

SECTION 02932

TREES, SHRUBS, AND GROUNDCOVERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnishing and installing plant material.

1.2 RELATED SECTIONS

- A. Section 02912: Topsoil
- B. Section 02936: Vegetation Establishment Period

1.3 REFERENCES

- A. ANSI Z 60.1: American Standard for Nursery Stock

1.4 SUBMITTALS

- A. A copy of the plant purchase order indicating plant names, sizes, quantities, and unit prices. Submit within 90 calendar days from the Notice to Proceed.
- B. Plant substitutions:
 - 1. Obtain a signed statement from three wholesale nurseries, noted for stocking the specified plant(s), indicating that the plant(s) is unavailable.
 - 2. Submit to the Engineer the signed statements and a written request indicating the size and species of the unavailable plants and their suggested replacements.
 - 3. Substitutions will not be approved after 120 calendar days from the Notice to Proceed.
- C. All necessary inspection certificates for each shipment of plants as required by Utah Laws and Regulations.

1.5 QUALITY ASSURANCE

- A. Reject plants not meeting ANSI specifications.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Secure required plants at a nursery within 60 calendar days from the Notice to Proceed.
- B. Before site delivery, grow plants under full exposure to climatic conditions for a minimum of 60 calendar days.
- C. Notify the Engineer at least 14 calendar days before delivering the plants to the site.
- D. Deliver plant materials to the work site in covered vehicles just before placement.
- E. Maintain delivered plants in a healthy condition.
 - 1. Replace all wilted, windburned or stressed plants at no additional cost to the Department.
 - 2. Protect balled and burlapped rootballs from sun and wind by covering with soil or other suitable material if not planted immediately upon delivery.

1.7 PLANT INSPECTION AND ACCEPTANCE

- A. Replace unacceptable plant material within 14 days after notification from the Engineer.
- B. The plant inspection only occurs after all plant materials have been installed.
- C. The Engineer schedules the inspection date.
- D. Make the required field adjustments and changes following the inspection.

1.8 SCHEDULING

- A. Install irrigated plants using the following schedule:

<u>Elevation</u>	<u>Planting Season</u>
Below 4000 ft*	March 1 - December 1
3940 to 6000 ft	April 15 - October 15
Above 6000 ft	May 1 - July 1

* No planting in July or August.

- B. Install non-irrigated plants in the fall after the plant is dormant and before the ground freezes.

PART 2 PRODUCTS

2.1 PLANTS

- A. Supply healthy plants of the species and size specified, true to form, free from disfiguring knots, sunscald, frost cracks, abrasions of the bark, and all forms of infestation and disease.
- B. Provide legible labels attached to all plants, flats, bundles, or other containers indicating botanical genus, species, and size.
- C. Supply trees with straight central leaders capable of standing upright without the support of stakes or guys.
- D. Establish fully in the container, container supplied plants.
- E. Use no balled and burlapped plants if the ball of earth surrounding roots has been cracked or broken or if the burlap is not secure.
- F. Use bare-root plant material as approved by the Engineer.

PART 3 EXECUTION

3.1 PREPARATION

- A. Verify that area prepared to receive plants is graded properly as per plan, all work is completed in the area, and that topsoil has been placed. Refer to Section 02912.
- B. Have the irrigation system installed and fully operational before installing plants.

- C. Stake or delineate locations of plants for approval before installation.

3.2 INSTALLATION

- A. General
 - 1. Install plants so that the top of the rootball is flush with the surrounding finished grade.
 - 2. Within one hour of installation, water the plants to saturate the rootball to a minimum of 4 inches below and around the plant hole. Add more backfill if settling occurs.
- B. Containerized Plants
 - 1. Excavate plant holes to twice the diameter and the same depth of the rootball.
 - 2. Carefully remove the plant from its container, scarify the sides and bottom of the rootball if needed and place it in the prepared hole.
 - 3. Place excavated soil in 4 inch lifts around the rootball and eliminate voids by tamping the soil between each lift.
- C. Balled and Burlapped Plants
 - 1. Excavate plant holes to twice the diameter and the same depth of the rootball.
 - 2. With burlap securely intact, gently place the plant in the prepared hole.
 - 3. Reject mishandled or plants with broken root balls.
 - 4. Remove the top half of the burlap without disturbing the root ball.
- D. Tubeling Plants
 - 1. Auger a hole the same size as the tube.
 - 2. Immediately following excavation of the hole, gently place watered tubeling in the prepared plant pit so that the roots are not tangled, compacted, or curled up at the ends.
 - 3. Compress the soil at the base of the tubeling to eliminate voids between the rootball and existing soil.

3.3 CLEANING AND MAINTENANCE

- A. Remove from site foreign materials such as containers, burlap, and twine collected during installation.
- B. Remove any tags, labels, or other items attached to the plant material after final plant inspection.

- C. Water and maintain the plants in a healthy condition until the final plant inspection. Refer to Section 02936 for vegetation establishment period.

END OF SECTION