

908 - TREE AND SHRUB PLANTING AND MAINTENANCE

908.1 DESCRIPTION

The work covered under these specifications consists of furnishing labor, equipment, and materials necessary to supply, install, maintain and guarantee all of the landscape materials (trees and shrubs) as indicated on the landscape plans and in accordance with Section 908 of the Standard Specifications except as otherwise modified herein. These specifications shall be considered minimum guidelines and will be **strictly followed**.

The planting as specified herein shall include new and replacement trees as shown in the Plans.

908.2 MATERIALS

- (1) Unless otherwise indicated on the plans, all trees removed shall be replaced with the same species; 2" to 2 ½" in diameter, and staked as shown on the plans.
- (2) Unless otherwise indicated on the plans, all shrubs removed shall be replaced with the same species; 5 gallon in size, and staked as shown on the plans.
- (3) Unless otherwise indicated on the plans, all perennials shall be replaced with the same species, 1 gallon in size, and as staked as shown on the plans.
- (4) A complete list of plants to be supplied, including common and scientific names, quantities, sizes, and number of each is included in the planting plans.
- (5) All plants shall be true to species and variety in accordance with the latest edition of Standardized Plant Names, American Joint Committee on Horticulture Nomenclature, and each plant shall be properly labeled.
- (6) All plants shall be symmetrical in growth with normal, well developed branches and vigorous root systems, balanced root and top growth, and shall conform to ANSI Z60.1-2004 American Standard for Nursery Stock. Attention should be paid to minimum root ball diameters and root ball depths.
- (7) Plant material shall be nursery field grown and shall have received the proper fertilizing, watering, pruning and other such care as is normally received for a particular plant under nursery conditions. Plants shall not be tip-pruned, headed back or sheared prior to delivery except as authorized by the City. All plants shall be free of mechanical injury, decay, or other defects.
- (8) All root balls shall be of firm earth from the original soil in which the plant grew. The root ball shall be wrapped with burlap and tightly tied to hold it firm and intact. Any plants with small, broken, loose, or manufactured root balls will be rejected. Stock furnished shall be uniform in size and shape.
- (9) Trees should be rooted into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted. The trunk should bend when gently pushed, not pivot at or below soil line. **The point where the top-most root in the root ball emerges from the trunk shall be visible at the soil surface.**
- (10) No plant material specified balled and burlapped may be substituted with container or other stock unless approved by the City.
- (11) Plant material shall be available for inspection at the nursery, or information concerning the source of the material available upon request by the City. Stock shall consist of plants grown under natural conditions in soils and climate comparable to Eastern Kansas. No stock shall be accepted if grown in a zone warmer than zone 5 unless approved by the City. Priority may be placed on locally grown plant material.
- (12) No plant material shall be planted by the contractor until it is inspected and approved by the City or his representative at the site of the project. Tree wrap may be removed for inspection purposes. All rejected material shall be immediately removed from the site and replaced with acceptable material at no additional cost.
- (13) All plant material shall conform to the laws of Kansas, and the stock shall be certified free of insects and diseases by the Department of Agriculture.

908.3 CONSTRUCTION REQUIREMENTS

a. Landscaping Items

All landscaping items in the Tracts listed in the plans, including but not limited to, lawn sprinkler systems, landscape beds, landscape walls, stone walkways and patios shall be documented prior to the start of construction with photography, videography, detailed survey drawings or other such methods to ensure proper reconstruction of said items. All landscaping items shall be reconstructed with new materials at the conclusion of the project to the original, or better, condition in accordance with the pre-construction documentation referenced above. The contractor is required to coordinate these activities with the property owner and the City Engineer. Lawn sprinkler systems shall comply with the "Lawn Sprinkler System" specification.

b. Nursery Stock Selection

When nursery stock is to be used, the property owner shall be notified, 15 days prior to planting, of the name and location of the nursery supplying the replacement plantings. The property owner shall be given the opportunity to select the specific stock to be planted of the type and size as indicated on the Landscape schedule. If the property owner does not select the nursery stock, the Contractor shall select the stock subject to final approval by the Engineer.

c. Installation

- (1) Planting operations shall be conducted under favorable weather conditions. The City shall be contacted at least 24 hours before planting starts.
- (2) Trees shall be located where shown on the plans, unless specific locations are flagged/staked on site by the City. Locations shall be checked that the requirements of the Overland Park Municipal Code section 18.420 is met. Installation shall be in accordance with the provided Tree Planting Detail.
- (3) The Contractor shall be responsible for locating all underground utilities and notifying serving utility companies of pending construction prior to any work being done on this project. Should obstructions be found, the Contractor shall promptly notify the City Representative. The Contractor will assume responsibility for any damaged underground utility or structure.
- (4) No planting holes shall be dug until the proposed locations have been flagged on the ground. The Contractor will promptly notify the Forester or City Representative of missing or confusing flags. Holes shall be dug according to the attached diagram. Holes for trees shall be twice as wide as the diameter of the root ball and no deeper than the height of the root ball.
- (5) Plants shall be set at the proper height, so as the point where the top-most root in the root ball emerges from the trunk shall be visible at the soil surface. Leaning or crooked trees and shrubs will be rejected. Trees and shrubs planted too deep or too high will be rejected. (See Plans). No backfill will be permitted against trunks or stems.
- (6) No pruning of stock is to take place at the time of planting except broken or dead branches.
- (7) All ropes, strings, wire baskets, staves, etc., shall be removed from top of the root ball, trunk, and stems. Burlap shall be removed or laid back from the top of the root ball after the plant is placed in the hole, immediately before backfilling. The top one-third of any wire baskets shall be removed after placing and securing in hole.
- (8) Balled and burlapped (B & B) plants shall be handled only by the ball of earth and not by the tops or branches. Care shall be taken not to drop or damage the ball in any manner.
- (9) Existing excavated top soil shall be used as backfill if it is suitable as determined by the City Representative. All rocks, asphalt, concrete or other foreign debris not suitable for backfill shall be removed from site. Soil amendments are not to be used, but extra topsoil may be used if necessary. Planting holes shall be backfilled carefully to fill all voids and to avoid root injury. Backfill shall not be compacted. Existing or extra soil as needed shall be used to construct a saucer with a minimum of 4 inch lip, and the same diameter as the hole around each tree and shrub. On slopes the "uphill" side of the saucer shall be left open to catch rain runoff. No holes

will be left open overnight unless completely covered and barricaded. Excess excavation material shall be removed from site.

(10) Each tree or shrub planted shall be thoroughly irrigated the same day as planting by low-volume, low pressure garden hose. After the saucer fills with water and soil settling has occurred, additional soil shall be added to bring the surface to grade. All plants shall be watered a second time before the Contractor leaves for the day.

(11) All trees over four (4) feet in height, shall be staked with two (2) T-rail metal stake placed outside planting hole. The stakes will be placed in a matching configuration on opposite sides of the tree. East/West or North/South orientation will be determined by the City. The trunk shall be secured to the stake with galvanized wire. The trunk shall be protected by threading the wire through nylon, polypropylene or other approved 1 ½ " wide straps wherever the wire may touch the trunk.

(12) After planting has been approved by the City Representative, a 2-3" layer of hardwood mulch shall be applied to cover all of the saucer area. The mulch shall not be piled up against trunk of tree.

(13) All accidental damage to trees and shrubs occurring during the course of planting shall be reported to the City Representative.

(14) All plant material must be alive, healthy and planted properly in order to be considered complete. Excess fill and waste material shall be removed from site. Roads and walkways shall be swept clean and the site shall be left in a clean condition. Contractor shall be responsible for all damage to the site caused by the Contractor.

d. Maintenance, Inspection, Guarantee and Replacements

(1) All trees and shrubs shall be guaranteed to remain alive and healthy for a full twenty-four (24) months from the completion of the entire project.

(2) The Contractor shall assume the responsibility of maintenance including watering, weeding, mulching, repairing and tightening support stakes, etc., for the entire guarantee period. The Contractor shall notify the City Representative at least 24 hours prior to any watering or maintenance.

(3) Tree Watering

Approved Methods:

- (a) Tank and hose with or without pump
- (b) Tree Gators or similar device with 30 gallon or more holding capacity.
- (c) Tree well shall be filled once and let drain and filled again.
- (d) Care shall be taken not to dislodge mulch, soil or create holes by force of water.

Amount & Frequency:

- (e) 20-30 gallons per tree per visit applied to tree to allow no runoff
- (f) Between October 1st and March 31st, one application per month if precipitation is less than 1" in any 30 day period.
- (g) Between April 1st and September 30th, one application per every two weeks if precipitation is less than 1" in any fourteen day period.
- (h) Soil is to be kept between field capacity and wilting point, to a depth of 24 inches, until next application.

(4) Mulching:

- (a) Three applications of mulch shall be included. The first will be at time of planting and one application in the Fall of the following two years.
- (b) The mulch shall be organic hardwood woodchips or bark of similar color and consistency. Specific mulch shall be approved by City before first application.
- (c) The first application shall be a 2-3" layer applied to cover all of the saucer area. The following two applications shall be a top dressing of mulch adequate to cover old mulch and any areas of bare ground. The mulch shall not be piled up against trunk of tree.
- (5) The Contractor shall be responsible for resetting of any plants to an upright position or to proper grade, and for the removal and replacement of any dead plant material, during guarantee period.
- (6) The Contractor shall notify the City representative of any irregularities or deficiencies which will affect the guarantee
- (7) Final inspection to determine acceptance will be made at the conclusion of the guarantee period by the City. No plants will be accepted unless they are alive and healthy. The Contractor shall replace any plants which are dead or, in the opinion of the City, are in an unhealthy or unsightly condition. The cost of such replacement(s) shall be borne by the Contractor and shall be included in his bid price for this projects. All new trees will be guaranteed for an additional 24 months from the time of replacement.

e. Sequencing and Scheduling

- (1) Planting Time:
- (2) Proceed with and complete planting as rapidly as portions of the site become available, working within seasonal limitations for each kind of landscape work required.
- (3) Planting Dates:
- (4) Trees, shrubs, and perennials shall be planted only when the ground is not frozen, snow covered, or in an otherwise unsuitable condition for planting. Spring planting shall generally occur between April 1 and June 15, and fall planting shall generally occur between September 15 and November 15.

f. Out-of-Season Plantings

For those plantings out-of-season or unavailable at the time of project acceptance, the Contractor shall provide a credit in the name of the property owner at the nursery of the Contractor's choice to be used by the property owner when the plantings become available. The amount of the credit shall equal the cost of purchasing the unavailable items in the quantities listed herein. The installation of the plantings shall be the responsibility of the property owner, except the installation of trees shall be included in the above described credit and performed by the selected nursery.

g. General

- (1) Upon request, and with approval of the City Representative, the planting Contractor may be allowed to drive upon the island(s) during planting and maintenance operations if ground conditions are suitable and firm. The Contractor shall be prepared to coordinate all planting activities from the adjacent roadway and be responsible for providing and maintaining all traffic control devices and flaggers as necessary to protect the work area and safeguard the public as specified in the latest edition of the Overland Park Traffic Control Handbook.
- (2) Bidders must bid on and be able to supply all plant materials as listed and specified in plan detail plant schedule.

908.4 MEASUREMENT AND PAYMENT

The Engineer will measure landscaping by the lump sum, excepting tree, shrub or perennial replacement, for the specified tract.

The Engineer will measure each tree replacement.

The Engineer will measure each shrub.

The Engineer will measure each perennial.

Payment for landscape material except replacements shall be made at the contract lump sum price bid for "Landscaping" for the specified Tract. Payment for replacements shall be made at the contract unit price bid per each for "Tree Replacement", "Shrub", and "Perennial".

Payment for maintenance shall be subsidiary to other bid items for the watering and mulching over the two-year guarantee period. Estimated number of waterings is ten(10)/year; mulching is two(2)/year: for a total of 20 waterings and two mulchings during the guarantee period.