

## Prevent Damage to Your Trees' Roots

Trees are hardy plants, and their roots fight back against manmade limits around them. In the urban and suburban landscape, tree roots often are forced to grow between buildings or under driveways and walkways. As roots grow they will break walls, pipes and patios, causing damage to properties.

### *Plan before you plant*

"Before you plant a new tree in your yard, you need to understand how a tree damages your property and look for methods to preventing it," says Peter Gerstenberger, senior advisor for safety, standards and compliance with the Tree Care Industry Association.

Woody tree roots thicken as they grow, gradually pushing shallow roots toward the surface. Since soil near the surface is best suited for root growth, most tree roots are just below the surface – putting them in conflict manmade obstacles. Where the soil is covered by a solid driveway or patio, upward growing roots don't experience the normal signals (increased light and air) that they are reaching the surface. As a result, they often grow against the underside of pavement.

"Most damage is found six feet or less from the tree," notes Gerstenberger, "since roots become smaller and less damaging the further they are from the trunk. Keep this in mind before you plant. That small sapling could become a large shade tree with roots spreading 30 or 40 feet outward from the trunk."

### *Fixing the problem*

Some homeowners, masons and landscapers deal with intrusive roots by grinding down or removing them. This can be expensive and is very harmful to the tree. Wounding a tree's roots creates points of entry for pathogens, leaving a tree vulnerable to disease. Cutting major roots also reduces a tree's ability to take up nutrients and water, leaving it more susceptible to drought. Finally, reducing a tree's structural support from the roots increases the danger the tree will topple onto your house in high winds.

Keep these cautions in mind if you plan to deal with a problem tree:

- The farther you cut from the trunk, the less threat to the tree's health, and the less danger of creating a hazard.
- Try not to cut roots over 2 inches in diameter.
- Roots recover better from being severed when you: cut them cleanly with a saw instead of breaking them with a backhoe; mulch and water well after pruning; and fertilize in early fall or spring.

### *Deciding what to plant*

Select trees for your landscape that cause less damage, match species with site conditions, and – most importantly – do not plant large shade trees within 12 feet of hardscapes. Since the health of trees in your yard is put at risk whenever root systems are cut back or damaged, anything that can be done to reduce the damage caused by tree roots will also benefit your trees.

In areas within 5 to 7 feet of a paved area or structure, plant trees that grow to a mature height of less than 30 feet. In areas within 7 to 10 feet of a paved area or structure, plant trees that grow to a mature height of less than 50 feet. Reserve trees that mature higher than 50 feet for areas with at least 12 feet of clearance. This allows adequate space for the roots. Also, before you plant check for overhead utility lines and leave adequate space for that tree to mature.

### *Find a professional*

A professional arborist can assess your landscape and work with you to determine the best trees to plant. Contact the Tree Care Industry Association (TCIA), a 68-year old public and professional resource on trees and arboriculture. It has more than 2,000 member companies who recognize stringent safety and performance standards and who are required to carry liability insurance. TCIA has the nation's only Accreditation program that helps consumers find tree care companies that have been inspected and accredited based on: adherence to industry standards for quality and safety; maintenance of trained, professional staff; and dedication to ethics and quality in business practices. An easy way to find a tree care service provider in your area is to use the "Locate Your Local TCIA Member Companies" program. You can use this service by calling 1-800-733-2622 or by doing a ZIP Code search on the TCIA Web site, [www.treecareindustry.org](http://www.treecareindustry.org).