

**SECTION 02950
PLANTING**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 1 Specifications Sections, apply to this Section.

1.2 DESCRIPTION

Work Includes providing and installing all plant materials as shown on the drawings and as specified herein including but not limited to:

- A. Planting all trees, shrubs and wetland plants including finishing operations.
- B. Plant pit and shrub bed excavation, and backfill mixtures.
- C. Mulch for all plant bed and saucer areas and other areas indicated.
- D. Protection, maintenance and replacement of plant material and related items.
- E. Related sections.
 - 1. Division 2, Section "SCREENED TOPSOIL AND TOPSOIL BORROW"
 - 2. Division 2, Section "ATHLECTIC FIELD LAWN HYDROSEEDING AND DRILL SEEDING"
 - 3. Division 2, Section "CLEARING AND GRUBBING"

1.3 SUBMITTALS

- A. Product Literature:
 - 1. Fertilizers/Lime
 - 2. Tree anchors
 - 3. Anti-transpirant
 - 4. Peat moss
 - 5. Landscape Edging
 - 6. Weed Barrier
 - 7. Plant Certificates
- B. Samples:
 - 1. Shredded Bark Mulch
 - 2. Compost
 - 3. Landscape Edging (When indicated on the Contract Drawings)
- C. Topsoil: Testing reports/analysis, as per Division 2 Section "Topsoil", must be submitted prior to preparation of planting mixtures.

1.4 QUALITY ASSURANCE

- A. Standards:

1. All plants shall meet or exceed the specifications of Federal, State and County laws requiring inspection for plant disease and insect control.
 2. Quality, size and ball size shall conform to the latest issue of ANSI Z60.1 "American Standard for Nursery Stock" by the American Association of Nurserymen, Inc. and its amendments.
 3. All plants shall be certified true to name by the nursery source. Sealed certificates from the nursery source shall be submitted to Landscape Architect prior to any plant material installation. One plant of each species shall be tagged with the name and size of the plant in accordance with the standards of practice of the American Association of Nurserymen. Botanical names shall take precedence over common names.
- B. Qualifications of Installers:
1. Provide at least one person who shall be thoroughly familiar with the type of materials being installed and shall direct all work performed under this Section.
 2. The foreman shall be on site at all times during the planting installations.

1.5 PRODUCT HANDLING

- A. Delivery and Storage:
1. Deliver all items to the job site in their containers with all labels intact and legible at the time of inspection. Provide protective covering during delivery. Root balls shall not be cracked or broken. Notify Owner of delivery schedule at least two (2) days in advance so plant material may be inspected upon arrival at job site. Remove unacceptable plant material immediately from job site. Do not prune plants prior to delivery unless otherwise directed by Owner. Do not bend or bind-tie trees or shrubs in such a manner as to damage bark, break branches, or destroy natural shape.
 2. Use all means necessary to protect plant materials before, during, and after installation and to protect the work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary at no additional cost to the Owner.
- C. Delivery: Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed more than six (6) hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap, or other acceptable means.
- Deliver fertilizer to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, and conformance to state law.

1.6 PROJECT CONDITIONS

- A. Examine: the areas and conditions under which work of this Section will be performed. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Owner before planting. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected. Coordinate work with other related site

work that is not included in this contract. Maintain proper sequencing of operations. Commencement of work implies acceptance by Contractor of preparatory work by others.

- B. The Contract drawings show the approximate locations of utility structures in the area of proposed landscape development. Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate as required. The Contractor is responsible for any damage that is the cause of the Contractor's operations and shall replace or repair any damage at the Contractor's expense. Changes in the locations of plant material due to utility obstructions shall not be cause for extra compensation.
- C. Plant Locations: On the Drawings are approximate and are to be used only as a guide. Contractor shall provide all field engineering services to accurately stake out locations for all plants and outlines of plant beds. Do not begin excavation until Owner or Landscape Architect has approved specific layout. Relocate the planting, without extra compensation if directed prior to final installation.
- D. Upon completion of planting: remove from the site all excess soil, mulch, materials, and debris resulting from work operations of this Section. Restore to original conditions all damaged pavements, structures and lawn areas resulting from landscaping operations. Broom clean all walks and pavements. Dispose of all debris off-site in a satisfactory legal manner.
- E. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed. Maintain the site area in a neat and clean condition at all times.

1.7 COORDINATION AND SCHEDULING

- A. Progress with planting only under favorable weather conditions. Planting will not be permitted when ground is frozen or excessively moist. Coordinate installation of planting materials during normal planting seasons for each type of plant material required. Time of planting is at the discretion of the Contractor, except as noted or when otherwise directed by Owner. Notify the Owner prior to planting.

1.8 GUARANTEE REQUIREMENTS

- A. Period Required:
 - 1. The guarantee period for all plants will begin upon Owner's certification of substantial completion of the planting.
 - 2. Plant material is eligible to receive final acceptance one (1) year from the date of the certification of substantial completion. Planting done in late fall (after November 1st), shall be maintained and guaranteed until the second Spring's leafing.
- B. Plants: shall be guaranteed true to botanical name and size, and be in vigorous, healthy growing condition at the end of the maintenance/guarantee period.
- C. Replacements:
 - 1. Replace any dead plant or any plant that is unhealthy or unsightly.

2. Make replacement immediately as seasonal conditions permit. Guarantee replacement for one full year from date of replacement.
3. Replacements shall be of the same variety and size specified in the plant list.
4. As required after the second spring leafing for plantings installed after November 1st.

1.9 FINAL INSPECTION AND ACCEPTANCE

- A. Landscape work may be inspected for acceptance in portions as agreeable to the Owner, provided each portion of the work offered for inspection is complete, including maintenance.
- B. Submit Written Notice: requesting inspection by the Owner at least 10 days prior to the end of the guarantee period.
- C. Final Acceptance: will be made if all plants meet the guarantee requirements. A sum sufficient to cover the cost of possible replacement plantings will be withheld from the Contractor if plant material is not accepted.
- D. All stakes, guying materials and wrapping shall be removed prior to acceptance, if directed by the Landscape Architect or Owner.

PART 2 PRODUCTS

2.1 TREES, SHRUBS, GROUND COVER AND PERENNIALS

- A. Nursery Grown: unless otherwise noted.
- B. Hardy: under climatic conditions similar to those in the locality of the project.
- C. Typical: of their species or variety, with a normal habit of growth. Sound, healthy and vigorous. Well-branched and densely foliated when in leaf, free of disease, insect pests, eggs or larvae. Shall have healthy well-developed root systems. All trees shall have straight single trunks with their main leader intact unless otherwise stated.
- D. Substitutions: will be permitted only upon written approval by the Owner.
- E. Sizes: shall conform to the measurement specified on the Drawings. Plants larger than specified on the Drawings may be used if approved. Use of such plants shall not increase the Contract price.
- F. Quantities: If there is a discrepancy between plants shown on the drawings and quantities given, the greater number will prevail. Discrepancies will not entitle the Contractor to an extra.

2.2 PLANT PIT BACKFILL MIXTURES

- A. General: Provide mixtures as required. Bulk mix on-site; no off-site mixing allowed.
- B. Planting Mixture:
 - Lime as recommended by soil analysis
 - 1 part peat moss or finished compost
 - 3 parts topsoil
 - Roots, Inc. "Transplant 1-Step" fertilizer/biostimulant/mycorrhiza inoculant.

2.3 TOPSOIL

- A. As per Division 2, Section 02920, "Topsoil".

2.4 SOIL AMENDMENTS AND CONDITIONERS:

Install as recommended by soil test reports.

- A. Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10 mesh sieve and not less than 50 percent passes a 100-mesh sieve.
- B. Peat: Finely shredded divided peat, so completely decomposed and free of fibers that its biological identity is lost. Provide in granular form, free of hard lumps and with a pH range suitable for intended use.
- C. Compost: Stable, finished, screened compost free of biosolids.
- D. Other Amendments: As recommended from topsoil test.

2.5 STAKES

- A. 2" x 2" x by minimum seven (7) foot long pointed hardwood stakes, free of knot holes and other defects.

2.6 STAKING AND GUYING MATERIAL

- A. Deep Root Arbor Tie (green) or approved equivalent.

2.7 FLAGS

- A. Shall be plastic, color - white, min. 3" x 10".

2.8 MULCH

- A. Mulch shall be finely shredded uncolored bark mulch free of debris and weeds and aged at least six months. Sample to be approved.

2.9 ANTI-TRANSPIRANT

- A. "Transfilm" as manufactured by PBI/Gordon Corporation or approved equal.

2.10 LANDSCAPE EDGING (When indicated on the Contract Drawings)

- A. Heavy duty black poly landscape edging shall be Heavy Duty Black Polyethylene Edging as manufactured by "Oly-Ola Sales, Inc." (1-800-334-4647), or approved equal.

PART 3 EXECUTION

3.1 PLANTING MIXTURE

- A. Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, or other extraneous materials harmful to the health of plants.

- B. Provide planting mixtures for specific plants, shrubs, groundcover, as specified. Thoroughly mix all amendments to topsoil prior to commencing planting operations.
- C. For pit and trench type backfill, mix planting soil prior to backfilling, and stockpile at site.

3.2 PLANTING PROCEDURES

- A. Balled and Burlapped and Container Planting:
 - 1. Stake all plant locations in the field as per the planting plan. Obtain approval from Owner of all plant locations. Make minor adjustments as may be required.
 - 2. Excavate plant pits as detailed, remove and spread excess excavated material to on-site areas acceptable to the Owner. Do not mix subsoil with planting soil or use as backfill. Scarify bottom and sides of each plant pit. In planting islands, as indicated on the drawings, continuously excavate to the minimum dimensions as detailed or greater if needed to remove materials compacted for parking area.
 - 3. Fill excavations for trees and shrubs with water and allow water to percolate out prior to planting. All plant pits must be free draining. Notify the Owner if positive drainage does not exist.
 - 4. Set all plants in the center of plant pits, plumb and straight with top of ball at same elevation as adjacent finished grades, and as detailed on the drawings.
 - 5. Handle balled and burlapped plants from the ball only.
 - 6. Face each plant to give best appearance.
 - 7. Carefully remove only surplus bindings and synthetic materials that do not readily decompose. Remove burlap from upper portion of ball as detailed. Do not pull burlap away from the plant. Remove top half of wire baskets, if present.
 - 8. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill to eliminate voids and air pockets. Backfill all pits 2/3 their depth with prepared plant backfill mixture, water thoroughly and allow to settle, then tamp around to fill all voids and air pockets. Complete backfilling to conform to required elevations after settlement.
 - 9. Install mulch over entire plant pit as detailed. In areas of mass planting mulch entire bed. Do not cover root flare with mulch.

3.3 FINISHING OPERATIONS

- A. Guying and Staking Trees (**Only if shown on planting details**):
 - 1. Inspect tree for injury and improper pruning and take corrective measures before wrapping. Guy, stake and anchor each tree as shown on the applicable drawings immediately after planting.
 - 2. Staking and Guying materials shall not interfere with lower limbs and shall be equally spaced and under the same tension. Install staking material at least 6 feet above finish grade for all trees of 3" caliper and over.

- B. Mulching:

Mulch all plant and shrub beds with a three (3) inch deep layer of bark mulch unless otherwise shown on the Contract Drawings.
- C. Anti-Transpirant:

Spray all trees with one (1) application of anti-transpirant in accordance with manufacturer's directives.

Apply protective film over all parts of branches, twigs and foliage.
- D. Watering Plants:

Thoroughly water all plants immediately after planting and as necessary to guarantee the plant material.
- E. Topsoil Amendments:

Provide topsoil amendments to each planting area in accordance with manufacturer's recommendations at the rates established in each specific topsoil test. Obtain Landscape Architect's approval of specific materials and rates/quantities prior to application. Prevent lime from contacting the roots of acid loving plants.
- F. Pruning:

Prune only broken and damaged limbs.

3.5 REPAIR OF LAWN AREAS

- A. Repair all lawn areas damaged/disturbed during all planting operations. Materials and procedures to be approved prior to execution of work.
- B. Provide sediment and erosion control as required to protect disturbed areas from erosion.

3.6 MAINTENANCE

- A. Period Required: begins immediately after planting. Continue until the end of the guarantee period.
- B. Maintenance Requirements:
 - 1. Provide inspection of all plant material with the Owner present. Two (2) inspections, one every six months, are required.
 - 2. Maintenance responsibilities shall include cultivating, spraying, weeding, watering, adjusting guying and staking material, pruning, fertilizing, mulching, resetting trees and shrubs to proper grade or vertical position as required, and any other operations necessary to properly maintain plant viability.
 - 3. Begin maintenance immediately after planting.

END OF SECTION 02950