SECTION 02950
TREES, PLANTS AND GROUND COVERS

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Trees.
2. Plants and shrubs.
4. Non-plant materials required to complete installation of planting.

B. Related Sections:

1. Section 02810 - Irrigation Systems.
2. Section 02900 - Landscape, General.
3. Section 02920 - Soil Preparation.

1.2 REFERENCES:

A. Standards:

1. Plants shall be first-class representatives of the specified species or variety, in healthy condition with normal well-developed branch and root systems, free of objectionable features, and shall conform to requirements as follows:

   a. USDA Standards for Nursery Stock.
   b. AAN Standardized Specifications.
   c. American Joint Committee on Horticulture (AJCH) (plant names shall meet standards of AJCH).

1.3 SUBMITTALS:

A. Certificates of Inspection for Materials:

1. State, Federal, or other inspection certificates shall accompany invoice for materials showing source or origin.

B. Plant List:
1. Submit list of plants. Refer to Section 01300;
2. Indicate which plants have special watering requirements.

C. Maintenance Instructions:

1. At completion of work, furnish three copies of written maintenance instructions to Owner for maintenance and care of installed plants through a full growing season.
2. Maintenance shall be the responsibility of Landscaping Subcontractor for 1 year after final acceptance of project.
3. The Owner shall be notified 14 days in advance of the date that maintenance operations will be discontinued.

1.4 QUALITY ASSURANCE:

A. Inspection and Approval: The Owner reserves the right to reject, at any time or place prior to final acceptance, of the installation, any materials and plants which in the Owner's opinion fails to meet specified standards requirements.

B. Inspection of plants is primarily for quality; size and variety, however, other requirements are not waived even though visual inspection results in approval.

C. Plants may be inspected where growing, but inspection at place of growth shall not preclude the right of rejection at site.

D. Rejected plants and other materials will be promptly removed from site.

1.5 DELIVERY, STORAGE AND HANDLING:

A. Fertilizer:

1. Deliver to site in original unopened container bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark and conformance to Local, State and Federal law.

B. Protection:

1. Plants shall be containerized with limbs bound, properly pruned and prepared for shipping.
2. Root system shall be kept moist and plants shall be protected from adverse conditions.

C. Identification:
1. Each plant shall be identified by means of grower's label affixed to plant.
2. Grower's label will give data necessary to indicate conformance to specifications.
3. Use durable waterproof labels with water resistant ink which will remain legible for at least 60 days.

1.6 SITE CONDITIONS:

A. Repair of lawn watering system, other underground pipe, electrical wiring, concrete walkways, sodded areas or other appurtenances damaged by operations under this Section at no additional cost to the Owner.

1.7 PLANT WARRANTY:

A. For a period of one (1) full growing season after Final Acceptance of Landscape work and at no additional cost to the Owner, the Contractor shall replace any trees, shrubs or ground cover that are dead, or that are, in the opinion of the Owner, in unhealthy, or unsightly condition, or that have lost their natural shape due to dead branches or excessive pruning of dead branches.

B. Replacement of planting shall be in accordance with the original specifications and its cost shall be included.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL:

A. Plant List:

1. Refer to "Schedule" provided in construction drawings.

LEED WEc1: Water Efficient Landscaping
When feasible, plants chosen from schedule shall be native and adapted to local climate conditions.

B. Size:

1. Minimum acceptable sizes of plants measured before pruning with branches in normal position.

C. Source:

1. Hardiness Zones:

a. Shrubs grown in Hardiness Zones 2, 3, 4 and 5 only will be accepted. Hardiness Zones are defined in U.S. Department of Agriculture
2. Nursery Grown:
   
a. Plants shall be nursery grown. The term "nursery grown" will include gathered native plants and imported plants that have been growing in a nursery for a minimum of one growing season.

2.2 BACKFILL MATERIAL:

A. Planting mix shall be existing topsoils blended 50%/50% with A1 Premium 3 Organic Compost.

B. Topsoils:
   
1. Use topsoils stockpiled on site, free from toxic substances, sticks, debris, vegetation and stones over 1" (2.5cm) in maximum dimension.

2. In the event that no suitable topsoil exists after site clearing, the Contractor shall provide adequate topsoil at no additional cost.

3. The Design Consultant shall specify suitable import topsoil material.

2.3 TREE WRAPPING MATERIALS:

A. Will be first quality 4" wide Bituminous impregnated tape, corrugated or crepe paper, brown in color, specifically manufactured for tree wrapping and having qualities to resist insect infestation.

2.4 STAKING AND GUYING MATERIAL:

A. Stakes will be standard wood 8' high stakes.

B. Protective loops will be nylon, of a composition durable enough to last two years.

PART 3 - EXECUTION

3.1 INSTALLATION:

A. Positioning:
   
1. Shrubs and trees will be placed in position prior to planting, for final acceptance to location by the Owner or Landscape Consultant.

B. Placing Plants:
   
1. Planting will be done in accord with good horticultural practice or region. Trees should be planted so the top of the root ball is at least one (1) inch above
surrounding grade.

C. Excavation of Planting Pit:

1. After preparation of soil, the plant pit, centered on the location stake, shall be excavated in a cylindrical shape with vertical sides and flat or saucer-shaped bottom. Sides of the plant pit shall be scarified. Diameter of plant pit will be at least twice the spread of ball or container.

D. Root Care:

1. Do not remove protective wrapping of root ball or bare roots until plant is positioned accurately in planting pit. When positioned, remove wire mesh and burlap prior to backfilling.
2. Score root balls of containerized shrubs just prior to planting.

E. Pruning and Watering:

1. Plant material will be pruned only to remove dead, injured or lower branches.

LEED WEc1: Water Efficient Landscaping
Plant Material specified shall be chosen to minimize water consumption for irrigation.

F. Guying and Staking:

1. Guy and stake in accordance with the standard detail following this section.

G. Tree Mulch Ring.

1. Provide an eight (8) foot diameter mulch ring around each newly planted tree.

3.2 PRE-EMERGENT HERBICIDE:

A. Will be applied as per manufacturer's specification, at Owner’s approval

3.3 MULCHING:

A. Organic Mulch:

1. Mulch planting saucers, beds, tree mulch ring and areas within two days after planting.

3.4 PRUNING:

A. New Plant Material:
1. Prune minimum necessary to remove injured twigs and branches, deadwood and suckers.

3.5 PLANT MAINTENANCE AND ACCEPTANCE:

   A. Maintenance period will begin immediately after plant material is installed until final acceptance of landscape work.

   B. Maintenance shall include watering, weeding, cultivating, mulching removal of dead branches, restoring plants to proper grade or upright position and other necessary operations.

3.6 SCHEDULE:

   A. Climatological factors directly influence and limit in many ways the possible choices available to the designers of Boulder Campus landscaping.

END OF SECTION 02932