

CITY OF HAMILTON APPROVED TREE SPECIES LIST FOR THE RIGHT-OF-WAY

Last updated: November 11, 2024

Context	Size	Botanical Name		Common Name	Accepted Cultivars	Height (m)	Spread (m)	Growth Rate	Size (Sm/M/L)	Salt Tol.	Soil Tol.	Hydro Friendly	Small Blvd. Friendly	Native	Hamilton Survival Rate	Special Features	Rationale for Planting	Internally / Municipally Supported	Future Maintenance Concerns from Pests	Native Descriptor	
		Genus	Species																		
High Intensity Urban Environments	Full Form Canopy Tree	Acer	Acer x freemanii	Freeman Maple	Autumn Blaze 'Jeffersred'	15-17m	12-14m	Fast	Large			X		X	94%	Upright, densely branched, broad, oval crown. Upright branching habit. Bright fall foliage.	Sensitive to desiccation from winter winds. Use in sheltered locations from prevailing winds. Tolerates wet feet.	INTERNAL	Spotted Lanternfly	Native to Ontario	
		Aesculus	Aesculus glabra	Ohio Buckeye		10-12m	9-12m	Medium	Medium			X	X	X	94%	Low branched, broad, oval, rounded crown. Showy flowers followed by seed husks covered in soft spines.	Municipally-supported. Somewhat cost effective. Salt tolerant. Tolerant to adverse soil conditions / volumes.	BOTH		Native to Ontario	
			Aesculus hippocastanum	Horsechestnut	Baumannii	15-21m	16m	Medium	Large				X		96%	Upright, oval, rounded crown. Showy white flowers, oblong leaflets Full sun/ light shade.	Municipally-supported. Somewhat cost effective. Tolerant of urban pollution.	BOTH		Non-native	
		Ginkgo	Ginkgo biloba	Ginkgo		15-25m	12m	Slow-Med	Large					X	88%	Upright, broad, spreading growth habit. Unique two-lobed fan-shaped leaves. Slower-growing.	Pest-free. Tolerant to wind, full sun or shade, adverse soil conditions / volumes, pollution.	MUNICIPAL		Non-native	
		Gleditsia	Gleditsia triacanthos var. inermis	Thornless Honeylocust	Skyline, Shademaster, Streetkeeper	13m	10m	Fast	Medium			X	X	X	91%	Rounded to narrow-upright oval, usually developing a flat-topped crown. Open branching, small leaves provide filtered shade. Fruitless.	Municipally-supported. Cost-effective. Tolerant to wind, full sun or shade, adverse soil conditions / volumes, pollution.	BOTH		Native to Ontario	
		Gymnocladus	Gymnocladus dioicus	Kentucky Coffeetree	Espresso	21m	11m	Slow-Med	Medium					X	X	91%	Open branching habit with stubby twigs and large double-compound leaves with small leaflets. Dioecious tree with male and females. Male preferred.	Municipally-supported. Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	BOTH		Native to Ontario
		Ulmus	Ulmus davidiana var. japonica	Accolade Elm	Accolade, Commendation, Homestead	21m	12m	Fast	Large						X	96%	Vase-shaped, with an oval to rounded crown. Notable yellow fall colour. Resistant to Dutch Elm Disease.	Municipally-supported. Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	BOTH	Big Zigzag Sawfly, Dutch Elm Disease, elm bark beetle and elm leaf beetle	Non-native
		Platanus	Platanus acerifolia	London Planetree	Bloodgood	30m	13m	Medium	Large						X	91%	Fast growing, maple-like leaves. Exfoliating bark, burr-like fruit	Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	BOTH		Non-native
	Small Form Ornamental Tree	Carpinus	Carpinus caroliniana	Blue Beach / Musclewood		8-10m	8-10m	Medium	Small			X	X	X	90%	Rounded to oval crown with wide spreading branches. Smooth gray bark with distinct muscle-like fluting.	Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	INTERNAL		Native to Ontario	
		Ostrya	Ostrya virginiana	Ironwood / American Hophornbeam		10m	8m	Slow	Small			X		X	87%	Upright, rounded to to oval crown. Unique drooping clusters of drooping seed-bearing pods. Slow to establish.	Fairly pest and disease resistant. Tolerant to adverse soil conditions / volumes.	INTERNAL		Native to Ontario	
		Syringa	Syringa reticulata	Japanese Tree Lilac	Ivory Silk China Snow	6-7m	6m	Medium	Small			X	X		85%	Upright, vase-shaped form with an arching habit. Showy lilac blooms. Tolerant of full sun.	Municipally-supported. Fairly pest and disease resistant.	BOTH		Non-native	
		Viburnum	Viburnum lentago	Nannyberry		5-6m	2m	Medium	Small			X		X	90%	Upright when young, becoming wider with age. Flat-topped clusters of creamy white flowers.	Municipally-supported. Tolerant to wind, full sun or shade, adverse soil conditions / volumes. Suitable for narrow planting strips.	MUNICIPAL		Native to Ontario	

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		Genus	Species																			
Low Intensity Urban Environments	Full Form Canopy Tree	Acer	Acer rubrum	Red Maple	Armstrong	14-16m	5-7m	Fast	Medium	Green	Green			X	86%	Columnar, narrow crown, with branches growing vertical.	Suitable for narrow planting strips, vertical accents.	INTERNAL	Spotted Lanternfly	Native to Ontario		
			Acer x freemanii	Freeman Maple	Autumn Blaze 'Jeffersred'	15-17m	12-14m	Fast	Large	Yellow	Green		X	X	94%	Upright, densely branched, broad, oval crown. Upright branching habit. Bright fall foliage.	Sensitive to desiccation from winter winds. Use in sheltered locations from prevailing winds.	BOTH	Spotted Lanternfly	Native to Ontario		
		Betula	Betula nigra	River Birch		12-18m	10-13m	Fast	Medium	Green	Yellow					94%	Upright, oval to rounded growth habit. Exfoliating reddish-brown bark reveals lighter bark.	One of the most disease-free birches. Tolerant of urban pollution.	INTERNAL	Spotted Lanternfly	Native to North America	
		Celtis	Celtis occidentalis	Common Hackberry		15-18m	14-16m	Fast	Medium	Green	Green			X	X	97%	Upright, arching branches with a rounded, spreading crown. Light green leaves, corky bark. Sensitive to de-icing salts. Use away from roadways.	Municipally-supported. Cost-effective.	BOTH		Native to Ontario	
				Prairie Sentinel Hackberry	Prairie Sentinel	15-18m	3-4m	Fast	Medium	Green	Green			X	X	97%	Narrow, columnar form with vertical upswept branches. Light green leaves, corky bark.	Municipally-supported. Cost-effective. Suitable for narrow planting strips.	BOTH		Native to Ontario	
		Liquidambar	Liquidambar styraciflua	Moraine Sweetgum	Moraine	18-22m	12m	Med-Fast	Large	Green	Yellow				X		88%	Densely branched pyramidal crown becoming oval with maturity. Lobed glossy green leaves.	Fruit causes mess-needs room for roots. Tolerant to adverse soil conditions, drought.	INTERNAL		Native to North America
		Liriodendron	Liriodendron tulipifera	Tuliptree		36m	12m	Med-Fast	Large	Yellow	Yellow				X	84%	Pyramidal to broad, conical growth form. Yellow-green tulip-like flowers. Bright green leaves turn golden yellow in fall.	Cost-effective. Prefers moist, well-drained soil with minimal salt spray.	INTERNAL	Spotted Lanternfly, aphids	Native to Ontario	
		Quercus	Quercus macrocarpa	Bur Oak		24m	18m	Slow	Large	Yellow	Green			X	X	86%	Pyramidal when young, maturing to a broad, spreading, rounded crown. Unusual branching and corky twigs. Sensitive to de-icing salts. Use away from roadways.	Municipally-supported.	BOTH	LDD Moth, Oak Wilt, Spotted lanternfly	Native to Ontario	
			Quercus robur 'Fastigiata'	Pyramidal English Oak		15-18m	5-6m	Slow	Medium	Green	Yellow					91%	Pyramidal, upright, dense crown, with nearly vertical branches. Suitable for screening or where space is limited.	Tolerant to adverse soil conditions, drought. Suitable for narrow planting strips.	BOTH	LDD Moth, Oak Wilt, Spotted lanternfly	Non-native	
			Quercus rubra	Red Oak		16-22m	15-20m	Slow	Large	Green	Green				X	87%	Rounded, broad spreading, often irregular crown. Foliage turns red-brown in fall.	Tolerant to adverse soil conditions, drought.	INTERNAL	Wilt, Spotted lanternfly	Native to Ontario	
	Tilia	Tilia cordata	Littleleaf Linden	Greenspire,	16-20m	8-12m	Fast	Med-Large	Green	Green			X		87%	Densely branched pyramidal to oval crown. Green leaves turn pale yellow in fall. Suitable as a shade tree with its dense form.	Municipally-supported. Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	BOTH	Aphids	Non-native		
	Small Form Ornamental Tree	Carpinus	Carpinus caroliniana	Blue Beach / Musclewood		8-10m	8-10m	Medium	Small	Green	Green		X	X	90%	Rounded to oval crown with wide spreading branches. Smooth gray bark with distinct muscle-like fluting.	Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	INTERNAL		Native to Ontario		
		Ostrya	Ostrya virginiana	Ironwood / American Hophornbeam		10m	8m	Slow	Small	Yellow	Green		X	X	87%	Upright, rounded to oval crown. Unique drooping clusters of drooping seed-bearing pods. Slow to establish.	Fairly pest and disease resistant. Tolerant to adverse soil conditions / volumes.	INTERNAL		Native to Ontario		
		Parrotia	Parrotia persica	Persian Ironwood		6-12m	10m	Medium	Small-Med	Green	Green		X		90%	Upright form. Green leaves emerge reddish with exfoliating bark. Tolerant of full sun to light shade. Tolerant of pollution.	Tolerant to adverse soil conditions, drought.	SURVIVAL STUDY		Non-native		
Syringa		Syringa reticulata	Japanese Tree Lilac	Ivory Silk, China Snow	6-7m	6m	Medium	Small	Yellow	Yellow		X	X	86%	Upright, vase-shaped form with an arching habit. Showy lilac blooms. Tolerant of full sun.	Fairly pest and disease resistant.	BOTH		Non-native			

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		Genus	Species																		
Rural Environments	Full Form Canopy Tree	Acer	Acer saccharinum	Silver Maple		18-20m	15-18m	Fast	Large	Green	Green			X	74%	Tall, with a rounded, open, spreading crown. Light green leaves with silvery underside. Tolerant of wet areas. Susceptible to bark- / branch-splitting.	Municipally-supported. Cost-effective. Tolerant of wet, often poorly drained soils.	MUNICIPAL SCAN	Spotted Lanternfly	Native to Ontario	
			Acer saccharum	Sugar Maple		25-30m	15-18m	Slow-Med	Large	Yellow	Yellow			X	71%	Upright growing with a dense, rounded crown. Leaves turn yellow to bright orange / red in fall.		INTERNAL	Spotted Lanternfly	Native to Ontario	
		Celtis	Celtis occidentalis	Common Hackberry		15-18m	14-16m	Fast	Medium	Green	Green			X	X	97%	Upright, arching branches with a rounded, spreading crown. Light green leaves, corky bark. Sensitive to de-icing salts. Use away from roadways.	Municipally-supported. Cost-effective.	BOTH		Native to Ontario
		Liriodendron	Liriodendron tulipifera	Tuliptree		36m	12m	Med-Fast	Large	Yellow	Yellow			X	84%	Pyramidal to broad, conical growth form. Yellow-green tulip-like flowers. Bright green leaves turn golden yellow in fall.	Cost-effective. Prefers moist, well-drained soil with minimal salt spray.	INTERNAL	Spotted Lanternfly, aphids	Native to Ontario	
		Gymnocladus	Gymnocladus dioicus	Kentucky Coffeetree	Espresso	21m	11m	Slow-Med	Medium	Green	Green			X	X	91%	Open branching habit with stubby twigs and large double-compound leaves with small leaflets. Dioecious tree with male and females. Male preferred.	Municipally-supported. Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	BOTH		Native to Ontario
		Juglans	Juglans nigra	Black Walnut		18-25m	16-18m	Fast	Large	Green	Yellow				X	78%	Tall, oval to rounded growth habit. Large pinnate compound leaves. Litter from fruit (nuts) can be messy. Use in larger open areas.	Fruit (nuts) causes mess - needs room for roots. Tolerant to adverse soil conditions, drought.	INTERNAL		Native to Ontario
		Liquidambar	Liquidambar styraciflua	Moraine Sweetgum	Moraine	18-22m	12m	Med-Fast	Large	Green	Yellow			X		88%	Densely branched pyramidal crown becoming oval with maturity. Lobed glossy green leaves.	Fruit causes mess - needs room for roots. Tolerant to adverse soil conditions, drought.	INTERNAL		Native to North America
		Acer	Acer rubrum	Red Maple	Armstrong	14-16m	5-7m	Fast	Medium	Green	Green				X	86%	Columnar, narrow crown, with branches growing vertical.	Suitable for narrow planting strips, vertical accents.	INTERNAL	Spotted Lanternfly	Native to Ontario
	Quercus	Quercus macrocarpa	Bur Oak		24m	18m	Slow	Large	Yellow	Green			X	X	86%	Pyramidal when young, maturing to a broad, spreading, rounded crown. Unusual branching and corky twigs. Sensitive to de-icing salts. Use away from roadways.	Municipally-supported.	BOTH	LDD Moth, Oak Wilt, Spotted lanternfly	Native to Ontario	
	Cladastris	Cladastris kentukea / lutea	American Yellowwood		10-12m	10m	Medium	Small-Med	Green	Green			X		93%	Vase-shaped crown with broad, horizontal spreading branches. Long pendulous drooping clusters of white flowers.	Tolerant of urban conditions and high pH levels in soil.	INTERNAL		Native to North America	
	Carpinus	Carpinus caroliniana	Blue Beach / Musclewood		8-10m	8-10m	Medium	Small	Green	Green			X	X	90%	Rounded to oval crown with wide spreading branches. Smooth gray bark with distinct muscle-like fluting.	Tolerant to wind, full sun or shade, adverse soil conditions / volumes.	INTERNAL		Native to Ontario	
	Ostrya	Ostrya virginiana	Ironwood / American Hophornbeam		10m	8m	Slow	Small	Yellow	Green			X	X	87%	Upright, rounded to oval crown. Unique drooping clusters of drooping seed-bearing pods. Slow to establish.	Fairly pest and disease resistant. Tolerant to adverse soil conditions / volumes.	INTERNAL		Native to Ontario	
	Picea	Picea abies	Norway Spruce		20-25m	8-10m	Fast	Large	Yellow	Yellow					75%	Pyramidal with upright, arching branches. Large cones.	For use as a screening / windbreak along highways to supplement deciduous plantings.	INTERNAL		Non-native	
		Picea glauca	White Spruce		25m	6-8m	Medium	Large	Yellow	Green				X	96%	Dense, uniformly pyramidal. Stiff, spirally-arranged needles that are blue-green.	For use as a screening / windbreak along highways to supplement deciduous plantings.	INTERNAL		Native to Ontario	
	Pinus	Pinus strobus	Eastern White Pine		20-24m	7-10m	Fast	Large	Yellow	Yellow			X	64%	Broadly pyramidal evergreen. Whispy, long soft needles. Open branching with smooth bark.	For use as a screening / windbreak along highways to supplement deciduous plantings.	INTERNAL		Native to Ontario		

DEFINITIONS AND TERMINOLOGY

Right-of-Way Contexts for Tree Placement	
<i>High Intensity Urban Environments</i>	For use along highways (expressways), arterial streets, bus routes, commercial shopping streets, hardscapes/soil cells. Trees planted in these contexts must withstand adverse soil conditions with minimal soil volume, plus salt, salt spray and winter winds.
<i>Low Intensity Urban Environments</i>	For use along non-bus routes, residential / local streets that are less susceptible to excessive amounts of salt and salt spray.
<i>Rural Environments</i>	For use along secondary highways, rural roads, and open areas with more expansive space to grow.
Other Terms	
<i>Municipally-supported</i>	Species is listed on York Region's plant list as a <i>Proven Species</i> and City of Mississauga's plant list as a streetscape (hardscape) planting.
<i>Cost-effective</i>	A tree is identified as cost-effective if it is deemed as a fast-growing species. These were cited by tree nurseries as the least expensive to grow.
<i>Hamilton Survival Rate</i>	The degree (percentage) to which a species has historically survived. This metric accounts for all species planted by the City of Hamilton on <i>all</i> rights-of-way, historically.
<i>Internally- / Municipally- / Both-Supported; Survival Study</i>	<i>Internal</i> = Survival rates are good and internal staff approved. Environmental tolerance to urban / roadside conditions; <i>Municipal</i> = Supported by 1 or more municipalities, other than Hamilton. <i>Both</i> = Both internally- and municipally-supported. Environmental tolerance to urban / roadside conditions. <i>Survival Study</i> = Only survival rates are sufficient, and therefore worth trialing.
<i>Hydro</i>	The ability for a tree to grow beneath or near hydro and its ability to be pruned or trimmed near hydro lines.
<i>Small Boulevard Friendly</i>	The ability of a tree to grow within a boulevard that is minimum 1.8m wide. Trees planted in these contexts must also withstand adverse soil conditions with minimal soil volume, plus salt, salt spray and winter winds.
<i>Native Descriptors</i>	Native to Ontario, Native to North America and Non-native

EVALUATION CRITERIA

Criteria Factor	Degree of Capability		
	High	Medium / Moderate	Low
The degree of tolerance to adverse soil conditions and soil volume.	High degree of tolerance to withstand poor soil conditions.	Can tolerate some degree of poor soil conditions and / or soil volume (ex. Some compaction, poor drainage, etc.)	Low degree and tree needs richer soil to survive.
The degree of tolerance to salt and salt spray.	High degree of tolerance to withstand salt and salt spray.	Tree can tolerate some degree of salt and salt spray.	Tree cannot tolerate salt and salt spray.
The degree / pace of growth (i.e. growth rate).	Fast-growing.	Medium growing / medium-slow growing.	Slow-growing.
Cost effectiveness.	Cost effective because it is fast-growing.	Somewhat cost effective.	Less cost-effective because it is slow-growing.