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**LOCAL HISTORIC DISTRICT:** Dilworth

**PROPERTY ADDRESS:** 804 East Kingston Avenue

**SUMMARY OF REQUEST:** Tree removal

**APPLICANT/OWNER:** Amit Aravapalli

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**Details of Proposed Request**

*Existing Conditions*

The property is the site of a single family house with a large, mature tree in the right side yard and partially on the adjacent property. There is second large maturing tree located in the rear yard. A one car driveway apron is located on the right side to provide access to a detached garage that has been demolished. A new detached garage was constructed on the rear left side of the property.

*Project*

The project is the request to remove the large, mature tree in the side yard to provide clear access to the garage in the rear yard and the installation of a new driveway.

**Policy & Design Guidelines – Trees, page 8.5 (New Guidelines)**

1. Retain existing trees that define the district's character.
2. When tree removal is needed (due to disease or other reasons) or desired, a certified arborist must be consulted and the written recommendation must be provided to the HDC before removal is granted. This guideline includes trees in front, side and rear yards.
3. Trees less than six inches in diameter may be removed in front, side and rear yards with administrative approval.
4. Identify and take care to protect significant existing trees and other plantings when constructing new buildings, additions or site structures such as garages.
5. New construction that impacts healthy trees must be reviewed by the HDC. Unhealthy mature trees are reviewed by HDC staff. Replacement trees may be required.
6. The HDC may require the planting of additional trees to replace a mature canopy that is removed.

**Staff Analysis**

The Commission shall determine if the tree should be removed and new tree(s) planted, if possible.

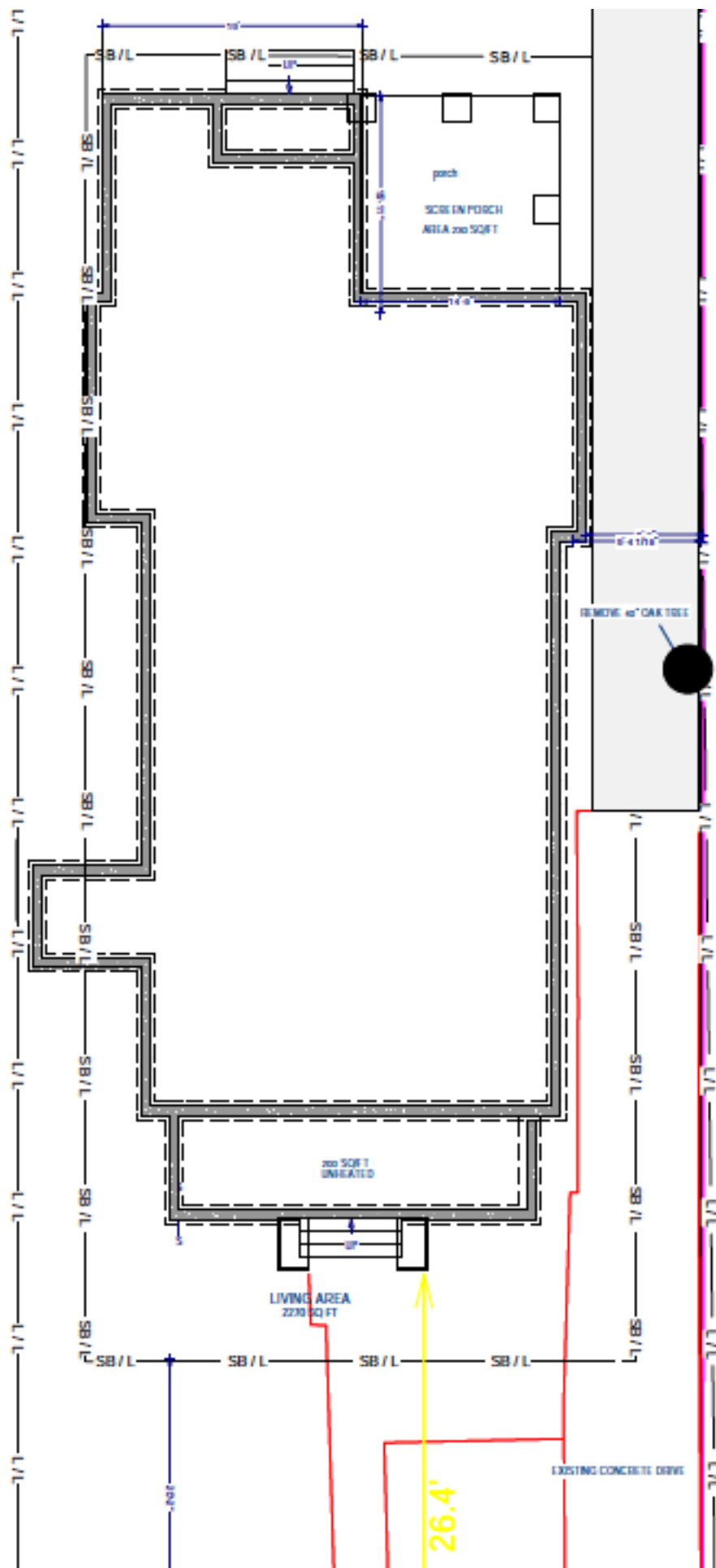
*Charlotte Historic District Commission Case 2017-429*  
**HISTORIC DISTRICT: DILWORTH**  
**TREE REMOVAL**

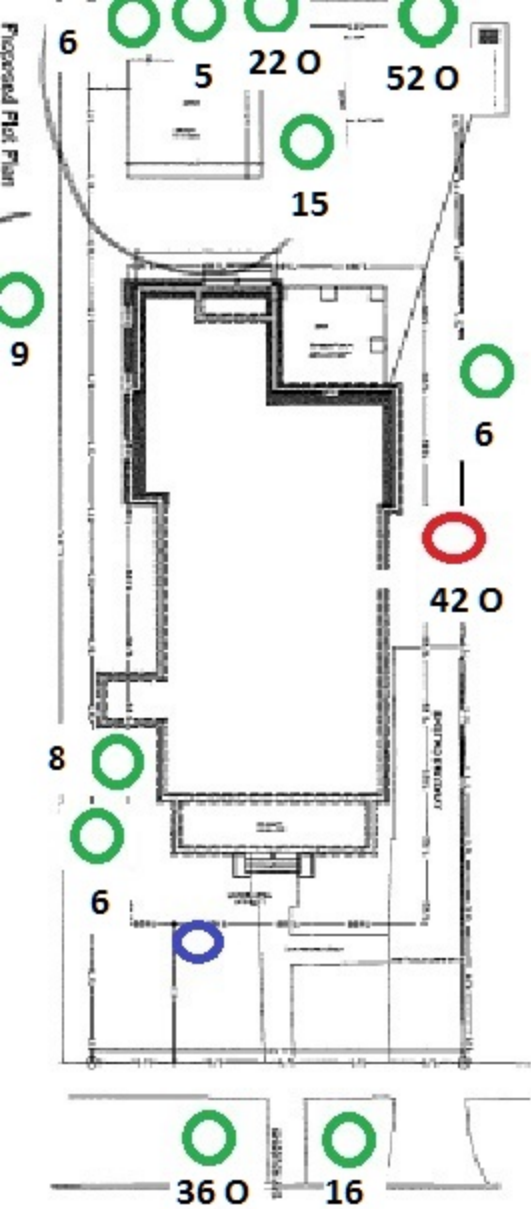














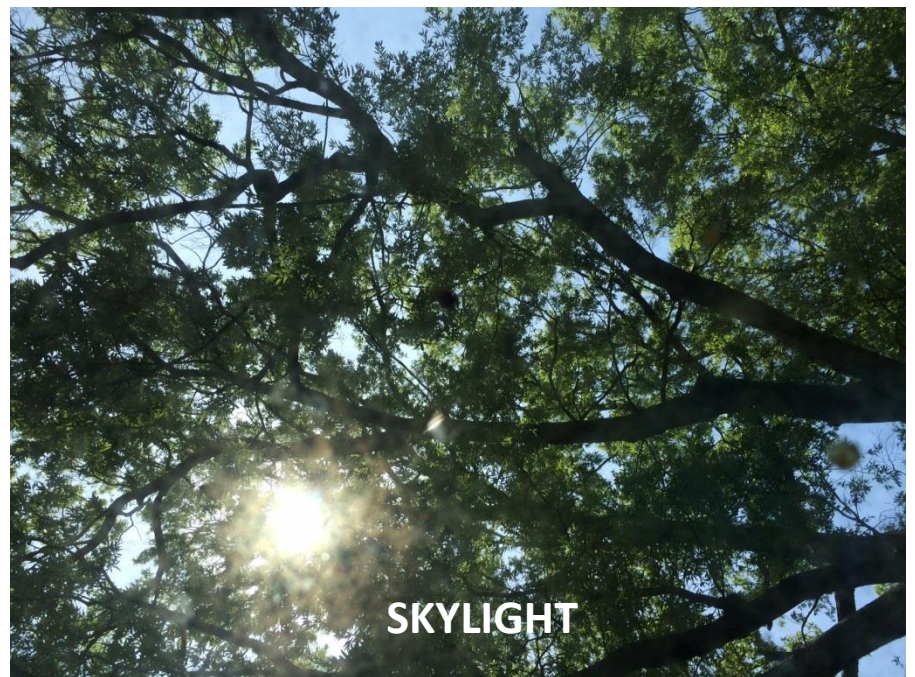




**FRONT TO BACK**



**FRONT RIGHT SIDE**



**SKYLIGHT**





**NEW GARAGE**



**OLD GARAGE**





CAR VIEW





UP VIEW









# Basic Tree Risk Assessment Form

Client Keith Wesolowski Date Sept. 9, 2016 Time 11:30 am  
 Address/Tree location 804 E. Kingston Ave. Charlotte, N.C. 28203 Tree no. \_\_\_\_\_ Sheet \_\_\_\_\_ of \_\_\_\_\_  
 Tree species Quercus phellos (Willo Oak) dbh 42" Height 100' Crown spread dia. 90'  
 Assessor(s) Denny Defibaugh, Bryan Gray Time frame Very soon Tools used Resistograph

## Target Assessment

Target number	Target description	Target zone			Occupancy rate 1 – rare 2 – occasional 3 – frequent 4 – constant	Practical to move target?	Restriction practical?
		Target within drip line	Target within 1 x Ht.	Target within 1.5 x Ht.			
1	House	X			4		
2	Right Neighbors house	X			4		
3							
4							

## Site Factors

History of failures \_\_\_\_\_ Topography Flat ☒ Slope ☐ \_\_\_\_\_ % Aspect \_\_\_\_\_  
 Site changes None ☐ Grade change ☐ Site clearing ☐ Changed soil hydrology ☐ Root cuts ☒ Describe New Construction  
 Soil conditions Limited volume ☒ Saturated ☐ Shallow ☐ Compacted ☒ Pavement over roots ☒ 80 % Describe Houses, new construction  
 Prevailing wind direction East Common weather Strong winds ☐ Ice ☐ Snow ☐ Heavy rain ☐ Describe \_\_\_\_\_

## Tree Health and Species Profile

Vigor Low ☒ Normal ☐ High ☐ Foliage None (seasonal) ☐ None (dead) ☐ Normal 40 % Chlorotic 55 % Necrotic 5 %  
 Pests \_\_\_\_\_ Abiotic \_\_\_\_\_  
 Species failure profile Branches ☒ Trunk ☒ Roots ☐ Describe Over extended scaffolds, co dominant with inclusion at 30'

## Load Factors

Wind exposure Protected ☐ Partial ☒ Full ☐ Wind funneling ☐ \_\_\_\_\_ Relative crown size Small ☐ Medium ☐ Large ☒  
 Crown density Sparse ☐ Normal ☒ Dense ☐ Interior branches Few ☐ Normal ☒ Dense ☐ Vines/Mistletoe/Moss ☐ \_\_\_\_\_  
 Recent or planned change in load factors New construction, continuous footer

## Tree Defects and Conditions Affecting the Likelihood of Failure

### — Crown and Branches —

Unbalanced crown ☐ LCR 80 %  
 Dead twigs/branches ☒ 5 % overall Max. dia. 3"  
 Broken/Hangers Number 1 Max. dia. 6"  
 Over-extended branches ☒  
 Pruning history  
 Crown cleaned ☒ Thinned ☒ Raised ☒  
 Reduced ☐ Topped ☐ Lion-tailed ☐  
 Flush cuts ☐ Other \_\_\_\_\_  
 Cracks ☐ \_\_\_\_\_ Lightning damage ☐  
 Codominant ☒ \_\_\_\_\_ Included bark ☒  
 Weak attachments ☒ \_\_\_\_\_ Cavity/Nest hole \_\_\_\_\_ % circ.  
 Previous branch failures ☒ \_\_\_\_\_ Similar branches present ☒  
 Dead/Missing bark ☐ Cankers/Galls/Burls ☐ Sapwood damage/decay ☐  
 Conks ☐ Heartwood decay ☐ \_\_\_\_\_  
 Response growth \_\_\_\_\_  
 Main concern(s) Over extended scaffolds, co dominance

Load on defect N/A ☐ Minor ☐ Moderate ☐ Significant ☒ \_\_\_\_\_  
 Likelihood of failure Improbable ☐ Possible ☒ Probable ☐ Imminent ☐ \_\_\_\_\_

### — Trunk —

Dead/Missing bark ☒ Abnormal bark texture/color ☐  
 Codominant stems ☐ Included bark ☐ Cracks ☐  
 Sapwood damage/decay ☐ Cankers/Galls/Burls ☐ Sap ooze ☐  
 Lightning damage ☐ Heartwood decay ☐ Conks/Mushrooms ☐  
 Cavity/Nest hole \_\_\_\_\_ % circ. Depth \_\_\_\_\_ Poor taper ☐  
 Lean 4-w ° Corrected? N.a.  
 Response growth \_\_\_\_\_  
 Main concern(s) New construction damage to lower trunk

Load on defect N/A ☐ Minor ☐ Moderate ☐ Significant ☐  
 Likelihood of failure Improbable ☐ Possible ☐ Probable ☐ Imminent ☐

### — Roots and Root Collar —

Collar buried/Not visible ☐ Depth \_\_\_\_\_ Stem girdling ☐  
 Dead ☐ Decay ☐ Conks/Mushrooms ☐  
 Ooze ☐ Cavity ☐ \_\_\_\_\_ % circ.  
 Cracks ☐ Cut/Damaged roots ☒ Distance from trunk 6'  
 Root plate lifting ☐ Soil weakness ☐  
 Response growth \_\_\_\_\_  
 Main concern(s) Decay from new construction damage

Load on defect N/A ☐ Minor ☐ Moderate ☐ Significant ☒  
 Likelihood of failure Improbable ☐ Possible ☒ Probable ☐ Imminent ☐



Risk Categorization																							
Condition number	Tree part	Conditions of concern	Part size	Fall distance	Target number	Target protection	Likelihood												Consequences				Risk rating of part (from Matrix 2)
							Failure				Impact				Failure & Impact (from Matrix 1)								
							Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	
1	Scaffolds	Over extended Decay	40'	80'	1/2	N.a.			X					X			X				X	High	
2	Root collar	Construction damage	100'	100.	1/2	N.a.		X					X		X						X	Mod	
3																							
4																							

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impacting Target			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Notes, explanations, descriptions

2 cavities at 30' In right lead  
Diam. 28", cavity total 16", Opening total 14"  
Total strength loss... 32% In right lead  
Drilling results... Less than 5% S.L. In lower trunk

Mitigation options Removal is recommended

Residual risk  
Residual risk  
Residual risk  
Residual risk

Overall tree risk rating Low ☐ Moderate ☐ High ☒ Extreme ☐

Work priority 1 ☒ 2 ☐ 3 ☐ 4 ☐

Overall residual risk Low ☐ Moderate ☐ High ☐ Extreme ☐

Recommended inspection interval

Data ☒ Final ☐ Preliminary Advanced assessment needed ☒ No ☐ Yes-Type/Reason

Inspection limitations ☐ None ☒ Visibility ☐ Access ☐ Vines ☐ Root collar buried Describe Construction material at flares



9/21/16

Keith Wesolowski  
804 E. Kingston Avenue  
Charlotte, NC 28203

RE: Risk Assessment of 42" Willow Oak (*Quercus phellos*)

Dear Mr. Wesolowski,

On 9/19/16 I inspected the 42" diameter Willow Oak located in the right side of your property. The purpose of the inspection was to gain a more informed understanding of the strength loss associated with visible structural defects, and to determine the level of risk associated with the tree's present condition. My inspection consisted of two separate procedures, a drilling analysis and a visual inspection.

The drilling analysis of the main lower trunk was completed using a Resistograph. The Resistograph is a machine that measures and records wood density and integrity at the drilling points. The measurements of decayed wood and sound wood were used to calculate the approximate strength loss percentage for the tree. Generally, a tree is considered to represent an unreasonable risk of failure when strength loss exceeds 33%.

The visual inspection was performed for the purpose of detecting structural defects such as cracks, weak branch unions, stem or branch decay, cankers, dead branches, root problems, poor tree form, etc. Observations of tree defects and other characteristics plus site conditions and target use were recorded on a Tree Risk Assessment form. The form was developed according to specifications endorsed by the International Society of Arboriculture and taught in the Tree Risk Assessment Qualification Course. The drilling analysis and key visual findings are as follows:

#### Inspection Results

- The drilling analysis revealed a 32% approximate strength loss at 30' in right lead
- The drilling analysis also revealed a less than 5% strength loss in lower trunk
- Co-dominant stems with included bark at 30'
- Soil compaction and approximate 80% pavement over critical root zone
- Construction damage to approximately 15% of cambium of lower trunk





Recommendations

- Based on the inspection results, your tree does present a high risk of failure at this time and should be removed.

Please call your arborist, Josh Milbourne, with any questions or concerns regarding these findings.

Sincerely,

A handwritten signature in black ink, appearing to be 'B. Gray', written in a cursive style.

Brian Gray  
Consulting Arborist, TRAQ Qualified  
ISA Certificate #SO-7417A



September 21, 2016

Keith Wesolowski  
804 E. Kingston Avenue  
Charlotte, N.C. 28203

**RE: RISK ASSESSMENT OF QUERCUS PHELLOS(WILLOW OAK)**

Dear Mr. Wesolowski;

On 9/19/2016, I inspected the 42" diameter Willow Oak, located in the right side of your property. The purpose of the inspection was to gain a more informed understanding of the strength loss associated with visible structural defects, and to determine the level of risk associated with the trees' present condition. My inspection consisted of two separate procedures, a drilling analysis and a visual inspection.

The drilling analysis of the decay areas and lower trunk was completed using a Resistograph®. The Resistograph® is a machine that measures and records wood density and integrity at the drilling points. The measurements of decayed wood and sound wood were used to calculate the approximate strength loss percentage. Generally, a tree is considered to represent an unreasonable risk of failure when strength loss exceeds 33%.

The visual inspection was performed for the purpose of detecting structural defects such as cracks, weak branch unions, stem or branch decay, cankers, dead branches, root problems, poor tree form, etc. Observations of tree defects and other characteristics plus site conditions and target use were recorded on the enclosed Tree Risk Assessment form. The form was developed according to specifications endorsed by the International Society of Arboriculture as outlined in the book A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas. The drilling analysis results and key visual findings are as follows:

Inspection Results

- The drilling analysis revealed a 32% approximate strength loss at 30 feet in right lead.
- Drilling analysis also revealed a less than 5% strength loss in lower trunk.
- Co dominant stems with included bark at 30 ft.
- Soil compaction and approximate 80% pavement over critical root zone.



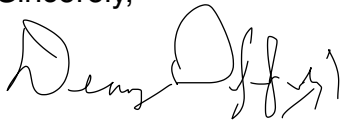
- Construction damage to approximately 15% of cambium of lower trunk.

Recommendations:

Your tree presents a high risk at this time and removal is recommended.

Please call your arborist, Josh Melbourne, with any questions or concerns regarding these findings.

Sincerely,

A handwritten signature in black ink, appearing to read 'Denny Defibaugh', with a stylized flourish at the end.

Denny Defibaugh  
Technical Arborist  
ISA Certificate # SO-5101A