

SECTION 01040 - PLANTING

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Comply with Section 01040 of the Standard Specifications modified as follows:

01040.02 Definitions: Add the following definitions to the end of this subsection:

Fall - The period beginning on the equinox in September through solstice in December.

Summer - The period beginning on the solstice in June through the equinox in September.

Replace the paragraph that begins "**Permanent Wilting Point** ..." with the following paragraph:

Permanent Wilting Point - The level of Soil wetness at the point a plant wilts and can no longer recover its sustainable turgidity when placed in a saturated atmosphere for 12 hours.

Replace the paragraph that begins "**Root Protection Zone** ..." with the following paragraph:

Root Protection Zone - A generally circular area around an existing plant to be protected from disturbance or compaction by the use of temporary fencing or other means. The zone as actually staked may exceed the current root area to allow for future growth of the plant. Root Protection Zones are shown or staked before construction activities begin.

01040.03(b) Pesticide Applicators License and Chemical Registration - Replace this subsection, except for the subsection number and title, with the following:

Provide evidence to the Agency that each applicator is licensed for the specific class of chemical being applied. Also, provide evidence that any chemical is registered for the proposed use by the Oregon Department of Agriculture according to ORS Chapters 452, 561, 570, and 634.

01040.04(a) Planting Work Plan – Replace the bullet that begins "Plant installation and..." with the following bullet:

- Plant installation

Add the following bullet to the end of the bullet list:

- Plant establishment plan according to 01040.70

Add the following subsection:

01040.05 Submittals – Submit the following for review and approval:

- Contract Growing Plan according to 01040.19(g).
- Planting work plan according 01040.04(a).
- Plant establishment plan according to 01040.70.
- Weed Control Work Plan according to 01030.42(a).
- Photo log 10 Days after each plant establishment visit and periodic inspection. [Furnish Provide](#) date stamped photographs in photo log of each plant establishment site visit with photos of multiple individual plants, seeded areas and weed control areas that are sufficiently close to display plant condition and that are representative of the health, vigor and growth of the site plantings.

01040.10 General - Replace this subsection, except for the subsection number and title, with the following:

Submit a list of Project Materials for approval according to 01040.04(a) before arranging for procurement of any Materials. For materials not approved, submit a list of alternate Materials for approval. Materials installed without approval are subject to removal and replacement with acceptable Material at no additional cost to the Agency.

Substitute Materials may be allowed if proof of equivalent quality, suitable product specifications, manufacturer's literature and other detailed information is provided to the Agency according to 00140.70.

01040.13(a) Soil Fertility Test and Soil Amendment Report - Replace the paragraph that begins "Prior to planting ..." with the following paragraph:

Prior to planting, provide a Soil fertility analysis of existing Soils performed by a certified testing lab. Prior to planting, adjust Soil amendment and fertilizer applications as recommended by the Soil amendment report and as approved by the Agency.

01040.13(a)(1) Sampling - Replace this subsection, except for the subsection number and title, with the following:

Take five samples per acre of each Soil type. Mix the five samples into one test sample for each Soil type. Provide Soil fertility test results that provide information on available nutrient content and fertility status of the Soil. Conduct sampling procedures according to the Oregon State University Extension Service handout EC 628, *How to Take a Soil Sample... and Why.*

01040.13(a)(3) Soil Amendment Report - Replace this subsection, except for the subsection number and title, with the following:

Provide a report from the testing laboratory summarizing sampling locations and procedures with printed results, and that makes recommendations for fertilizers and Soil amendments to effectively develop productive Soil.

01040.14 Topsoil - Replace the bullet that begins "Provide one 20..." with the following bullet:

- Furnish one 20-pound representative Soil sample of each Topsoil type for testing of particle size range and organic matter by the Agency, unless otherwise specified.

01040.14(a) Selected Topsoil - Replace the paragraph that begins "Furnish native Topsoil ..." with the following paragraph:

Furnish native Topsoil from the required excavations meeting the requirements of 00330.10 or from other Agency-Controlled Lands. The general limits of Topsoil Materials are indicated on the Plans. The Agency will make the final determination of the areas where the most suitable materials exist. Furnish Topsoil that is the fertile part of a Soil profile commonly referred to as the "A" horizon, typically ranging in depth from 3 inches to 12 inches. Do not take material for Topsoil from a depth greater than 12 inches below existing ground, unless approved.

01040.14(c) Wetland Topsoil - Replace the paragraph that begins "Furnish a native..." with the following paragraph:

Furnish a native, naturally hydric Wetland Topsoil consisting of Silts, Clays, and organic matter in combination that is free from substances detrimental to plant growth, such as Noxious Weeds, undesirable plant roots, refuse, sticks, or lumps. Furnish Wetland Topsoil that is from a Wetland with an existing, well established, healthy growth of the desired Wetland plants. Obtain approval of the source before excavation of Wetland Topsoil begins.

01040.15 Soil Conditioners - Replace the paragraph that begins "Soil conditioners..." with the following paragraph:

Soil conditioners are for modifying Soil structure and improving Soil aeration characteristics, as distinguished from plant foods, mulch, and Soil organism amendments. Furnish Soil conditioners free of Noxious Weeds, living plants and rhizomes, and substances detrimental to plant life. For mushroom compost and Peat moss only, submit a 15-pound sample for approval by the Agency prior to construction. Furnish Soil conditioners that are free of weed seeds, excessive salts, chemicals detrimental to plant growth, and pest organisms. Soil conditioners proposed for use are subject to testing at any time or place the Agency deems appropriate.

01040.16 Soil Amendments - Replace the paragraph that begins "Soil amendments..." with the following paragraph:

Soil amendments are intended to improve Soil nutrition. Furnish Soil amendments that are free of materials detrimental to plant life. Provide manufacturer or Supplier quality compliance certification according to 00165.35. Ensure that material testing methods meet the requirements of the Oregon Department of Agriculture appropriate to that material. Obtain approval for use before beginning Work. Soil amendments may include the following:

01040.17 Soil Bio-Amendments - Replace the paragraph that begins "Soil bio-amendments..." with the following paragraph:

Soil bio-amendments are intended to increase beneficial Soil organism numbers or Soil organic nutrient content. Furnish bio-amendment products or materials that are free of substances or life forms detrimental to plant life and receive approval prior to use on the Project. Provide manufacturer or Supplier quality compliance certification according to 00165.35. Ensure that material testing methods meet the requirements of the Oregon Department of Agriculture appropriate to that material. The following are typical Soil bio-amendments that may be identified in the Soil bio-amendment report:

01040.18(b) Plant Bags and Tablets - Replace the paragraph that begins "Furnish plant bags..." with the following paragraph:

Furnish plant bags or tablets that are controlled-release with a minimum one-year release period. Chemical formulation, rates and are approved by the Agency.

01040.19(a) Nomenclature - Replace this subsection, except for the subsection number and title, with the following:

Use the most current edition of *Hortus Third*, by Bailey for botanical identification and nomenclature of plant materials. The Agency may authorize use of other references such as the *Sunset Western Garden Book*, the *Flora of the Pacific Northwest*, by Hitchcock, or the *Manual of California Plants*, by Jepson.

Furnish plants according to the applicable requirements of the current issue of the *American Standard for Nursery Stock*, published by the American Association of Nurserymen. When a conflict exists between this publication and the Specifications, the Specifications will prevail.

01040.19(b) Quality - Replace the paragraph that begins "Provide plants that are healthy..." with the following paragraph:

Furnish plants that are healthy, first-class representatives of their species or variety, free from disease and insect pests, with top growth that is well developed and free of disfiguring knots, sun scalds, bark abrasions, wind or frost injury or any other objectionable features.

Replace the paragraph that begins "Furnish plants that are acclimated..." with the following paragraph:

Furnish plants that are acclimated to the specific Project environmental site conditions prior to planting. Store all container-grown and balled and burlapped plant materials acquired for planting a minimum of 3 months before planting, as specified in 01040.41 or 01040.42, at a location north of the Oregon - California border.

Replace the paragraph that begins "Furnish plants that possess..." with the following paragraph:

Furnish plants that possess top growth and root systems typical to their variety. Furnish trees with central leaders that have a symmetrical, well-branched, straight trunk. Trees with a damaged or missing leader, multiple leaders or Y-crotches, or sheared conifer trees are rejected.

01040.19(c) Certification - Replace the paragraph that begins "Furnish a State..." with the following paragraph:

Provide a State inspection certificate and shipping certificate for each load or lot of plant material that includes the following information:

01040.19(d) Inspection - Replace this subsection, except for the subsection number and title, with the following:

Plants are subject to inspection by the Agency, at any time and place. The Agency will make no plant material inspection at the source, except as it may elect. Notify the Agency of each delivery of plants to the Project site no less than 24 hours ahead of delivery. Do no planting until the plants have been inspected and approved for use. Any planting done without prior approval of the plants is considered in violation of the Specifications.

The presence of Noxious Weeds in the Soil accompanying plants or at the nursery source is cause for rejection of any or all plants from that source.

01040.19(e) Availability - Replace this subsection, except for the subsection number and title, with the following:

Provide a list of nursery sources for all specified plants within 90 Calendar Days after execution of the Contract. Verify, by this list, that all specified plant material has been located and is available for use on the Project. If applicable, see 01040.19(g) for alternate requirements.

01040.19(f) Plant Substitution - Replace this subsection, except for the subsection number and title, with the following:

No substitution of plant materials is allowed unless written evidence is submitted that a specified plant or material cannot be obtained and has been unobtainable since the execution of the Contract. If substitution is allowed, it is by written approval from the Agency for the nearest acceptable variety, size and grade. Make any request for substitution in writing to the Agency with ample time for approval without delaying the Work.

(Use the following subsection .19(g) when a contract growing agreement is required.)

01040.19(g) Contract Growing Plant Materials - Add the following sentence to the end of this subsection:

This Project requires a contract growing agreement.

01040.19(h)(2) Deciduous Trees - Replace the paragraph that begins "Trees with leaves that are..." with the following paragraph:

Trees which shed their leaves annually.

01040.19(h)(3) Transplanted Specimen Plants - Replace this subsection, except for the subsection number and title, with the following:

Unique or large plants typically used in low numbers on projects. See the Plans for specimen type, size, and location. Deliver trees to the site that are dormant and with buds that have not

yet swelled. Furnish plants that have an unbroken root ball sufficient to sustain continued growth. Ensure that the root ball size conforms to the current edition of the American Standard for Nursery Stock. Furnish plants with no broken limbs or bark abrasions, and cleanly cut off any frayed roots or damaged limbs. Deliver trees that are balled and burlapped, boxed or moved by commercial tree spade.

01040.19(h)(4) Balled and Burlapped (B&B) Plants - Replace the paragraph that begins "Furnish plants with ..." with the following paragraph:

Furnish plants with root balls securely wrapped in burlap or similar mesh fabrics not harmful to plants, and bound with removable twine or wire. Furnish root balls that are firm, intact and held solidly together by a fibrous root system consisting of only the earth where the plant was growing. "Made" balls are rejected.

01040.19(h)(6) Container Grown Plants - Replace this subsection, except for the subsection number and title, with the following:

Plants that are grown and delivered in containers that possess well-formed top growth and whose root growth is typical to the variety.

Furnish plants that are resident in their delivery containers long enough to have established new fibrous roots, have a root mass that will retain its shape, and hold 90 percent (visual estimate) of the root ball material when removed from their containers. Some root growth should be visible along the outer edges of the container. Root-bound container grown plants and "made" container plants are rejected.

01040.19(h)(7) Seedling Trees - Replace the paragraph that begins "Plants that are grown from seed..." with the following paragraph:

Plants that are grown from seed in a nursery and brought to the site in a bare root condition. ~~Provide~~ Furnish seedlings labeled with age and certification (class number) ~~which~~ that shows the length of time grown in a nursery seedbed, followed by the length of time grown in a transplant bed. Furnish seedling trees that are a minimum of 2 years old.

01040.19(h)(9) Plant Cuttings - Replace this subsection, except for the subsection number and title, with the following:

Living, freshly cut branches from certain woody shrub or tree species that readily propagate when embedded in damp Soil. Furnish plant cuttings of regionally native species and dimensions as shown. Obtain written approval of the cutting stock sources before taking any cuttings and provide a brief, written description of the cutting sites and the date and time the cuttings were taken to the Agency. Take cuttings in such a manner so as to leave no long-term damage to the source population. If willow species are called for, select the local native shrub variety.

01040.19(h)(15) Wetland Plants - Replace this subsection, except for the subsection number and title, with the following:

Plants that meet the definition of hydrophyte, that is any macrophyte that grows in water, or on a substrate, that is at least periodically deficient in oxygen as a result of excessive water content.

01040.19(h)(16) Bulbs - Replace this subsection, except for the subsection number and title, with the following:

For the purposes of this section, these will typically include the forms known as bulbs, corms, culms, plantlets, rhizomes, runners, small offsets, stolons and tubers. These plants are collectively referred to as "Bulbs". The appropriate propagule (plant part that can be separated and used to grow another plant) will vary depending on the plant species.

01040.19(h)(17) Sod Lawn - Replace this subsection, except for the subsection number and title, with the following:

Grass sod grown on agricultural land that is commercially cultivated specifically for turf sod. Furnish sod that is free of Weeds, diseases, harmful nematodes and insects. Furnish sod that is mature, not less than 10 months old, and machine cut to a uniform thickness of 5/8 inch or more, excluding top growth and thatch. Broken pieces and torn or uneven ends will not be accepted. Plant sod within 36 hours of harvest.

01040.20 Mulch - Replace this subsection, except for the subsection number and title, with the following:

Furnish plant bed mulch Materials free of Noxious Weed seeds or plants and that contain no substance detrimental to plant life. Mulches are subject to inspection at any time and place at the discretion of the Agency. The following are some types of Materials that fall under the category of "mulch", and may be used on projects:

(a) **Bark Mulch** - Ground, shredded or broken particles from the bark of fir, pine or hemlock trees that are free of non-bark debris, harmful bacteria, disease spores, pests and substances toxic to plant growth. Furnish mulch that is the standard trade size known as "medium fine mulch".

(b) **Cinder Mulch** - Crushed lava cinders, screened to an approximate size between 3/16 inch to 5/8 inch. Furnish cinders free of fines and other non-cinder material.

(c) **Straw Mulch** - Furnish straw mulch according to 01030.15.

(d) **Rock Mulch** - Round 3/8" - No. 4 pea gravel or round 2" - 3/8" Rock. Furnish Material that is free of fines and other non-gravel material. Rock colors may vary.

(e) **Wood Chip Mulch** - Mulch that is chipped from cleared site vegetation. Ensure that chipped material is free of any Noxious Weeds or invasive vegetation.

(Use the following subsection .20(e) paragraph and bullet when the allowable size of wood chip mulch is to be listed in the Special Provisions. Obtain the allowable size range from the Designer.)

Provide wood chip mulch in the following size range:

•

(f) **Compost Mulch** - Commercially manufactured medium compost material meeting the requirements of Section 03020, unless otherwise approved.

~~(Use the following subsection .20(e) when the allowable size of wood chip mulch is to be listed in the Special Provisions. Obtain the allowable size range from the Designer.)~~

~~01040.20(e) Wood Chip Mulch~~ — Add the following to the end of this subsection:

~~Provide wood chip mulch in the following size range:~~

~~1.~~

01040.21 Herbicides - Replace the paragraph that begins "The use of herbicide ..." with the following paragraph:

The use of herbicide chemicals is allowed only upon approval of the Agency. Select and apply chemical herbicides according to all applicable Federal, State and local laws, as well as the WCWP requirements of the PWP. The following are standard herbicide functional categories:

(Use the following subsection .22 when pressure moisture stress sensors or moisture retention chemicals are required. Delete "(s)" or parentheses.)

01040.22 Water - Add the following paragraph(s) to the end of this subsection:

(Use the following paragraph when pressure moisture stress sensors are required.)

Provide a pressure moisture stress sensor device for this Project.

(Use the following paragraph when moisture retention chemicals are required.)

Provide moisture retention chemicals for this Project.

01040.22(b) Moisture Retention Chemicals - Replace this subsection, except for the subsection number and title, with the following:

Granular chemical that are typically cross-linked potassium based polyacrylate or polyacrylamide copolymers. Furnish commercial quality product from the QPL.

01040.23 Miscellaneous Items - Replace the paragraph that begins "Furnish miscellaneous items ..." with the following paragraph:

Furnish miscellaneous items meeting the following requirements or furnish commercial-quality products from the QPL. Obtain approval from the Agency prior to use.

01040.23(g) Tree Stakes and Ties - Replace this subsection, except for the subsection number and title, with the following:

Rough sawn tree stakes of 1 1/2 inches x 1 1/2 inches Douglas fir or pine, construction grade or better. Use stakes 6 feet long for trees less than 8 feet tall, and stakes 8 feet long for trees 8 feet or taller. Stain all tree stakes with an approved, dark green penetrating oil stain. Furnish tree trunk protection of guying material of either a commercially available tree tie or a section

of garden hose. Furnish tree guying material of a commercial product manufactured for this use, such as plastic chain, or stainless steel woven-wire with clamp fasteners. Size the guying material appropriate to the size of the tree and the wind factors of the area.

01040.41 Planting Season (West of the Cascades) - Replace the title of this subsection with "**Planting (West of the Cascades)**".

01040.42 Planting Season (East of the Cascades) - Replace the title of this subsection with "**Planting (East of the Cascades)**".

01040.44(c) Hauling and Spreading - Replace this subsection, except for the subsection number and title, with the following:

Transport select Wetland Topsoil to the site by any means that meets all applicable regulations related to hauling potentially wet or moist materials. Spread the Topsoil to a depth of 6 inches minimum to 24 inches maximum, or to meet the finished elevations as specified on the Plans. Make as smooth as practicable without excessive Soil compaction. After spreading, have the area inspected and approved by the Agency prior to planting.

01040.45 Soil Amendments - Replace this subsection, except for the subsection number and title, with the following:

Incorporate Soil amendments into the Topsoil when required by the Soil fertility test and Soil amendment report. The application rate is verified by checking settings on the spreading or application Equipment.

01040.46 Bio-Amendments - Replace the bullet that begins "Mycorrhizal Inoculation (Injection) ..." with the following bullet:

- Mycorrhizal Inoculation (Injection) - Furnish pre-measured packets containing live endomycorrhizal and ectomycorrhizal fungi.

Replace the paragraph that begins "The application rate ..." with the following paragraph:

The application rate is verified by visual inspection of application rates. A one-time application should be adequate, as long as pesticides, fertilizers or other toxic materials are not used at the same time. If it becomes necessary to apply pesticides that have non-target organism effects, or to apply fertilizer at rates greater than 13 pounds per acre, re-inoculate the organisms about 1 month after the pesticide or fertilizer was applied.

01040.47 Fertilizers - Replace the paragraph that begins "The application rate ..." with the following paragraph:

The application rate is verified by visual inspection. Provide manufacturer or Supplier quality compliance certification according to 00165.35. Ensure that material testing methods meet the requirements of the Oregon Department of Agriculture appropriate to that material.

01040.48 Planting Area Preparation - Replace the paragraph that begins "All planting areas ..." with the following paragraph:

Provide Weed Free planting areas before planting or seeding operations begin. Identify, kill, and remove Weeds according to 01030.62(b)(3).

01040.48(b) Method "B" (Non-Cultivated Planting Areas) - Replace the paragraph that begins "Finish Wetland mitigation planting ..." with the following paragraph:

Finish Wetland mitigation planting areas to specified finish elevations, blending to existing ground smoothly, as required and directed. Except for projects that are less than 1 year in duration and unless otherwise approved, review the hydrology of the area to be planted for the period November 15 to February 28 prior to planting any Wetland plants. Adjust plant types and planting locations as required or directed, based on the review of site hydrology.

01040.48(c) Method "C" (Sod Lawn and Seeded Lawn Areas) - Replace the paragraph that begins "Furnish the Agency ..." with the following paragraph:

Provide the Agency with sod mixture information and a quality compliance certificate from the sod grower, certifying sod compliance with mixture requirements, according to 01040.10.

01040.49 General Planting - Replace the bullet that begins "Apply bark or wood chip ..." with the following bullet:

- Apply bark or wood chip mulch of the type and depth as shown. Correct contamination of new mulch due to the Contractor's operations at no additional cost to the Agency. Feather mulch into plant material trunks, stems, canes or root collars, and leave 1 inch below the top of junction and valve boxes, curbs and Pavement edges. Any mulch placed to a thickness greater than specified is at no additional cost to the Agency.

01040.50(a)(1) Mechanical Digging - Replace this subsection, except for the subsection number and title, with the following:

Use a tree spade unless otherwise directed. Move only while the tree is dormant. Treat deciduous plants with anti-transpirant prior to excavation. Confirm with the Agency that the size of the spade is appropriate to the size and type of tree prior to beginning Work. Dig the receiving hole prior to digging the tree to be transplanted. Take care not to damage the tree bark. Refill the original hole after transplanting. Do not move Oregon White Oak (*Quercus garryana*) by this method.

01040.50(c) Seedling Trees - Replace the paragraph that begins "No pre-staking of planting ..." with the following paragraph:

No pre-staking of planting locations is required. The Agency will be present as planting begins and will approve the spacing, planting method, and areas to be planted before Work can begin. Vary plant spacing in order to allow seedlings to be planted in suitable Soil. During the planting process, remove one tree at a time from the planting bag or other container to prevent drying of roots.

01040.50(g) Plant Cuttings - Replace this subsection, except for the subsection number and title, with the following:

Replace the paragraph that begins "Collect and plant the cuttings ..." with the following paragraph:

Collect and plant the cuttings while the plant is dormant, generally between October and March. Notify the Agency if conflicts exist with permit requirements. Store all cut material in ventilated plastic containers that allow free flow of water. Protect root systems from excessive drying at all times. Do not store plants in airtight containers.

Plant stock within 4 hours of harvest. If plants are a willow species, plant in the riparian zone on that portion of the slope where the plant stem ends are in contact with year-round moist Soil as determined by the Agency. Make planting holes by forcing a steel bar or similar tool into the ground about 12 inches deep. Place the cuttings into the holes and tamp Soil firmly around the stems, leaving a minimum of 6 inches showing. Vary these dimensions as required for larger plant cuttings.

01040.53(a) Ornamental Plant Bed Areas - Replace the paragraph that begins "Submit a 15-pound ..." with the following paragraph:

Submit a 15-pound sample of bark mulch to the Agency for visual inspection and approval. The approved sample is the standard of acceptability for all mulch used on the Project.

01040.53(b)(3) Compost Blanket - Replace this subsection with the following subsection:

01040.53(b)(3) Compost Mulch - Spread compost on top of the Soil to a nominal depth of 3 inches. Where a compost erosion blanket is in place according to 00280.44(f) apply and spread additional compost to achieve a depth of 3 inches.

01040.54(a) Pressure Moisture Stress Sensor - Replace the paragraph that begins "When a pressure moisture ..." with the following paragraph:

When a pressure moisture stress sensor is specified, the Agency will test a 1 to 5 percent representative sample to ensure that the moisture stress level is below 20 bars of pressure and inform the Contractor if any material exceeds this limit. Any plant material found to have greater than 25 bars of pressure is considered to be under extreme moisture stress. Provide sufficient water within 24 hours to bring the plant into normal range. The Agency will retest to determine the new representative pressure. Plant material that have 30 bars or greater is considered to have reached its Permanent Wilting Point. Replace all such material during the next planting period. Testing will occur mid-day at the following times until the end of the Establishment Periods:

Replace the bullet that begins "At 1 month intervals..." with the following bullet:

- At 1 month intervals throughout the Summer, up to the first Fall rain or snow.

01040.70 Plant Establishment - Replace this subsection, except for the subsection number and title, with the following:

Add the following paragraph and bullets after the paragraph that begins "The Contractor is responsible..."

The Contractor is responsible for the survival of all plant material until the end of a Plant Establishment Period of 1 calendar year. The Plant Establishment Period begins when all the original planting is complete. The original planting is considered complete when all the plant material has been planted to the satisfaction of the Agency.

At a minimum of 15 Days prior to landscape Work, submit the plant establishment plan as part of the planting work plan according to 01040.05. Should the plan become unworkable at any time during Plant Establishment Period, submit a revised plan prior to proceeding with further Work. Include the following in the plant establishment plan:

- Activity descriptions necessary to ensure continued health and vigor of planted and seeded areas according to 01030.60 and 01040.71.
- Proposed scheduling of joint inspection meetings, weeding, and watering/irrigation schedule.
- Materials including herbicides and fertilizers, and Equipment to be utilized for the plant establishment.
- Proposed adaptive management activities for successful establishment of seeded, sodded, and planted areas, during changing environmental conditions or unanticipated weather.

Establishment Period Work includes removing all plants that have reached their Permanent Wilting Point, are dead, dying, or do not meet Specifications, and replacing them with healthy plants. All plants in place after this replacement are recognized as the original planting and are subject to the establishment Specifications. Repair, restore, and replace all plantings that have been damaged by vehicles, vandalized, and stolen according to 00170.80.

~~(Use the following subsection .71 to include minimum watering frequencies for trees and shrubs. Obtain information from the Designer. Delete what does not apply.)~~

01040.71 Plant Care and Success Criteria - Replace the paragraph that begins "The determination of a successful ..." with the following paragraph:

The determination of a successful Plant Establishment Period is made at periodic plant establishment inspections. A successful planting establishment for each inspection is defined as follows:

Replace the paragraph that begins "At the discretion of the Agency, ..." with the following paragraph:

At the discretion of the Agency, certain types of regularly spaced plantings such as groundcovers may be measured using an area sampling method. To determine the rate of survival, set out (delineate) representative plots measuring 100 square feet at the completion of the original planting at random locations in each general planting area. The representative plots are mutually agreed upon between the Contractor and the Agency. Mark the plot corners with permanent markers such as re-bar, including date and identification. Delineate a minimum of three plots per acre of new planting area.

~~(Use the following subsection .71 paragraphs and bullets to include minimum watering frequencies for trees and shrubs. Obtain information from the Designer. Delete what does not apply.)~~

Add the following to the end of this subsection:

The following watering frequencies are required:

- Deciduous trees that are 1 1/2 inch and larger, water at a frequency of _____.
- Conifer trees that are over 4 feet tall, water at a frequency of _____.
- All shrubs, water at a frequency of _____.

01040.72 Periodic Inspections - Replace the bullet that begins "Spring..." with the following bullet:

- Early May

Replace the bullet that begins "Summer..." with the following bullet:

- Mid-July

Replace the bullet that begins "Fall..." with the following bullet:

- Late September

Replace the paragraph that begins "Depending on when the Establishment ..." with the following paragraph:

Depending on when the Establishment Period begins, one of the above inspections is the final inspection.

01040.73 Corrective Work - Replace the paragraph that begins "The Contractor will be allowed..." with the following paragraph:

The Contractor ~~will be~~is allowed to replace plants outside the planting times described in 01040.41 or 01040.42 as applicable to perform corrective work after each periodic inspection.

Replace the paragraph that begins "Furnish plant replacements ..." with the following paragraph:

Furnish plant replacements of the same variety, size, and quality as specified for the original plants, unless otherwise approved.

(Use the following subsection .75 when Weed Control is not included as a Pay Item under 01030.90.)

01040.75 Weed Control - Replace this subsection, except for the subsection number and title, with the following:

Perform weed control throughout the Plant Establishment Period. Kill and remove Specified Weeds as directed, prior to the Weeds going to seed. Keep the plant areas Weed Free throughout the Plant Establishment Period.

01040.77(b) Trimming and Pruning - Replace the paragraph that begins "Prune during the dormant..." with the following paragraph:

Prune during dormancy unless otherwise specified. Remove and dispose of all dead and critically damaged plant material to maintain the overall appearance of the Project.

~~(Use the following subsection .77(d) when sod lawn is required. Obtain the schedule from the Designer.)~~

01040.77(d) Sod Lawn - Replace the paragraph that begins "Mow, cut and fertilize ..." with the following paragraph:

Mow, cut and fertilize sod lawns as required to maintain a healthy and vigorous condition. A schedule of feeding, mowing, and general treatment, including thatching and aeration is listed in the Special Provisions. Final acceptance of sod lawn areas will depend on its health and condition. Keep sod lawns mowed to a height between 1 1/2 inches to 2 inches.

~~(Use the following subsection .77(d) paragraphs and bullet when sod lawn is required. Obtain the schedule from the Designer.)~~

Add the following to the end of this subsection:

Provide sod lawn feeding, mowing, and general treatment as follows:

-

(Use the following subsection .80(c) when soil conditioner is required.)

01040.80(c) Soil Conditioners - Replace this subsection with the following subsection:

01040.80(c) Soil Conditioners and Hydraulically Applied Soil Conditioner - Soil conditioners and hydraulically applied soil conditioners will be measured according to one of the following:

- **Area Basis** - Hydraulically applied soil conditioners and other surface applied soil conditioners will be measured on the area basis, along the ground surface.
- **Volume Basis** - Soil conditioners will be measured on the volume basis in the hauling vehicle or in containers delivered to the Project Site.

01040.90 Payment - Replace the paragraph that begins "Payment will be payment ..." with the following paragraph:

Payment will be payment in full for furnishing and placing all Materials, and for providing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

Replace the paragraph and bullets that begin "No separate ..." with the following paragraph and bullets:

No separate or additional payment will be made for:

- Soil amendments
- Lime, gypsum, or trace minerals

- Soil bio-amendments
- Fertilizer
- Herbicides
- Anti-transpirants
- Game repellent
- Browsing protectors
- Pesticides
- Trunk wraps
- Tree stakes and ties
- Water
- Pressure moisture stress sensors
- Mulch materials required as part of replacement planting
- Corrective work during the Plant Establishment Period

(Use the following subsection .90(c) when soil conditioner is required.)

01040.90(c) Soil Conditioners - Replace this subsection with the following subsection:

01040.90(c) Soil Conditioners and Hydraulically Applied Soil Conditioner - Soil conditioners will be paid for at the Contract unit price, per cubic yard, for the item "Soil Conditioner".

Hydraulically applied soil conditioners will be paid for at the Contract unit price, per acre or square yard, for the item "Hydraulically Applied Soil Conditioner".