

The Shade Tree Department LLC

September 2, 2015

Borough of Chatham
Att: Robert Falzarano, Administrator
54 Fairmount Avenue
Chatham, NJ 07928

RE: 50.8" diameter Scarlet Oak at Lower Lum Field

Dear Mr. Falzarano,

On September 1, 2015, we met in the Borough Hall Conference Room to interpret the Resistograph data gathered by James Houck of SAVATREE on or about August 5, 2015. Present at the meeting were Steve Williams, Tony Torello, Timothy Day, Vincent DeNave, James Lonergan (by conference call), you and I.

At your suggestion we plotted the Resistograph readings on a life size paper cross section of the 50.8" diameter tree in an attempt to visualize the extent of the trunk decay and compare them with my own readings.

In so doing, we determined that the actual cross section area of the 50.8" diameter tree trunk was 2,041 square inches (πR^2) and the estimated cross section area of the decay had an average diameter of 26" and an area of 530 square inches. The 530 square inches is approximately 25% of the total cross section area.

We re-calculated these figures to be more conservative by deducting 3" in the tree diameter to allow for 1.5" of outer bark and corky tissue thus reducing the diameter to 48".

At 48", the cross section area of the trunk would be 1,810 inches and the cross section of the decayed area would still be 530 square inches. This would up the percentage of trunk decay to 29% which conversely gives the tree 71% of sound structural wood.

What does all of this mean?

Referring back to A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas Second Edition published by the International Society of Arboriculture, which is the professionally accepted standard, the threshold for action occurs when trunk strength loss reaches 33%. This does not necessarily mean remove the tree if trunk decay reaches or exceeds 33% of the cross section area, but it does indicate that abatement procedures should be initiated.

In our case, abatement would include crown reduction of over-extended branches, corrective pruning, treatment of ants, treatment with Cambistat (a growth regulator), deep root feeding, discouragement of activity beneath the tree (particularly during storm conditions), etc.

At our meeting, mention was made of SAVATREE's Resistograph as having a drilling depth of only 15". The tree was solid on the east side to the 15" depth. So the question is where does decay actually begin on the east side of the tree?

According to the Rinntech (manufacturer of the Resistograph) website, by special order Resistographs are available with a drilling depth of 100 cm (39 3/8 inches).

At this time, I have no idea who might have a Resistograph with a drilling depth of over 15". A larger and longer drill bit used on a regular drill could be used to probe the east side of the tree, but this would be more invasive than the 1/16" drill bit used in the Resistograph.

I believe that the further study of this tree confirms my original opinion of the tree, that although there is decay in the tree, the risks are manageable and barring any unforeseen event such as an ice storm, hurricane, lightning strike, etc., with regular care the tree should be around for many years to come.

Respectfully submitted,

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