

Arboricultural Specification Manual

Authority:

Pursuant to authority granted under Ordinances numbers 867 and 868, The Genoa Tree Board hereby promulgates the following as the Arboricultural Specifications and Standards of Practice for the City of Genoa, Illinois hereinafter called the Arboricultural Specifications Manual.

A. Policy

1. All work on public trees shall comply with the City's Unified Ordinances, the City's Municipal Codes and the Arboricultural Specifications Manual.
2. The Director of Public Works has the authority with the advice and assistance of the Tree Board to amend the Arboricultural Specifications Manual to reflect current trends, new information, and implement methods that will provide the necessary means to promote a healthy and sustainable urban forest.

B. Species, Cultivars or Varieties

1. The attached Table I contains a list of tree species or their varieties acceptable and approved for planting on City property.
2. Unacceptable trees species or their varieties and undesirable forms of any variety contained in the attached Table II shall not be planted on City-owned property, except in special locations where, because of characteristics of adaptability or landscape effect, they can be used to the public advantage.
3. Other tree species or their varieties not listed in Table I may be planted on City-owned property, but only desirable trees of good appearance, beauty and adaptability that are generally free from injury, injurious insects, (detrimental to the tree's health) disease or other limitations may be planted.
4. Where certain planting sites have been assigned a particular species or variety, only the designated species or variety shall be planted on such sites, unless the Director of Public Works or his/her designee, revise the landscape plan.
5. All trees removed for clearance under utility lines must be replaced with approved trees which conform to small tree heights from Table I.

6. New Subdivisions

New subdivisions shall have a mix of trees containing not more than 10% (ten) of any one species, or **genus** in a one block area. Species in selection must also meet an approximate blend of equal number of trees of large, medium and small mature heights. Special attention is given to the N, S, E, & W location, when selecting planting site. Refer to the City's Unified Development ordinance Title 6.6.3 and the City's Municipal Code Chapter 7-4 for specific requirements for land development and new construction.

- a. Tree location plan is to be submitted to the Director of Public works or his/her designee before any tree planting is to take place.
- b. Genus, species, and cultivar shall be made known on the plan to ensure proper plant diversity, growth rate, and adaptability.
- c. The name of the nursery to supply trees is required to ensure quality stock and appropriate zone hardiness. No auction stock will be accepted.
- d. Nurseries are to be within a 50-mile radius of the City of Genoa. Unless approved by the Director of Public Works or his/her designee.
- e. The plan shall also show utilities, curb, sidewalk, fire hydrant, and driveway placement where applicable. Street addresses and north arrow are also to be shown.
- f. Scale of plan shall be no smaller than 1" per 50'
- g. The Director of Public Works or his/her designee reserves the right to change or refuse the tree location or a species at his/her discretion to ensure urban forest benefit and diversity.
- h. Parkway to have a minimum of ten inches of topsoil. Soil to have substantial organic matter with nutrients, indicative to original soil removed.
- i. Trees are to be planted by auguring or hand digging. Other may be used with City consent.
- j. The Director of Public Works or his/her designee is to be notified 72 hours in advance of installation of trees for a site inspection. Installation will take place during regular working hours, Monday through Friday, 7 a.m. to 5 p.m., unless otherwise directed by the Public Works Department.
- k. Trees to be inspected before planting in the parkway.

- l. All trees to be tagged with Genus, Species, Cultivars, and indicate the nursery where purchased. Stock will be deemed unacceptable if tags are not in place or tree size is not indicated on the invoice.
 - m. All trees to have good form and strong leader according to the genus.
 - n. Arboricultural Specification manual to be adhered to in new subdivisions to include, appropriate species, sizes, and stock standards.
7. Trees shall be planted at least fifteen (15) feet from intersections the distance shall be such as to provide for the Visibility Triangle as determined by the Director of Public Works. No tree shall be planted closer than fifteen (15) feet to a utility pole to allow room for line maintenance.
 8. Spacing for all trees shall be determined in accordance with local conditions, the species, cultivars or varieties used, and their mature height to spread and form. Generally, all large trees, at maturity, shall be spaced forty (40) to sixty (60) feet center-to-center; all medium sized trees shall be spaced a minimum of thirty-five (35) feet center-to-center; and all small trees shall be spaced a minimum of twenty-five (25) feet center-to-center.
 9. The minimum planting density of tree lawns in new subdivisions shall be one tree per lot for lots with less than 80 feet of right-of –way. Two trees per lot shall be planted for lots with a right-of –way in excess of 80 feet. Homeowners who are against having a tree in the parkway may waive the privilege of a tree. However, a tree shall be planted for the City's urban forestry benefit. The price per tree will be estimated at the time that the trees are planted for that specific section of the subdivision to include the price of planting. Location of tree shall still be on city property, at the discretion of The City.
 10. All planting on unpaved streets without curbs or sidewalks must have approval of the Director of Public Works, who shall determine the location of the tree, so that it will not be injured or destroyed when curbed and paved, or when sidewalks are constructed.

C. Planting Stock Requirements

1. Size
 - a. Unless otherwise specified all medium to large deciduous trees and their cultivars or varieties shall conform to American Association of Nurserymen Standards.
 - b. Tree shall be free of branches to a point not more, not less than sixty (60) percent of their height.
 - c. Tree shall be at least 2.5 – 3 inches in diameter at a point (6) inches above ground level or 2 inches upon approval by City.
 - d. Tree shall be at least eight (8) to ten (10) feet in height when planted, or indicative to genus specie to caliper ratio upon approval of Director or his/her designee.

2. Grade

- a. Unless otherwise allowed for specific reasons, all trees shall have comparatively straight trunks, well developed leaders and tops, and the roots shall not only be characteristic of the species, cultivar or variety, but also shall exhibit evidence of balance between top and root.
- b. At the time of planting, all trees must be free of mechanical injuries, diseases, insects, and other objectionable features that tend to affect the future form and beauty of the tree.

3. Location and Spacing

- a. Based on a 40-year cycle, no tree that will attain a trunk diameter greater than fifteen (15) inches shall be planted in a tree lawn less than five (5) feet in width. In the tree lawns less than five (5) feet of width, or where overhead lines or building setback presents a special problem, the selection of planting site and species, shall be determined by the Director of Public Works. Delete with approval of tree board.
- b. Trees shall be planted at least fifteen (15) feet from driveways and alleys, and at street intersections. The distance shall be such as to provide for the Visibility Triangle as determined by the Director of Public Works.
- c. No tree shall be planted closer than fifteen (15) feet to a utility pole to allow room for line maintenance.
- d. Spacing of trees shall be determined in accordance with local conditions, the species, cultivars or varieties used, and their mature height, spread and form. Generally, all large trees, at maturity, shall be spaced forty (40) to sixty (60) feet, center-to-center; all medium sized trees shall be spaced a minimum of thirty-five (35) feet center-to-center; and all small trees shall be spaced a minimum of twenty-five (25) feet center-to-center.

4. Methods of Planting and Support

- a. All deciduous and coniferous trees shall be balled and burlaped. Balled roots should be prevented from drying out at the surface of the ball and they should be protected against freezing.
- b. Shrubs may be moved balled and burlap or as a container grown stock.
- c. Tree planting guidelines as illustrated in the attached Table III; Tree Planting Standard shall be adhered to at all times.
- d. Planting pits should be twice as wide as the root ball and dug only as deep as needed to have the root flare level with the soil surface. If necessary, remove soil from top of ball to expose root flare.

- e. If there are root sprouts above the root flare remove when only a few are present and the main root system appears healthy. Do not remove when an entirely new root system has formed above the old one, plant at the new root flare. (See Table V)
- f. Remove the burlap and wire basket from the upper 1/2 of the root ball. Remove entirely, if possible. Backfill planting pit without placing soil on top of the root ball.
- g. A section of eight (8) inch black plastic drain pipe, one side cut, shall be placed around the base of the trees.
- h. Hardwood mulch shall cover the entire pit to a depth of 3 inches. Mulch should be no deeper than one (1) inch next to the trunk.
- i. Pruning at the time of planting shall be done only to eliminate crossed branches, v-crotches, and dead wood. Proper pruning techniques must be followed.
- j. When environmental conditions deemed necessary, tree trunks shall be suitably wrapped and guyed, or supported in an upright position. Place stakes outside the rootball (B&B), and should be parallel to the sidewalk and street. The wire and straps should be placed as high as possible on the tree to prevent vandalism. Do not over-tighten the wires, so the tree is free to move. Wrap the wire ends around the stake and clip the excess to prevent injury to the public. Necessity for this is to be determined by the Director of Public Works. Tree supports are not to be used on one tree for more than one year. Unless, otherwise specified by the Director of Public Works or his/her designee.
- k. Plants must be adequately watered at planting time.

D. Early Maintenance

- 1. General
 - a. Newly planted trees, shrubs and other plants require special maintenance for one to three growing seasons following planting.
 - b. All maintenance practices shall follow approved Arboricultural Standards.
- 2. Watering
 - a. Ample soil moisture shall be maintained following planting. Thorough water once in five (5) to ten (10) days, depending on soil type and drainage provisions, is usually adequate during growing season.
 - b. A soil auger can be used to check the adequacy of moisture in the soil ball and/or backfill.
- 3. Fertilization

Provision of good drainage and adequate moisture of the backfill or the soil ball on balled plants is more important than fertilization immediately following planting.

4. Insect and Disease Control

- a. Frequent and thorough inspections shall be made to determine when measures for the control of insects and disease shall be taken. Plants are in a weakened condition following transplanting and they are more susceptible to insects, especially borers, and disease than are vigorously growing trees.
- b. Bio-remediation shall be the first recommended control practice. When it is necessary, then spraying of insecticides or fungicides shall be used, that is labeled for the intended use.
- c. Application of pesticides to be done only by the Director of Public Works or his/her designee.

E. Pruning, Early Maintenance

1. General

- a. Pruning newly planted trees shall consist of removing dead, broken or injured branches, and the suppression of rank, uneven growth that affects form. Water sprout shall be removed when they reach the diameter of a pencil.
- b. Pruning shall be practiced thereafter as needed to assure sturdy crotch development.
- c. Tree crown should be elevated as growth characteristics and location dictate. Newly planted trees need not have lower branches removed until they are well established.

F. General Maintenance, Established Trees

1. Pruning and Removal

- a. No topping of the trees shall be permitted.
- b. All large, established trees shall be pruned to the following height to allow free passage of pedestrians and vehicular traffic: at least eight (8) feet over sidewalks and a minimum clearance of thirteen (13) feet over all streets.
- c. It shall be the policy of the Director of Public Works to cooperate with the municipal or utility lighting engineer, and vice versa, in the placement and selection of lighting standards and the development of a system of tree pruning that will give effective street illumination.

- d. All cuts shall be made with a saw or pruner and only at the nodes or crotches. No stubs shall be left. No spurs or climbing irons shall be used on the trees, except when trees are to be removed. All dead branches shall be removed; branches that cross or rub should be pruned to eliminate the problem.
- e. To prevent the spread of infectious disease, all pruning tools must be disinfected before being used on a new tree.
- f. All necessary cabling shall be done according to Arboricultural Standards.
- g. The stumps of all removed trees shall be cut to at least **four (4) inches** below the ground level. The chips shall be removed, the soil cavity shall be filled with soil, the area leveled and seeded with a seed blend approved by the Director of Public Works.

2. Spraying

- a. The Director of Public Works or his licensed designee shall do spraying. Suitable precautions shall be taken to protect and warn the public that spraying is being done.
- b. Spraying shall be done only as a secondary means of control after bioremediation efforts have proven unsatisfactory.
- c. Spraying shall be done only for the control of specific disease or insects, with the proper materials in the necessary strength and applied at the proper time, to obtain the desired control.
- d. All spraying practices shall conform to federal and state regulations.
- e. Dormant oil sprays shall not be applied.

3. Cabling and Bracing

- a. The Director of Public Works or his licensed designee shall determine and approve cabling and bracing.
- b. As a general rule, cables should be located above the crotch point approximately two-third (2/3) of the distance between the crotch and the tops of the branch ends. Rust-resistant cables, thimbles, and lags should be used. The ends of a cable should be attached to hooks or eyes of lags or bolts inserted near the ends of the branches; thimble must be used in the eye splice in each end of the cable. In no instance shall cable be wrapped around a branch.
- c. All cabling and bracing practices with screw rods shall follow National Arborist Association or other accepted arboricultural standards.

G. Tree Protection

1. Construction Zone

- a. It is the responsibility of the contractor, building inspector and building permit holder, as a condition of the permit, to protect all public trees located on the adjacent public right-of-way that may reasonably be expected to be affected or damaged by construction activities.
- b. Existing trees subject to construction damage shall be guarded with a good substantial fence, frame, or box. Placement to be at a distance in feet from the tree equal to the diameter of the trunk in inches, diameter at breast height, or if space is limited, at the discretion of the Director of Public Works or his/her designee. All vehicles, construction equipment, building materials, dirt or other debris shall be kept outside of the barrier. (See Table V)
- c. No person shall excavate any ditches, tunnels, trenches, or lay any drive within a radius of ten (10) feet from any public tree without first obtaining a written permit from the Director of Public Works.

2. Utility Installation (Underground)

- a. All installations of underground utilities upon the public right-of-way are subject to approval by the City. Any and all conflicts (roots) are especially subject to the review and the approval of the Director of Public Works before the project starts.
- b. All installations through tree dripline areas shall follow approved tunneling methods. The distance of the tunnel from the face of the tree is determined by the diameter of the tree 4.5 feet from the ground line. Unless specified otherwise by the Director of Public Works, all dimensions apply as illustrated in Table IV.