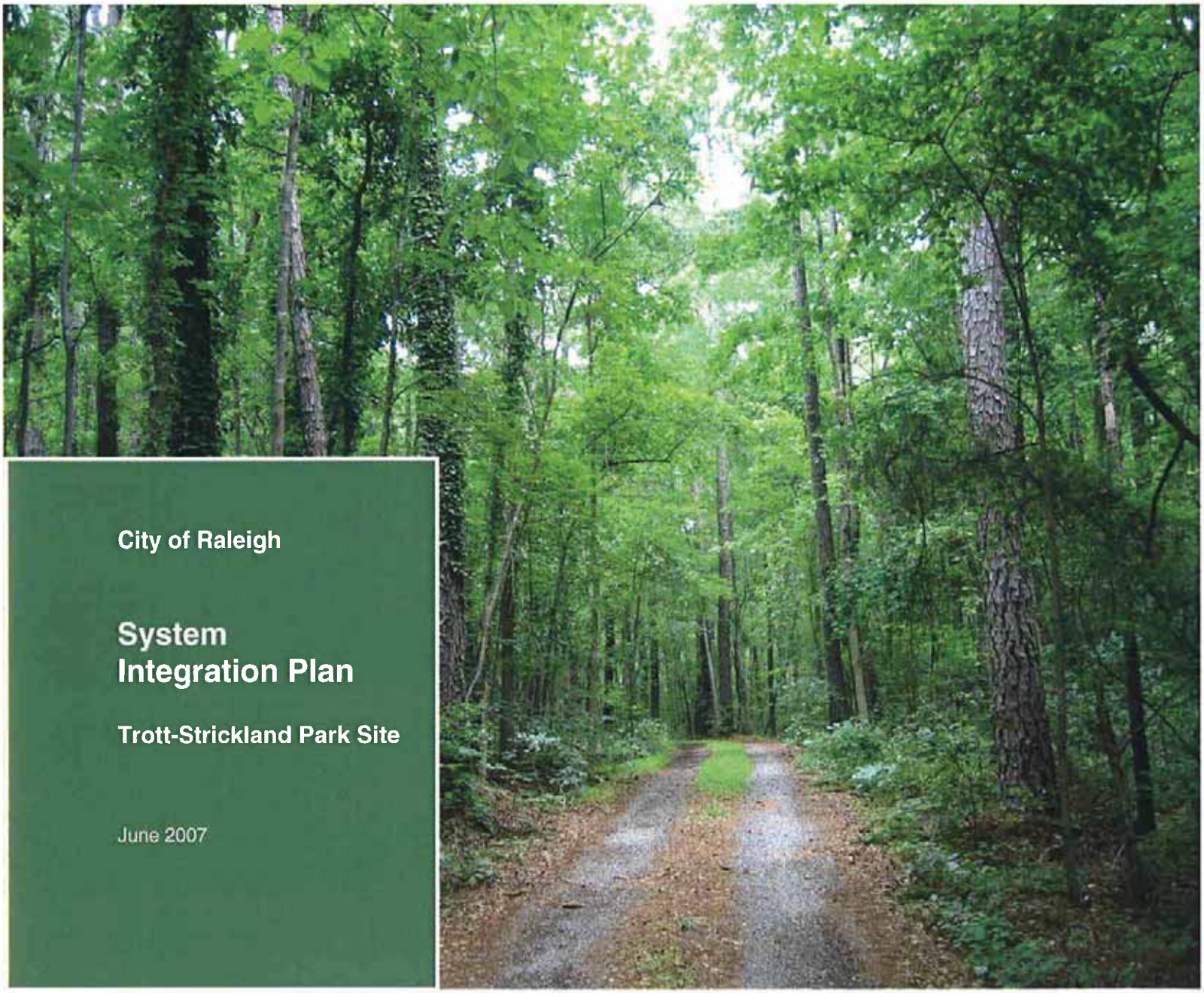
ARCADIS
Infrastructure, environment, facilities

Imagine the result



City of Raleigh

System Integration Plan

Trott-Strickland Park Site

June 2007

System Integration Plan

Trott-Strickland Park Site

Prepared for:
City of Raleigh

Prepared by:
ARCADIS G&M of North Carolina, Inc.
801 Corporate Center Drive
Suite 300
Raleigh
North Carolina 27607
Tel 919.854.1282
Fax 919.854.5448

Prepared in cooperation with:
TRC Garrow Associates, Inc.
Circa, Inc.

Our Ref.:
NC606016.0000

Date:
June 2007

This document is intended only for the use of the individual or entity for which it was prepared and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. Any dissemination, distribution, or copying of this document is strictly prohibited.

Table of Contents

Table of Contents

Tables

Figures

Appendices

1. Introduction

1.1 Purpose of the System Integration Plan

The System Integration Plan is an important component of the overall park development process. The objective of the System Integration Plan is to develop a set of guidelines for the interim management of parkland prior to the initiation of a Master Plan, to document existing site conditions and constraints, to establish the park's classification consistent with the Comprehensive Plan, and if applicable, any special intent for the park (Resolution (2003) – 735). The System Integration Plan is not intended to restrict the Master Plan process.

1.2 Site Description and Setting

The Trott-Strickland site encompasses approximately 37.53 acres and is located just south of Interstate-540 in north Raleigh, Wake County, North Carolina. The site is on the north side of Strickland Road, between Ray Road and Leesville Road (Figure 1). The site is outside the city limits but is within the city's planning jurisdiction (Extraterritorial Jurisdiction) (Figure 2). The area surrounding the property is primarily undeveloped or residential. Residential uses include single-family subdivisions and homes on large lots.

The site is mostly wooded with a mixture of pines and hardwoods. Two small ponds drain to Lower Barton Creek, which marks most of the northern property boundary. The land slopes down from the road in a northerly direction toward the creek, although relatively level areas are present at the southern edge of the property and along the creek in its northeastern corner. A long unpaved drive leads north from Strickland Road through the wooded parcel to a house and outbuildings, which are clustered near the center of the tract, west of the largest pond.

2. Existing Conditions

Existing Conditions information provides the framework for developing a System Integration Plan for the future park property. The Existing Conditions section documents the existing resources, including natural and human environmental resources and will provide guidance to the City in developing the Trott-Strickland site as a public park. The Existing Conditions section contains information regarding wetlands, streams, surface waters, rare and protected species, biotic community

description including a floral and faunal inventory, initial cultural resource assessment, and critical natural elements.

Published information and resources were collected prior to initiating the site investigations. Data were collected for use during site investigations and in preparation of the Existing Conditions Report, which is incorporated in this System Integration Plan. Data sources include:

- United States Geologic Survey (USGS) 7.5-minute topographic quadrangle map (Bayleaf, North Carolina)
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Map (Bayleaf, North Carolina)
- *Soil Survey of Wake County, North Carolina* (Cawthorn 1970)
- North Carolina Department of Environment and Natural Resources (NCDENR) – Division of Water Quality (NCDWQ) Neuse River Basinwide Water Quality Management Plan (NCDWQ 2002)
- USFWS list of rare and protected species (April 2006)
- North Carolina Natural Heritage Program (NCNHP) database of rare species and unique habitats (August 2006)

Site investigations were conducted in September 2006. Water resources were identified and their physical characteristics were recorded. For the purposes of this study, a preliminary habitat assessment was performed within the proposed park site. Plant communities and potential associated wildlife were identified using a variety of observation techniques, including active search, visual observation, and identification of characteristic signs of wildlife (sounds, tracks, scat, and burrows). Terrestrial community descriptions generally follow Schafale and Weakley (1990), where applicable. Plant taxonomy and descriptions generally follow Radford et al. (1968) unless more recent data is available. Animal names and descriptions generally follow Martof et al. (1980), Potter et al. (1980), and Webster et al. (1985). Scientific nomenclature and common names (when applicable) are provided for each plant and animal species listed. Subsequent references to the same organism include the common name only.

Jurisdictional wetland delineations were performed using the three-parameter approach described in the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Supplemental technical literature describing the parameters of hydrophytic vegetation, hydric soils, and wetland hydrological indicators was also utilized. Wetlands were mapped with sub-meter accuracy using Trimble Global Positioning System (GPS) equipment at the time of the delineation.

For the purposes of the Existing Conditions section, the project study area is defined as the 36.89-acre area described in Section 1.1. The project vicinity is defined as a larger area, extending approximately one-half mile on all sides of the study area. The project region is the area more or less represented on a standard 7.5-minute USGS topographic quadrangle map with the project study area occupying the center of the map.

2.1 Physical Resources

Soil and water resources that occur in the project study area are discussed with respect to possible environmental concerns and also with respect to general environmental conditions that may be useful during plan development.

Wake County is situated in the east-central portion of the state. The county is mostly contained with the Piedmont physiographic province; however, a small portion of the county is located within the Coastal Plain physiographic province. The project study area is located in the northwestern portion of the county. Elevations in the project study area range from approximately 390 feet above mean sea level (MSL) to approximately 490 feet above MSL, as depicted on the Bayleaf, North Carolina USGS topographic quadrangle map. Land use in the project vicinity is primarily residential and undeveloped. A private residence and several associated out-buildings are located within the property.

Geologically, the project study area is located within the Raleigh Belt and over kyanite and staurolite Paleozoic metamorphic facies (NCGS 1985). The biotite, gneiss, and schist of this area include small masses of granite (NCGS 1985). Soils underlying the project study area have developed from these geologic formations.

2.1.1 Soils

The process of soil development depends on both biotic and abiotic influences. These influences include past geologic activities, nature of parent materials, environmental

and human influences, plant and animal activity, time, climate, and topographic position. The project study area is underlain by one soil association: Cecil-Appling association. Ten soil mapping units are mapped within the project study area. One of the ten soils onsite is listed as a hydric soil, Chewacla soils. A hydric soils is defined as a soil that is saturated, flooded, or ponded long enough in the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (Cowardin et al. 1979). Hydric A soils are soils that are hydric throughout most of the series, and hydric B soils are those with inclusions of hydric soils. Chewacla soils are listed as hydric B soils (Gregory 2001). The remaining soils are not classified as hydric (Gregory 2001). Additional information regarding the soils mapped within the project study area is provided below and shown in Figure 3 (Cawthorn 1970).

- Appling gravelly sandy loam, 6-10% slopes (AgC) is mapped on narrow side slopes in the uplands. This moderately sloping, well drained soil has moderate permeability with rapid surface runoff. The seasonal high water is greater than 10 feet below the soil surface. Appling gravelly sandy loam is a non-hydric soil.

- Appling sandy loam, 10-15% slopes (ApD) is mapped on narrow side slopes bordering drainageways in the uplands. This strongly sloping, well drained soil has moderate permeability and very rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Appling sandy loam is a non-hydric soil.

- Cecil sandy loam, 10-15% slopes (CeD) is mapped on narrow side slopes bordering upland drainageways. This strongly sloping, well drained soil has moderate permeability and very rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Cecil sandy loam is a non-hydric soil.

- Cecil sandy loam 15-45% slopes (CeF) is mapped on narrow side slopes bordering upland drainageways. This steep, well drained soil has moderate permeability and very rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Cecil sandy loam is a non-hydric soil.

- Cecil gravelly sandy loam, 2-6% slopes, eroded (CgB2) is mapped on broad interstream divides in the uplands. This gently sloping, well drained soil has

moderate permeability and medium surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Cecil gravelly sandy loam is a non-hydric soil.

- Cecil gravelly sandy loam, 6-10% slopes, eroded (CgC2) is mapped on short to long side slopes in the uplands. This moderately sloping, well drained soil has moderate permeability and rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Cecil gravelly sandy loam is a non-hydric soil.

- Chewacla soils (Cm) are mapped on the floodplains of stream. This nearly level, somewhat poorly drained soil has moderate to moderately rapid permeability and slow surface runoff. The seasonal high water table is within 1.5 feet of the soil surface. Chewacla soils are listed as hydric B soils.

- Georgeville silt loam, 2-6% slopes, eroded (GeB2) is mapped on smooth interstream divides in the uplands. This gently sloping, well drained soil has moderate permeability and medium surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Georgeville silt loam is a non-hydric soil.

- Georgeville silt loam, 6-10% slopes (GeC) is mapped on short to long side slopes in the uplands. This moderately sloping, well drained soil has moderate permeability and rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Georgeville silt loam is a non-hydric soil.

- Wake soils, 10-25% slopes, (WkE) are mapped on side slopes bordering drainageways in the uplands. The moderately steep, somewhat excessively drained soils have moderately rapid permeability and very rapid surface runoff. The seasonal high water table is greater than 10 feet below the soil surface. Wake soils are non-hydric soils.

2.1.2 Water Resources

The project region is in the Neuse River Basin, a drainage basin covering approximately 6,235 square miles within North Carolina. The basin originates in Person and Orange Counties, flows southeasterly to New Bern, and empties into the Pamlico Sound.

The project study area is located in NCDWQ Subbasin 03-04-01 and USGS Hydrologic Unit 03020201 (NCDWQ 2002). Surface waters in the project study area include Lower Barton Creek, one unnamed tributary (UT) to Lower Barton Creek, and two manmade ponds.

The NCDWQ classifies surface waters of the state based on their intended best uses. Unnamed tributaries receive the same best usage classification as the named streams into which they flow. All waters in the Neuse River basin have been classified as Nutrient Sensitive Waters (NSW). NSW designates waters that have water quality problems associated with excessive plant growth resulting from nutrient enrichment. Lower Barton Creek [NCDWQ Index # 27-16-(1)] has been classified as WS-IV, NSW. WS-IV indicates that the stream is part of a developed watershed that provides water supply. The reach of Lower Barton Creek that occurs within the project study area is more than one-half mile upstream of the Falls Lake water supply reservoir.

High-Quality Waters (HQW) are waters that are designated as native and special trout waters, primary nursery areas, critical habitat areas, water supply watersheds classified as WS-I or WS-II, or Class SA waters; or are rated as excellent based on biological and physical/chemical characteristics through monitoring or special studies. There are no HQW, Outstanding Resource Waters, or WS-I or WS-II designated waters within the project vicinity.

The Ambient Monitoring System (AMS) is a network of stream, lake, and estuarine water-quality monitoring stations strategically located for the collection of physical and chemical water-quality data. The type of water-quality data collected is determined by the waterbody's classification and corresponding water-quality standards. Data from the AMS determines the "use support" status of waterbodies, meaning how well a waterbody supports its designated uses. Surface waters (streams, lakes, or estuaries) are rated as *supporting their designated uses or impaired.* These terms refer to whether the classified uses of the water (such as water supply, aquatic life protection, and swimming) are supported or not supported due to impairment of the water. Lower Barton Creek does not have monitoring stations located on it and is not rated. Therefore, the rating of the nearest rated stream into which Lower Barton Creek flows applies to both Lower Barton Creek and its UTs. Falls Lake is rated as supporting its designated uses, and this rating also applies to Lower Barton Creek and its UTs.

Section 303(d) of the Clean Water Act (CWA) requires states to develop a comprehensive public accounting of all impaired waters. The list includes waters impaired by contaminants (e.g., nitrogen, phosphorus, and fecal coliform bacteria).

Potential sources of impairment include point sources, nonpoint sources, and atmospheric deposition. There are no waters within the project study area on the Section 303(d) list of impaired waters (NCDWQ 2002).

2.2 Biotic Resources

The project study area is composed of different terrestrial communities determined by topography, soils, hydrology, disturbance, and past and present land uses. These systems are interrelated and, in many aspects, interdependent. Scientific nomenclature and a common name (when applicable) are provided for each plant and animal species listed. Subsequent references to the same organism include only the common name.

2.2.1 Terrestrial Communities

Three terrestrial communities were identified within the project study area: Piedmont/Low Mountain Alluvial Forest, Mesic Mixed Hardwood Forest (Piedmont subtype), and Dry-Mesic Oak-Hickory Forest (Figure 4). Descriptions of the communities are in the following sections. An inventory of flora and fauna observed within the project study area was created during site investigations (Appendix A).

2.2.1.1 Piedmont/Low Mountain Alluvial Forest

Piedmont/Low Mountain Alluvial Forests occur on floodplains of rivers and streams. These communities occur on a variety of alluvial soils and experience intermittent to seasonal flooding. Typically, the canopy of this community is dominated by sycamore (*Platanus occidentalis*), river birch (*Betula nigra*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), tulip poplar (*Liriodendron tulipifera*), American elm (*Ulmus americana*), hackberry (*Celtis laevigata*), black walnut (*Juglans nigra*), and green ash (*Fraxinus pennsylvanica*). Understory species generally include box elder (*Acer negundo*), red maple, pawpaw (*Asimina triloba*), ironwood (*Carpinus caroliniana*), and American holly (*Ilex opaca*). Woody vines and a lush, diverse herbaceous layer provide groundcover in this community.

Within the project study area, the dominant canopy trees in the Piedmont/Low Mountain Alluvial Forest community include tulip poplar, sweetgum, and American elm. Understory and shrub species include ironwood, spicebush (*Lindera benzoin*), pawpaw, deciduous holly (*Ilex decidua*), and umbrella magnolia (*Magnolia tripetala*). Vines present within the community include greenbrier (*Smilax rotundifolia*), muscadine

grape (*Vitis rotundifolia*), and poison ivy (*Toxicodendron radicans*). Herbaceous species include Japanese stiltgrass (*Microstegium vimineum*), Southern lady fern (*Athyrium filix-femina ssp. asplenioides*), small-spike false nettle (*Boehmeria cylindrica*), and lizard's tail (*Saururus cernuus*). The understory in a portion of the west side of the project study area is strongly dominated by spicebush. The understory in a portion of the eastern portion of the project study area is strongly dominated by umbrella magnolia (Figure 5). There is regular flooding from Lower Barton Creek and its UT through the community, as evidenced by stratification within the upper 16 inches of the soil profile. The community occurs along the northern boundary of the project study area in the floodplain adjacent to streams SB and SC and encompasses approximately 5.89 acres (Figure 4).

2.2.1.2 Mesic Mixed Hardwood Forest (Piedmont subtype)

The Mesic Mixed Hardwood Forest community is found throughout the southeastern United States. These communities are located on deep, well-drained soils transitioning uphill from poorly drained soils and tend to occur on slopes and in ravines. Due to their occurrence on steep sites, these areas have historically been disturbed less than surrounding areas. Therefore, this forested community commonly appears as a thin, sloping buffer between the wetter floodplains and land used for agriculture or other development. The community is characterized by a variety of hardwood species, including tulip poplar, American beech (*Fagus grandifolia*), red maple, sugar maple (*A. saccharum*), and northern red oak (*Quercus rubra*). The subcanopy and herbaceous strata are typically thick in a young community and open in an older, mature community. Pines and early successional hardwoods, such as sweetgum and tulip poplar, occur in greater numbers in areas of disturbance.

Within the project study area, the dominant canopy trees in the community include tulip poplar, sweetgum, loblolly pine (*Pinus taeda*), American beech, and Northern red oak. Within the transition zone between this community and the Piedmont/Low Mountain Alluvial Forest, black walnut (*Juglans nigra*) is present in the canopy. The understory and shrub strata are composed of sassafras (*Sassafras albidum*), ironwood, black gum (*Nyssa sylvatica*), umbrella magnolia, white oak (*Quercus alba*), flowering dogwood (*Cornus florida*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), eastern redcedar (*Juniperus virginiana*), and redbud (*Cercis canadensis*). The vine layer is represented by muscadine grape. Herbaceous species present in the community include Japanese stiltgrass, Christmas fern (*Polystichum acrostichoides*), rattlesnake fern (*Botrychium virginianum*), cranefly orchid (*Tipularia discolor*), and running-cedar (*Lycopodium sp.*). This community occurs on the slopes adjacent to the Dry-Mesic

Oak-Hickory Forest and the Piedmont/Low Mountain Alluvial Forest communities and covers approximately 20.12 acres (Figure 4).

2.2.1.3 Dry-Mesic Oak-Hickory Forest

Dry-Mesic Oak-Hickory Forests are found on mid-slopes, low ridges, upland flats, and other dry-mesic upland areas. The community is generally underlain by acidic upland soils. Typically, the canopy and subcanopy strata are composed of a variety of oaks and hickories with white oak (*Q. alba*) dominating the canopy. Other common canopy species include northern red oak, black oak (*Q. velutina*), mockernut hickory (*C. tomentosa*), and pignut hickory (*C. glabra*). In areas of disturbance, tulip poplar, sweetgum, and a variety of pines may contribute to the canopy. The understory typically contains red maple, flowering dogwood, sourwood, American holly, and black gum. The vines commonly found in this community are muscadine grape and poison ivy, and the herbaceous layer tends to be sparse.

Within the project study area, the canopy of the community is composed of cherrybark oak (*Q. falcata var. pagodaefolia*), northern red oak, white oak, shortleaf pine (*Pinus echinata*), and occasional individuals of tulip tree. The understory and shrub layers are represented by southern red oak (*Q. falcata var. falcata*), flowering dogwood, pignut hickory (*Carya glabra*), black gum, red maple, sourwood (*Oxydendron arboreum*), American holly, redbud, and eastern redcedar. Additionally, white pine *(P. strobus*) and eastern hemlock (*Tsuga canadensis*) are present along the southern margin of pond PB. Few vines and sparse herbs are present within the community. Greenbrier and rattlesnake fern comprise the groundcover vegetation. The community is located adjacent to the Mesic Mixed Hardwood Forest and pond PB in the eastern portion of the project study area (Figure 4).

Additionally, the southwestern portion of the project study area is currently overgrown with 15-year-old loblolly pine with mowed paths throughout and a couple of small gardens. This area is in an early successional state and is anticipated to develop into a mature Dry-Mesic Oak-Hickory Forest if the vegetation is allowed to regenerate and develop naturally over the next 50 to 75 years. This early successional area is considered to be a part of the Dry-Mesic Oak-Hickory Forest and covers approximately 6.03 acres. When combined with the mature portion of the community, the total acreage covered by the community is approximately 8.75 acres.

2.2.2 Aquatic Communities

There are three aquatic communities located within the project study area: Manmade Impoundment, Lower Barton Creek, and UT to Lower Barton Creek (Figure 6).

2.2.2.1 Manmade Impoundment

Two manmade impoundments exist within the project study area (Figure 7). The impoundments are dammed by earthen walls and are located at the head of two natural drainageways. An ephemeral drain is located at the downstream end of the western impoundment (impoundment PA). The drain contained no water at the time of site investigations, but it appears to carry runoff during large storm events. When water is present in the drain, it flows through wetland WF and into Lower Barton Creek within the project study area. Impoundments PA and PB cover approximately 0.55 acre and 1.56 acres, respectively.

2.2.2.2 Lower Barton Creek

Lower Barton Creek flows along and immediately south of the northern property boundary and continues off the property flowing in a northeasterly direction to Falls Lake. Approximately 1,305 feet of Lower Barton Creek are located within the project study area. The bed of the stream shows evidence of substrate sorting and deposition and has large portions of exposed bedrock forming small waterfalls within the channel (Figure 8). The banks show signs of instability in some places within the project study area. The stream provides habitat for a variety of small fish, amphibians, and macroinvertebrates, including crayfish, caddisflies, water pennies, and stone flies. Additionally, there is evidence that the stream is utilized by several terrestrial mammals, including white-tail deer and raccoon.

2.2.2.3 UT to Lower Barton Creek

The UT to Lower Barton Creek that is present within the project study area is fed by a natural spring within a headwater wetland (Figure 9). The stream flows in a generally northerly, then northeasterly direction within the project study area. Shortly beyond the site boundary, the stream was observed to empty into Lower Barton Creek. Approximately 460 feet of the UT to Lower Barton Creek are located within the project study area. The banks along the stream appear stable as they are protected by adjacent wetlands along much of its length within the project study area. Silt and clay dominate the bed material within the stream. Macroinvertebrates and amphibians

inhabit the stream within the project study area. Additionally, tracks of terrestrial mammals were observed within and adjacent to the stream channel.

2.3 Jurisdictional Topics

Section 404 of the CWA requires regulation of discharges into Waters of the United States. The United States Environmental Protection Agency (USEPA) is the principal administrative agency of the CWA; however, the United States Army Corps of Engineers (USACE) has the responsibility for implementation, permitting, and enforcement of the provisions of the CWA covering discharges of fill materials. The USACE regulatory program is defined in 33 CFR 320-330.

NCDWQ has the responsibility of administering Section 401 General Water Quality Certifications. Any action that may result in a discharge into Waters of the United States within the state of North Carolina requires a water quality certification from the NCDWQ.

Water bodies, including lakes, rivers, and streams, are subject to jurisdictional consideration under the Section 404/401 program. Wetlands are also identified as Waters of the United States. Wetlands are defined in 33 CFR 328.3 as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Any action that proposes to place fill into these areas falls under the jurisdiction of the USACE under Section 404 of the CWA (33 USC 1344).

2.3.1 Surface Waters

The NCDWQ defines a perennial stream as a clearly defined channel that contains water for the majority of the year. These channels usually have some or all of the following characteristics: distinctive streambed and bank, aquatic life, and groundwater flow or discharge.

One perennial and one intermittent stream were observed within the project study area (Figure 6). The perennial stream is Lower Barton Creek, and the intermittent stream is the UT to Lower Barton Creek. The NCDWQ Stream Classification Form and the USACE Stream Quality Assessment Worksheet were completed for each stream (Appendix B).

At the time of the site visit, Lower Barton Creek ranged from 10 to 16 feet wide with 2- to 4-foot high banks. The stream exhibits frequent meander and regular use of its floodplain, as evidenced by well stratified layers of sediment within the adjacent floodplain. The UT to Lower Barton Creek is approximately 3 feet wide with 8- to 12-inch high banks. The stream is fed by a natural, artesian spring and flows through occasional bends within a wetland area, which functions as a floodplain within the project study area. At one location within wetland WG, stream SC flows underground. The length of this subterranean flow is approximately 82 feet.

Two manmade impoundments are located on side slopes within the natural drainageways that occur within the project study area. The impoundments are depicted on the USFWS NWI map (Bayleaf, NC) as palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh). For additional descriptions of the surface waters onsite, see Section 3.2.

2.3.2 Jurisdictional Wetlands

Two wetland areas were observed and delineated during site investigations conducted in September 2006 (Figure 6). These wetland areas are not shown on the USFWS NWI mapping for the project vicinity. Based on observations during site investigations, the two wetland areas match the classification of palustrine, forested, broad-leaved deciduous (PFO1). USACE Routine Wetland Determination Forms and NCDWQ Wetland Rating Worksheets were completed for each wetland area delineated within the project study area (Appendix C).

Wetland WF is located in the northwestern portion of the project study area adjacent to Lower Barton Creek and down-gradient from impoundment PA. It is located within the Piedmont/Low Mountain Alluvial Forest community. Wetland WF encompasses approximately 0.72 acre and received an NCDWQ rating of 52. Wetland WG is located in the northeastern portion of the project study area adjacent to the UT to Lower Barton Creek and down-gradient from impoundment PB. It is located within the Mesic Mixed Hardwood Forest community. Wetland WG encompasses approximately 0.44 acre and received an NCDWQ rating of 61.

2.3.3 Neuse River Riparian Buffer Rules

The Neuse River riparian buffer rules, effective in August 2000, support the implementation of the Neuse River NSW Management Strategy by protecting, maintaining, and mitigating riparian areas. These buffer rules set restrictions on

activities that may occur within the protected riparian areas immediately adjacent to perennial and intermittent streams within the Neuse River Basin. The riparian buffers remove nitrogen, phosphorus, and other pollutants from rainwater that flows into the basins' streams, protecting the waters from surrounding land uses. The City has buffer rules in place to meet the requirements of the Neuse River riparian buffer rules.

2.3.3.1 Neuse River Basin

The Neuse River NSW Management Strategy requires that existing riparian buffer areas be protected and maintained on both sides of surface waters, including both intermittent and perennial streams (15A NCAC 2B.0233). The following represent a few of the Neuse buffer rule requirements:

- A 50-foot buffer must be maintained on each side of surface waters.
- All flow entering the buffer must be diffuse flow.
- Non-electric utility crossings in the buffer must be perpendicular to stream flow (unless it is shown "no practical alternative" is available and an appropriate mitigation strategy is provided).
- Underground electric utility crossings may be other than perpendicular only if specified Best Management Practices (BMPs) are used, including all woody vegetation is removed by hand, diffuse flow is maintained at all times, and vegetation removal is minimized (root systems must be left intact).
- Harvesting of dead or infected trees or application of pesticides necessary to prevent or control extensive tree pest and disease infestation is allowed. The Division of Forest Resources must approve the practice for a specific site.

The buffer rules do not require restoration of buffers that do not currently have forest vegetation. Perennial and intermittent stream determinations are to be based on soil survey maps prepared by the U.S. Natural Resources Conservation Service (NRCS) or the most recent version of USGS 7.5-minute topographic quadrangle maps. The buffer rules also include requirements to protect buffers as part of a municipal separate storm sewer system (MS4) or other local stormwater programs by requiring buffers to be "recorded on plats as easements."

Lower Barton Creek has approximately 2.50 acres of riparian buffer within the project study area that is anticipated to be protected under the Neuse River riparian buffer rules. Additionally, the UT to Lower Barton Creek has approximately 1.12 acres of riparian buffer within the project study area that is likely to be protected by the Neuse River riparian buffer rules.

2.3.3.2 City of Raleigh

The City has fully complied with the 50-foot buffers as required by the Neuse River riparian buffer rules. However, Section 10-9040 of the Raleigh City Code pertains to more specific buffer rules in Raleigh's jurisdiction. These buffer rules apply to all perennial streams and all streams draining 5 or more acres. A 100-foot buffer is required for any property in the secondary watershed protection area of the Reservoir Watershed Protection Area Overlay District and in the Conservation Management District where impervious surfaces exceed 24 percent. A 60-foot buffer is required for watercourses draining 25 or more acres and development is low density. A 35-foot buffer is required for watercourses draining between 2 and 25 acres, and development is low density. Finally, a 35-foot buffer is required for any perennial stream that drains less than 5 acres. The City allows some minimal use within a buffer. However, no land-disturbing activity is allowed within 80 feet of the water edge if the slope averages between 15 and 20 percent, and 95 feet of the water edge if the average slope exceeds 20 percent (Section 10-9041, Raleigh City Code). In addition to the area of riparian buffer protected by the Neuse River riparian buffer rules, the Raleigh City Code protects an additional area of approximately 0.30 acre of buffer along Lower Barton Creek and approximately 0.21 acre of buffer along the UT to Lower Barton Creek.

The City has developed the "Raleigh Stormwater Management Design Manual" (Raleigh 2002) and Section 10-9004 of the Raleigh City Code requires the standards and requirements set forth in the manual to be applied in the same manner as City Land Use Ordinances.

2.3.4 Permit Considerations

2.3.4.1 Section 404 of the Clean Water Act

Impacts are defined as any discharge of a material into waters of the US, which includes streams, impoundments, and wetlands. Impacts to greater than 0.10 acre of jurisdictional wetlands will require a permit from the USACE, pursuant to Section 404 of the CWA. Impacts to less than 0.5 acre of jurisdictional wetlands and 300 feet of

stream channel may be permittable under a Nationwide Permit through the USACE. A final permitting strategy can be developed once a site plan has been designed and proposed impacts, if any, are determined.

2.3.4.2 Section 401 of the Clean Water Act

A Section 401 General Water Quality Certification is also required for any activity that may result in a discharge into waters of the US. Certifications are administered through the NCDWQ. Once a design has been selected, the City should coordinate with the NCDWQ to obtain the Section 401 General Water Quality Certification, if required.

2.3.4.3 Mitigation Requirements

The USACE has adopted, through the Council on Environmental Quality (CEQ), a mitigation policy that embraces the concepts of "no net loss of wetlands" and sequencing. The purpose of the policy is to restore and maintain the chemical, biological, and physical integrity of Waters of the United States, specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts (40 CFR 1508.20). Avoidance, minimization, and compensatory mitigation must be considered in sequential order.

Avoidance examines all appropriate and practicable possibilities of averting impacts to Waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the USEPA and the USACE, "appropriate and practicable" measures to offset unavoidable impacts should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes.

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to Waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the footprint of the proposed project through the reduction of sidewalk widths and/or fill slopes.

Compensatory mitigation is not normally considered until anticipated impacts to Waters of the United States have been avoided or minimized to the maximum extent possible. It is recognized that "no net loss of wetlands" functions and values may not be

achieved in each and every permit action. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been completed. Compensatory actions often include restoration, creation, and enhancement of Waters of the United States, specifically wetlands. Such action should be undertaken in areas adjacent to the discharge site.

2.4 Rare and Protected Species

2.4.1 Federally Protected Species

Some populations of fauna and flora have declined, or are in the process of declining due to either natural forces or their inability to coexist with humans. Federal law [under the provisions of Section 7 of the Endangered Species Act of 1973, as amended (ESA)] requires that any action likely to adversely affect a species classified as federally protected is subject to review by the USFWS. Other species may receive additional protection under state laws. As of April 27, 2006, the USFWS had identified one threatened and three endangered species as potentially occurring in Wake County (Table 1). The NCNHP database of rare species and unique habitats (August 2006) was reviewed to determine the state status of the federally protected species. The following table lists the federally protected species and their status. Discussion of the species and their respective habitats follows.

Table 1. Federally Protected Species Known from Wake County, North Carolina

Scientific Name	Common Name	Federal Status	State Status
Vertebrates			
Haliaeetus leucocephalus	Bald eagle	T*	T
Picoides borealis	Red-cockaded woodpecker	E	E
Invertebrates			
Alasmidonta heterodon	Dwarf wedgemussel	E	E
Vascular Plants			
Rhus michauxii	Michaux's sumac	E	E-SC

Notes: * - Proposed for de-listing

T – Threatened: A taxon likely to become endangered within the foreseeable future throughout all of a significant portion of its range.

E – Endangered: A taxon in danger of extinction throughout all or a significant portion of its range.

E-SC – Endangered – Special Concern: A taxon in danger of extinction throughout all or a significant portion of its range that may be collected, transported, and sold with a permit.

2.4.1.1 Vertebrates

Bald eagle (*Haliaeetus leucocephalus*)
Federal Status: THREATENED (Proposed for De-listing)
State Status: THREATENED

The bald eagle is a very large bird of prey that is from 32 to 43 inches tall and has a wingspan of more than 6 feet. Adult body plumage is dark brown to chocolate-brown with a white head and tail, while immature birds are brown and irregularly marked with white until their fourth year. They are primarily associated with large bodies of water where food is plentiful. Eagle nests are found in proximity to water (usually within 0.5 mile with a clear flight path to the water), in the largest living tree in an area, with an open view of the surrounding land. Human disturbance can cause nest abandonment. Nests as large as 6 feet across are made of sticks and vegetation in the tops of tall trees; these platform nests may be used for many years. Breeding begins in December or January, and the young remain in the nest for at least 10 weeks after hatching. Bald eagles eat mostly fish robbed from ospreys or picked up dead on the shore. They may also capture small mammals such as rabbits, some birds, wounded ducks, and carrion.

Biological Conclusion: *No Effect*

As of July 6, 1999, this species is under consideration by the USFWS for a proposed de-listing of their threatened status. However, this raptor will still be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, and under provisions of the ESA, populations will continue to be monitored for at least five years following de-listing. No eagles or eagle nests were observed during the field surveys of the project study area. The NCNHP has no records of any known populations of this species within a 1-mile radius of the project study area. No impacts to this species from project development are anticipated.

Red-cockaded woodpecker (*Picoides borealis*)
Federal Status: ENDANGERED
State Status: ENDANGERED

The red-cockaded woodpecker (RCW) is a small woodpecker with a black- and white-barred back and conspicuous large white cheek surrounded by a black cap, nape, and throat, standing 7 to 8 inches. Males have a very small, red mark at the upper edge of the white cheek and just behind the eye. The RCW is found in open pine forests in the southeastern United States. The RCW uses open, old-growth stands of southern pines, particularly longleaf pine (*Pinus palustris*), for foraging and nesting habitat. A forested stand optimally should contain at least 50 percent pine and lack a thick understory. The RCW is unique among woodpeckers because it nests exclusively in living pine trees. These birds excavate nests in pines greater than 60 years old and contiguous with open, pine-dominated, foraging habitat. The foraging range of the RCW may extend 500 acres and must be contiguous with suitable nesting sites.

Living pines infected with red-heart disease (*Fomes pini*) are often selected for cavity excavation because the inner heartwood is usually weakened. Cavities are located from 12 to 100 feet above ground and below live branches. These trees can be identified by “candles,” large encrustations of running sap that surround the tree. Colonies consist of one to many of these candle trees. The RCW lays its eggs in April, May, and June; the eggs hatch approximately 38 days later.

Biological Conclusion: *No Effect*

Suitable habitat for RCW does not exist within the project study area. There are no stands of pine within the project study area that are of sufficient age, density, and connectivity to adjacent pine/pine-dominated stands to support an RCW population, nor is there appropriate foraging habitat available within the project study area. Additionally, the NCNHP has no records of any known populations of this species

within a 1-mile radius of the project study area. No impacts to this species from project development are anticipated.

2.4.1.2 Invertebrates

Dwarf wedgemussel (*Alasmidonta heterodon*)
Federal Status: ENDANGERED
State Status: ENDANGERED

The dwarf wedgemussel is a relatively small (from 0.9 to 1.8 inches in length) mussel with a subrhomboidal to subtrapezoidal shell. The exterior shell color is greenish-brown with green rays. The interior nacre is bluish to silvery white. This species is unique in the reversed arrangement of its lateral teeth; there are two teeth on the right valve and one on the left. The dwarf wedgemussel had a historic range from New Brunswick, Canada south to the Neuse River in North Carolina. Currently, the range is greatly reduced in the northern portion of the range and fragmented throughout the southern portion. Populations are known from the Tar and Neuse River basins in North Carolina. This mussel inhabits large rivers to small streams within its range. The preferred substrate is clay banks stabilized with the root systems of trees. Other bed substrates include coarse sands, mixed sand, gravel and cobble, and very soft silts. The most important feature of their preferred habitat appears to be excellent to good water quality.

Biological Conclusion: *No Effect*

Habitat for the dwarf wedgemussel does not occur within the project study area. Lower Barton Creek is of sufficient size and flow for mussel fauna to inhabit, however, past and current degradation (down cutting, bank erosion, sediment input, etc.) of this stream results in minimal habitat availability. No mussel fauna evidence (relic shells and middens) was observed in the project study area during site visits conducted on (dates). Additionally, the NCNHP has no records of any known populations of this species within a 1-mile radius of the project study area. No impacts to this species from project development are anticipated.

2.4.1.3 Vascular Plants

Michaux's sumac (*Rhus michauxii*)
Federal Status: ENDANGERED
State Status: ENDANGERED

Michaux's sumac is a densely pubescent, dioecious, rhizomatous shrub. It has a low stature growing to usually less than two feet high. The leaves are compound with seven to thirteen, serrately edged, hairy leaflets on a hairy rachis. Male or female flowers are found in dense terminal panicles typical of the genus. Flowers bloom in June and seed heads are visible from August to September. Due to habitat fragmentation, colonies of this dioecious plant, when they occur, often are only one large clone representing a single sex. Unfortunately, this quality is a serious limitation to the reproduction and repopulation of this species. Michaux's sumac grows in dry, open woodlands and forest edges in scattered locations from Virginia to Georgia. In the Piedmont region, it is usually associated with clayey soils derived from mafic rock such as Carolina slates or gabbro.

Biological Conclusion: *May Affect: Not Likely to Adversely Affect*

Habitat for Michaux's sumac is present within the project study area within the Mesic Mixed Hardwood Forest (Piedmont subtype) upslope of Impoundment PA and along the edge of woods along Strickland Road. Pedestrian surveys were conducted within areas of potential habitat for the species, and no populations were observed within the project study area. Additionally, the NCNHP has no records of any known populations of this species within a 1-mile radius of the project study area. Impacts to this species from project development are possible due to the presence of habitat. However, impacts to the species are not likely to occur as a result of the proposed project.

2.4.2 Federal Species of Concern

The USFWS lists sixteen federal species of concern (FSC) for Wake County. These species are not protected under the provisions of the ESA. FSC species are defined as species that are under consideration for listing, but for which there is insufficient information to support listing as threatened or endangered (formerly C2 candidate species). The status of these species may be upgraded at any time, thus they are included here for consideration. The NCNHP lists twelve of these sixteen species and identifies an additional seventeen species receiving protection under state laws (15A NCAC 10I.0101 through 10I.0105) (August 2006). Table 2 lists the FSC species, their state status, and the habitat requirements and availability within the project study area. A review of NCNHP maps found no known populations of FSC species within the project region. Although specific surveys for FSC species were not conducted, no individuals of any FSC species listed in Wake County, NC were observed during site investigations.

Table 2. Federal Species of Concern Known from Wake County

Common Name	Scientific Name	Federal Status	State Status	Habitat Requirements	Habitat Available
Vertebrates					
American eel	*Anguilla rostrata*	FSC	-	Sounds, rivers, and small streams with burrows, tubes, snags, plant masses, or other types of shelter on the bottom	Yes
Bachman's sparrow	*Aimophila aestivalis*	FSC	SC	Open, grassy pine or oak woods	No
Carolina darter	*Etheostoma collis lepidinion*	FSC	-	Sand, mud, or rubble substrate under silt or detritus in small upland creeks and rivulets	Yes
Carolina madtom	*Noturus furiosus*	FSC	SC (PT)	Very shallow water with little to no current over fine to coarse sand bottom	Yes
Pinewoods shiner	*Lythrurus matutinus*	FSC	-	Rocky pools and runs of small creeks and rivers with moderate flow, gravel bottoms, and clear water with little to no silt deposition	No
Roanoke bass	*Ambloplites cavifrons*	FSC	SR	Creeks to medium rivers with rock, gravel, sand, and silt substrates	Yes
Southeastern myotis	*Myotis austroparius*	FSC	SC	Roost in caves or abandoned buildings with standing water, and forage over open water	Yes
Southern hognose snake	*Heterodon simus*	FSC	SC	Open, xeric areas with well-drained sandy soils, and field and river floodplains	Yes
Invertebrates					
Atlantic pigtoe	*Fusconaia masoni*	FSC	E	Medium-sized rivers with moderate gradients, fast water, and sand or gravel bed under riffles	No
Diana fritillary	*Speyeria diana*	FSC	-	Breeding in deciduous or mixed woods; feeding in grasslands and shrublands	Yes
Green floater	*Lasmigona subviridis*	FSC	E	Small freshwater streams with slow current and gravelly and sandy bottoms	No

Common Name	Scientific Name	Federal Status	State Status	Habitat Requirements	Habitat Available
Yellow lance	*Elliptio lanceolata*	FSC	E	Freshwater streams and rivers with sandy substrates, rocks, and in mud in slack water areas	No
Vascular Plants					
Bog spicebush	*Lindera subcoriacea*	FSC	T	Permanently moist to wet, shrub-dominated seepage wetlands	Yes
Grassleaf arrowhead	*Sagittaria weatherbiana*	FSC	SR-T	Fresh to slightly brackish marshes, streams, swamps, and pond margins	Yes
Sweet pinesap	*Monotropsis odorata*	FSC	SR-T	Dry forests and bluffs	Yes
Virginia least trillium	*Trillium pusillum* var. *virginianum*	FSC	E	Mesic to swampy hardwood forests	Yes

Notes:

T – Threatened: A taxon likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

E – Endangered: A taxon likely to become extinct throughout all or a significant portion of its range.

FSC – Federal Species of Concern: A species under consideration for listing for which there is insufficient information to support listing at this time. These species may or may not be listed in the future.

SC – Special Concern: Any species of wild animal native or once-native which requires monitoring but may be taken under regulations adopted under provisions within the NC General Statutes.

PT – Proposed Threatened: A species proposed to be listed as Threatened.

SR – Significantly Rare: A species which exists in the state in small numbers and has been determined by NCNHP to require monitoring. The species may exist in greater numbers elsewhere within its range.

-T – Throughout: These species are rare throughout their ranges.

2.5 Cultural Resources

TRC Garrow Associates, Inc. (TRC) and Circa, Inc., completed a cultural resources and archaeological background study of the Trott-Strickland park site. This study was conducted to produce information on the known and potential presence of significant cultural resources on the site so that the information can be used for planning purposes and to guide any future studies. While this study will not satisfy survey and evaluation requirements that may eventually be needed for regulatory compliance under the

National Historic Preservation Act, it will be useful in planning such work should it be necessary.

2.5.1 Methods

The project included background research, field visits, and analysis and reporting. The background research included review of the available archaeological and historical literature concerning each tract, and was intended to provide information on previously identified and potential resources in each project area. The following data sources were examined:

- National Register and Historic Structures files at the North Carolina State Historic Preservation Office (SHPO) in Raleigh;
- Archaeological site and report files at the Office of State Archaeology (OSA) in Raleigh;
- Historic cemetery records available on-line and at the North Carolina Department of Archives and History;
- Deed records available on-line;
- Historic maps and other materials on file at the North Carolina Collection at the University of North Carolina at Chapel Hill, the North Carolina Department of Archives and History, and other locations.

Following the background research, TRC and Circa staff members visited the site to examine current conditions, inspect standing structures and architectural remains, and evaluate the potential for significant resources. Ellen Turco of Circa and Paul Webb of TRC visited the Trott-Strickland site on October 4, 2006. The fieldwork included an examination of standing structures, as well as a field reconnaissance. No systematic archaeological survey was conducted. Standing structures, structural remains, and general landscape features were documented through sketch maps, photographs, and field notes. Previously recorded resources are shown on Figure 10.

2.5.2 History

The Trott-Strickland Site is in the southern part of Barton's Creek Township. The tract lies north of Strickland Road (shown as Hillsboro Road on the 1871 Bevers map), less than one mile east of the crossroads community of Leesville (Figure 11). The principal road to Raleigh (known as Lower Raleigh Road) formerly intersected Strickland Road a short distance west of the property. The Bevers Map is the earliest map showing detail in the project area; it depicts a single structure, labeled "JM Heck Plantation"

immediately west of the tract, along with "E.S. McCuller's Mill" along the creek some distance to the northwest. Subsequent maps dating to 1887 (Shaffer 1887;12), 1904 (Clements 1904; Figure 13), and 1914 (Brinkley 1916; Figure 14) do not depict structures on the tract, although the 1914 map (which is the most detailed of the three) does show a structure to the west.

The structure shown at the "JM Heck Plantation" in 1871 (and also visible on the 1914 map) is almost certainly the Sorrell House (see below), which still stands west of the tract. J.M. Heck is almost certainly Colonel Jonathan McGee Heck, a former Confederate Army officer who was born in West Virginia (Bisher 1988; Murray 1983:641) and moved to the Raleigh area shortly after the Civil War, when he joined with others to form Battle, Heck, and Company. The new company published the *North Carolina Advertiser*, which promoted immigration and investment into the South from the northern states. The firm also had a real estate arm, which by late 1865 listed for sale 132 properties totaling 146,700 acres. Although there is presently no definitive evidence associating Heck with the Sorrell house or the adjacent Trott-Strickland tract, it is likely that the tract was one of many properties owned by Heck for at least a short time. Heck clearly did not live on the tract, however. The 1870 census data confirms that Heck was then living in Raleigh along with his wife Mattie and six young children, presumably in the newly built Heck-Andrews house (www.cr.nps.gov/nr/travel/raleigh/hec.htm), which still stands on Blount Street.

Although limited deed research has been accomplished on-line, no attempt has been made to trace the 19th century ownership of the Trott-Strickland tract. It is almost certain, however, that the property was part of the 958.93-acre L.P. Sorrell estate that was divided among several Sorrell heirs on November 22, 1926. L.P. Sorrell was born in Wake County in 1849 (Thompson 1983:499), and appears in the 1880 census for Barton's Creek Township; at that time he was a 28-year old physician living with his first wife, Virginia, and two infant children. After his death, Sorrell's land was divided into five tracts that were distributed among his heirs; each of the tracts contained from one to five lots. References in the deed indicate that the property included substantial acreage to the east of the "old home tract," which presumably included the structure now known as the Sorrell House. The deed makes reference to several structures in addition to the home place, including a dormitory building (possibly associated with the former Leesville Academy, which is shown west of the tract on the 1887 map) as well as a "store lot," "gin lot," and "old well." Subsequent to the Sorrell family ownership, the property apparently passed through members of the Hunt, Redwine, and Trott families before being purchased by the City of Raleigh in 1998.

In summary, the available data strongly suggest that the Trott-Strickland tract was part of a mid-to-late 19th-century farm or plantation that may have been owned by J.M. Heck and later by the Sorrell family. Although the main residence was apparently located west of tract, it is possible that outbuildings or other facilities were situated on the tract, especially in the relatively flat ground in its the southwest corner. In this regard, it should be noted that a current resident of the Sorrell House reported that she had been told that the westernmost pond on the tract might have originally been used as a quarry.

2.5.3 Structures

No structures had been previously recorded on the Trott-Strickland tract, although one potential historic property, the Sorrell House (WA 1347), is recorded in the SHPO files. The Sorrell House is located immediately west of the Trott-Strickland tract (Figure 15). This house appears to date from about 1850 (Figure 16), and probably corresponds to the structure depicted on the 1878 Bevers map of Wake County as the J M Heck Plantation.

The principal structure present on the Trott-Strickland tract is a one-story shallow pitched, side-gable, shingled house with a metal roof (Figure 17). Small windows are set under the eaves on the front elevation. A large brick exterior end chimney anchors the south elevation. A rear deck overlooks a manmade pond. Tax records date the dwelling to 1958, and this date of construction is supported by the building's style and appearance.

West of the house is a cluster of outbuildings (Figure 18). The first is a one-story, rectangular, side-gable, concrete block outbuilding of undetermined use (Figure 19). The building is surmounted by a metal roof with exposed rafter tails and weatherboarded gable ends. An open-air equipment shelter is located west of the block outbuilding (Figure 20). Round wood posts support a metal shed roof. Southwest of the shelter is a front-gable plywood shed topped with a tar paper roof (Figure 21). South of the outbuilding cluster is a small, front-gable livestock barn covered in both flush board and board-and-batten siding (Figure 22). The barn has a metal roof and exposed rafter tails in the eaves. Construction dates for these outbuildings could not be determined, but they likely date from the second half of the 20th century.

The buildings on site were recorded on SHPO site form WA 4329.

2.5.4 Archaeological Resources

There has been no previous archaeological survey within or adjacent to the Trott-Strickland site, and there are no recorded archaeological sites within or adjacent to the property. The nearest archaeological survey took place along the Northern Wake Expressway (I-540) corridor north and west of the site, and was conducted in the late 1980s by the North Carolina Department of Transportation (NCDOT 1990). That project consisted of a 28% sample survey of the project corridor, and examined several 50 × 50 m quadrants near of the current project. The survey identified four sites (31WA619–31WA622) within one mile of the Trott-Strickland property. All were low to moderate-density lithic artifact scatters dominated by quartz debitage. None contained diagnostic artifacts, but they likely date to the Middle to Late Archaic periods. All were recommended not eligible for the NRHP.

There are no known cemeteries on the tract, although a nearby resident showed the researchers the location of a former cemetery associated with the Sorrell House, which is situated within a residential development being constructed to the west of the Sorrell House.

The archaeological field reconnaissance included a pedestrian reconnaissance of parts of the tract, including the vicinity of the standing structures, the sloping hillside leading down to the north, and a small terrace along West Barton Creek. Surface exposures were examined when present, but no shovel tests were excavated. No definite artifacts were observed, although several moderate-sized (fist-sized) pieces of high quality quartz suitable for tool-making were observed. Substantial evidence of former erosion and gullying was noted along the hillside above the creek, presumably as a result of past farming practices.

2.5.5 Cultural Resources Summary

The Trott-Strickland site has moderate potential to contain significant cultural resources. Prehistoric sites may be present on the relatively level ground in the southwestern part of the tract and to the north, along Lower Barton's Creek. Given the tract's location adjacent to a mid-19th century dwelling and a possible plantation seat, it is also possible that 19th-century structural remains, features, and/or artifact concentrations could be located on the tract, especially in the relatively level area east of the Sorrell House.

Further background research should be conducted in order to identify past uses of the tract and further evaluate the potential for significant historic period resources, including deed research; further review of historical maps, census records, and other documentary sources (including the Holloway and Sorrell papers at the University of North Carolina [http://www.lib.unc.edu/mss/inv/htm/04652.html] and the J.M. Heck Collection at the North Carolina State Archives); and informant interviews. That research should be supplemented by systematic archaeological survey of the tract, including systematic subsurface testing of the relatively level areas as well as pedestrian survey of the sloping area south of Lower Barton's Creek.

A SHPO survey site file has been completed for the house and outbuildings (WA 4329). No additional documentation of the standing structures is recommended at this time.

2.6 Summary of Existing Conditions: Opportunities and Constraints

Topography: The site contains a relatively flat upland area adjacent to Strickland Road in the southwestern portion of the site. The site slopes down from the road in a northerly direction toward Lower Barton Creek. A relatively level area is also present along the creek in the northeastern corner of the property. There are some areas of severe slope adjacent to the floodplain of the creek.

Soils: The project study area is underlain by one soil association: Cecil-Appling association. Ten soil mapping units are mapped within the project study area. One of the ten soils onsite, Chewacla soils, is a hydric soil.

Water Resources: The surface waters in the project study area are Lower Barton Creek, one unnamed tributary (UT) to Lower Barton Creek, and two manmade ponds. Approximately 1,305 feet of Lower Barton Creek are located within the project study area. Exposed boulders within the bed of the stream are unique features that serve as grade control and provide visual interest. The UT to Lower Barton Creek is fed by a natural spring within a headwater wetland.

Terrestrial Communities: The project study area includes terrestrial communities of Piedmont/Low Mountain Alluvial Forest, Mesic Mixed Hardwood Forest (Piedmont subtype), and Dry-Mesic Oak-Hickory Forest, which provide habitat for a wide variety of mammals, birds, amphibians, invertebrates, and plants.

Umbrella magnolia dominates a portion of the Piedmont/Low Mountain Alluvial Forest. This area, in particular, is anticipated to provide visual interest to park visitors.

Invasive exotic plants often out-compete native vegetation, resulting in a change in vegetative cover. The vegetation change affects the faunal populations within an area by changing the food and cover sources available to the individuals within the population. Within the project study area, invasive exotic species of plants exist, including Japanese stiltgrass, English ivy (*Hedera helix*), periwinkle (*Vinca sp.*), and chinaberry (*Ailanthus altissima*). Japanese stiltgrass was observed along the southern bank of Lower Barton Creek. The periwinkle was observed along paths leading to the residence and associated out-buildings within the property. The other two species were mainly observed within the southwestern corner of the property.

Aquatic Communities: Lower Barton Creek and the UT to Lower Barton Creek provide habitat for a variety of small fish, amphibians, and macroinvertebrates, including crayfish, caddisflies, water pennies, and stone flies. There is evidence that the stream is utilized by several terrestrial mammals, including white-tail deer and raccoon. The bed of the stream shows evidence of substrate sorting and deposition. The banks show signs of instability in some places within the project study area.

In addition, two wetlands were delineated within the project study area; both wetland areas are palustrine, forested systems located in the floodplain of a stream.

Regulations and Permit Considerations: Jurisdictional streams and wetlands comprise approximately ten percent of the site area. Sections 404 and 401 of the CWA apply to these surface waters and wetlands. Development of the site may require permitting of impacts to waters of the US through USACE and NCDWQ in order to comply with Sections 404 and 401 of the CWA.

The project study area is located within the Neuse River basin; therefore, Neuse River riparian buffer rules are applicable.

Rare and Protected Species: USFWS lists four species as federally protected and occurring in Wake County. Of the four species, habitat for Michaux's sumac is present within the project study area. Adverse impacts to the species are not likely to occur as a result of park development.

Cultural Resources: The site has moderate potential to contain significant cultural resources. Prehistoric sites may be present on the relatively level ground in the

southwestern part of the tract and to the north, along Lower Barton's Creek. Given the tract's location adjacent to a mid-19th century dwelling and a possible plantation seat, it is also possible that 19th-century structural remains, features, and/or artifact concentrations could be located on the site. Further background research, supplemented by systematic archaeological survey of the tract, is recommended. No additional documentation of the standing structures is recommended at this time.

3. Interim Management Guidelines

Interim management guidelines for the Trott-Strickland site are proposed to guide management of the site prior to the initiation of a Master Plan. The guidelines incorporate current management practices and are based on existing site conditions and constraints.

The Raleigh City Council endorsed the following interim management guidelines for the Trott-Strickland future park site.

Current Management

- The dock at the pond is inspected three times a year for needed maintenance and repairs.

Interim Management Guidelines

- Research the origin and create a plan for the koi fish in the pond.
- Determine continued need for dock; repairs/replacement costs.
- An intra-departmental staff review team will visit the site annually to provide a comprehensive inspection until the site is Master Planned. This review will consist of a representative from each division of the Parks and Recreation Department.
- The property's boundaries should be marked with carsonite posts.
- Review the lease agreements for the property (if any exist) and review the level of care for the property. The review should consider items including but not limited to the upkeep of the grounds, landscaping, utility systems, cleanliness of building interiors, periodic monitoring, lease fees, etc.

- Determine if the outbuildings would be useful for park purposes. Compare repair/renovation costs to the benefit of maintaining the structures. Remove any abandoned structures that are not cost effective to maintain.

4. Comprehensive Plan Classification

The Comprehensive Plan is the City's official policy statement to guide growth and redevelopment, including the City's park system. The Park, Recreation and Open Space Element of the Comprehensive Plan established a park classification system to address the following goal: Provide a Diverse, Well-Balanced, Well-Maintained Range of Recreational Opportunities.

The five park classifications are: Natural Areas, including Conservation Areas and Greenway Corridors sub-classifications; Neighborhood Parks; Community Parks; Metro Parks; and Special Parks. Each classification includes guidelines for park size, location and facilities.

The Comprehensive Plan designates the Trott-Strickland site as a Neighborhood Park. According to the Comprehensive Plan, Neighborhood Parks typically range in size from 5 to 25 acres and serve residents within a half-mile radius. Neighborhood Parks should be located to accommodate convenient, safe, and easy access. The Comprehensive Plan also recommends that Neighborhood Parks include a base set of facilities, such as playgrounds and picnic areas, with additional facilities that would create distinctive and varied neighborhood-responsive parks.

The Neighborhood Park classification was found to be appropriate for the Trott-Strickland site. The 37-acre Trott-Strickland site is larger than the recommended size range for a neighborhood park. The additional acreage provides the opportunity to preserve areas and add features that are not typically found in neighborhood parks. Decisions regarding specific park facilities will be made during the Master Planning process.

5. Literature Cited

Bevers, Fendol. Map of Wake County, North Carolina. Nichols and Gorman, Raleigh.

Bisher, Catherine. 1988 Heck, Jonathan McGee. In Dictionary of North Carolina Biography, Vol. 3, edited by William S. Powell, pp. 92-93. University of North Carolina Press, Chapel Hill.

Brinkley, Lonn L. 1916 Soil Survey of Wake County, North Carolina. U. S. Department of Agriculture, Washington, D.C.

Cawthorn, Joel. 1970. Soil Survey of Wake County, North Carolina. United States Department of Agriculture, Soil Conservation Service, now Natural Resource Conservation Service. Raleigh, NC.

Clements, W.G. 1904 School Map of Wake County, North Carolina. Drawn by W.G. Clements, Supt. of Schools.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. USFWS, U.S. Department of the Interior.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

Gregory, J.D. 2001. Hydric Soils and Growing Season: Wetland Delineation Data for North Carolina. Department of Forestry, NC State University, Raleigh, NC.

Martof, B. S., W. M. Palmer, J. R. Bailey, and J. R. Harrison III. 1980. Amphibians and Reptiles of the Carolinas and Virginia. The University of North Carolina Press, Chapel Hill, NC. 264 pp.

Murray, Elizabeth Reid. 1983 Wake: Capital County of North Carolina. Capital County Publishing Company, Raleigh.

North Carolina Department of Transportation. 1990. An Archaeological Survey of the Proposed Northern Wake Expressway, Wake County, North Carolina. North Carolina Department of Transportation., Raleigh. On file at Office of State Archaeology, Raleigh.

NCDWQ. 2002. Neuse River Basinwide Water Quality Management Plan. North Carolina Department of Environment and Natural Resources, North Carolina Division of Water Quality, Water Quality Section, Raleigh, NC. http://h2o.enr.state.nc.us/basinwide/Neuse/2002/2002_plan.htm. Accessed 18 September and 4 October 2006.

North Carolina Geological Society (NCGS). 1985. Geologic Map of North Carolina. Printed 1985.

North Carolina Natural Heritage Program (NCNHP). August 2006. Element Occurrence List for Wake County, North Carolina. North Carolina Division of Parks and Recreation, Raleigh, NC. www.ncsparks.net/nhp/county.html. Accessed 4 October 2006.

Parks Plan. 2004. City of Raleigh Comprehensive Plan. http://www.raleighnc.gov/portal/server.pt/gateway/PTARGS_0_0_306_209_0_43/http;/pt03/DIG_Web_Content/category/Leisure/Park_and_Greenway_Planning/Cat-Index.html. Accessed October 9, 2006.

Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. Birds of the Carolinas. The University of North Carolina Press, Chapel Hill, NC. 394 pp.

Radford, A. E., H.E. Ahles, and C.R. Bell. 1968. Manual of the Vascular Flora of the Carolinas. The University of North Carolina Press, Chapel Hill, NC.

Raleigh, City of. January 2002. Stormwater Management Design Manual.

Resolution (2003) – 735. January 2004. City of Raleigh. A Resolution to Revise the Process for Approval of Master Plans for Park and Related Projects. http://www.raleighnc.gov/publications/Parks_and_Recreation/Park_Planning/Park_Master_Plan_Process_Resolution.doc. Accessed October 6, 2006.

Schafale, M. P., and A.S. Weakley. 1990. Classification of the Natural Communities of North Carolina, Third Approximation. North Carolina Natural Heritage Program, Division of Parks and Recreation, Department of Environment, Health and Natural Resources, Raleigh, NC.

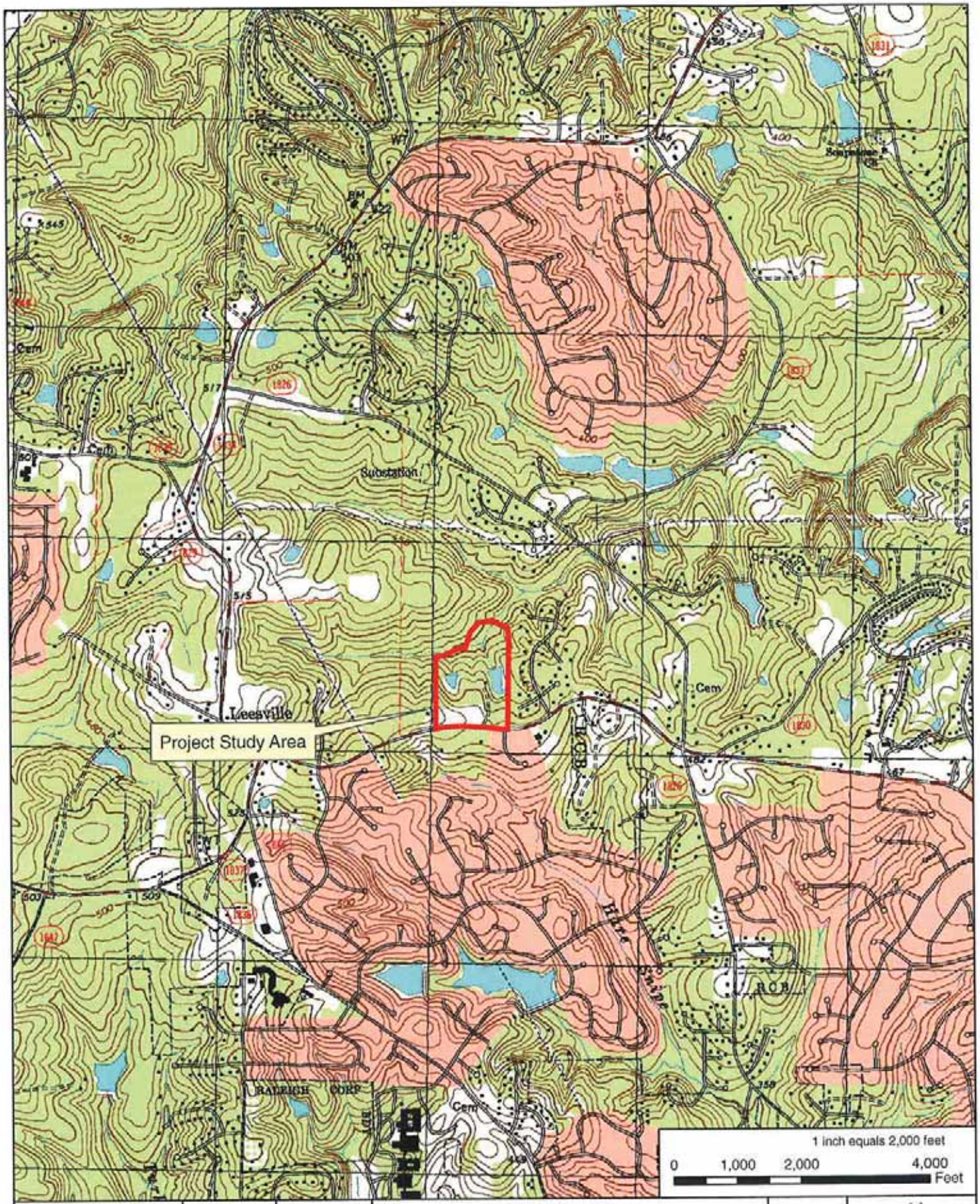
Shaffer, A.W. 1871. Shaffer's Map of Wake County, N. C. Raleigh.

Thompson, Mrs. W.C. 1983. Dr. L.P. Sorrell. In The Heritage of Wake County, North Carolina. Wake County Genealogical Society and Hunter Publishing Company, Winston-Salem, edited by Lynne Belvin and Harriette Riggs, pp. 499–500.

USFWS. 2006. Wake County Endangered Species, Threatened Species and Federal Species of Concern. United States Department of Interior.

Webster, W.D., J.F. Parnell, and W.C. Biggs. 1985. Mammals of the Carolinas, Virginia, and Maryland. The University of North Carolina Press, Chapel Hill, NC.

Figures



Prepared By

ARCADIS

Prepared For

Vicinity Map

City of Raleigh Parks and Recreation
System Integration Plans
Trott-Strickland Site, Wake County, North Carolina

Source: USGS 7.5-minute Topographic Quadrangle Map: Bayleaf, North Carolina

Figure

1

N
W E
S

Prepared By ARCADIS

Prepared For

Study Area Map

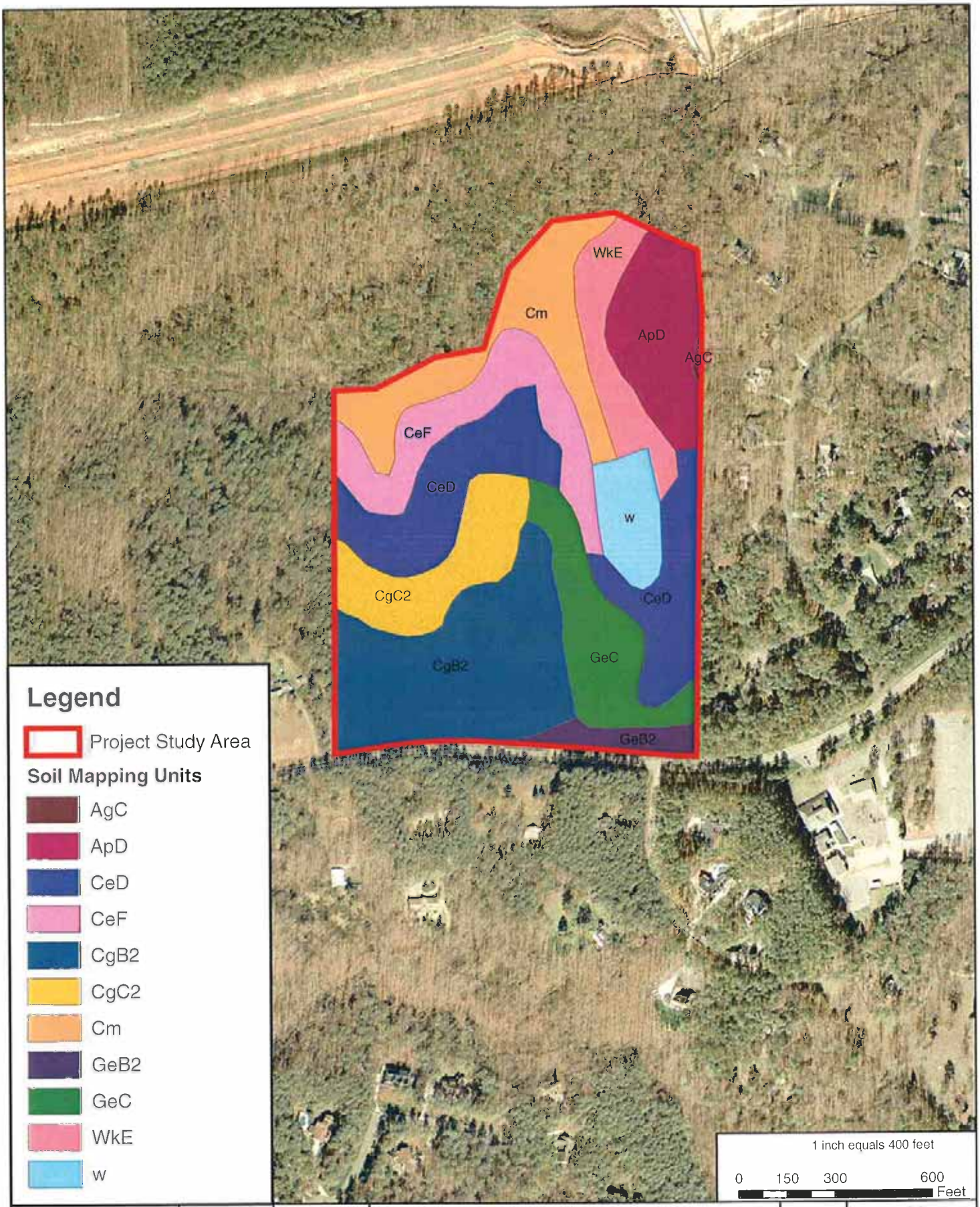
City of Raleigh Parks and Recreation System Integration Plans

Trott-Strickland Site, Wake County, North Carolina

Source: Wake County GIS Department; City of Raleigh; FEMA Flood Insurance Rate Map (FIRM)

Figure **2**

N W E S



Legend

Project Study Area

Soil Mapping Units

- AgC
- ApD
- CeD
- CeF
- CgB2
- CgC2
- Cm
- GeB2
- GeC
- WkE
- w

1 inch equals 400 feet

0 150 300 600 Feet

Prepared By ARCADIS

Prepared For

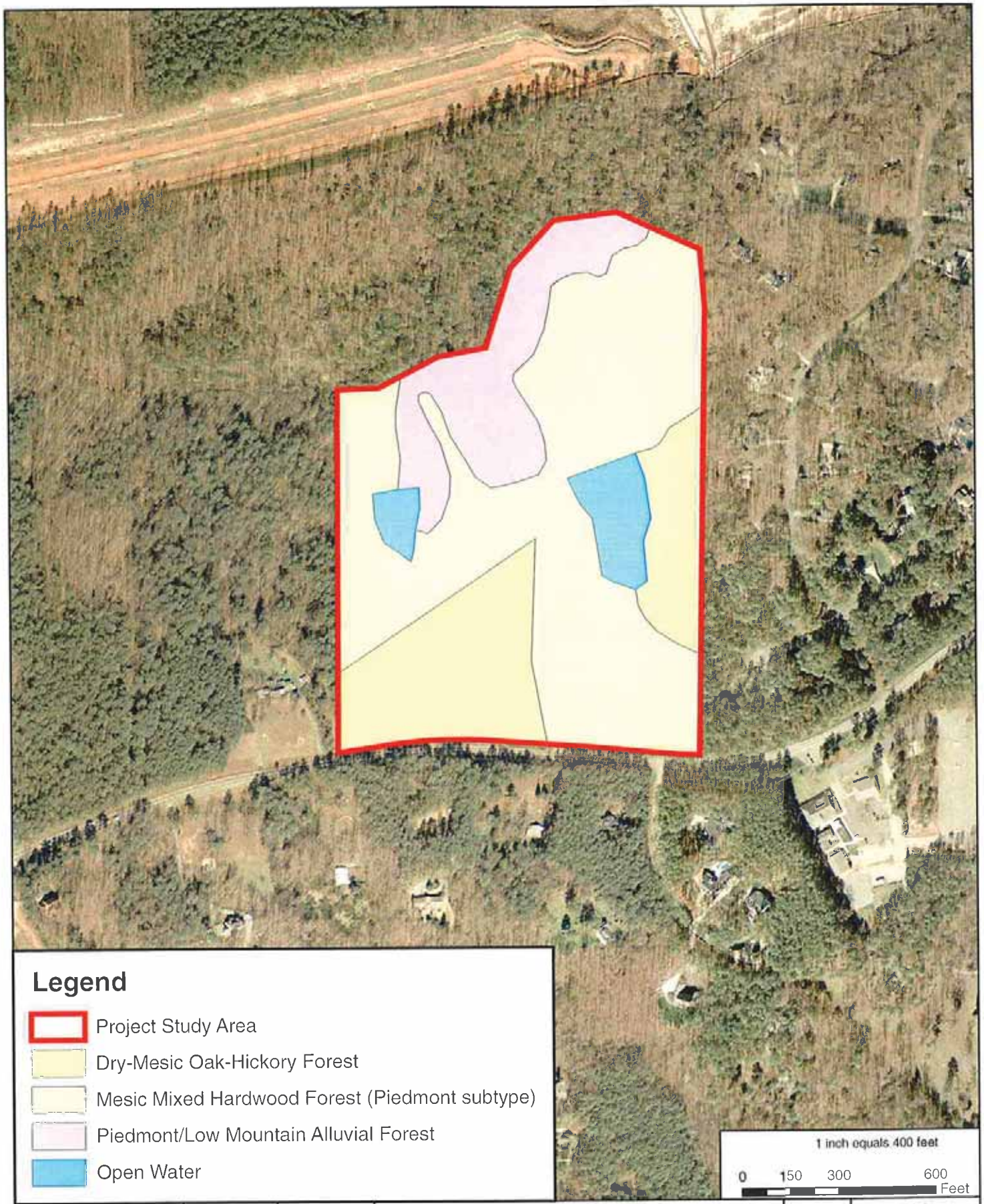
Soils Map

City of Raleigh Parks and Recreation
System Integration Plans
Trott-Strickland Site, Wake County, North Carolina

Source: Wake County GIS Department; Soil Survey of Wake County, North Carolina

Figure **3**

N W E S



Prepared By ARCADIS

Prepared For

Terrestrial Communities Map

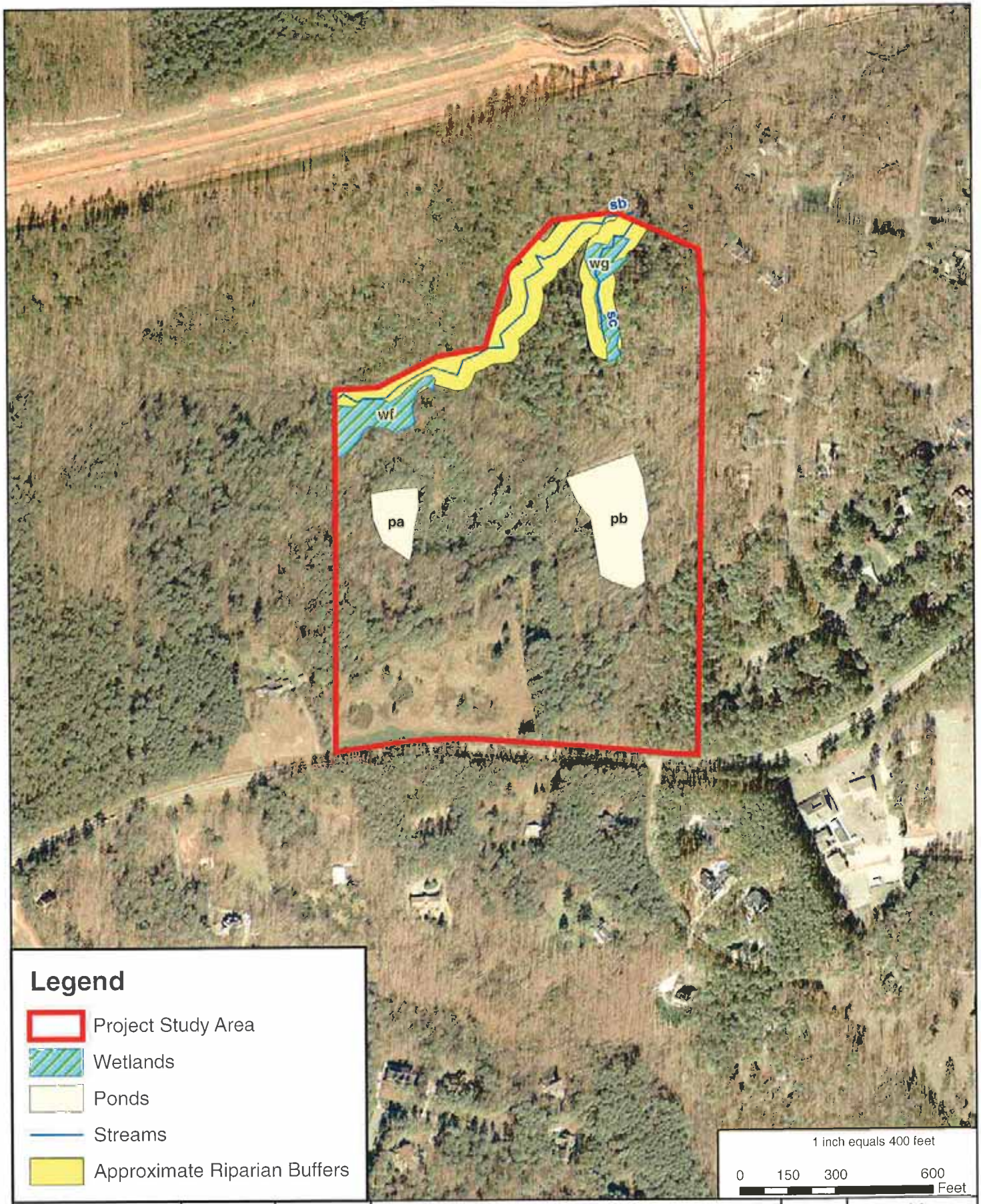
City of Raleigh Parks and Recreation
System Integration Plans
Trott-Strickland Site, Wake County, North Carolina

Source: Wake County GIS Department

Figure 4

N W E S

Figure 5. Umbrella magnolia-dominated area within Piedmont/Mountain Alluvial Forest.



Legend

- Project Study Area
- Wetlands
- Ponds
- Streams
- Approximate Riparian Buffers

1 inch equals 400 feet

0 150 300 600 Feet

Prepared By ARCADIS

Prepared For

Jurisdictional Waters

City of Raleigh Parks and Recreation
System Integration Plans
Trott-Strickland Site, Wake County, North Carolina

Source: Wake County GIS Department

Figure **6**

N W E S

Figure 7. Impoundment PA from southern bank.

Figure 8. Exposed bedrock within Lower Barton Creek. The creek flows over the rock and into a large pool.

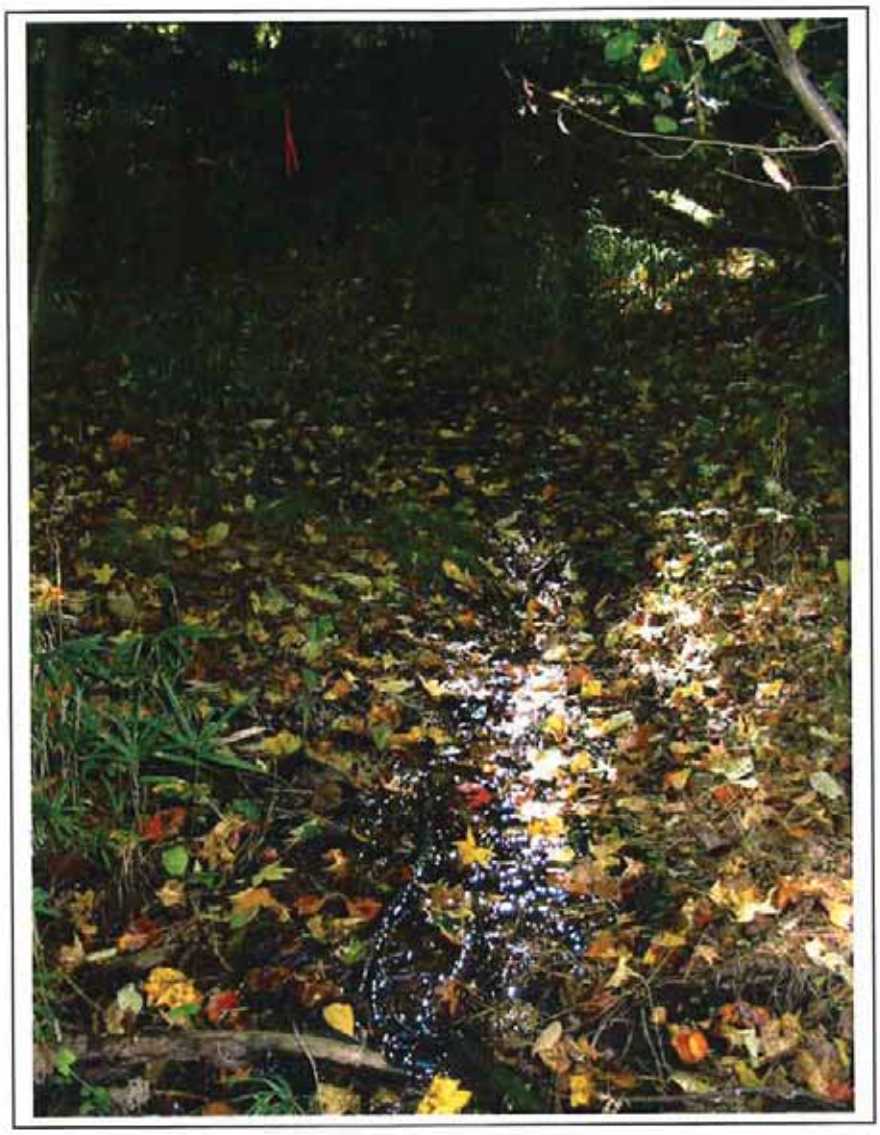


Figure 9. Headwaters of Stream SB seeping out of ground at upstream end of Wetland WG.

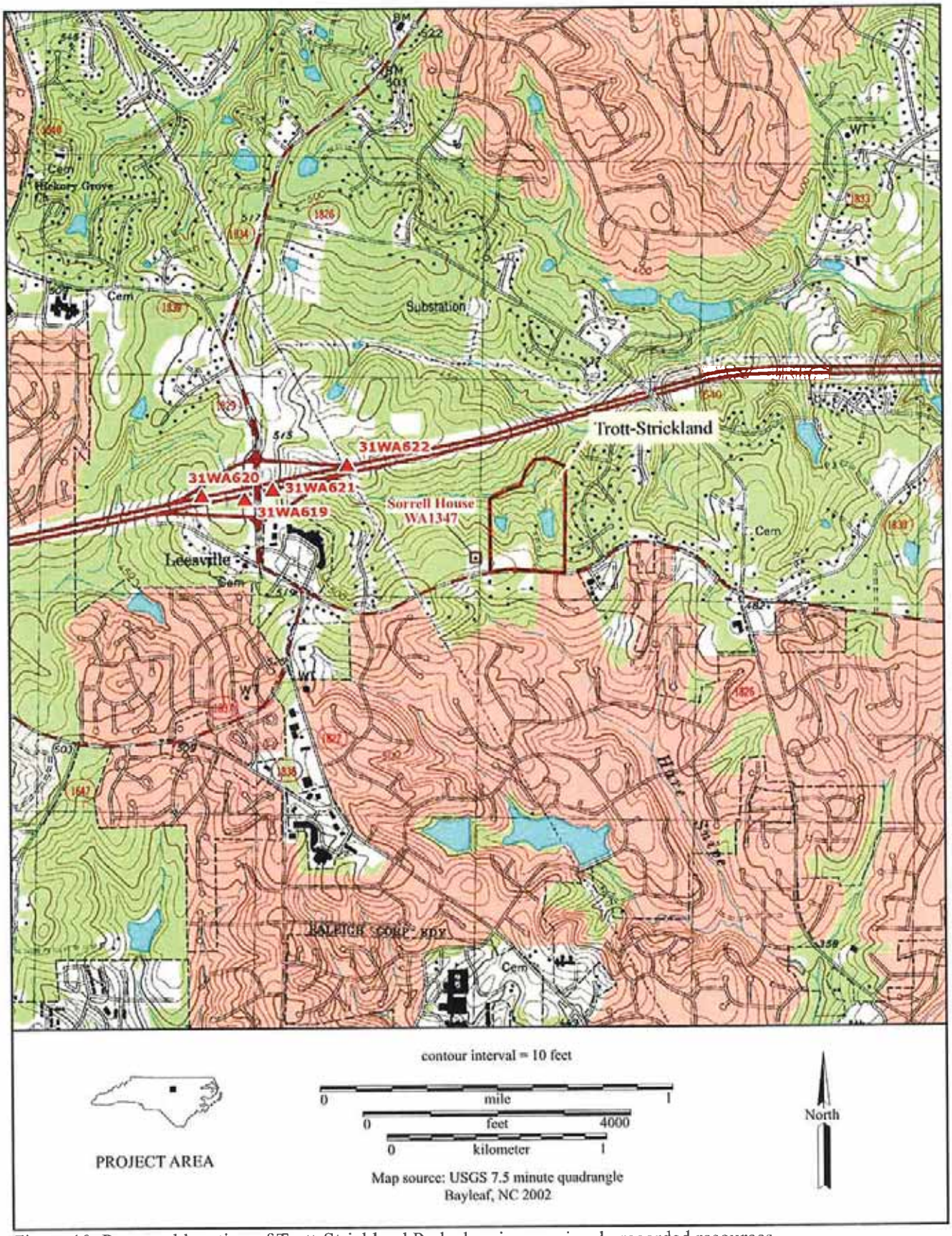


Figure 10. Proposed location of Trott-Strickland Park showing previously recorded resources.

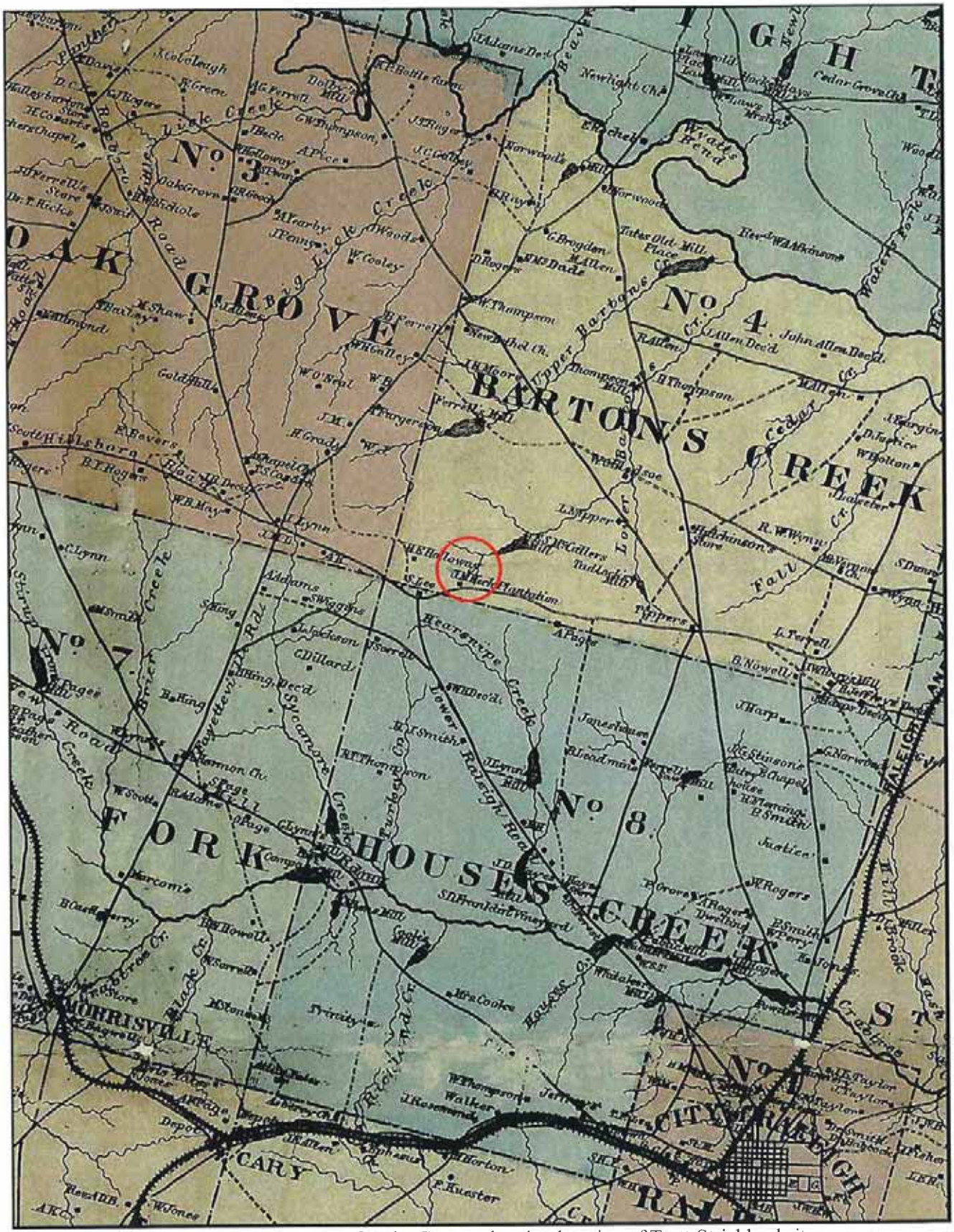


Figure 11. Portion of Bevers' 1871 Map of Wake County showing location of Trott-Strickland site.

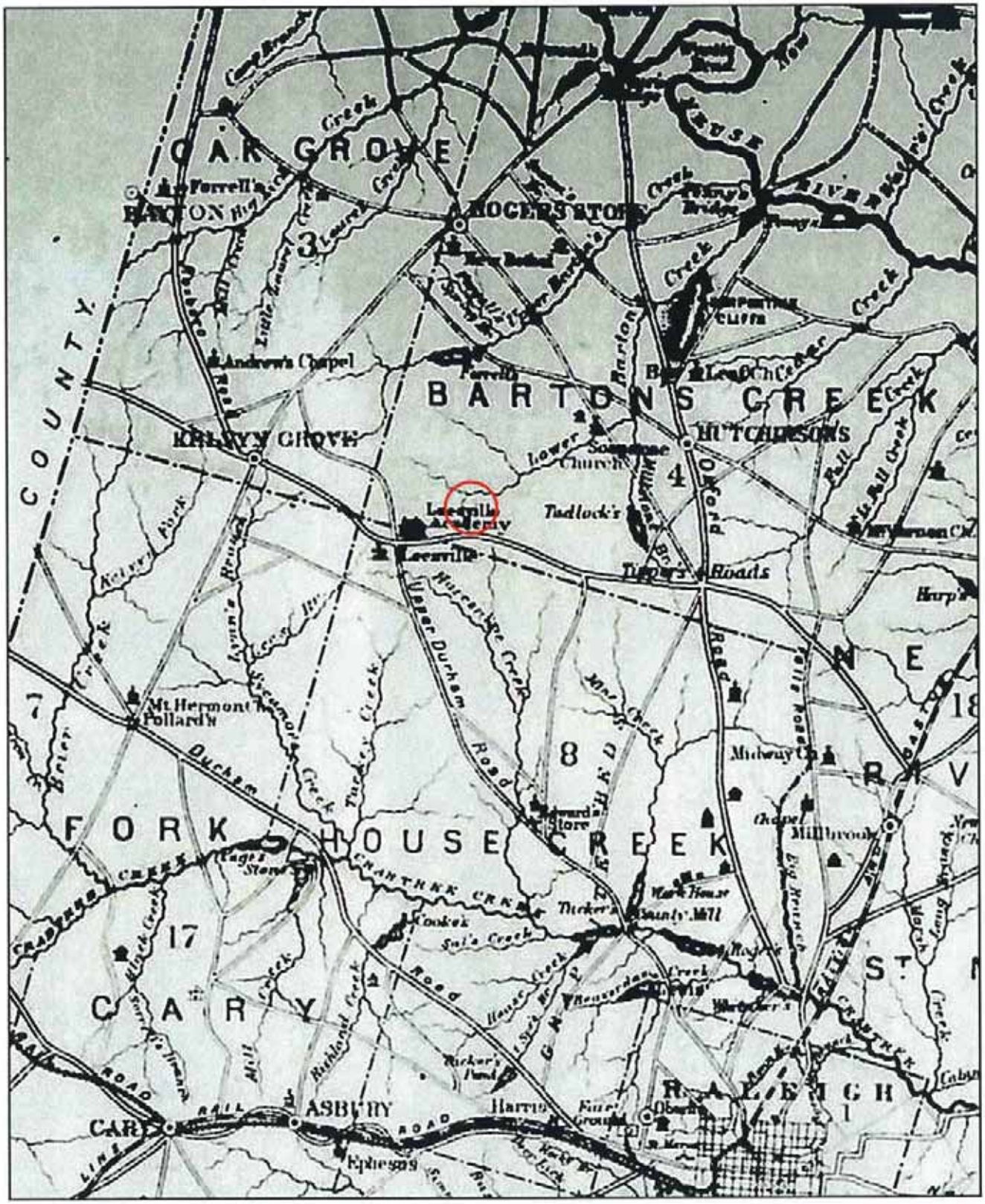


Figure 12. Portion of Schaffer's 1887 Map of Wake County showing location of Trott-Strickland site.

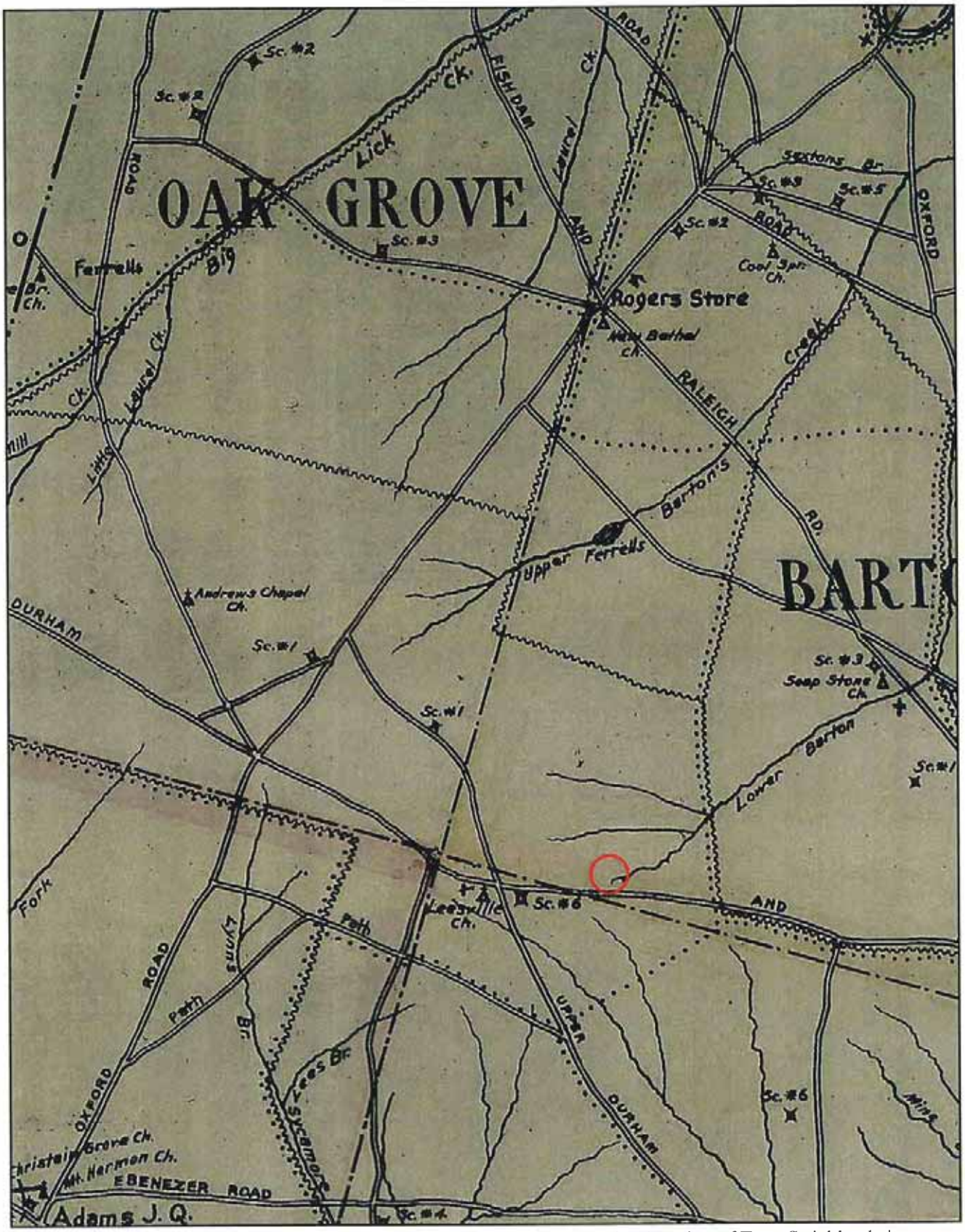


Figure 13. Portion of Clements' 1904 School Map of Wake County showing location of Trott-Strickland site.

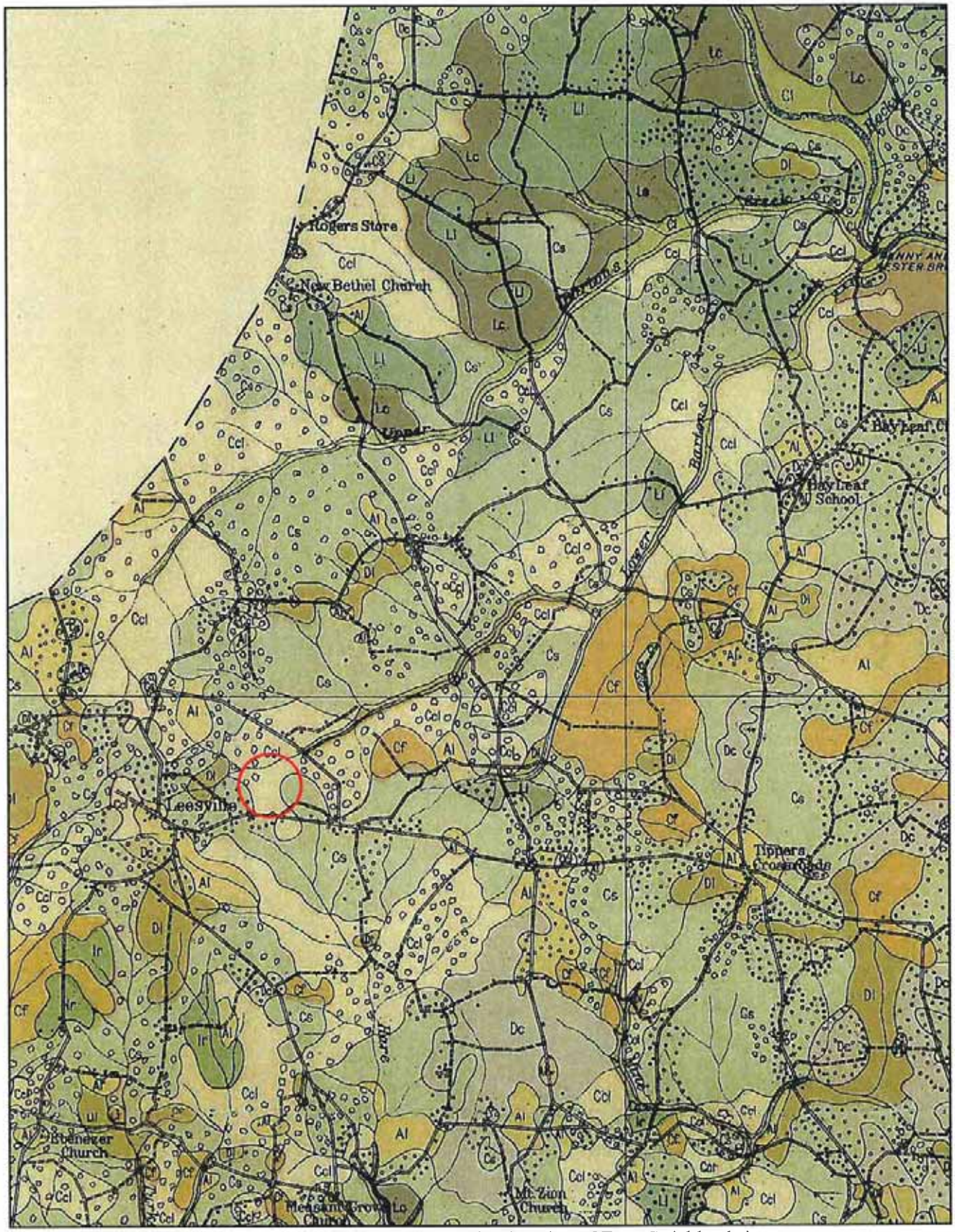


Figure 14. Portion of 1914 Wake County soils map showing location of Trott-Strickland site.

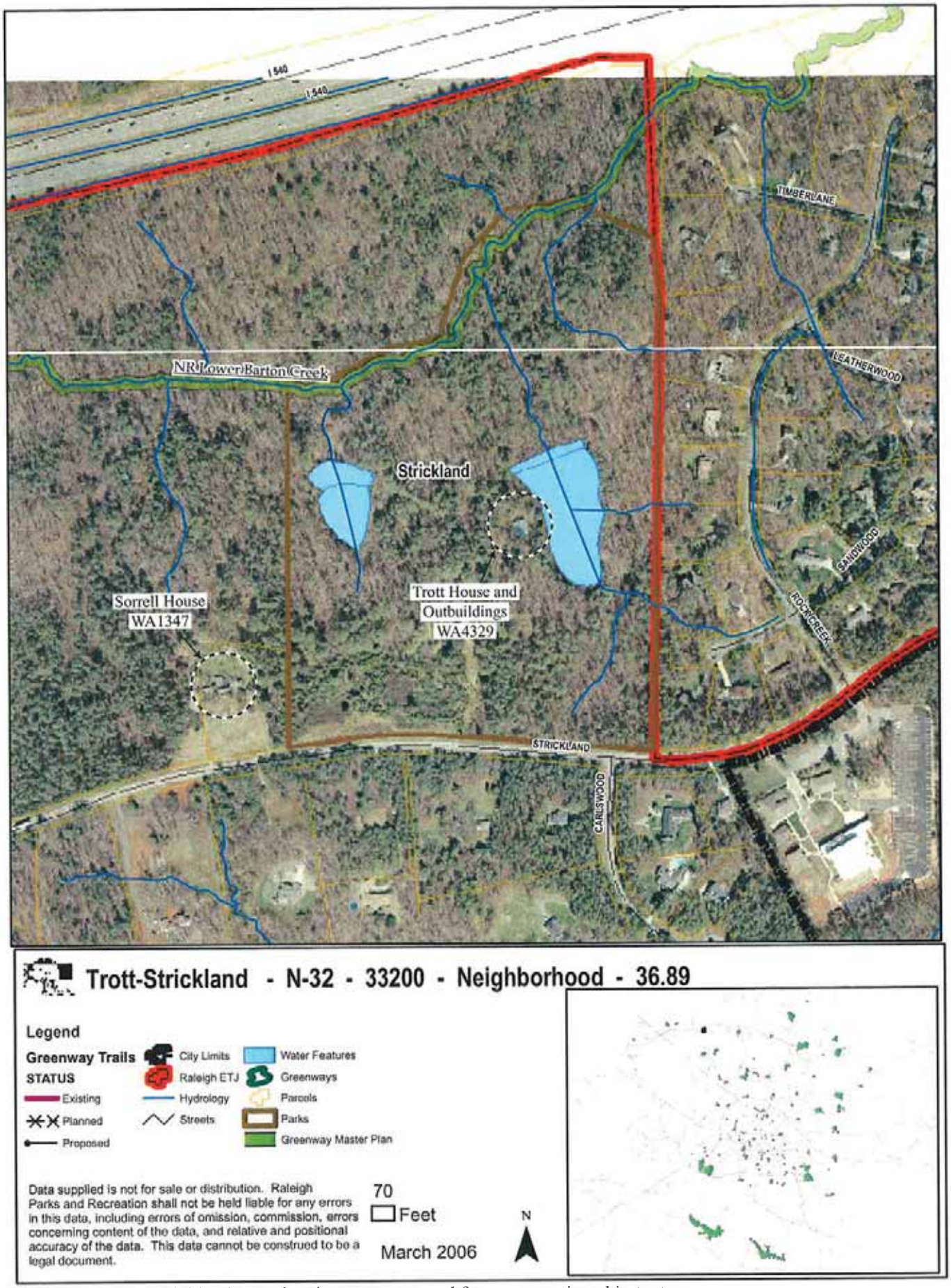


Figure 15. Trott-Strickland area showing resources and features mentioned in text.

Figure 16. View of Sorrell house adjacent to Trott-Strickland park site, facing northwest.

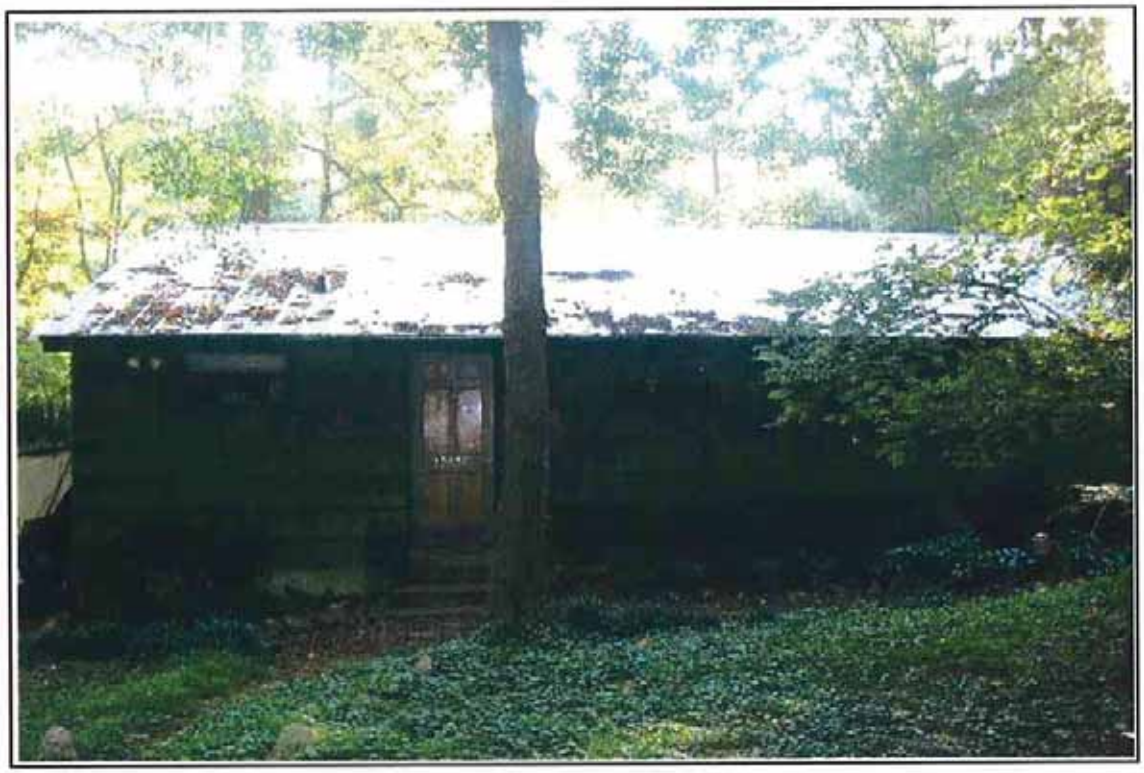


Figure 17. View of house at Trott-Strickland site, facing east.

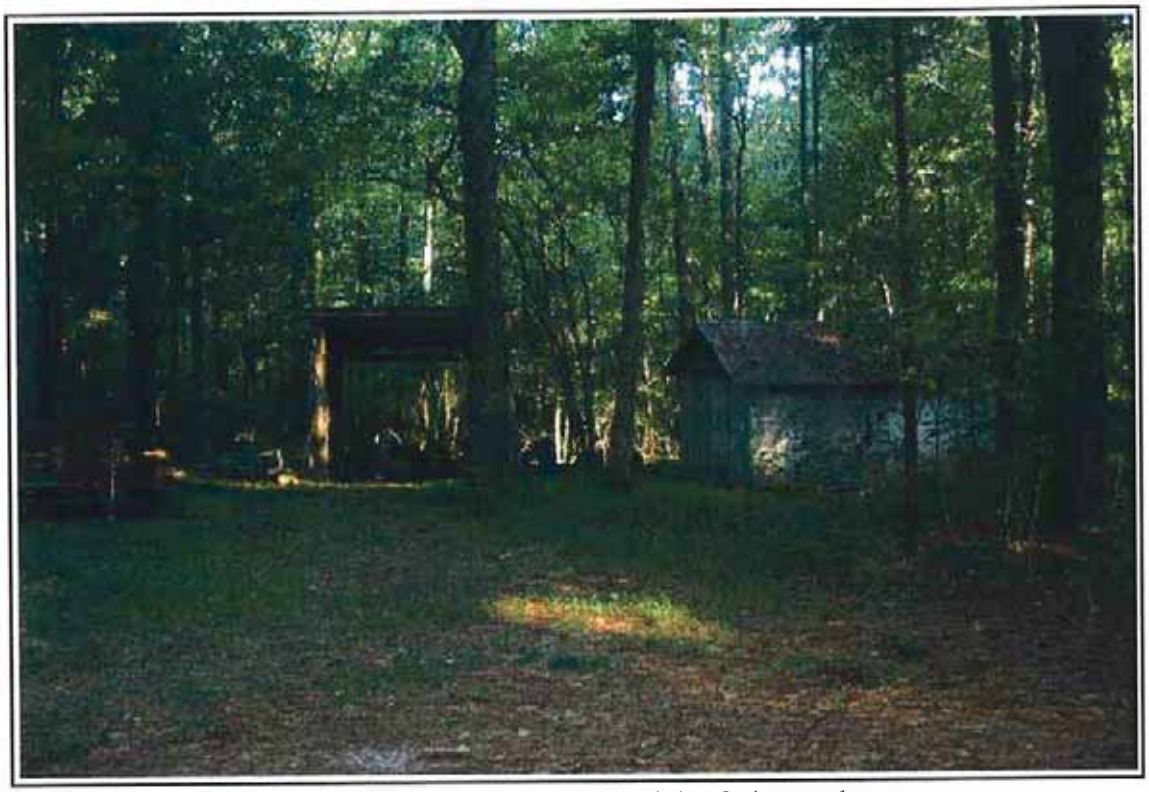


Figure 18. View of outbuilding cluster at Trott-Strickland site, facing north.

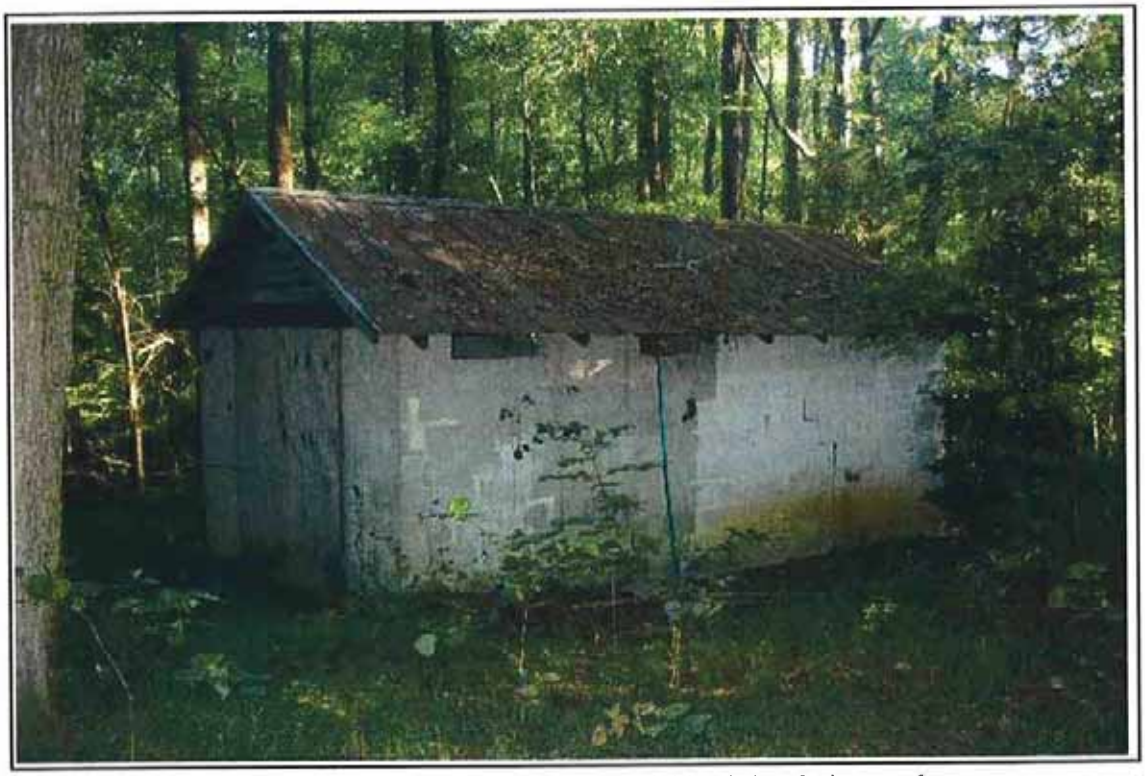


Figure 19. View of concrete block structure at Trott-Strickland site, facing northwest.

Figure 20. View of open-air equipment shelter at Trott-Strickland site, facing north.

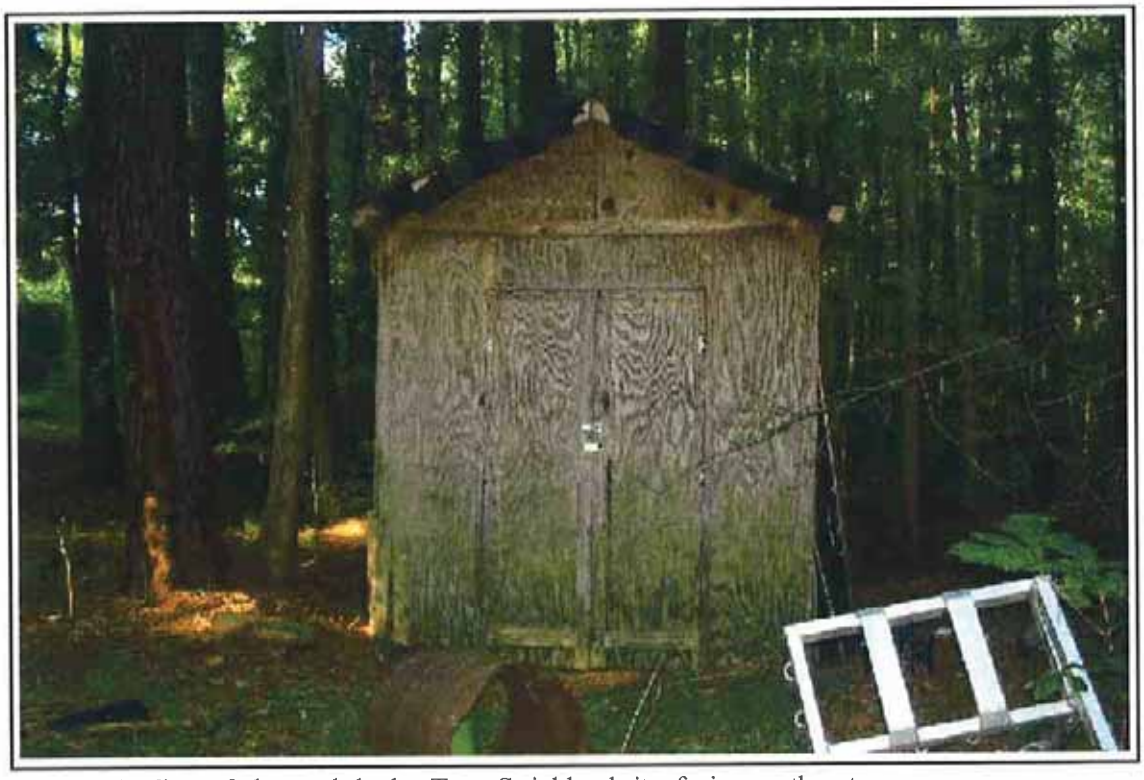


Figure 21. View of plywood shed at Trott-Strickland site, facing northeast.

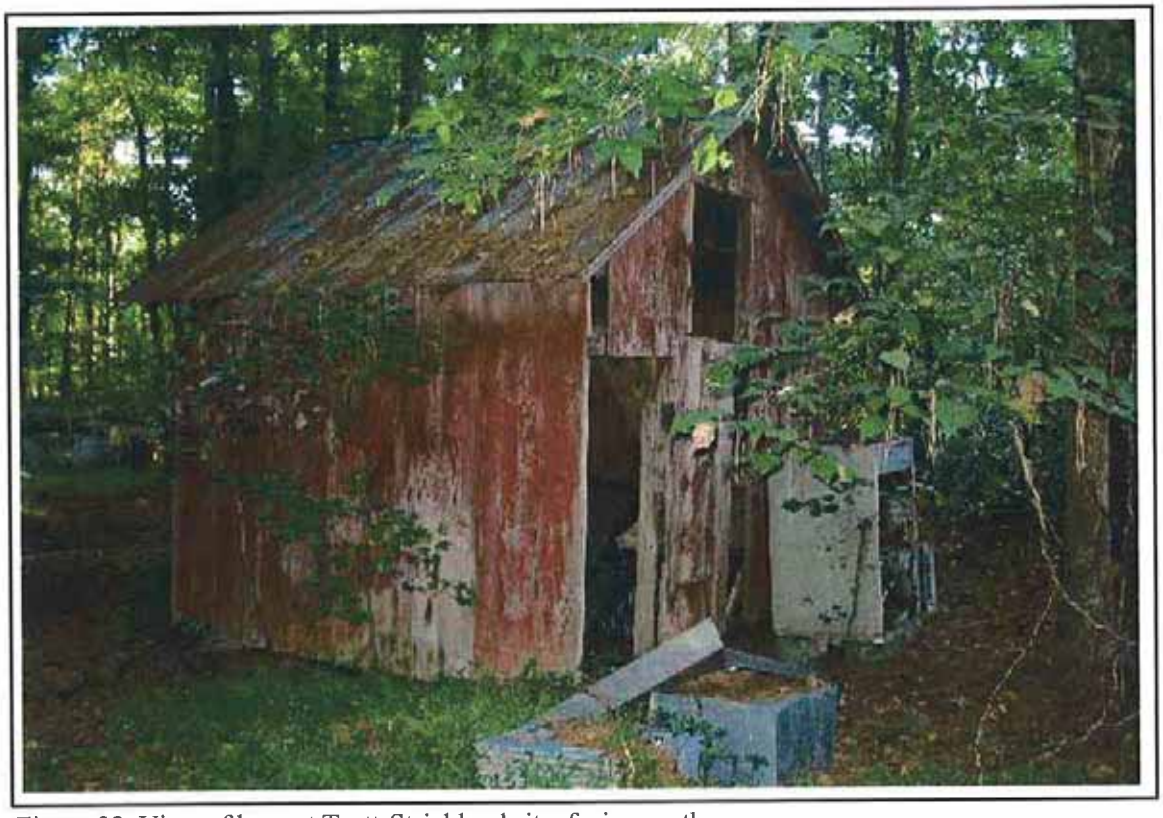


Figure 22. View of barn at Trott-Strickland site, facing north.

Appendix A

Inventory of Observed Flora and Fauna Species

Inventory of Fauna Observed within the Project Study Area

Scientific Name	Common Name
Vertebrates - Reptiles and Amphibians	
Acris crepitans	Northern cricket frog
Bufo woodhousei	Fowler's toad
Bufo americanus	American toad
Plethodon glutinosus	Slimy salamander
Terrapene carolina	Eastern box turtle
Vertebrates - Birds	
Ardea herodas	Great blue heron
Buteo lineatus	Red-shouldered hawk
Cardinalis cardinalis	Northern cardinal
Carpodacus mexicanus	House finch
Colaptes auratus	Northern flicker
Corvus brachyrhynchos	American crow
Cyanocitta cristata	Blue jay
Dryocopus pileatus	Pileated woodpecker
Helmitheros vermivorum	Worm-eating warbler
Melanerpes carolinus	Red-bellied woodpecker
Parus bicolor	Tufted titmouse
Picoides pubescens	Downy woodpecker
Poecile carolinensis	Carolina chickadee
Setophaga ruticilla	American redstart
Sitta carolinensis	White-breasted nuthatch
Sphyrapicus varius	Yellow-bellied sapsucker
Thryothorus ludovicianus	Carolina wren
Troglodytes aedon	House wren
Turdus migratorius	American robin
Wilsonia citrina	Hooded warbler
Zenaida macroura	Mourning dove
Vertebrates - Mammals	
Didelphis virginiana	Virginia opossum
Odocoileus virginianus	White-tailed deer
Procyon lotor	Raccoon
Sciurus carolinensis	Gray squirrel

Inventory of Flora Observed within the Project Study Area

Scientific Name	Common Name
Vascular Plants	
Acer rubrum	Red maple
Ailanthus altissima	Chinaberry
Arundinaria gigantea	Giant cane
Asimina triloba	Pawpaw
Athyrium felix-femina var. asplenioides	Southern ladyfern
Boehmeria cylindrica	Small-spike false nettle
Botrychium virginianum	Rattlesnake fern
Carpinus caroliniana	Ironwood
Carya glabra	Pignut hickory
Carya ovata	Shagbark hickory
Cercis canadensis	Redbud
Cornus florida	Flowering dogwood
Desmodium nudiflorum	Bare-stemmed tick-trefoil
Fagus grandifolia	American beech
Hedera helix	English ivy
Hexastylis sp.	a Heartleaf
Ilex decidua	Deciduous holly
Ilex opaca	American holly
Impatiens capensis	Touch-me-nots
Juglans nigra	Black walnut
Juniperus virginiana	Eastern redcedar
Lindera benzoin	Spicebush
Liquidambar styraciflua	Sweetgum
Liriodendron tulipifera	Tulip poplar
Lycopodium sp.	Running-cedar
Magnolia tripetala	Umbrella magnolia
Microstegium vimineum	Japanese stiltgrass
Morus rubra	Red mulberry
Nyssa sylvatica	Black gum
Oxydendrum arboreum	Sourwood
Pinus echinata	Shortleaf pine
Pinus strobus	White pine
Pinus taeda	Loblolly pine
Polystichum acrostichoides	Christmas fern
Prunus serotina	Black cherry
Quercus alba	White oak
Quercus falcata	Southern red oak
Quercus pagoda	Cherrybark oak
Quercus rubra	Northern red oak
Sassafras albidum	Sassafras
Saururus cernuus	Lizard's tail
Smilax rotundifolia	Greenbrier
Spiranthes sp.	Ladies'-tresses

Inventory of Flora Observed within the Project Study Area

Scientific Name	Common Name
Vascular Plants	
Tipularia discolor	Cranefly orchid
Toxicodendron radicans	Poison ivy
Tsuga canadensis	Eastern hemlock
Ulmus americana	American elm
Ulmus rubra	Slippery elm
Vinca sp.	Periwinkle
Vitis rotundifolia	Muscadine grape
Woodwardia areolata	Netted-chain fern

Appendix B

Stream Data Forms

USACE AID#_____ DWQ #_____ Site # SB (indicate on attached map)

STREAM QUALITY ASSESSMENT WORKSHEET

Provide the following information for the stream reach under assessment:

1. Applicant's name: City of Raleigh Parks and Rec. 2. Evaluator's name: Hal Bain, ~~not~~ Lindsey Riddick
3. Date of evaluation: 9/26/06 4. Time of evaluation: 12:30 p.m.
5. Name of stream: Lower Barton's Creek 6. River basin: Neuse River
7. Approximate drainage area: 242 acres 8. Stream order: 1st
9. Length of reach evaluated: 1300 ft 10. County: Wake
11. Site coordinates (if known): prefer in decimal degrees. 12. Subdivision name (if any): NONE
Latitude (ex. 34.872312): 35.907047° Longitude (ex. -77.556611): 78.708787°
Method location determined (circle): (GPS) Topo Sheet Ortho (Aerial) Photo/GIS Other GIS Other_____
13. Location of reach under evaluation (note nearby roads and landmarks and attach map identifying stream(s) location):
North of Strickland Rd., South of I-540
14. Proposed channel work (if any): None proposed
15. Recent weather conditions: Mid-afternoon storms (9/24/06)
16. Site conditions at time of visit:
17. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat
___Trout Waters ___Outstanding Resource Waters X Nutrient Sensitive Waters ___Water Supply Watershed ___(I-IV)
18. Is there a pond or lake located upstream of the evaluation point? YES (NO) If yes, estimate the water surface area:_____
19. Does channel appear on USGS quad map? (YES) NO 20. Does channel appear on USDA Soil Survey? (YES) NO
21. Estimated watershed land use: 10 % Residential ___% Commercial ___% Industrial ___% Agricultural
80 % Forested 10 % Cleared / Logged ___% Other (_____)
22. Bankfull width: 10-16 Ft 23. Bank height (from bed to top of bank): 2-4 ft.
24. Channel slope down center of stream: ___Flat (0 to 2%) ✓Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
25. Channel sinuosity: ___Straight ___Occasional bends ✓Frequent meander ___Very sinuous ___Braided channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 82 **Comments:** Flood plain is in use. well stratified bottom land forest is present. strong evidence (depositional bars) of multiple size substrate being transported. Newly placed sewer? line on west side of property, adjacent to the north side of stream valley.

Evaluator's Signature Hal Bain **Date** 9/26/06

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 06/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	4
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	5
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	4
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	4
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	4
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	4
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	3
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	3
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	4
	10	**Sediment input** (extensive deposition = 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	1
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	4
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	2
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	2
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	4
	15	**Impact by agriculture, livestock, or timber production** (substantial impact = 0; no evidence = max points)	0 – 5	0 – 4	0 – 5	4
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	5
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	5
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	5
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	3
BIOLOGY	20	**Presence of stream invertebrates** (see page 4) (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	3
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	2
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	2
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	5
		Total Points Possible	100	100	100	
		TOTAL SCORE (also enter on first page)				82

* These characteristics are not assessed in coastal streams.

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1 SB

Date: 9/26/06	Project: Trott-Strickland	Latitude:	
Evaluator: Stallsmith, Lindsey, Riddick	Site: City of Raleigh Parks and Rec Evaluation	Longitude:	
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* 47.75	County: Wake	Other *e.g. Quad Name:* Bayleaf, NC	

A. Geomorphology (Subtotal = 27.5)	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	2	(3)
2. Sinuosity	0	1	2	(3)
3. In-channel structure: riffle-pool sequence	0	1	2	(3)
4. Soil texture or stream substrate sorting	0	1	2	(3)
5. Active/relic floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	2	(3)
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	0	1	(2)	3
9[a] Natural levees	0	1	(2)	3
10. Headcuts	(0)	1	2	3
11. Grade controls	0	0.5	(1)	1.5
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = 0		(Yes = 3)	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 9.5)				
14. Groundwater flow/discharge	0	1	(2)	3
15. Water in channel and > 48 hrs since rain, or Water in channel – dry or growing season	0	1	2	(3)
16. Leaflitter	1.5	(1)	0.5	0
17. Sediment on plants or debris	0	(0.5)	1	1.5
18. Organic debris lines or piles (Wrack lines)	0	0.5	1	(1.5)
19. Hydric soils (redoximorphic features) present?	No = 0		(Yes = 1.5)	

C. Biology (Subtotal = 10.75)				
20[b]. Fibrous roots in channel	(3)	2	1	0
21[b]. Rooted plants in channel	3	(2)	1	0
22. Crayfish	0	0.5	1	(1.5)
23. Bivalves	(0)	1	2	3
24. Fish	0	(0.5)	1	1.5
25. Amphibians	0	0.5	(1)	1.5
26. Macrobenthos (note diversity and abundance)	0	0.5	(1)	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	0	0.5	(1)	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; (FACW = 0.75); OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

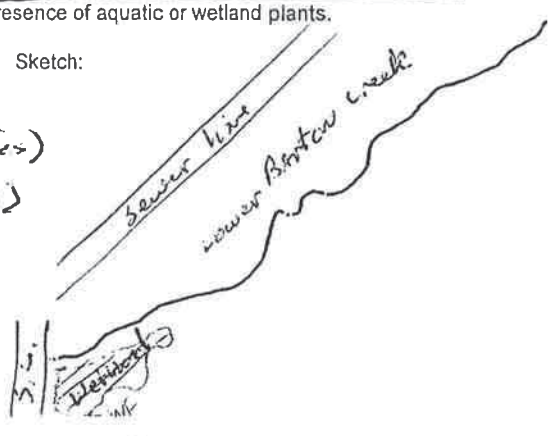
Notes: (use back side of this form for additional notes.)

Macro benthos

many crayfish – caddisfly (at least one species)

Four winter perlaids, stonefly (at least one species)

Sketch:



USACE AID#_____ DWQ #_____ Site # SC (indicate on attached map)

STREAM QUALITY ASSESSMENT WORKSHEET

Provide the following information for the stream reach under assessment:

1. Applicant's name: City of Raleigh Parks & Rec
2. Evaluator's name: Lindsey Riddick, Hal Bain
3. Date of evaluation: 9/27/06
4. Time of evaluation: 12:45 pm
5. Name of stream: UT to Lower Barton Creek
6. River basin: Neuse
7. Approximate drainage area: 32 acres
8. Stream order: 1st
9. Length of reach evaluated: 460ft
10. County: Wake
11. Site coordinates (if known): prefer in decimal degrees.
12. Subdivision name (if any): NONE

Latitude (ex. 34.872312): 35.907057° Longitude (ex. -77.556611): 78.708305°

Method location determined (circle): (GPS) Topo Sheet Ortho (Aerial) Photo/GIS Other GIS Other_____

13. Location of reach under evaluation (note nearby roads and landmarks and attach map identifying stream(s) location):
North of Strickland Rd, South of I-540, Raleigh, NC
14. Proposed channel work (if any): None
15. Recent weather conditions: mid-afternoon storms (9/24), highs in mid 70's
16. Site conditions at time of visit:
17. Identify any special waterway classifications known: ___Section 10 ___Tidal Waters ___Essential Fisheries Habitat ___Trout Waters ___Outstanding Resource Waters X Nutrient Sensitive Waters ___Water Supply Watershed ___(I-IV)
18. Is there a pond or lake located upstream of the evaluation point? YES (NO) If yes, estimate the water surface area:_____
19. Does channel appear on USGS quad map? (YES) NO
20. Does channel appear on USDA Soil Survey? YES NO
21. Estimated watershed land use: ___% Residential ___% Commercial ___% Industrial ___% Agricultural 100% Forested ___% Cleared / Logged ___% Other (_____)
22. Bankfull width: 3'
23. Bank height (from bed to top of bank): 8"-12"
24. Channel slope down center of stream: ___Flat (0 to 2%) ✓Gentle (2 to 4%) ___Moderate (4 to 10%) ___Steep (>10%)
25. Channel sinuosity: ___Straight ✓Occasional bends ___Frequent meander ___Very sinuous ___Braided channel

Instructions for completion of worksheet (located on page 2): Begin by determining the most appropriate ecoregion based on location, terrain, vegetation, stream classification, etc. Every characteristic must be scored using the same ecoregion. Assign points to each characteristic within the range shown for the ecoregion. Page 3 provides a brief description of how to review the characteristics identified in the worksheet. Scores should reflect an overall assessment of the stream reach under evaluation. If a characteristic cannot be evaluated due to site or weather conditions, enter 0 in the scoring box and provide an explanation in the comment section. Where there are obvious changes in the character of a stream under review (e.g., the stream flows from a pasture into a forest), the stream may be divided into smaller reaches that display more continuity, and a separate form used to evaluate each reach. The total score assigned to a stream reach must range between 0 and 100, with a score of 100 representing a stream of the highest quality.

Total Score (from reverse): 77 **Comments:** 1st order stream originating from spring and associated wetlands at top of slope

Evaluator's Signature _____ **Date** 9/27/06

This channel evaluation form is intended to be used only as a guide to assist landowners and environmental professionals in gathering the data required by the United States Army Corps of Engineers to make a preliminary assessment of stream quality. The total score resulting from the completion of this form is subject to USACE approval and does not imply a particular mitigation ratio or requirement. Form subject to change – version 06/03. To Comment, please call 919-876-8441 x 26.

STREAM QUALITY ASSESSMENT WORKSHEET

	#	CHARACTERISTICS	ECOREGION POINT RANGE			SCORE
			Coastal	Piedmont	Mountain	
PHYSICAL	1	**Presence of flow / persistent pools in stream** (no flow or saturation = 0; strong flow = max points)	0 – 5	0 – 4	0 – 5	2
	2	**Evidence of past human alteration** (extensive alteration = 0; no alteration = max points)	0 – 6	0 – 5	0 – 5	5
	3	**Riparian zone** (no buffer = 0; contiguous, wide buffer = max points)	0 – 6	0 – 4	0 – 5	4
	4	**Evidence of nutrient or chemical discharges** (extensive discharges = 0; no discharges = max points)	0 – 5	0 – 4	0 – 4	4
	5	**Groundwater discharge** (no discharge = 0; springs, seeps, wetlands, etc. = max points)	0 – 3	0 – 4	0 – 4	4
	6	**Presence of adjacent floodplain** (no floodplain = 0; extensive floodplain = max points)	0 – 4	0 – 4	0 – 2	3
	7	**Entrenchment / floodplain access** (deeply entrenched = 0; frequent flooding = max points)	0 – 5	0 – 4	0 – 2	2
	8	**Presence of adjacent wetlands** (no wetlands = 0; large adjacent wetlands = max points)	0 – 6	0 – 4	0 – 2	4
	9	**Channel sinuosity** (extensive channelization = 0; natural meander = max points)	0 – 5	0 – 4	0 – 3	4
	10	**Sediment input** (extensive deposition = 0; little or no sediment = max points)	0 – 5	0 – 4	0 – 4	3
	11	**Size & diversity of channel bed substrate** (fine, homogenous = 0; large, diverse sizes = max points)	NA*	0 – 4	0 – 5	#2
STABILITY	12	**Evidence of channel incision or widening** (deeply incised = 0; stable bed & banks = max points)	0 – 5	0 – 4	0 – 5	4
	13	**Presence of major bank failures** (severe erosion = 0; no erosion, stable banks = max points)	0 – 5	0 – 5	0 – 5	5
	14	**Root depth and density on banks** (no visible roots = 0; dense roots throughout = max points)	0 – 3	0 – 4	0 – 5	3
	15	**Impact by agriculture, livestock, or timber production** (substantial impact = 0; no evidence = max points)	0 – 5	0 – 4	0 – 5	4
HABITAT	16	**Presence of riffle-pool/ripple-pool complexes** (no riffles/ripples or pools = 0; well-developed = max points)	0 – 3	0 – 5	0 – 6	3
	17	**Habitat complexity** (little or no habitat = 0; frequent, varied habitats = max points)	0 – 6	0 – 6	0 – 6	3
	18	**Canopy coverage over streambed** (no shading vegetation = 0; continuous canopy = max points)	0 – 5	0 – 5	0 – 5	5
	19	**Substrate embeddedness** (deeply embedded = 0; loose structure = max)	NA*	0 – 4	0 – 4	2
BIOLOGY	20	**Presence of stream invertebrates** (see page 4) (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 5	0 – 5	3
	21	**Presence of amphibians** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	3
	22	**Presence of fish** (no evidence = 0; common, numerous types = max points)	0 – 4	0 – 4	0 – 4	0
	23	**Evidence of wildlife use** (no evidence = 0; abundant evidence = max points)	0 – 6	0 – 5	0 – 5	5
		Total Points Possible	100	100	100	
		TOTAL SCORE (also enter on first page)				77

* These characteristics are not assessed in coastal streams.

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1 SC

Date: 9/27/06	Project: Trott/Strickland	Latitude:
Evaluator: Lindsey R. Addick	Site: City of Raleigh Parks & Rec Property	Longitude:
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* 28.5	County: Wake	Other *e.g. Quad Name:* Bayleaf, NC

A. Geomorphology (Subtotal = 15)	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	(2)	3
2. Sinuosity	0	1	(2)	3
3. In-channel structure: riffle-pool sequence	0	(1)	2	3
4. Soil texture or stream substrate sorting	0	(1)	2	3
5. Active/relic floodplain	0	1	(2)	3
6. Depositional bars or benches	0	1	(2)	3
7. Braided channel	0	1	(2)	3
8. Recent alluvial deposits	0	(1)	2	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	(0)	1	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = (0)		Yes = 3	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 10)				
14. Groundwater flow/discharge	0	1	2	(3)
15. Water in channel and > 48 hrs since rain, or Water in channel -- dry or growing season	0	1	2	(3)
16. Leaflitter	1.5	(1)	0.5	0
17. Sediment on plants or debris	0	(0.5)	1	1.5
18. Organic debris lines or piles (Wrack lines)	0	0.5	(1)	1.5
19. Hydric soils (redoximorphic features) present?	No = 0		Yes = (1.5)	

C. Biology (Subtotal = 3.5)				
20[b]. Fibrous roots in channel	3	2	(1)	0
21[b]. Rooted plants in channel	3	2	1	(0)
22. Crayfish	0	(0.5)	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	(0)	0.5	1	1.5
25. Amphibians	0	0.5	(1)	1.5
26. Macrobenthos (note diversity and abundance)	0	0.5	(1)	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

1st order stream originating from spring
UT to Lower Barton Creek

Sketch:

Appendix C

Wetland Data Forms

DATA FORM - ROUTINE WETLAND DETERMINATION

Project/Site: *Trott-Strickland Park Site*
Applicant/Owner: *City of Raleigh*
Investigator(s): *H Bain, L Riddick*
Do Normal Circumstances exist on the site? **Yes** No
Is the site significantly disturbed (Atypical Situation)? Yes **No**
Is this area a potential Problem Area? Yes **No**

Date: *September 26, 2006*
County: *Wake*
State: *NC*
Community ID: *WF*
Transect ID: *WF-06*
Plot ID: *wetland*

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. *Liquidambar styraciflua*	*Canopy*	*FAC+*
2. *Lindera benzoin*	*Shrub*	*FACW*
3. *Liquidambar styraciflua*	*Shrub*	*FAC+*
4. *Saururus cernuus*	*Herb*	*OBL*
5. *Boehmeria cylindrica*	*Herb*	*FACW+*
6. *Impatiens capensis*	*Herb*	*FACW*
7. *Microstegium vimineum*	*Herb*	*FAC+*
8. *Arundinaria gigantea*	*Herb*	*FACW*
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): *100%*

Remarks:
dense to moderate herbaceous cover
shrub layer dense in some areas, absent in other areas within system
broken canopy
hydrophytic vegetation dominates

HYDROLOGY

___ Recorded Data (Describe in Remarks)
___ Stream, Lake, or tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)
Depth to Free Water in Pit: 8 (in.)
Depth to Saturated Soil: 0 (in.)

Primary Indicators:
___ Inundated
X Saturated in Upper 12 Inches
X Water Marks
X Drift Lines
X Sediment Deposits
X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
X Oxidized Root Channels in Upper 12 Inches
X Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:
floodplain of Lower Barton Creek (south side) at the base of steep north-facing slope
receives regular overbank flooding
saturated to the surface

SOILS

Map Unit Name (Series & Phase): Cecil sandy loam, 15-45% slopes
Taxonomy (Subgroup): Typic Hapludults
Drainage Class: *Well Drained*
Confirm Mapped Type? Yes **No**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	*A*	*10YR 3/1*	7.5YR 3/4		*silt loam*

HYDRIC INDICATORS

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
X Gleyed or Low-Chroma Colors

___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
steep north-facing slope
soils do not exhibit hydric characteristics

Hydrophytic Vegetation Present? **Yes** No
Wetland Hydrology Present? **Yes** No
Hydric Soils Present? **Yes** No

Is this Sampling Point Within a Wetland? **Yes** No

Remarks:
wetland is in a floodplain location that receives overbank and surficial runoff hydrologic input
location contains all three wetland indicators

DATA FORM - ROUTINE WETLAND DETERMINATION

Project/Site: *Trott-Strickland Park Site*
Applicant/Owner: *City of Raleigh*
Investigator(s): *H Bain, L Riddick*
Do Normal Circumstances exist on the site? **Yes** No
Is the site significantly disturbed (Atypical Situation)? Yes **No**
Is this area a potential Problem Area? Yes **No**

Date: *September 26, 2006*
County: *Wake*
State: *NC*
Community ID: *WF*
Transect ID: *WF-06*
Plot ID: *upland*

VEGETATION

	Dominant Plant Species	Stratum	Indicator
1.	*Quercus alba*	*Canopy*	*FACU*
2.	*Fagus grandifolia*	*Canopy*	*FACU*
3.	*Liriodendron tulipifera*	*Canopy*	*FAC*
4.	*Oxydendrum arboreum*	*Canopy*	*NI*
5.	*Pinus taeda*	*Canopy*	*FAC*
6.	*Acer rubrum*	*Subcanopy*	*FAC*
7.	*Liquidambar styraciflua*	*Subcanopy*	*FAC+*
8.	*Oxydendrum arboreum*	*Subcanopy*	*NI*
9.	*Cornus florida*	*Subcanopy*	*FACU*
10.	*Magnolia tripetala*	*Shrub*	*FAC*
11.	*Vitis rotundifolia*	*Vine*	*FAC*
12.	*Toxicodendron radicans*	*Vine*	*FAC*
13.	*Hexastylis sp.*	*Vine*	-
14.	*Polystichum acrostichoia*	*Herb*	*FAC*
15.			
16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): *73%*

Remarks:
steep north-facing slope
well developed strata within community
sparse to moderate herbaceous layer density
12 - Toxicodendron radicans
14 - Polystichum acrostichoides

HYDROLOGY

___ Recorded Data (Describe in Remarks)
___ Stream, Lake, or tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water: -___ (in.)
Depth to Free Water in Pit: >12 (in.)
Depth to Saturated Soil: >12 (in.)

Remarks:
steep north-facing slope
no hydrologic indicators observed

Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

SOILS

Map Unit Name (Series & Phase): Cecil sandy loam, 15-45% slopes
Taxonomy (Subgroup): Typic Hapludults
Drainage Class: *Well Drained*
Confirm Mapped Type? Yes **No**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4	*A*	*7.5YR 3/4*	-	-	*clay loam*
4-16	*B*	*5YR 4/6*	-	-	*clay loam*

HYDRIC INDICATORS

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors

___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
steep north-facing slope
soils do not exhibit hydric characteristics

Hydrophytic Vegetation Present? **Yes** No
Wetland Hydrology Present? Yes **No**
Hydric Soils Present? Yes **No**

Is this Sampling Point Within a Wetland? Yes **No**

Remarks:
data point is not located within a wetland

WETLAND RATING WORKSHEET (4th VERSION)

Project Name:	*Trott-Strickland Park Site*	County:	Wake
Nearest Road:	*Strickland Road*	Date:	*9/26/2006*
Wetland Area (ac):	*2-3 acres*	Wetland Width (ft):	*150-200 feet*
Name of Evaluator(s):	*H Bain, L Riddick*	Wetland ID:	*WF*

WETLAND LOCATION:

___ on sound or estuary, pond or lake
X on perennial stream
___ on intermittent stream
___ within interstream divide
___ other ___

ADJACENT LAND USE:

(within 1/2 mile upstream, upslope or radius)

X	forested/natural vegetation	80 %
X	agricultural/ urbanized	15 %
X	impervious surface	5 %

Adjacent Special Natural Areas

SOILS:

Soil Series: *Cecil sandy loam*

___ predominantly organic (humus, muck or peat)
X predominantly mineral (non-sandy)
___ predominantly sandy

DOMINANT VEGETATION:

1 *Liquidambar styraciflua*
2 *Lindera benzoin*
3 *Saururus cernuus*
4 *Boehmeria cylindrica*

HYDRAULIC FACTORS:

X freshwater
___ brackish
___ steep topography
___ ditched or channelized
X total wetland width >= 100 feet

FLOODING AND WETNESS:

___ semipermanently to permenently flooded or inundated
___ seasonally flooded or inundated
X intermittently flooded or temporary surface water
___ no evidence of flooding or surface water

WETLAND TYPE: (select one)*

X Bottomland Hardwood Forest
___ Swamp Forest
___ Carolina Bay
___ Pocosin
___ Pine Savannah
___ Freshwater Marsh
___ Bog/Fen
___ Headwater Forest
___ Bog Forest
___ Ephemeral Wetland
X Other: *floodplain bounded by steep north-facing slope*

* The rating system cannot be applied to salt and brackish marshes or stream channels.

DEM RATING

WATER STORAGE	4	X 4.00 =	16
BANK, SHORELINE STABILIZATION	3	X 4.00 =	12
POLLUTANT REMOVAL	1 *	X 5.00 =	5
WILDLIFE HABITAT	4	X 2.00 =	8
AQUATIC LIFE	2	X 4.00 =	8
RECREATION/EDUCATION	3	X 1.00 =	3
		TOTAL WETLAND SCORE =	52

* Add one point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

DATA FORM - ROUTINE WETLAND DETERMINATION

Project/Site: *Trott-Strickland Park Site*
Applicant/Owner: *City of Raleigh*
Investigator(s): *H Bain, L Riddick*
Do Normal Circumstances exist on the site? **Yes** No
Is the site significantly disturbed (Atypical Situation)? Yes **No**
Is this area a potential Problem Area? Yes **No**

Date: *September 27, 2006*
County: *Wake*
State: *NC*
Community ID: *WG*
Transect ID: *WG-04*
Plot ID: *wetland*

VEGETATION

	Dominant Plant Species	Stratum	Indicator
1.	*Woodwardia areolata*	*Herb*	*OBL*
2.	*Microstegium vimineum*	*Herb*	*FAC+*
3.	*Magnolia tripetala*	*Canopy*	*FAC*
4.	*Arundinaria gigantea*	*Herb*	*FACW*
5.	*Boehmeria cylindrica*	*Herb*	*FACW+*
6.	*Ulmus rubra*	*Canopy*	*FAC*
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): *100%*
Remarks: *wetland begins at natural spring and extends downslope towards Lower Barton Creek*
hydrophytic vegetation dominates

HYDROLOGY

___ Recorded Data (Describe in Remarks)
___ Stream, Lake, or tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: 1-2 (in.)
Depth to Free Water in Pit: 1 (in.)
Depth to Saturated Soil: 0 (in.)

Primary Indicators:
X Inundated
X Saturated in Upper 12 Inches
X Water Marks
___ Drift Lines
___ Sediment Deposits
X Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
X Oxidized Root Channels in Upper 12 Inches
X Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:
good microtopography with water standing in depressions
saturated soil throughout

SOILS

Map Unit Name (Series & Phase) Appling sandy loam, 10-15% slopes
Taxonomy (Subgroup) *Typic Hapludults*
Drainage Class: *Well Drained*
Confirm Mapped Type? Yes **No**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-12	*A*	*10YR 3/1*	*10YR 4/1*		*clay loam*

HYDRIC INDICATORS

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
X Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
uniform low-chroma throughout upper 12 inches of soil profile

Hydrophytic Vegetation Present? **Yes** No
Wetland Hydrology Present? **Yes** No
Hydric Soils Present? **Yes** No
Is this Sampling Point Within a Wetland? **Yes** No

Remarks:
wetland originates surrounding natural spring and extends down-gradient
wetland generally encompasses UT to Lower Barton Creek that is fed by natural spring

DATA FORM - ROUTINE WETLAND DETERMINATION

Project/Site: *Trott-Strickland Park Site*
Applicant/Owner: *City of Raleigh*
Investigator(s): *H Bain, L Riddick*
Do Normal Circumstances exist on the site? **Yes** / No
Is the site significantly disturbed (Atypical Situation)? Yes / **No**
Is this area a potential Problem Area? Yes / **No**

Date: *September 27, 2006*
County: *Wake*
State: *NC*
Community ID: *WG*
Transect ID: *WG-04*
Plot ID: *upland*

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. *Pinus taeda*	*Canopy*	*FAC*
2. *Vitis rotundifolia*	*Vine*	*FAC*
3. *Lycopodium obscurum*	*Herb*	*FACU-*
4. *Fagus grandifolia*	*Canopy*	*FACU*
5. *Carpinus caroliniana*	*Canopy*	*FAC*
6. *Liquidambar styraciflua*	*Canopy*	*FAC+*
7. *Liriodendron tulipifera*	*Canopy*	*FAC*
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): *71%*
Remarks: *upland immediately adjacent to and upslope of WG-04*
hydrophytic vegetation dominates

HYDROLOGY

___ Recorded Data (Describe in Remarks)
___ Stream, Lake, or tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water: - (in.)
Depth to Free Water in Pit: >12 (in.)
Depth to Saturated Soil: >12 (in.)

Remarks:
moderately steep slope grading down to wetland WG

Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

SOILS

Map Unit Name (Series & Phase) Appling sandy loam, 10-15% slopes
Taxonomy (Subgroup) Typic Hapludults
Drainage Class: *Well Drained*
Confirm Mapped Type? Yes / **No**

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	*A*	*10YR 3/3*	-	-	*loam*
2-12	*B*	*7.5YR 4/6*	-	-	*loam*

HYDRIC INDICATORS

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors

___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
bright reddish soil
no evidence observed of water being held in soil

Hydrophytic Vegetation Present? **Yes** / No
Wetland Hydrology Present? Yes / **No**
Hydric Soils Present? Yes / **No**

Is this Sampling Point Within a Wetland? Yes / **No**

Remarks:
no indicators of wetland hydrology or hydric soils were observed

WETLAND RATING WORKSHEET (4th VERSION)

Project Name:	*Trott-Strickland Park Site*	County:	Wake
Nearest Road:	*Strickland Road*	Date:	*9/26/2006*
Wetland Area (ac):	*~1 acre*	Wetland Width (ft):	*5-100 feet*
Name of Evaluator(s):	*H Bain, L Riddick*	Wetland ID:	*WG*

WETLAND LOCATION:

____ on sound or estuary, pond or lake
__X__ on perennial stream
____ on intermittent stream
____ within interstream divide
____ other ____

ADJACENT LAND USE:

(within 1/2 mile upstream, upslope or radius)

__X__ forested/natural vegetation **100** %
____ agricultural/ urbanized ____ %
____ impervious surface ____ %

Adjacent Special Natural Areas

SOILS:

Soil Series: *Wake soils*

____ predominantly organic (humus, muck or peat)
__X__ predominantly mineral (non-sandy)
____ predominantly sandy

DOMINANT VEGETATION:

1 *Woodwardia areolata*
2 *Arundinaria gigantea*
3 *Microstegium vimineum*
4 *Boehmeria cylindrica*

HYDRAULIC FACTORS:

__X__ freshwater
____ brackish
____ steep topography
____ ditched or channelized
____ total wetland width >= 100 feet

FLOODING AND WETNESS:

____ semipermanently to permenently flooded or inundated
____ seasonally flooded or inundated
__X__ intermittently flooded or temporary surface water
____ no evidence of flooding or surface water

WETLAND TYPE: (select one)*

____ Bottomland Hardwood Forest
____ Swamp Forest
____ Carolina Bay
____ Pocosin
____ Pine Savannah
____ Freshwater Marsh
____ Bog/Fen
__X__ Headwater Forest
____ Bog Forest
____ Ephemeral Wetland
____ Other: ____

* The rating system cannot be applied to salt and brackish marshes or stream channels.

DEM RATING

WATER STORAGE	2	X 4.00 =	8
BANK, SHORELINE STABILIZATION	3	X 4.00 =	12
POLLUTANT REMOVAL	2 *	X 5.00 =	10
WILDLIFE HABITAT	5	X 2.00 =	10
AQUATIC LIFE	4	X 4.00 =	16
RECREATION/EDUCATION	5	X 1.00 =	5
		TOTAL WETLAND SCORE =	61

* Add one point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream, upslope, or radius.

Appendix D

Architectural Survey Forms

North Carolina Historic Multiple Structures Survey Form

Circle options or write in blanks; number codes are for data entry only. For additional codes, see structures form manual. This green form is for recording groups of buildings; individually significant properties covered by this form may also be recorded on yellow forms and cross-referenced by survey site numbers (see item 15)

Survey Site No. WA 4329 County Wake

19. Potential Study List: NO In a District NO Quad Map ~~Leesville~~ Bayleaf

Comment: _____ Acreage 37

1. Site name Troth House + outbuildings
2. Location/Address 12804 Strickland Rd.
3. Town/City/vicinity ~~Raleigh~~ Wake Co. Leesville vicinity
5. Field Recorder(s) E. TURCO / Circa, Inc. Date recorded: 10 10 06
22. Synopsis of significance: Ranch house + 4 non-historic outbuildings. Not likely to be eligible for NR now or in future.

7. Type of site: 02

Rural Crossroads	Farm Complex	Agricultural/Industrial		Village/Small Twn	Mill Village
01	(02)	03		04	05
Residential area	**Comm. Area**	**Industrial**	**Resort**	**School Complex**	**Health Facility**
06	07	08	09	10	11

8. Approximate number of structures covered:

(1-5)	5-10	11-25	26-50	51-100	100+
01	02	03	04	05	06

HISTORICAL DATA

10. Date of construction: 1958 actual; or _____ estimated: circle below

pre-1780	1781-1800	1801-25	1826-65	1866-85	1886-1915	1916-30
01	02	03	04	05	06	07
1931-45	**1946-70**	**1970-99**	**2000+**			
08	09	10	11			

16. Cultural/Ethnic associations:

African	English	German	Scots	Scots-Irish	Spanish
07	01	05	04	02	08

18. Religious associations:

AME	AME Zion	Baptist	Primitive Baptist	Catholic	Episcopal
13	12	10	18	01	04
Jewish	**Lutheran**	**Moravian**	**Methodist**	**Presbyterian**	**Quaker**
03	08	07	11	05	06

17. Significant persons associated with properties (last name first)

Type._____ Name: _____ Type._____ Name: _____

Type._____ Name: _____ Type._____ Name: _____

Builder	Architect	Contractor	Landscape designer	Orig. owner	Sig. later owner	Other_____
01	02	03	04	05	06	07

Revised 2002

ARCHITECTURAL DATA

9. **Main construction materials** 12

Frame	Log	Brick	Stone	Metal	Concrete	Other:
(12)	01	06	04	10	11	

11. **General style(s):** 35 (Other styles: see manual: _____)

Georgian 1	Geo/Fed 2	Federal 3	Gk Rev 5	Fed/Gk Rev 4	Goth Rev 7		Italianate 6
19-20thc trad/vern 9	Queen Anne 11	Neocl Rev 12	Col Rev 13	Misc Vic 15	Std Comm/Ind 16		Beaux Arts 21
Spanish/Mission 24/23	Tudor Rev 22	Bungalow 25	Craftsman 41	Shotgun 49	Foursquare 44		Rustic Rev 45
International 27	Moderne 42	Art Deco 26	Ranch (35)	Cape Cod 38	Prd Cottage 39	MinTradl 40	Split Level 43

13. **Significant outbuildings and landscape features** (and see other codes).Comment: _____

Type: 7 ; material wood ; date post 1950 Type: 20 ; material wood ; date c.1980

Type: 20 ; material c.block ; date c.1980 Type: 20 ; material plywood ; date c.1980

Tobacco barn 8	Slave house 2	Garage 5	Barn (7)	Kitchen 1	Smokehouse 10	Dairy 11	Crib 12
Landscape/plantings 38	Shed (20)	Privy 23	Well 24	Fence 27	Cemetery 33	Wall 28	Tenant hse 53

15. **Associated individual historic structures forms, by site number:**

_____; _____; _____; _____; _____; _____

Trott House and Outbuildings/ WA 4329 **12804 Strickland Road, Wake County**

The Trott House is located in the southern part of Barton's Creek Township in Wake County. The tract lies north of Strickland Road less than one mile east of the crossroads community of Leesville. Lower Barton Creek runs along the parcel's north boundary, and two ponds are present on two north-draining tributaries within the tract. The land slopes down north from the road toward the creek, although relatively level areas are present at the southern edge of the property and in the northeastern corner along the creek. Most of the property is forested in a mixture of pines and hardwoods. A long unpaved drive leads north from Strickland Road through the wooded parcel to a house and outbuildings, which are clustered near the center of the parcel, west of the largest pond. The recently constructed Interstate 540 is located north of the parcel's northern boundary.

The available data strongly suggest that the Trott tract was part of a mid-to-late 19th-century farm or plantation that may have been owned by J.M. Heck (Bevers Map, 1878) and later by the Sorrell family. Although the main residence was apparently located west of tract, it is possible that outbuildings or other facilities were situated on the tract.

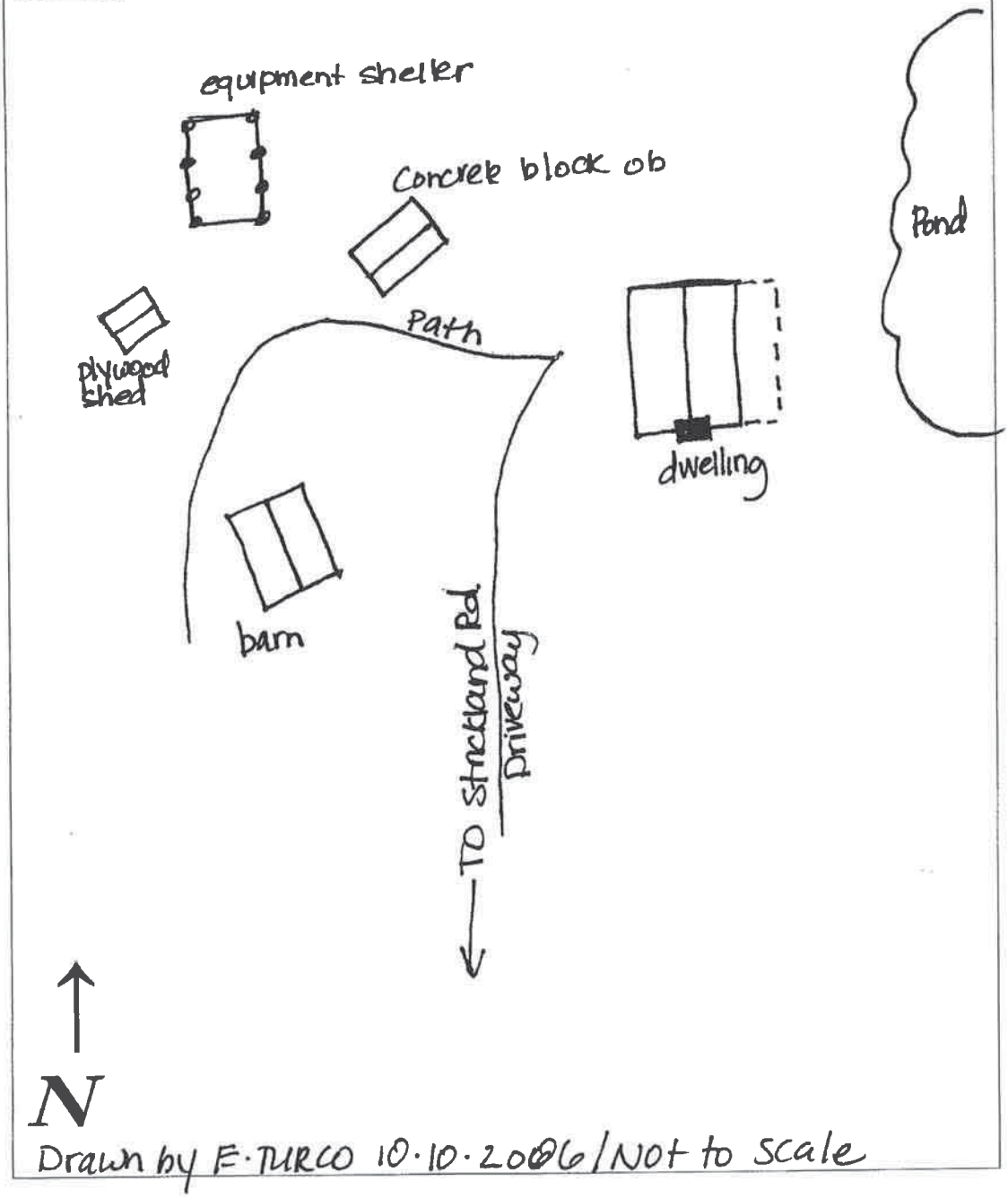
The principal structure is a one-story shallow pitched, side-gable, shingled **house** with a metal roof. Small windows are set under the eaves on the front elevation. A large brick exterior end chimney anchors the south elevation. A rear deck overlooks a manmade pond. Tax records date the dwelling to 1958, and this date of construction is supported by the building's style and appearance.

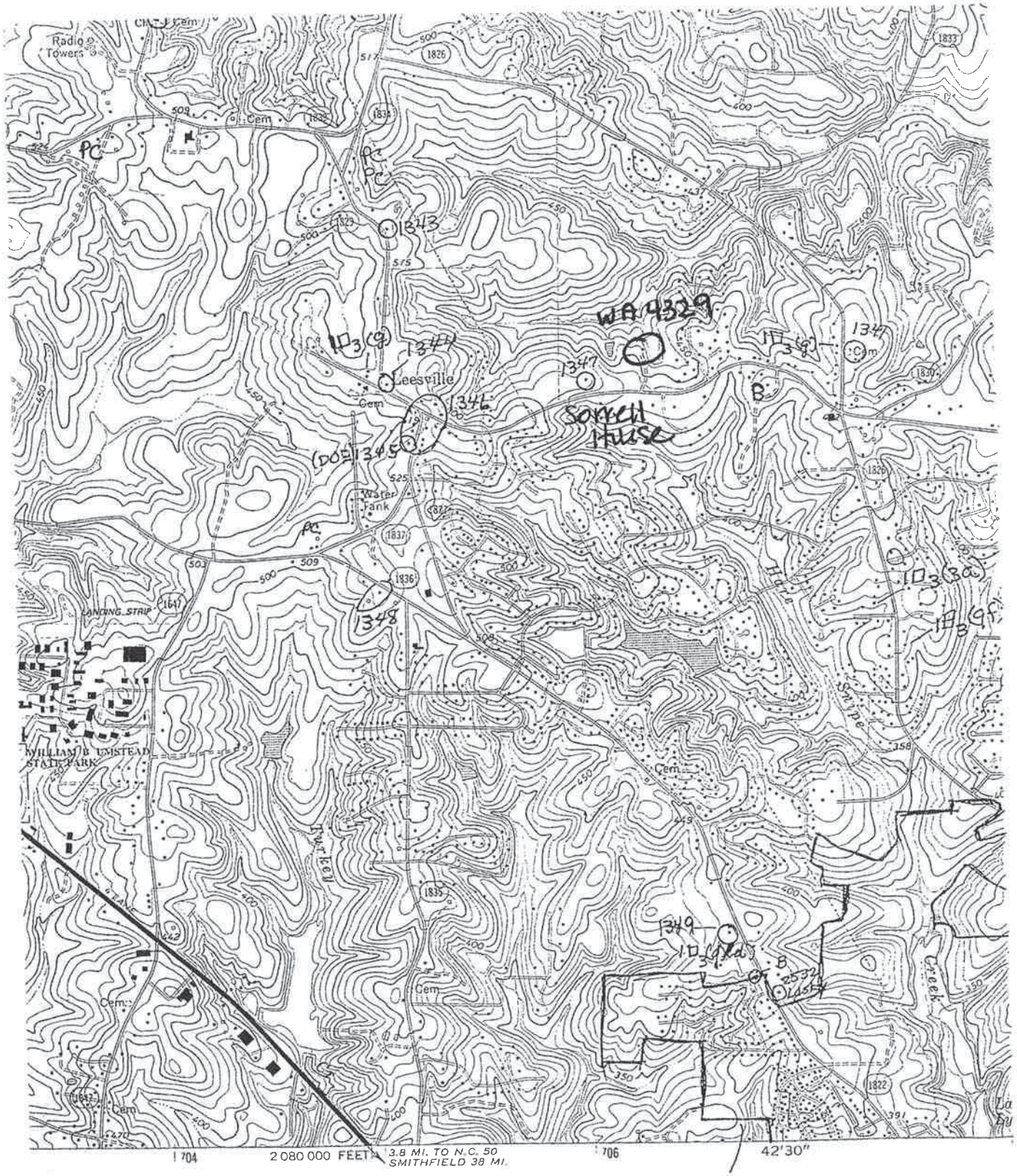
West of the house is a cluster of outbuildings. The first is a one-story, rectangular, side-gable, concrete block **outbuilding** of undetermined use. The building is surmounted by a metal roof with exposed rafter tails and weatherboarded gable ends. An open-air **equipment shelter** is located west of the block outbuilding. Round wood posts support a metal shed roof. Southwest of the shelter is a front-gable plywood **shed** topped with a tar paper roof. South of the outbuilding cluster is a small, front-gable livestock **barn** covered in both flush board siding and board-and-batten siding. The barn has a metal roof and exposed rafter tails in the eaves. Construction dates for these outbuildings buildings could not be determined, but they likely date from the second half of the 20th century.

RECONNAISSANCE SURVEY
SITE PLAN FORM

SURVEY SITE NUMBER. # WA 4329 House and Outbuildings, Strickland Road

SITE PLAN:





ped, edited, and published by the Geological Survey

ol by USGS, NOS/NOAA, and North Carolina Geodetic Survey

graphy by photogrammetric methods from aerial photographs
1965. Field checked 1967

onic projection. 10,000-foot grid ticks based on North Carolina
inate system. 1000-meter Universal Transverse Mercator grid

MN GN
7° 124 MILS 1°21'

1000 0

Raleigh Limits - 1988

Bayleaf Quad.

Appendix E

Parks Committee Review

Meeting Summary Notes

System Integration Plans
Parks and Recreation Department
Raleigh, NC

Subject:
System Integration Plans

Summary by:
Robin Pugh, AICP
ARCADIS

Place/Date of Meeting:
Jaycee Park Community Center
April 5, 2007

Summary Issue Date:
April 20, 2007

Participants:
Parks Committee:
Gregg Barley
Tina Certo
Jimmy Thiem
Gail Till

Raleigh Parks and Recreation Department:
Dick Bailey
Stephen Bentley
Wayne Schindler

ARCADIS:
Robin Pugh
Lindsey Riddick

Copies:
Stephen Bentley
Parks Committee

The purpose of the meeting was to develop draft System Integration Plans for the Alvis Farm, Trott-Strickland, and Milburnie future park sites. The objectives of the System Integration Plan are to: (1) document existing site conditions and constraints, (2) develop a set of guidelines for the interim management of parkland prior to the initiation of a Master Plan, (3) establish the park's classification consistent with the Comprehensive Plan, and if applicable, (4) establish any special intent for the park.

Existing Site Conditions and Constraints
Robin Pugh and Lindsey Riddick, ARCADIS, presented an overview of the existing conditions data collected for each site, as documented in the Existing Conditions Reports. Issues discussed are highlighted below:

Alvis Farm

- Conservation Area – The deed for the property (northern portion only) restricts the use of floodplain west of the western right-of-way of the sewer easement. The City agreed to designate this area as a "Conservation Area." Improvements or construction within this area are restricted. Vehicular and pedestrian access within this area shall also be restricted. The greenway or other trails would not be allowed in this Conservation Area, but would be allowed within the sewer easement and east of the sewer easement.

- Lease by J&H Stables – It was noted that J&H Stables is leasing the northern tract. The City can terminate the lease with 30 days notice.

- Access – The northern portion of the property is currently accessed from the adjacent parking lot of the Raleigh Christian Community Church. This portion of the park site has frontage on Tarheel Clubhouse Road (dogleg portion of the property) but an access drive has not been developed.

- Property configuration – The City is trying to acquire the property that would connect the northern and southern portions of the park site. Another privately-owned parcel is bordered on three sides by the southern portion of the park site and on one side by the Neuse River.

- Topography – The site is mostly gently rolling with steeper slopes towards the Neuse River.

Trott-Strickland

- Umbrella magnolias – A stand of umbrella magnolias was noted as a special feature on the site. The magnolias are located on the northern portion of the site.

- Koi – The largest pond contains some large and potentially valuable koi. These fish are not native and it is not known who put the fish in the pond.

- Threatened and endangered species – Habitat for sumac is found on the site, but no species were found. It was noted that it is important to distinguish between habitat and the presence of species.

Milburnie

- Cemetery – A cemetery is located on the eastern Milburnie tract. The archaeology sub-consultant (TRC) provided additional research on the cemetery (Appendix G) and flagged the cemetery's boundaries. The association of the cemetery could not be determined; however, the characteristics of this type of cemetery are often indicative of a slave cemetery. The cemetery is protected by state statutes. It was noted that several of the city's park properties include cemeteries.

- Milburnie dam – The dam is not on the park property but is visible from the park property from both sides of the river. Removal of the dam would drain Bridgers Lake to the northwest.

- Rock outcrops – Rock outcrops are found on the property.

- In-holding - The City is trying to acquire the properties that are surrounded by the park property. These lots remain from the former mobile home park. The City also wants to purchase properties to connect the non-contiguous portion of the park site.

- Milburnie Master Plan – A master plan for Milburnie was completed in the 1990s as a part of the Neuse River Corridor Master Plan. The adventure area shown on the eastern portion of the site is planned at Forest Ridge Park. The master plan for Milburnie may be revisited since there are very similar components (adventure recreation) to the recently adopted Forest Ridge Park Master Plan. The master plan is not fully funded.

Guidelines for the interim management of parkland

Stephen Bentley presented the current management practices and preliminary staff recommendations for each future park site. (See the Appendices of the Existing Conditions Reports.) Issues discussed are highlighted below:

- Property configuration - The committee agreed that a goal for the Alvis and Milburnie sites should be to combine all non-contiguous portions of the park properties and to acquire properties surrounded by the park sites.

- Dam removal - The current trend to remove dams as a method of river management was mentioned, as well as the possibility that the Milburnie dam could be removed. The City should consider the affects that removing the Milburnie dam would have on the park property/resources. A contingency plan to address the potential affects should be developed if the dam is removed.

- Abandoned structures - There are abandoned structures, with associated liability, on the three park sites. Abandoned structures should be removed from park property. The trailers on the Milburnie

site should be removed and the site should be cleaned up. The tire pile on the Alvis property has already been removed.

- Other structures – Some existing structures on the properties may be useful for park purposes. It should be determined if structures on the sites are programmatically useful. Repair/renovation costs should be compared to the benefit of maintaining the structure(s).

Park Classification
The following classifications are proposed for each park:
Alvis Farm – Community Park
Trott-Strickland – Neighborhood Park
Milburnie – Community Park

The committee reviewed the Comprehensive Plan definitions of "Neighborhood Park" and "Community Park," as well as "Metro Park." These definitions provide guidance for park location, size, and development. The guidelines also suggest typical park facilities for each classification.

The 36-acre Trott-Strickland site is larger than the recommended size range for a neighborhood park (5 to 25 acres). The additional acreage provides the opportunity to preserve areas and add features that are not typically found in neighborhood parks. Water features, such as the ponds on the Trott-Strickland property, are not usually found in a neighborhood park.

After discussion, the committee endorsed the classifications for each park site as proposed. The committee emphasized that the Trott-Strickland site has the potential to include some features of other park classifications, due to the size of the site.

Special intent for the park (if applicable)
No special intent for any of the park sites was suggested.

COMMITTEE RECOMMENDATION
The committee voted unanimously to endorse staff comments (Current Management and Preliminary Draft Recommendations) for each park site with the additional committee comments noted above.

The draft System Integration Plans will be forwarded to the Parks Board for review at the May meeting. Stephen Bentley will initiate the public notification process.

Appendix F

Parks, Recreation and Greenway
Advisory Board Review

DRAFT MINUTES
Parks, Recreation and Greenway Advisory Board

Anderson Point Park • 10 North Rogers Lane
Thursday, May 17, 2007

MEMBERS PRESENT: Gail Till, Patrick Beggs, Greg Barley, Chris Smith, Jimmy Thiem, Elaine Perkinson, David Knight, Tina Certo, Shoshanna Serxner, Doris Burke, and Gerald Wright

MEMBERS ABSENT (EXCUSED): Tina Gordon, Pete Benda, Mary Alice Farrell, and Eugene Weeks

STAFF PRESENT: Jack Duncan, Stephen Bentley, David Shouse, Jennifer Alford, Ken Hisler, Scott Payne, Venessa Garza, Wayne Schindler, Terri Stroupe, and Dick Bailey

GUESTS PRESENT: Michael Saunders of 5411 Allen Drive; Teresa Ellerbe of Strickland Road; Hank & Debby Hagerman of 3125 Tarheel Clubhouse Road; June Guralnick; PRGAB Liaison – Councilor Jessie Taliaferro, Roger Lynn Spears of Szostak Design; Robin Pugh and Lindsey Riddick of Arcadis

Excerpt Parks, Recreation and Greenway Advisory Board Minutes
Pertaining to the SIP for Alvis Farm, Milburnie and Trott-Strickland Properties

Public Comment: **Michael Saunders:** I'm Michael Saunders, 5411 Allen Drive, I just relocated back here from Northern Virginia. My concern is about the Milburnie proposal - park. I spoke with Mr. Bentley today and my concern is that my family has been in that area before the Civil War. That's my maternal father's people, the Sewell's – they have been there every since the Civil War. And one of my concerns is what type of construction will be in that area that will probably damage wildlife and probably intrude on the privacy of the people who live in the area right now. Also that's a very historical area. I don't know how many of you are familiar with the road that called Raleigh Beach Road – that was the main road that connected Raleigh to down east, Tarboro. A very historical area – union soldiers went to that area during the Civil War. They burned the grits mill. The grits mill is an important area, people came to turn there food into meals. It is also the site of commerce and communication. People gathered there with friends to gather information and there were stores there. The union army came through there and burned the grits mill. Has anyone ever thought about suing the federal government because they burnt that area? – Because it wasn't military cartage. My concern is if they develop a park there, there is a lot of history there. There's American history, my history, our history. What I would like to see is some types of historical markers letting people know what took place in the area. My aunt, when she built her house years ago, she found some Native American artifacts, Indian heads. And I would like to see some type of historical markers designating what took place in that area.

Gail Till: Thank you sir for your comments. Right now we are talking about the management plan. This is the kind of conversation we will have when we initiate a master plan – and that is not currently planned. Right now we are learning a little bit about what is there historically.

Jack Duncan: There is an element of the Neuse River plan that was adopted in 1996 – I'm not sure if you're talking about Milburnie East or West

Saunders: West

Jack Duncan: Milburnie West was more recently used as a trailer park. So there may be things our consultants have found already that will contribute to support the position you have taken with the government. Historical interpretation is really what you are basically saying about the site. So those kinds of things are value added to the plans that we have in this area. But for the most part there is no funding to do anything at this site. So I don't think there is any immediate pressure on the property to reconfigure it or change it from what it is currently being used for.

Public Comment: **Teresa Ellerbe:** Hi I'm Teresa Ellerbe, and I live on Strickland Road. When you do begin your process where we can have public involvement, it would be nice if you would send out a newsletter or make your signs larger so we can see them without having to cross a busy highway.

Duncan: We have a pretty progressive notification process once we get to that level.

Stephen Bentley: The SIP is a part of the city's broad master planning policy. The intent is to document the character of the site that is cultural, historical and to also take a thorough look at the environmental resources on the site – an extensive inventory of everything existing on the site. Secondly, it takes a look at an interim management guide so the city can be better stewards of its resources. The SIP is not to plan any facility.

Stephen stated that the goal is for the board to review and approve the Parks Committee's comments on each draft plan and to forward to the City Council for their consideration. Arcadis Consultants, Robin Pugh and Lindsey Riddick reviewed each SIP site.

When discussing the Milburnie property Mr. Saunders indicated that the lake being referred to as Bridges Lakes used to be called Sewell Lake.

Public Comment: **Debby Hagerman** I would like to know if the city is currently actively seeking land at Alvis Farm. The property in the center is next door to my house and I am particularly interested.

Councilor Taliaferro explained that all real estate transactions go first through the City Council's the Budget, Economic and Development Committee in closed sessions held in confidentiality. Once council makes a decision on the real estate investment then it becomes public knowledge.

ACTION: Tina Certo made a motion to move forward with presenting the System Integration Plan information for Alvis Farm, Milburnie, and Trott-Strickland sites to City Council for consideration with the amended information provided by Michael Saunders for the Milburnie site to be included as a part of public comments. Her motion was seconded by Gail Till. The motion passed unanimously.

Appendix G

City Council Approval

COUNCIL MINUTES

The City Council of the City of Raleigh met in regular session on Tuesday, June 19, 2007, at 1:00 p.m. in the City Council Chamber, Raleigh Municipal Building, Avery C. Upchurch Government Complex, 222 W. Hargett Street, Raleigh, North Carolina, with the following present.

Mayor Charles C. Meeker
Mayor Pro Tem James P. West
Tommy Craven
Thomas G. Crowder
Philip R. Isley
Joyce Kekas
Russ Stephenson
Jessie Taliaferro

They Mayor called the meeting to order and invocation was rendered by Pastors Joseph and Marlene Lewis, Awesome Word Ministries. The Pledge of Allegiance was led by Mayor Pro Tem James P. West. The following items were discussed with action taken as shown.

RECOGNITION OF SPECIAL AWARDS

PROCLAMATION – EUGENE WEEKS DAY – PROCLAIMED

Mayor Meeker read a proclamation proclaiming Tuesday, June 19 as Eugene Weeks Day in the City of Raleigh. He indicated Mr. Weeks will be honored at a reception at 301 Hillsborough Street later in the day. He talked about Mr. Weeks service to the City of Raleigh and work on the Human Relations Commission.

In accepting the proclamation, Mr. Weeks expressed appreciation to the Council for showing confidence in him. He pointed out we have accomplished a lot as it relates to human relations in the City of Raleigh but we have a long ways to go. He stated he is finishing up his term on the Human Relations Commission but will still be involved in human relations and promotion of harmony in the City of Raleigh.

SOLID WASTE EMPLOYEES – HONORED

City Manager Allen asked Solid Waste Director Fred Battle to help him recognize employees Adrian Grubb, Edward Wright and Bianca Bradford. City Manager Allen pointed out Adrian Grubb won the first place in the rear loader compactor competition in the recent Rodeo. Mr. Grubb will have a chance to move forward onto the national competition. Edward Wright received second place in the rubber tire loader and will also be competing in the National Rodeo. He expressed appreciation to Mr. Grubb, Mr. Wright and all solid waste employees for doing such a great job in a safe and successful manner. He stated it is very difficult to maneuver this large equipment in an urban environment. City Manager Allen recognized Bianca Bradford who

inventory, an analysis of existing public and private pools; a market and demographic analysis; a needs assessment; analysis of spatial distribution of aquatic facilities, costs; and recommended implementation and prioritization of the results. He explained the City currently has six outdoor seasonal swimming facilities, one outdoor swimming facility that has an air structure over it in the winter months and one indoor facility. He went over the process that will be utilized including a review of the programs and facilities, research area demographics, access national aquatic trends, survey potential user groups, evaluate existing area providers, develop options for programming, develop project cost estimates, identify search areas, estimate revenue potential, estimate operating expenses, determine cash flow and an implementation strategy.

Mr. Hunsaker went over the types of aquatic programming including competitive, recreation instructioned, fitness and therapy, explaining how each is utilized, the benefits and types of opportunities in each category. He talked about developing a tool kit of options, the public process, stakeholders, user groups, etc.

Roger Spears talked about the needs and what other communities in Wake County are doing, talked about other providers, types of facilities, where we are in the study. He stated the study would not select sites but would develop criteria for site selection. They went over the study schedule, the various meetings, talked about the definition of success.

Mr. Crowder talked about getting information on how the City of Raleigh could partner with other folks and gave the example of Lake Johnson/Athens; talked about the different trends, growth, senior citizen population, the need to provide amenities in areas where they are not available, Mr. West talked about starter homes without amenities and whether the group is looking at that kind of factors as it relates to the needs. Life cycles of pools and how that figures into the equation was touched on. The assessments, cross section of responses, how surveys were conducted, how and where information on the meetings was distributed, private facilities and how they play into consideration was discussed. The report was received with no further action.

REPORT AND RECOMMENDATION OF THE PARKS, RECREATION AND GREENWAY ADVISORY BOARD

SYSTEM INTEGRATION PLANS FOR ALVIS FARM, TROTT-STRICKLAND, AND MILBURNIE PARKS – ADOPTED

Last July the City Council authorized staff to negotiate a contract with Arcadis G&M of North Carolina to facilitate System Integration Plans for Alvis Farm, Trott-Strickland and Milburnie Parks. Over the course of several months, Arcadis developed a series of draft Existing Condition Reports for each site. These reports were reviewed by Parks and Recreation staff and brought before the Parks, Recreation and Greenway Advisory Board (PRGAB) for its consideration. The PRGAB referred the review to its Parks subcommittee. In April, the Parks Committee reviewed all three reports and referred them back to the PRGAB. The draft SIPs were posted online for public comment. Signs and letters were sent to nearby property owners, etc. to collect public input. The PRGAB reviewed the draft SIPs at its regularly scheduled meeting on May 17, 2007.

Public comments and questions were addressed at that meeting. The PRGAB unanimously voted to send all three draft System Integration Plans to the City Council for consideration.

Recommendation: Adopt the draft System Integration Plans for Alvis Farm, Trott-Strickland and Milburnie Parks as forwarded by the Parks, Recreation and Greenway Advisory Board.

Parks Planner Stephen Bentley, of the Design Development Division of the City's Parks and Recreation Department, made a slide presentation to the City Council. He showed the location of the three sites and explained that the System Integration Plan (SIP) process is a sub-section of the overall City Park Master Planning Process described in City of Raleigh Resolution No. 2003-735. The objectives of the SIP are to develop a set of guidelines for the interim management of parkland prior to the initiation of a Master Plan, to document existing site conditions and constraints, to establish the park's classification consistent with the Comprehensive Plan, and if applicable, any proposed special intent for the park. The development process began with the consultant. Arcadis performed a thorough documentation of the sites to develop an existing conditions report for staff. Staff reviewed and commented on the report and prepared follow-up information if necessary, then sent the information to the PRGAB. The PRGAB commented on the report and sent it to the Parks Committee. After the Parks Committee review and comments, the report was returned to the PRGAB and is now being presented to the City Council.

Lindsey Riddick of Arcadis G&M also made a slide presentation to the Council showing views of the sites, including terrain and structures, and providing the information summarized below:

Alvis Farm (92.9 acres)

Natural Resources

- One man-made impoundment on-site
- Three wetland areas
- Gently rolling terrain with steeper slopes towards the Neuse River

Cultural Resources

- Structures are not eligible for listing in the National Register of Historic Places (NRHP)
- Moderate potential for intact archaeological sites along the levee ridge (northern part of tract)

Interim Management Recommendations

- Annual comprehensive inspection by a Parks and Recreation Department review team.
- Mark the property's boundaries with carsonite posts.
- Review any lease agreements for the property and review the level of care for the property.
- Determine if structures on the site (*i.e.*, barn, outbuildings, houses) would be useful for park purposes. Remove the abandoned house from the southern portion of the property if it is determined not to be cost effective to maintain it.

- Research the potential for partnering with (leasing to) a local landowner for growing some type of crop.
- Continue current management practices (mow fields, grade access road, remove trash, inspections).
- Continue efforts to acquire adjacent properties.

Mr. Riddick pointed out that the interim management recommendations for Alvis Farm apply to all three properties.

Trott-Strickland (37.53 acres)

Natural Resources
- Lower Barton Creek
- One unnamed tributary (UT) to Lower Barton Creek
- Two man-made ponds
- Two wetlands
- Unique features – umbrella magnolias, koi
- Evidence of terrestrial mammals (white-tail deer and raccoon)
- Relatively flat topography, sloping toward Lower Barton Creek

Cultural Resources
- Structures are not likely to be NRHP-eligible
- Research suggests that the site was part of a mid-to-late 19th-century farm or plantation

Interim Management Recommendations
- Continue inspection of the dock at the pond three times a year for needed maintenance and repairs.
- Determine continued need for dock; repairs/replacement costs.
- Research the origin and create a plan for the koi fish in the pond.
- Determine if the outbuildings would be useful park purposes. Remove any abandoned structures that are not cost effective to maintain.

Milburnie (91.76 acres)

Natural Resources
- Bridges Lake (semi-permanent impoundment)
- One unnamed tributary (UT) to Neuse River
- Three wetland areas
- Upland ridges and slopes
- Archaeological sites (three)
- Cemetery
- Milburnie dam (off-site)

Interim Management Recommendations

- Continue current management practices (remove trash, grade access road, control invasive/exotic species, inspections).
- Include the cemetery site with other City of Raleigh cemetery locations for management and monitoring.
- Remove the abandoned mobile home and debris from the Milburnie West site.
- Evaluate the condition of the greenway access road for potential future improvements.
- Continue efforts to acquire properties (Milburnie West).
- Evaluate the effects that removing the Milburnie dam would have on the park site/resources. Develop a contingency plan to address the potential effects.

There was no discussion of this item. Ms. Taliaferro moved to adopt the System Integration Plans for Alvis Farm, Trott-Strickland and Milburnie Parks as forwarded by the Parks, Recreation and Greenway Advisory Board. Mr. Isley seconded the motion and approval was unanimous. The Mayor ruled the motion adopted on a vote of 8-0.

REPORT AND RECOMMENDATION OF THE PLANNING COMMISSION

PLANNING COMMISSION – ANNUAL REPORT AND WORK PLAN – RECEIVED

Per Council Resolution 2002-240 regarding the duties and responsibilities of City Council Boards and Commissions, the Planning Commission submitted its annual report for FY 2007-2008. As requested in the resolution, the Planning Commission's work items for the next fiscal year are described in the report. The two main items are the updated of the Comprehensive Plan and several text changes.

Recommendation: That the report be received.

The report was received without discussion.

REQUEST AND PETITIONS OF CITIZENS

SIDETRACK BREWPUB – VARIANCE FROM RIGHT-OF-WAY DEDICATION ON HARGETT STREET – APPROVED

Andrew Leager, Sidetrack Brewpub, requested a variance from right-of-way dedication on Hargett Street associated with Sidetrack Brewpub at the corner of Boylan Avenue and Hargett Street. This is associated with Building Permit Transaction #179593.

City Manager Allen explained this request with it being pointed out in background information that during the initial review of this project a need for a variance was identified with respect to right-of-way requirements along Hargett Street which is classified as a minor thoroughfare and requires the dedication of ½ of an 80 foot right-of-way. The existing building is located immediately adjacent to the back of the sidewalk which renders the dedication requirement impractical in this case since the building envelop is not being modified. Staff has no issue with