Client: Town of Weston, CT  Attn: Bill Loomis, Tree Warden

Inspection Date: October 12, 2016

Inspector: Neil Hendrickson, PhD, Bartlett Tree Research Laboratory; ISA Qualified Tree Risk Assessor

Time Frame: 3 years

Tree:
Species: Red oak (Quercus rubra)  DBH: 4 trunks of approximately 40” each  Est. Ht. Approx. 80’
Tree Location: edge of Northfield Rd

Assignment:

Bartlett (Neil Hendrickson) was asked by Bill Loomis to perform a follow-up assessment to that done by Bartlett on August 9, 2016, to estimate the change in risk rating of this tree if one or two leaders closer to the road are removed. Although assessment of a hypothetical situation is speculative, the principles of tree risk assessment can still be applied.

It is likely that if one or two leaders closer to the road are removed, the load on the remaining two leaders away from the road will increase, although nearby trees still offer some protection from wind loads. Both of the two leaders that would remain lean away from the road, meaning the primary targets are the stone wall and adjacent open areas. The likelihood of stem/leader failure of the remaining two leaders would be possible. The likelihood of impact to the road or onto the wires would probably become very low, and the likelihood of failure on the stone wall high. The consequences of stem failure onto the stone wall were considered minor. As a result, overall risk rating for the tree with two remaining leaders away from the road is low.

The question of vehicles hitting the tree is not a part of tree risk assessment. The concern in this report is limited to the likelihood of failure of some part of the tree, the likelihood that a part of the tree could strike a particular target, and the consequences of that impact.

Summary and Recommendations:

Tree Risk Rating: Low

Mitigation Recommendations:
1. If a low risk is not acceptable, remove this red oak and replant with another tree. The risk of failure cannot be reduced to zero unless the tree is removed and the stump ground.

2. If a low risk is acceptable and the tree is not removed, installation of cables, or re-cabling, should be performed as practical.

3. Pruning to remove dead branches would reduce their likelihood of failure to improbable.

4. Pruning to reduce some of the longest limbs can reduce loads, and the likelihood of their failure. As with cabling, reduction pruning would not alter the risk rating.

Residual Risk: None if tree is removed; low for branch failure if tree is pruned; low for the whole tree even if pruning and cabling is performed.
Re-inspection Interval: Visual assessments are recommended annually and after major storms if tree is not removed. Cables should be inspected approximately annually.

Submitted by:
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Northeast Technical Support
Bartlett Tree Research Lab
ISA Qualified Tree Risk Assessor

Appendix:

Limitations of Tree Risk Assessments
It is important for the tree owner or manager to know and understand that all trees pose some degree of risk from failure or other conditions. The information and recommendations within this report have been derived from the level of tree risk assessment identified in this report, using the information and practices outlined in the International Society of Arboriculture’s Best Management Practices for Tree Risk Assessment, as well as the information available at the time of the inspection. However, the overall risk rating, the mitigation recommendations, or any other conclusions do not preclude the possibility of failure from undetected conditions, weather events, or other acts of man or nature. Trees can unpredictably fail even if no defects or other conditions are present. It is the responsibility of the tree owner or manager to schedule repeat or advanced assessments, determine actions, and implement follow up recommendations, monitoring and/or mitigation. Bartlett Tree Experts can make no warranty or guarantee whatsoever regarding the safety of any tree, trees, or parts of trees, regardless of the level of tree risk assessment provided, the risk rating, or the residual risk rating after mitigation. This information is solely for the use of the tree owner and manager to assist in the decision making process regarding the management of their tree or trees. Tree risk assessments are simply tools which should be used in conjunction with the owner or tree manager’s knowledge, other information and observations related to the specific tree or trees discussed, and sound decision making.

Glossary
Tree risk assessment has a unique set of terms with specific meanings. Definitions of all specific terms may be found in the International Society of Arboriculture’s Best Management Practice for Tree Risk Assessment. Definitions of some of these terms used in this report are as follows:

The likelihood of failure may be categorized as imminent meaning that failure has started or could occur at any time; probable meaning that failure may be expected under normal weather conditions within the next 3 years; possible meaning that failure could occur, but is unlikely under normal weather conditions during that time frame; and improbable meaning that failure is not likely under normal weather conditions, and may not occur in severe weather conditions during that time frame.

The likelihood of the failed tree part impacting a target may be categorized as high meaning that a failed tree or tree part will most likely impact a target; medium meaning that a failed tree or tree part may or may not impact a target with equal likelihood; low meaning that the failed tree or tree part is not likely to impact a target; and very low meaning that the chance of a failed tree or tree part impacting the target is remote.

The Likelihood of Failure and Impact is defined by Table 1, the Likelihood Matrix:
The consequences of a known target being struck may be categorized as severe meaning that impact could involve serious personal injury or death, damage to high value property, or disruption to important activities; significant meaning that the impact may involve personal injury, property damage of moderate to high value, or considerable disruption; minor meaning that impact could cause low to moderate property damage, small disruptions to traffic or a communication utility, or minor injury; and negligible meaning that impact may involve low value property damage, disruption that can be replaced or repaired, and do not involve personal injury.

Targets are people, property, or activities that could be injured, damaged or disrupted by a tree failure.

Levels of assessment 1) Limited visual assessments are conducted to identify obvious defects. 2) Basic assessments are visual inspections done by walking around the tree looking at the site, buttress roots, trunk and branches. It may include the use of simple tools to gain information about the tree or defects. 3) Advanced assessments are performed to provide detailed information about specific tree parts, defects, targets of site conditions. Drilling to detect decay is an advanced assessment technique.

Tree Risk Ratings are terms used to communicate the level of risk rating. They are defined in Table 2, the Risk Matrix, as a combination of Likelihood and Consequences:

<table>
<thead>
<tr>
<th>Likelihood of Failure &amp; Impact</th>
<th>Consequences of Tree Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negligible</td>
<td>Low</td>
</tr>
<tr>
<td>Minor</td>
<td>Moderate</td>
</tr>
<tr>
<td>Significant</td>
<td>High</td>
</tr>
<tr>
<td>Severe</td>
<td>Extreme</td>
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</tbody>
</table>

Overall tree risk rating is the highest individual risk identified for the tree. The residual risk is the level of risk the tree should pose after the recommended mitigation. Mitigation Priority 1 is defined as mitigation activities that should be scheduled prior to the next growing season. Mitigation Priority 2 can be scheduled on the next routine maintenance cycle.
Red oak showing codominant stems and root zone restricted by road and driveway

Separation between leaders at main crotch

Dead branch and wires

Two visible cables (red arrows) and small dead branches (purple)
Base of the tree showing no obvious defects except grass up to the base.

Leader immediately adjacent to road, damaged by vehicle impacts