

01 56 39 Tree and Green Space Protection

Protection and preservation begin in the earliest phases of any project. Unnecessary tree removal due to insufficient planning in the design process is not permitted.

Protection During Construction

Site Evaluation and Preparation:

1. Audit location and condition of trees and other green space/landscape material.
2. Photograph the existing project site to be affected by construction.
3. Identify protective tree and shrub root zones. Arrange for protective measures around plant material which will remain on site. Transplant and relocate any trees and other plant material as needed in advance of the start of construction.
4. For material that absolutely cannot remain on site or be transplanted/relocated, provide a list of potential replacements to project manager prior to construction for internal review by Environmental Services and the Office of Sustainability.

Protection of Existing Trees and Plantings

1. Install chain-link fence around the tree protection zone for trees to be saved.
2. Where fencing to prevent construction traffic is not possible, use temporary wood chip mulch or gravel mulch to prevent soil compaction around tree roots. Place wood chips or gravel mulch 6 to 12 inches deep on top of geotextile landscape fabric placed over the root zones of the trees to be protected.

Site Use During Construction

1. No materials should be stored within the tree protection zone (TPZ). If lay down is necessary within the TPZ, materials shall be no closer than two feet to tree root buttress flairs and shall remain no longer than 24 hours.
2. If soil test results indicate the need for fertilization, fertilize the root zone of any trees impacted by construction by applying soluble fertilizers. Various construction activities may impact soil pH, and thus, unless otherwise specified, soil pH of the site shall be restored to a range of 6.0-6.5.
3. Any restoration work must be planned and documented prior to construction and approved by Environmental Services and Office of Sustainability. Plans shall be revisited as the project progresses to address any changes or losses of existing plant materials planned to be saved, or if any other unforeseen site conditions arise. All restoration costs are to be included in the project's cost.

Relocation and Replacement of Removed Trees

Trees up to 8 inches in diameter are generally considered transplantable and should be prioritized for relocation. If a tree must be removed and cannot be relocated to another suitable site, then it must be replaced, and the following standards must be met.

Replacement Species

1. Trees must be replaced with non-invasive species native to Maryland, species consistent with the [Maryland Department of General Services Landscaping Plant Specifications](#), and/or species otherwise approved by the University.
 - a. Other Guiding Documents:
 - i. [Baltimore City Street Trees Species List](#)
 - ii. [Baltimore County EPS Reforestation and Urban Tree Canopy List](#)
 - iii. [UMB's Native Landscaping Master List](#)

Trunk Area Replacement (TAR) Valuation

1. A Tree Valuation Protocol establishes the maximum value of a tree based on its size, and then depreciates that value based on the tree's condition, species, and location. The value is expressed as Trunk Area Replacement (TAR), which is the amount of wood in square inches required to replace the wood lost due to the tree's removal. The TAR value is then converted to a quantity of trees to be planted or the current cost equivalent. An assessment with methodology equal or similar to the [NYC Tree Valuation Protocol](#) should be followed.
 - a. A tree cannot be valued lower than its caliper TAR equivalent, or the area of wood accounting for the number of 3" trees that span the total caliper of the tree(s) removed.
 - b. When a tree has been removed due to natural circumstances (e.g. old age, weather damage), its value is capped at twice caliper TAR.

Documentation of Removal/Replacement/Additions

1. Any tree that has been removed or planted must be documented with the following:
 - a. Removed trees must have a corresponding reason for removal.
 - b. Removed or planted trees must include species, location, and approximate cost of planting.
 - c. Proof of proper wood chipping and/or composting for any material removed.
2. Documentation is to be forwarded to the UMB Project Manager and Office of Sustainability.

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