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May 20, 2015

Mr. Kenneth J. Abner
Bishop, Dulaney, Joyner, & Abner P.A.
4521 Sharon Road, Suite 250
Charlotte, NC 28211

Subject: **Wetlands Determination**
Hickory Grocery Site
Hickory, North Carolina
SUMMIT Project No. 2910-14

Dear Mr. Abner:

SUMMIT ENGINEERING AND CONSTRUCTION SERVICES, INC. (**SUMMIT**) is pleased to submit the following report of our Wetlands Determination of the properties located at 2315 N Davidson Street and 421 E 26th Street in Charlotte, North Carolina (Mecklenburg County Tax IDs: 08305206 and 08305204). The wetlands determination was performed in general accordance with the 1987 US Army Corps of Engineers "Wetland Delineation Manual."

This report includes a description of the methodology of our investigation and a summary of our findings and conclusions. If you have any questions regarding our assessment of the subject property or our conclusions, please do not hesitate to call us at (704) 504-1717

Sincerely,
SUMMIT

Michael D. Zavislak, NRCC-EAC, CHMM, CIH, PE
Environmental Department Manager



WETLANDS DETERMINATION

**2315 N DAVIDSON STREET 421 E 26th Street
CHARLOTTE
MECKLENBURG COUNTY
NORTH CAROLINA
SUMMIT PROJECT NO. 3621.01**

**Prepared For:
Bishop, Dulaney, Joyner, & Abner P.A.
4521 Sharon Road, Suite 250
Charlotte, NC 28211**

**Prepared By:
SUMMIT Engineering and Construction Services, Inc. (SUMMIT)
P.O. Box 7384
Charlotte, North Carolina 28241**

May 20, 2015

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1.0 EXECUTIVE SUMMARY

On October 7, 2014, SUMMIT ENGINEERING AND CONSTRUCTION SERVICES, INC. (**SUMMIT**) field-reviewed the properties located at 2315 N Davidson Street and 421 E 26th Street in Charlotte, North Carolina (Mecklenburg County Tax IDs: 08305206 and 08305204) for the presence of jurisdictional water of the U.S. The study was conducted to determine the presence of areas which would be expected to be jurisdictional and subject to permitting and regulatory authority of the U.S. Army Corps of Engineers (USACE) and the N.C. Division of Water Quality (DWQ). This investigation was conducted according to methodologies described in the 1987 Corps of Engineers Delineation Manual, as well as recent guidance from the USACE.

The results of the field investigation indicate that there are two (2) jurisdictional channels within the property limits.

There is an un-named creek along the northern property boundary of parcel 08305204, and Little Sugar Creek borders parcel 08305204 to the west.

The site has not been verified by the US Army Corps of Engineers (USACE). This report was submitted to USACE. If a site visit is scheduled by USACE, **SUMMIT** requests the opportunity to be present during the USACE site visit.

2.0 INTRODUCTION

2.1. PURPOSE

The purpose of a jurisdictional wetland determination is to identify boundaries and acreage of waters of the United States (including wetlands) within the survey area for verification by the USACE. The wetlands determination presents areas that are potentially under the jurisdiction of the USACE and the verifications would determine the final jurisdictional areas.

2.2. SCOPE OF SERVICES

Wetland determinations were made using the parameters described in the "Routine Onsite Determination Method" as described in the Corps of Engineers Wetlands Delineation Manual (COE, 1987). The examination was made on October 7, 2014. To begin the site examinations, soil survey maps were examined to determine the probable location of wetland soils and habitats within the area of proposed impact. A qualified environmental scientist, knowledgeable in plant identification, wetland soil characteristics, and wetland determination techniques made the site examination. The scientist was responsible for identifying major plant communities within the proposed project area and identifying the presence of wetlands. In each plant community and landscape position hydrology, soils, and plant communities were examined to verify that all three wetland parameters occurred.

Plants were classified as hydrophytic or non-hydrophytic. The wetland indicator status for each of the dominant species was determined using the manual "National List of Plant Species That Occur in Wetlands: Southeast (Region 2)" (May 1988). The dominance by the particular category was determined using the techniques specified in the Corps of Engineers Wetlands Delineation Manual.

Munsell Soil Color Charts (2000 Revised) were used to identify the hue, value, and chroma of soil samples. A soil survey of Cumberland County was examined to determine the type soils mapped for the area. "Field Indicators of Hydric Soils in the United States" (version 5.9) was used in addition to the Corps Manual for hydric soil determination.

3.0 SITE DESCRIPTION

3.1. PHYSICAL SETTING SOURCES

3.1.1. Topography

The United States Geological Survey (USGS) “Charlotte, North Carolina, United States” topographic quadrangle map was reviewed on May 11, 2015. According to the contour lines on the topographic maps, the elevation of the subject property ranges from approximately 690 feet (along eastern property boundaries) to approximately 680 feet (along western property boundaries) above Mean Sea Level (MSL). The contour lines indicate the general direction of downward slope is to the west along an un-named creek. The un-named creek flows into Little Sugar Creek. Little Sugar Creek flows into Sugar Creek. Sugar Creek flows into the Catawba River, near Goat Island.

3.1.2. Geology and Hydrogeology

The property is located in Mecklenburg County, North Carolina, which is located in the south central Piedmont Physiographic Province. The Piedmont Province generally consists of well-rounded hills and ridges which are dissected by a well-developed system of draws and streams. The Piedmont Province is predominantly underlain by metamorphic rock (formed by heat, pressure and/or chemical action) and igneous rock (formed directly from molten material) which were initially formed during the Precambrian and Paleozoic eras. The volcanic and sedimentary rocks deposited in the Piedmont Province during the Precambrian era were the host from the metamorphism and were changed to gneiss and schist. The more recent Paleozoic era had periods of igneous emplacement, with at least episodes of regional metamorphism resulting in the majority of the rock types seen today.

The topography and relief of the Piedmont Province has developed from differential weathering of the igneous and metamorphic rock. Ridges and hills have been developed on the more easily weathered and erodible rock. Because of the continued chemical and physical weathering, the rocks in the Piedmont Province are now generally covered with a mantle of soil that has weathered in place from the parent bedrock. These soils vary in thickness and are referred to as residuum or

residual soils. The residuum is typically finer grained and has higher clay content near the surface because of the advanced weathering. Similarly, the soils typically become coarser grained with increasing depth because of decreased weathering. As the weathering decreases, the residual soils generally retain the overall appearance, texture, gradation and foliations of the parent rock.

Based on a review of the United States Geological Survey (USGS) “Charlotte, North Carolina, United States” quadrangle topographic map, the inferred groundwater flow direction based on topography appears to be to the west along an un-named creek. Refer to Figure 1 in Appendix I for a topographic map for the subject properties.

4.0 RECONNAISSANCE FINDINGS

4.1. WETLAND METHODOLOGY AND LIMITING CONDITIONS

The wetlands determination was conducted by **SUMMIT** personnel (Michael Zavislak) by walking the property boundaries and accessible portions of the interior of the property to locate possible wetland areas.

SUMMIT personnel completed the “Routine Wetland Determination Data Form” by performing several transects across the subject properties. **SUMMIT** personnel sampled and investigated the subject properties for the three wetland parameters (vegetation, soils and hydrology).

Obligate Wetland (OBL)	contain plants that almost always occur in wetlands (99% of the time)
Facultative Wetland (FACW)	contain plants that usually occur in wetlands (67-99% of the time)
Facultative (FAC)	includes plants that are just as likely to occur in wetland or non-wetland areas (34-66% chance of occurring in wetlands or non-wetlands)
Facultative Upland (FACU)	contain plants that occasionally occur in wetlands (1-33% of the time)
Upland (UPL)	contain plants that almost always occur in uplands (99% of the time)

The results of the field investigation indicate that there are two (2) jurisdictional channels within the property limits.

There is an un-named creek along the northern property boundary of parcel 08305204, and Little Sugar Creek borders parcel 08305204 to the west.

5.0 QUALIFICATION(S) OF ENVIRONMENTAL PROFESSIONALS

The environmental professionals for this project are listed below.

Mr. Zavislak is a registered Professional Engineer (PE) in the States of North Carolina, Georgia and Virginia, a certified Environmental Analytical Chemist (NRCC-EAC), a Certified Hazardous Materials Manager (CHMM), a Certified Industrial Hygienist (CIH) and the Environmental Department Manager for **SUMMIT**. Mr. Zavislak has over twenty years of experience in the environmental field. Previous environmental experience includes managing and operating several environmental laboratories, performing numerous environmental research projects, and managing and performing a multitude of environmental projects that include asbestos, lead-based paint, Phase I/II Environmental Site Assessments (ESA), Polychlorinated Biphenyl's (PCBs), hazardous waste, industrial hygiene, mold, indoor air quality, wetlands, storm water, Spill Prevention Control and Countermeasure (SPCC) Plans, Underground Storage Tank (UST) closures, soil and groundwater contamination monitoring and remediation, and construction management. Mr. Zavislak is also Adjunct Faculty at Greenville Technical College teaching classes on asbestos, health and safety, lead-based paint and hazardous waste.

APPENDIX I
FIGURES

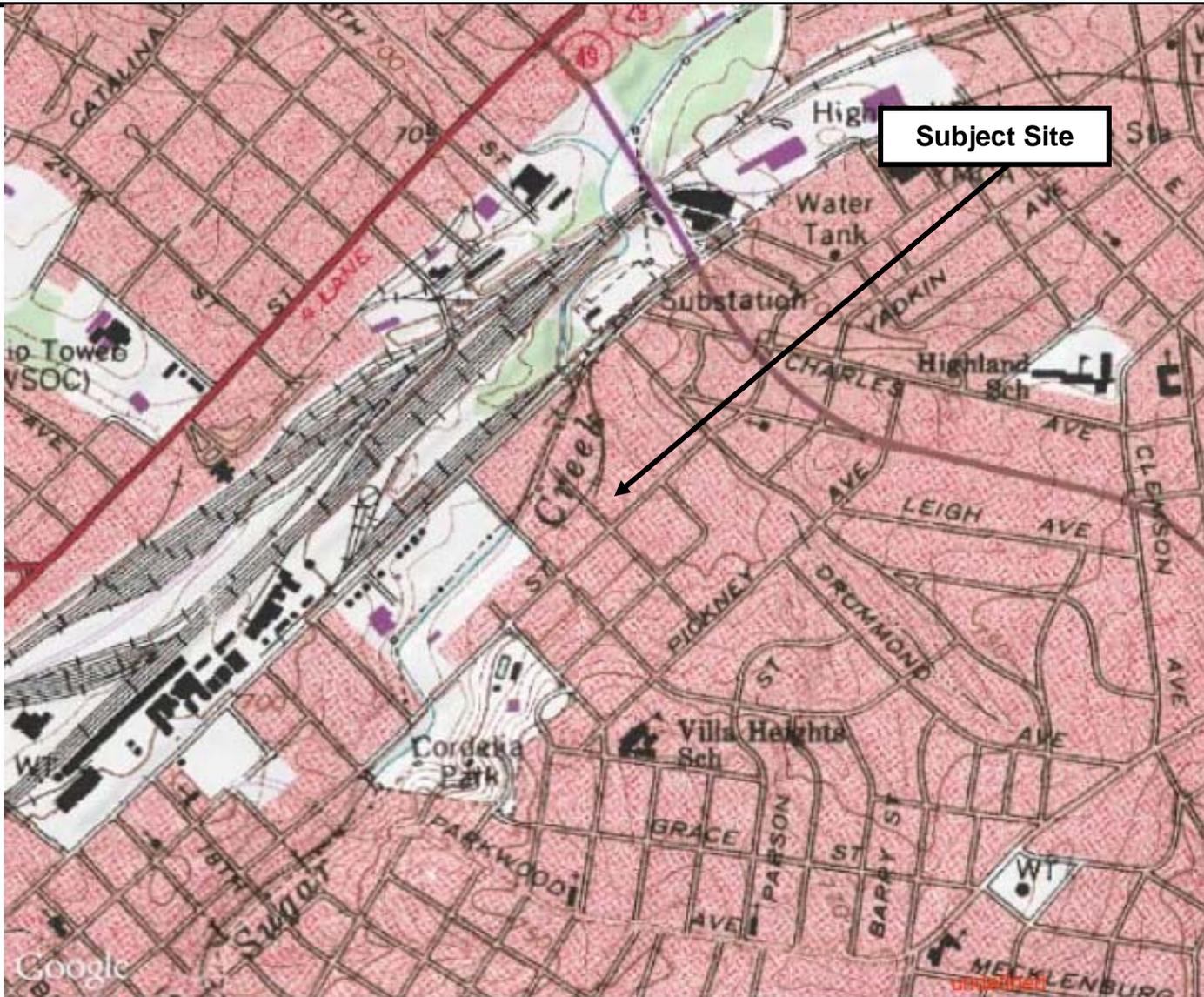


Figure 1

USGS Topographic Map

2315 N Davidson St

Charlotte, NC



SUMMIT ECS, Inc.

Project: 3621.01



Figure 2
Aerial Photograph

2315 N Davidson St
Charlotte, NC



SUMMIT ECS, Inc.

Project: 3621.01

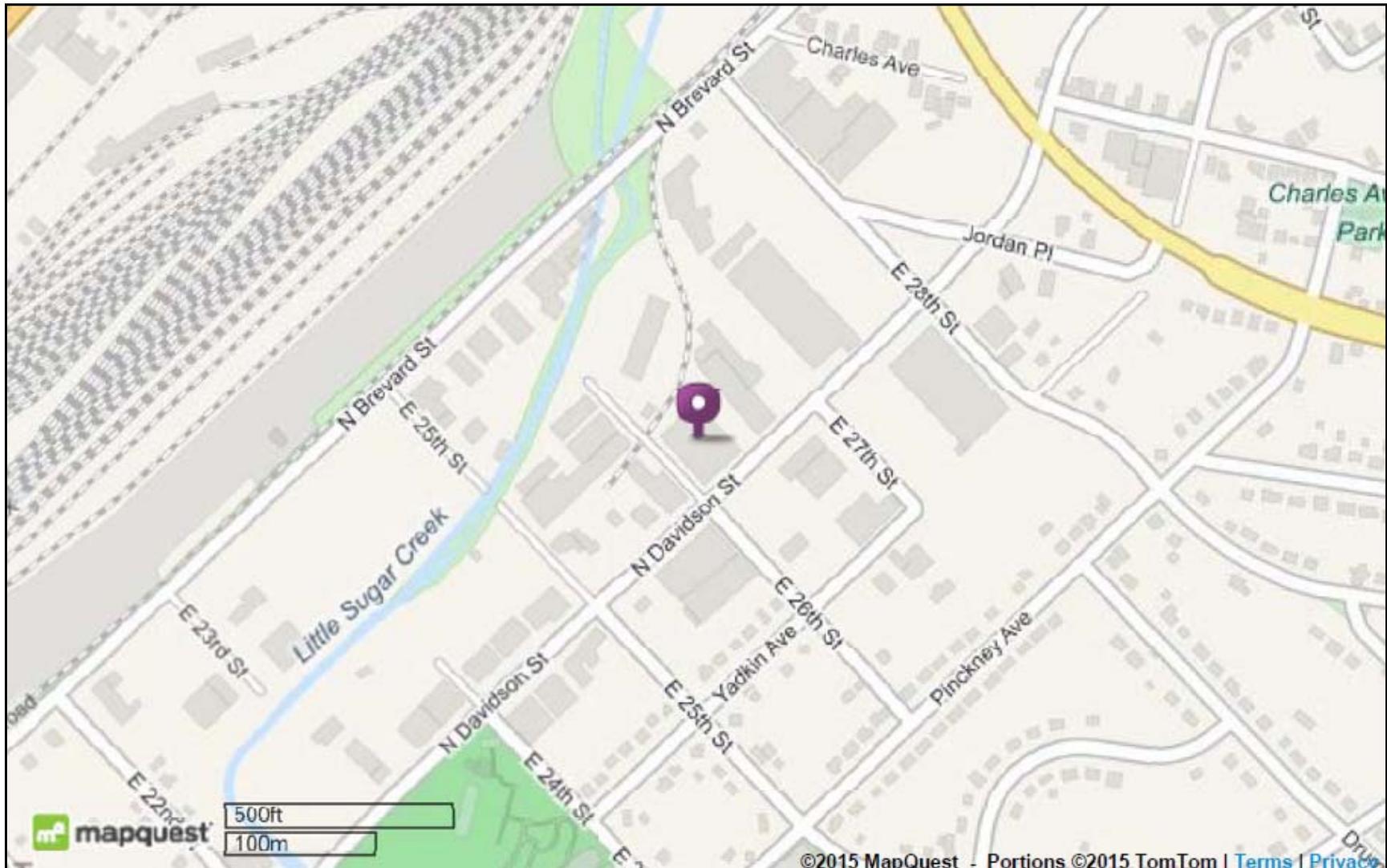


Figure 3
Site Location Map

2315 N Davidson St
Charlotte, NC



SUMMIT ECS, Inc.

Project: 3621.01

APPENDIX II
ROUTINE WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: 2315 N Davidson St City/County: Charlotte/Mecklenburg Sampling Date: 5/10/2015
 Applicant/Owner: Bishop, Dulaney, Joyner, & Abner P.A. State: NC Sampling Point: B-1
 Investigator(s): M. Zavislak Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR or MLRA): _____ Lat: 35°14'30.46"N Long: 80°48'53.02"W Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: site borders Little Sugar Creek and an un-named creek	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) _____ Saturation (A3) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) _____ Presence of Reduced Iron (C4) _____ Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Drift Deposits (B3) _____ Thin Muck Surface (C7) _____ Algal Mat or Crust (B4) _____ Other (Explain in Remarks) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 flowing stream

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: B-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. <u>red maple</u>		YES	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
9. _____		-	-	
10. _____		-	-	
	0	= Total Cover		
Herb Stratum (Plot size: _____)				
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
9. _____		-	-	
10. _____		-	-	
11. _____		-	-	
12. _____		-	-	
	0	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
	0	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) site is maintained except along stream channels				

Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>1</u> x 3 = <u>3</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>1</u> (A) <u>3</u> (B) Prevalence Index = B/A = <u>3</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: 2315 N Davidson St City/County: Charlotte/Mecklenburg Sampling Date: 5/10/2015
 Applicant/Owner: Bishop, Dulaney, Joyner, & Abner P.A. State: NC Sampling Point: B-2
 Investigator(s): M. Zavislak Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1
 Subregion (LRR or MLRA): _____ Lat: 35°14'30.46"N Long: 80°48'53.02"W Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: site borders Little Sugar Creek and an un-named creek	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: top of bank	

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: B-2

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B)
1. <u>red maple</u>		YES	FAC	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
	0	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>1</u> x 3 = <u>3</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>1</u> (A) <u>3</u> (B) Prevalence Index = B/A = <u>3</u>
Sapling/Shrub Stratum (Plot size: _____)				
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
	0	= Total Cover		
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
7. _____		-	-	
8. _____		-	-	
9. _____		-	-	
10. _____		-	-	
11. _____		-	-	
	0	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. _____		-	-	
2. _____		-	-	
3. _____		-	-	
4. _____		-	-	
5. _____		-	-	
6. _____		-	-	
	0	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) top of bank				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

APPENDIX III
SITE PHOTOGRAPHS

SITE PHOTOGRAPHS



2315 N Davidson St., looking south.



2315 N Davidson St., looking south.



2315 N Davidson St., looking west.



2315 N Davidson St., looking east.



E 26th St., looking west.



Rear of 2315 N Davidson St., looking east.



Rear of 2315 N Davidson St., looking north.



421 E 26th St., looking west.



421 E 26th St., looking north.



421 E 26th St., looking north.



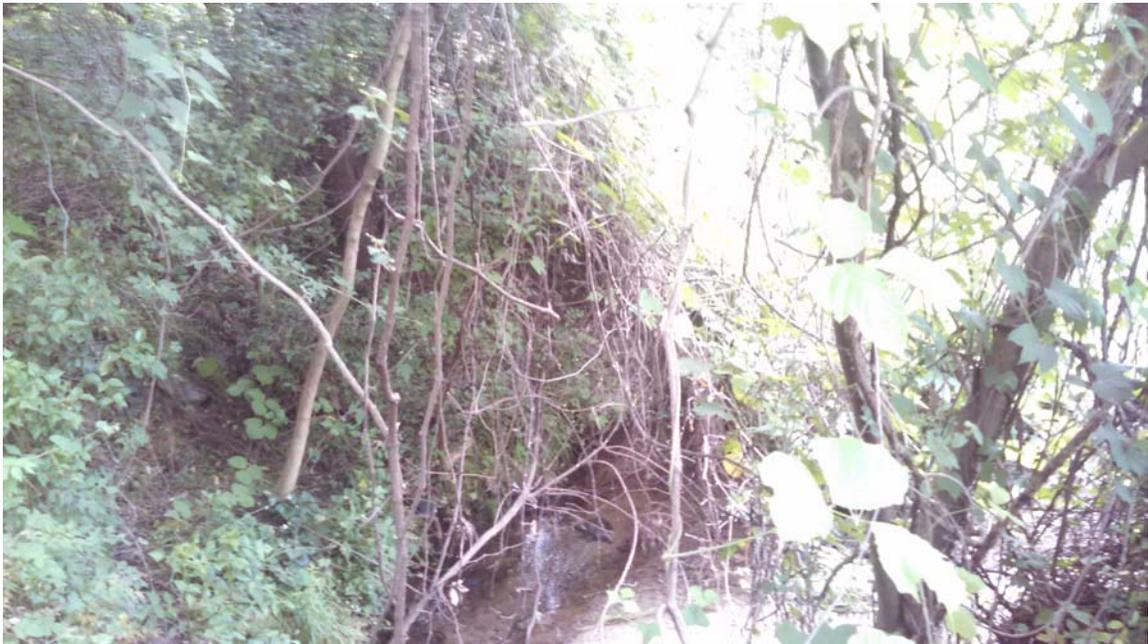
421 E 26th St., looking east.



421 E 26th St., looking east.



Un-named creek on northern portion of site, looking west.



Un-named creek on northern portion of site, looking east.