

SECTION 028060
Landscape Planting (S-7)
(Palm Trees)

1. SCOPE

This Specification shall govern all work and materials required for Landscape Planting.

2. MATERIALS FOR PLANTING

Topsoil - Topsoil shall be a natural, fertile, friable soil, possessing characteristics of representative productive soils in the vicinity. It shall be obtained from naturally well drained areas. Topsoil shall be without admixture of subsoil and free from Bermuda grass, nut grass (*Cyperus rotundus*) and other objectionable grass, weeds and toxic substances. Topsoil shall not be stripped, collected or deposited while wet.

Peat Moss - Peat Moss is to be of German or Michigan origin and is to be low in content of woody material and free of minerals harmful to plant life; it shall be a ph from 4 to 6, a moisture content of not more than 30 percent, and a water absorbing capacity from 1100 to 2000 percent; it may be natural, shredded, and granulated.

Water - Water will be furnished by the Contractor and will be suitable for irrigation and free of ingredients harmful to plant life. Hose and other equipment required for the placement of water shall be furnished by the Contractor.

Commercial Fertilizers - Commercial Fertilizers shall conform to all applicable state fertilizer laws, shall be delivered in original, unopened containers, each bearing the manufacturer's guaranteed analysis, and shall be uniform in composition, dry, and free flowing. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.

Guy Wires - Guy wires shall be No. 12 pliable galvanized iron.

Plant Materials - The Engineer may inspect plants at place of growth but such inspection does not preclude the right of rejection on the site.

Plant List - A plant list is shown on the planting plan.

Nomenclature - The scientific and common names of plants herein specified conform with the approved names given in "Standardized Plant Names". Names of varieties not included therein conform generally with names accepted in the nursery trade.

Quality and Size

- a. Plants shall have a habit of growth which is normal for the species and shall be sound, healthy, vigorous, and free from insect pests, plant diseases, injuries, and after effects thereof.
- b. Plants shall conform to the sizes indicated in the Plant List and/or shown on the plans with the exception that larger plants than those specified may be used if approved by the Engineer. Use of such plants shall not increase the contract price. Plant material shall be measured before pruning with branches in normal position.
- c. Plants shall have normal, well developed branches and vigorous fibrous

root systems.

- d. Requirements for the measurement, branching, grading, quality, balling, and burlapping of plants generally follow the code of standards currently recommended by the American Association of Nurserymen, Inc., in the "American Standard for Nursery Stock".

Palm Specifications

- a. Palms for this project shall be Canary Island Date Palms (*Phoenix canariensis*) and shall have a minimum trunk-foot height of eight (8) feet and minimum trunk circumference of 60" measured 36" above ground.
- b. Palms shall be balled and burlapped.
- c. The trunk-foot (height) shall be measured from the ground level (before digging) to the base of the leaves (fronds) which provide horizontal branching.
- d. The palms shall, upon delivery, have at least five (5) but not more than ten (10) leaves. Leaves shall be counted in the order of age starting from, but not to include, the bud leaf.
- e. Ends of leaves may be clipped, but not to exceed 50% of each leaf surface.
- f. Palms must be free of dead leaves.
- g. Palms must exhibit all characteristics of healthy and vigorous growth; free of disease and insects and damage related thereto.
- h. Trunks of palms shall be sound and free of symptoms of peeling, cavities, or other deterioration.
- i. The City of Corpus Christi shall have the options of requiring scaled photographs of the prospective palms or availing itself of the opportunity of viewing the palms at their source, before digging.
- j. Palms shall be guaranteed to live for a period of twelve (12) months after completion and acceptance of the project.
- k. At least two work-days notice must be given to the Engineer prior to delivery of palms.

3. CONSTRUCTION METHODS

Edging shall be placed between the existing turf and proposed planting areas. Edging shall be a 2" x 6" member pressure treated in accordance with AWPA Standard C2-80 (or latest revision) with chromate copper arsenate (CCA) and shall have a minimum final retention of 0.4 pcf by assay.

Substitutions - Substitutions will be permitted only upon submission of proof that a plant is not reasonably obtainable and authorization by the Engineer of a change order providing for use of the nearest equivalent obtainable size and variety of plant having the same essential characteristics with an equitable adjustment of contract price.

DIGGING, WRAPPING AND HANDLING

Balled Plants - Plants designated "B&B", balled and burlapped, in the Plant List, shall be adequately balled with firm, natural balls wrapped with burlap. No balled plant shall be planted if the ball is cracked or broken either before or during the plant process. Any plant which is loose in the ball shall be removed from the site and another plant conforming to the specifications of the plant removed shall be planted in its place at the expense of the Contractor.

Protection - All plants shall be handled in such a manner as to avoid unnecessary damages of any kind. The balls of balled plants which cannot be planted immediately upon delivery shall be covered with moist soil or mulch, or other protection from drying wind and sun. All plants shall receive expert attention and shall be watered as necessary until planted.

Labeling - Durable, legible labels stating in weather resistant ink the correct plant name and size, as specified in the Plant List, shall be securely attached to all plants, bundles or packages of plants of a single species and size, or plant container delivered to the planting site for the purpose of inspection and planting identification.

Shipment and Delivery - The Contractor shall promptly notify the Engineer in advance of the time and manner of delivery of plants, and shall furnish therewith an itemized list of the actual quantity of plant materials to be delivered, on order to insure satisfactory coordination of delivery, and to expedite the required inspection at the point of delivery. These itemized lists and the necessary inspection certificates to accompany each plant and/or shipment shall be delivered to the Engineer prior to acceptance and planting of the plant material. When shipment is made by truck, all plant material shall be packed to provide adequate protection against climatic, seasonal, and breakage injuries during transit. The tops shall be securely covered with tarpaulin or canvas to minimize wind whipping and drying. Under no circumstances shall balled plants be dropped from trucks to the ground. A suitable method of handling shall be employed to insure the careful, workmanlike delivery of heavy balled plants to preclude cracked or "mushroomed" plant balls at the point of delivery.

PLANTING OPERATIONS

Time of Planting - Planting operations shall be conducted under favorable weather conditions during the seasons which are normal for such work as determined by accepted practice in the locality. At the option of and on the full responsibility of the Contractor, planting operations may be conducted under unseasonable conditions without additional compensation to the Contractor.

Obstruction Below Grade or Overhead - The Contractor shall secure from the Engineer copies of layout drawings showing the location of all underground utility lines and other structures in order to minimize conflict with same. During excavation operations, the Contractor shall notify the Engineer at once so that arrangements may be made either to move the structure or relocate the planting.

Excavation for Planting - Plant pits shall be circular in outline and shall have vertical sides and flat bottoms. The minimum widths and depths of plant pits, specified below, shall be measured from finished grade.

Balled and Burlapped

Pit diameter - 24 inches greater than diameter of ball.

Pit depth - 12 inches greater than depth of ball.

One and Five Gallon Containers

Pit diameter - 18 inches greater than diameter of container.

Pit depth - 6 inches greater than depth of container.

Soil Preparation - Soil used for planting areas and backfilling plant pits shall be existing excavated topsoil; or if the quantity of existing excavated topsoil is inadequate, sufficient additional topsoil shall be provided. Topsoil for backfilling plant pits shall be thoroughly mixed with the following materials and in the following proportions:

| <u>Topsoil</u> | <u>Peat</u> | <u>Sulfur</u> | <u>Fertilizer</u> <u>10-20-10</u> |
|----------------|-------------|---------------|--------------------------------------|
| 27 Cu. Ft. | 10 Cu. Ft. | 2 lbs. | 4 lbs. |
| 12 Cu. Ft. | 2 Cu. Ft. | 3 Cups | 2 Cup |

Soil mix shall be thoroughly mixed so as to combine all parts. All plants shall be planted in pits, centered and set of excavated soil to such depth that the finished grade level at the plant after settlement will be the same as that which the plant was grown. They shall be planted upright. No burlap shall be pulled out from under balls. Wire and surplus binding from the top of balls shall be loosened or removed to prevent any future girdling. The excavated soil shall be placed and compacted carefully to avoid injury to roots and to fill all voids. When the hole is nearly filled, add water as necessary and allow it to soak away. Fill the hole to finished grade. Form a shallow saucer around each plant by placing a ridge of topsoil around the edge of each pit. Remove containers before planting.

Setting Plants

- a. **General:** All plants shall be set 1-12 to 2 inches above existing grade so that after settlement they bear the same relation to the finished grade of the surrounding soil that they bore to the grade of the soil from which they were dug.
- b. **Ball Plants:** After pits have been dug as hereinbefore specified, a minimum of six inches of compacted prepared soil, or as much more as is needed to allow the ball to rest firmly on such compacted soil at the proper level, shall be placed in the bottom of the pit. Prepared soil shall then be placed around the ball and compacted carefully to avoid injury to roots and to fill all voids. Burlap, rope, wire and other wrapping materials shall be cut away from the top of the ball and removed from the pit, but no burlap shall be pulled from under the ball. All broken or grayed roots shall be cut off clean. When the pit is nearly filled with soil, add water and allow it to soak away. Fill the pit to finished grade. After the ground settles, additional soil shall be filled in to the level of the finished grade.

Pruning - Pruning shall be limited to the minimum necessary to remove injured twigs and branches, and to compensate for the loss of roots during transplanting, but never to exceed one-third of the branching structure. Cuts over 3/4 inch in diameter shall be painted with an approved tree wound paint. Any necessary pruning shall be done at the time of planting.

Mulching - Plants shall be mulched within two days after planting with a four

inch deep layer of mulch material, entirely covering the area within the tree well that was created at the time of planting and shown in the plans.

Soaking - All plants to be soaked immediately after planting.

Clean-up - As planting operations proceed, all rope, wire, burlap, empty containers, rocks, clods and all other debris shall not be allowed to accumulate but shall be removed daily and the site kept as clean as possible at all times.

4. MEASUREMENT & PAYMENT

Unless specified otherwise in the Special Provisions, Landscape Planting shall not be measured and is considered subsidiary to the appropriate bid item. See Special Provisions.