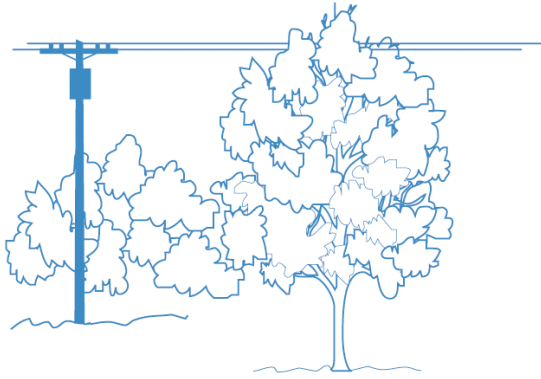
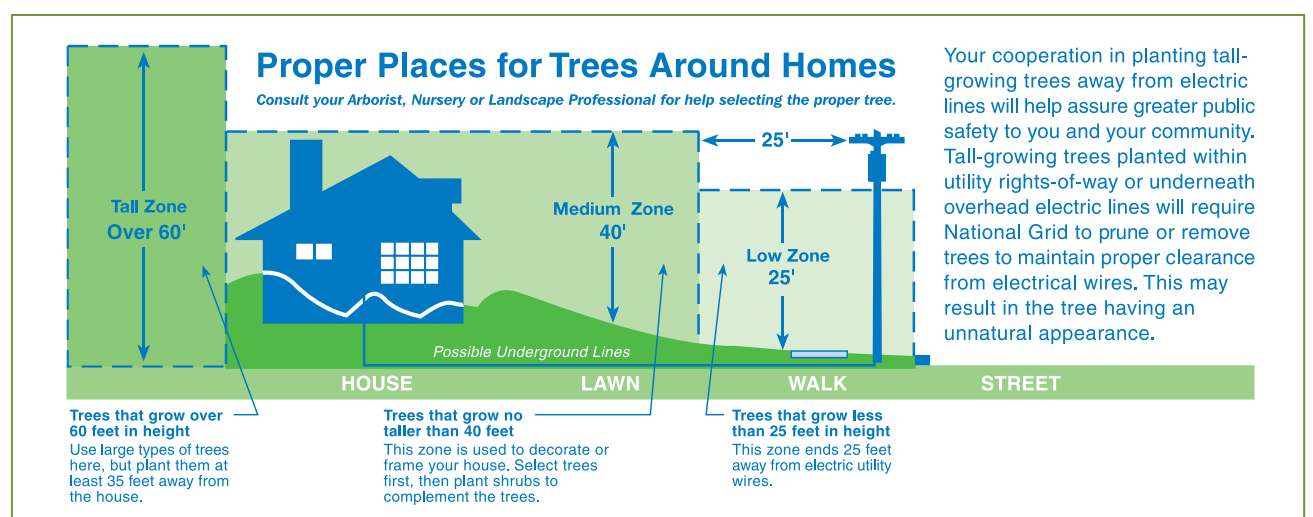


# How to avoid tree & utility line conflicts when selecting and planting trees



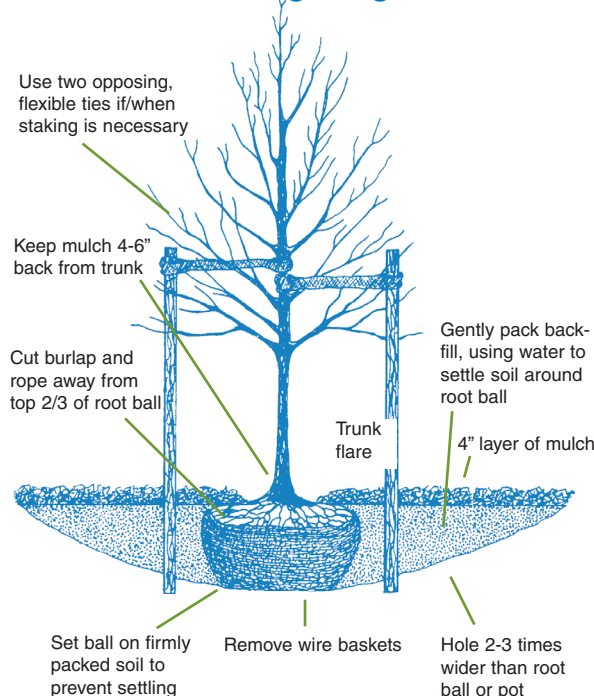
Determining where to plant a tree is a decision that should not be taken lightly. Many factors need to be evaluated prior to planting. Before planting, make sure to consider the tree's full growth potential to see if the location of the tree will affect any overhead or underground utility lines and rights-of-way. The ultimate mature height of the tree to be planted must be within the available overhead growing space. Proper tree species selection and placement will assure the avoidance of or minimize tree and utility line conflicts in the future.

To assist you in making a decision on what type of low-growing tree species to choose, where to place it to avoid potential conflicts and how to plant it properly, National Grid is providing this fact sheet for your use. This will help assure the tree you plant will not only add beauty to your home, your community and benefits the environment, but also contributes to future electric service reliability by avoiding overhead and/or buried lines.



## Correct planting instructions

### Tree Planting Diagram



1. Dig a shallow hole, 2-3 times wider than the width of the ball/pot, but no deeper than the depth of the ball/pot.
2. Lift and set the tree carefully into the center of the hole on firm soil. **Be sure the top of the trunk flare at the base of the tree is even with grade level, or even 1-2" higher to allow for possible settling. Carefully pull back some soil from the base of the tree to assure the trunk flare and upper layer of roots have not been covered with excess soil. Remove any excess soil back to the original soil level across the top of the ball or pot and raise the ball or pot to the proper level by adding soil to the bottom of the hole.**
3. Straighten the tree and back fill the hole 1/3 of the way. Remove all rope or twine from the base of the tree and top of the root ball; cut and remove the upper 2/3 of the burlap and remove the wire basket. Be sure to remove all plastic/nylon twine and synthetic burlap as this material will not rot away and may strangle tree roots. Plastic pots need to be removed completely while peat pots need only be sliced down the sides. Carefully loosen the outer roots from potted containers.
4. Backfill and pack the soil firmly and uniformly in layers around the hole, watering as you go to settle the soil. It is not necessary to amend the soil or add fertilizers at this time. Use the excess soil to create an earthen berm (low earth wall) around the ball on the surface just past the root ball to help retain water. Apply a 2-4" layer mulch to the entire area under the tree to help maintain moisture, keeping the mulch 4-6" from the base of the tree.
5. Stake the tree for support, only if absolutely necessary, and do so with 2-3 stakes and wide, soft, loose ties which will allow the tree to move with the wind encouraging faster establishment. Water the tree as needed once the upper soil surface has dried well into the Fall. Do NOT cut the main central leader; prune only dead or damaged limbs; do NOT apply tree paints.

For more information, call our Distribution Forestry Department at **315-428-5987**, or visit **www.nationalgridus.com**.

### Before You Dig

#### Upstate NY

Dig Safely  
811 or 1-800-962-7962  
www.digsafelynewyork.com  
at least two working days prior to excavation

#### Massachusetts and New Hampshire

811 or 1-888-344-7233  
www.digsafe.com  
72 hours (except weekends and holidays)

#### Rhode Island

811 or 1-888-344-7233  
48 hours (except weekends and holidays)

# Recommended Small Trees For Planting Under Low Overhead Utility Lines or Confined Spaces

Urban Trees Recommended for USDA Planting Zones 6 and Below

| Common name                             | Scientific name   | Zone  | Mature Height** | Crown Shape      | Comments   |
|---|---|-------|-----------------|------------------|--|
| Trident Maple                           | <i>Acer buergerianum</i><br>var. 'Street Wise'                                  | 6a    | 20'-25'         | round            | variable Fall color (yellow-red), low branched, will require pruning for street tree use<br>can be trained to single stem; burgundy Fall color                                   |
| Hedge Maple (CU-SS)                     | <i>Acer campestre</i><br>var. 'Queen Elizabeth'                                 | 5b    | 20'-35'         | round            | adapted to compaction, will sustain severe pruning; several new cultivars available<br>vigorous grower   |
|   | var. 'Schichtel's Upright'  | 5b    | 20'-35'         | narrow oval      | narrower crown form  |
|   | var. 'St. Gregory'  | 5b    | 20'-35'         | upright oval     | strong central leader, smooth bark   |
| Amur Maple                              | <i>Acer tartaricum</i> ssp. <i>Ginnala</i><br>var. 'Betzam', aka 'Beethoven'    | 3a    | 15'-25'         | rounded          | often multi-stemmed, but can be trained/specified for single stem; variable Fall color<br>10'-15' wide crown, deep hunter green leaves; red samaras (seeds); gold-red Fall color |
|   | var. 'Embers'   | 3a    | 15'-25'         | narrow upright   | red seeds, red Fall color  |
|   | var. 'Flame'  | 2     | 15'-25'         | rounded          | seed grown, variable form; can be trained to quality low branched/multi-stem tree  |
|   | var. 'Mozzazam', aka 'Mozart'   | 2     | 15'-25'         | pyramidal        | symmetrical form; strong central leader; red Fall color  |
| Tartarian Maple                         | <i>Acer tartaricum</i><br>var. 'Hotwings'                                       | 3     | 15'-25'         | rounded          | multi-stemmed, irregular, but can be trained/specified for single stem; variable Fall color<br>scarlet-red fruit in Summer   |
|   | var. 'Pattern Perfect'  | 3     | 15'-25'         | rounded          | persistant bright-red fruit in Summer; red-orange Fall color   |
|   | var. 'Rugged Charm'   | 3     | 15'-25'         | oval             | red fruit in Summer; drought tolerant  |
| Shantung/Painted Maple (CU-SS)          | <i>Acer truncatum</i><br>var. 'Kiethsform', aka 'Norwegian Sunset'              | 5a    | 25'-35'         | round            | spring color purplish-red changing to green<br>yellow/orange Fall color; more drought tolerant than Norway Maple   |
|   | var. 'Warrenred', aka 'Pacific Sunset'  | 5     | 25'-35'         | upright oval     | bright yellow/orange early Fall color; finer branched  |
| Serviceberry                            | <i>Amelanchier</i> spp.<br>var. 'Autumn Brilliance'                             | 3b-4  | 20'-30'         | oval             | edible fruit, early white flowers, red to yellow Fall color<br>heavy flowering, bright red-orange Fall color; excellent heat/drought tolerance                                   |
|   | var. 'Cole's Select'  |       |                 | narrow           | 15' wide crown; glossier, smaller green leaves; orange-red to red Fall color   |
|   | var. 'Cumulus'  |       |                 | narrow           | 12-18' wide crown; faster growing; yellow to orange-scarlet Fall color; may root sucker  |
|   | var. 'Forest Prince'  |       |                 | oval             | heavy flowering; leathery dark green foliage orange-red Fall color   |
|   | var. 'Lustre' aka 'Rogers'  |       |                 | upright open     | flower clusters droop; leaves emerge purplish-bronze, yellow to red Fall color   |
|   | var. 'Princess Diana'   |       |                 | oval             | bright red, long lasting Fall color; (difficult to find in tree form!)   |
|   | var. 'Robin Hill'   |       |                 | narrow           | 12-15' wide crown; heavy flowering, pink buds, early bloomer; bronze tinged leaves   |
|   | var. 'Snowcloud'  |       |                 | narrow           | 15' wide, open crown; blue-green leaves in Summer, copper-orange to scarlet in Fall  |
|   | var. 'JFS-Arb', aka 'Spring Flurry'   |       | 35'             | upright oval     | strong central leader; green Summer foliage; orange Fall color   |
|   | var. 'Spirzam', aka 'Spring Glory'  |       | 10'-15'         | very narrow      | 8-10' wide crown; grey-green leaves in Summer, amber-orange Fall color   |
|   | var. 'Trazam', aka 'Tradition'  |       |                 | oval             | good branching, strong center leader; heavy fruiting; grey-green foliage   |
| American Hornbeam                       | <i>Carpinus caroliniana</i>   | 3b    | 30'             | round            | "muscle" bark, good orange-red Fall color; slow to establish; difficult to transplant  |
| Eastern Redbud (CU-SS)                  | <i>Cercis canadensis</i><br>var. 'Appalachian Red'                              | 4a-5b | 20'-30'         | open, spreading  | edible, pink, very early Spring flowers; typically multi-stemmed; heart shape leaves<br>magenta pink buds, bright pink flowers   |
|   | var. 'Forest Pansy'   | 5b-6  |                 | open, spreading  | typically smaller, slower growth; red-purple Spring leaves, bronze Summer foliage  |
|   | var. 'Northern or Minnesota Strain'   |       |                 | open, spreading  | more cold hearty; limited availability   |
|   | var. 'Whitebud'   |       |                 | open, spreading  | faster growth rate; white flowers; lighter green foliage   |
| Corneliancherry Dogwood (CU-SS)         | <i>Cornus mas</i><br>var. 'Golden Glory'  | 4     | 20'             | round - oval     | multi-stemmed; showy early small yellow flowers; heavy fruiting (litter may be a nuisance!)<br>larger fruit; red-purple Fall color   |
| American Smoketree                      | <i>Cotinus obovatus</i>   | 5a    | 20'-30'         | oval -round      | low branching, multi-stemmed tree; 6-10" light, puffy, pyramidal Spring flower; color variable   |
| Thornless Cockspur Hawthorn (CU-SS)     | <i>Crataegus crus-galli</i> var. <i>inermis</i><br>var. 'Cuzam', aka 'Crusader' | 4a    | 20'-25'         | round            | white flowers, bright red persistent fruit<br>faster growing; 12-15' wide; reportedly disease resistant  |
| Washington Hawthorn (CU-SS)             | <i>Crataegus phaenopyrum</i><br>var. 'Presidential', aka Prezan                 | 4a    | 20'-30'         | round            | white flowers; thorny; reddish-purple Fall color ; insect & disease prone; 'usually' multi-stem<br>faster growing; almost thornless; relatively pest free                        |
|   | var. 'Lustre'   |       |                 | upright          | faster growing; fewer thorns   |
|   | var. 'Washington Lustre', aka Westwood 1  |       |                 | oval             | faster growing; fewer thorns; early blooms   |
| Winter King Hawthorn (CU-SS)            | <i>Crataegus viridis</i> var. 'Winter King'                                     | 4-5a  | 20'-30'         | oval             | thorny, white flowers, purple and scarlet Fall color, fruit persists   |
| Imperial Thornless Honeylocust (CU-SS)  | <i>Gleditsia tricanthos</i> var. <i>inermis</i> 'Impcole'                       | 4a    | 30-35'          | broad round      | open, spreading form; good branch angles; small leaves; yellow Fall color  |
| Goldenraintree (CU-SS)                  | <i>Koelreuteria paniculata</i>  | 5b    | 30'-40'         | irreg. rounded   | pest free; 12" pyramidal, mid-Summer, yellow flower clusters   |
| Amur Maackia (CU-SS)                    | <i>Maackia amurensis</i>  | 4a    | 20-30'          | rounded upright  | 4-6" long white pedulous flower clusters; grey-green leaves turn to olive green; pest free   |
| Flowering Crabapple (CU-SS)             | <i>Malus</i> spp.<br>var. 'Adams'   | 3-4   |                 |                  | various cultivars (some may be disease resistant):<br>buds deep pink, flowers deep pink, profuse   |
| Flowering Crabapple (CU-SS)             | var. 'Adirondack'   | 4a    | 20'             | round            | bright red fruit 1/2" diameter, dark green leathery leaves   |
|   | var. 'American Salute'  | 4     | 18'             | vase             | rose-red flower, cherry red 3/8" fruit; maroon-red foliage   |
|   | var. 'American Spirit'  | 4     | 18'             | upright oval     | deep rose flower, persistent red 1/2" fruit  |
|   | var. 'American Triumph'   | 4     | 20'             | round            | dark red single flower, dark burgandy-red fruit; reddish-purple leaves   |
|   | baccata, var. 'Jackii'  | 3a    | 20'             | upright columnar | flowers are white fragrant and early, fruit is deep red-purple   |
|   | var. 'Cardinal'   | 4     | 16'             | round            | flowers bright pink-red purple, fruit deep dark red, leaves deep glossy purple-red   |
|   | var. 'Centurion'  | 4     | 20'             | broad spread.    | flowers rose red, bright red persistent 5/8" diameter fruit, leaves reddish  |
|   | var. 'Dolgo'  | 4     | 20'             | narrow oval      | flowers white, fruit bright red, edible 1 1/2" in diameter, leaves glossy green  |
|   | var. 'Donald Wyman'   | 3b    | 30'             | oval             | flowers white, abundant, fruit glossy bright red, abundant   |
|   | var. 'Dobloons'   | 4     | 20'             | round            | flowers white, double fruit bright lemon-yellow, abundant  |
|   | var. 'floribunda'   | 4b    | 20'             | dense oval       | flowers white, double fruit bright lemon-yellow, abundant  |
|   | var. 'Liset'  | 4a    | 15'             | round            | flowers pink fading to white, profuse, 1-1 1/2" diameter, fruit yellow-red   |
|   | var. 'Ormiston Roy'   | 4a    | 15'             | columnar         | flowers pink-red 1 1/2" diameter, fruit dark red, leaves reddish   |
|   | var. 'Prairifire'   | 4a    | 20'             | oval - round     | pink-rose bud, white flower, yellow 3/8" diameter persistent fruit, green leaf   |
|   | var. 'Professor Sprenger'   | 4     | 20'             | oval - round     | crimson bud, pink-rd flower, orange-red persistent 1/2" fruit, leaves age to red-green   |
|   | var. 'Purple Prince'  | 4     | 20'             | oval - round     | pink bud, white fragrant flower, orange-red persistent 1/2" diameter fruit, green leaf   |
|   | var. 'Red Jewel'  | 4     | 20'             | round            | carmine bud, rose red flower, persistent maroon 3/8" fruit, purple-bronze leaf   |
|   | var. 'Robinson'   | 4     | 15'             | round            | pink-white bud, white flower, persistent bright red 1/2" diameter fruit, green leaf  |
|   | var. 'Royal Raindrops'  | 4     | 25'             | oval             | crimson bud, deep pink flower, dark glossy red 3/8" fruit, red aging to bronze leaf  |
|   | var. 'Sentinel'   | 4     | 20'             | upright spread.  | pink bud, bright pinkish flower; persistent red 1/4" fruit; purple cut-leaf, orange-red Fall   |
|   | var. 'Strawberry Parfait'   | 4     | 18'             | narrow oval      | red buds, white-pink flower, persistent bright red 1/2" fruit, dark green glossy leaf  |
|   | var. 'Sugartyme'  | 4     | 18'             | vase             | red buds, large pink flower, yellow 3/8" fruit, red aging to green leaf  |
|   | x zumi 'Calocarpa'  | 4     | 18'             | oval             | pink bud, white fragrant flower, red persistent 1/2" diameter fruit, green leaf  |
| Persian Parrotia (CU-SS)                | <i>Parrotia persica</i><br>var. 'Ruby Vase'                                     | 4a    | 20'             | round            | bright red, persistent 3/8" diameter, leaves large green, dense canopy<br>relatively pest free; red-purple new foliage to green in Summer, yellow-red in Fall                    |
| Accolade Flowering Cherry               | <i>Prunus sargentii</i> + <i>subhirtella</i>                                    | 4     | 20'             | upright-vase     | narrower than species; foliage emerges ruby red in Spring, persisting through Fall   |
| Snow Goose Cherry                       | <i>Prunus</i> 'Snow Goose'  | 5a    | 20'-25'         | round-vase       | deep rose-pink bud, semi-double pink flowers, attractive bark  |
| Edgewood Callery Pear (CU-SS)           | <i>P. calleryana</i> x <i>P. betulaefolia</i> 'Edgedell'                        | 5     | 20'-25'         | upright          | white flowers, foliage green aging to yellow-red in Fall; fruit is 1/4" blue-black   |
| Jack Callery Pear (CU-SS)               | <i>P. calleryana</i> 'Jaczam'   | 4     | 30'             | round            | leaves emerge with purple tint, silvery green through Summer, red-purple in Fall   |
| Jill Callery Pear (CU-SS)               | <i>Pyrus calleryana</i> 'Jilzam'  | 4     | 15'-20'         | oval; dense      | glossy green to gold-red leaves in Fall; 1/2" yellow-green fruit   |
| Valiant Callery Pear (CU-SS)            | <i>Pyrus calleryana</i> 'Valzam'  | 4     | 15'-20'         | round            | olive green to gold leaves in Fall; 1/2" yellow-green fruit  |
| Korean Sun Pear (CU-SS)                 | <i>Pyrus calleryana</i> 'Westwood'  | 4     | 25'-30'         | upright-pyram.   | glossy hunter green to crimson red leaves in Fall; 1/4" tan fruit  |
| Prairie Gem Ussurian Pear (CU-SS)       | <i>Pyrus fauriei</i>  | 4     | 15'-20'         | round            | reddish-orange leaves in Fall; leaves drop earlier than <i>P. calleryana</i>   |
| Globe Black Locust (CU-SS)              | <i>Pyrus ussuriensis</i> 'MorDak'   | 3     | 20'-25'         | oval - round     | large, showy white clustered flowers; 1"-1 1/2" green-yellow fruit (if cross pollinated)   |
| Bessoniana Black Locust (CU-SS)         | <i>Robinia pseudacacia</i> 'Globe' (or 'Inermis')                               | 4     | 20'             | round; dense     | late Spring flowering (possibly flowerless); spineless; medium to blue-green leaves  |
| Swedish Mountain Ash (CU-SS)            | <i>Robinia pseudacacia</i> 'Bessoniana'   | 4     | 30'             | oval             | late Spring flowering; essentially spineless; medium to blue-green leaves; central leader  |
| Columnar Oakleaf Mountain Ash (CU-SS)   | <i>Sorbus intermedia</i>  | 5b-6a | 25-35'          | round            | green upper leaf/grayish white undersides; orange-red Fall color   |
|   | <i>Sorbus thuringiaca</i><br>var. 'Fastigiata'                                  | 3b    | 25-35'          | oval-pyram.      | dark green upper leaf/whitish undersides; rusty orange-yellow Fall color<br>more narrow pyramidal crown form   |
| Japanese Tree Lilac (CU-SS)             | <i>Syringia reticulata</i><br>var. 'Ivory Silk'                                 | 3a    | 20'-25'         | narrow pyram.    | large cream colored flowers in late June; good for use in large containers   |
|   | var. 'Summer Snow'  | 3a    | 20'-25'         | oval             | dense; compact; heavy flowering; fast growing; cherry-like bark  |
|   | var. 'Regent'   | 3a    | 20'-25'         | upright          | glossy leaves; heavy flowering   |
| Peking Lilac                            | <i>Syringia pekinensis</i><br>var. 'Beijing Gold'                               | 4     | 20'             | round            | glossy leaves; heavy pure white flower producer  |
|   | var. 'China Snow'   | 4     | 30' +           | upright spread.  | primrose-yellow flowers; cinnamon clored bark  |
| Summer Sprite Littleleaf Linden (CU-SS) | <i>Tilia cordata</i> 'Halka'  | 4     | 15'-20'         | upright rounded  | showy cinnamon clored exfoliating bark   |
| Wireless Japanese Zelkova (CU-SS)       | <i>Zelkova serrata</i> 'Schmidtlow'   | 4     | 20'             | narrow pyram.    | may grow slower than the species; fragrant, mid-Summer flowers (attracts bees!)  |
|   | var. 'City Sprite'  | 5     | 35'             | broad vase       | exfoliating bark; less likely than species to have poor branch structure; Elm-like appearance  |
|   |   | 5     | 20'             | oval to vase     | as above, smaller in form; red Fall foliage  |

\*Trees over 30 feet in mature height should be planted at least 25' away from the edge of overhead wires; trees over 25 feet high that are planted directly under electric lines **may** require minor pruning to avoid conflicts with overhead primary electric lines in the future.

(CU-SS = Trees suitable for planting in Cornell University Structural Soil mix)

Tree list summarized from **RECOMMENDED URBAN TREES: SITE ASSESSMENT AND TREE SELECTION FOR STRESS TOLERANCE**; 2009 (revised)

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