

Explanation of a Visual Tree Assessment

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When structurally weak and/or dead trees fail, the result can be harmful to the public and expensive, negligence lawsuits for the property owner and possibly your company. To avoid this potential trouble, it is important to remove weak and dead trees, especially when these trees might fall onto a local roadway or other public area. It is equally important to protect trees during construction as a protection against lawsuit in the future.

A question that naturally arises from this discussion is: “According to Indiana state law my client has a duty to inspect their trees; however do they think by contract I am performing this duty for them? What does my contract say about mature trees? If I am to inspect the mature trees, what do I look for? How do I evaluate a tree for potential for risk?” Trees that present a “risk of harm” to the general public are undesirable, and it is also undesirable to cut down healthy and beneficial trees! This can be quite a predicament!

Be proactive

The first thing to do is create an *action plan* for your Company to follow for every property that you are involved in the care of, especially for properties that you may be listed as a “project manager” or as a “landscape designer or architect”. Involve your company attorney to write language into the contract spelling out exactly, what you are doing concerning mature trees. Even if your contract explains you are not caring for, evaluating or inspecting mature trees it is wise to go above and beyond and notify your client when you see a tree that presents a risk. Remember when you do this you may actually be saving one of your employees from harm as they work around potential-



A Visual Tree Assessment is a key element of tree inventories in property action plans.

ly hazardous trees. A proactive plan may save you a lot of money, as it takes money to prove that you are not contractually obligated.

If your contract does include inspecting mature trees, your proactive plan should, at the very least, evaluate trees within a striking distance of any public area. That is, perform an inventory of the trees in critical areas that, if they failed, could harm the general public. The plan should document what is being looked for and how the company will deal with trees that present unreasonable risk. It may also describe how trees will be protected during construction and maintenance.

This tree inventory documents trees as the area is physically explored. It should

include species, diameter at breast height (dbh), condition of the trees, and possibly a maintenance plan. It is advised that the inventory sheets include a check box for “immediate removal recommended” to categorize dead trees and trees with very obvious decayed areas that threaten the public areas. A tree inventory should also include a Visual Tree Assessment (VTA) of each tree.

But what exactly is being looked for during a VTA? This article examines the first step in performing a VTA. Future articles will explore the remaining steps to this assessment process. Please realize that the following guidelines are preliminary and further education is needed to perform a thorough VTA.

On site—person-to-tree

A Visual Tree Assessment must be made on site, person-to-tree. Trees near a roadway cannot be assessed from a downtown office, from an aerial photo, from neighbor hearsay or from a helicopter. *Instead, inspections should be completed by physically walking the area and scrutinizing the trees!* Remember, a 100-foot tall tree fifty feet deep in a woods could easily fall and hit the roadway or public area.

The process of VTA should include an assessment of:

- The ground around the root flare (area where trunk connects to the roots)
- The root flare itself (sometimes looks like an “elephant’s foot”)
- The bole or trunk of the tree (also sometimes called the stem)
- The limb junctions (where limbs branch off of the trunk)
- The scaffold branches (big limbs which make up the crown of the tree)

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VTA (continued)

- The branches (attached to scaffolds)
- The twigs of the tree
- Miscellaneous hazards
- An evaluation of the target, it's usage and it's value

VTA Step #1: The ground around the root flare

It is important to use the Visual Tree Assessment (VTA) and an inventory process for trees within striking distance of any public area. The first area to check is the "ground around the root flare", the entire area within the tree's drip line (straight down from the outer most branches). For this step, note any irregularity within the drip line in order to identify a tree's potential for failure.

One type of irregularity manifests in the roots. Trees use their roots for support and absorption of air, nutrients and water. If roots are damaged or decayed the tree may fall, causing injury or damage. While investigating the ground around the root flare it is crucial to visualize the formation of the root system. Most people think roots grow straight and deep down into the ground, like an upside down volcano. In reality, the root system generally grows in a shallow, horizontal pattern like an upside down kitchen plate. Generally this "plate" grows only two to three feet below the ground, therefore roots are not "as deep as the tree is tall" as people often think.

While examining the soil within a tree's drip line, consider the roots' "kitchen plate" metaphor. Note if the soil has moved or heaved, or if there are large cracks in the soil that may have resulted from the tree moving on a blustery day. When trees move in high winds roots

often partially emerge from the soil. If roots are not previously visible are now visible above ground it may be a sign that they have lost their anchoring ability. It may also signify that decay is killing the small fibrous roots, or perhaps the soil is too wet or sandy to support the tree.

While it is often difficult to predict which trees will stand and which trees will fall, in doing an assessment common sense must prevail in the evaluation. A telltale warning sign is when the tree leans away from a crack in the soil. Try to determine if this lean was caused by a tree shifting from its original growing habit. When a tree has shifted, sometimes there will be a mound of soil beside the trunk because the roots act like a pry bar pushing upwards and produce a pile of dirt on the surface. Also raise a red flag if the soil underneath the tree moves on a windy day.

Another thing to look for in the tree's drip line is the presence of mushrooms and other fungal growth. When mushrooms grow directly from exposed roots they can function as nature's caution tape, warning that a tree is destined to fall. Remember, mushrooms frequent woodland environments so it is not necessary to remove every tree that harbors a morel, but when a large concentrated group of mushrooms grows where it is known that roots reside, watch out!

Root disturbance is another problem contributing to the fall of a tree. Root damage threatens a tree's stability and the root system is vulnerable to decay. If a nearby creek has eroded soil from the root system, a tree may not be able to support itself. Similar problems threaten trees that have had roots cut by various construction processes or farm implements. It is important to consider whether or not the tree



Presence of mushrooms and other fungal growth in the tree's drip line function as nature's caution tape, warning that a tree is destined to fall.

has enough roots to remain standing, and whether roots were cut on the windward side of the tree. Windward-side roots are naturally the strongest roots for defense against wind throw. If these roots are cut the tree may not be able to support itself.

Watch this column in the next issue for Part 2 of the VTA process. (Next article will examine root flares and trees trunks.) Remember when in doubt, call a Registered Consulting Arborist or a Certified Arborist for help in your evaluation! ☞

About the Author

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