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Did you know?

●
Trees grow as a community, protecting each other from the elements. When some trees are removed, the remaining trees are suddenly exposed to sunlight and wind, making them more prone to sunscald, and breakage from wind or heavy ice or snow.

●
Trees are measured by the trunk diameter at 1.4 metres above ground. This is called diameter at breast height (dbh).

●
The smallest tree protection zone (TPZ) in Toronto is for a tree with a trunk diameter of 11-40 cm dbh. The minimum protection distance is 2.4 m all around the tree.

●
Trees require several years to adjust to the injuries and environmental changes sustained during construction. Stressed trees are more prone to health problems such as disease and insect infestations.

●
Effects of root damage may take years to manifest. Trees should be monitored and periodically evaluated for declining health or safety hazards.

Tree Protection During Construction or Landscaping

Construction or landscaping can be harmful to surrounding trees. The visible injuries such as broken branches and wounds to tree trunks are only the beginning. It is often the unseen damage to the root systems that result in the worst injuries.

Many of the trees on your property can be protected if the proper steps are taken.

Hire a professional arborist in the early planning stages

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of protecting them. Few builders are aware of the way tree roots grow and what must be done to prevent injury.

Many factors determine how a tree will tolerate root severing. Tree species, age, size, site conditions, existing problems, vigor and extent of pruning are just some of the factors. A certified arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage, and suggest preservation and protection measures.

Reconsider the plan

Sometimes small changes in the placement or design of your house, driveway or landscaping can make a great difference in whether a tree will survive.

Keep roots safe

Feeder roots are very fine and delicate, and are only about the diameter of a strand of hair. Roots need air, water and nutrients to grow, and to anchor and nourish the tree. Ninety percent of the fine roots that absorb water and minerals grow in the upper 6 to 12 inches (15 to 30 cm) of soil. Roots can reach outward up to three times the height of the tree.

Don't leave roots gasping for air

Healthy soil has spaces between the soil particles that are filled with water and air. These pores allow roots to grow. When heavy construction equipment causes soil compaction, the amount of oxygen in the pores is severely decreased, and root growth is inhibited.



Factsheets in the series:



The Three "P"s of Healthy Trees



Top 10 Things To Do for Your Trees



Selecting a Tree Care Company



Inventories: The Place to Start



Improving the Urban Forest in your Neighbourhood



Protecting Our Trees: City of Toronto Bylaws and Policies



Fundraising for Your Urban Forest Project



Made in the Shade: Shade Trees for Sun Safety



Volunteer Opportunities in Urban Forestry



Trees: The Key to Cleaner Air



Healthy Soil the Key to Healthy Trees

Prevent grade changes

Most people don't realize that even piling soil over the root system or increasing the grade can smother the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

Cutting or severing of roots

Often, the digging and trenching involved in construction and installation of underground utilities will sever roots of nearby trees. The amount of damage to the tree can depend, in part, on how close to the tree the cut is made and how much of the root system is affected. Cutting one major root can cause the loss of 5 to 20 percent of the root system.

Digging underground might be inevitable in the construction process, but need not be severely damaging to surrounding trees. For instance, tunneling beneath a tree rather than digging across the roots is one way of minimizing damage to tree roots when installing pipes and utilities. "Daylighting" is one method used that is less damaging to tree roots. A certified Arborist is qualified to discuss these options.

Keep the trunk and branches safe

Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Diligent watering

Keep trees well watered during and after any root disturbance. Since your tree's ability to take up water may be reduced by root damage, it is important to ensure a readily available source of water for the roots that remain. For mature trees use the hose on slow drip for one hour once per week. Newly planted trees need more frequent watering. Wrap any roots exposed through digging in burlap and water frequently.

Protect trees by building construction fences - it's the law!

Because the ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. Each city and region has different by-laws and policies concerning street trees and private trees. Find out if your city has a tree protection policy while construction occurs around the home to make sure you are following the correct measures.

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