



**SPECIAL PROVISIONS  
FOR  
LANDSCAPE MATERIALS**

**Johnson County  
STP-U-1557(648)--70-52**

**Effective Date  
October 17, 2023**

**THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**236003.01 DESCRIPTION**

**1.01 WORK INCLUDED**

- A. The Contractor shall furnish all labor, materials, tools, equipment, supervision, and services necessary to install limestone blocks, polypropylene root barrier panels, plant material, planting soils, mulching, staking, pruning, watering, warranty replacements, and the proper disposal of any excess earth or debris, all in accordance with the accompanying contract documents and these Specifications.

**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. 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 Specifications. 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.
7. Chapter 5 of the Iowa Storm Water Management Manual, current edition.
8. Polypropylene Root Barrier Panel manufacturer's installation information, current edition.

C. Coordination

1. 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. Contractors 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, root barrier installation 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.
- 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, fertilizer, mulch, planting soil components, limestone blocks, root barrier, 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 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 the Engineer 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
  - 1. 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
  - 1. 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 2 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

1. 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.

**1.05 JOB CONDITIONS**

A. Examination of Site:

1. The bidder must examine the site, contract documents and Specifications and the submission of a quotation shall be considered evidence that examinations have been made.

B. Field Conditions: 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.

1. 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.

**1.07 MATERIALS CLEAN-UP**

- A. 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.

**236003.02 MATERIALS****2.01 PLANTING SOIL**

- A. Planting soil shall be installed in all mulched planting beds and within roadway landscape medians to a minimum depth of 12 inches.
- B. Planting soil consist of organic compost and clean sand thoroughly mixed with 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 planting 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 planting 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 planting soil mix shall be clean concrete sand, having a fineness modulus (FM) between 1.8 and 2.5.

**2.02 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.

**2.03 PRE-EMERGENT WEED PREVENTER**

- A. All pre-emergent weed preventers shall be an 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.

## 2.04 PLANT MATERIAL

- A. Plant Schedule: Schedules listing plant materials and quantities are shown on the contract documents. In the event of any discrepancy between the schedules and the contract documents showing the plants, the contract documents shall govern.
- 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 contract documents.

## 2.05 MULCH

- A. Double-shredded Hardwood Mulch:
  - 1. Brown Premium Colored Mulch
    - a. Dubuque Mulch Company Inc. (10492 Route 52 South, Dubuque, IA 52003; (563) 582-0587) or approved equal. Submit sample for approval.
  - 2. See plans for depth and location of hardwood mulch.
  - 3. Weed barrier shall not be installed under mulch.

## 2.06 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.

## 2.07 WATER

- A. Water shall be provided by the Contractor.
- B. Water shall not contain elements toxic to plant life. It shall be the Contractor's responsibility to obtain water to be used for watering of plant material.

**2.08 LIMESTONE BLOCKS**

- A. Limestone blocks shall be Iowa Buff limestone as provided by Weber Stone Company, Stone City, Iowa.

**2.09 TREE DRAINAGE WELLS**

- A. Porous Backfill Material: Comply with Section 4131 of the Standard Specifications.
- B. Engineering Fabric: Comply with Article 4196.01 of the Standard Specifications.

**2.10 POLYPROPYLENE ROOT BARRIER PANELS**

- A. Approved providers:
  - 1. Deep Root Polypropylene Root Barrier Panel, style UB24-2 as provided by DeepRoot Green Infrastructure or approved equal.
  - 2. NDS EP-2450 Tree Root Barrier Panel, 24 inch depth, as provide by NDS, Inc

**236003.03 INSTALLATION**

**3.01 GENERAL PREPARATION**

- A. Clearing
  - 1. All planting bed areas are to be cleared by the Contractor.
  - 2. 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 LIMESTONE BLOCKS**

- A. Limestone blocks shall be installed as shown on plans and details.
- B. Limestone block installation shall be completed prior to planting bed preparation, planting soil placement, and planting.

**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 the contract documents and as specified herein and in strict accordance with standard horticultural practices.
- C. Preparation of mulched planting beds:
  - 1. Location of proposed planting pits, placement and layout/alignment of planting masses shall be approved by the Engineer prior to installation. The Engineer may adjust plant material locations and bed outlines to meet field conditions.
  - 2. Planting Soil preparation:
    - a. Planting soil mix shall be prepared as described above.
    - b. Excavate planting beds to a suitable depth to allow for the finished settled depths as noted in the contract documents.

- c. Scarify and loosen surface of subgrade to minimum 6 inch depth to ensure a positive bond between subgrade and planting soils.
  - d. Where indicated on the plans and details, install polypropylene root barriers per manufacturer's specifications.
  - e. In all planting beds containing trees and in tree planting pits, install tree drainage wells per plans and details.
    - 1) Locate the drainage well at the edge of the excavated planting pit nearest the street. The intent is providing a path to the drainable rock base layers behind street curb.
    - 2) Auger an 8 inch to 12 inch diameter hole to a minimum depth of 42 inches.
    - 3) Fill the excavated hole with porous backfill material and cover the aggregate with engineering fabric.
  - f. Do not place planting soils until after clean-up and removal of construction debris, trash, surplus materials, and equipment from project site.
  - g. Use a cultipacker, pulverizer, or similar tool to pulverize the soils and eliminate all lumps. Do not compact planting soils.
  - h. Finish grade of settled planting soils shall be as shown on the contract documents.
  - i. On the installed planting soil finished grade surface, apply fertilizers at recommended rates and till into soils to a depth of 6 inches immediately prior to planting.
  - j. 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.
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 the 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 contract documents.
  - 2. 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.
  - c. 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.
  - d. The remainder of backfill of planting soil mixture shall be tamped and watered.
  - e. 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.
3. 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.
  4. 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 mulch to a depth of 3 inches across all mulched planting beds.
2. Finish grade of mulch shall be level with the top of adjacent curb or pavement edge at the time of installation and at the time of final project acceptance.

#### F. Watering:

1. The initial watering shall occur not less than 4 hours after planting.
2. Provide watering 3 days each week for the first 4 weeks after planting, 2 days each week for the second 4 weeks after planting, and 1 day each week for the third 4 weeks after planting. 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 mulch.
3. Required frequency of watering may vary depending on rainfall.
4. The Contractor may install a temporary irrigation system at his/her expense. Contractor shall furnish hoses and other watering equipment as required for supplemental watering.

### 3.04 MAINTENANCE

- A. Begin immediately following installation of plant material and continue until the Engineer issues the Notice of Acceptance. Contractor retains responsibility for maintenance during the period between the punch list inspection and completion of any punch list items. The Contracting

Authority will only assume maintenance responsibilities upon issuance of Notice of Acceptance or Notice of Conditional Acceptance, if applicable.

- B. Include weeding, watering, re-mulching, resetting to proper grades and other related operations.
- C. Contractor shall be responsible for effective chemical or mechanical weed control from the time they move on site until the Engineer issues the Notice of Acceptance. At no time shall weeds in plant beds be allowed to grow over one foot in height or produce seeds. All cut or pulled weeds shall be removed from site and disposed of properly.

### **3.05 ACCEPTANCE**

- D. Planting acceptance shall be based upon the following criteria:
  - 1. All requirements for the completed installation and maintenance have been provided.
  - 2. Clean-up operations are completed.
  - 3. All required submittals have been received by the Engineer, including maintenance instructions.
  - 4. Plants shall be well-branched and well-formed alive, healthy, and in a vigorous growing condition at the time of final acceptance.
- E. Seven calendar days prior to the anticipated date of punch list inspection, submit written notice requesting inspection to the Engineer.
- F. The Engineer and Contractor will complete a punch list inspection of the landscape to determine completion of contract work. Punch list inspection will not be conducted unless all items of work as outlined in 236003.03 INSTALLATION have been completed.
- G. After the punch list inspection, the Contractor will be notified in writing by the Engineer, of any deficiencies in the requirements for completion of the work.
- H. The Contractor will complete/resolve all of the items on the punch list and submit written notice requesting follow up inspection to the Engineer 7 calendar days prior to the anticipated date of a follow up inspection.
- I. The Engineer and Contractor will complete a follow up inspection of the landscape to determine completion of all punch list items. If all items are complete, the Engineer will issue a written Notice of Acceptance. If not, the Contractor will be notified in writing by the Engineer, of any remaining deficiencies in the requirements for completion of the work and another follow up inspection will be scheduled. The Engineer will perform no more than two inspections to determine whether the work or a designated portion thereof has attained Final Completion in accordance with the contract documents. The Contracting Authority is entitled to reimbursement from the Contractor for the amounts paid for any additional inspections.
- J. At the time of the Notice of Acceptance, the 1 year warranty inspection will be scheduled by the Engineer.

### **3.06 PARTIAL AND CONDITIONAL ACCEPTANCE**

- A. There may be instances where the Contractor and Engineer agree that a specified portion of the site should undergo the punch list inspection process with the intent of the Engineer granting acceptance of that portion of the site, occupying it for the Engineer's use and accepting maintenance responsibilities. This constitutes a Partial Acceptance.
  - 1. The process for completing the punch list inspection and issuance of the Notice of Partial Acceptance is the same as described in Section 3.5 but only applies to that portion of the site as agreed to by the Engineer and Contractor.

2. An exhibit with the boundaries of the partial acceptance clearly illustrated will be prepared by the Engineer and will be attached to the Notice of Acceptance.
  3. Upon issuance of the Notice of Acceptance, the Contracting Authority will assume maintenance responsibilities for that area of the site and the one-year plant warranty period will begin for all plants within the defined area.
  4. By implication, the remainder of the work must undergo the same process once judged to be complete by the Contractor and another Partial Acceptance must be achieved.
- B. There may be instances where the Contractor may choose to seek Conditional Acceptance of the work or portions of the work. This would apply to instances where plants have been installed but for some reason do not meet all the requirements of the specifications such as a variance in size or the plant material was installed outside the approved planting dates. In these instances, the Engineer may choose to grant the Conditional Acceptance with the understanding that the plant material will be re-assessed at a future date and either fully accepted or rejected.
1. This provision will only be allowed at the discretion of the Engineer and should be used only in extremely unusual circumstances. This provision is not included to allow or encourage the Contractor to install plant material outside the approved planting dates.
  2. The process for completing the punch list inspection and issuance of the Notice of Conditional Acceptance is the same as described in Section 3.5 but only applies to the specific portions of the work as agreed to by the Engineer and Contractor. The process for achieving Acceptance for the remainder of the work should be proceeding in parallel with this process.
  3. An exhibit clearly defining which portions of the work are included will be prepared by the Engineer and will be attached to the Notice of Conditional Acceptance. The Notice will also clearly set a date by which a follow up inspection will be made.
  4. Upon issuance of the Notice of Conditional Acceptance, the Contracting Authority may or may not assume maintenance responsibilities for that portion of the work. This is a detail that will need to be worked out between the Engineer and Contractor and will be documented in the Notice of Conditional Acceptance.
  5. On or before the date specified in the Notice of Conditional Acceptance, the Engineer, Contractor, and Landscape Architect will complete a follow up inspection to determine if the work in question meets the requirements for acceptance.
    - a. If so, the original Notice of Acceptance for the remainder of the site will be amended to include the work in question and beginning date of the warranty period for those plants shall be deemed to be the same as the remainder of the project.
    - b. If not, the Contractor shall follow the same procedures for rectifying the non-compliant work and re-inspection as outlined in Section 3.5. Once the work has been corrected and verified, a Notice of Partial Acceptance will be issued for that portion of the work and the one-year plant warranty period will begin for all plants included in that portion of the work.

### **3.07 WARRANTY AND REPLACEMENT**

- A. Plant material shall be warrantied for 1 full year after issuance of the Notice of Acceptance and shall be alive, in good health, and in satisfactory condition at the end of warranty period.
- B. Any plant required under this contract that is dead or not in a vigorous, thriving condition, as determined by the Engineer at the time of warranty inspection, will be removed from the site.

- C. The Engineer and Contractor will complete a warranty inspection of the landscape.
- D. After the warranty inspection, the Contractor will be notified in writing by the Engineer, of any deficiencies or required replacements.
- E. The Contractor will complete and/or resolve all the items on the warranty inspection and submit written notice requesting follow up inspection to the Engineer 7 calendar days prior to the anticipated date of a follow up inspection.
- F. The Engineer and Contractor will complete a follow up inspection of the landscape to determine completion of all warranty items. If all items are complete, the Engineer will issue a written Notice of Warranty Fulfillment. If not, the Contractor will be notified in writing by the Engineer, of any remaining deficiencies in the requirements for completion of the work and another follow up inspection will be scheduled.
- G. Plants that are missing at the time of warranty inspection are to be installed during the specified planting season when weather and site conditions permit.
- H. After Notice of Acceptance, the Contractor shall replace plants (once during or at the end of the warranty period) that are observed to be dead or in a badly impaired condition. One replacement after Notice of Acceptance shall constitute fulfillment of Contractor's warranty for the particular plant replaced. Plants replaced during the punch list process are considered to be part of the fulfillment of the requirements of the Contract and are not part of the warranty.
- I. 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 the Contracting Authority.
- J. 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, and 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.

**236003.04 METHOD OF MEASUREMENT**

- A. Measurement of items involving landscape materials, satisfactorily completed, will be as follows:
  - 1. Planting Soil: Measured based upon the cubic yards of planting soils installed.
  - 2. Mulch: Measured based upon tons of mulch installed.
  - 3. Perennials, Ornamental Grasses, Shrubs: Measured based upon each plant installed.
  - 4. Trees: Measured based upon each tree installed.
  - 5. Limestone Blocks (on concrete footing): Measured based upon each installed.
  - 6. Limestone Blocks (on granular setting bed): Measured based upon each installed.
  - 7. Root Barrier: Measured based upon each installed.
  - 8. Watering for Plants: Measured based on Mgal applied.

**236003.05 BASIS OF PAYMENT**

- A. Planting Soil: Payment is full compensation for the planting soil including all labor, materials, and equipment to furnish, mix, and install the planting soils. Incidental to this item is the excavation of the landscape planting bed to the proper depths and dimensions to accommodate placement of the planting soil.

- B. Mulch: Payment is full compensation for the mulch including all labor, materials, and equipment to furnish and install the mulch to the depths and finish levels indicated in the contract documents.
- C. Perennial, Ornamental Grasses, and Shrubs: Payment is full compensation for the planting including all labor, materials, and equipment to furnish and install the planting. Includes replacement of the planting during the warranty period as required.
- D. Trees: Payment is full compensation for the planting including all labor, materials, and equipment to furnish and install the tree. Includes installation of tree drainage wells and replacement of the tree during the warranty period as required.
- E. Limestone Blocks with Concrete Footing: Payment is full compensation for the limestone block installation on footings, including submittals, labor, materials, and equipment to furnish and install the limestone blocks and construct the concrete footing. Stainless steel pins and epoxy for the blocks are incidental to this item. Work also includes concrete footing construction, to include furnishing, constructing, and removing all forms, ties, and falsework; providing materials for filling and sealing joints; structural steel or steel reinforcement; footing excavation; subbase preparation; other incidental work necessary for completion of the footing in conformance with the contract documents.
- F. Limestone Blocks with Granular Setting Bed: Payment is full compensation for the limestone block installation on granular setting bed, including submittals, labor, materials, and equipment to furnish and install the limestone blocks. Furnishing and placing the granular setting bed is incidental to this item.
- G. Root Barrier: Payment is full compensation for the installation of root barriers including all labor, materials, and equipment to furnish and install the root barriers at the locations and dimensions shown in the contract documents.
- H. Watering for Plants: Payment is full compensation for the application of water to planting beds and trees including all labor, materials, and equipment to furnish and apply the water. Incidental to this item is providing, maintaining, and removing traffic control necessary to complete the watering operations under traffic.