

SECTION 015639 – TEMPORARY TREE AND PLANT PROTECTION

Initial Issue Date: 8/6/2026

(A/E shall edit specifications and blue text in header to meet project requirements. This includes but is not limited to updating Equipment and/or Material Model Numbers indicated in the specifications and adding any additional specifications that may be required by the project. Remove text underlines and highlights)

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work of this Section includes protection, preservation, monitoring, relocation, replacement, and restoration of existing trees, shrubs, and green space affected by construction activities, whether impacts are temporary or permanent.
- B. Protection and preservation of trees and green space shall begin at project planning. Unnecessary removal of trees due to insufficient planning is not permitted.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at **[Project site] <Insert location>**.
 - 1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
 - a. Tree-service firm's personnel and equipment needed to make progress and avoid delays.
 - b. Arborist's responsibilities.
 - c. Quality-control program.
 - d. Coordination of Work and equipment movement with the locations of protection zones.
 - e. Trenching by hand or with air spade within protection zones.
 - f. Field quality control.
 - g. **<Insert additional agenda items>**.

1.3 ACTION SUBMITTALS

- A. Product Data:

1. Materials: Products used as part of protection plan and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent. Examples such as fencing and signage.

B. Shop Drawings:

1. Tree Protection Plan:
 - a. Identify Tree Protection Zones (TPZs), fencing limits, signage, access routes, staging areas, and protection measures. Coordinate with construction sequencing and site logistics.
 - b. Identify all trees proposed for removal, relocation, or replacement, by species, location, and anticipated replacement or restoration measures.
 - c. Indicate extent of utility boring and trenching by hand or with air spade within protection zones.
 - d. Include any existing irrigation system that will be used to water plants.
 - e. Detail scope and extent of tree pruning to remain that interfere with or are affected by construction.
2. Erosion and Sediment Control Plans
 - a. Any changes to project Erosion and Sediment Control Plans resulting from Tree Protection Plan.

<Edit Mitigation Requirements by Project>.

C. Mitigation Requirements

1. Local ordinances governing tree mitigation.
2. Standards established under the approved tree mitigation report developed by the arborist.
3. Maryland DGS Environmentally Preferable Purchasing Legislation, Statutes, and Regulations:
 - a. Environmentally Preferable Purchasing (COMAR 21.11.07.09)
 - b. Procurement – Invasive Plant Species – Prohibition on Use of State Funds (State Finance and Procurement Article § 14-417(a))
4. Prohibitions on Invasive Plants pursuant to Md. Code Ann., State Fin. and Proc. (SFP), § 14-417.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Statements: For arborist and tree service firm.

B. Existing Conditions Documentation: Documentation of existing trees and plantings indicated to remain, relocate, or be removed, establishing preconstruction conditions that might be misconstrued as damage caused by construction activities.

1. This may be submitted as part of shop drawing submittal.
 2. Use sufficiently detailed photographs.
 3. Include plans identifying tree locations, species, approximate size, and any existing wounds or damage conditions of each tree or plant designated to remain.
- C. Post Construction Final Certification: From arborist certifying that trees indicated to remain have been protected during construction in accordance with recognized standards and that trees were promptly and properly treated and repaired when damaged.
- D. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.5 QUALITY ASSURANCE

- A. Arborist Qualifications: All tree protection, pruning, relocation, and mitigation activities shall be overseen by a Certified Arborist or a Maryland Licensed Tree Expert experienced in similar institutional projects.
- B. Tree-Service Firm Qualifications: An experienced tree-service firm that has successfully completed temporary tree- and plant-protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
- C. University Oversight: All tree protection, relocation, restoration, and replacement activities are subject to review and approval by University Environmental Services and the Office of Sustainability.

1.6 FIELD CONDITIONS

- A. The following practices are prohibited within protection zones:

<Revise subparagraphs below to suit Project.>

1. Storage of construction materials, debris, or excavated material.
2. Moving or parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.

7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.
- D. Take precautions to protect plants from airborne contaminants, such as paint or fireproofing overspray.

1.7 PRE-CONSTRUCTION REQUIREMENTS

- A. Site Evaluation and Preparation: Prior to start of construction, perform a site audit to identify existing trees and green space to be affected. Identify Tree Protection Zones (TPZs), root protection limits, and trees proposed for relocation or removal.
- B. Planning for Preservation: Relocation or preservation of trees shall be evaluated prior to approval of removal. Trees shall not be removed solely for contractor convenience or due to insufficient construction planning.

PART 2 - PRODUCTS

2.1 MATERIALS <Revise for specific project>

- A. Backfill Soil: [Stockpiled soil from location indicated on Drawings] [Stockpiled soil mixed with planting soil] [Planting soil] of suitable moisture content and granular texture for placing around tree; free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.
 1. Mixture: Well-blended mix of [2 parts stockpiled soil to 1 part planting soil] <Insert requirement>.
 2. Planting Soil: Planting soil <Insert drawing designation> as specified in [Section 329113 "Soil Preparation"] [Section 329115 "Soil Preparation (Performance Specification)."]
- B. Organic Mulch:

1. Comply with Maryland Green Purchasing Committee Approved Specification– Mulch requirements
2. Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
3. Type: [Shredded hardwood] [Ground or shredded bark] [Wood and bark chips] <Insert mulch type>.
4. Size Range: [3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum] <Insert size range>.
5. Color: Natural. <Revise for specific project>

C. Protection-Zone Fencing: Fencing and gates.

<Architect to edit section to include specific fence requirements.>

D. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes; legibly printed with nonfading lettering.

PART 3 - EXECUTION <Revise to suit project>

3.1 EXAMINATION

- A. Site Verification: Examine site conditions prior to installation of tree and plant protection measures to verify locations, limits, and existing conditions of trees, shrubs, and plantings to remain, relocate, or be removed.
- B. Erosion and Sedimentation Control: Verify that temporary erosion- and sedimentation-control measures are in place and functioning prior to installation of tree protection measures. Ensure runoff from construction activities does not enter or cross Tree Protection Zones (TPZs).
- C. Detrimental Conditions Report: Prepare a written report identifying any site conditions detrimental to tree and plant protection. Do not proceed with Work affecting protected vegetation until conditions have been corrected.

3.2 PREPARATION

- A. Plant Identification: Prior to start of construction activities identify all trees, shrubs, and plantings as to remain, relocate, or be removed.

1. Mark trees to remain and trees to be relocated in a manner that remains visible throughout construction.
2. Coordinate identification with Tree Protection Plan and approved submittals.

B. Coordination

1. Coordinate work with University landscaping contractor and O&M representatives.
2. Coordinate tree and plant protection activities with construction sequencing, access routes, staging areas, and utility work to prevent damage to protected vegetation.

3.3 TREE PROTECTION DURING CONSTRUCTION

A. Tree Protection Zones (TPZs): Establish Tree Protection Zones prior to mobilization and maintain for the duration of construction.

1. Install chain-link fencing around TPZs in locations indicated on approved Tree Protection Plan.
2. Where fencing is not feasible, install mulch or gravel mulch over geotextile fabric to prevent soil compaction.
3. Maintain TPZs free of construction activities except as specifically approved by the University.

B. Prohibited Activities: The following activities are prohibited within TPZs unless specifically approved by the University:

1. Storage of materials, equipment, or debris.
2. Parking or operation of vehicles or machinery.
3. Grade changes, excavation, or soil compaction.
4. Attachment of signs, fencing, or materials to trees.
5. Discharge of chemicals, concrete washout, fuels, or solvents.

C. Temporary Access Exception: If temporary access or laydown within a TPZ is unavoidable:

1. Materials shall be placed no closer than two feet from tree root buttress flares.
2. Materials shall remain no longer than 24 hours.
3. Provide additional root protection measures as directed by the arborist.
4. Obtain prior approval from the University.

3.4 SOIL PROTECTION AND ROOT ZONE MANAGEMENT

A. Soil Protection: Protect soils within TPZs from compaction, contamination, erosion, and excessive moisture.

- B. Root Zone Protection: Protect tree root systems from damage caused by runoff, ponding, dewatering operations, or spillage of noxious materials.
- C. Soil Restoration: Where construction activities impact soil chemistry or structure, restore soils to suitable conditions for plant health.
 - 1. Restore soil pH to a range of 6.0 to 6.5 unless otherwise approved by the University.
 - 2. Replace or amend soils as required to support long-term viability of protected vegetation.

3.5 FENCING AND TRUNK PROTECTION

- A. Protection-Zone Fencing: Install fencing as indicated on approved submittals prior to bringing materials or equipment onto the site.
 - 1. Maintain fencing in an upright, secure condition throughout construction.
 - 2. Repair or replace damaged fencing immediately.
- B. Trunk Protection: Where trees are subject to potential impact, install trunk protection assemblies as required.
 - 1. Protect trunks from abrasion, impact, and equipment contact.
 - 2. Maintain trunk protection until risk of damage has passed.

3.6 EXCAVATION AND TRENCHING NEAR PROTECTED VEGETATION

- A. General: Perform excavation near TPZs in a manner that minimizes damage to roots and soil structure.
- B. Trenching within TPZs: Where trenching within a TPZ is unavoidable:
 - 1. Excavate by hand or with air spade, tunneling, or approved low-impact methods.
 - 2. Do not cut main lateral roots or taproots.
 - 3. Prune roots cleanly using sharp tools as directed by the arborist.
 - 4. Protect exposed roots from drying and backfill as soon as practicable.

3.7 TREE PRUNING AND REPAIR

- A. Pruning: Prune trees only where necessary to accommodate construction activities and only under supervision of the arborist.

- B. Repair of Damage: Promptly repair damage to trees or plants caused by construction activities in accordance with arborist recommendations.

3.8 TREE RELOCATION, REMOVAL, AND REPLACEMENT

- A. Tree Relocation: Trees up to eight (8) inches in caliper are generally considered transplantable and shall be prioritized for relocation where feasible.
- B. Tree Removal: Remove trees only after approval by the University. Removal for contractor convenience or due to avoidable planning conflicts is not permitted.
- C. Replacement Requirements: Where relocation is not feasible, provide replacement trees.
 - 1. Replacement species shall be non-invasive, native to Maryland, and consistent with Maryland Department of General Services landscaping standards or otherwise approved by the University.
 - 2. Replacement quantities shall be determined using a Trunk Area Replacement (TAR) methodology equivalent to or consistent with the NYC Tree Valuation Protocol.

3.9 MONITORING AND QUALITY CONTROL

- A. Monitoring: Monitor tree protection measures throughout construction to ensure continued compliance.
- B. Corrective Actions: Immediately correct deficiencies or damage identified by the arborist or University at no additional cost to the University.
- C. Notification: Notify University immediate of any damage to trees and plants or tree protection area boundaries.

3.10 RESTORATION AND CLOSEOUT

- A. Restoration: Restore disturbed areas and vegetation to conditions equal to or better than preconstruction conditions.
- B. Cost Responsibility: Include all costs for tree protection, relocation, replacement, soil remediation, and restoration in the Contract Sum.

- C. Final Certification: Submit certification from the arborist confirming compliance with tree protection requirements and completion of required restoration.

END OF SECTION 015639