

SECTION 329300 - PLANTING**PART 1 - GENERAL****1.1 WORK INCLUDED**

- A. Planting trees, shrubs, and ground covers.
- B. Mulching.
- C. Plant establishment and warranty period.

1.2 SUBMITTALS

- A. Product Submittals:
 - 1. Sample: Submit 1/2 gallon product sample of bark mulch prior to delivery at the site.
 - 2. Submit a sample of plant guys.
- B. Quality Assurance Submittals:
 - 1. Submit written confirmation of plant order with landscape bid. Substitution requests for plants must be submitted prior to bidding. See submittal procedures.
 - 2. Submit Certificates required by law with plant shipments in the Closeout Manual.
 - 3. Submit notification to Owner 14 days minimum prior to Owner assuming plant maintenance responsibility that indicates the recommended landscape maintenance procedures for the next 60 days.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Comply with minimum requirements for plant quality, grade tolerances, and caliper to height ratios as specified in American Standards for Nursery Stock, ANSI Z60.1.
 - 2. Meet or exceed the specifications of federal, state, and county laws requiring inspection of plants and planting material for plant disease control.
 - 3. The Landscape Architect may observe trees and plants prior to purchase.
- B. Plant Names:
 - 1. Names and sizes of plants shall comply with the Standards of Practice of the American Association of Nurserymen, Inc.
 - 2. Conform to Standardized Plant Names by J. Horace McFarland Company.
 - 3. Botanical names take precedence over common names.
- C. The Landscape Architect may reject plant material that does not meet specified standards at any time prior to Final Acceptance.
- D. Tree Inspection: Coordinate the City arborist inspection of trees at time of delivery. Provide City Arborist a minimum (48) forty-eight hour notice prior to delivery.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Packing and Shipping:
 - 1. Notify the Landscape Architect of delivery schedule so plant materials may be inspected upon delivery.
 - 2. Do not deliver more plant materials than can be planted in 48 hours.
 - 3. Deliver packaged materials in manufacturer's unopened containers, fully identified by name, brand, type, weight, and analysis.
- B. Storage and Protection:
 - 1. Protect plants against damage and dehydration.

2. Cover plant roots and root balls with soil or other accepted material upon delivery, if not scheduled for planting within 4 hours.
3. Store plant materials in shade and protect against harmful weather.
4. Store packaged materials to prevent damage and intrusion of foreign matter.

1.5 SITE CONDITIONS

- A. Environmental Requirements:
 1. Do not plant when air temperature is less than 35°F or above 90°F.
 2. Do not plant when ground is frozen, excessively wet or dry.
 3. Do not plant when wind velocity exceeds 25 mph.
- B. Scheduling:
 1. Conduct landscape work when within the acceptable planting season for each kind of plant.
 2. Coordinate Work with other contractors.

1.6 PLANT WARRANTIES

- A. Warranty begins on date of Final Acceptance.
- B. Plant materials shall be in healthy condition at end of one-year warranty period, or for one full growing season after installation, whichever is longer.
- C. Replace unhealthy plants within 15 days or as approved by the Landscape Architect.
- D. Corrective Work shall be done within 15 days or as approved by the Landscape Architect.
- E. Contractor is not responsible for plants damaged by vandalism or theft during warranty period.

1.7 MAINTENANCE SERVICE AND PERIOD

- A. Begin maintenance service immediately after planting and continue until Final Acceptance.
- B. Water, weed, fertilize, spray, cultivate, mulch, reset plants to correct grade and upright position, remove dead wood, and perform other necessary maintenance work necessary for healthy growth.
- C. Remove fallen leaves, cones, and plant litter from landscape areas.
- D. Irrigate planting soils when necessary to avoid drying out of plant materials and to promote healthy growth.

1.8 QUALIFICATIONS

- A. Installer Qualifications: The landscape construction professional as defined in ORS 671.520 and performing work under this section of the contract shall hold a valid landscape contractor's license in accordance with ORS 671.510 to 671.760.

PART 2 - PRODUCTS

2.1 PLANTS

- A. Nursery Stock:
 1. Healthy, well-branched and rooted, full-foliaged when in leaf, free of disease, injury, insects, weeds, and weed roots.
 2. Typical of plant species and variety.
 3. Plants held in storage will be rejected if they show signs of growth during storage.
 4. Do not use cold storage plants.
 5. Where drawings indicate row planting, furnish plants matched in form.

6. Plants larger than specified in plant list may be used when acceptable to the Landscape Architect at no additional cost to Owner.
 7. If use of larger plants is acceptable to the Landscape Architect, then increase the spread of roots or root ball in proportion to the plant size.
- B. Plant Names:
1. Furnish plants true to name.
 2. Tag a minimum of one of each bundle or lot with common and botanical name.
- C. Balled and Burlapped Plants (B&B):
1. Ball and Burlap with natural ball of size to insure healthy growth.
 2. Dig with firm natural balls of earth of sufficient diameter and depth to encompass the feeding root system necessary for full recovery of the plant.
 3. Comply with ball sizes listed by American Standard for Nursery Stock.
 4. Cracked or broken balls are not acceptable.
- D. Container Grown Plants:
1. Furnish plants in removable containers or integral peat pots.
 2. Furnish plants well rooted to ensure healthy growth.
 3. Furnish plants grown in containers from six months to two years prior to delivery, with roots filling container but not root bound.
 4. Furnish plants grown in container for sufficient length of time for root system to hold container soil together.
- E. Trees:
1. Furnish species that mature at heights over 25 feet with a single main trunk.
 2. Do not furnish trees that have a main trunk with two or more co-dominant leaders.
 3. Do not furnish conifers which have been sheared as for Christmas tree stock.
 4. Trees shall not contain pruning wounds with a diameter of more than 1 inch. Pruning wounds must be made at branch collar and have sound bark on all edges.
- F. Shrubs and Ground Covers:
1. Furnish plants with spread and height requirements typical for the species in the specified container size.
 2. Furnish plants in a moist and vigorous condition, free of dead wood, bruises, root injuries, and branch injuries.
- G. Plant List: As indicated on the Drawings.
1. Contractor shall verify plant quantities indicated on the Drawings. Quantity errors on the Drawings are not the responsibility of the Owner or the Landscape Architect. Provide sufficient quantity of plants to complete work shown on the Drawings.

2.2 ACCESSORIES

- A. Bark Mulch:
1. Free from weeds, seeds, and material harmful to plant life.
 2. Shredded hemlock or fir bark, medium grade, free of wood chips, maximum size to pass 3/4" mesh screen.
- B. Wood Stakes:
1. Wood Species and Grade: Douglas Fir, WCLIB or WWPA No. 2 or Construction grade.
 2. Nominal Size for Deciduous Trees: 2" x 2" square, or 2" diameter round, by 8 feet long, or larger if needed.
- C. Plant Guys:
1. Broad belt-type strapping or plastic chain, minimum 1" width.

PART 3 - EXECUTION

3.1 ACCEPTABLE PLANT INSTALLERS

- A. Employ a planting field superintendent to be present and direct performance of planting Work. Planting superintendent shall be familiar with planting materials and methods of installation.

3.2 PERFORMANCE

- A. Verification of Conditions:
 - 1. Examine planting areas and site conditions prior to starting work.
 - 2. Verify location of underground utilities prior to starting work.
 - 3. Starting work indicates acceptance of existing site conditions.
- B. Protection:
 - 1. Protect utility lines.
 - 2. Barricade and cover excavations as required to protect pedestrians, employees, equipment, and adjacent property.
 - 3. Protect existing shrubs and trees from damage, discoloration, and soiling.
 - 4. Protect existing and new improvements from damage, discoloration, and soiling.
 - 5. Provide protective cover and barriers as necessary to prevent damage and staining.
- C. Preparation:
 - 1. Comply with requirements in Section 32 91 13, Soil Preparation.
 - 2. Excavate pit to a minimum of three times diameter of root ball or root system, not less than 6" deeper for shrubs, and not to exceed depth of root ball for holes for balled trees.
 - 3. Assure drainage by flooding prior to planting.
 - 4. Immediately prior to planting, scarify bottom and sides of hole with shovel.
- D. Placement of Trees and Shrubs:
 - 1. Set top of root ball 1-1/2 inches above finished grade.
 - 2. If hole is too deep, fill hole with compacted soil to correct levels. Deep planting is not permitted.
 - 3. Install plants upright and face plants to give best appearance and relationship to adjacent plants and structures.
 - 4. Remove root ball containers completely.
 - 5. After trees have been set in plant pit, remove top and sides of wire baskets. Use bolt cutters to cut wire in several places and remove wire from plant pit. Remove fasteners and burlap wrapping from top third of root ball. Do not bury wire and fasteners in landscape; dispose of legally.
 - 6. Trim broken and frayed roots and any circularly growing roots conforming to the container shape.
 - 7. Adjust plant locations to minimize conflicts with irrigation equipment.
- E. Installation of Tree Support: Guy and stake deciduous trees from two directions with guys, guy wire, and stakes as detailed on the Drawings.
- F. Planting Trees and Shrubs:
 - 1. Cut off broken and frayed roots.
 - 2. Place and compact prepared planting soil carefully to avoid injury to roots and fill voids.
 - 3. When hole is filled to within 4" of finish grade, fill with water and let stand until water is absorbed by soil.
 - 4. Backfill with prepared soil mix and compact to eliminate voids.
 - 5. Place Mycorrhizae Tablets in each plant pit as specified in Section 32 91 13, Soil Preparation. Ensure tablets are in direct contact with plant roots or rootball.
 - 6. Do not perform initial watering of trees and shrubs by irrigation system. Water plants thoroughly by hand with a hose immediately after planting.
- G. Planting Ground Covers:
 - 1. Install plants at spacing indicated.
 - 2. Dig holes large enough to allow spreading of roots.

3. Backfill with prepared soil mix and compact to eliminate voids.
 4. Place Mycorrhizae Tablets in each plant pit as specified in Section 32 91 13, Soil Preparation. Ensure tablets are in direct contact with plant roots.
 5. Slightly dish soil surface at each plant and water thoroughly.
- H. Pruning Trees and Shrubs: Prune trees and shrubs to remove damaged, dead and poorly connected branches.
- I. Mulching:
1. Apply 3" thick layer of bark mulch over planting beds within two days after planting.
 2. Lift plant foliage above mulch where required to prevent mulch contact with foliage.

3.3 ADJUSTING AND CLEANING

- A. Remove defective trees, plants, and ground covers from the site within 8 hours after site delivery.
- B. Repair damage to utility lines and site improvements as a result of planting work.
- C. Reshape finish grade to match adjacent surfaces.
- D. Replace defective trees, plants, and ground covers prior to Final Acceptance or where necessary during next planting season.
- E. Remove excess materials from the site.
- F. Sweep clean adjacent paving, curbs, walls, and walk surfaces.

END OF SECTION