PITCHFORDASSOCIATES
arboriculture + environmental consulting

March 23, 2011

Mr. Larry Ausubel
2744 32nd St., NW
Washington, D.C. 20008

Dear Mr. Ausubel:

With this letter, I want to reiterate the discussion we had this morning concerning the potential impact to two trees that straddle the property line between you and your neighbor, Mr. Voorhees. I understand your concern with the potential for irreparable damage given the proposed construction on the Voorhees property.

The two trees in question are a white oak, with a diameter of 30.5", and a red maple with a diameter of 12 inches. Both of these trees are located along your property line. In fact, I believe that both are now co-owned trees. The white oak is in good to excellent condition. I inspected the root flares and main trunk and they were free of any significant defects. My only comment was to limit any more pruning of live limbs from this tree given that many limbs have been pruned for clearance over roofs, and probably to allow for more light into your back yard. The canopy is still large enough, but it can't afford to loose any more live limbs. The red maple is in good to fair shape, but only because the form has suffered from growing so close to the oak. This is a young and vigorous tree with no apparent structural defects.

I mentioned to you the pattern of tree root expansion that leads me to conclude that the proposed construction would inflict irreparably harm to at least the white oak. The best way to envision a tree's root system is to consider a dinner plate with a wine glass placed in the center. The dinner plate represents the wider system of lateral and absorbing roots which we call the "critical root zone," or CRZ. The roots in this zone are of a small diameter and they are both woody and non-woody. They are often re-grown in place, or grown elsewhere in the root system when severed. Our industry has determined tolerances for root loss in the CRZ which may be an issue here, but this is not the major issue.

The more significant problem rests with the roots within the area called the "root plate." This is the area immediately around the tree where we find the large, woody structural roots. These roots are located in the zone demarcated by our hypothetical "base of the wine glass." I term this zone the "minimum clearance zone," or MCZ, because these roots cannot be cut or the tree will lose its structural integrity. Our industry defines this zone as being present in an area measured radially around the tree equal to 6 inches for every one-inch of trunk diameter. So, for your 30.5" oak the root plate will extend out roughly 15 feet in all directions. There are exceptions to this rule especially when there are impenetrable surfaces, like a retaining walls or a building foundation, that will deflect these roots. However, this is not the case here. There are no impenetrable surfaces to re-direct these large roots.

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I can conclude from reviewing the proposed construction plan that you gave me this morning that the edge of the new addition is approximately 9 feet from your oak tree. And, even if there were no standard overdig needed, which is usually an additional 3 feet, this footing is well within the 15' MCZ. If a standard overdig is used, this would put the limit of disturbance at approximately 6 feet from the base of your tree. Therefore, if this construction proceeds as planned the structural roots of the white oak on the project side will be cut very close to this tree and it will then become structurally unstable. And, this is very bad news for you since these are the roots that keep the tree from falling in your direction.

I could also predict that even if somehow the tree were to remain upright despite the loss of these support roots, this amount of damage will almost certainly kill this tree within a period of five years, or less. Not only is this prediction based upon industry reference books, but I can concur that this amount of time is consistent with my own experience with trees in construction situations from my 22 years of work in the DC area. I am not overly concerned with the red maple in this case because it is of a small enough diameter to avoid any serious damage to the support roots. The MCZ of this tree is only 6 feet so it should be out of harms way.

In closing I want to add one more observation, and that concerns the structural integrity of the Northern red oak on the Voorhees property which is located between your homes. I had a chance to see this tree close up when inspecting several trees on their property for the landscape architect. I noted at that time that this tree is very close to the foundation of the proposed addition. In fact, I believe that the base is perhaps only three feet from the proposed LOD. Since this tree measured 25" of diameter (or, 78" of circumference) they could not remove this tree under the tree and slope overlay limitations given its size and good to excellent condition rating, so they would have to accommodate it in the construction plans. Unfortunately, digging this close to the tree will certainly violate the MCZ of 12.5 feet and will lead to a severe loss of structural integrity. And, again, like the white oak this tree would also fall onto your property with the loss of these structural roots.

My recommendation is to discuss these matters with Mr. Voorhees, and to explain the potential for very serious damage to your white oak including the likelihood that it would fall on your home if the construction proceeds as planned. I would also recommend discussing the potential for catastrophic damage to your pool and home if the roots of the Northern red oak are cut so close to the base.

Thank you for the opportunity to present these observations. Please contact me with any other questions you may have.

Respectfully submitted,

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