Arlington County Tree Preservation Guide

The Chesapeake Bay Preservation Ordinance requires all projects with a Land Disturbance Permit to show tree preservation measures. This document is a guide on current practices, as a support manual for the Chesapeake Bay Preservation Ordinance Guidance Manual.

Maximizing preservation

For all land disturbance projects, maximizing preservation of existing woody vegetation is achieved by:

1. Involving arborist advice at the design phase, allowing for changes, before settling on architectural or site design.
2. Minimizing disturbance on the site in the plan, particularly inside the Critical Root Zones of preserved trees.
3. Maintaining tree preservation measures until all site disturbance, including construction vehicle access, is stopped.
4. Providing after care for trees with damaged critical root zones.

Guiding documents for preservation

The industry’s leading document on tree preservation is the ANSI A300 – Management of Trees and Shrubs During Site Planning, Site Development, and Construction. Arlington County has also developed details to expand on the interpretation of this document.

Best use of tree protection measures

Arlington County benefits from a high tree canopy percentage, which means most land disturbance projects impact trees on and off-site, through direct or indirect damage to trunk and/or roots.

1. Project siting and design phase: Plot all tree locations and critical root zones of all trees impacted on your plan, and:
   a. Prioritize the reduction of damage near the trunk. The closer the disturbance, the higher the impact is likely to be, and this damage may destabilize a tree.
   b. Work with the desired design of the project, to adjust the limits of disturbance, to reduce impact to existing on and off-site trees. Adjust the desired design, where preservation is maximized.
   c. Calculate the percentage impact to each tree. Where the impact to a critical root zone exceeds 30%, adjust the design to reduce impact, or work to limit root impact in other ways.
   d. Where off-site trees are impacted, work with the owner to reduce impact, or plan for replacement.
2. Tree protection measures.
   a. Reduce disturbance and compaction to the maximum extent practicable.
   b. Use tree protection fencing at the limit of disturbance (LOD). Where the LOD impacts the Critical root zone of trees, plan to use trenchless silt fence, to reduce root impact.
   c. Use root protection matting, where access is needed for project completion, where matting can be present throughout the project.
d. Trunk protection, where tree fencing may not be enough to reduce impact.
e. Use root pruning only where significant cutting occurs. Root pruning reduces damage, but still causes harm. Logical locations for root pruning include the edge of a construction over dig, or the edge of utility installation trenches. Root pruning shall not be used within ¼ of the radius of the tree.

3. Tree damage mitigation during construction
   a. Following the tree protection plan throughout the project.
   b. Coordinate changes to the limit of disturbance with a certified arborist.
   c. Watering during dry spells

4. Landscaping phase
   a. Respect the critical root zones during landscape installation. Damage can be done by individual plant installations.
   b. Grass can compete with tree roots for nutrients. Avoid installation of grass in the critical root zones, and opt for hardwood mulch, instead, where appropriate.
   c. Remove non-native invasive vines inside the tree preservation area

5. After care
   a. Follow ANSI standards for soil management and pruning to provide appropriate after care for trees, after disturbance is completed.
   b. Do not prune tree branches to compensate for root loss.
   c. Mulch the critical root zones with shredded hardwood mulch or other appropriate organic mulch.
   d. Water trees, if necessary.

See the following diagrams for examples of proper tree protection during disturbance:
Providing access over roots:

TEMPORARY ROOT PROTECTION MATTING REQUIRED. NO EXCAVATION IN THIS AREA.

PROPOSED ROOT PROTECTION MATTING (SEE DETAIL & SPECIFICATIONS)
**Constructing on top of roots (with phasing):**

**Tree Protection Fence (see detail):**
- Silt fence to be installed on grade with no trench. Matting to be installed over silt fabric and anchored by minimum 12” landscape nails @ 1’ OC. Second layer of silt fabric to be installed on top of matting. Installation to be performed by a certified arborist (see specifications).

**Tree to be Protected:**
- Tree protection area
- Existing grade
- Existing undisturbed soil
- Roots to remain

**Notes:**
1. Matting material shall be double-sided geocomposite, geonet core with non-woven covering (such as Tenax Tenplan 710/2) or approved equivalent.
2. RPM shall be installed by a certified arborist.
3. To be used for designated temporary construction access and stockpile areas.
4. Matting shall be placed on 12” wood chip mulch unless otherwise directed.
5. For heavy traffic areas, matting shall be covered with 6-8” well graded crushed aggregate. Additional layers of geotextile may be needed.

**Temporary Root Protection Matting (typical):**

[Diagram showing tree protection and related details]
TRUNK PROTECTION

TREES TO BE REMOVED, CONTRACTOR TO GRIND STUMPS

DEMO BY HAND & AS DIRECTED BY ARLINGTON COUNTY ARBORIST
Paths through forested areas:
ALL TREES TO REMAIN SHALL BE OUTSIDE TREE PROTECTION FENCE. FIELD ADJUST FENCE AS NEEDED TO PROTECT TREES. TREES CLOSE TO THE FENCE SHALL HAVE TRUNK WRAP INSTALLED. SEE DETAIL LJ001-4

TEMP WATING FOR CONSTRUCTION ACCESS