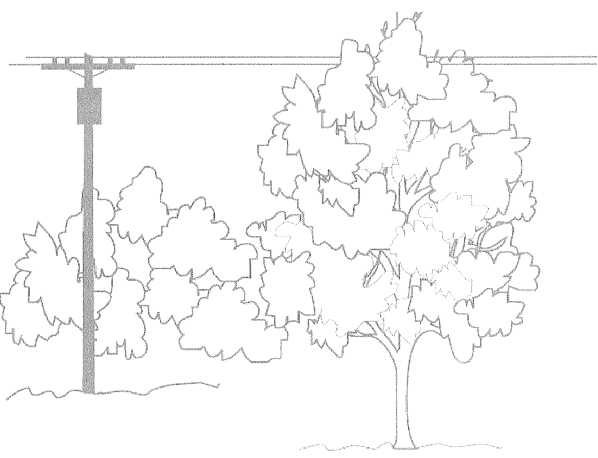


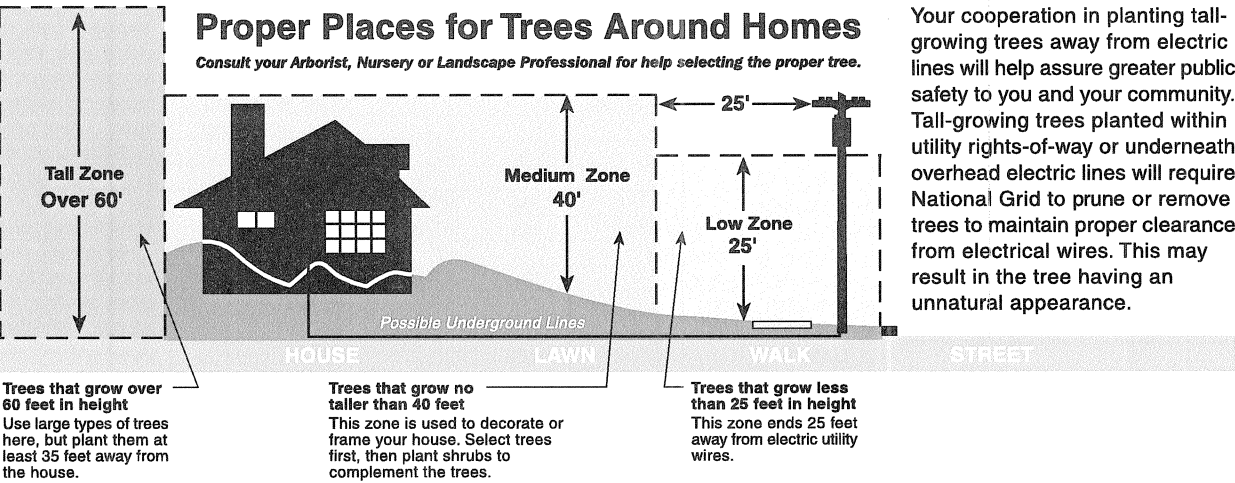
# How to Avoid Tree & Utility Line Conflicts When Selecting and Planting Trees



Determining where to plant a tree is a decision that should not be taken lightly. Many factors need to be considered prior to planting. When planning what type of tree to plant, remember to look up, as well as down, to determine where the tree will be located in relation to both the overhead and underground utility lines. The location of these lines will have a direct impact on your tree and planting site.

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 utility line conflicts in the future.

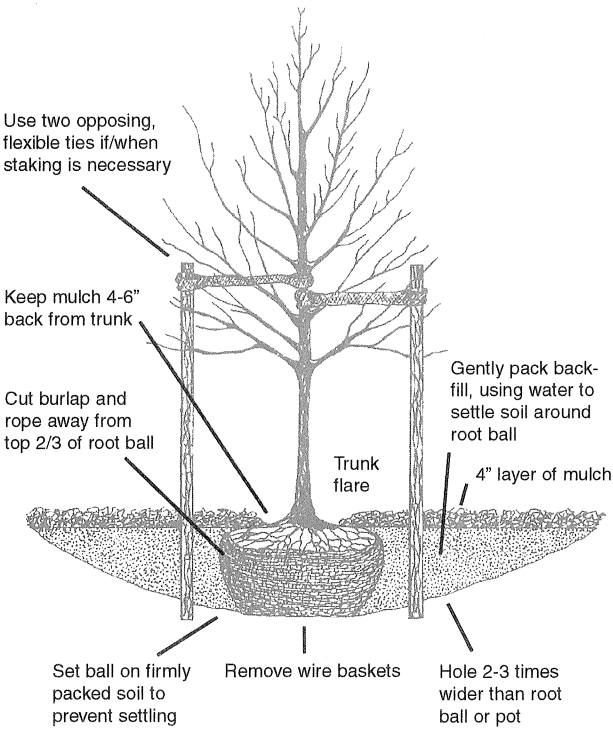
To assist you in making a decision on what type of low growing tree species to choose, where to place it to avoid potential conflicts and how to plant it properly, National Grid is providing this fact sheet for your use. This will help assure the tree you plant will not only add beauty to your home,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



## Correct Planting Instructions

**NOTE:** In New York State call “Dig Safely New York” at 1-800-962-7962 or “Dig Safe” at 888-344-7233 (in Massachusetts, Rhode Island and New Hampshire) at least 3 full days before you dig...buried lines may be where you least expect them!

### 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 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.nationalgrid.com](http://www.nationalgrid.com).

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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                      | Acer buergeranum                           | 6a    | 20'-25'         | round           | variable fall color (yellow-red), low branched, will require pruning for street tree use        |
|                                    | var. 'Street Wise'                         | 6a    | 20'-25'         | oval            | can be trained to single stem; burgundy Fall color  |
| Hedge Maple *                      | Acer campestre                             | 5b    | 20'-25'         | round           | adapted to compaction, will sustain severe pruning; several new cultivars available             |
|                                    | var. 'Queen Elizabeth'                     | 5b    | 20'-25'         | upright oval    | vigorous grower   |
|                                    | var. 'Schichtel's Upright'                 | 5b    | 20'-25'         | narrow oval     | narrower crown form   |
|                                    | var. 'St. Gregory'                         | 5b    | 20'-25'         | upright oval    | strong central leader, smooth bark  |
| Globe Norway Maple *               | Acer platanoides 'Globosum'                | 4a    | 15'-18'         | dense round     | top grafted on 6-7' standard; yellow Fall color   |
| Amur Maple                         | Acer tartaricum ssp. Ginnala               | 3a    | 15'-25'         | rounded         | often multi-stemmed, but can be trained/specified for single stem; variable Fall color          |
|                                    | var. 'Betzam', aka 'Beethoven'             | 3a    | 15'-25'         | narrow upright  | 10-15' wide crown, deep hunter green leaves; red samaras (seeds); gold-red Fall color           |
|                                    | var. 'Embers'                              | 3a    | 15'-25'         | rounded         | 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. 'Mozazam', aka 'Mozart'               | 2     | 15'-25'         | pyramidal       | symmetrical form; strong central leader; red Fall color   |
| Tartarian Maple                    | Acer tartaricum                            | 3     | 15'-25'         | rounded         | multi-stemmed, irregular, but can be trained/specified for single stem; variable Fall color     |
|                                    | var. 'Rubrum'                              | 3     | 15'-25'         | rounded         | blood-red Fall color  |
| Shantung/Painted Maple *           | Acer truncatum                             | 5a    | 25'-35'         | round           | spring color purplish-red changing to green   |
|                                    | var. 'Kiethsform', aka 'Norwegian Sunset'  | 5a    | 25'-35'         | upright oval    | yellow/orange Fall color; more drought tolerant than Norway Maple                               |
|                                    | var. 'Warrenred', aka ' Pacific Sunset'    | 5a-5  | 25'-35'         | rounded upright | bright yellow/orange early Fall color; finer branched   |
| Serviceberry                       | Amelanchier spp.                           | 3b-4  | 20'-30'         | oval            | edible fruit, early white flowers, red to yellow fall color                                     |
|                                    | var. 'Autumn Brilliance'                   |       |                 | oval            | heavy flowering, bright red-orange Fall color; good heat/drought tolerance                      |
|                                    | var. 'Cole's Select'                       |       |                 | narrow          | 15' wide crown; glossier, smaller green leaves; orange-red to red Fall color                    |
|                                    | var. 'Cumulus'                             |       |                 | narrow          | 15-18' wide crown; faster growing; yellow to orange-scarlet Fall color                          |
|                                    | var. 'Majestic'                            |       |                 | oval            | fast growing; irregular multi-stem form; copper-orange Fall color (hard to find tree form!)     |
|                                    | var. 'Princess Diana'                      |       |                 | oval            | bright red, long lasting Fall color; (difficult to find in tree form!)                          |
|                                    | var. 'Refzam', aka 'Reflections'           |       |                 | narrow          | 10-15' wide crown; heavy flowering  |
|                                    | 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. '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                  | Carpinus caroliniana                       | 3b    | 30'             | round           | "muscle'd" bark, good orange-red fall color; slow to establish; difficult to transplant         |
| Eastern Redbud *                   | Cercis canadensis                          | 5b    | 20'-30'         | open, spreading | edible, pink, very early Spring flowers; typically multi-stemmed; heart shape leaves            |
|                                    | var. 'Forest Pansy'                        | 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 *          | Cornus mas                                 | 4     | 20'             | round - oval    | multi-stemmed; showy early small yellow flowers; heavy fruiting (litter may be a nuisance!)     |
|                                    | var. 'Golden Glory'                        |       |                 | narrow upright  | larger fruit; red-purple Fall color   |
| American Smoketree                 | Cotinus obovatus                           | 5a    | 20'-30'         | oval -round     | low branching, multi-stemmed tree; 6-10" light, puffy, pyramidal Spring flower; color variable  |
| Thornless Cockspur Hawthorn *      | Crataegus crus-galli var. inermis          | 4a    | 20'-25'         | round           | white flowers, bright red persistent fruit  |
|                                    | var. 'Cuzam', aka 'Crusader'               |       | 15'             | round           | wider in form, smaller in height  |
| Washington Hawthorn *              | Crataegus phaenopyrum                      | 4a    | 20'-30'         | round           | white flowers; thorny; reddish-purple fall color ; insect & disease prone; 'usually' multi-stem |
|                                    | var. 'Princeton Sentry'                    |       |                 | upright         | faster growing; almost thornless; relatively pest free  |
|                                    | var. 'Manbeck Select'                      |       |                 | round           | improved tree form selection  |
|                                    | var. 'Lustre'                              |       |                 | oval            | faster growing; fewer thorns  |
|                                    | var. 'Fastigata'                           |       |                 | round           | glossy, dark green foliage in Summer  |
|                                    | var. 'Vaughn'                              |       |                 | round           | NOT recommended for use due to thorniness and disease problems                                  |
| Ohio Pioneer Hawthorn *            | Crataegus punctata var. inermis            | 4-5a  | 20'-25'         | round           | white spring flowers, purplish red fall color, thornless; prone to disease/insect problems      |
|                                    | var. 'Aurea'                               |       |                 | round           | yellow fruiting variety (difficult to find!)  |
| Winter King Hawthorn *             | Crataegus viridis var. 'Winter King'       | 4-5a  | 20'-30'         | oval            | thorny, white flowers, purple and scarlet fall color, fruit persists                            |
| Golden Desert European Ash *       | Fraxinus excelsior 'Aureaefolia'           | 4b-5a | 20'-30'         | rounded         | leaves emerge yellow, become yellow-green; twigs/young stems golden yellow                      |
| Leprechaun Green Ash *             | Fraxinus pennsylvanica 'Johnson'           | 3     | 15'-20'         | dense, rounded  | top grafted on 4-6' stems; Anthracnose resistant  |
| Goldenraintree *                   | Koelreuteria paniculata                    | 5b    | 30'-40'         | irreg. rounded  | pest free; 12" pyramidal, mid-summer, yellow flower clusters                                    |
| Emerald Sentinal Sweetgum          | Liquidambar stryaciflua 'Clydesform'       | 5     | 30'             | narrow pyram.   | relatively pest free; yellow-orange Fall color; fruit persists & litter may be a concern        |
| Flowering Crabapple *              | Malus spp.                                 | 3-4   |                 |                 | various cultivars (some may be disease resistant):  |
|                                    | var. 'Adams'                               | 4a    | 20'             | round           | buds deep pink, flowers deep pink, profuse  |
|                                    | var. 'Adirondack'                          | 4     | 18'             | vase            | bright red fruit 1/2" diameter, dark green leathery leaves                                      |
|                                    | var. 'American Spirit'                     | 4     | 18'             | round           | deep rose flower, persistent red 1/2" fruit   |
|                                    | baccata, var. 'Jackii'                     | 3a    | 20'             | round           | flowers are white fragrant and early, fruit is deep red-purple                                  |
|                                    | var. 'Cardinal'                            | 4     | 16'             | broad spread.   | flowers bright pink-red purple, fruit deep dark red, leaves deep glossy purple-red              |
|                                    | var. 'Centurion'                           | 4     | 20'             | narrow oval     | flowers rose red, bright red persistent 5/8" diameter fruit, leaves reddish                     |
|                                    | var. 'Dolgo'                               | 3b    | 30'             | oval            | flowers white, fruit bright red, edible 1-1/2" in diameter, leaves glossy green                 |
|                                    | var. 'Donald Wyman'                        | 4     | 20'             | round           | flowers white, abundant, fruit glossy bright red, abundant                                      |
|                                    | var. 'Doubloons'                           | 4     | 18'             | dense oval      | flowers white, double fruit bright lemon-yellow, abundant                                       |
|                                    | floribunda                                 | 4b    | 20'             | round           | flowers pink fading to white, profuse, 1-1/2" diameter, fruit yellow-red                        |
|                                    | var. 'Harvest Gold'                        | 4     | 20'             | oval            | flowers white double, fruit gold, abundant, persistent  |
|                                    | var. 'Henry Kohankie'                      | 4     | 20'             | round           | flowers pink-white, fruit glossy red, ellipsoid, persistent, edible                             |
|                                    | var. 'Indian Summer'                       | 4a    | 18'             | round           | flowers rose red, fruit persistent bright red 5/8" diameter, buds purple                        |
|                                    | var. 'Liset'                               | 4a    | 15'             | columnar        | flowers pink-red 1-1/2" diameter, fruit dark red, leaves reddish                                |
|                                    | var. 'Ormiston Roy'                        | 4a    | 20'             | oval - round    | pink-rose bud, white flower, yellow 3/8" diameter persistent fruit, green leaf                  |
|                                    | var. 'Prairifire'                          | 4     | 20'             | oval - round    | crimson bud, pink-rd flower, orange-red persistent 1/2" fruit, leaves age to red-green          |
|                                    | var. 'Professor Sprenger'                  | 4     | 20'             | oval - round    | pink bud, white fragrant flower, orange-red persistent 1/2" diameter fruit, green leaf          |
|                                    | var. 'Purple Prince'                       | 4     | 20'             | round           | carmine bud, rose red flower, persistent maroon 3/8" fruit, purple-bronze leaf                  |
|                                    | var. 'Red Jewel'                           | 4     | 15'             | oval            | pink-white bud, white flower, persistent bright red 1/2" diameter fruit, green leaf             |
|                                    | var. 'Robinson'                            | 4     | 25'             | oval            | crimson bud, deep pink flower, dark glossy red 3/8" fruit, red aging to bronze leaf             |
|                                    | var. 'Royal Raindrops'                     | 4     | 20'             | upright spread. | pink bud, bright pinkish flower; persistent red 1/4" fruit; purple cut-leaf, orange-red Fall    |
|                                    | var. 'Sentinel'                            | 4     | 18'             | narrow oval     | red buds, white-pink flower, persistent bright red 1/2" fruit, dark green glossy leaf           |
|                                    | var. 'Strawberry Parfait'                  | 4     | 18'             | vase            | red buds, large pink flower, yellow 3/8" fruit, red aging to green leaf                         |
|                                    | var. 'Sugartyme'                           | 4     | 18'             | oval            | pink bud, white fragrant flower, red persistent 1/2" diameter fruit, green leaf                 |
|                                    | x zumi 'Calocarpa'                         | 4a    | 20'             | round           | bright red, persistent 3/8" diameter, leaves large green, dense canopy                          |
| Persian Parrotia *                 | Parrotia persica                           | 5     | 20'-30'         | pryra.-round    | relatively pest free; red-purple new foliage to green in Summer, yellow-red in Fall             |
|                                    | var. 'Ruby Vase'                           | 4     | 20'             | upright-vase    | foliage emerges ruby red in Spring, persisting through Fall                                     |
| Accolade Flowering Cherry          | Prunus sargentii + subhirtella             | 5a    | 20'-25'         | round-vase      | deep rose-pink bud, semi-double pink flowers, attractive bark                                   |
| Snow Goose Cherry                  | Prunus 'Snow Goose'                        | 5     | 20'-25'         | upright         | white flowers, foliage green aging to yellow-red in Fall; fruit is 1/4" blue-black              |
| Canada Red Chokecherry             | Prunus virginiana                          | 2b    | 25'             | oval-upright    | white flowers, foliage green aging to dark maroon, edible fruit                                 |
| Dancer Ornamental Birchleaf Pear * | Pyrus betulaefolia 'Southwood'             | 4     | 30'             | round           | flowers 3 weeks later than most P. calleryana; reportedly Fireblight resistant                  |
| Edgewood Callery Pear *            | P. calleryana x P. betulaefolia 'Edgedell' | 4     | 30'             | round           | leaves emerge with purple tint, silvery green through Summer, red-purple in Fall                |
| Jack Callery Pear *                | Pyrus calleryana 'Jaczam'                  | 4     | 15'-20'         | oval; dense     | glossy green to gold-red leaves in Fall; 1/2" yellow-green fruit                                |
| Jill Callery Pear *                | Pyrus calleryana 'Jilzam'                  | 4     | 15'-20'         | round           | olive green to gold leaves in Fall; 1/2" yellow-green fruit                                     |
| Valiant Callery Pear *             | Pyrus calleryana 'Valzam'                  | 4     | 25'-30'         | upright-pyram.  | glossy hunter green to crimson red leaves in Fall; 1/4" tan fruit                               |
| Cleveland Pride Callery Pear *     | Pyrus calleryana 'Clepipzam'               | 4     | 25'-30'         | pyramidal       | salmon/pink leaves in Spring to olive green to burgundy leaves in Fall; 1/4" tan fruit          |
| Korean Sun Pear *                  | Pyrus fauriei 'Westwood'                   | 4     | 15'-20'         | round           | reddish-orange leaves in Fall; leaves drop earlier than P. calleryana                           |
| Mountain Frost Ussurian Pear *     | Pyrus ussuriensis 'Mountain Frost'         | 3     | 20'-25'         | oval - round    | large, showy white clustered flowers; 1"-1 1/2" green-yellow fruit (if cross pollinated)        |
| Prairie Gem Ussurian Pear *        | Pyrus ussuriensis 'MorDak'                 | 3     | 20'-25'         | oval - round    | large, showy white clustered flowers; 1"-1 1/2" green-yellow fruit (if cross pollinated)        |
| Globe Black Locust *               | Robinia pseudacacia 'Globe' or 'Inermis'   | 4     | 20'             | round; dense    | late Spring flowering (possibly flowerless); spineless; medium to blue-green leaves             |
| Bessoniana Black Locust *          | Robinia pseudacacia 'Bessoniana'           | 4     | 30'             | oval            | late Spring flowering; essentially spineless; medium to blue-green leaves; central leader       |
| Swedish Mountain Ash *             | Sorbus intermedia                          | 5b-6a | 25-35'          | round           | green upper leaf/grayish white undersides; orange-red fall color                                |
| Columnar Oakleaf Mountain Ash *    | Sorbus thuringiaca                         | 3b    | 25-35'          | oval-pyram.     | dark green upper leaf/whitish undersides; rusty orange-yellow fall color                        |
|                                    | var. 'Fastigiata'                          | 3b    | 25-35'          | narrow pyram.   | more narrow pyramidal crown form  |
| Japanese Tree Lilac *              | Syringia reticulata                        | 3a    | 20'-25'         | oval            | large cream colored flowers in late June; good for use in large containers                      |
|                                    | var. 'Ivory Silk'                          | 3a    | 20'-25'         | upright         | dense; compact; heavy flowering; fast growing; cherry-like bark                                 |
|                                    | var. 'Summer Snow'                         | 3a    | 20'-25'         | round           | glossy leaves; heavy flowering  |
|                                    | var. 'Regent'                              | 3a    | 20'-25'         | upright         | glossy leaves; heavy pure white flower producer   |
| Summer Sprite Littleleaf Linden *  | Tilia cordata 'Halka'                      | 4     | 15'-20'         | narrow pyram.   | may grow slower than the species; fragrant, mid-Summer flowers (attracts bees!)                 |
| Siebold Viburnum                   | Viburnum sieboldii                         | 5-4   | 15'-20'         | open            | often considered a large shrub, with pruning can have tree-like form; white late Spring flowers |
| Wireless Japanese Zelkova *        | Zelkova serrata 'Schmidtlow'               | 5     | 25'             | broad vase      | exfoliating bark; less likely than species to have poor branch structure; Elm-like appearance   |

Revised 11/03

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

\*\* Trees over 25' in mature height should be planted at least 25' away from the edge of overhead wires. Not all tree species listed may be available at nurseries, may be in limited production or limited quantities.

Tree list summarized from RECOMMENDED URBAN TREES: SITE ASSESSMENT AND TREE SELECTION FOR STRESS TOLERANCE; 2003 Urban Horticulture Institute, Dr. Nina Bassuk, Deanna Curtis,

B.Z. Marranca & Barb Neal; Cornell University, 134-A Plant Science Bldg., Ithaca, NY 14853 [www.hort.cornell.edu](http://www.hort.cornell.edu)

For more information: Call our Distribution Forestry Department (315) 428-5987, or visit [www.nationalgrid.com](http://www.nationalgrid.com).

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