

ITEM 193
LANDSCAPE ESTABLISHMENT

193.1. Description. Establish landscape plantings and maintain landscaped areas at designated locations. If used with Item 192, "Landscape Planting," begin this Item after the final payment is approved in accordance with Article 192.5.D, "Final Payment."

193.2. Materials. Unless otherwise shown on the plans, furnish the following materials:

- fertilizer in accordance with Article 166.2, "Materials";
- mulch consisting of loose organic materials such as wood chips or shredded bark that is free from harmful chemicals, soil, and other foreign matter that may promote compaction of the mulch or cause injury to the plants;
- water that is clean and free of industrial wastes and other substances harmful to the growth of vegetation;
- replacement plants as originally installed or as approved;
- pesticides conforming to the requirements of Section 193.3.A, "Plant Maintenance";
- supports of the same type as originally installed or as approved; and
- irrigation system replacement parts of the same type and manufacturer as originally installed or approved equal.

193.3. Work Methods. When "Plant Maintenance" or "Irrigation System Operation and Maintenance" are measured by the month, inspect the site at least every 2 weeks, and perform the required maintenance. Perform the following maintenance activities, and conform to requirements shown on the plans.

- A. Plant Maintenance.** Maintain vegetation within the site in a healthy and vigorous growing condition. Apply pesticides, when required, under the supervision of a person possessing a license in the appropriate use category issued by the Texas Department of Agriculture or the Texas Structural Pest Control Board. Provide documentation of this license, and obtain approval of the pesticides before applications. Pesticide applications must conform to label directions and all pertinent laws and regulations.
- 1. Pruning.** Prune in accordance with ANSI A300 when shown on the plans. Remove dead or dying plants and dead, diseased, or damaged limbs on trees and shrubs. Remove sucker-growth on trunks of trees. Apply an approved wound dressing to all oak (*Quercus*) species within 20 min. of causing bark damage or making a pruning cut. Remove and dispose of pruning debris.
 - 2. Insect, Disease, and Animal Control.** Notify the Engineer in writing of problems with insects, diseases, or animals as such problems arise. Treat the plants or planted areas as directed.
 - 3. Fertilization.** Apply fertilizer uniformly to all plants designated to receive fertilizer.
 - 4. Mulching, Plant Basin, and Plant Bed Maintenance.** Physically remove or apply herbicide to weeds and grasses within plant basins and plant beds before placing additional mulch. Apply and maintain mulch at a depth of 2 in. Maintain plant basins and plant beds free of weeds and grasses, except those that have been treated with herbicides may remain in place until removal is directed. Reshape plant basins and plant beds as necessary to conform to plan details.
 - 5. Mowing, Trimming, and Edging.** Remove and dispose of litter within the designated areas before mowing. Mow and trim grassed areas at the designated height and frequency. Edge where required. Do not use nylon cord trimmers inside plant basins or inside beds containing plant material. Trim vegetation and remove debris from curbs, sidewalks, and other hardscape features.
 - 6. Staking, Guying, and Bracing of Plants.** Stake, guy, or brace plants as directed. Remove support materials when directed, and dispose of removed materials.
- B. Plant Replacement.** If required on the plans, remove plants selected by the Engineer and replace with plants of the original species, size, and characteristics or with approved substitutes. Replace plants that have been damaged or killed due to the actions or negligence of the Contractor at no additional cost to

the Department. Unless otherwise directed, replace plants within the next scheduled work period following notification to begin replacement. Backfill in conformance with the plans or as directed.

- C. Vegetative Watering.** Apply water at the designated rate and frequency to plants or planting areas not serviced by an existing irrigation system. Apply water as directed, adjusting rate and frequency to provide adequate moisture to plant material. Use watering equipment with accurate measuring devices.
- D. Irrigation System Operation and Maintenance.** Maintain the system under the supervision of a person possessing an irrigator's license issued by the TCEQ, and provide documentation of this license. Verify and adhere to all local, state, and federal regulations. Coordinate and obtain required backflow preventer testing at no cost to the Department. Unless otherwise shown on the plans, operate the system using water provided by the Department. Ensure that all zones are functioning properly and providing adequate moisture to plant material using an approved watering schedule. When required, winterize the system to prevent freeze damage in locations where temperatures fall below 32°F. Repair the system using replacement parts of the same type and manufacturer as originally installed or an approved equal. Provide plant irrigation by an approved alternate method at no cost to the Department if the system fails due to the Contractor's actions or neglect.

193.4. Measurement. "Plant Maintenance" will be measured by the month or by the cycle. "Plant Replacement" will be measured by each plant. "Vegetative Watering" will be measured by the 1,000 gal. of water. "Irrigation System Operation and Maintenance" will be measured by the month.

193.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Plant Maintenance," "Plant Replacement" of the size specified, "Plant Replacement" of the size and type specified, "Plant Replacement" of the group specified, "Vegetative Watering," and "Irrigation System Operation and Maintenance." This price is full compensation for furnishing and operating equipment and for litter pickup, mowing, trimming, edging, pruning, fertilizer, labor, materials, tools, and incidentals. Plant replacement needed due to Contractor negligence will be at no additional cost to the Department.