herbaceous plant is critical for its long-term survivability. Some basic steps are provided here to ensure the right methods are utilized. After-care is also important, as proper maintenance and garden management are critical for successful establishment of native plantings.

UNDERSTANDING YOUR SITE CONSIDERATIONS

Use the following checklists to help you evaluate your existing site conditions.

Soil Conditions:

- Clay
- Sandy
- Loam

Planting Constraints:

- Underground Utilities
- Overhead Utilities
- Driveway/Sidewalk
- Standing water
- Structures (deck, pergola etc.)

Site Conditions:

- Wet
- Dry
- Windy
- Protected

Solar Orientation:

- Sun
- Full Shade
- Partial Sun

Garden Type Desired

- Butterfly Garden
- Songbird Garden
- Raingarden
- Winter Garden
- Shade Garden
- Streetside garden

Tree Selection:

- Shade tree
- Ornamental tree
- Multi-stem tree
- Flowering tree
- Nut tree

Tree Needs

- Space for root growth
- Soil amendments

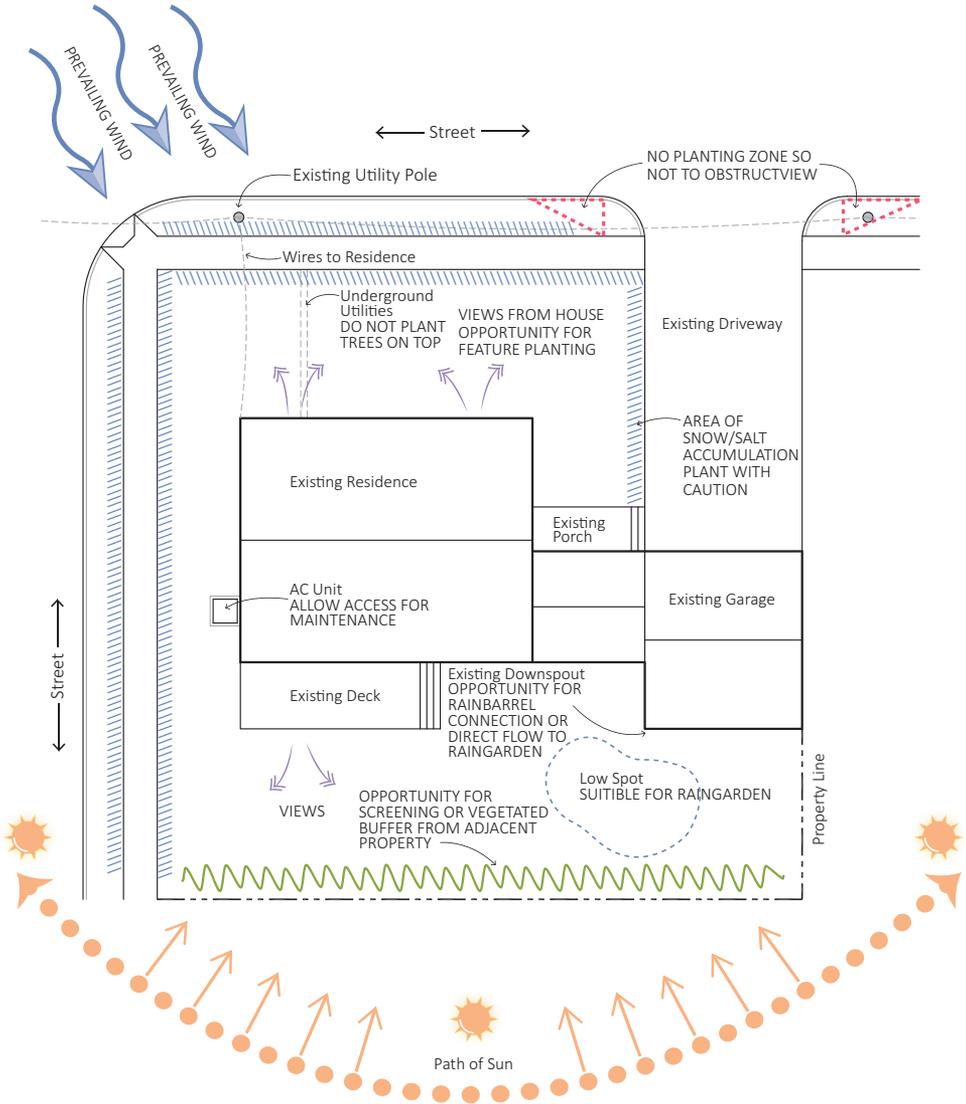
Existing Vegetation:

- Large shade trees
- Coniferous trees
- Hedge
- Invasive plants

» *Tip from a Landscape Architect* «

It is important to understand your current site conditions when planning your garden. Check for sun exposure, soil types, wet or dry conditions and prevailing winds.

SITE INVENTORY AND ANALYSIS



» *Tip from a Landscape Architect* «

A site analysis is a simple but highly effective tool used to identify opportunities and constraints on your site.

Site Considerations

For best results, always think holistically when planning for your garden. Here are some reminders:

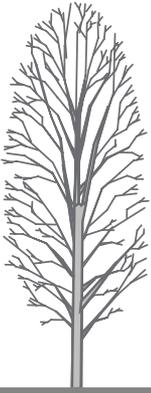
- Consider the maximum height and width the plant will grow
- Determine how much sunlight the plant requires and will receive based on its location
- Avoid planting species that have large fruit or nuts around driveways, decks or patios
- Consider the shape, character and features of the tree
- Plan for the aesthetics, color and/or texture each plant provides

» **Tip from a Landscape Architect** «

Tree roots should be able to spread beyond the branch area of a tree (dripline). Most of the critical air and water absorbing roots are found in the top 18-inches of soil. Be cautious when digging in the vicinity to avoid damaging the root system.



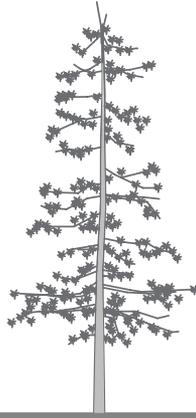
Tree Form and Character



Narrow/Tall



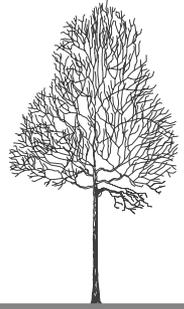
Columnar



Coniferous/
Sparse



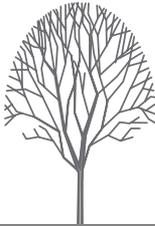
Coniferous
Evergreen



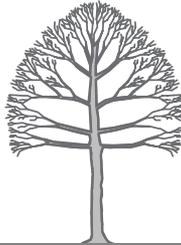
Asymmetrical



Wide/
Spreading



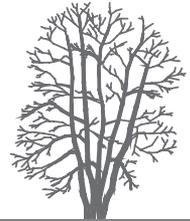
Vase Shaped



Open/
Spreading



Deciduous
Evergreen



Multi-Stem

» Tip from a Landscape Architect «

Consider the form of the tree before purchasing. For example; columnar trees can work well along a narrow pathway or drive. Round symmetrical trees are perfect for a front yard where they will be seen from all angles.

Nursery Selection + Planting Preparation

How to Select a Tree:

- Check trunk condition
- Look for good trunk taper beginning at root flair
- Ensure rootball is appropriate size for tree
- Check for signs of insects or disease
- Look for strong leader
- Ensure branches are distributed evenly along trunk without crossing or rubbing
- Ensure foliage is of uniform size and color for the species

Useful Tools:

- Shovel
- Small Pruning Saw
- Wire Cutters
- Utility Knife
- Measuring Tape
- Tarp
- Rake

How to Select Plant Material:

- Look for compact healthy plants with live dominant buds in leaf or in bloom.
- Check for signs of insects or disease on both sides of the leaves
- Check plant tags to ensure your site conditions meet the plants needs, and the final height and width is appropriate for your space.
- Do not select weak or diseased plants, even when at a bargain price

» **Tip from a Landscape Architect** «

When at the nursery select trees and plant materials that are in the middle of the size spectrum. A plant that is too large may be out of proportion with its roots, and a plant that is too small may have been stunted.

Indicators of Healthy Plants



Buds about to flower



Flowering



Healthy Buds and Branches



New Growth

» **Tip from a Landscape Architect** «

The quality of the root system is the most important factor in determining how well the plant will survive transplanting and how fast it will become fully adapted to its new site. Ensure there are both small and large roots.

Planting and After Care Information

When to plant: Spring may be the best time to plant, but even mid-summer and fall can be acceptable as long as the plants are watered.

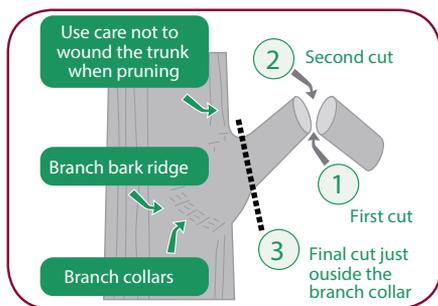
How to Plant a Tree

- Dig a hole. It is better for the planting hole to be much wider than the root ball. It should never be too deep. The depth should be only deep enough to ensure that the trunk flare will sit slightly above grade.
- Locate the trunk flare on the tree. You may need to brush away soil from the top of the root ball to reveal the trunk flare.
- Lift tree by root ball (not by the trunk) and place it in the center of the planting pit.
- Balance the tree upright.
- Take a step back and check to see if the tree is straight, make adjustments if needed.
- For trees with wire baskets, either fold wire down or cut wire (and remove) to one third or halfway down root ball.
- Cut away or remove burlap to expose the root ball (do not remove any soil from the root ball).
- Prune any dead or damaged branches.
- Begin refilling the planting space with soil while gently tamping backfill around the root ball.
- Once all of the soil is in the planting space, take a rake and smooth out the planting area.
- Remove any tree wrap or protection material on the trunk. Mulch lightly and evenly with 2-inches of dye-free mulch, keeping mulch two inches away from touching the trunk.

- Do not fertilize during planting.
- Water your newly planted tree (slow soak is recommended).

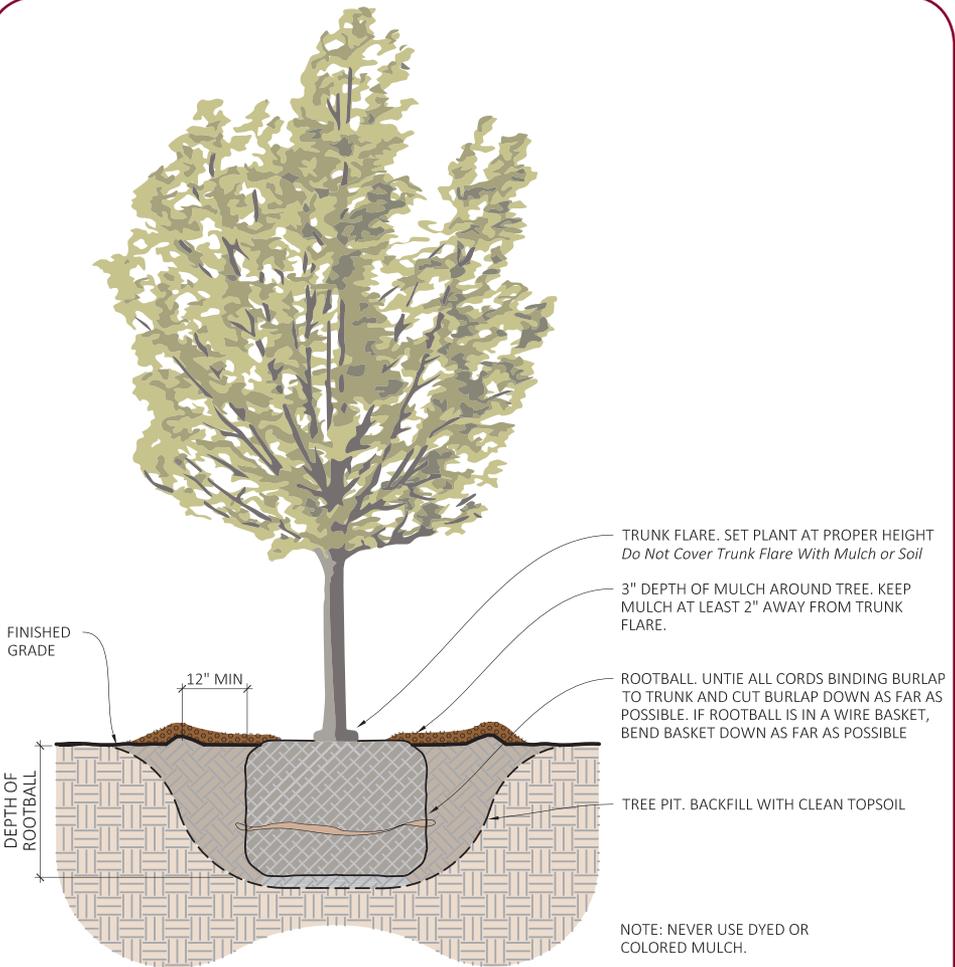
After Planting

- Water is a critical factor for tree survival after planting. Allow water to run slowly, soaking the soil (once or twice, in a dry week after initial planting).
- Do not over-water your plants.
- Keep lawn mowers and string trimmers away from the tree trunk to avoid any damage.
- Never fertilize stressed or newly planted trees.
- Keep weeds from growing in planting area.
- Prune dead or damaged branches, it is best to do so in late fall or during winter months.
- Never prune near overhead utilities.
- Continue to water plants during drought months to ensure healthy growing conditions.



Proper pruning technique

Tree Planting Detail



DRAWING NOT TO SCALE

» *Tip from a Landscape Architect* «

Check for circulating roots around the root ball. If present, cut cleanly or untangle to encourage a healthy root system. This will help the tree thrive and grow beautifully in its new location in your garden.

About Invasive Plants

What is an Invasive Plant?

Invasive plant species are non-native species that can cause harm to the environment, the economy or to human health. Invasives come from all around the world. As international trade increases, so does the rate of invasive species introductions - New York State Department of Environmental Conservation (NYS-DEC)

Why are Invasive Species a Threat?

Invasive plants eliminate and displace native plants, and replace wildlife food sources with exotic plants. Many invasive plants are very aggressive and can take over a landscape rapidly. They are often inedible, harmful or toxic to both wild and domestic life including humans. They can also draw important pollinators away from beneficial native plants and cause an overall reduction in biodiversity, which damages vulnerable ecosystems.

Tips on How to Control Invasive Species:

- Learn to properly identify and manage invasive plants on your property. If an infestation is discovered, remove plants as soon as possible to prevent spreading.
- Refer to BNRRiverkeeper.org for proper removal techniques
- **Do not** compost the flowers or seeds of invasive plants, as seeds can remain viable long after the parent plant has been pulled and discarded.
- Know what you are growing and be cautious when exchanging seeds and plants with other gardeners.
- To determine whether a plant species is invasive, or to find out how it should be controlled, contact the New York Invasive Species Clearinghouse: <http://www.nyis.info/> or your local Cooperative Extension .

Native Alternatives to Common Invasive Plants

The table on the next page lists some of the invasive species commonly still sold and suggests native alternatives with similar characteristics. The invasive plants selected were taken from the *Revised Interim List of Invasive Plant Species in New York State*, May 14, 2012. NYS-DEC

Native Alternatives to Common Invasives

	DO NOT PLANT	INVASIVE SPECIES	NATIVE ALTERNATIVES
DO NOT PLANT		Norway Maple (<i>Acer platanoides</i>)	Red Maple (<i>Acer rubrum</i>) – pg 60
			American Beech (<i>Fagus grandifolia</i>) – pg 64
			Tulip Tree (<i>Liriodendron tulipifera</i>) – pg 66
			Pin Oak (<i>Quercus palustris</i>) – pg 68
			Hackberry (<i>Celtis occidentalis</i>) – pg 62
DO NOT PLANT		Japanese Barberry (<i>Berberis thunbergii</i>)	Northern Bayberry – pg 52 (<i>Morella pensylvanica</i>)
			Ninebark (<i>Physocarpus opulifolius</i>) – pg 54
			Red Dogwood (<i>Cornus sericea</i>) – pg 50
DO NOT PLANT		Burning Bush (<i>Euonymus alatus</i>)	Black Chokeberry – pg 48 (<i>Aronia melanocarpa</i>)
			American Cranberry Bush (<i>trilobum</i>) – pg 56
			Chokecherry (<i>Prunus virginiana</i>) – pg 54
DO NOT PLANT		Autum Olive (<i>Elaeagnus umbellata</i>)	Witchazel (<i>Hamamelis virginiana</i>) – pg 08
			Grey Dogwood (<i>Cornus racemosa</i>) – pg 50
			Serviceberry – pg 48 (<i>Amelanchier canadensis</i>)
DO NOT PLANT		Non Native Honeysuckle Shrubs (<i>Lonicera tatarica</i> , <i>L. maackii</i> , <i>L. morrowii</i> , <i>L. x. bella</i> , <i>L. xylosteum</i>)	Trumpet Honeysuckle – pg 74 (<i>Lonicera sempervirens</i>)
			Ninebark (<i>Physocarpus opulifolius</i>) – pg 54
			Staghorn Sumac (<i>Rhus typhina</i>) – pg 54
DO NOT PLANT		Multiflora Rose (<i>Rosa multiflora</i>)	Elderberry (<i>Sambucus canadensis</i>) – pg 56
			Witchazel (<i>Hamamelis virginiana</i>) – pg 50
			St. Johns Wort – pg 52 (<i>Hypericum kalmianum</i>)
DO NOT PLANT		Japanese Honeysuckle Vine (<i>Lonicera japonica</i>)	Virginia creeper – pg 76 (<i>Parthenocissus quinquefolia</i>)
			Trumpet Honeysuckle – pg 74 (<i>Lonicera sempervirens</i>)

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Lady Bird Johnson Wildflower Center 2014.

Leopold, Donald J. Native Plants of the Northeast: A guide for gardening & conservation.

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(<http://plants.usda.gov>)

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