

Tree Structure Evaluation

Client: John Smith

Inspector: Kris Adler (ISA Board Certified Master Arborist, MI-0626B)

Guardian Tree Experts LLC., 680 Archwood Dr., Ann Arbor, MI 48103.

Date of Inspection: November 12, 2010

Type of Inspection: Visual Assessment, Wood Decay Evaluation

Species: Black Oak (*Quercus velutina*)

Location in Landscape: 1534 Packard, Ann Arbor MI 48103, Tree is in extension at corner of Maple Road and Packard.

Primary Concern: Risk associated with tree, fungal fruiting bodies observed at base. Tree is next to Plum road and close to a drop off area for a school on the adjacent lot.

Tree Characteristics:

- **Diameter at 4.5' off ground:** 29"
- **Height:** About 60'
- **Health:** Some decline and dieback in upper crown 10-15%. Lots of large buds are present throughout the crown. There are two large pieces of deadwood over Plum road (12" and 5" in diameter) and several smaller pieces of deadwood throughout the crown and over the sidewalk, up to 3" in diameter. A root flare is present at the base of tree. A 1 inch cavity is present at the base of the tree extending from the ground to seventeen inches in height. Above this cavity a seam runs from 17" off ground to about 5' in height. No other major defects were observed from ground.

Site Characteristics: The tree is located on the tree lawn at 1534 Packard near a busy road, intersection, and schools. Tree is surrounded by grass.

Structural Analysis:

Root Zone: Likely limited due to curb, street, and walk. No visible surface roots.

Root Collar: Flares are visible. Old fruiting bodies near one inch cavity on street side of tree. Sounding flares with mallet revealed a hollow and decay. Probing the cavity with a 1/8"X10" drill bit revealed decay extending inward at least 10". A resistograph was utilized to determine average thickness of sound wood at 16" off ground on the root flare. Four drill locations spaced around trunk over flares revealed an average thickness of 4.1" of sound wood. Examining the calculations, an average thickness of 4.1" of sound wood is less the 4.5" of sound wood required for this tree to be considered having only a moderate risk of failure. Calculations reveal this amount of decay to be a severe defect. Therefore this tree

has a high risk of failure. Trees with severe defects are likely to fail especially during periods of stress such as wind and ice storms. Trees with severe defects require removal or remedial treatments.

Crown: Some decline and dieback in upper crown 10-15%. Lots of large healthy buds are also present throughout the crown. There are two large pieces of deadwood over Packard (12" and 5" in diameter) and several smaller pieces of deadwood throughout the crown and over the sidewalk up to 3" in diameter. No other major defects were observed from ground.

Risk Assessment: The risk of the tree failing near the base due to internal decay is high. Failure is especially likely during periods of stress (wind, ice, etc).

Recommendations to Mitigate Risk: Numerous targets cannot be moved. Remedial treatments are not available to repair defect. Recommend tree removal as soon as possible.