

C Gardner Landscape Guidelines

Street Tree Planting Requirements

Permission to Plant

No tree may be planted without written permission from the City Parks and Recreation Department.

Developers are required to submit a street tree planting design that includes:

- Tree species and size
- Location/placement of trees
- Location of proposed or existing utilities, including streetlights
- Dimensioned width between sidewalk and curb

A planting plan approved by the City Parks and Recreation Department serves as a permit for developers.

Tree Locations

Determine planting locations using the following guidelines:

Space 40 - 60 feet apart. Within this range, space narrow canopied trees closer

together, and wider canopied trees farther apart. Closer spacing is allowed in some landscaping situations, such as office or business planting with certain tree species.

- Place trees at least 50 feet from an intersection
- Place trees at least 15 feet from a street light
- Place trees at least 8 feet from a driveway
- Place trees at least 6 feet from a fire hydrant
- Place trees at least 6 feet from a gas valve, water valve, cable box, or any other above ground utility or other vertical obstruction
- Do not place trees with an average height of more than 40 feet under overhead wires
- Do not place trees in a bus stop zone where passengers enter and exit bus.

Approved Trees

Plant preferred trees from the current street tree planting list provided by the City Parks and Recreation Department (See Appendix). Alternatives are acceptable,

but must be approved by the City Parks and Recreation Department.

Species diversity

Species diversity is an important component of a sustainable urban forest. We require developers to plant a diverse range of trees according to the following guide:

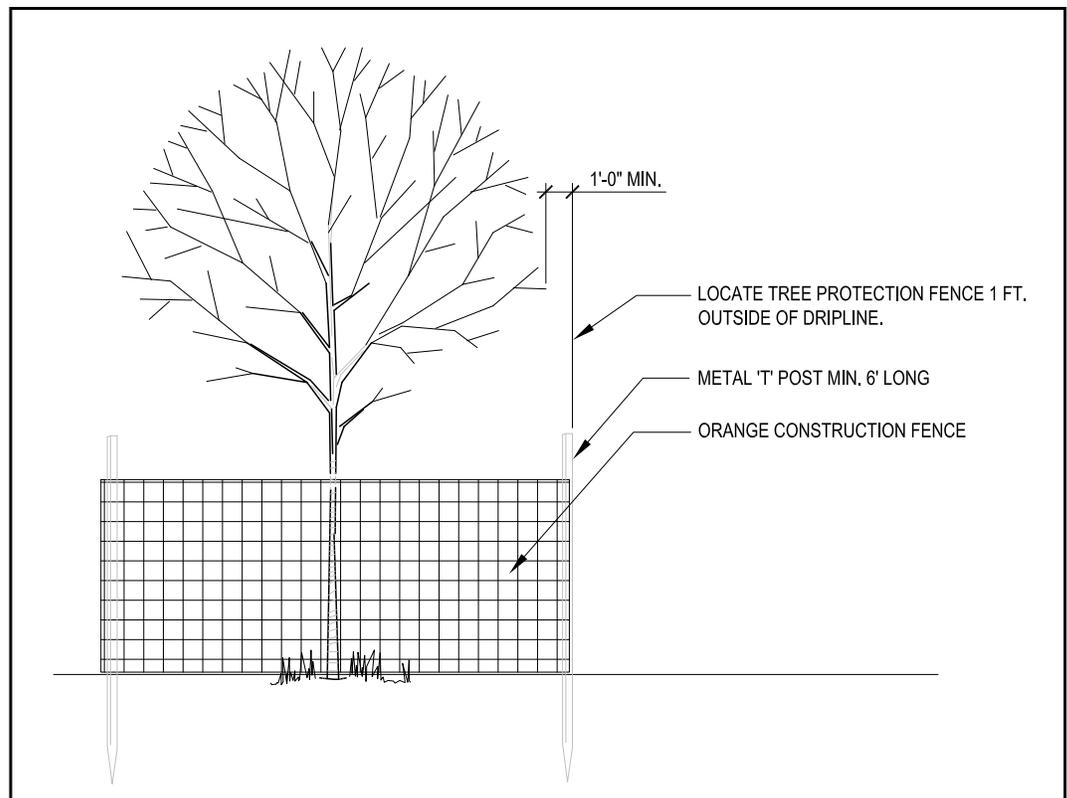
- If less than 50 trees, then not more than 50% may be of a single genus.
- If more than 50 trees, then not more than 30% may be of a single genus and not more than 30% of those may be of the same species.

Size of Tree & Width of Right-of-Way

Trees planted in public right-of-way must have adequate clearance from the curb and sidewalk within that R.O.W. for growth. When choosing a tree species, reference its maximum dbh (trunk diameter). At a tree's maximum dbh, it must have a minimum clear distance of 3 feet from trunk edge to sidewalk or 6 feet to curb.

Protection of Existing Plants

Do not store materials or equipment, or operate equipment under branches of any existing trees, except as actually required for planting in those areas. If existing plants are damaged during planting, Developer shall



*Figure C-1.
Tree Protection
Detail*

replace such plants with the same species and size as those damaged at no cost to the City. Determination of the extent of damage and value of damaged plant shall rest solely with the representative of the City Parks and Recreation Department. (See FIGURE C-1 for tree protection guidelines.)

Planting Specifications

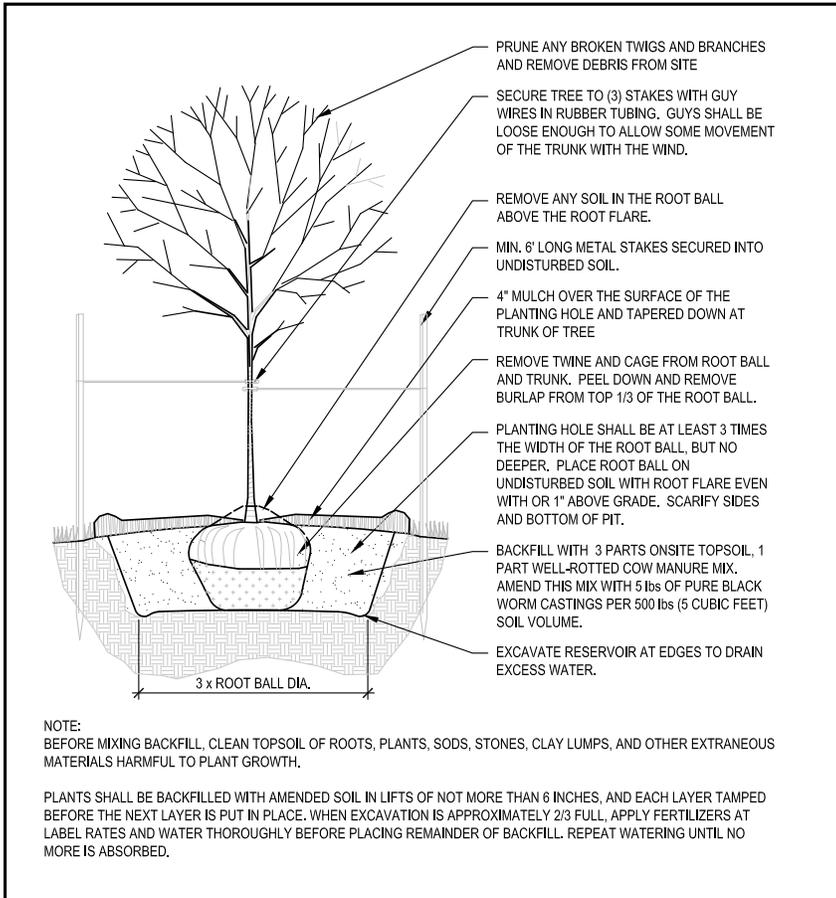
(FIGURES C-2 and C-3)

The representative from the City Parks and Recreation Department may inspect any phase of this operation and may reject any plant material improperly handled during any phase of this operation. Nothing in this Section shall be interpreted as relieving the developer of the responsibility of providing healthy, viable plants, nor shall it have any effect upon the terms of the warranty specified.

Requirements

- All trees shall be minimum 2" caliper.
- All plants shall be symmetrical in growth with balanced root and top growth and shall be No. 1 in grade or type, conforming to the latest edition of "American Standard of Nursery Stock" referenced herein. Trees shall have a single straight trunk, single dominant central leader (when characteristic of the species), and a well-balanced branch structure.
- Plant material specified as Balled and Burlapped (B&B) must have a ball of firm earth from the original soil in which the plant grew. The ball shall be wrapped with burlap and tightly tied to hold it firm and intact. Any plants with loose or broken balls or

Figure C-2.
Ball-and-burlap
Tree Planting Detail



manufactured balls will be rejected. Wire baskets shall be used where necessary to protect the balls.

- Plants shall be nursery grown and shall have received the proper fertilizing, watering, root pruning, and other care as is normally used in nursery practice. Collected stock will be rejected. Trees shall have been transplanted or root pruned at least once in the past 3 years. Stock shall consist of plants grown under natural conditions in soils and climate compatible with the city of Gardner.
- Plants shall be free from defects and injuries. All shipments of plant stock shall comply with existing State and Federal laws and regulations governing plant disease and infection, and interstate movement of nursery stock.

Fertilizer

Fertilize trees during planting with a "Plant Starter/Root Stimulator" liquid solution applied according to the manufacturer's instructions.

Mulch

Wood mulch shall consist of bagged or bulk aged wood chips, or double-ground shredded hardwood. Walnut bark or chips are not acceptable. Mulch shall cover the diameter of the planting hole at minimum; and to a depth of 4 inches. Mulch shall be tapered away from the base of the tree or shrub as shown in FIGURES C-2 and C-3.

Excavation for Planting

Planting holes shall be 3 times the diameter of the rootball. The bottom of the hole shall be no deeper than the height of the

root ball so that the tree ball is placed on solid earth. Planting holes shall have approximately vertical sides and flat bottoms.

Where turf areas are damaged by planting operations, restore and replace with equal quality turf.

Setting and Backfilling

Set all plants plumb and straight. Set at such a level that the root flare is at or 1" above the finish grade level.

Cut and remove all ties from the ball. Remove wire baskets. Cut and fold down the top 2/3 of the burlap. In no case should the burlap be pulled out from under the balls. No burlap shall be exposed above finish grade. Do not plant trees whose balls have been broken during the planting process.

Soil used for backfilling all plants shall consist of the soil excavated at the time of planting unless otherwise noted in the project specifications. Backfill each hole about 2/3.

Flood the planting hole with water and allow soil to settle. Root stimulator shall be applied at the time of watering. Backfill the remaining 1/3 of the hole not exceeding the root flare. See FIGURES C-2 and C-3 for additional details. All excess excavated soil shall be removed from the planting site.

Final Operations

Remove all remaining tags, ties, and transit protectors from trees. Install tree guard as specified.

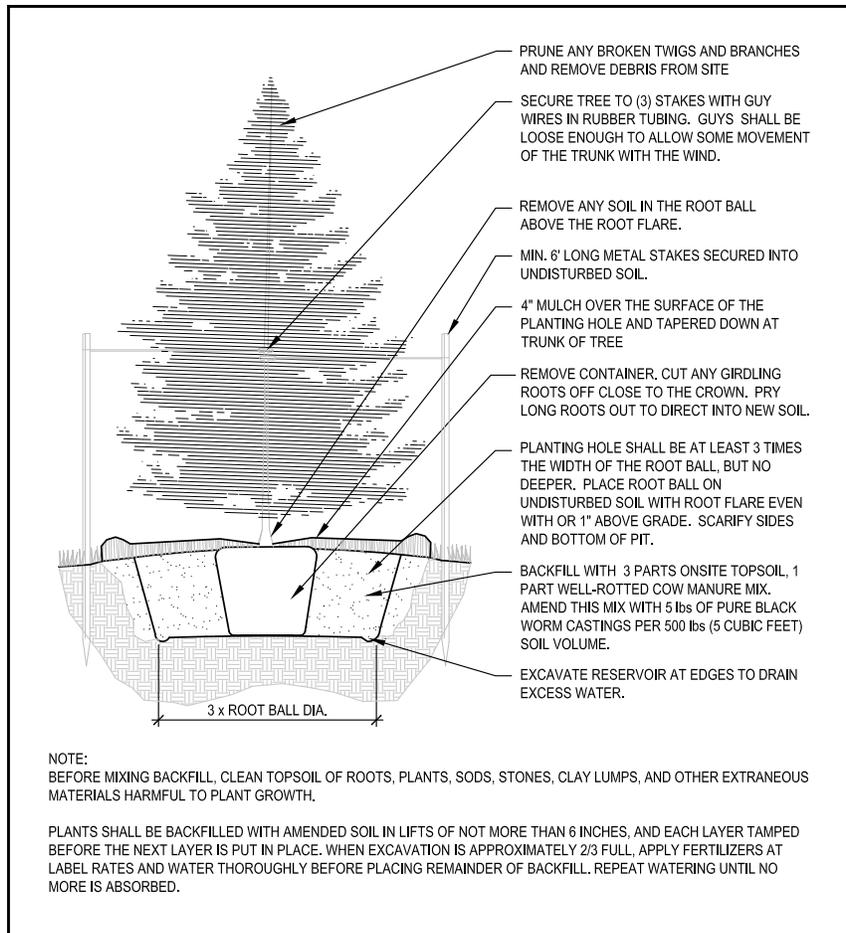


Figure C-3.
Container Tree
Planting Detail

Remove all excess and waste materials from the site promptly. Existing turf or any other conditions damaged during planting shall be repaired. When completed, the area shall be neat and clean.

Plant Guarantee and Maintenance Requirements

A representative from the Parks and Recreation Department shall have the right to inspect all landscape material to be planted in the City right-of-way prior to planting.

Rejected plants shall be promptly removed and replaced.

All plants shall be guaranteed by the Developer to be in vigorous growing condition at the time of planting.

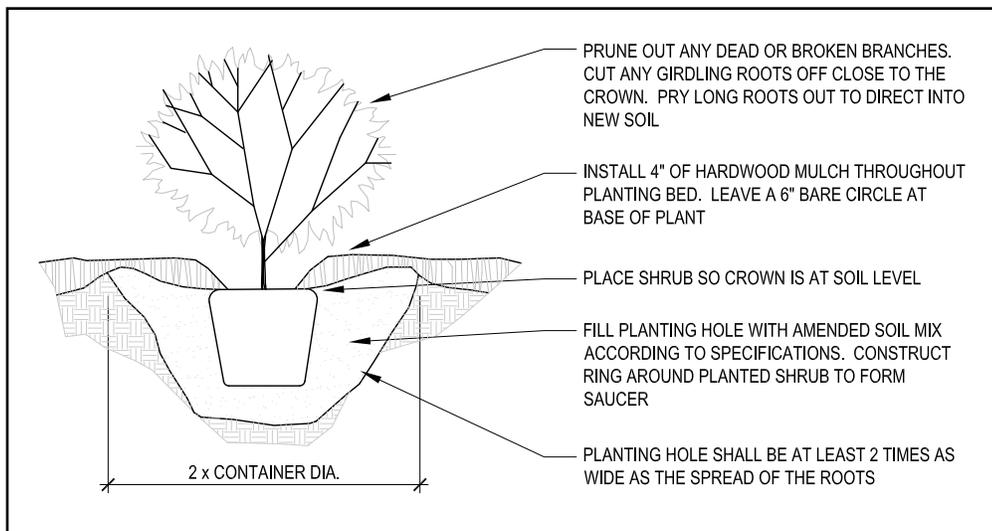
Developer shall promptly raise and straighten plants that settle or lean, for a period of 18 months.

Developer will treat for any disease, or insect problem that could cause significant harm to the plant.

Developer will guarantee and replace any plant that dies for a period of 18 months. A representative from the Parks and Recreation Department shall have the right to inspect plants for growing condition, and require replacement if necessary. Replacement plants will also be guaranteed for a period of one year.

Developer will not be held responsible for plants that are vandalized, or otherwise damaged due to circumstances beyond the contractor's control. Any plants identified as dying due to circumstances beyond the control of the developer, must be inspected and verified by a representative from the Parks and Recreation Department.

Figure C-4.
Shrub Planting
Detail



Finding the Root Flare

For balled-and-burlapped plants, probe the top of the soil ball close to the trunk/ stem to find the first roots. You can do this with a stout wire. Check in two or more locations to make sure you've located the top major roots. Leave the burlap in place to make moving the plant easier. Measure the distance from the top of the soil ball to the root flare. Next, subtract that distance from the total depth of the burlapped soil ball.

The distance from the top-most buried root to the bottom of the ball is the correct depth to dig the pit.

Testing for Compacted Soil

To test for compacted soil, do a simple percolation test. Dig a hole 12 inches to 18 inches deep and fill it with water. If the water is still in the hole 12 to 18 hours later, then you have compacted or heavy clay soils.

Roots need oxygen, so in compacted soil, dig a wide shallow hole three to four times the width of the root ball or container and only half as deep. Mound backfill soil

slightly to the top of the root flare, covering the entire excavation. This creates a raised planting bed, which will improve the plant's performance. Soils that hold excessive moisture may need a subsurface drain tube installed below the root ball.

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