Many residents, institutions, and businesses have expressed a willingness to fund, plant, or maintain climate hardy trees throughout the Town of Concord. Planting trees today ensures shade tree coverage for successor generations. In an effort to foster collaboration and support to develop a robust tree canopy in Concord, this publication of Concord Public Works will be distributed online and in print to the following constituents of Town Boards, Commissions, and Departments of Concord Town Government:

- Agriculture Committee
- Board of Health
- Buildings and Inspections Department
- Cemetery Committee
- Climate Action Advisory Board
- Community Preservation Committee
- Comprehensive Sustainability and Energy Committee
- Economic Vitality Committee
- Historic Districts Commission
- Municipal Light Board
- Natural Resources Commission
- Planning Board
- Pollinator Health Advisory Committee
- Public Works Commission
- School Board
- Select Board
- Town Manager
- Trails Committee

Special appreciation is given to Friends of Concord Trees and Brian Rosborough for their support in advancing this initiative and Robert O'Brien who contributed his art, illustrations, and graphic design.
This brochure is intended to serve as a guide for all members of the community, including residents, businesses, contractors, public works, and other stakeholders, to achieve a shared vision for the future of the urban forest in Concord — a vision that focuses on sustainably managing the tree canopy through consistent information sharing and best management practices.

**Concord Tree Planting Program**

As our climate changes, so too, will our urban forest. The Town of Concord has established a tree management program that includes the selection, planting, and maintenance of public and private shade trees that will help sustain our canopy. All residents and other stakeholders in the Town of Concord have the opportunity to be part of planting new trees. It is imperative for everyone in the community to understand the importance of trees and to have access to information that aligns Concord’s tree planting initiative with climate change resilience.

Climate change will affect Concord’s urban tree canopy, but adding more trees can help the community better adapt to a changing climate in specific ways. A combined effort from the Town and the community is necessary in order to plant new urban trees that are more resilient and can adapt to increasing environmental stress. Additionally, the Town has developed a plan for future urban tree planting that includes proper tree selection for the micro-environment in which the tree will be planted as well as a process for planting new trees each year. The addition of new trees in the urban forest will aid in addressing the following specific climate concerns:

- Reduce the urban heat island effect
- Increase resilience to flooding and drought
- Mitigate storm water runoff
- Protect and enhance groundwater quality
- Reduce greenhouse gas emissions and sequester carbon

Tree canopies can also reduce emissions by reducing energy demands. In the winter they can lower wind speeds, while in the summer they contribute to shading direct sunlight and lowering local temperature. While the primary goal of tree planting in Concord focuses on adding new trees to mitigate climate change, there are ancillary benefits to adding trees to the community, such as aesthetics, traffic calming, and habitat creation for wildlife.

**A Tree Planting Guide for Concord**

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**Plant with a Purpose**

Trees in the landscape can help conserve water. Drought-tolerant or native plants also help to conserve water.

- Plant deciduous shade trees to cool your house in the summer. In the winter, the bare trees will allow the warmth of the sun to pass through.
- Shading the west and south sides of your house is best for lowering utility bills.
- Setback trees are planted on private property within 20 feet of the right-of-way. Trees are owned and maintained by the resident, but can be planted by the town as part of the tree planting program.

**Concord Tree Planting Program**

Increasing and improving the urban tree canopy in Concord has the benefit of reducing the urban heat island effect. This is especially true with strategic tree plantings that target vulnerable areas where impervious structures dominate the landscape. In making tree planting decisions, we recommend trees that are best adapted to survive and thrive in specific microclimates.

We also recommend trees that contribute to the capture of precipitation on leaf and branch surfaces to moderate soil erosion and evapotranspiration, and to reduce demand on our storm water infrastructure. An important part of the planting program is knowing what species of tree to plant and where to plant it.
Planting Your Tree
1. Mark out the planting area 2 to 3 times wider than the root ball diameter (the wider, the better). Loose soil around the root ball promotes early root growth.
2. The depth of the hole should equal the depth of the root ball. The bottom of the root ball should sit on firm soil. 
3. Place the tree in the hole. Be sure the container or root wrapping is removed before planting.
4. Place the root ball in the center of the hole and adjust the tree so that it is straight and at the proper depth. After planting, the top of the root ball should be level with or slightly higher than the surrounding ground.
5. Backfill the hole with the original soil. Fill until the hole is half-full of soil. Tamp gently with your foot to firm the soil. Flood the hole with a slowly running hose to settle the soil around the root ball and eliminate air pockets. Add soil until it is even with the root ball, but do not cover the root ball with soil.
6. Construct a ring of soil 3 to 4 inches high at the edge of the root ball to hold water in the area near the tree’s roots. The soil berm should be deep in circle around tree. Make hole 2-3 times wider than root ball.
7. Mulch the 1st-4" deep in circle around tree. Mulch 3”- 4” around tree. Keep mulch away from trunk. If root planting in a lawn, build a soil dam 3-4 feet from trunk.

Caring for Your Tree
After the first growing season, light pruning and removal of dead branches can be done at any time. With winter usually being the best time to prune, it is not recommended to remove more than 20 percent of live foliage or growth in any given year unless necessary.

Prune spring flowering trees, like redbuds and fruit trees, after the bloom. Note that pruning fruit trees after blooming will inhibit fruit production. Always use clean and sharp pruning equipment. Never prune trees near a power line. Contact Concord Municipal Light and Power at 978-318-3101 for questions or assistance with pruning trees near overhead utility wires.

How to Prune
Inspect the tree first to determine what needs pruning. Some examples of limbs to remove include the following: crowded, rubbing, crossing and narrow branch angles, double leaders, root suckers and water sprouts.

When removing these branches, always prune back to the main trunk or the next largest branch, being careful not to prune into the branch collar or branch break ridge, nor leave a pronounced stub. The branch collar is the swollen area near the base of the limb. Always make a clean cut to accelerate wound closure. Wound dressings (paint) have been proven to inhibit wound closure. Lopping shears should only be used on branches smaller than ¾” in diameter. To avoid peeling bark, remove larger branches with a saw utilizing the three-cut method. Incorrect pruning methods can cause costly problems. It is important to discuss the maintenance of your trees with a certified arborist and, when hiring a tree care company, always seek out professionals who can provide references and proof of insurance.

Tree Planting Precautions
What to Avoid When Planting:
1. Avoid blocking vision at street corners. Plant at least 10 feet from the curb at corners.
2. Avoid planting too close to sidewalks, streets or driveways.
3. Avoid planting closer than 3 feet from underground utilities or pad-mounted transformers. Plant trees and shrubs well away from ground-level equipment to allow utility workers direct access.
4. Avoid planting large trees (greeter than 45 feet tall) at least 50 feet from power lines.
5. Plant medium trees (31-45 feet tall) at least 20 feet from power lines.
6. Plant only small trees (less than 30 feet tall) near power lines and within 10 feet of power poles.
7. The final cut should be just beyond the branch collar. Support the stub so that it does not tear the bark.

Three-Cut Pruning Method for Mature Trees
1. Undertake 1/2” to 2” from the branch collar. (This stops the bark from peeling.)
2. Make the second cut from the top all the way through the branch, 2” to 3” above the first cut.
3. The final cut should be just beyond the branch collar. Support the stub so that it does not tear the bark.

Call before you dig!
* Massachusetts law requires calling for utility locations 72 hours before digging, not including weekends or holidays. The Dig Safe service is free and a request for service is initiated for utility locations 72 hours before digging. More information is available at www.digsafe.com.

Pruning Near Power Lines
Small Tree Zone
Trees 30 feet tall or less
Medium Tree Zone
Trees 31-45 feet tall
Tall Tree Zone
Trees 45 feet or taller

Utility Pruning Zone
Height
20 ft.
10 ft.

3 feet
5 feet
10 feet

Front Access Area

Mature Tree Pruning

Young Tree Pruning
Remove branches shown with dotted lines:
- Remove limbs that extend beyond the natural crown of the tree.
- Remove dead, broken or crossing limbs.
- Remove limbs that turn inward towards the trunk.
- Remove root suckers and sprouts.

Shrink low branches to develop trunk thickness.

Remove competing stems to develop a single trunk.
# Recommended Trees for Concord

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Preferred Cultivar(s)</th>
<th>Mature Height</th>
<th>Spread</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Carya ovata</em></td>
<td>'Peegee'</td>
<td>50-70 feet</td>
<td>40-50 feet</td>
<td>A native species that is tolerant of moderately moist soils and will tolerate moderate shade. Deep green leaves turn bright yellow to orange in the fall.</td>
</tr>
<tr>
<td><em>Quercus rubra</em></td>
<td>'Trend'</td>
<td>50-60 feet</td>
<td>30-40 feet</td>
<td>A common street tree known for its excellent salt tolerance and filtered shading from its lacy foliage. Tolerant of a variety of soil conditions. Native to North America.</td>
</tr>
<tr>
<td><em>Larix laricina</em></td>
<td>'Rosea'</td>
<td>20-30 feet</td>
<td>20-30 feet</td>
<td>A good pollinator with dense green foliage that produces fragrant, yellow flowers in summer. Can be extremely sensitive to salt and drought conditions, especially at a young age.</td>
</tr>
<tr>
<td><em>Thuja plicata</em></td>
<td>'Greenspire'</td>
<td>50-60 feet</td>
<td>40-50 feet</td>
<td>An excellent shade tree with smooth gray bark and nice framework of branches in winter. Branches can be brittle and susceptible to ice and heavy snow damage.</td>
</tr>
</tbody>
</table>

## Relative Tree Heights at Maturity

<table>
<thead>
<tr>
<th>Tree Name</th>
<th>Height at Maturity</th>
</tr>
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<tbody>
<tr>
<td><em>Larix laricina</em></td>
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</table>

**Native trees in bold type**

**Relative Tree Heights at Maturity**

- **Trees less than 30 feet:** 
  - *Thuja plicata* (Greenspire): 50-60 feet
  - *Larix laricina* (Rosea): 20-30 feet

- **Trees from 30 to 60 feet:** 
  - *Thuja plicata* (Greenspire): 50-60 feet
  - *Larix laricina* (Rosea): 20-30 feet

- **Trees from 60 to 100 feet:** 
  - *Thuja plicata* (Greenspire): 75-100 feet
  - *Larix laricina* (Rosea): 50-70 feet

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