

TREES FOR VERMONT COMMUNITIES

This is Part Two of a two-part article on selecting trees for Vermont communities. Part One, in the February VLCT News, focused on trees for large green spaces like a town green. This month, we will focus on trees to be planted in downtown areas with tough growing conditions, such as along Main Street or in parking lots. Before we recommend trees, it is important to revisit four fundamental questions to consider prior to selecting trees. Failure to answer these questions up-front can lead to short-lived trees, infrastructure conflicts and higher maintenance costs.

- What is the purpose and use of the planting?
- What are the site conditions above and below ground?
- What type of maintenance will be required?
- What is the best tree(s) species for long-term success?

Part II: Trees on Main Street

The best friend on earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources of the earth.

Frank Lloyd Wright

One of the world's best known architects and visionaries recognized long ago what modern studies now prove: trees greatly increase the appeal of downtowns. Research shows that trees stimulate economic development. They help attract new business – even tourism. Retail areas with trees are more attractive to shoppers, apartments rent more quickly and tenants stay longer. There's little doubt that trees add beauty and visual excitement to downtown settings. These areas' square-edged structures and hard, paved surfaces would be harsh without the softening presence of trees. Trees also enhance architectural designs, provide privacy and frame views. Varying textures and colors of foliage, flowers, bark and fruit create multiple seasons of interest.

Yet, smart tree planning and planting does much more than beautify an area. It also serves many practical purposes. Planting trees of the correct size in the proper places can intercept storm water runoff, improve air quality and reduce air temperature.

Being knowledgeable about the limitations of certain species of trees in the urban environment is necessary for successful plantings. Existing grey infrastructure, such as foundations, sidewalks, driveways, sewers, gas, water and power lines, can limit potential planting locations and should inform species selection. *Remember, the green infrastructure is the only infrastructure that will increase in value over time if the "right plant" is put in the "right place."*

Here are some things to keep in mind when choosing what and where to plant in your downtown.

- ***Is there enough soil volume to sustain a healthy tree?*** Research suggests that 1200 cubic feet of soil volume will sustain most medium to large shade trees. Rooting space can be increased through using larger sidewalk cut outs, or sharing rooting space. Other

options include using tree root-friendly engineered soils, a pavement substrate that can be used under load-bearing surfaces such as sidewalks and parking lots.

- ***Consider overhead clearance for pedestrians and vehicle, as well as line of site issues.*** While repetitive pruning can help to address some of these issues, a more cost-effective and sustainable solution is to plant smaller trees where overhead conflicts exist. Proactively assess clearance, store frontage visibility, and traffic safety issues when identifying planting locations and selecting species.
- ***Consider snow.*** Snow removal needs may limit planting locations. Check with your Public Works Department during the planning stage of any project. Also, if salt is used on the sidewalks, select a salt tolerant species.

Recommended Trees for Downtowns

The table below is designed to help you select a few different species that match your needs and site conditions. It is not a complete list of all potential species. For a more complete guide to the process of tree species selection, visit <http://orb.at.ufl.edu/TREES/index.html>.

Hardiness Zone	Common Name, Scientific Name	Mature Height	Tolerance To				Ornamental Features	Indigenous to VT	Remarks
			Drought	Poor Drainage	Salt	Shade			
4	Amur Maackia, <i>Maackia amurensis</i>	S	H	M	M	L	Shiny brown bark; white flowers in July & August.		Pruning required to improve branching structure.
5	Callery Pear, <i>Pyrus calleryana</i>	M	H	M	M	L	Very attractive flowers.		Major problem with too many upright branches growing too closely together on the trunk. Prune the trees early in their life to space lateral branches along a central trunk. Avoid the cultivar Bradford.
3	Common Hackberry, <i>Celtis occidentalis</i>	L	H	H	H	M	Rounded vase shape form.	Y	Needs wider greenbelt.
3	Ginkgo, <i>Ginkgo biloba</i>	L	H	T	M	M	Distinct fan shaped leaves, excellent yellow fall foliage.		Only male clones should be planted. Several cultivars available.
4	Honey Locust, <i>Gleditsia triacanthos</i>	L	H	H	H	L			Several cultivars available. Has been used extensively; insect problems are beginning to catch up. Use in moderation.
3	Japanese Tree Lilac, <i>Syringa reticulata</i>	S	H	M	H	L	Large white flowers in late June; dark cherry-like bark.		Compact size makes good street tree.
4	River Birch, <i>Betula nigra</i> 'Heritage'	M	M	H	M	I	Showy bark.		Can be multi or single stemmed. Little King is a dwarf cultivar not expected to get taller than 15'.
4	Turkish Filbert, <i>Corylus colurna</i>	M	H	M	M	L	Ornamental bark.		May be difficult to locate.
5	Zelkova, <i>Zelkova serrata</i>	L	H	M	M	M	Attractive bark.		Cultivars include Green Vase, Village Green and Spring Grove. Can show winter injury if exposed to wind. Look for good branch structure when purchasing.
5	European Hornbeam, <i>Carpinus betulus</i> 'Fastigiata'	M	M	M	L	L			May be difficult to locate. Possibly hardy to zone 4 if sheltered.

Key: Mature Height (total height of a typical tree at maturity), S=<30 feet; M=30-50 feet; L=>50 feet. Tolerances (indicates the ability of the species to withstand drought, poor drainage, salt and shade), L=Low, M=Medium, H=High.

To receive more information on site assessment, recommended tree species or after care information, contact Kate Forrer, Urban and Community Outreach Specialist, Vermont Urban and Community Forestry Program, University of Vermont Extension, by phone at 802/223-2389, ext. 25, or visit www.vtcommunityforestry.org.

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