

APPENDIX 5: SPECIAL CONCRETE COLORS & FINISHES

Mission Bay
Master Specification

SECTION 02950
STREET TREE PLANTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes (but is not necessarily limited to):

1. Street Tree Planting for City Sidewalks and Multiblock Walkways
2. Crushed Gravel Mulch
3. Inspections
4. Maintenance Period
5. Warranty Period

B. Related Sections:

1. City Standard Specification, by DPW, July 1996, Section 205 - Aggregate Base
2. Section 02720 - Specialty Sidewalks
3. Section 02110 - Irrigation Systems
4. Section 02870 - Site Furnishings
5. Section 02920 - Structural Soil
6. Section 02230 - Combined Sewer
7. Section 02935 - Landscape Maintenance

C. Department of Public Works (DPW) Order No. 171,442 "Regulations for excavations and Restoring Streets in San Francisco", approved January 1, 1999

D. Department of Public Works (DPW) Order No. 172,236, "Regulations for Excavation in Public Right-of-Way, Mission Bay Project Area."

1.2 SUBMITTALS

A. Furnish 3 copies of manufacturer's literature or laboratory analytical data for the following items:

1. Organic planting fertilizer(s)
2. Crushed gravel mulch
3. Written verification of procurement of all trees from suppliers
4. Anti-detriment spray
5. Root Barrier
6. Soil Amendments and Fertilizers: Submit manufacturer's catalog cuts and guaranteed analysis of all soil amendments and fertilizers specified by the results of the soil analysis.

B. All submittals shall be forwarded in a single package to the Owner's Agent within 30 days of award of the Contract.

C. Submit Contractor Qualifications.

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D. Submit Certificates of Inspection of plant materials.

1.3 CONTRACTOR QUALIFICATION

A. Contractor shall have minimum of five years of successful experience performing landscape work of comparable size and nature.

B. Provide at least one person who is thoroughly trained and experienced in landscape planting and who shall be present at all times to direct all work in this section.

1.4 REFERENCE STANDARDS

A. Work under this section shall comply with the following standards:

1. "An Annotated Checklist of Woody Ornamental Plants of California, Oregon and Washington, (Hansen 4091)", McClintock and Lester, Division of Agricultural Sciences, University of California, 1979.
2. "USA Standard for Nursery Stock", 1973 Edition, American Association of Nurserymen.
3. "Standardized Plant Names", 1942 Edition, American Joint Committee on Horticultural Nomenclature.
4. "Hortus Third"

B. All trees shall be true to name and in all cases botanical names shall take precedence over common names. All trees of such clones, species or cultivar shall be delivered to the site labeled with their full botanical name. Any tree, after one year following final acceptance of the project, determined by the Owner's Agent to be untrue to the species, clone and/or variety specified, shall be replaced by Contractor, at no cost to the Owner, to the equal condition of adjacent plants at the time of replacement.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. All plant material shall be shipped and stored in their original containers as furnished by the nursery supplier.

B. Plant material shall not be stored on the site and shall be delivered within 5 days of the commencement of planting operations.

C. Plant material shall be protected during transit, plants in broken containers and plants with broken branches or exposed trunks will be rejected.

1.6 REQUIREMENTS OF REGULATORY AGENCIES

A. Perform work in accordance with all applicable laws, codes and regulations required by authorities having jurisdiction over such work and provide for all inspections and permits required by Federal, State and local authorities in furnishing, transporting and unloading materials.

B. Certificates of inspection required by law for transportation shall accompany invoice for each shipment of trees. Submit five copies of certificates to Owner's Agent after

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acceptance of material. Inspection by Federal or State Governments at place of growth does not preclude rejection of trees at project site.

1.7 SELECTION, TAGGING AND ORDERING OF TREES

A. Trees shall be subject to inspection and approval by Owner's Agent at place of growth and upon delivery for conformity to the Contract Documents. Such approval shall not impair the right of inspection and rejection during progress of the work. Submit to Owner's Agent a written request for inspection of trees at place of growth. Written request shall state the place of growth and quantity of trees to be inspected. Owner's Agent reserves right to refuse inspection at this time if, in his judgment, a sufficient quantity of trees is not available for inspection.

B. Substitution of trees will not be permitted unless authorized in writing by Owner's Agent. If proof is submitted that any tree specified is not obtainable, a proposal will be considered for use of the nearest equivalent size or variety with corresponding adjustment of Contract price. These provisions shall not relieve Contractor of the responsibility of obtaining specified materials in advance of special growing conditions or other arrangements must be made in order to supply specified materials.

1.8 INTENT OF DRAWINGS AND SPECIFICATIONS

A. It is the intent of the Drawings and Specifications to provide planting with trees in vigorous growth, ready for the Owner's use. Any items not specifically shown in the Drawings or called for in the Specifications, but normally required to conform to such intent, are to be considered as part of the work.

1.9 SITE CONDITIONS

A. Environmental Requirements:

1. Perform actual planting during those periods when weather and soil conditions are suitable in accordance with locally accepted horticultural practice.
2. Perform grading and soil preparation only during the period when beneficial and optimum results may be obtained. If the moisture content of the soil should reach such a level that working it would destroy soil structure, suspend spreading and grading operations until the moisture content is increased or reduced to acceptable levels and the desired results are likely to be obtained.

B. Field Measurements:

1. Scaled dimensions are approximate. Before proceeding with planting, carefully check and verify dimensions and immediately inform the Owner's Agent of discrepancies between the Contract Documents and actual conditions.

1.10 EXISTING CONDITIONS

A. Protect existing improvements. Damage to existing construction caused by work of this Section shall be promptly repaired and/or replaced at no cost to Owner.

1.11 CLEAN UP

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A. Commencement of planting operations shall presume that Contractor has fully examined all areas to be planted and has determined that conditions are satisfactory.

B. Coordinate tree planting operations with installation of irrigation systems, drain installation, and work of other trades.

1.2 HANDLING OF PLANT MATERIALS

A. Carefully pack trees to prevent bruising, damage to bark, branches and root systems, and root ball cracking. Provide adequate ventilation. Protect root balls from sun, drying wind and frost. Do not drop trees from vehicles. Lightly label trees with correct botanical name and common name, including genus, species and variety/cultivar name.

B. Store packaged materials in dry locations away from contaminants. Separate pesticides from other landscape materials.

1.3 PLANTING OF TREES

A. GENERAL

1. At the nursery and upon delivery, plants shall be subject to inspection and approval by Owner's Agent for conformity with this section. The Owner's Agent reserves the right to examine and reject any plant material deemed to be unhealthy condition during planting or throughout the Ornateer period. Provide 72 hours notification of plant delivery.
2. Notify the Owner's Agent a minimum of 72 hours prior to commencement of tree planting.
3. Examine areas to receive planting prior to commencement of work. Items to be examined include irrigation installation and completed work of other trades.

B. DRAINAGE, DETRIMENTAL SOILS AND OBSTRUCTIONS:

1. Notify the Owner's Agent in writing of all soil or drainage conditions Contractor considers detrimental to growth of trees. State condition and submit proposal to improve drainage.

D. PLANTING OPERATIONS

1. Protect trees at all times prior to planting from sun or drying winds. Trees that cannot be planted immediately on delivery shall be kept in the shade, with protected and shall be kept well watered for no more than (5) five days.
2. Place root barrier per Drawings and manufacturer's instructions.
3. After removing trees from container, scurry sides of root ball to prevent root-bound condition.
4. Install tree as shown on Drawings.
5. Set tree plumb and brace rigidly in position until installation of trees is complete.
6. Place specified fertilizer tablets 4" below finished grade in accordance with the following schedule:

Container size	# of Tablets
24 inch box	8
36 inch box	12
48 inch box	16

7. Smooth planting areas per Section 02920 after full settlement has occurred.
8. Water all trees immediately after planting.

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9. Remove all nursery type plant labels from trees.

1.4 ROOT BARRIER

A. Install per drawings and in accordance with manufacturer's instructions.

1.5 STAKING

A. To avoid damage to powder coating, stakes shall be wrapped separately by manufacturer for delivery to site.

B. Staking shall be completed immediately after planting. Trees shall stand plumb after staking.

C. Staking for 34" Box Trees - "Reddy Stake"

1. Tree should be oriented with nursery stake on the same side as the Reddy Stake. Nursery stake must be removed.
2. Place the Reddy Stake as shown on Drawings. The tree should be one to three inches away from the end of the T-bar. Set stake within tree pit. Avoid damaging root ball. Insert the pin through the hole in the top of the Reddy Stake and twist clockwise into the soil.
3. Twist the Reddy Stake until the tab is 1 to 2 inches below grade. Drive the anti-rotation pin through the hole in the tab and into the soil. Use the handle of a shovel, rake, or two by two, and pack soil firmly around the stake.
4. Determine the correct height for the T-bar keeping in mind it should be no higher than necessary but high enough to hold the tree upright. To locate the correct point to mount the T-bar, hold the trunk of the tree in one hand and gently bend the top with the other. Find the lowest height at which the top returns upright, and mark the Reddy Stake six to eight inches higher than that point. Slip the T-bar over the top of the Reddy Stake to the marked height and tighten the bolt.
5. Place the UV-resistant, tubing strap around the tree, and slip the ends of the tubing over the ends of the T-bar. Fold both sides of tubing towards the tree trunk and against the T-bar and secure with two of the provided cable ties. Add third cable tie around strap between T-bar and tree trunk.
6. Treat any chipped powder coating on stakes with touch-up paint per manufacturer's recommendation.

D. Staking for 36" and 48" box trees - "Mega Stake"

1. Tree should be oriented with nursery stake on the same side as the Mega Stake. Nursery stake must be removed.
2. Place the Mega Stake as shown on Drawings. The tree should be one to three inches away from the end of the Strap-bar. Set stake within tree pit. Avoid damaging root ball.
3. Drive the Mega Stake into the soil 3 feet minimum. Use the handle of a shovel, rake, or two by two, and pack soil firmly around stake.
4. Determine the correct height for the Strap-bar keeping in mind it should be no higher than necessary but high enough to hold the tree upright. To locate the correct point to mount the Strap-bar, hold the trunk of the tree in one hand and gently bend the top with the other. Find the lowest height at which the top returns upright, and mark the Mega Stake six to eight inches higher than that

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