

PARKS &  
RECREATION

**RULES &  
REGULATIONS**

OF THE MANAGER OF THE DEPARTMENT OF PARKS AND RECREATION, CITY & COUNTY OF DENVER

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Governing Tree Planting and Care Upon  
Public Right-of-Ways and Other Public Places,  
and Licensing Process



Approved as to form:

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Date

Approved & Adopted:  


Allegra R. Haynes  
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Adopted Pursuant to Article II  
of the Charter of the City &  
County of Denver and Sections  
2-91 et seq. and 39-2 of the  
Revised Municipal Code.

## FORWARD

The following rules and regulations are issued by the Manager of Parks and Recreation of the City and County of Denver under authority of Sections 2-91, et seq., and 39-2 of the Revised Municipal Code of the City and County of Denver. One copy of these rules and regulations is filed with the City Clerk, one copy with the Attorney for the City and County of Denver, and one copy in the office of the Manager of Parks and Recreation. A notice has been published by the Manager of Parks and Recreation on \_\_\_\_\_ in the Daily Journal.

These Rules and Regulations replace and supplant those Rules and Regulations on the same subject filed April 15, 1971, and notice published April 16, 1971.

Definitions of terms shall be in accord with Section 57-17 of the Revised Municipal Code. Other terms shall be parenthetically defined as necessary.

CITY AND COUNTY OF DENVER  
DEPARTMENT OF PARKS AND RECREATION

These regulations are intended to serve as requirements for arboricultural activities on public right-of-way and other public places, and otherwise defines required practices and treatments pertaining to same within the City and County of Denver (City of Denver), Colorado.

Any failure to comply with these regulations will be considered subject to prosecution or serve as a basis for a hearing conducted by the Manager of Parks and Recreation or both.

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## I. DEFINITIONS

In addition to the definitions provided in D.R.M.C. Sec. 57-17, provided here for reference, the following definitions apply to these rules.

*Caliper* shall mean a standard for measuring nursery trees at the time of purchase. The diameter of a tree six inches above the root flare. The root flare, also called trunk flare, is where the first main roots attach to the trunk.

*Diameter at Breast Height (DBH)* shall mean the diameter of a tree measured at 4.5 feet above finished grade.

*Drip Line* shall mean all the ground under the outermost edge of a tree's canopy or branch spread.

*Established Tree* shall mean any live, self-supporting woody perennial plant which has a trunk diameter of 6 inches or more measured at a point four and one half (4 1/2) feet above ground level and which normally obtains a height of at least ten (10) feet at maturity, usually with one main stem or trunk and many branches.

*Maintenance* shall mean any and all work performed on a tree including, but not limited to, planting, watering, pruning, removing, stump grinding, treating for insects or diseases, protecting and enhancing soils, and preserving and protecting during construction.

*Planting Area* means the total open area allocated to receive vegetation.

*Private property* means all land and improvements, including fixtures and appurtenances, located within the property lines of a property.

*Project Consulting Arborist* shall mean an independent consultant with a degree in forestry, horticulture, or arboriculture, an American Society of Consulting Arborists (ASCA) registered consulting arborist, an International Society of Arboriculture (ISA) Certified Arborist, and / or a consultant with at least five years (5) field experience in tree preservation or on-site monitoring of public works or construction projects involving tree retention and protection.

*Property owner* shall mean any person or entity having a legal or equitable interest in real property and its fixtures and appurtenances, including the interests of a tenant or lessee.

*Public place* shall mean and include all real property owned by, leased to, or under the control of the City and County of Denver, specifically including all public right-of-way.

*Responsible party* shall mean the property owner or an entity or person who, acting as an agent for or in any other legal capacity on behalf of the owner, has authority over property subject to this article or is responsible for the maintenance or management of said property.

*Tree* shall mean any perennial woody plant, usually, but not necessarily, single stem and long-lived, with a height greater than overall spread.

**II. APPLICABILITY**

- A) These rules apply to the planting and maintenance of trees in public places in the following developments:
  - 1) Where the City is requiring new public right-of-way street construction.
  - 2) Issuance of a permit for a new primary structure.
  - 3) Issuance of a permit for a new accessory structure when the cost of construction is estimated to be \$100,000 or more.
  - 4) Issuance of a permit for an addition to a structure when the improvements are estimated to be \$100,000 or more.
  - 5) Issuance of demolition permit in a residential zone district, as that term is defined in the Denver Zoning Code.
  - 6) Issuance of a Street Tree Permit.
- B) Trees shall be planted in accordance with the requirements below on all public places unless physical site conflicts exist.
- C) These Rules and Regulations do not apply to commercial or residential interior renovations but shall apply to development when new public Right-of-Way street construction is part of the development; or when any of the above conditions are met as part of development or redevelopment involving construction or reconstruction of an existing public Right-of-Way, in whole or in part.

**III. PLANTING AND MAINTENANCE OF TREES ON PUBLIC PLACES**

- A) Applicable development must comply with the following requirements for diversity of trees planted within the public right-of-way.
  - 1) As a percentage of number planted:

Genera diversity schedule

Number of Trees	Genus Percentage
≤ 2	100
3 to 8	50
9 to 15	33
16 to 20	20% species, 30% genus, 40% family
≥ 21	10% species, 20% genus, 30% family

- 2) Species diversity (minimum species richness [number of individual species] for large developments including ≥100 street trees):

Species Diversity (Richness)
One (1) species per 10 total trees max Species do not have to be equally represented (but must meet above requirements). Maximum species required 25

- 3) Consecutively/Groupings:
  - (a) Consecutive like trees in a continuous row (including around corners) or in approved groupings

<b>Consecutive Linear Row</b>	
2	Same genus

B) Trees that may be planted in the public right-of-way.

1) Acceptable trees.

(a) The City Forester’s Approved Street Tree List for Denver’s Public Rights-of-way (“Approved Street Tree List”) is the current list of trees permitted to be planted in public right-of-way. Any tree not included on the Approved Street Tree List shall be reviewed and approved by the City Forester. Trees may be approved based on the following criteria.

- (i) A species or variety not previously available in our area that is regionally appropriate based on water use, hardiness (USDA Plant Hardiness Zone) and growth characteristics.
- (ii) A species or variety suitable for planting in limited site specific applications such as natural areas, extreme urban heat islands, green roofs or other limited soil volume applications.

(b) Classes of trees.

- (i) Small maturing ornamental trees are approved only for planting under utility lines or other canopy obstructions; these trees are defined by their mature height of equal to or less than twenty-five (25) feet.
- (ii) Shade trees are approved only for planting in locations without canopy obstructions; these trees are defined by their mature height of greater than twenty-five (25) feet.

2) Unless otherwise specifically authorized by the City Forester, the following species and types of trees shall not be planted on public right-of-way. The City Forester may authorize planting of these species in unique circumstances based on landscape typology or habitat requirements such as riparian zones or designated wetlands, or when a new cultivar or variety is commercially available for testing as an addition to the Approved Planting List.

- (a) Any member of the genus *Populus* (poplar species)
- (b) Any member of the genus *Salix* (willow species)
- (c) Any member of the genus *Fraxinus* (ash species)
- (d) Any member of the genus *Morus* (mulberry species)
- (e) Any evergreen member of the order Pinales (conifers, formerly Coniferales).
- (f) *Acer x freemanii* (all cultivars)
- (g) *Acer saccharinum* (silver maple)
- (h) *Ulmus pumila* (Siberian elm)
- (i) *Ailanthus altissima* (tree-of-heaven, aka: Chinese sumac)
- (j) *Elaeagnus angustifolia* (Russian olive)
- (k) Any tree on the Colorado State Noxious Weed List
- (l) Any weeping or pendulous type tree or cultivated variety with weeping characteristics
- (m) Any tree with a low branching, multi-stem or bushy growth habit which cannot be maintained to a single leader or trunk, except as part of an approved water quality planting design.
- (n) Any plant with thorns present on the trunk or major branches.

- 3) Temporary suspension of particular trees or groups of trees.
    - (a) In the event of any destructive or communicable disease, or other pestilence that could have potential devastating impacts to the urban forest, the City Forester may temporarily suspend planting of specific trees in the public right-of-way.
    - (b) The suspension shall be lifted upon evidence supporting the quarantine or effective control of a pestilence.
- C) Tree spacing and planting space.
- 1) Unless otherwise authorized by the City Forester, all newly planted trees shall be planted as follows. In addition to the specific scenarios listed below, the City Forester may vary these requirements when physical site conditions cannot be improved and make planting otherwise infeasible.
    - (a) Midway between the sidewalk and the curb where there is a detached sidewalk, five feet minimum from the sidewalk where there is an attached sidewalk, or as approved by the City Forester if meeting this standard eliminates potential street trees in cases where all other standards are met.
    - (b) Planting strips between the curb and sidewalk greater than five feet in width shall be planted with shade trees if no utility or other physical conflict exists.
    - (c) Planting strips over twenty feet in width shall be staggered, planted in a zig zag pattern or double row. Patterns may be allowed by the City Forester if they are consistent with anticipated tree growth.
    - (d) Trees shall be planted a minimum of thirty feet from the projected curb line at a street intersection.
    - (e) Tree spacing shall be as follows unless reviewed and approved by the City Forester based on industry-accepted size projections:
      - ii) Shade trees shall be spaced thirty-five feet apart and may be varied from 25-40' apart if consistent with soil volume provided and canopy width at maturity per the Approved Street Tree list and if such spacing allows for avoidance of other requirements such as streetlights or utilities. Ornamental trees shall be spaced twenty feet apart and may be varied from 15-25' apart if consistent with soil volume provided and canopy width at maturity per the Approved Street Tree list and if such spacing allows for avoidance of other requirements such as existing/proposed infrastructure, including streetlights and utilities.
  - 2) No trees may be planted in the public right-of-way closer than three feet to the projected property line between two properties.
  - 3) Any tree planted without a permit issued as required by DRMC 57-19 is subject to order of removal from the right-of-way or transplantation to a more appropriate location on the right-of-way, depending upon whether the tree in question is included in the Approved Street Tree List, whether it is appropriate to the site, and whether it is located properly.
- D) Planting Standards.
- 1) Soil volume requirements are as follows unless approved by the City Forester due to physical site limitations. Planting areas will be reviewed on a per-site basis for appropriate context and adequate root soil volume.
    - (a) Provide minimum soil volume of 900-1000 cu. ft. of irrigated soil volume per tree (i.e. 300-334 sq. ft. open area per tree).

- (b) Use fixed depth of 3' to calculate volume where no below grade encroachments exist.
  - (c) If existing below grade encroachments exist, such as parking structures, soil depth shall be adequate to plant the minimum sized tree required per Section III and shall be evaluated based on a case-by-case basis to determine viability and possible alternatives.
  - (d) Due to varying site conditions and stormwater area mitigation, soil volume requirements for trees planted within stormwater planting areas will be determined on a per-case basis.
- 2) Tree grate systems are typically prohibited unless the proposed site meets the following criteria.
- (a) The planting site is on a sidewalk that does not meet minimum required width.
  - (b) Existing/proposed site infrastructure makes open planters infeasible or supports the goals of other city departments including green infrastructure, neighborhood plans or approved guidelines.
  - (c) Grates are necessary to match an existing streetscape design within an established improvement or maintenance district
  - (d) When the implementation of other walkable surfaces such as suspended pavement systems is not feasible due to site conditions including but not limited to restricted planting area expansion and existing site infrastructure preventing implementation.
  - (e) Suspended pavement, such as paver grates, cells or combinations of open planters and suspended pavement, may be used to meet soil volume minimums and will be reviewed and approved in coordination with DOTI encroachment standards based on:
    - (i) Surface area space limitations.
    - (ii) Proximity of all above and below grade structures.
    - (iii) Highest resulting soil volume.
- 3) Shade trees shall be 2" caliper and small (ornamental) maturing trees shall be 1.5" caliper at the time of planting unless otherwise authorized by the City Forester. Smaller and larger trees shall be reviewed and approved based on any of the following criteria:
- (a) Standard nursery sizes are not available for particular species resulting in a loss of diversity.
  - (b) Larger sizes are desired to meet a goal at the time of planting and maintenance and replacement is provided for the corresponding extension of the tree establishment period.
  - (c) Trees are provided through a City Forestry recognized partner program at reduced or no cost.
- 4) Soil analysis is required and any compaction and/or required amendment shall be provided.
- 5) Use of landscape/weed barrier fabric is prohibited for tree planting and adjacent landscaped areas.
- 6) Knitted or gorilla hair shredded wood mulch is required of all newly planted trees and trees in turf at a minimum depth of 3". Rock is not permitted. See approved Tree Planting Detail (Exhibit A) for additional information.



- 7) Tree staking is not allowed unless planting sites are subject to extreme winds, necessary for structural support or protection, and shall be promptly removed after one full growing season.
- 8) A vegetated understory is required for all trees unless otherwise warranted due to existing tree and site conditions and approved by the City Forester. Regionally appropriate, including native, low shrubs, groundcovers, perennials, and ornamental grasses shall be planted to conserve water, provide habitat and help shade the planting area or strip. Refer to the Colorado State Noxious Weed list for prohibited plants. Turf shall be reviewed for consideration by the City Forester where high pedestrian traffic or other limitations exist and shall be consistent with other city policy and codes limiting turf.
- 9) Proposed changes in surface treatment require special care to avoid root disturbance and require tree protection consistent with the standards of section IV Tree Preservation and Protection. Trees with a vegetated understory shall not be converted to non-vegetated alternatives.
- 10) Any fence shall not impede access to a publicly owned tree.
- 11) Trees shall be irrigated consistent with the Denver Parks and Recreation Standard Specifications for Irrigation Systems with the following additional standards. Trees will require a hydrozoned approach to deliver sufficient water to sustain a healthy tree when planted in low water or xeric landscape.
  - (a) Street trees maintained by adjacent residential property owners of buildings under four units do not require automated irrigation systems but shall receive sufficient water for survival and growth.
  - (b) The City Forester will require a watering plan for any property that determines irrigation is infeasible due to meter restrictions, water main locations or other physical limitation.
- 12) Planting is prohibited during extreme heat, cold or windy conditions. Planting periods are March 1 – June 1 and Sept 1 – Oct 15 and when nighttime temperatures are consistently above freezing, unless approved by the City Forester. Planting outside of these periods shall be reviewed and approved based on:
  - (a) Unusual seasonal weather patterns resulting warmer or cooler temperatures.
  - (b) The species of the proposed trees to be planted.
  - (c) Access requirements that make planting infeasible during the approved periods.

#### IV. TREE PRESERVATION AND PROTECTION

- A) Applicability. Tree preservation and protection is required pursuant to Sec. 57-25(c).
- B) Reference Standards.
  - 1) Tree Protection Zone. The Tree Protection Zone is the area above and below grade around each tree where construction activities are limited or restricted to prevent injury to preserved trees.
    - (a) The Tree Protection Zone shall extend one and one-half foot (1.5') from the base of the trunk for every one inch (1") of tree diameter. The diameter of the tree shall be measured at four and one-half feet (4.5') above grade (referred to as diameter breast height).

- (b) For areas with groups or groupings of trees, if the distance between trees is less than thirty feet (30'), the Tree Protection Zone may be combined and treated as one contiguous Tree Planting Zone to create a more clearly defined and manageable Tree Protection Zone.
- 2) All applicable requirements and recommendations of the most current versions of the following standards shall be met prior to any site disturbance. Where these conflict with other specified requirements, the more restrictive requirements shall govern.
  - (a) ANSI Z133.1: American National Standard for Tree Care Operations.
  - (b) ANSI A300: Tree, Shrub, and Other Woody Plant Management – Standard Practices.
  - (c) Guide for Plant Appraisal – Current Edition: Council of Tree and Landscape Appraisers; published by the International Society of Arboriculture.
  - (d) Refer to the Tree Retention and Protection specifications available on the OCF webpage for detailed current minimum standards.

## V. STANDARDS OF TREE MEASUREMENT AND REPLACEMENT FOR MITIGATION

- A) This section implements the process for determining the lost monetary value of a tree and the requirements for tree replacement in accordance with DRMC Sec. 57-24 when a tree in a public place has been damaged beyond repair or has been removed without a permit.
- B) Replacement and other mitigation methods for damaged or removed trees are calculated based on Diameter Measurements.
  - For Standard and Alternate Diameter Measurement Methods refer to the Guide for Plant Appraisal – Current Edition: Council of Tree and Landscape Appraisers; published by the International Society of Arboriculture.
- C) Tree Replacement.
  - 1) A tree shall be replaced on the site where it was removed unless infeasible due to physical site limitations. Authorization is required if no replacement trees are proposed.
  - 2) A responsible party wishing to combine a payment for lost value and tree replacement credit to compensate for lost value of a tree must follow the procedure set forth below. The credit given for replacement trees is the Installation Cost and Replacement Tree Cost (as established in the most current edition of the *Species Ratings and Appraisal Factors Guide* from the International Society of Arboriculture Rocky Mountain Chapter) of each tree planted in authorized locations.
  - 3) Authorized replacement tree locations include:
    - (a) The location from which the tree being replaced was removed,
    - (b) The adjacent public right-of-way, or
    - (c) An approved location in another public place if no alternative exists.
- D) Previously Approved Site Plans: Any amendments or modification to a previously approved site or landscaping plan where those changes occur within 30 feet of an existing tree requiring preservation or a proposed Right-of-Way, Park, or Parkway tree, may require an additional submittal and review by City Forester for impacts to the existing/proposed trees.

## VI. PRUNING ACTIVITIES UPON TREES GROWING IN DENVER'S PUBLIC STREET RIGHT-OF-WAY

- A) All pruning of public trees shall be completed per current industry Best Management Practices and American National Standards Institute (ANSI) A300 Pruning Standards.

## VII. SAFETY REQUIREMENTS FOR ARBORICULTURAL OPERATIONS

- A) All persons licensed by the City and County of Denver to perform work on trees and their employees shall follow industry Best Management Practices, applicable OSHA standards and ANSI Z133.1 Safety Standard requirements for arboricultural operations.

## VIII. TREE SERVICE LICENSE TESTING PROCEDURES

- A) D.R.M.C. Sec. 57-71 requires that anyone performing tree care services including pruning and removing be licensed with the city.
- B) A passing written test and field exam are each required to obtain a license. The City Forester shall administer a written and field exam upon request.
- C) Applicants who are not International Society of Arboriculture (ISA) Certified Arborists nor have met Denver's testing requirements through a qualified reciprocal testing community will be required to schedule and pass a written test.
  - 1) The City Forester will waive the need for applicants to complete the required written test if the applicant can provide documentation verifying that they are a current Certified Arborist of the International Society of Arboriculture.
  - 2) For the Sawyer License, the need for testing is determined based on the detailed qualifications of the applicant.
  - 3) A grade of at least seventy percent (70%) is required on the exams.
  - 4) Accommodations for those with reading and writing disabilities shall be made. Contact the City Forester to request accommodation.
  - 5) An applicant for a license must pass the written exam prior to taking the field test.
  - 6) The written exam covers general knowledge of: Tree Biology, Tree Identification, Safety, Insects and Diseases, Practical Tree Work Skills, and Tree Risk Assessment.
  - 7) The results of the written exam are valid for six months from date of test. If remaining requirements for the license are not completed before the expiration of the written exam results, the application is void, and the applicant must retake the written test.
- D) Applicants who are not ISA Certified Arborists nor have met Denver's testing requirement through a qualified reciprocal testing community will be required to pass a field test after completion of the written exam.
  - 1) The City Forester may waive the tree climbing portion of the required field exam if the applicant can provide documentation verifying that they are a current Certified Tree Worker of the International Society of Arboriculture.
  - 2) Proof of required insurance must be provided prior to field exam.

- 3) General license applicants must provide their own personal climbing and personal safety equipment and be prepared to conduct aerial work in a large tree.
- 4) Ornamental license applicants need to come prepared to prune a small tree or shrub.
- E) The City Forester may waive the need for applicants to complete Denver's written and field exams when the applicant has satisfied those testing requirements through participating reciprocal cities.
- F) The City Forester reserves the right to verify all documentation.