

SECTION 120 — TREE PRESERVATION

120.01 DESCRIPTION. This work shall consist of the establishment of a Tree Preservation Area (TPA) (an area of existing trees, which is to remain protected and preserved) as specified in the Contract Documents or as directed by the Engineer.

120.02 MATERIALS.

Temporary Orange Construction Fence

104.20.02

120.03 CONSTRUCTION.

The Contractor shall erect a temporary orange construction fence around the TPA at locations specified in the Contract Documents and as specified in 104.20.03.

The Contractor, the Administration's Landscape Operations Division representative, and the Engineer shall meet on the site to discuss all aspects of tree protection and maintenance prior to the commencement of any work.

Tree Expert. The Contractor shall engage a Maryland licensed tree expert to perform the following work:

- (a) Recommend procedures to compensate for loss of roots (if any) and perform initial pruning of branches and stimulation of root growth where removed. This work shall be completed prior to commencing any construction activities.
- (b) Inspect all trees at the completion of construction and perform follow-up care for any damage incurred.
- (c) Submit a written Tree Protection Certification that trees have been protected during the course of construction in conformance with recognized standards of the industry. Certify that damaged trees were promptly and properly treated. Indicate any damaged trees that are incapable of reaching maturity and those recommended for removal and replacement.

Protective Fencing. Protective fencing shall be installed to clearly define the protected area as indicated on the Contract Documents. Prior to commencing with clearing and grubbing or erosion and sediment control, install temporary orange construction fence around areas to be left undisturbed. Temporary orange construction fence shall encompass any significant trees to be saved within and along the area designated as the

TPA. The location of the protective fencing shall be approved on site by the tree expert and the Engineer.

Wash-Out Area. Any “wash-out” area for trucks shall be located away from TPA, as approved by the Engineer.

Tree Roots. The Contractor shall protect tree root systems throughout the life of the project. Tree root systems shall be protected from smothering, flooding, excessive wetting resulting from dewatering operations, off-site runoff, spillage, and drainage of solutions containing materials that could be hazardous to tree roots. Removal of top soil or root mat within the TPA is prohibited.

Traffic. The Contractor is prohibited from parking any construction equipment, or from storing building supplies or material within the TPA. Foot traffic and vehicular traffic are prohibited within the TPA.

Tree Removal and Damaged Trees. The Contractor shall not remove any tree that is designated for preservation. Any tree damaged or destroyed within the TPA shall be the responsibility of the Contractor. The Contractor shall avoid the following:

- (a) Placing backfill in protected areas.
- (b) Felling trees into protected areas.
- (c) Driving construction equipment into or through protected areas.
- (d) Burning in or in close proximity to protected areas.
- (e) Stacking or storing supplies in protected areas.
- (f) Changing site grades which cause drainage to flow into, or to collect in protected areas.
- (g) Conducting unauthorized trenching operations in the vicinity of trees.
- (h) Grading in the vicinity of trees.

Work within the TPA.

- (a) **Root Pruning.** The Contractor shall use a trenching machine, vibratory knife, or rock saw to a depth of 18 in. along the outside limits of disturbance, as shown in the Contract Documents, in the vicinity of existing trees prior to clearing and grubbing. When a trenching machine is used, the trench shall be immediately

backfilled. This root pruning operation shall occur concurrently with tree pruning and tree fertilization.

Some trees that are immediately adjacent to the root pruning may be affected adversely due to their close proximity to the excavation. Removal of any of these additional trees or any of their limbs shall require the concurrence of the Landscape Operations Division representative and the Engineer.

Upon satisfactory completion of these activities, protective fencing shall be installed along the outside edge of the trench line in conformance with 104.20.03.

- (b) **Replacing Damaged Trees.** Existing trees that have been designated to remain but are damaged beyond repair due to construction operations, as determined by the Engineer, shall be removed and replaced at no additional cost to the Administration. Replacement trees shall be the same genus, species, variety, and size as the removed tree, except those trees having caliper greater than 6 in. shall have smaller trees furnished and installed. Caliper shall be measured as specified in 714.04. The replacement trees shall be a caliper and quantity acceptable to the Engineer. The minimum caliper shall be 3 in. Price adjustments for replacing trees with smaller caliper trees will be as specified in 120.04.

Planting of replacement trees shall be in conformance with Section 710 and include a one year warranty period.

- (c) **Repairing Tree Limbs, Branches, and Trunks.** The Contractor shall repair limbs and branches that have been damaged by construction operations as determined by the Engineer. Repairing shall be accomplished by cutting damaged limbs and branches to healthy wood in conformance with Section 712 and this Specification at no additional cost to the Administration.
- (d) **Pruning Trees.** All pruning shall be in conformance with the current edition of the National Arborist Association Standard for Pruning Shade Trees, Section 712, and this Specification. All pruning tools and methods employed shall be in conformance with accepted arboricultural practices performed by competent personnel under the direct supervision of the tree expert. The Contractor shall notify the Engineer 10 days prior to the beginning of any work.

Safety ropes shall be used to climb trees to be pruned. Climbing spurs are prohibited.

Existing injuries to bark, trunks, and limbs as designated by the Engineer, shall be repaired by properly cutting, smoothing the wood if necessary, tracing the bark to the proper shape to ensure rapid healing, and using only approved tools, materials and methods.

All pruned material shall be removed and disposed of by means acceptable to the Engineer.

The Contractor shall be responsible for all damage or injury to property of any character during the execution of the work resulting from any act, omission, neglect or misconduct, in the manner or method of executing this work satisfactorily.

Construction Activities within the TPA. When construction activities become necessary within the TPA, the Contractor shall obtain written permission from the Engineer prior to working in the area.

Removal and Clean-up.

- (a) **Removal.** After construction has been completed, protective fencing and all surplus construction materials shall be removed from the site in a manner that will not cause damage within the TPA.
- (b) **Clean-up.**
 - (1) The Contractor shall clean up all work areas.
 - (2) Grades shall be restored, stabilized, and blended into the adjacent areas.
 - (3) The Contractor shall haul away all debris, excess dirt and construction materials and dispose of off-site.
 - (4) The Contractor shall seed all disturbed areas within 24 hours in conformance with Section 705.
 - (5) The Contractor shall guard and protect the work to prevent vandal damage.

120.04 MEASUREMENT AND PAYMENT. Tree preservation, including the services of a Maryland licensed tree expert, will not be measured but the cost will be incidental to the Clearing and Grubbing item.

Temporary Orange Construction Fence will be measured and paid for as specified in 104.20.04.

Price Adjustment. If smaller trees are furnished and installed to replace larger trees that have been damaged beyond repair as determined by the Engineer, a reduction of the Contract price will be made at a rate of \$200.00 per inch of caliper differential between the damaged tree and the smaller tree for calipers over 12 inches.