

West Tisbury Library Hazardous Tree Evaluation

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After careful review of the three Norway Maples along the South side of the parking lot we found that in our professional opinion they should be removed. The liability that the trees represent is self-evident. For starters they are Norway Maples which are considered invasive, form a dense canopy, and have major root problems. Being invasive they will constantly seed into the new garden areas which will increase maintenance costs and cause future damage if they aren't controlled. The tree roots are so aggressive they have been banned for urban tree use across the country. The dense canopy is a great aspect of the Norway maple but in this case, where you want things to grow under and around them it will greatly reduce the plant choices and more than likely stunt/kill anything that is planted near them. Their roots produce a noxious chemical that inhibits plant growth in and around the canopy. Finally, the roots of the Maple are so dense and leave almost no extra room for anything to grow. They are highly prone to root problems like girdling roots, the roots will also tear through any root barrier you put in place and heave any type of road material you use for the new parking lot. They will just cost you more money and be a bigger liability down the road if you don't remove them now. Along with these problems they are also many disease problems, including aphids, tar spot and verticillium wilt, and they tend to hold deadwood. You do not want trees that will hold onto deadwood when you have people and cars around them.

As far as the integrity of the three Norway Maples along the Southern property line, the structures are bad. First all three trees are multi stem/ co-dominant trunks. Along with this there is heavy included bark and narrow connection angles. These three factors combined gives them a high potential for failure. Also through observation we found several decay columns that progress down into large branches roughly 12" in Diameter. The percent shell left on these arms are unknown meaning that they could easily be below the 20% mark and be at a critical risk and according to ANSI (American National Standards Institute) standards would need to be removed immediately. If you would like us to evaluate the percent shell on the trees we can but we did not want to mark the trees until asked to.

Potential for Failure plus Targets = Potential liability

Evaluation of targets around the site shows that there will be sitting and moving targets (people/ animals/ cars). Looking at the site there are two benches that sit almost directly under the trees and there is also a path that leads people from the new bus stop and the sculptor garden to the library. Everyone walking will be funneled right under the trees creating a high target area. People will also be attracted to the area because of the shade offered. The shade can be a good thing but in the summer it will attract people to stand closer/under then, again creating a targets and raising the liability. Also the new rain gardens and swales will attract people bringing them close to the trees and again

increasing the number of targets. The Maples are also tall enough that if they do fall over or lose a large limb they will be able to reach and damage cars in the new parking lot.

Foreseeable liability

We heard from the construction officials and workers that they are going to be trenching several feet deep along the property edge and basically right at the foot of the trees. This will severely damage the trees roots and greatly increase the chance for failure and more than likely eventually kill the trees. If you are not wanting to injure the tree and increase their liability you would need to put up tree protection zones (TPZ) around each tree. By doing this you would be able to ensure that the construction work around the trees is not increasing the liability of the trees. For Example a tree with a 10" diameter at breast height you would need a protection zone around the tree with a radius of 15' or more to ensure protection of the tree roots. To figure this you take the diameter at breast height multiplied by 1.5 and express that answer in feet. This is then the Radius of the TPZ. So for a tree like number 1 on the plans with a Diameter at breast height around 24" you would need a TPZ with a radius of 36 ft. Not only should you not dig through the TPZ areas but even the compaction that the machinery will create through these areas will cause the decline and death of the trees. This will again increase the liability of the trees. All of these issues are foreseeable which makes the library and the city liable if there is an accident. If the protection zones were put up in the beginning and respected then it would not be foreseeable and if there was an accident, the liability would be taken off of the city.

Finally, if you do decide to keep them for a while and in time you do decide to take them down, the cost will be double if not triple what it would cost now. The reason for this is that while the area is under construction you can drop the trees any direction and you can use the heavy equipment to help with it. There are no worries of damaging anything. If you don't wait and you do plant/ design all around them you will have to take the trees down piece by piece and use specialty equipment to not damage the new planting's.

Overview

Overall the three Norway Maples along the South side of the parking lot have;

- Co-dominant trunks
- Bad branch unions
- Included bark
- Decay columns
- Old severe damage
- Unhealthy growth
- Disturbed Tree Protection Zone

And on top of hazards there are people and car targets everywhere that will be stationary and mobile. In our professional opinion the best solution for these problems is to remove the trees. Remove the liability and start off on the right foot.