

Protection of Existing Trees from Construction Related Activities

1. Potential Issues Requiring Protective Measures

- Significant alteration in flow of water to the tree due to site clearance and grading operations;
- Compaction of soil within the tree's critical root zone due to constant passage of vehicles or persons in this area, or storage of equipment or materials;
- Root damage within the critical root zone due to grading or trenching for the installation of utilities;
- Damage to the tree's trunk or broken limbs from passage of vehicles or equipment; or
- Release of materials or substances hazardous to a tree's health within the tree's critical root zone due to placement of areas to clean equipment.

2. Tree Protection Plan

If any of the above construction related activities occur adjacent to trees proposed for credit towards tree planting requirements, a Tree Protection Plan must be prepared that identifies trees in need of protection and outlines the measures to be taken to protect the trees. The Tree Protection Plan must be in writing (with applicable illustrations as needed) and made available to every person who will be working in close proximity to any protected tree.

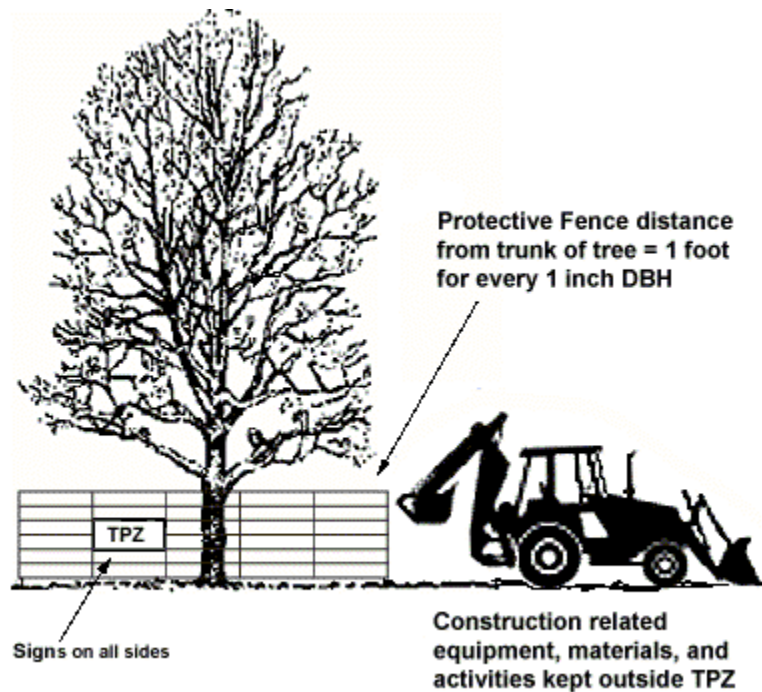
A Tree Protection Plan must include the following information:

- The location, species and approximate size in DBH of all trees to be protected;
- A listing of anticipated construction activities on site (based on the activities listed in Item 1 above) that could impact these trees;
- The location of existing and proposed public and private utilities, buildings and other infrastructure within thirty feet of any protected tree; and
- Illustration showing dimensions of the "tree protection zone" around protected trees.

3. Standards for Tree Protection Zone

As shown in the following illustration, the tree protection zone includes the entire area around the tree equal to one foot of radius for every one inch in DBH of the tree's trunk. This area contains the tree's critical root zone and none of the construction related activities listed in Item 1 is allowed to take place within this area. If multiple trees in close proximity to one another are to be protected, the tree protection zone is measured from the outermost trees to determine the protection area.

(Illustration: Tree Protection Zone)



To create a tree protection zone use, at a minimum, place orange construction fencing of at least 4 feet in height around the entire tree protection zone and secured by posts to ensure durability. Affix signage on all sides noting the tree protection zone. Also use silt fencing if there is concern about erosion within the tree protection zone. The attachment of any rope, wire, nail, or sign to any tree, or the application of any liquid or solid substance that is harmful and could damage or destroy the tree is prohibited.

It is recommended that all utilities remain outside this tree protection zone. However, if it is necessary for utilities to cross the tree protection zone they should be installed via tunneling rather than trenching, if this can be accomplished in a cost effective manner. Brush and undergrowth within the tree's protected area may be addressed if no heavy equipment is used and any stumps are cut flush to and not below the ground, where root damage could occur. Additionally, break up the soil at the surface in areas where such work takes place to prevent soil compaction.

4. Corrective Actions for Tree Damage from Construction Activities

While adequate tree protection measures should limit potential damage, some types of accidental damage may occur. Any trees listed on a Tree Protection Plan that are subsequently damaged by construction related activities should be noted. The entity charged with implementing tree protection measures is responsible for corrective measures or tree replacement for damage noted during or shortly following construction activities. Failure to address noted issues may delay approval of the final site inspection. The following corrective measures may be taken to address damage from construction activities:

- The removal of dead wood within the tree's crown using appropriate pruning techniques;
- The application of low-level nitrogen or a balanced nitrogen/phosphorous fertilizer around the base of the tree to encourage new root and foliage growth. While granules spread around the critical root zone may be used, high pressure injection directly into the soil is recommended; or
- Loose bark from damage to the tree's trunk should be removed or cut flush with a sharp knife, being careful not to cut into living tissue. This will aid the tree's healing process for such wounds.