



**SPECIAL PROVISIONS
FOR
LANDSCAPE MATERIALS**

**Dallas County
ICAAP-SWAP-8177(626)--SH-25**

**Effective Date
December 15, 2020**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

157152.01 GENERAL.

1.01 WORK INCLUDED

The Contractor shall furnish all labor, materials, tools, equipment, supervision, and services necessary to install plant material, sod, soil preparation, fine grading, planting, mulching, guying, pruning, watering, and the proper disposal of any excess earth or debris, extended maintenance (alternate) all in accordance with the contract documents.

1.02 QUALITY ASSURANCE

A. Regulatory Requirements

1. Comply with applicable requirements of Federal, State, and Local laws, regulations and codes having jurisdiction at the project site. The Contractor shall take out all required permits, arrange for all necessary inspections and shall pay any fees and expenses in conjunction with the same as a part of the work under this section.
2. Contractor shall be responsible for certificates of inspection of plant material that may be required by Federal and Local authorities to accompany shipments of plants.
3. The entire installation shall fully comply with all local and state laws and ordinances and with all the established codes applicable thereto.

B. Reference Standards

1. "Standardized Plant Names" by the American Joint Committee of Horticultural Nomenclature.
2. "American Standard of Nursery Stock" by the American Association of Nurseryman current edition. Standards: All plant materials, methods, etc., are to conform to the Standards of

the American Association for Nursery Stock. In the event there is a discrepancy between these standards and this specification, the most restrictive requirement shall govern.

3. Nomenclature: The names of plants required under this contract conform to those given in the "Standardized Plant Names", current edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery code.
 4. American National Standards Institute (ANSI); Publication Z60.1-current edition.
 5. Condition and Source of Plants shall be subject to inspection and approval by the Engineer upon delivery for conformity to contract documents. Such approvals shall not impair the right of inspection and rejection during progress of the work.
 6. All plant material shall be hardy stock grown in a similar hardiness zone for a minimum of 2 years.
- C. Coordination: Work in conjunction with other trades as directed, taking all reasonable precautions to avoid disturbance or interference with any other operation or installation on the site. Contractor shall be responsible for the cost of replacing any material damaged as a result of his/her negligence.
- D. Points of Inspection: The Contractor shall notify the Engineer at least 10 days prior to start of work, plant bed preparation, layout or delivery of materials to the project site to allow for inspection scheduling for each of the following work activities listed below.
1. Layout and Planting Operations: The Engineer shall review all planting operations including but not limited to plant materials, planting procedures, plant bed preparation, final grade for prior to sod placement and other operations. This meeting shall occur before planting begins in mass to ensure bed preparation is correct and the proper planting procedures are followed.
 2. Plant stock delivery: Contractor shall notify the Engineer at least 2 days in advance of any delivery of plant material. The Engineer must approve all plant material before installation.
 3. Progress Inspections: The Engineer will observe the site to monitor correct planting procedures, coordinate on unexpected site conditions, and inspection of additional plant stock on site.
 4. Initial Acceptance Inspection. A punch list by the Engineer shall be created and sent to the Contractor to coordinate any clean up, plant replacement, and repair prior to start of the warranty period.
 5. Final Acceptance Inspection: A final review to determine if replacements or repairs are necessary at the end of the warranty period.

1.03 SUBMITTALS

- A. General: Submit the following in accordance with conditions of the contract documents.
- B. Product Data: Contractor shall submit in writing to the Engineer at least 30 days prior to start of the work the source and supplier of all plant material, sod, fertilizer, mulch, compost amendments, imported planting soil components, and other materials along with the type of equipment to be used on this project. Plant material shall comply with the proposed planting schedule, indicating the type, size, and quantity of each species.
- C. Testing Data: Current, project-specific soil lab and gradation testing for imported planting soil components.

- D. Grower's Certificates: Proof of certification of Nursery Stock Grower and Dealer Inspection as well as any other certificates required by governmental authorities.
- E. Fertilizer Manufacturer's Certificate of Compliance: Written documentation verifying compliance with chemical analysis of fertilizer furnished. Submit to Engineer at least 5 days prior to delivery.
- F. Substitutions: Substitutions of plant material will not be permitted unless authorized in writing by the Engineer. If proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of the nearest equivalent size or variety with corresponding adjustment of contract price. Such proof shall be substantiated and submitted in writing to the Engineer at least 30 days prior to start of the work under this Section. These provisions shall not relieve the Contractor of the responsibility of obtaining specified materials in advance if special growing conditions or other arrangements must be made in order to supply specified materials.
- G. Planting Schedule: Proposed planting schedule, indicating dates for each type of landscape work during normal seasons for such work in area of site. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.
 - 1. Normal seasons for this work as follows: Field potted or container grown perennials and ornamental grasses shall be planted only when the ground is not frozen, snow covered, or in an otherwise unsuitable condition for planting. Spring planting generally may occur as soon frost is absent from the ground until June 15, and fall planting shall generally occur between August 15 and November 15.
- H. Maintenance Instructions: General maintenance instructions recommending procedures to be established by Contracting Authority for maintenance of landscape work during the 1 year warranty period.

1.04 STORAGE, HANDLING, AND DELIVERY

- A. Storage of Materials: All materials delivered to the job shall be stored so as to keep them in new condition and free from deterioration and shall be stored in temporary sheds off-site at Contractor's expense.
- B. Packaged Materials: Deliver packaged materials in unopened containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
- C. Pre-planting: Plants shall be brought to the site the day they are to be installed, if possible. If situations arise where earlier delivery cannot be avoided or if planting is delayed after the plants have been delivered, they shall be stored where they can be properly watered, sheltered from direct sunlight, and protected from mechanical damage by construction equipment, animals, etc. If storage needs to be more than two days, the plants shall be separated far enough from each other to provide good air circulation to their tops, reducing the risk of fungus. Bare root plants which must be held shall be healed-in where they can be watered as needed.
 - 1. All plants shall be watered thoroughly and allowed to drain prior to planting.
 - 2. While planting, bare root plants must be protected from hot sun and drying wind by shading them with burlap, landscape fabric, straw, or other breathable material. Plastic is unacceptable.
 - 3. Containerized plants must be left in their containers until each is planted. They shall not be removed from the containers to be laid out on the bed where sun and wind will damage the roots prior to planting.
 - 4. Any dead or damaged plant parts shall be removed from the plants upon planting.

- D. Plant Material: Plants shall not be delivered to the site until the corresponding beds are fully prepared and approved. Vegetated material shall be inspected as required by Local, State, or Federal laws, and upon delivery at premises shall be subject to inspection by the Engineer. All materials must arrive with identification labels calling out the size and species name. All plant material is subject to rejection by the Engineer either at time of delivery or after planting, provided it does not comply with the requirements stated herein. Delivered trees with more than 4 inches of soil over the root flare shall be rejected. If after carefully removing the soil over the trunk flare unveils encircling roots and/or unhealthy conditions the tree will be rejected. The Engineer may open soil balls or containers to inspect for root condition, size, balance, and trunk location within the ball. Any rejected stock shall be immediately removed from the premises and replaced with approved stock.
- E. Sod
 - 1. Protect root system from exposure to wind or sun.
 - 2. Protect sod from dehydration, contamination, and heating during transportation, and delivery.
 - 3. Do not deliver more sod that can be installed in the same day.
 - 4. Do not tear, stretch, or drop sod.

1.05 JOB CONDITIONS

- A. Examination of Site: The bidder must examine the site, plans and specifications and the submission of a bid shall be considered evidence that examinations have been made.
- B. Field Conditions:
 - 1. The Contractor shall verify drawing dimensions with actual field conditions and inspect related work and adjacent surfaces. The Contractor shall report to the Engineer all conditions which prevent proper execution of this work. The Contractor agrees to be fully responsible for any and all damage which might be occasioned by the Contractor's failure to exactly locate and preserve any and all utilities, structures, and geogrid reinforcement.
 - 2. Soil moisture must be at or below field capacity to avoid destroying the soil structure before any work begins.

1.06 SEQUENCING/SCHEDULING

- A. Planting Time: Proceed with and complete planting as rapidly as portions of the site become available, working within seasonal limitations for each kind of landscape work required.
- B. Planting Dates: Sod shall be installed and trees, shrubs, and perennials shall be planted only when the ground is not frozen, snow covered, or in an otherwise unsuitable condition for planting. Spring planting shall generally occur between April 1 and June 15, and fall planting shall generally occur between August 15 and November 15.

1.07 MATERIALS CLEAN-UP

The Contractor shall keep the premises free from rubbish and all debris associated with their work at all times and all unused materials and debris shall be removed from the site.

157152.02 MATERIALS

2.01 COMPOST AMENDMENT

- A. Imported compost shall be used to amend topsoil borrow in all mulched planting beds not including roundabout center island or splitter island medians.

- B. Compost shall be derived from partially decomposed vegetable organic matter of natural occurrence; black, clean, granulated, or shredded in appearance. Organic matter should be free from debris, weed seeds, and insects or diseases which may be harmful to the intended planting.

2.02 IMPORTED PLANTING SOIL

- A. Imported planting soil shall be installed to a minimum depth of 18 inches in all mulched planting beds within the roundabout center island and splitter island medians.
- B. Imported planting soil consist of organic compost and clean sand thoroughly mixed with onsite topsoil borrow or imported topsoil, prepared in the following proportions:
 1. Topsoil: 3 parts by volume
 2. Compost: 1 part by volume
 3. Sand: 1 part by volume
- C. Topsoil used in amended soil mix shall be pliable loam, typical of cultivated topsoils of the locality. Secure from naturally well-drained areas. Use satisfactory soil materials with highly organic content capable of sustaining turf grass and landscape plants. Stockpiled topsoil shall be free of admixture of subsoil, and free from weed seeds, harmful insects, and clay lumps, stone, or other debris greater than 1 inch in diameter. Topsoil to have pH value of minimum 5.4 and maximum 7.0. Very poor soils of clay, gumbo, gravel, hard-pan, or other soils injurious to plants shall not be used.
- D. Compost used in amended soil mix shall be derived from partially decomposed vegetable organic matter of natural occurrence; black, clean, granulated, or shredded in appearance. Organic matter should be free from debris, weed seeds, and insects or diseases which may be harmful to the intended planting.
- E. Sand used in amended soil mix shall be clean concrete sand, having a fineness modulus between 1.8 and 2.5.

2.03 FERTILIZER

- A. All fertilizers shall be horticultural grade complete formula fertilizers and shall conform to the applicable State Fertilizer Laws. Fertilizer shall consist of uniform dry granulated nutrients produced by mining and manufacturing processes and commonly used in the agricultural or lawn care industries. It shall contain the three major plant nutrients of nitrogen, phosphorous, and potassium. Commercial fertilizer may be furnished as a homogenous or blended form. Submit product information for Engineer approval.
- B. Slow release fertilizers for mulched planting beds shall be 14-14-14 (Nitrogen-Phosphorous-Potassium) and applied at a rate of 3 pounds per 1000 square feet.
- C. Slow release fertilizers for sod areas shall be Fertilizer nutrients by weight: Nitrogen 6%; Potassium Peroxide 24%; Phosphoric Anhydride 12%.
- D. Fertilizers shall be applied to surface of amended soils immediately prior to planting and sodding.

2.04 PRE-EMERGENT WEED PREVENTER

- A. All pre-emergent weed preventers shall be a herbicide combination such as isoxaben/trifluralin (Snapshot), oryzalin/benefin (XL2G), oxyfluorfen/oryzalin (Rout), and oxyfluorfen/pendimethalin (Ornamental Herbicide 2). Check the label to determine which ornamental species the material can safely be used around and which species of weeds are controlled. Follow manufacturer's labels on personal protection measures for using this product.

- B. Submit pre-emergent weed preventer for approval.

2.05 PLANT MATERIALS

- A. Plant Schedule: Schedules listing plant materials and quantities are shown on the plans.
- B. Certification of inspection of plant materials required by Federal, State, or other governmental agencies to accompany all shipments to be furnished to the Engineer.
- C. Planting stock shall be well-branched and well formed, sound, vigorous, healthy, free from disease, sun-scale, windburn, abrasion, and harmful insects or insect eggs; and shall have healthy, normal unbroken root systems. Deciduous trees and shrubs shall be symmetrically developed, of uniform habit of growth, with straight trunks or stems, and free from objectionable disfigurements. Evergreen trees and shrubs shall have well-developed symmetrical tops with typical spread of branches for each particular species or variety. Evergreen trees and shrubs shall not be sheared. Plants shall have been grown under climatic conditions similar to those in the locality of the project.
- D. Stock Sizes: All stock measurements - caliper, height, branching level, number of canes, ball sizes shall be in strict accordance with the latest edition of the American Standard for Nursery Stock, unless otherwise noted on the plans. Plants used on the project shall meet or exceed all minimum requirements indicated in the size, condition, and remarks sections of the planting legend on the plan sheets.
- E. All stock shall be balled and burlapped or container grown stock. Bareroot stock of any kind is unacceptable. Spade or box trees are acceptable on greater than 4 inch caliper and 10 foot to 12 foot/16 foot to 18 foot height trees.
- F. All plant material must be watered the same day it is planted in order to comply with these Specifications.
- G. Trees that need to be staked and guyed shall be installed as shown on plans.

2.06 MULCH

Mulch shall be double-shredded hardwood mulch, locally obtained or a proprietary product. No artificially colored mulch will be accepted.

2.07 GUYING AND STAKING MATERIALS

- A. Stakes for tree support shall be steel "T" bar fence post, 8 feet long, painted dark green with the top 6 inches painted white.
- B. Tree tie systems shall be easily adjustable, strong in all weather, and easily attached and removed. See details on plans.

2.08 SOD

- A. Grass Species: bluegrass varieties listed in Section 4169 of the Standard Specifications.
- B. Grade: Field grown
- C. Uniformly mowed height when harvested 1 1/2 inches to 2 1/2 inches.
- D. Free of Bermuda grass, quack grass, Johnson grass, poison ivy, nut sedge, nimble will, Canada thistle, bindweed, bent grass, wild garlic, ground ivy, perennial sorrel, and brome grass.
- E. Uniform in color, leaf texture, and density.
- F. Sod should be approved by the Engineer prior to placement.

- G. Peat sod is not allowed.

2.09 WATER

- A. Water shall be provided by the Contractor.
- B. Incidental to watering shall be traffic control, equipment, materials, tools, and labor needed to successfully water the entirety of the planted areas in accordance with the contract documents.
- C. Each watering shall consist of a gentle application of 1/2 inch depth of water, evenly distributed in a manner that does not displace plants, soil or rock mulch.
- D. The initial watering shall occur not less than 4 hours after planting.
- E. Water shall not contain elements toxic to plant life.

157152.03 CONSTRUCTION.

3.01 GENERAL PREPARATION

- A. All planting bed areas and areas of turf sod establishment are to be cleared by the Contractor.
- B. Clearing shall consist of the satisfactory removal and disposal of brush, rubbish, and other vegetative growth occurring within all proposed turf sod and planting bed areas. All debris associated with this work shall be gathered and removed from the project by the Contractor.

3.02 SOD INSTALLATION

- A. Inspection
 - 1. The Engineer must review and approve finish grades by the Contractor before sodding can begin.
 - 2. Verify that soil preparation and related preceding work have been complete.
 - 3. Do not start work until conditions are satisfactory.
- B. Preparation
 - 1. Limit preparation to areas that will be immediately sodded.
 - 2. Where weed growth has developed, remove all weeds and weed debris.
 - 3. Shape and fine grade sodbed to remove washes or gullies, water pockets, and irregularities. Provide an even surface, true to grade and cross-section.
 - 4. Rototill and cultivate sodbed to a fine and mellow condition to a minimum depth of 3 inches. Clear the top 3 inches of soil lumps, stones over 3/4 inch, and foreign material using hand labor as required.
 - 5. Apply slow-release fertilizer per manufacturer's application rate and recommendations.
 - 6. Water dry soil to depth of 4 inches 48 hours before sodding.
- C. Installation
 - 1. Transplant sod within 24 hours after harvesting.
 - 2. Begin sodding at bottom of slopes.
 - 3. Lay first row of sod in straight line with long dimension of pads parallel to slope contours.
 - 4. Butt side and end joints.

5. Stagger end joints in adjacent rows.
6. Do not stretch or overlap sod.
7. Peg sod on slope ratio of 1 in 3 or greater with minimum of two stakes per square yard.
8. Sprinkle sod immediately after transplanting.
9. Roll sod, except on pegged areas, with roller weighing not more than 150 pounds per foot of roller width.
10. Water sod and soil to depth of 4 inches within four hours after rolling.
11. Resod areas larger than 1 square foot not having uniform stand of grass.

3.03 TREE, SHRUB, AND PERENNIAL INSTALLATION

- A. All planting shall be performed by personnel familiar with the accepted procedure of planting and under the constant supervision of a qualified planting foreman.
- B. All planting is to be done as shown on drawings and as specified herein and in strict accordance with standard horticultural practices.
- C. Preparation of mulched planting beds:
 1. Plant material locations and planting bed outlines will be provided by the Engineer and in collaboration with the Contractor. Approval of proposed planting pits, placement and layout/alignment of planting masses shall be approved by the Engineer prior to installation. Plant material locations and bed outlines may be adjusted by the Engineer to meet field conditions.
 2. Soil preparation:
 - a. Imported planting soil shall be mixed with the ratios of topsoil, organic matter, and sand as described above.
 - b. Excavate planting beds to a suitable depth to allow for the finished settled depths as noted in the drawings.
 - c. Scarify and loosen surface of subgrade to minimum 6 inch depth to ensure a positive bond between subgrade and imported planting soil.
 - d. Do not place imported planting soil until after clean-up and removal of construction debris, trash, surplus materials, and equipment from project site.
 - e. Place and spread imported planting soil lifts to a depth of 18 inches. Use a cultipacker, pulverizer, or similar tool to pulverize the topsoil and eliminate all lumps. Do not compact planting soil.
 - f. Finish grade of settled planting soils shall be as shown on the plans.
 - g. The Contractor shall be responsible for testing percolation rates to measure adequate drainage in the planting areas. Where trees, shrubs, or perennials are planted a test bed shall be prepared with the location selected by the Engineer. A percolation test shall be conducted by filling a 16 inches deep planting hole with water and measuring the time it takes for the water to drain. Adequate drainage will be considered equal to or greater than a percolation rate of 1/2 inch per hour. In case of inadequate drainage, the Engineer shall be notified.

- 1) Every tree location within the roundabout center island and splitter island medians shall be tested for adequate drainage. Every 10th tree location shall be tested in all other areas.
 - h. Treat the freshly prepared plant beds with a pre-emergent weed preventer per manufacturer's application instruction for the approval product, immediately prior to planting and mulching.
 - i. On the imported planting soil finished grade surface, apply fertilizers at recommended rates and till into soils to a depth of 6 inches immediately prior to planting.
3. Finish Grading
- a. Positively drain all turf and planting areas to designated surface water collection points, streets, and/or waterways.
 - b. Protect paving, sidewalks, utilities, and plants during finish grading; repair or replace any items damaged by construction operations at no cost to Contracting Authority. Equipment that may leave black tire marks should not be driven on sidewalk or paver areas, or marks must be removed, without damage to walks or pavers, prior to project acceptance.
 - c. After placement, maintain surfaces to indicated finished grades; deposit additional topsoil or amended soil to repair settlement or erosion up to the date of final acceptance. Scarify surfaces upon which additional topsoil is to be deposited.
- D. Installation of Trees, Shrubs and Perennial.
1. Planting pits shall be excavated to produce vertical sides and flat bottoms. Scarify side walls to alleviate glazing and loosen any hard subsoil in bottom of pit. Minimum pit sizes shall be as shown on plans.
 2. Following excavation of planting pit for all trees, fill the pit full of water; allow to stand (without adding water) for an 18 hour period to determine porosity of the soil.
 3. If the Engineer determines the soils are too impervious, provide a drainage well. Installation of planting wells shall be considered incidental to tree installation bid items.
 - a. Locate the drainage well at the edge of the excavated planting pit.
 - b. Auger an 8 inch to 12 inch diameter hole to existing pervious soil or to a maximum depth of 10 feet. If pervious soil is encountered, extend hole a minimum of 12 inches into the pervious layer.
 - c. Fill the excavated hole with porous backfill material and cover the aggregate with engineering fabric.
 - d. Following completion of drainage well, fill the pit full of water; allow to stand for an 18 hour period to verify sufficient drainage exists. The Engineer will determine if the drainage is sufficient.
4. Setting Plants
- a. The Contractor shall install the first balled and burlapped tree with the Engineer present to ensure proper planting methods. Refer to planting details and specifications for the proper planting procedure of hole preparation and removal of all twine, burlap, wire cage and other trappings of the root ball. Root ball crowns shall also be set so that they are 2 inches higher than the surrounding grade to ensure the root flare is slightly above grade.

- b. Balled and burlapped and container grown plants shall be handled and moved only by the ball or container. Remove the bottom of the wire cage and burlap before placing root ball in the ground. Plants shall be set plumb and held in position until a sufficient quantity of planting soil mixture has been firmly placed around roots or ball. Once the tree is stabilized in the planting hole, carefully remove the sides and remainder of the wire cage, burlap, twine, and all other trappings before backfilling.
 - c. The remainder of backfill of planting soil mixture shall be tamped and watered.
 - d. Container-grown stock shall be removed from containers without damaging plant or root system. Planting shall be completed as specified for balled or burlapped plants.
5. Pruning: The Contractor shall prune new plant material in the following manner: Dead and broken branches shall be removed. Evergreen plants shall not be thinned out or sheared. Shrubs shall not be sheared. All plants shall meet or exceed the minimum requirements indicated in the size, condition, and remarks sections of the planting legend on the plan sheets after pruning has taken place. Cuts shall be made with sharp instruments and shall be in compliance with ANSI A300 Pruning Standards. "Headback" cuts at right angles to line of growth shall not be permitted. All trimmings shall be removed from the site.
- a. Pruning shall be considered incidental to the overall project. No additional compensation shall be allowed.
6. Initial inspection of the planting to determine completion of contract work, exclusive of possible replacement of plants, will be made by the Engineer upon completion of the work. All plants shall be alive, healthy and in a vigorous growing condition at the time of initial acceptance. The Contractor shall notify the Engineer when initial installation is complete.

E. Mulch

1. Spread double-shredded hardwood mulch to a depth of 3 inches.
2. The top of all areas of mulch cover shall be 1 inch below the top of adjacent curb or edge of pavement.

F. Watering:

1. Provide a total of 12 waterings as needed to achieve 1/2 inch depth of water across the planting areas per week within the first 60 days from planting. Required frequency of watering may vary depending on rainfall. Each watering shall consist of a gentle application of 1/2 inch depth of water, evenly distributed over the entirety of all planting areas in a manner that does not displace plants, soil or rock mulch.
2. The Contractor may install a temporary irrigation system at his/her expense. Temporary irrigation systems may be established at the Contractor's expense. Contractor shall furnish hoses and other watering equipment as required for supplemental watering.

3.04 WARRANTY AND REPLACEMENT

- A. All container and field-dug plant material shall be warrantied for 1 full year upon award of initial acceptance and shall be alive, in good health, and in satisfactory condition at the end of warranty period.
1. The warranty period will not begin until initial acceptance has been issued by the Engineer.
 2. The warranty period ends when final acceptance has been issued by the Engineer. To gain final acceptance:
 - a. The Engineer will determine if any plant is dead or not in a vigorous, thriving condition.

- b. Replacement Plants: Plants of the same kind and size as specified in the Plant Schedule; furnished and planted as specified herein. Guyed or staked, mulched, fertilized, pruned, and restored to original condition as originally specified at no cost to Contracting Authority.
 - c. Replacement cost shall be borne by Contractor except for possible replacements resulting from loss or damage due to occupancy at project in any part, vandalism, civil disobedience, acts of neglect on the part of others, physical damage by animals, vehicles, fire, or losses due to curtailment of water by local authority, or to "Acts of God". Droughts, floods, tornadoes, winds of hurricane force, and hail are not normal and the damage they do cannot be calculated in a bid.
 - d. Plants that are missing at the time of final inspection are to be installed during the specified planting season when weather and site conditions permit.
- B. All sod shall be guaranteed to be in vigorous growing conditions after one growing season.
- 1. Sod warranty period shall begin immediately following initial acceptance as provided by the Engineer after installation of sodding and shall continue for one growing season.
 - 2. Include weeding, rolling, mowing, replacing bare spots, resetting to proper grades and other related operations.
 - 3. The Contractor will be required to remove weeds and repair or replace, or both, all sodded areas that are defective or becomes damaged.
 - 4. All sod shall be guaranteed to be in vigorous growing conditions in one growing season.

3.05 ACCEPTANCE

- A. Planting Acceptance:
- 1. Planting acceptance shall be based upon the following criteria:
 - a. All requirements for the completed installation and maintenance have been provided.
 - b. Clean-up operations are completed.
 - c. Plants shall be well-branched and well-formed alive, healthy, and in a vigorous growing condition at the time of final acceptance.
 - 2. Five days prior to the anticipated date of initial inspection, submit written notice requesting inspection to the Engineer.
 - 3. Fourteen days prior to the anticipated date of final inspection and end of the warranty period, the Contractor shall submit written notice requesting inspection to the Engineer.
- B. Sod Acceptance:
- 1. Sod acceptance shall be based upon the following criteria:
 - a. All requirements for the completed installation and maintenance have been provided.
 - b. Clean-up operations are completed.
 - c. Sod shall be alive, healthy, and in a vigorous growing condition at the time of final acceptance.

- d. Sodded areas shall have a dense uniform stand of lawn/grass free of weeds and disease growing on not less than 95% of the overall area and with no individual bare spots larger than 3 inches in size and no concentrations of bare spots.
 2. Five days prior to the anticipated date of initial inspection, submit written notice requesting inspection to the Engineer.
 3. Fourteen days prior to the anticipated date of final inspection and end of the warranty period, the Contractor shall submit written notice requesting inspection to the Engineer.
- C. Initial inspection of the plantings and sod shall be made by the Engineer upon completion of work. The purpose of the initial inspection will be to determine completion of contract work, exclusive of possible replacement of plants and sod. Initial inspection will not be conducted unless all items of work as outlined in this specification have been completed.
1. The Engineer will document the corrective actions necessary in the form of punch-list.
 2. The Engineer will make one site visit to confirm all items on the punch-list have been satisfactorily completed.
 - a. Initial Acceptance will only be issued for the entirety of the plantings. No partial acceptance will be provided.
 - b. Separate acceptance of the sod may be provided.
- D. After each initial and final inspection, the Contractor will be notified in writing by the Engineer, of acceptance of inspected work exclusive of the possible replacement of plants and correction of deficiencies in the requirements for completion of the work.
- E. Final acceptance will be issued once all corrective items documented in the initial inspection and final inspection are satisfactorily completed

157152.04 METHOD OF MEASUREMENT

Measurement of items involving landscape materials, satisfactorily completed, will be as follows:

- A. Compost Amendment: Measured based upon the cubic yard of compost amendment installed
- B. Mulch: Measured based upon the cubic yard of mulch installed
- C. Imported Planting Soils: Measured based upon the cubic yard of soil installed
- D. Perennial, ornamental grass, shrub planting: Measured based upon each plant installed
- E. Trees: Measured based upon each tree installed

157152.05 BASIS OF PAYMENT

- A. Compost Amendment: Payment is for full compensation for the compost amendment including all labor, materials, and equipment to furnish and install the compost amendment
- B. Mulch: Payment is for full compensation for the mulch including all labor, materials, and equipment to furnish and install the mulch
- C. Imported Planting Soils: Payment is for full compensation for the planting soils including all labor, materials, and equipment to furnish and install the planting soils

- D. Perennial, Ornamental, Shrub Planting: Payment is for full compensation for the planting including all labor, materials, and equipment to furnish and install the planting. Including replacement of the planting during the warranty period as required.
- E. Trees: Payment is for full compensation for the planting including all labor, materials, and equipment to furnish and install the tree. Including replacement of the tree during the warranty period as required.