ENVIRONMENTAL ASSESSMENT

For the Proposed

Spring Creek 115kV Switching Station Construction Project

Miller County, GA

Rural Utilities Service

prepared by:

Georgia Transmission Corporation
2100 East Exchange Place
Tucker, GA 30085

November 2012

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1. INTRODUCTION

The purpose of the Environmental Assessment (EA) is to assess potential impacts to the environment that may result from the proposed construction of the Spring Creek 115kV Switching Station. This electric transmission facility is being proposed by the Georgia Transmission Corporation (Georgia Transmission) to address electrical reliability concerns identified in the 2010 South Regional Study prepared by Georgia Transmission and the 2010 Integrated Transmission System (ITS) 10-Year Plan prepared by the Georgia Power Company.

Georgia Transmission intends to request financing from the U.S. Department of Agriculture Rural Utilities Service (RUS), thereby making the proposed project a federal action subject to review by the National Environmental Policy Act of 1969, the National Historic Preservation Act (NHPA), and all applicable federal environmental law and regulation. This EA was prepared in accordance with 7 CFR Part 1794, RUS' Environmental Policies and Procedures, and 40 CFR Parts 1500-1508, the regulations promulgated by the Council on Environmental Quality for implementing the National Environmental Policy Act (NEPA). This EA will also address other laws, regulations, executive orders, and guidelines promulgated to protect and enhance environmental quality such as the Endangered Species Act, the National Historic Preservation Act, the Farmland Protection Policy Act, the Clean Water Act, and executive orders governing floodplain management, protection of wetlands, and environmental justice.

2. PROJECT PARTICIPANTS

Georgia Transmission is an electric transmission cooperative established under the laws of the State of Georgia in 1996. The not-for-profit cooperative, headquartered in Tucker, Georgia, is engaged in the business of building, maintaining, and owning electric power transmission facilities (transmission lines, substations, and switching stations) to serve 39 of the 42 Georgia Electric Membership Corporations (EMCs).

The 39 EMCs, also known as Member Systems, are local, consumer-owned distribution cooperatives that provide retail electric service on a not-for-profit basis. Membership of the distribution cooperatives consists of residential, commercial and industrial consumers, generally within specific geographic areas. The 39 Member Systems serve approximately 4.5 million residents and operate 183,133 miles of low voltage electric power lines. This distribution system comprises the largest distribution network in the state of Georgia.

Georgia Transmission provides transmission capacity to its Member Systems through participation in the ITS, the statewide transmission system jointly owned by Georgia Transmission, the Georgia Power Company, the Municipal Electric Authority of Georgia, and the City of Dalton Utilities. The ITS serves as the backbone for the Georgia transmission grid, covering 90% of the state - 17,500 miles of the Georgia's 18,500 miles of transmission lines. As of October 1, 2012, Georgia Transmission owns and maintains approximately 3,088 miles of transmission line and 650 transmission and/or distribution substations of various voltages. Parity (expense or revenue) within the ITS, which depends on the load served by each of the owners, varies from year to year and requires periodic financial adjustments.

3. PROJECT DESCRIPTION

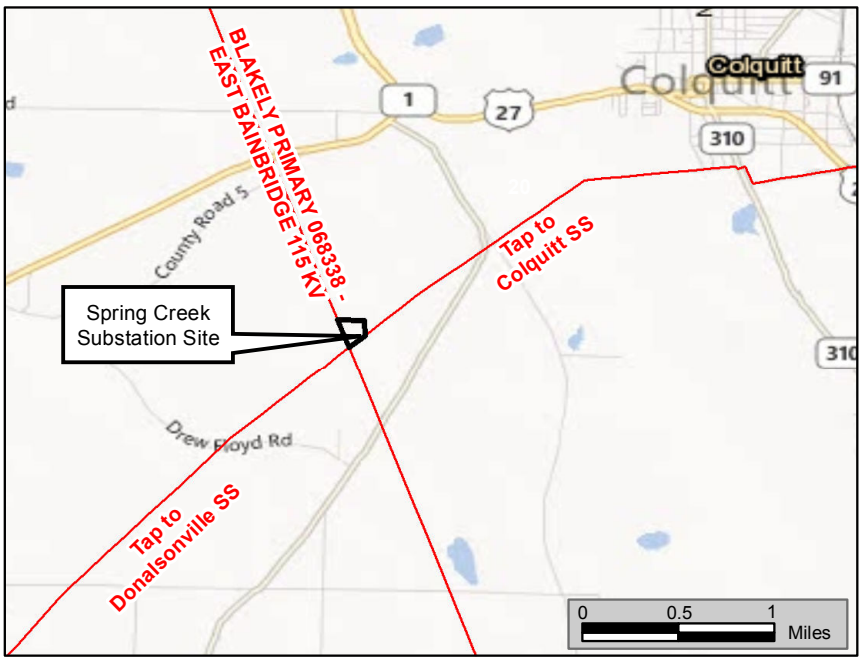
Georgia Transmission proposes to construct the Spring Creek 115kV Switching Station in Miller County, Georgia **(Figure 1.0)**. Construction will require the disturbance of approximately 11.9 acres to construct and access the proposed Spring Creek 115kV Switching Station, and will include the following actions that will be addressed under this EA:

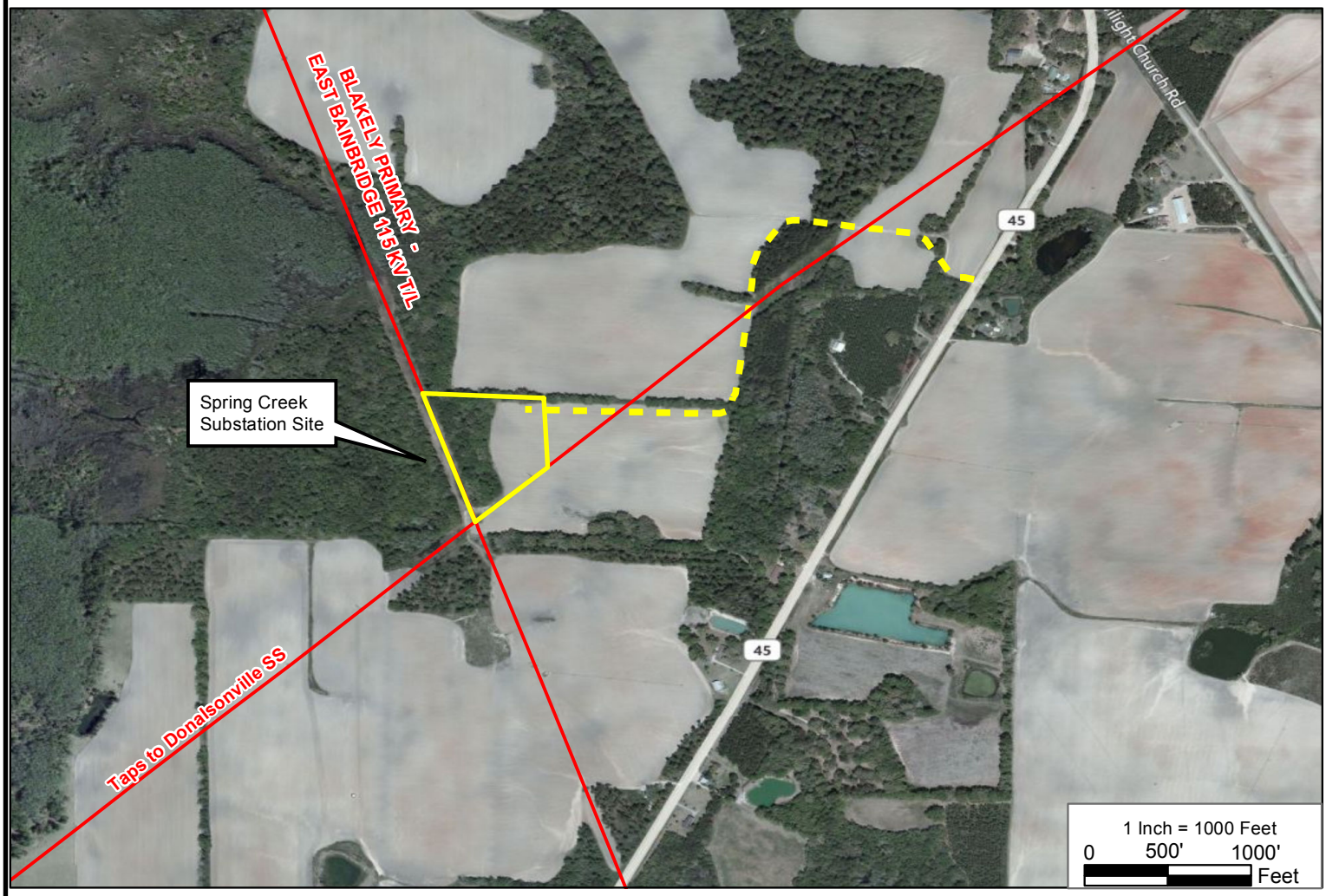
1. The construction of a new four-breaker 115kV switching station. Less than 7.4 acres of land will be disturbed to provide a level station pad and drainage controls.
2. The improvement of a long, winding field road located along the perimeter of fallow agricultural fields to serve as an access road for the proposed switching station. The access road will be equipped with ditches and other drainage controls will be approximately 3,500 feet in length and 20-feet in width. Approximately 4.6 acres of land disturbance is anticipated.
3. The modification of three (3) existing transmission facilities that are owned and operated by the Georgia Power Company, including the Blakely Primary-East Bainbridge 115kV Transmission Line, and transmission line taps to the Colquitt and the West Donalsonville Substations. The design and construction of these three existing facilities will be accomplished by the Georgia Power Company. This portion of the project, financed by another utility, is not considered a federal action subject to RUS' Environmental Policies and Procedures, and as such is not carried through for further review in this EA.

4. PROJECT JUSTIFICATION

Three Notch EMC, which serves Decatur, Early, Miller, Seminole, Clay and Baker Counties in southwestern Georgia, chronically receives some of the worst performance from the ITS. During the 2005-2008 study period, Three Notch EMC consumers experienced an average outage duration of 123 minutes, which is significantly higher than Georgia Transmission's goal of only 40 minutes. Three Notch EMC consumers also experienced an average of 3.93 outages, which far exceeds the Georgia Transmission frequency goal of 1.4 outages per consumer. Georgia Transmission determined that 37.6% of the sustained duration outages (46.2 minutes) and 35% of the sustained frequency outages (1.39 outages) were attributed to the Blakely Primary-East Bainbridge 115 kV Transmission Line. This line is the primary source of Three Notch EMC's reliability issues, given that no other individual circuit or substation serving Three Notch EMC accounts for more than 18% of the outages.

In addition, the 2010 South Regional Study, Georgia Transmission's contingency study, identified reliability threats associated with the Blakely Primary-East Bainbridge 115kV line. To meet North American Electric Reliability Corporation (NERC) standards, Georgia Transmission's Bulk System Planning Department conducts annual analyses to ensure that the transmission system is planned in a manner that will allow operation under contingency conditions (i.e. an unexpected failure or outage of a system component, such as a generator, transmission line, circuit breaker, switch or other electrical element). The 2010 South Regional Study determined that the loss of the Farley (APC) – South Bainbridge 230 kV line would cause the overloading of the North Camilla-Raccoon Creek segment of the Raccoon Creek-Thomasville 230kV in 2013 and the Donalsonville Junction (Spring Creek)-East Bainbridge segment of the Blakely Primary 115kV line in





Spring Creek — 115 kV Switching Station

From GTC take I-285 South to I-75 South. Take I-75 South for approx. 60 miles to exit #99 for GA 300 toward GA- Fla - Pkwy/ Albany for 0.4 miles. Turn right onto GA-300 Sand travel approx. 35 miles to Clark Ave. Turn right onto Clark and travel aprox. 1.5 miles to GA-3 S/GA-300 S/US-19/Liberty Expy ramp. Travel 2.4 miles on US 19 and take GA 234 ramp to Albany and travel approx.3 miles. then turn left onto Newton Rd./ GA Hwy 91. Travel approx. 47.3 miles to downtown Colquit and turn left onto N 1st St. After driving approx. 0.2 miles turn right onto US 27 N/GA-1 N. Continue on US 27 N for approx. 1.4 miles then turn left onto GA-45S/GA-91 S for approx. 0.1 miles then turn left onto GA-45 S again. Travel approx. 1.9 miles on GA-45 S to where the existing transmission line crosses GA-45. Project Substation Site is located at 0.4 miles away from the GA-45 on the right (North West) side of the road where the existing transmission lines cross each other.

Figure 1.0: Project Location Map

N

GeorgiaTransmission

Project No: P79262	Date: 10/30/2012
Source: Georgia DOT	Plot: O. Ozbek

2014. If no action is taken, the reliability of the transmission system would be compromised, which is an unacceptable alternative for Georgia Transmission and Three Notch EMC.

Please see a full explanation of the Project Necessity and Evaluation of Electrical Alternatives in **Appendix 9.1**.

5. PROJECT ALTERNATIVES

5.1 Electrical Alternatives

Three electrical alternatives were considered to address the electrical reliability issues identified in Section 4, including a "no action" alternative, an upgrading alternative, and a construction alternative.

5.1.1 No Action Alternative

The "no action" alternative would involve RUS not providing financing to Georgia Transmission and therefore Georgia Transmission not responding to the project need. Through this alternative, Georgia Transmission would fail to fulfill its obligations to ensure reliable electricity to its consumer members.

5.1.2 Upgrading Alternative

The upgrading alternatives would involve the reconductoring the North Camilla-Raccoon Creek 230kV line to 1033 SSAC in 2013 and upgrading three overload 477 ACSR facilities (21.9 miles of 115kV line) from 50°C to 100°C operation.

5.1.3 Construction Alternative

This construction alternative involves constructing a new four-breaker 115kV switching station and closing the normally open point on the Donalsonville-West Donalsonville 115kV line segment. With this alternative upgrades are still needed; however, only 0.6 miles of 115kV line would need to be upgraded to 100°C operation.

5.1.4 Alternative Selection

After evaluating the various alternatives, the construction alternative was determined to be the preferred electrical solution. Both electrical alternatives, upgrading and construction, resolve the thermal overloading that will result in response to the loss of the Farley (APC) – South Bainbridge 230 kV line; however, the construction alternative provides additional benefits by addressing the reliability needs for Three Notch EMC. The new equipment that will be constructed, owned, and operated by Georgia Power, including the Digital Fault Recorder (DFR), will also allow the ITS to sectionalize the Blakely Primary-East Bainbridge 115kV line (a 59.8 mile circuit) for faults. This will assist in better locating where faults have occurred on the line, and accordingly help reduce frequency and duration of fault events, including outages. This construction alternative is also the least cost alternative.

Please find a complete explanation and analysis of the alternatives in **Appendix 9.1.**

5.2 Substation Site Alternatives

Georgia Transmission determined that construction of the switching station would be most desirable at the intersection of three existing transmission facilities, including the the Blakely Primary-East Bainbridge 115kV Transmission Line and transmission line taps to the Colquitt and West Donalsonville Substations **(Figure 2.0)**. Construction at this intersection will alleviate the thermal loading overloading and address the reliability needs (real-time fault distance data) for the area. It also allows Georgia Transmission to close the normally open point at the Donalsonville-West Donalsonville 115kV line segment, which will create another network path on the system and alleviates the overloading that occurs on the Donalsonville Junction (Spring Creek)-East Bainbridge 115kV line segment. Two potential sites were identified, and information to assist in their vetting was collected from existing databases, research, and field reconnaissance. The two sites identified were then analyzed to determine the optimal alternative siting of the proposed station **(Figure 3.0)**. The merits of each alternate site are discussed in the following subsection and are also available in tabular form **(Table 1.0)**.

5.2.1 Site A

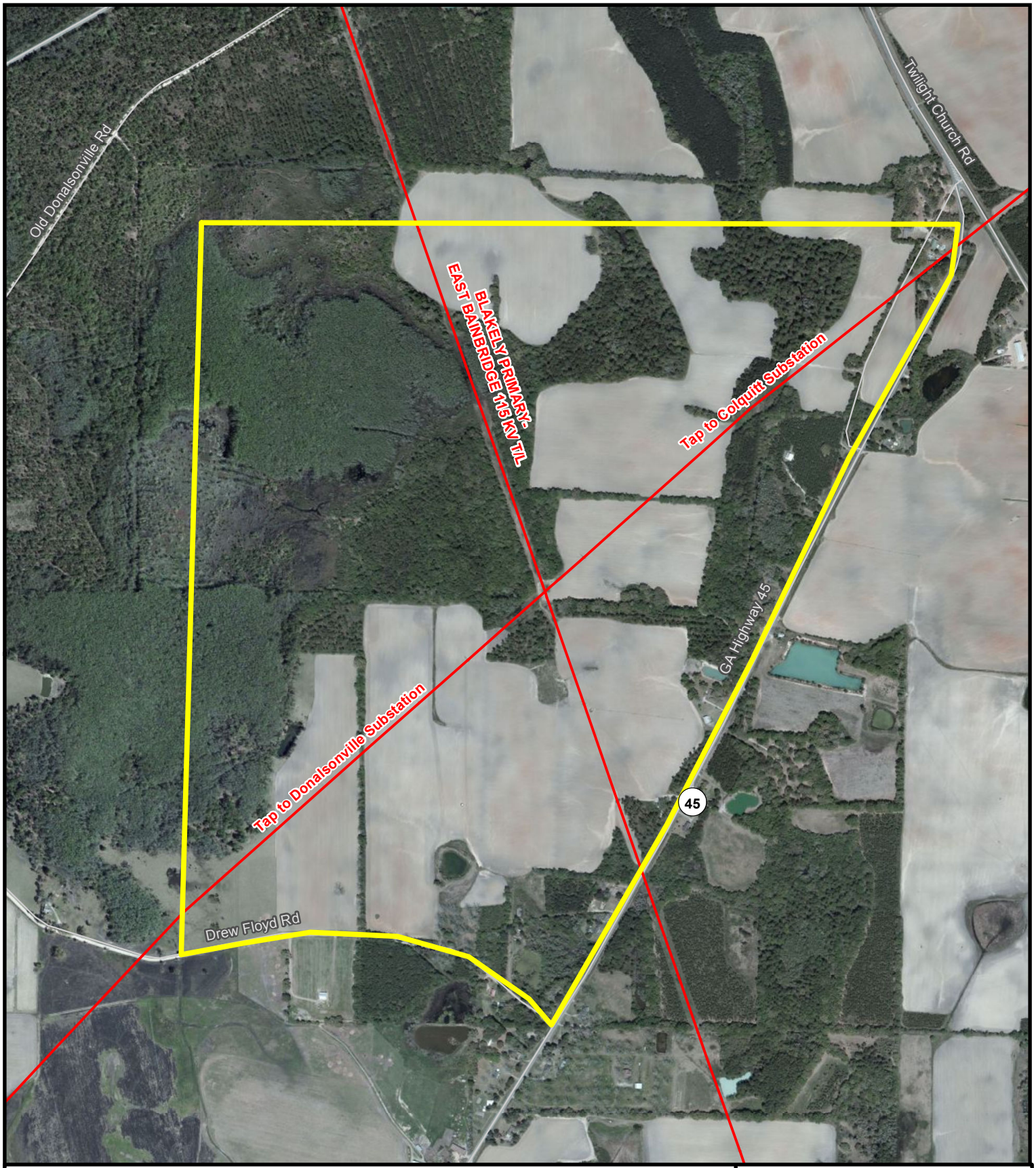
Site A is located to the north of the desired intersection of 115kV lines. This site alternative, consisting almost equally of forested lands and agricultural fields, involves the purchase of a 7.9 acre site that utilizes portions of the existing Blakely Primary-East Bainbridge 115kV line corridor. Site A has following additional characteristics:

- Remote and requires long access road corridor.
- 500-feet to the north of the desired intersection.
- Adjacent to only one transmission line; short transmission line taps are required.
- No wetland or streams associated with this site. Hydric soils are, however, located onsite.
- Highest land acquisition and total estimated costs.
- Low visibility from the and to surrounding community

5.2.2 Site B

Site B is located just north of the desired intersection of 115kV lines. This alternative, which is also composed of forestland and agricultural fields, involves the purchase of a 5.3 acre site that utilizes portions of the existing Blakely Primary-East Bainbridge 115kV Transmission Line. Site B has the following additional characteristics:

- Remote and requires long access road corridor.
- Immediately adjacent to the desired intersection
- Adjacent to all three transmission lines; consequently, fewer improvements to the system are required.
- No streams are associated with the site. A wetland and hydric soils are, however, located onsite.
- Lowest land acquisition and total estimated costs.
- Low visibility from road and to surrounding community.



Spring Creek

115 kV Switching Station

Figure 2.0: Study Area

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Study Area

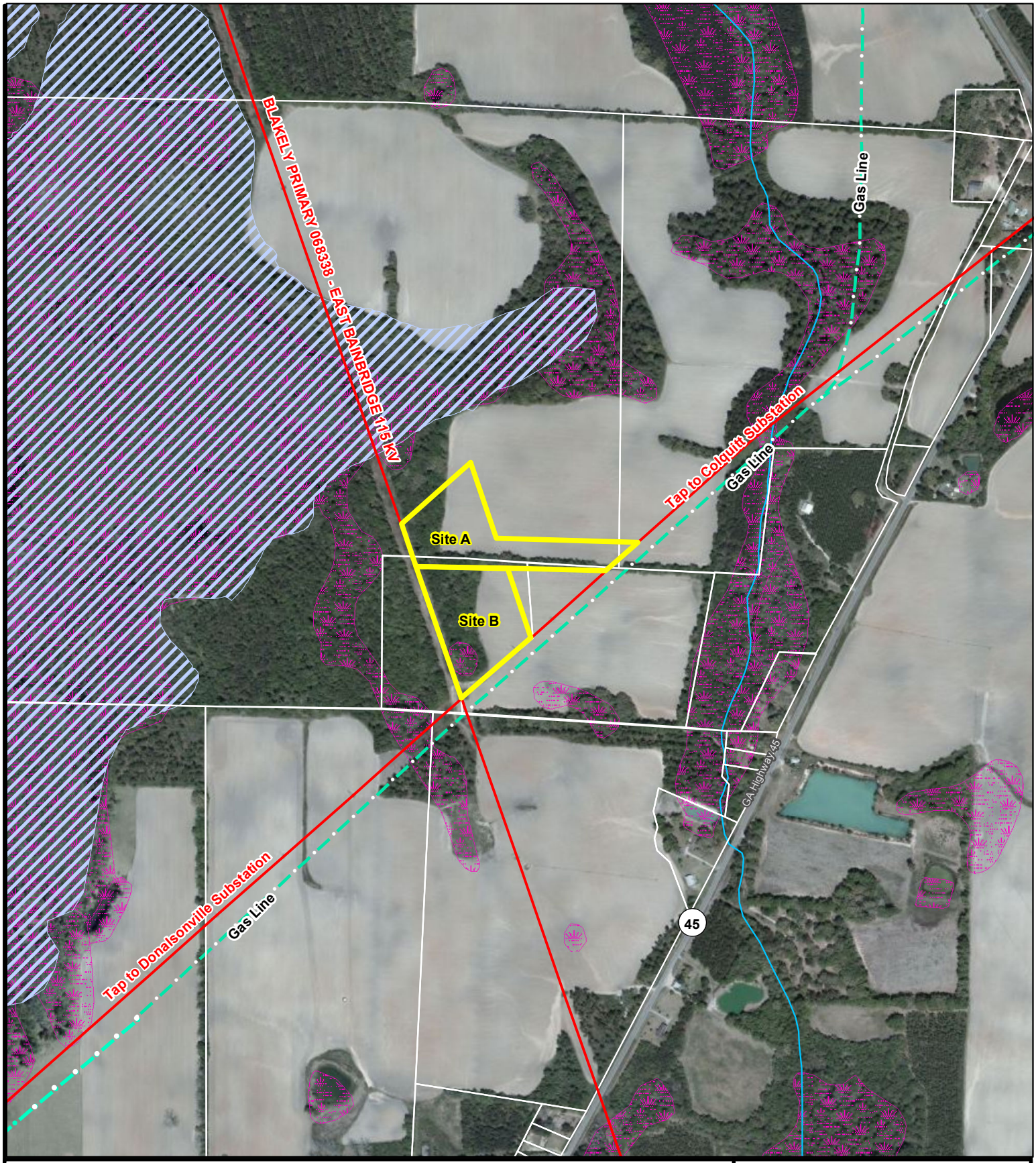
Existing 115kV Transmission Lines

Plot: T. Brooks

N

1" = 1,000'

0 500' 1,000'



Spring Creek

115 kV Switching Station

Figure 3.0: Alternate Substation Sites

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Alternate Sites

Existing 115kV Transmission Lines

USGS Blueline Stream

Tax Parcel

National Wetlands Inventory

Plot: T. Brooks

N

1" = 700'

0 350' 700'

TABLE 1: SPRING CREEK 115kV SWITCHING STATION SITE SELECTION CRITERIA

CATEGORIES	SITE REQUIREMENTS	SITE SUITABILITY	SITE A	SITE B
Electrical Suitability	Distance to EMC load center (intetsection of 115kv transmission lines)		500 ft (N) of desired intersection	immediately adjacent
	Acreage		approx. 7.9 acres	approx. 5.3 acres
	T/L ingress and egress suitability		high suitability: adjacent to one transmission line	most suitable - adjacent to both transmission lines
	D/L ingress and egress suitability		NA	NA
	EMC future circuits capability		good	good
	Future expansion capability		good - site is large enough to accommodate future equipment or expansion	good - site is large enough to accommodate future equipment or expansion
		GPC/MEAG future circuit capability	good	good
Construction Suitability	Vehicular access		remote location hard to access and requires long access road	remote location hard to access and requires long access road
		Storm water control	good	good
		Surface – grading, soils	mostly upland soils but hydric soil component also present	mostly upland soils but hydric soil component also present
		Subsurface – rock, water	seasonally high water table: 2 - 3 feet to water table (Dec-April)	seasonally high water table: 2 - 3 feet to water table (Dec-April)
Community Suitability		Existing land use compatibility	adjacent to existing facilities but also **introducing transmission line and access road**	adjacent to existing facilities but also **introducing access road**
		Adjacent land use compatibility	agricultural and forested lands	agricultural with center pivot irrigation system, and forested lands
		Visual compatibility	high compatibility- located by existing utility corridor and setback from the road	high compatibility- located by existing utility corridor and setback from the road
		Distribution exists – overhead/underground	NA	NA
		Transmission line impact	short transmission line loop required	least impact - does not require construction of new TL
		Construction noise	no concerns	no concerns
		Visibility from road	low visibility from road	low visibility from road
Environmental & Regulatory		Railroad permit	NA	NA
Issues, Mitigation		DOT Permit	**Yes** for GA Highway 45	**Yes** for GA Highway 47
		FAA permit	NA	NA
		Listed Species, mitigation	not yet determined but unlikely	not yet determined but unlikely
		Wetlands, floodplains, creeks, creek buffers	no concerns	wetland likely present
		Environmental permits	NEPA documentation prior to construction	NEPA documentation prior to construction
		Hazardous materials, mitigation	no concerns	no concerns
		Cultural resources, mitigation	no concerns	no concerns
		NPDES permit	**Yes,** land disturbance > 1 acre	**Yes,** land disturbance > 1 acre
Land Acquisition		Land use of parcel – entirety/remainder/frontage	2 parcels	2 parcels
		Future land use – property potential	agricultural	agricultural
		Relocation requirements	none	none
Project Cost		Acquisition cost	12% Higher	Lowest
		Site development cost	Lowest	8% Higher
		Transmission line cost	57% Higher	Lowest
		Landscaping cost	$0	$0
		Total of known costs (SS & TL)	**36% Higher**	**Lowest**

5.2.3 Substation Site Selection

Both of the alternative sites were considered suitable for constructing the proposed switching station. However, analysis and input by a team comprised of the Corporation's project management, environmental, engineering, land acquisition, and public relations specialists resulted in an overall ranking of the alternate substation sites and in the identification of a preferred site. Site B was ultimately selected as the preferred site for locating the proposed Spring Creek 115kV Switching Station **(Figure 4.0)**.

Both siting alternatives are setback from the road and are thus not highly visible from the road or to the surrounding community. Both also require long access roads that increase the amount of land disturbance associated with constructing the proposed action. The preferred site, however, does not require the construction of new transmission line taps. It is immediately adjacent to the desired intersection of 115kV transmission lines and thus requires fewer improvements to the system. It also has lower land acquisition and estimated total project costs. The above factors outweighed other issues, such as several known environmental constraints consisting of a lone wetland located in the southwest quadrant of the preferred site. However, because of the size of the site, impacts to the aforementioned wetland can likely be avoided.

6. DESCRIPTION OF THE EXISTING ENVIRONMENT

The project study area for the proposed Spring Creek 115kV Switching Station project is located west of Colquitt, an incorporated city located in Miller County, Georgia. The project study area, approximately 1 square mile in size, is centered at the intersection of the three existing transmission facilities aforementioned. Its western and northern borders extend approximately one-half of a mile from the aforementioned intersection of transmission lines. Georgia Highway 45 and Drew Floyd Road form the eastern and southern borders, respectively. The project study area may also be found on the Donalsonville N.E., Georgia United States Geological Survey (USGS) 7.5-minute series topographic map.

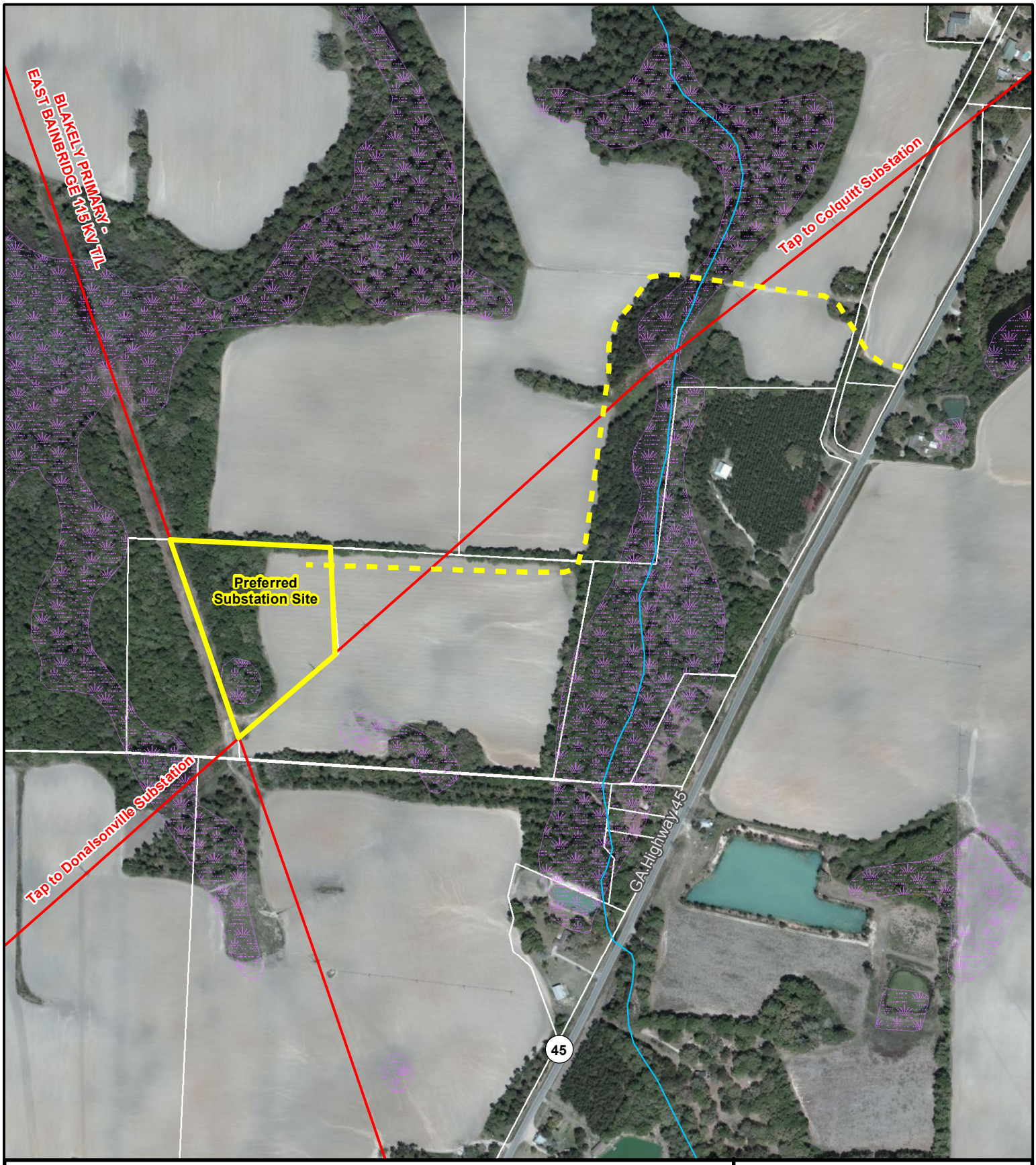
6.1 Land Use

6.1.1 General Land Use

The project study area, which is agricultural and rural in character, contains several utility corridors: a small network of state and county roads and several 115kV transmission lines (the Blakely Primary – East Bainbridge 115kV Transmission Line as well as taps to the Colquitt and West Donalsonville Substations). Single-family residential properties, forested areas, agricultural land use, and other utilities and communication corridors are also present in the project study area.

6.1.2 Formally Classified Lands

Formally classified lands are properties that are either administered by federal, state, or local agencies, or have been accorded special protection through formal designation. These lands may include, but are not limited to state and federal parks and forests, wild and scenic rivers, and recreational areas.



Spring Creek

115 kV Switching Station

Figure 4.0: Preferred Substation Site

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Preferred Site

Tax Parcel

Existing Transmission Lines

Proposed Access Road

National Wetland Inventory

USGS Blueline Stream

Plot: T. Brooks

N

1" = 500'

0 250' 500'

6.1.2.1 Wild and Scenic Rivers

In Georgia, the only river designated as a Wild and Scenic River is the Chattooga River located in the extreme northeastern part of the State (16 U.S.C. 1276).

6.1.2.2 National Forests

In Georgia, there are two National Forests including the Chattahoochee National Forest, in the mountains of north Georgia, and the Oconee National Forest in the lower Piedmont north of Macon, Georgia..

6.1.2.3 State and Federal Parks

Throughout Georgia, the Parks, Recreation, and Historic Sites Division of the Department of Natural Resources operates 45 State parks, 3 State historic parks, and 15 historic sites. The National Park Service of the U.S. Department of the Interior (USDI) operates 10 units in the State of Georgia, which includes facilities such as National Battlefield Parks, National Historic Sites, and National Monuments.

There are no formally classified lands in the project study area.

6.1.3 Prime Farmland Soils

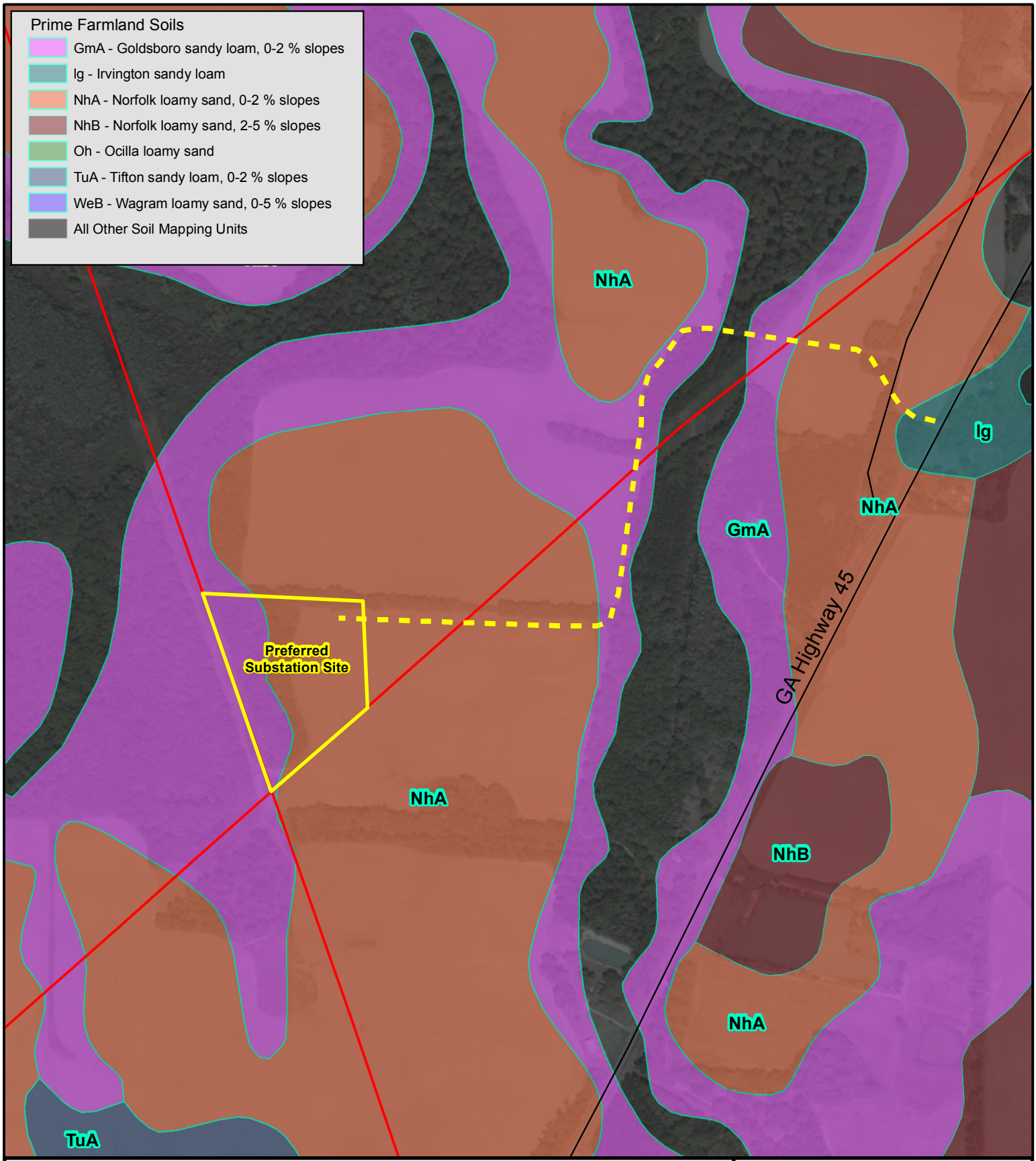
Through the passage of the Farmland Protection Policy Act of 1981 and the Final Rule for its implementation, 7 CFR § 658, the U.S. Department of Agriculture mandated that any Federal agency contemplating a land disturbing activity should review its actions with respect to prime, unique, statewide or locally important farmland soils.

The U.S. Department of Agriculture, *Soil Survey for Miller and Seminole Counties*, *Georgia* was reviewed for the location of prime farmland soils within the subject site **(Figure 5.0)**. According to the survey, three soil mapping units are associated with the switching station and access corridor: Goldsboro sandy loam, 0 to 2 percent slopes (GmA); Grady soils (Grd); and Norfolk loamy sand, 0 to 2 percent slopes (NhA). All except for the Grady soils are classified as prime farmland soils.

6.2 Vegetative Communities

To determine possible impacts to significant ecological resources, Georgia Transmission contracted Sligh Environmental Consultants, Inc. (SECI). SECI conducted an ecological field survey of the proposed substation site and access road corridor.

During this survey conducted in June 2011, SECI identified five upland and two wetland communities—agricultural fields, mixed hardwoods, natural pines, transmission line rights-of-way, pine plantations, bottomland hardwoods and emergent wetlands, respectively. While the study area consists of a mixture of habitats, agricultural fields consisting of either planted cotton (*Gossypium spp.*) or peanuts (*Arachis hypogaea*) predominate and represent more than 50% of the total project area. The characteristics of the other six vegetative communities are detailed in the *Report of Findings*, which may be found in **Appendix 9.3**.



Spring Creek — **115 kV Switching Station**

Figure 5.0: Prime Farmland Soils

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

Preferred Site — Proposed Access Road — Existing 115kV Transmission Lines

Tax Parcel — Road

GeorgiaTransmission

Plot: T. Brooks

N

1" = 500'

0 250' 500'

6.3 Threatened and Endangered Species

Section 7 of the Endangered Species Act requires every Federal agency, including RUS, to consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any action it authorizes is not likely to jeopardize the continued existence of any "listed species" (threatened or endangered plants or animals) or result in the destruction or adverse modification of designated critical habitat. On behalf of Georgia Transmission, SECI reviewed a tentative list of known protected species from the U.S. Fish and Wildlife Services online database (2004). SECI also contacted the Georgia Department of Natural Resources, Wildlife Resource Division requesting a listing of those species within the study area under the Natural Heritage Database.

SECI found that fourteen (14) protected species are known to occur within Miller County. This list, shown in **Table 2.0,** is comprised of eight federally-protected species and of six state-protected species. As seen in Table 2.0, habitat for one state-protected species, the gopher tortoise (*Gopherus polyphemus*), is likely present at the project site. After reviewing this information, field studies of the proposed project area were conducted to verify the conditions onsite.

6.1 Floodplains

Executive Order 11988 directs Federal agencies to avoid to the greatest extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. The location of floodplains and other flood hazard area are identified using maps produced by the U.S. Department of Housing Urban Development or the Federal Emergency Management Agency (FEMA). FEMA mappings of Miller County were reviewed.

According to the maps (Panel Number: 13201C0150C), there are no areas of FEMA designated 100-year floodplain located onsite **(Figure 6.0)**.

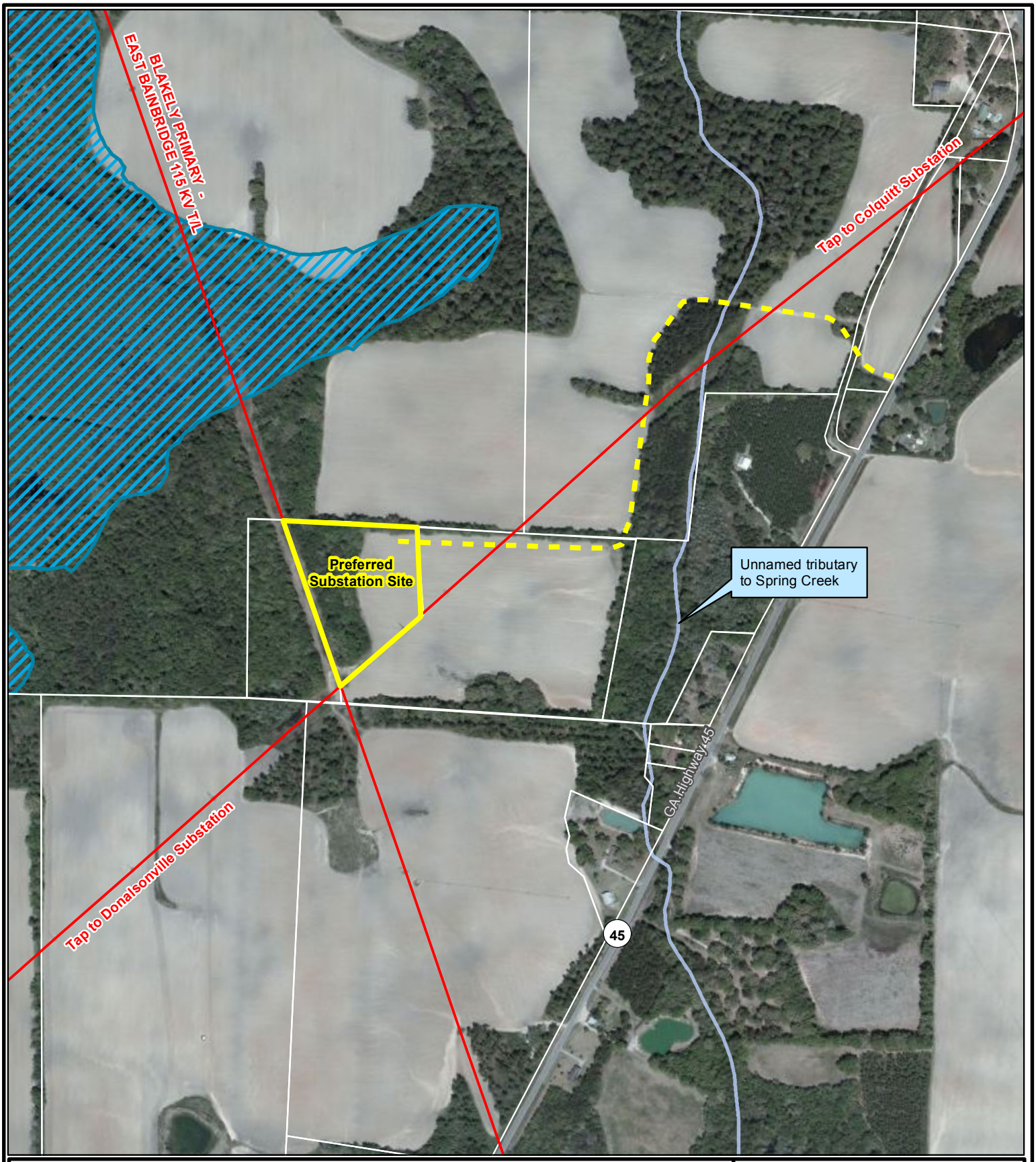
6.2 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) requires that Federal agencies to take into account the effects of their undertakings on historic properties. Historic properties, for the purposes of Section 106 review, are those properties listed or eligible for listing in the National Register of Historic Places (NRHP). In accordance with the Programmatic Agreement (PA) executed by Georgia Transmission, RUS, the Georgia State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), Georgia Transmission contracted two (2) consulting firms to identify potential historic properties through review of Georgia State Files and field surveys within the Area of Potential Effect (APE) in consultation with the Georgia Office of Historic Preservation. Under the terms of the PA, if a project is determined to have an adverse effect on a National Historic Landmark, a National Register-listed historic property, a traditional cultural property, archaeological site, or an eligible historic district, Georgia Transmission will initiate consultation with the SHPO as appropriate under the PA. Georgia Transmission and the SHPO will agree on a plan of resolution.

TABLE 2.0: Protected Species in Miller County, Georgia

Species Name	Status		Preferred Habitat	Preferred Habitat Present?
	State	Federal		
Animal				
Alligator Snapping Turtle *Macrochelys temminckii*	ST	N/A	Large streams and rivers; impoundments; river swamps	No
Bald Eagle *Haliaeetus leucocephalus*	ST	BGEPA	Inland waterways and estuarine areas in Georgia.	No
Eastern indigo snake *Drymarchon corais couperi*	ST	T	During winter, den in xeric sand-ridge habitat preferred by gopher tortoises; during warm months, forage in creek bottoms, upland forests, and agricultural fields	No
Flatwoods Salamander *Ambystoma bishopi*	ST	T	Mesic longleaf pine-wiregrass flatwoods and savannas	No
Gopher Tortoise *Gopherus polyphemus*	ST	C	Sandhills; dry hammocks; longleaf pine-turkey oak woods; old fields	Yes
Oval Pigtoe *Pleurobema pyriforme*	SE	E	Large rivers to small creeks	No
Red-cockaded Woodpecker *Picoides borealis*	SE	E	Open pine woods; pine savannas	No
Shinyrayed Pocketbook *Hamiota subangulata*	SE	E	Large rivers to small creeks	No
Wood stork *Mycteria americana*	SE	E	primarily feed in fresh and brackish wetlands and nest in cypress or other wooded swamps	No
Plant				
American Chaffseed *Schwalbea americana*	SE	E	Open pinelands, as in well-managed, somewhat moist longleaf pine-wiregrass forests seeps	No
Buckthorn *Sideroxylon thornei*	SR	N/A	Forested limesink depressions; calcareous swamps	No
Curtiss' Loosestrife *Lythrum curtissii*	ST	N/A	Openings in calcareous swamps	No
Pond Spice *Litsea aestivalis*	SR	N/A	Cypress ponds; swamp margins	No
Variable-leaf Indian-plantain *Arnoglossum diversifolium*	ST	N/A	Calcareous swamps	No

T = Federally Threatened, E = Federally Endangered, ST = State Threatened, SE = State Endangered, BGEPA = Bald and Golden Eagle Protection Act, N/A = Not Applicable



Spring Creek

115 kV Switching Station

Figure 6.0: FEMA 100 Year Floodplains

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

Preferred Site

Tax Parcel

Existing 115kV Transmission Lines

USGS Stream

FEMA 100yr Floodplain

Access Road

GeorgiaTransmission

Plot: T. Brooks

N

1" = 600'

0 300' 600'

6.2.1 Archaeological Resources

Historic properties listed in or eligible for listings in the National Register of Historic Places (NHRP) include significant historic and prehistoric archaeological resources. To determine whether there are archeological sites eligible for the NRHP, Georgia Transmission contracted with Southern Research Historic Preservation Consultants (Southern Research) to conduct an archeological survey of the project's Area of Potential Effect (APE). For the purposes of the archeological survey, the APE was defined as the substation area proposes access road right-of way.

Southern Research performed a literature review, which included an examination University of Georgia Archaeological Site Files maps and photographs of Miller County, Georgia. Southern Research then conducted a field survey in July 2011, which consisted of a visual inspection and shovel testing. During the course of this investigation, two isolated finds, IF1 and IF2, and one archeological site, 9Mi166, were identified within the APE, more specifically along the proposed access road **(Figure 7.0)**.

6.2.2 Historic Structures

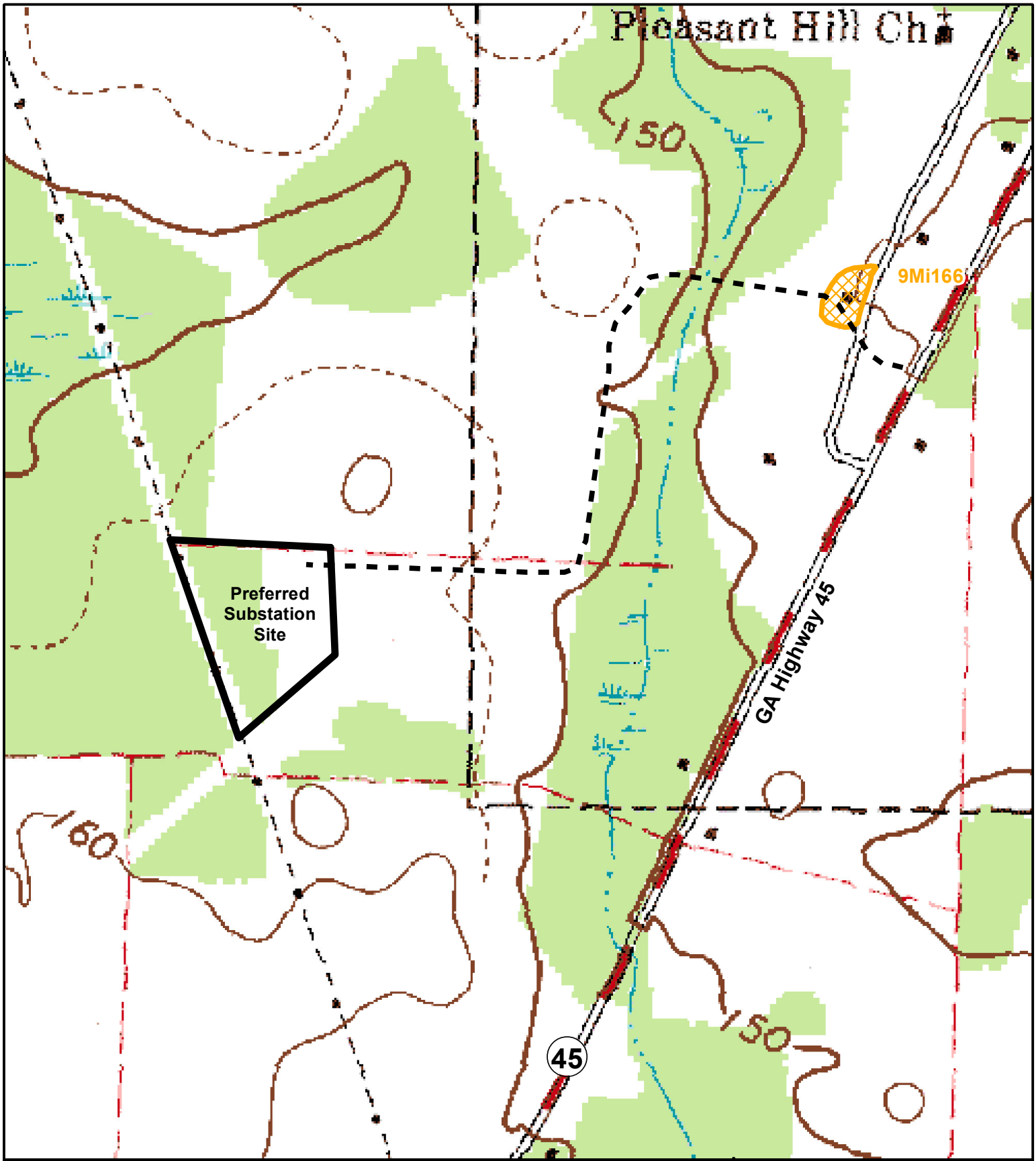
In addition to archeological resources, historic structures may also be listed on the NRHP. To determine the presence of historic structures, Georgia Transmission contracted Historic Preservation Consulting (HPC) to prepare a *Historic Resources Survey*. The entire project study area, was surveyed for historic resources and the resulting information was then used in the siting process.

The historic resources survey identified seven resources that appear to be more than 50 years old. These resources, identified in **Figure 8.0**, are clustered along both sides of Georgia Highway 45. None, are considered eligible for the National Register of Historic Places.

6.3 Wetlands and Waters

Section 404 of the Clean Water Act charges the U.S. Army Corps of Engineers (Corps of Engineers) with the regulation of discharges of "dredged or fill" materials into water of the United States, including wetlands and other special aquatic sites. Activities associated with electrical facility construction and maintenance that requires the discharge of dredged or fill material may have to be authorized by Individual or General Nationwide Permits from the Corps of Engineers.

Georgia Transmission considered the location and extent of mapped wetlands, derived from USFWS National Wetland Inventory maps, during the siting of the proposed Spring Creek 115kV Switching Station. Once the electric transmission facility was sited, Georgia Transmission contracted with SEIC to identify and delineate wetlands or waters (lakes, ponds, rivers, perennial and intermittent streams, as well as ephemeral ditches) that occurred within or adjacent to the substation site and access road corridor. During the field survey conducted in June 2011, one jurisdictional water (JWAT1) and two jurisdictional wetlands (JWET1 and JWET2) were delineated. The locations of the three jurisdictional features are shown in **Figure 9.0**.



Spring Creek — **115 kV Switching Station** — **Figure 7.0: Archeology Sites**

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Preferred Site

Tax Parcel

Archeology Site Boundary

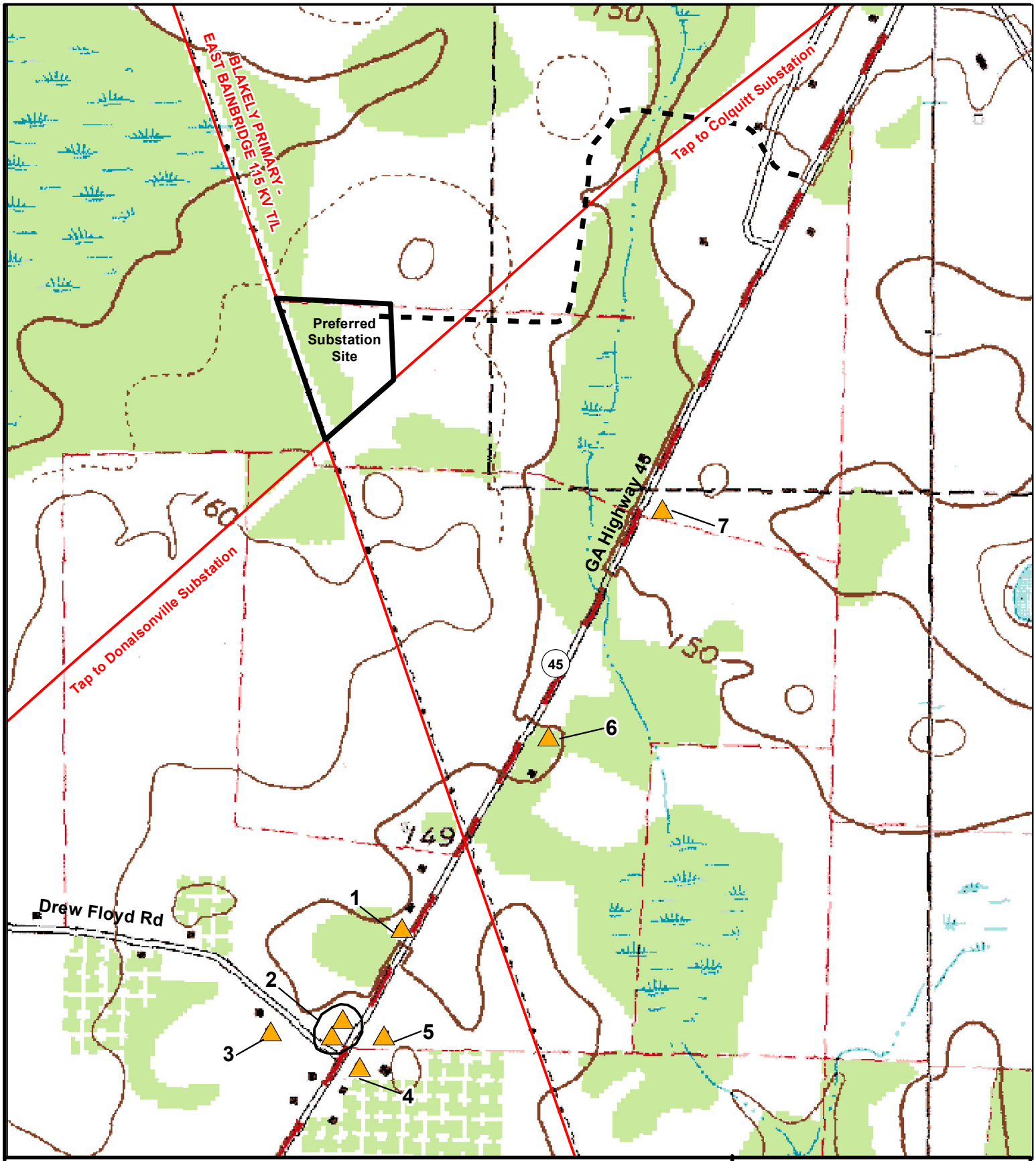
Access Road

Plot: T. Brooks

N

1" = 500'

0 250' 500'



Spring Creek — **115 kV Switching Station**

Figure 8.0: Historic Structures

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

Georgia Transmission

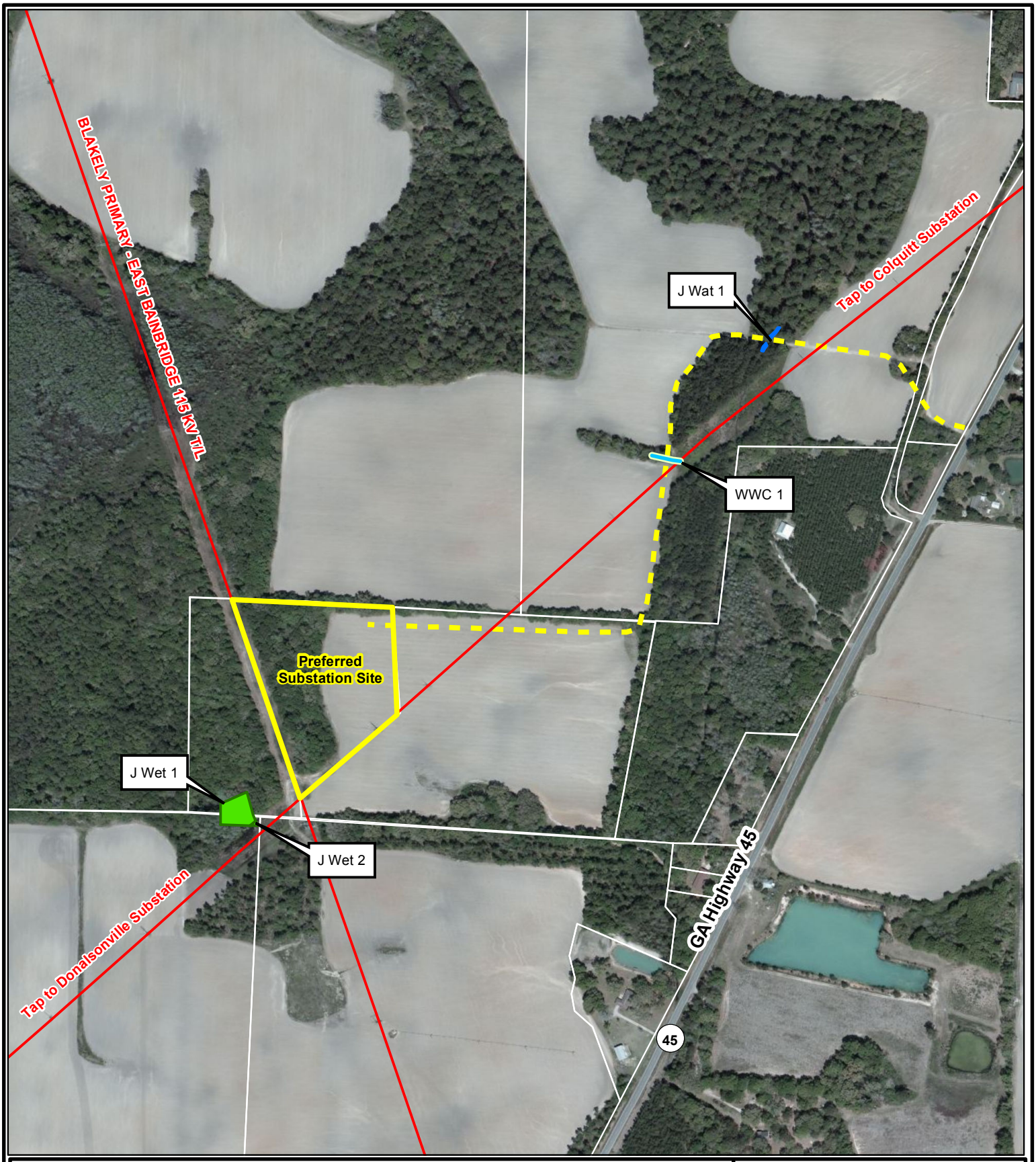
Preferred Site
Tax Parcel
Historic Resource
Existing 115kV Transmission Lines
Access Road

Plot: T. Brooks

N

1" = 700'

0 350' 700'



Spring Creek

115 kV Switching Station

Figure 9.0: Wetlands & Waters

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Preferred Site

Tax Parcel

Existing 115kV Transmission Lines

Access Road

Jurisdictional Wetlands

Jurisdictional Water

Wet Weather Conveyance

N

Plot: O. Ozbek

1" = 500'

0 250' 500'

7. ENVIRONMENTAL CONSEQUENCES

7.1 Land Use

7.1.1 General Land Use

The construction of the Spring Creek 115kV Switching Station will convert the land use and land cover types identified in Section 6.1 of approximately 11.9-acres of land into utility easements. . Adjacent land parcels outside of the proposed project corridor will not be converted; therefore, significant impacts to land use are anticipated.

7.1.2 Formally Classified Lands

As stated in Section 6.1.2, there are no formally classified lands in the project study area. Consequently, the proposed project will have no impact on these lands.

7.1.3 Prime Farmland Soils

As stated in Section 6.1.3, approximately 99% of lands affected by this project are considered prime farmland. Though the construction and operation of the project will take this land out of production, this will not cause a significant impact given the project's scale and the viability of agricultural activities on the surrounding acreage.

7.2 Threatened and Endangered Species

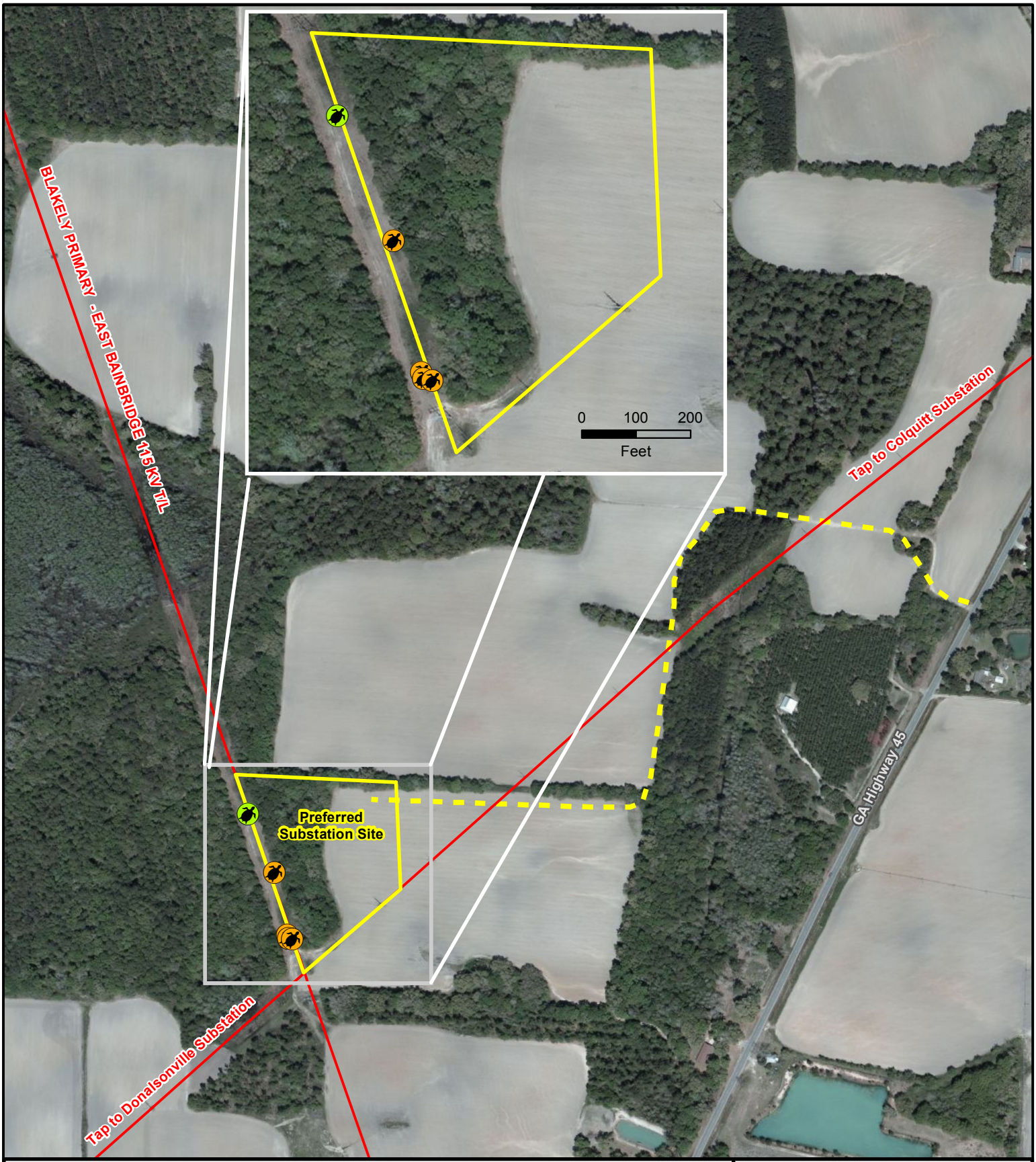
As described in Section 6.3, SEIC's June 2011 survey did not identify any federally-listed (threatened or endangered) species or federally designated critical habitat within the study area. The survey did, however, identify one active and four abandoned gopher tortoise burrows **(Figure 10.0)**. The gopher tortoise (*Gopherus polyphemus*) is a federal candidate species that is also a state-listed as threatened in Georgia.

Candidate species do not receive statutory protection under the Endangered Species Act; however, federal agencies are encouraged to consider them in project planning. As a listed-species under Georgia state law, the gopher tortoise is protected under the Endangered Wildlife Act.

To comply with state law, Georgia Transmission has committed to educating contractors to be able to identify the protected species and establishing buffers around each active gopher tortoise burrow. Construction activities and equipment associated with these projects will be confined to areas outside of the buffers.

It is also worth noting that the project area was thoroughly evaluated for the presence of the eastern indigo snake, which is often found in conjunction with gopher tortoise burrows. No snakes were observed near or within the burrows, and no snake skins or other evidence of the snake was found. The project area in SECI opinion does not constitute suitable habitat for the eastern indigo snake, which in Georgia are typically consists of xeric sandhills near large river bottoms. Although there may be well drained soils onsite, there are no xeric, excessively drained habitats with adjacent bottomland hardwood forests.

For the reasons discussed above, Georgia Transmission does not anticipate any adverse impacts to threatened and endangered species to result from the construction of the proposed Spring Creek 115kV Switching



Spring Creek

115 kV Switching Station

Figure 10.0: Protected Species - Gopher Tortoise Occurences

County: Miller	Date: 10/30/2012	Project #: P79262	Aerial Photography: ESRI http://www.esri.com/software/arcgis/arcgisonline/bing-maps.html

GeorgiaTransmission

Preferred Site

Existing 115kV Transmission Lines

Active Burrow - Confirmed Tortoise

Inactive & Abondoned Hole

Plot: T. Brooks

N

1" = 300'

0 150' 300'

Station. For further details, please find a copy of the Ecological Report of Findings, in **Appendix 9.3**.

7.3 Floodplains

There are no areas of FEMA designated 100-year floodplain located immediately within the proposed substation site. However, according to panel 13201C0150C, areas designated as 100-year floodplain are located approximately 600-feet north of the proposed project. Reaches of 100-year floodplain will be protected from any potential erosion associated with the construction of the transmission projects by physical and structural erosion control methods, which are documented in the Georgia Transmission's National Pollutant Discharge Elimination System (NPDES) control plan. Therefore, the proposed construction and operation of the Spring Creek 115kV Switching Station will have no adverse effect on 100-year floodplain.

7.4 Cultural Resources

As discussed in the following subsections, no archeological resources or historic structures eligible for listing on the NRHP were identified; therefore, the project will have no effect on historic properties in accordance with 36 CFR § 800.4(d)(1).

7.4.1 Archeological Resources

As described in Section 6.5.1, Southern Research's July 2011 survey identified two isolated finds and one historic farmstead (9Mi166) were within the APE. The two isolated finds are coastal plain chert debitage Site 9Mi166 consists of partially collapsed twentieth century house and barn with a surrounding surface and subsurface artifact scatter. The partially standing structures at the site lack integrity, while shovel test data and surface collections indicate site 9Mi166 is unlikely to have significant research potential. Consequently, Site 9Mi166 is not recommended eligible for the National Register of Historic Places, and does not merit further management considerations.

Please refer to the enclosed archeological survey found in **Appendix 9.4** for more information.

7.4.2 Historic Structures

Seven historic resources were identified by HPC in their June 2010 survey of historic resources within the project study area. This information was utilized in the siting and the evaluation of alternative substation sites. None of the identified historic structures are eligible for listing on the NRHP.

Historic resources are detailed in the Historic Resources Survey Report found in **Appendix 9.5**.

7.5 Wetlands and Waters

To minimize impacts, Georgia Transmission considered the location and extent of mapped wetlands shown on the USFWS National Wetland Inventory maps during the siting of the proposed project. Once the preferred site was identified, Georgia Transmission contracted with SEIC to delineate wetland and water features. In all, three jurisdictional features were identified, including one jurisdictional water (JWAT1) and two jurisdictional wetlands (JWET1 and JWET2). The jurisdictional water, an

intermittent stream, is associated with the proposed access road corridor and the jurisdictional wetlands are located to the west of the site designated for the proposed switching station.

7.5.1 Consideration of Practicable Alternatives

Whenever possible, existing roads will be used for construction and maintenance of the proposed electric transmission facilities. In general, impacts to jurisdictional features are needed in order to construct the access roads. These impacts are considered unavoidable; since access roads are necessary for the construction and maintenance of electric transmission facilities.

For this particular project, the one jurisdictional water (JWAT 1) identified by SEIC parallels Georgia Highway 26 and both run in a north-south direction. To access the station, Georgia Transmission would need to cross this body of water (Figure 4.0). Using an existing road and crossing at an already impacted area avoids introducing a duplicate and avoidable impact elsewhere. Furthermore, the wetland system associated with this body of waters is more extensive south of the proposed access point.

7.5.2 Proposed Impacts

No wetlands will be impacted by the proposed construction of the Spring Creek 115kV Switching Station; however, minor impacts resulting from the proposed construction of access roads are currently anticipated. Georgia Transmission intends to construct a new, longer culvert for JWAT1. The proposed pipe crossing will affect 71-feet of stream, and therefore qualifies under the US Army Corps of Engineers (USACE) General Conditions of the Nationwide Permit (NWP), Specifically, jurisdictional impacts satisfy the specific criteria of NWP 3 (maintenance) and NWP 12 (utility line activities) as outlined in the 2012 Nationwide Permits Final Decision Documents finalized in September 2012and the Savannah District's Nationwide Permit Regional Conditions also issued in 2012. A Pre-Construction Notification (PCN) is required for all projects meeting specific criteria of NWP 12, which will be issued prior to construction.

7.5.3 Minimization of Impacts

Buffers of 30-feet will be maintained for all streams. Within these buffers, overstory vegetation will be hand-cleared. Soil disturbance will be minimal. During construction, GTC will stringently apply to State of Georgia Best Management Practices (BMPs) to maintain water quality and minimize erosion and sedimentation.

Please see the enclosed *Biological Report of Findings* prepared by SECI for more information in **Appendix 9.3**.

7.6 Coastal Barriers

The proposed project is not located within areas protected by the Coastal Barrier Resources Act of 1972 (16 USC Part 3501 et. seq.). No impact to any areas protected by the Coastal Barrier Resources Act is anticipated.

7.7 Coastal Zone Management

The National Oceanic and Atmospheric Administration (NOAA) approved the Georgia Coastal Management Program (GCMP) on January 26, 1998, pursuant to the provisions of Section 306 of the Federal Coastal Zone Management Act of 1972, as amended, 19 U.S.C. 1455 (CZMA). The GCMP is prescribed in the Georgia Coastal Management Program and Final Environmental Impact Statement (P/FEIS) published in the *Federal Register* on February 6, 1998. The U.S. Department of Agriculture heading, "Code 10.850, Rural Electrification Loans and Loan Guarantees," is not included in Section III as a "listed activity" requiring Federal consistency.

7.8 Airports

No glide path of any airport will be affected as a result of the construction of the new Spring Creek 115kV Switching Station. Notification of the FAA is not required for this project.

7.9 Noise, Radio, and Television Interference

The construction, operation and maintenance of transmission facilities will not adversely affect the reception signals for radio, television or any other electronic device.

7.10 Aesthetics

There are no visually sensitive areas—areas of high scenic beauty, scenic overlooks, scenic highways, wilderness areas, integral vistas, parks, national forests, or rivers that are deemed wild and scenic, recreational, or in the national inventory—located near or along the project area. Consequently, no significant impacts to aesthetics are anticipated.

7.11 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires federal agencies to address potential environmental justice considerations for all federal actions by determining if a project would produce disproportionately high and/or adverse environmental and/or human health effects on minority or low-income populations.

This proposed Spring Creek 115kV Switching Station has not been sited based the socioeconomic or racial makeup of property owners affected by the proposed electrical facility. There is no disproportional impact on the health or environment of low income and/or minority populations. No additional considerations are necessary under Executive Order 12898.

7.12 Spill Prevention, Control, and Countermeasure (SPCC)

The U.S. Environmental Protection Agency, under authority of the Clean Water Act (CWA, *33 U.S.C. § 1251 et seq.*), issued the spill prevention control and countermeasure (SPCC) regulations located at 40 CFR part 112. These regulations require non-transportation related facilities to develop a SPCC plan if that facility is engaged in the consumption, usage, or storage of oil *(in threshold quantities[1])* that due to the facilities' location could reasonably be expected to discharge oil in harmful quantities into U.S. waterways or shorelines. The SPCC regulations, which became effective on January 10, 1974, were revised on July 17, 2002. The new rule revisions become effective on November 11, 2011.

The latest rules state that a facility that has 1,320 gallons of above ground storage capacity must have adequate secondary containment in order to prevent a release of oil from that facility from reaching a navigable waterway. The proposed substation will exceed the 1,320 gallon threshold due to the presence of relatively large autotransformers, power transformers, regulators and/or oil circuit breakers. The preceding list of materials and equipment are filled with highly refined, contamination-free oil for the purpose of providing insulation between internal parts that are electrically energized. Because the proposed facility will exceed the threshold promulgated in the revised SPCC regulations, it will be equipped with both a primary and a secondary containment. All substation facilities have a primary form of containment by nature of the substation pad itself. The nature of the substation pad allows it to act as an absorbent. The secondary containment structure for the proposed facility consists of a snout, or oil-water separator, in the outlet control structure that is located in the detention pond. As such, the proposed substation facility is in compliance with SPCC regulations, which will help prevent harmful quantities of oil from reaching navigable waters or shorelines in contingencies.

8. PERMITTING AND CONSTRUCTION

The design and construction of the Spring Creek 115kV Switching Station will follow guidelines noted in the *Environmental Criteria for Electrical Transmission Systems* published jointly by the United States Departments of Agriculture and Interior. Georgia Transmission will comply with standards required by the Georgia Erosion and Sedimentation Control Act of 1975, as amended, which mandates that appropriate erosion control measures such as seeding, straw bales, silt screens, and vegetative buffers be utilized where appropriate to prevent degradation of surface water quality during construction and operation. Georgia Transmission will acquire any necessary permit, including a PCN from the Corps of Engineers for use of NWP 12 and a National Pollutant Discharge Elimination System (NPDES) permit, so as to comply with all pertinent local, State, and Federal regulations during the construction and operation of this project.

Currently in Georgia, a NPDES Construction Activity General Permit (GAR No. 100002) is in effect. This permit is designed to control the erosion and sedimentation resulting from construction projects with land disturbance of 1.0 acre or more, and requires preparation and implementation of an Erosion, Sedimentation, and Pollution Control Plan (ESCP) and a Comprehensive Monitoring Program.

The usual noise, fugitive dust, and vehicular emissions from construction related activity will be temporary and minimal. Construction of this transmission line project should have no significant adverse impact on the environment.

9. APPENDICES

The following appendix documents correspondence and other contacts between Georgia Transmission Corporation and appropriate state and federal agencies or external consultants.

9.1 Project Release

9.2 Agency Correspondence

9.3 Biological Field Survey Report

9.4 Archeology Survey Report

9.5 Historic Resources Survey

9.1 Project Release

County: MILLER

Printed on: 03/14/2011

Georgia Transmission Corporation
PROJECT RELEASE

Planning Contact : CASEY PETTY
Project Manager : JAMES BILLINGSLEY

Region: Southwest

Required Cut-In Date: 05/01/2013

GTC Projects:

P79262 Spring Creek(I.T.S.) 115kV/ Substation

Approved by _____ Date 3-14-11

Approved by _____ Date 3-18-11

Approved by _____ Date 3/23/2011

Approved by _____ Date 3/24/11

Scopes:

P79262 Purchase property and construct a new four breaker 115 kV switching station at the intersection of the Blakely Primary - East Bainbridge 115 kV line and the taps to Colquitt and West Donalsonville Substations.

Justification: GTC's 2010 South Regional Study and the 2010 ITS 10-Year Plan determined that, in 2013, the loss of the Farley (APC) - South Bainbridge 230 kV line causes the North Camilla - Raccoon Creek segment of the Raccoon Creek - Thomasville 230 kV line to overload. By 2014, the aforementioned contingency causes the Donalsonville Junction (Spring Creek) - East Bainbridge segment of the Blakely Primary - East Bainbridge 115 kV line to overload. The Spring Creek 115 kV Switching Station solves these issues.

Additional scope items include: 1) Install Digital Fault Recorder (DFR) and SMP Gateway in the new switching station. 2) Request Georgia Power to modify relaying as needed at East Bainbridge and Blakeley Primary Substations.

This project was approved at the TPWG on March 10, 2011.

See separate detailed justification for more details.

	Total Budget	Retirement	Reimbursement	Net Cost	DSF	NET ITS INV
P79262	~~$2,388,646~~			~~$2,388,646~~		~~$2,388,646~~
Totals:	~~$2,388,646~~			~~$2,388,646~~		~~$2,388,646~~

SUBSTATION PROJECT INFORMATION

Project Name: Spring Creek Met Pt #: Description: New Substation

Facility Owner: GEORGIA TRANSMISSION CORPORATION

Area Project: Spring Creek 115 kV Switching Station

Op H S KV:	115kV	ITS Crit Proj:	Yes	Capacity Added:	0.00		
Op L S KV:	NA	Split Bus:	No	Capacity Removed:	0.00	Pro Type:	NA
Land Req'd:	Yes	EMC Low Side:	No	Control House:	Yes	RTU:	Yes
Mobile Req'd:	No	Req'd ITS:	05/01/2013	PCD Required:	No	PCD Date:	
Bypass Metering:	No	JSTP Submittal:	ITS Parity Only - Not Fixed Cost	JSTP Cost Type:	N/A		

Transformer ID	Action	Location	Amount

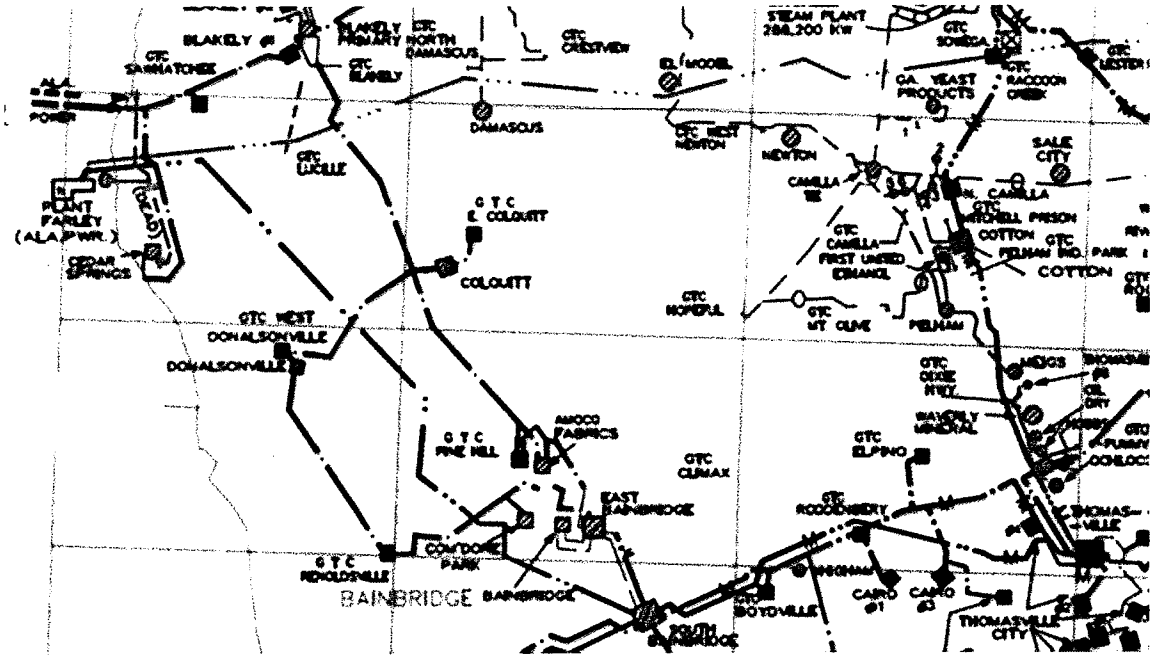
ITS Member Feeder Information

# of Feeders:	0	Regulator Size:	0
Overhd/Undergrd:	NA	Oper. Voltage:	NA

P79262 Spring Creek 115 kV Substation Project Summary
Project Cut-in Date: 5/1/2013

Background

The 2010 South Regional Study determined that, in 2013, the loss of the Farley (APC) – South Bainbridge 230 kV line causes the North Camilla – Raccoon Creek segment of the Raccoon Creek – Thomasville 230 kV line to load to 100.4% of its 509 MVA rating. By 2014, the aforementioned contingency causes the Donalsonville Junction (Spring Creek) – East Bainbridge segment of the Blakely Primary – East Bainbridge 115 kV line to load to 101.1% of its 79 MVA



rating. Existing system conditions in the area include a normally open point on the Donalsonville – West Donalsonville 115 kV segment and 1827 MW of generation at Plant Farley in Alabama.

Analysis

The overload on the North Camilla – Raccoon Creek 230 kV line segment occurs only for the near term in 2013. An operating procedure of opening breaker 075128 on the South Bainbridge – Thomasville 115 kV line at the Thomasville 115 kV station can alleviate the overload on the North Camilla – Raccoon Creek 230 kV line segment. However, the Spring Creek 115 kV station must be in service in 2013 in order to perform the operating procedure. Constructing Spring Creek in 2013 enables the ITS to delay the need to reconductor the Raccoon Creek – Thomasville 230 kV line until 2019.

The Donalsonville Junction (Spring Creek) – East Bainbridge segment is 21.9 miles and constructed with 477 ACSR, operating at 50°C. Upgrading the line may alleviate overloading issues. However, GTC's System Reliability Group has identified a need for a switching station to be placed at the location where the Blakely Primary – Pine Hill and the West Donalsonville - Colquitt 115kV sections intersect to enhance reliability in the area (see Appendix A). With the Spring Creek 115 kV switching station at Donalsonville Junction, the N.O. Point at Donalsonville

– West Donalsonville 115 kV segment can be networked. The segment is 0.6 mile, constructed with 4/0 ACSR, operating at 50°C.

Summary of Alternatives

1. Do Nothing

- The "Do Nothing" option compromises the reliability of the transmission system. This is not an acceptable alternative and was not considered.

2. Upgrade Existing Equipment ~~**(Cost – $24,380,000)**~~

- Reconductor the North Camilla – Raccoon Creek 230 kV line segment to 1033 SSAC, with 100°C operation. (2013)
- Upgrade the following overloaded 477 ACSR line segments from 50 °C to 100 °C operation:
    - 12.7 mile Donalsonville Junction –Pine Hill Junction #1 115 kV (2014)
    - 1 mile Pine Hill Junction #1 – Propex Junction 115 kV (2014)
    - 8.2 mile East Bainbridge – Propex Junction 115 kV (2014)

This option addresses all thermal needs in the area under existing conditions. However, it has a higher cost than the preferred alternative. Also, this alternative does not offer an additional benefit of addressing the reliability issues of Three Notch EMC outlined in Appendix A.

3. Construct the Spring Creek 115 kV Switching Station ~~**(Cost – $2,875,646)**~~

- Construct the 4-breaker 115 kV switching station on the Blakely Primary – East Bainbridge 115 kV line at the Donalsonville Junction location (2013).
- Close the normally open point at Donalsonville – West Donalsonville 115kV line segment. Upgrade the 0.6 mile, 4/0 Cu segment to 100°C operation (2013).

This option addresses all thermal and voltage needs in the area under existing conditions. It is the preferred alternative due to its lower cost. This alternative offers the following benefits:

- This alternative addresses the thermal overloading.
- This alternative offers an additional benefit of addressing the reliability needs for Three Notch EMC outlined in Appendix A.
- This alternative adds a benefit of having a networked line in the area.

Recommendation

In 2013, construct the 4-breaker 115 kV switching station on the Blakely Primary – East Bainbridge 115 kV line at the Donalsonville Junction location. This solution includes closing the normally open point at Donalsonville – West Donalsonville 115kV line segment and upgrading the 0.6 mile, 4/0 Cu segment to 100°C operation. This solution provides greater reliability to Three Notch EMC. Also, this project enables the ITS to perform the operating procedure of opening the breaker 075128 on the South Bainbridge – Thomasville 115 kV line at the Thomasville 115 kV station to alleviate the overload on the North Camilla – Raccoon Creek 230 kV line segment.

Appendix A
GTC Project # 79262
Spring Creek 115 kV Switching Station

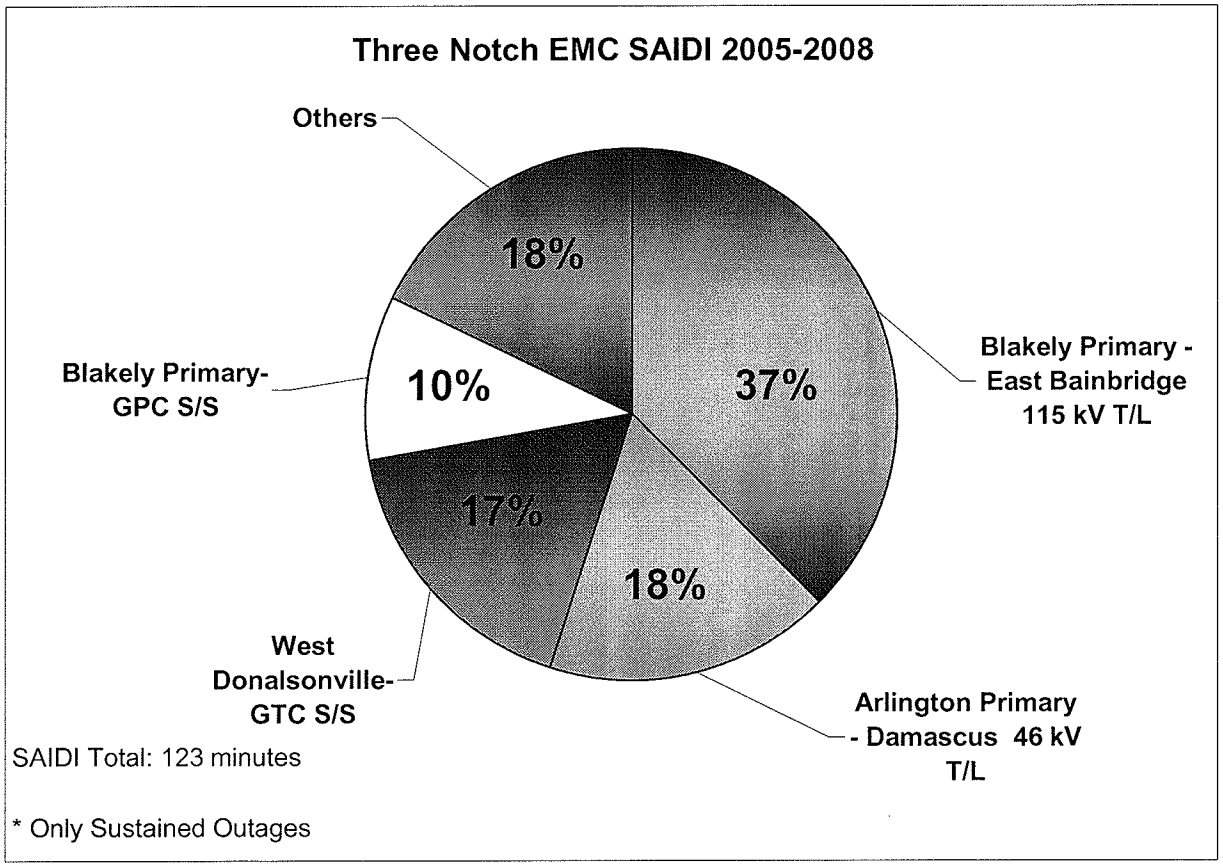
System Reliability Department
Douglas O. Maddox, Manager
June 2010

Introduction

Three Notch EMC is one of six EMCs out of 39 EMCs that GTC serves that chronically get some of the worst performance from the ITS. During 2005-2008, the EMC has had 123 minutes of ITS outage time per consumer as compared to the GTC goal of 40 minutes over the four years. The Blakely Primary – East Bainbridge line accounts for 46.2 minutes of SAIDI or 37.6 % of the EMC total. The chart below demonstrates each transmission facility that contributes to outages in the Three Notch EMC service territory.

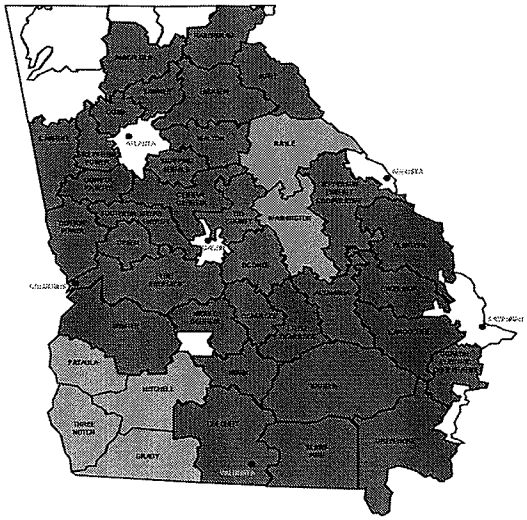
For the frequency goal, SAIFI, the EMC has had 3.93 outages per consumer during 2005-2008. This is 2.8 times worse than GTC's cumulative goal of 1.4 outages per consumer for this time frame. The Blakely Primary – East Bainbridge line is responsible for 1.39 outages per consumer. This one circuit is responsible for 35 % of the number of sustained transmission outages experienced at Three Notch EMC.

No other individual circuit or substation serving Three Notch accounts for more than 18% of their outages.



The map below shows the six EMCs who get the worst performance from the ITS.

Georgia EMC Service Areas



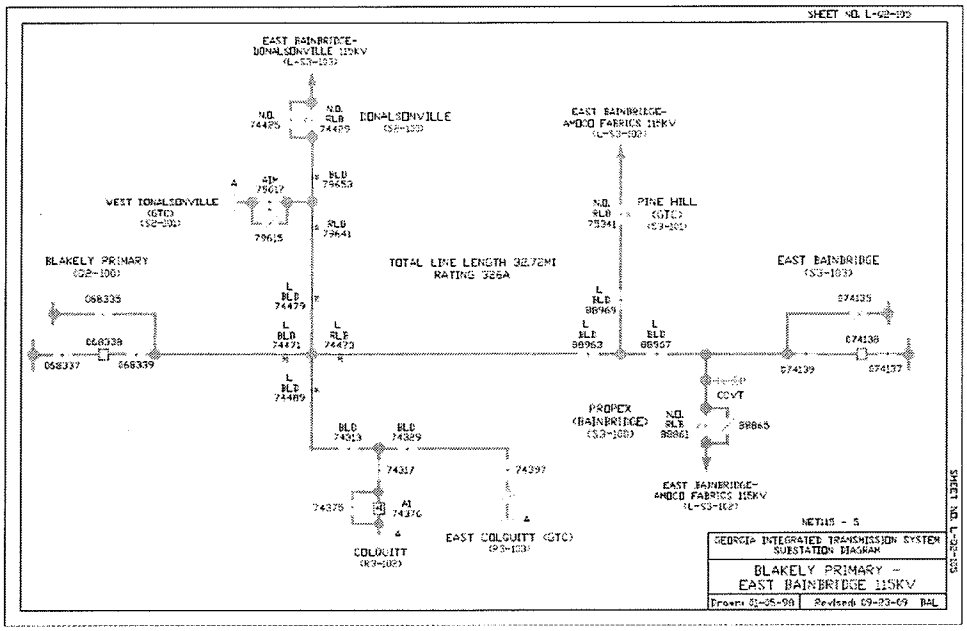
Grady
Mitchell
Pataula
Rayle
Three Notch
Washington

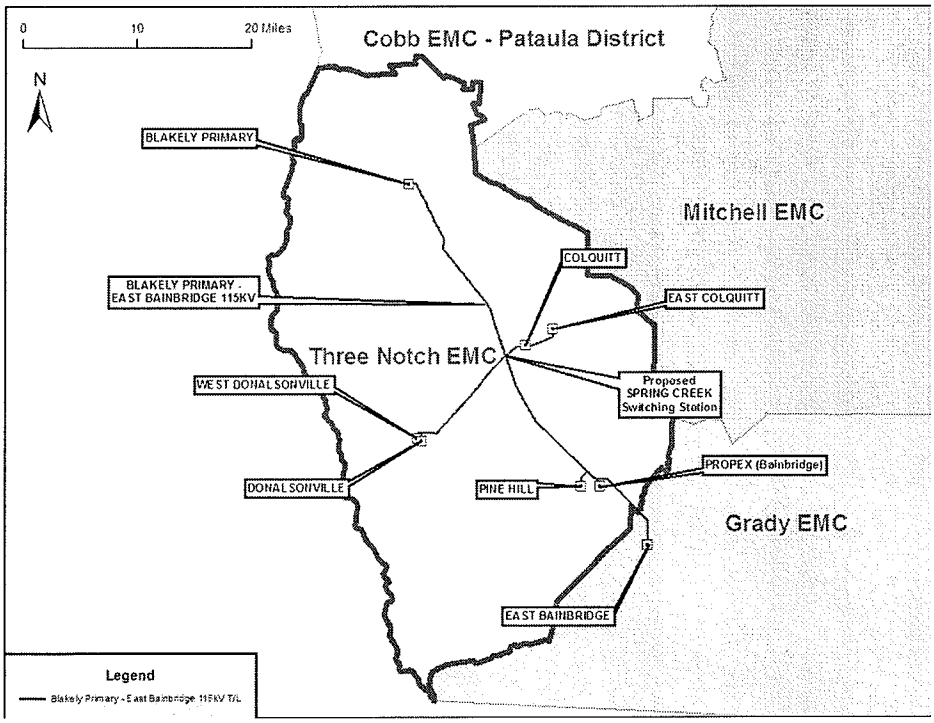
Problem Statement:

The Blakely Primary – East Bainbridge 115 kV circuit is the circuit that contributes the most SAIDI, SAFI, and MAFI to Three Notch EMC. Evaluate alternatives to reduce the frequency and duration of outages.

Existing Circuit Description:

The circuit has 59.75 miles of active line segments per STOMP. It is owned completely by Georgia Power Company. It is a mixture of 4/0 and 477 ACSR conductors. It is operated as a network between Blakely Primary and East Bainbridge. There are four taps: (1) a 0.8 mile tap to Propex, (2) a 1.6 mile tap to Pine Hill Sub, (3) a 12 mile tap to Donalsonville, and (4) a 5.3 mile tap to East Colquitt. Please see the attached ITS one line diagram and STOMP line segments report. There are three substations on this circuit: Colquitt (GPC load), East Colquitt (EMC) and West Donalsonville (EMC). There is not a DFR at either transmission substation source. Consequently, there is not an accurate fault distance to sectionalize for faults or to get a time stamp to correlate lightning strikes. The geographic area is not close to either the Albany or Valdosta TMCs and response time is a constant problem.


SHEET NO. L-02-105
EAST BAINBRIDGE-
DONALSONVILLE 115KV
(L-53-103)
DONALSONVILLE
(53-103)
EAST BAINBRIDGE-
AMOCO FABRICS 115KV
(L-53-102)
WEST DONALSONVILLE
(GTC)
(52-104)
PINE HILL
(GTC)
(53-101)
BLAKELY PRIMARY
(52-106)
TOTAL LINE LENGTH 32.72MI
RATING 326A
EAST BAINBRIDGE
(53-103)
PROPEX
(BAINBRIDGE)
(53-108)
COVT
EAST BAINBRIDGE-
AMOCO FABRICS 115KV
(L-53-102)
EAST COLQUITT (GTC)
(53-105)
COLQUITT
(53-102)
NOTES - 5
GEORGIA INTEGRATED TRANSMISSION SYSTEM
SUBSTATION DIAGRAM
BLAKELY PRIMARY -
EAST BAINBRIDGE 115KV
Drawn: 01-05-98
Revised: 09-03-09 BAL
SHEET NO. L-02-105


0
10
20 Miles
N
Cobb EMC - Pataula District
Mitchell EMC
Three Notch EMC
Grady EMC
BLAKELY PRIMARY
BLAKELY PRIMARY -
EAST BAINBRIDGE 115KV
COLQUITT
EAST COLQUITT
WEST DONALSONVILLE
Proposed
SPRING CREEK
Switching Station
DONALSONVILLE
PINE HILL
PROPEX (Bainbridge)
EAST BAINBRIDGE
Legend
Blakely Primary - East Bainbridge 115KV T/L

Performance Analysis

SUSTAINED OUTAGE HISTORY (1999-2009)						Existing	Existing	Existing	4 Breaker Proposed	4 Breaker Proposed	4 Breaker Proposed
Outage date	YEAR	Location of outage	Region	Duration of outage	Outage Cause	Colquitt	E. Colquitt	W Donalsonville	Colquitt	E. Colquitt	W Donalsonville
4/15/1999 15:21	1999	Tree contact between structures #245 and #246 from high winds	North of the junction	62	Major Storm	62	62	18	0	0	0
6/4/1999 18:49	1999	-22kA between structures #352 & #364	South of the junction	4	Lightning	4	4	4	0	0	0
3/27/2001 8:09	2001	Tree cut on line at structure 126.	West Donaldsonville Tap	51.43	Tree Cut-Public	51.43	51.43	17.43	0	0	17.43
9/15/2004 16:57	2004	Tree on line at structure 242. One conductor down	North of the junction	128.73	Tree Contact (Blown)	128.73	128.73	5.73	0	0	0
3/22/2005 12:49	2005	Structures 282 and 283 damaged. Structures 284 and 285 broken.	South of the junction	124.05	Major Storm	125	125	7	0	0	0
2/16/2006 16:22	2006	Found two sites where farmers had burned off fields yesterday. One was between structures 311 to 313 and the other was around the Pine Hill tap between structures 1 & 2. Fault was more likely to have been on the Pine Hill tap since that section of line is wood single pole. Will request fault data to confirm this	South of the junction	4.32	East Bainbridge PCB 074138 failed to reclose. Closed Blakely Primary PCB 068338 by supervisory control. Found bad closing coil on PCB 074138. UNKNOWN	4.19	4.19	4.19	0	0	0
8/7/2006 18:08	2006	A lot of lightning activity around structures 326 - 338	South of the junction	1.38	WEATHER CONDITIONS	1.38	1.38	1.38	0	0	0
1/7/2007 2:35	2007	Green Tree on line between structures 260 and 261.	North of the junction	503.23	Fall In - Off R/W	139.23	139.23	6.23	0	0	0
6/19/2007 9:30	2007	Both the IRQ & Co-9 had metal filings on induction disk in the relay for BKR. 348 at Blakely	North of the junction	44.85	Relay Misoperation, **abnormal configuration**	44.85	44.85	44.85	0	0	0
6/9/2008 11:54	2008	Airplane contacted bottom phase at structure 354. Conductor down.	South of the junction	315.81	Vehicle	65.36	65.36	21.16	0	0	0
7/29/2008 4:48	2008	Conductor steel core failed near splicing sleeve located between structures 206 and 207	North of the junction	625.65	FAILED EQUIPMENT	13	13	8	0	0	0
5/28/2009 0:01	2009	Tree fell and broke davit arm and damaged insulators in wet location. Structure #7	East Colquitt Tap	466	Fall In - Off R/W	470	470	8	470	470	0
					Average # events (per year)	1.00	1.00	1.00	0.08	0.08	0.08
					AVERAGE Duration (min)	92.43	92.43	12.16	39.17	39.17	1.45

Outage Statistics

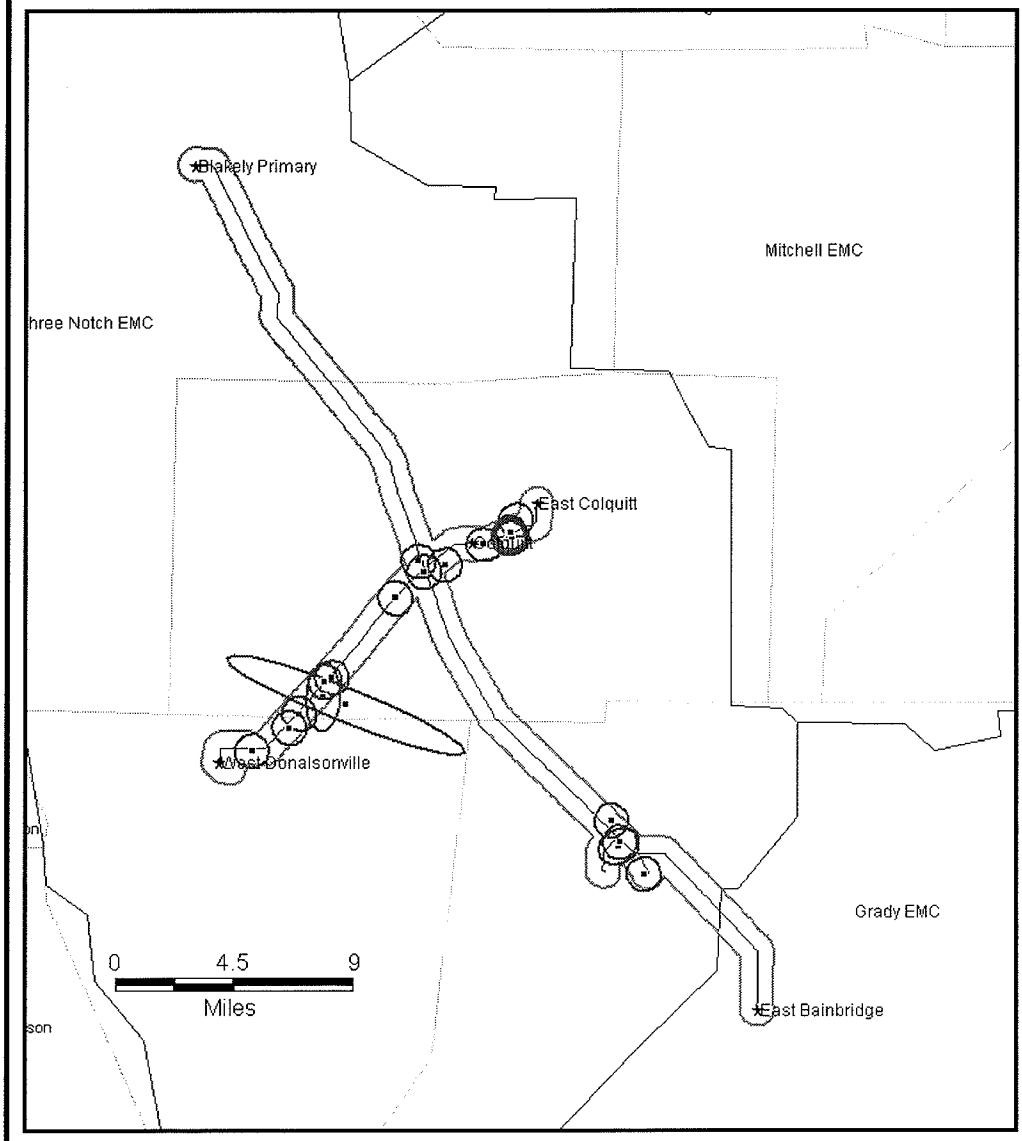
Duration Improvement (SAIDI): % Improved Reliability w/ Proposed Breakers (yearly average)	-58%	-58%	-88%
Event Reduction Improvement (SAIFI)	-92%	-92%	-92%
Average Duration Improvement (SAIDI		-68%	
System Improvement (SAIFI)		-92%	

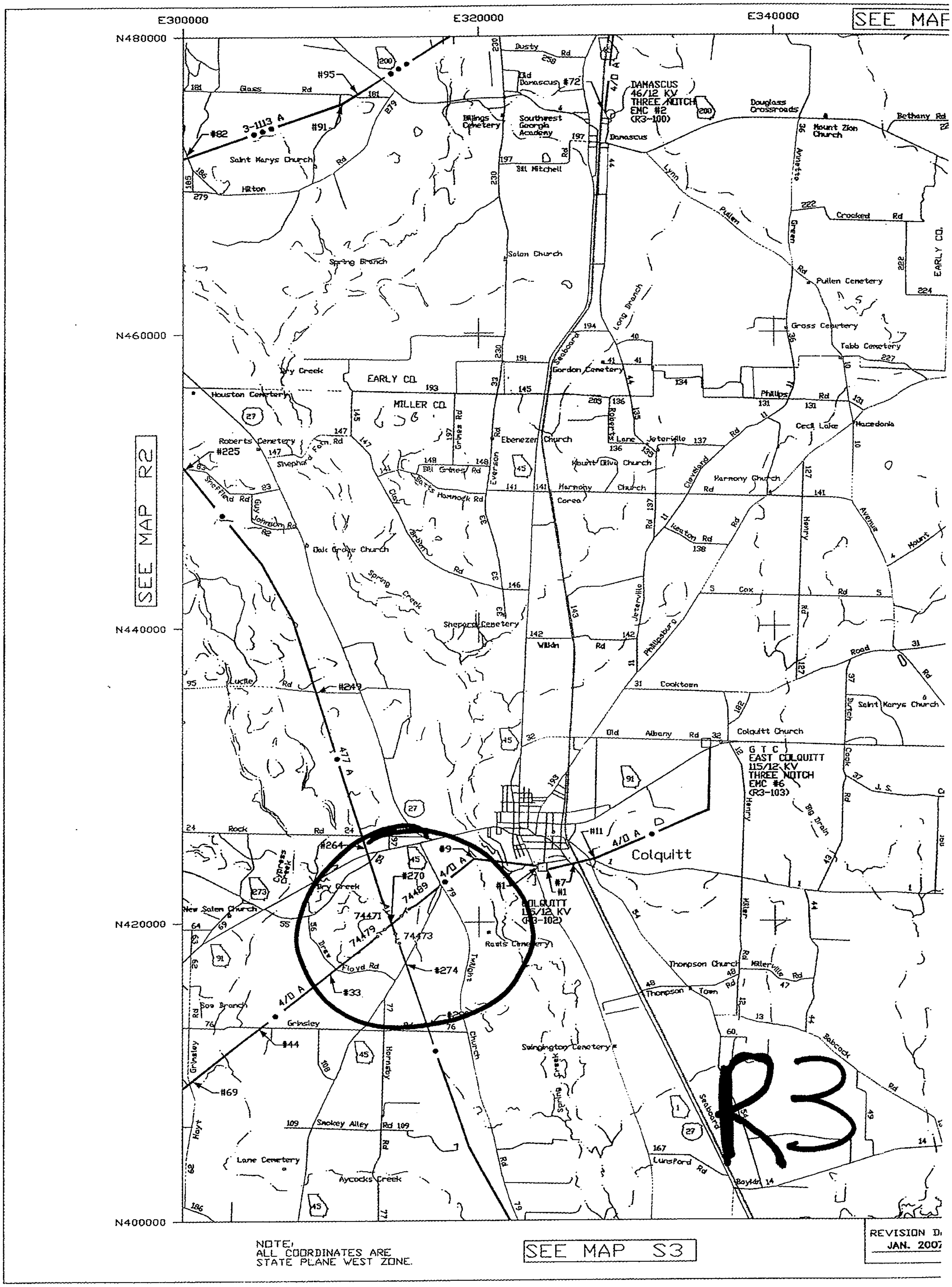
Selection of the preferred alternative:

GTC prefers alternative because it provides the most improvement of SAIDI, SAIFI, and MAIFI for the ITS customers on this circuit. This solution reduces sustained frequency by 92% and momentary frequency by 41%.

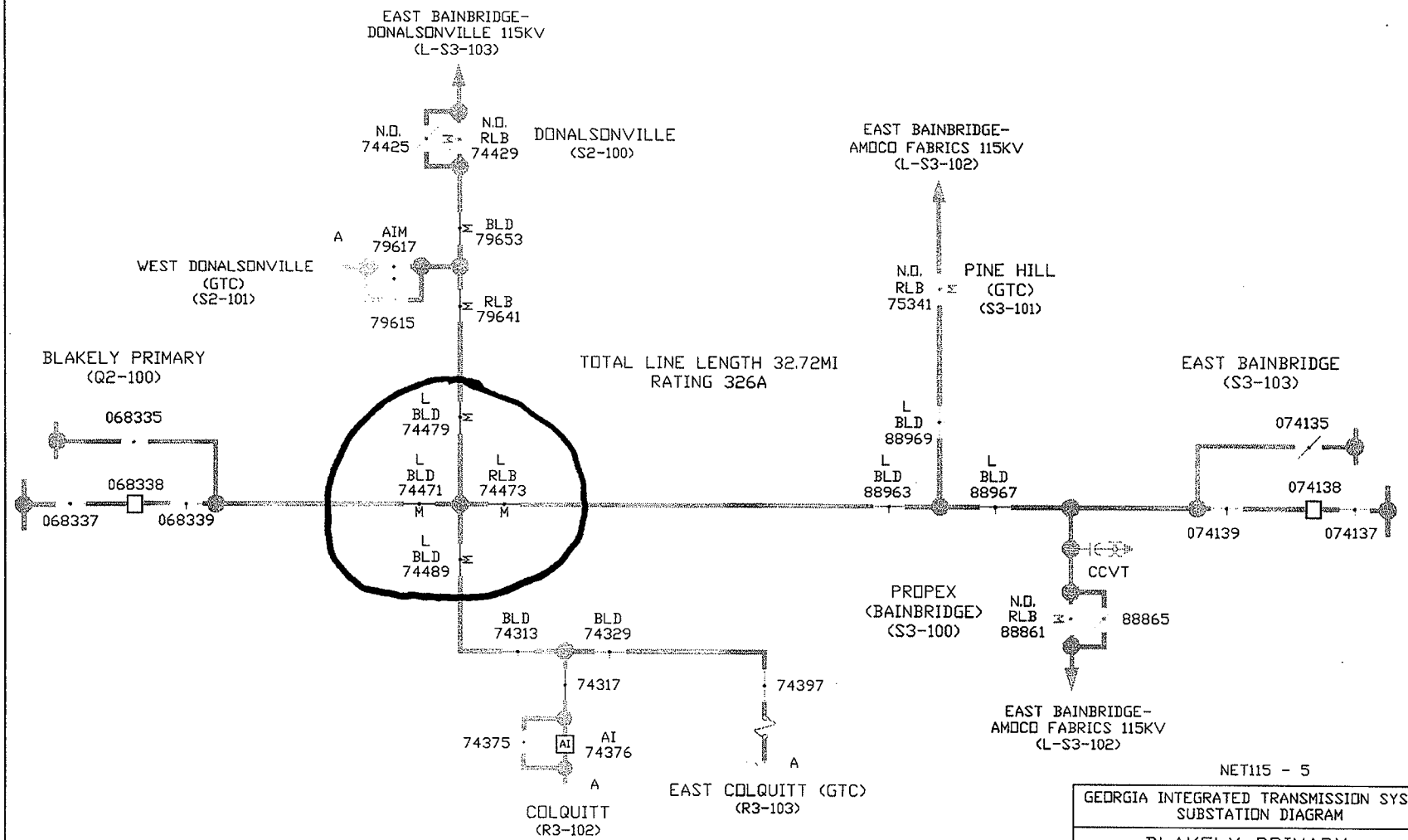
GTC System Reliability believes the improvement to momentary frequency is calculated conservatively. The momentary outages with no known location were not counted toward any improvements. Logic tells us that some of these would have been in the main line either north or south of the Spring Creek site. The main line is about 40 miles of the total 59 miles in the circuit. The diagram below shows the locations of the most frequent momentary outages for 1999-2009.

Lightning Correlated Momentary Outages (1999 - 2009)
Line/Facility BLAKELY PRIMARY - EAST BAINBRIDGE 115 KV





E300000
E320000
E340000
SEE MAP
N480000
N460000
N440000
N420000
N400000
SEE MAP R2
Dusty Rd
Old Damascus #72
DAMASCUS 46/12 KV THREE NOTCH EMC #2 (R3-100)
Damascus
Douglass Crossroads
Mount Zion Church
Bethany Rd
#95
Glass Rd
3-1113 A
#82
#91
Saint Marys Church Rd
Billings Cemetery
Southwest Georgia Academy
Bill Mitchell
Hilton
Lynn
Pullen
Annette
Green
Crooked Rd
EARLY CO.
Spring Branch
Solon Church
Pullen Cemetery
Long Branch
Gross Cemetery
Tabb Cemetery
Dry Creek
EARLY CO.
MILLER CO.
Gordon Cemetery
Houston Cemetery
Seaboard
Phillips Rd
Roberts Cemetery
#225
Shepherd Farm Rd
Grimes Rd
Ebenezer Church
Roberts Lane
Jeterville
Cecil Lake
Macedonia
Bill Grimes Rd
Everson
Mount Olive Church
Cleveland
Harmony Church
Sheffield Rd
Guy Johnson Rd
Hammock Rd
Harmony Church
Corea
Rd
Henry
Avenue
Oak Grove Church
Keaton Rd
Mount
Spring Creek
Cox Rd
Jeterville
Shepard Cemetery
Wilkin Rd
Phillipsburg
Road
Lucile Rd
#249
Cooktown
Saint Marys Church
Dutch
Old Albany Rd
Colquitt Church
G T C EAST COLQUITT 115/12 KV THREE NOTCH EMC #6 (R3-103)
Cook Rd
J. S.
477 A
Big Drain
Rock Rd
#264
#9
#11
4/0 A
Colquitt
Cypress Creek
#270
#7
#1
COLQUITT 115/12 KV (R3-102)
Dry Creek
74469
74471
74479
74473
New Salem Church
Draw
Floyd Rd
#274
Twilight
Roots Cemetery
Miller Rd
Thompson Church
Millerville Rd
Thompson Town Rd
#33
Sow Branch
4/0 A
Grinsley
Babcock
#44
Grinsley
Church
Swingington Cemetery
Hornsby
#69
Spring Creek
R3
Seaboard
Hoyt
Smokey Alley Rd
Rd
Lane Cemetery
Lunsford Rd
Aycocks Creek
Baylor
NOTE: ALL COORDINATES ARE STATE PLANE WEST ZONE.
SEE MAP S3
REVISION DATE
JAN. 2007



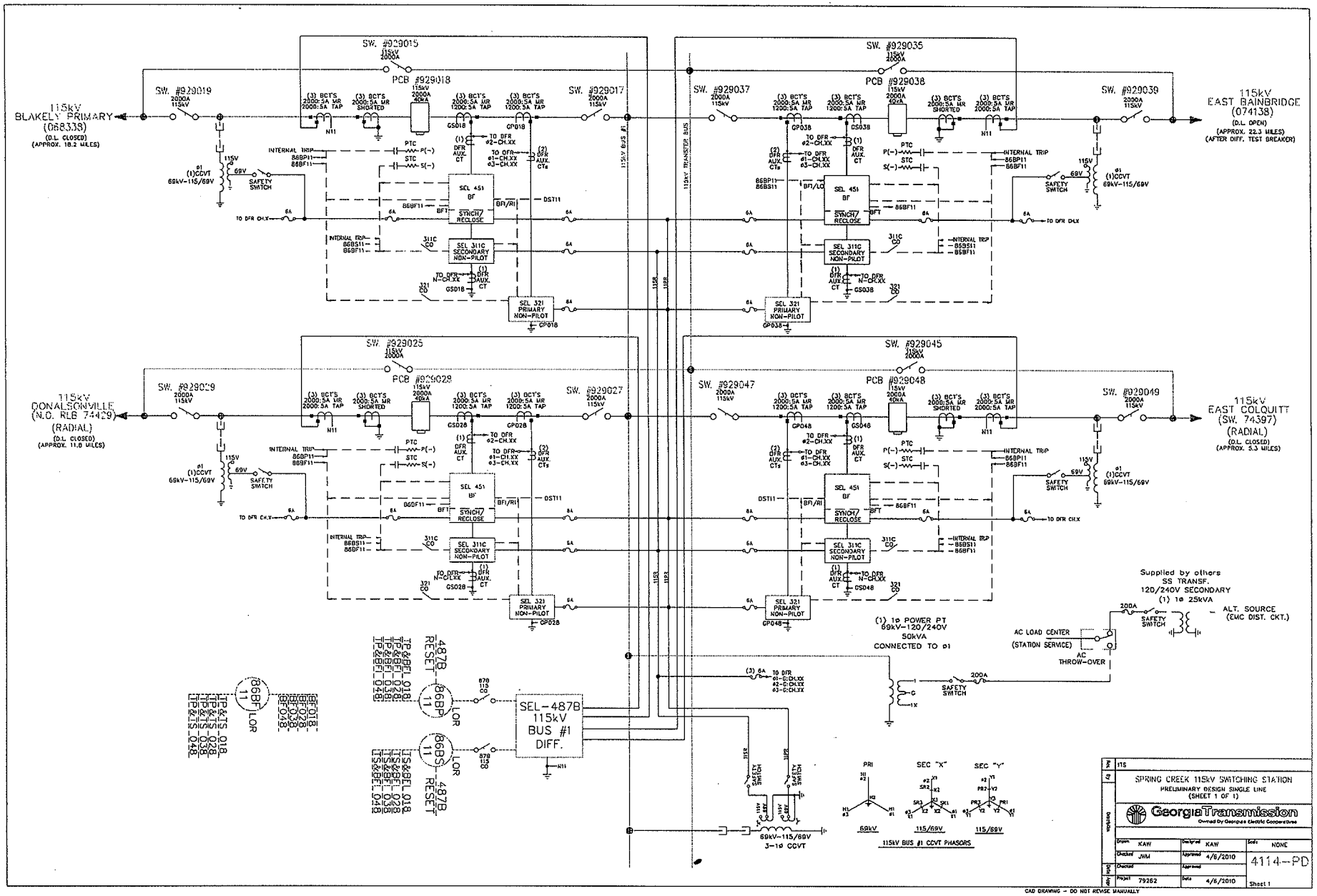
NET115 - 5

GEORGIA INTEGRATED TRANSMISSION SYSTEM
SUBSTATION DIAGRAM

BLAKELY PRIMARY - EAST BAINBRIDGE 115KV

Drawn: 01-05-98 | Revised: 09-23-09 BAL

SHEET NO. L-Q2-105


SW. #929015
PCB #929018
SW. #929019
SW. #929017
115kV BLAKELY PRIMARY (068338)
(D.L. CLOSED)
(APPROX. 18.2 MILES)
SW. #929035
PCB #929038
SW. #929037
SW. #929039
115kV EAST BAINBRIDGE (074138)
(D.L. OPEN)
(APPROX. 22.3 MILES)
(AFTER DIFF. TEST BREAKER)
115kV TRANSFER BUS
115kV BUS #1
SW. #929025
PCB #929028
SW. #929029
SW. #929027
115kV DONALSONVILLE (N.O. RLB 74429) (RADIAL)
(D.L. CLOSED)
(APPROX. 11.0 MILES)
SW. #929045
PCB #929048
SW. #929047
SW. #929049
115kV EAST COLQUITT (SW. 74397) (RADIAL)
(D.L. CLOSED)
(APPROX. 5.3 MILES)
SEL 451 BF
SYNCH/ RECLOSE
SEL 311C SECONDARY NON-PILOT
SEL 321 PRIMARY NON-PILOT
SEL-487B 115kV BUS #1 DIFF.
Supplied by others
SS TRANSF.
120/240V SECONDARY
(1) 1ø 25kVA
ALT. SOURCE (EMC DIST. CKT.)
(1) 1ø POWER PT
69kV-120/240V
50kVA
CONNECTED TO ø1
AC LOAD CENTER (STATION SERVICE)
AC THROW-OVER
69kV-115/69V 3-1ø CCVT
115kV BUS #1 CCVT PHASORS
PRI
SEC "X"
SEC "Y"
69kV
115/69V
SPRING CREEK 115kV SWITCHING STATION
PRELIMINARY DESIGN SINGLE LINE
(SHEET 1 OF 1)
Georgia Transmission
Owned By Georgia Electric Cooperatives
Drawn KAW
Designed KAW
Scale NONE
Checked JWM
Approved 4/6/2010
4114-PD
Project 79262
Date 4/6/2010
Sheet 1
CAD DRAWING - DO NOT REVISE MANUALLY
PDLS

9.2 Agency Correspondence

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

DAN FORSTER
DIRECTOR

July 21, 2011

Brandon Wall
Biologist
sligh environmental consultants, inc.
31 Park of Commerce Way
Suite 200B
Savannah, GA 31405

Subject: Known occurrences of natural communities, plants and animals of highest priority conservation status on or near Spring Creek Substation, Miller County, Georgia

Dear Mr. Wall:

This is in response to your request of June 20, 2011. According to our records, within a three-mile radius of the project site there are the following Natural Heritage Database occurrences:

GA *Ammodramus henslowii* (Henslow's Sparrow) approx. 0.5 mi. NW of site
GA *Anodontoides radiatus* (Rayed Creekshell) approx. 1.5 mi. NE of site
GA *Arnoglossum diversifolium* (Variable-leaf Indian-plantain) approx. 1.5 mi. NE of site
Asclepias pedicellata (Savanna Milkweed) approx. 1.5 mi. NE of site
GA *Elliptio arctata* (Delicate Spike) approx. 1.5 mi. NE of site in Spring Creek
GA *Elliptio purpurella* (Inflated Spike) approx. 1.5 mi. NE of site in Spring Creek
GA *Elliptio purpurella* (Inflated Spike) approx. 2.0 mi. N of site in Spring Creek
GA *Epidendrum magnoliae* (Greenfly Orchid) approx. 1.5 mi. NE of site
GA *Gopherus polyphemus* (Gopher Tortoise) approx. 1.5 mi. W of site
US *Hamiota subangulata* (Shinyrayed Pocketbook) approx. 1.5 mi. NE of site in Spring Creek
US *Hamiota subangulata* (Shinyrayed Pocketbook) approx. 3.0 mi. SE of site in Spring Creek
GA *Litsea aestivalis* (Pond Spice) approx. 1.0 mi. SW of site
GA *Litsea aestivalis* (Pond Spice) approx. 1.5 mi. NE of site
GA *Lythrum curtissii* (Curtiss' Loosestrife) approx. 1.5 mi. NE of site
GA *Macrochelys temminckii* (Alligator Snapping Turtle) approx. 1.0 mi. E of site in Spring Creek
GA *Macrochelys temminckii* (Alligator Snapping Turtle) approx. 3.0 mi. N of site in Spring Creek
Myotis austroriparius (Southeastern Myotis) [HISTORIC] approx. 2.5 mi. NE of site
Notropis chalybaeus (Ironcolor Shiner) approx. 1.5 mi. W of site in Cypress Creek
US *Pleurobema pyriforme* (Oval Pigtoe) approx. 1.5 mi. NE of site in Spring Creek

US *Pleurobema pyriforme* (Oval Pigtoe) approx. 3.0 mi. SE of site in Spring Creek
GA *Pteronotropis welaka* (Bluenose Shiner) approx. 1.5 mi. NE of site in Spring Creek
GA *Sideroxylon thornei* (Swamp Buckthorn) approx. 1.5 mi. NE of site
MAYHAW WMA [Heritage Preserve] approx. 0.5 mi. NW of site
Mayhaw WMA [GA DNR] approx. 2.5 mi. NW of site
Spring Creek [High Priority Stream] approx. 1.0 mi. E of site

* Entries above proceeded by "US" indicates species with federal status (Protected, Candidate or Partial Status). Species that are federally protected in Georgia are also state protected; "GA" indicates Georgia protected species.

Recommendations:

We have no records of high priority species or habitats within the project area. However, two federally listed species, *Hamiota subangulata* (Shinyrayed Pocketbook) and *Pleurobema pyriforme* (Oval Pigtoe) are within three miles of the proposed project. Section 9 of the Endangered Species Act states that taking or harming of a listed species is prohibited. We recommend all requestors with projects located near federally protected species consult with the United States Fish and Wildlife Service. For southeast Georgia, please contact Strant Colwell (912-265-9336, ext.30 or Strant_Colwell@fws.gov). In southwest Georgia, please contact John Doresky (706-544-6999 or John_Doresky@fws.gov). In north Georgia, please contact Robin Goodloe (706-613-9493, ext.221 or Robin_Goodloe@fws.gov).

In order to protect aquatic habitats and water quality, we recommend that all machinery be kept out of creeks during substation construction. Further, we strongly advocate leaving vegetation intact within 100 feet of creeks. We realize that some trees may have to be removed, but recommend that shrubs and ground vegetation be left in place. We also recommend that stringent erosion control practices be used during construction activities and that vegetation is re-established on disturbed areas as quickly as possible. Silt fences and other erosion control devices should be inspected and maintained until soil is stabilized by vegetation. Please use natural vegetation and grading techniques (e.g. vegetated swales, turn-offs, vegetated buffer strips) that will ensure that the project area does not serve as a conduit for storm water or pollutants into the water during or after construction. These measures will help protect water quality in the vicinity of the project as well as in downstream areas.

Please be aware that this project occurs near Spring Creek, a high priority stream. As part of an effort to develop a comprehensive wildlife conservation strategy for the state of Georgia, the Wildlife Resources division has developed and mapped a list of streams that are important to the protection or restoration of rare aquatic species and aquatic communities. High priority waters and their surrounding watersheds are a high priority for a broad array of conservation activities, but do not receive any additional legal protections. We now have GIS ESRI shapefiles of GA high priority waters available on our website (http://www.georgiawildlife.com/content/displaycontent.asp?txtDocument=89&txtPage=13). Please contact the Georgia Natural Heritage Program if you would like additional information on high priority waters.

NEW - Data Available on the Nongame Conservation Section Website - NEW

NEW Georgia protected plant and animal profiles are available on our website. Originating with the State Wildlife Action Plan, a strategy guiding conservation in Georgia, the accounts cover basics like descriptions and life history, as well as threats, management recommendations and conservation status. Visit http://www.georgiawildlife.com/node/2223?cat=6.

By visiting the Nongame Conservation Section Website you can view the highest priority species and natural community information by Quarter Quad, County and HUC8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Information page at: http://www.georgiawildlife.com/conservation/species-of-concern?cat=conservation

An ESRI shape file of our highest priority species and natural community data by quarter quad and county is also available. It can be downloaded from: http://georgiawildlife.com/sites/default/files/uploads/wildlife/nongame/zip/gnhpds.zip

Disclaimer:

Please keep in mind the limitations of our database. The data collected by the Nongame Conservation Section comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Nongame Conservation Section can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of highest priority species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our web site (http://www.georgiawildlife.com/node/1376) or by contacting our office. If I can be of further assistance, please let me know.

Sincerely,

Katrina Morris
Environmental Review Coordinator

9.3 Ecological Report of Findings – Sligh Environmental Consultants, Inc.

sligh environmental consultants, inc

February 1, 2012

Ms. Tasha Brooks
Georgia Transmission Corporation
2100 East Exchange Place
Tucker, Georgia 30084

Subject: **Report of Findings** **SECI#: 01-11-029**
Spring Creek Substation
Project Number: P79262
Miller County, Georgia

Dear Ms. Brooks:

Sligh Environmental Consultants, Inc. (SECI) is pleased to provide you with this letter report of findings for the Spring Creek Substation project (Project Number: P79262). The project site is located west of Georgia Highway 45, approximately one mile south of Georgia Highway 91, west of Colquitt, Miller County, Georgia (Figure 1).

I. SUMMARY

The Spring Creek Substation site is located at latitude 31°9' 11" N, longitude 84°45' 37" W. The survey area consists of the +/- 10 acre substation site and a +/- 4,100 foot long proposed access road corridor. Although the width of the road easement is not anticipated to exceed 50 feet, a 100 foot wide corridor was evaluated along the road to account for any possible shifts in alignment, design changes, etc. The total project area evaluated totals +/- 17.85 acres, and it is located within the Spring Creek Watershed (Hydrologic Unit Code 03130010). The ecology field survey of the project area was conducted on June 28, 2011 to collect information on vegetation communities, threatened and endangered species occurrences, habitats of concern, jurisdictional wetlands and other waters of the United States, non-jurisdictional wet weather conveyances, access issues, and existing road crossings. The results of the field survey are outlined below.

II. HABITAT DESCRIPTIONS

The project area consists of a mixture of habitats from natural pine to agricultural field (Figure 2). One wetland area was identified within the project area and occupies the southwestern most corner of the project area. Additionally, one other jurisdictional water was identified within the proposed access road corridor. Both of these features were delineated and GPS located and have been superimposed on the attached exhibit titled *Figure 3: Map of Ecological Features Spring Creek 115 kV Substation Project Number: P79262 Miller County, Georgia.* A detailed description of each of these areas is included in Section III of this report.

- **Agricultural Field**
  Approximately one half of the total project area (+/- 8.86 acres) consists of active agricultural field. At the time of the site visit, the fields were planted in either peanuts (*Arachis hypogaea*) or cotton (*Gossypium spp.*).

- **Mixed Hardwood Upland**
  The second most common habitat on-site is the mixed hardwood upland at 5.88 acres or 33% of the total project area. This habitat ranges from narrow fence rows and wind breaks between the agricultural fields to larger forested blocks on the western portion of the project site. The approximate age of this habitat is between 30 and 50 years of age. The canopy is closed and is dominated by water oak (*Quercus nigra*), live oak (*Quercus virginiana*), and sweetgum (*Liquidambar styraciflua*). The understory contains blackgum (*Nyssa sylvatica*), sweetgum, water oak, and blueberry (*Vaccinium spp.*).

- **Transmission Line ROW**
  The existing transmission line ROW habitat on-site comprises approximately 1.88 acres of the project area. This habitat is dominated by herbaceous species that have been maintained as part of the transmission line

maintenance schedule. Vegetation within this habitat consists of bahia grass (*Paspalum notatum*), broomsedge (*Andropogon virginicus*), rosette grass (*Dichanthelium acuminatum*), goldenrod (*Solidago spp.*), ragweed (*Ambrosia artemisiifolia*), bracken fern (*Pteridium aquilinum*), dog fennel (*Eupatorium capillifolium*), and blackberry (*Rubus spp.*).

- **Bottomland Hardwood**
  The bottomland hardwood habitat is situated in the southwestern most corner of the property and totals approximately 0.30 acres. This forested habitat is dominated by bald cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*) with lesser amounts of red maple (*Acer rubrum*), water oak, slash pine (*Pinus elliottii*), and blackgum. The quality of this wetland is good and the hydrology and vegetation are intact.

- **Emergent Wetland**
  The emergent wetland is a portion of the above described bottomland hardwood habitat that has been cleared and maintained as part of the existing transmission line maintenance schedule. This habitat only comprises 0.01 acre of the project area and is dominated by sedges (*Carex spp.*), plumegrass (*Erianthus giganteus*), and woolgrass (*Scirpus cyperinus*). The natural quality of this wetland has been slightly degraded by historic transmission line construction, and the vegetation has been converted from hardwoods to emergent species.

- **Natural Pine**
  The natural pine habitat (0.23 acres) is located in one small area north of and adjacent to the proposed access road. This habitat consists of an older loblolly pine (*Pinus taeda*) overstory (+/- 40 – 50 years of age) with a thick understory of hickory (*Carya tomentosa*), live oak, water oak, sweetgum, blackgum, and beautyberry (*Callicarpa americana*).

- **Pine Plantation**
  The 0.69 acres of pine plantation on site is located south and west of the proposed access road corridor. This planted habitat consists of a dense overstory of 20 – 25 year old loblolly pine with an understory of hickory, water oak, beautyberry, blackgum, black cherry (*Prunus serotina*), poison ivy (*Toxicodendron radicans*), and trumpet creeper (*Campsis radicans*).

III. JURISDICTIONAL AND NON-JURISDICTIONAL WATERS

Jurisdictional Waters of the U.S. are defined by 33 CRF Part 328.3 (b) and are protected by Section 404 of the Clean Water Act (33 U.S.C. 1344), which is administered and enforced by the United States Army Corps of Engineers (USACE). The approximate limits of jurisdictional areas were determined using the *1987 Corps of Engineers Wetlands Delineation Manual* along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region.*

The preliminary jurisdictional area locations were determined by compiling available topography, National Wetlands Inventory (NWI) data, and aerial photography of the project area. The entire project area was inspected thoroughly for the presence of wetlands or other jurisdictional waters, but areas having wetland signatures on the aerial photographs, mapped as a low area or drainage feature on the US Geological Survey topography data, or classified as wetland on the NWI were ground truthed and delineated if necessary. Areas were considered wetland if they exhibited evidence of positive hydrology, hydric soils, and hydrophytic vegetation. Upland areas illustrated soils and vegetation characteristic of upland areas of the Southeastern Plain of Georgia and showed a lack of positive wetland hydrology.

- **Wetlands**
  There is only one wetland area (which was divided into two habitat types (Jwet 1 and Jwet 2)) on the site totaling approximately 0.31 acres. As described above, 0.3 acres of this area is a forested bottomland hardwood habitat dominated by cypress and tupelo with lesser amounts of other hardwood species, and 0.01 acres consists of emergent species within the existing transmission line ROW. The vegetation is hydrophytic meaning that it is well adapted to life in saturated conditions. Although the soils were not saturated during the site visit due to extremely dry conditions, the soils did exhibit positive hydric soil indicators such as color, texture, organic streaking, and oxidation. Wetland hydrology consists of water staining, exposed roots, old water marks, and buttressing. Both the forested and non-forested areas of this wetland are common to this area of Georgia.

- **Jurisdictional Waters**
  One other jurisdictional water (Jwat 1) was identified within the proposed access road corridor. It is our opinion that this area may be an intermittent stream; however, it exhibits criteria of both an intermittent and ephemeral stream as well as a wetland. This feature is linear in nature, and the soils are hydric exhibiting oxidation and organic streaking. There is a narrow, shallow, but defined bed and bank north of the existing access road, and the bed south of the road is wider, flatter, and shallower with a less defined/cut bank. It appears that there is periodic flow within this channel due to the existence of a bare stream channel and deposited leaf litter, but the channel is not contiguous outside of the project area. This feature shows up as an intermittent stream on the USGS topography map, but the channel is broken and flattens out north and south of the project area. It is unclear at this time whether the US Army Corps of Engineers (USACE) would consider this area to be a stream or a wetland, but it is our opinion that it may be considered an intermittent stream segment. We recommend you obtain USACE verification of this area prior to any land disturbance within the boundaries of our delineation.

- **Wet Weather Conveyance:**
  There is one small non-jurisdictional wet weather conveyance (Wwc 1) which crosses the proposed access road corridor. This conveyance consists of an old ditch which was historically used to drain the agricultural fields on site. Today, the ditch contains a thick layer of leaves in the bottom, has tree saplings and vegetation growing in it and on the banks, and has non-hydric soils. This conveyance is approximately seven feet wide and two feet deep. Because this conveyance is a manmade feature, originates in upland, and does not exhibit any of the three criteria of a wetland, it is our opinion that it is not jurisdictional.

IV. ACCESS ISSUES

Five areas as illustrated on Figure 3 were identified as potential access issues or areas deserving of awareness. The first, just west of Georgia Highway 45, consists of old buildings which may need to be demolished during construction of the proposed access road. The remainder of the access issues consist of fences and/or gates and do not pose a significant threat to access.

V. EXISTING CROSSINGS

There are two existing crossings located within the proposed access road corridor. The first is associated with Jwat 1 and contains two 24-inch corrugated metal pipes. This existing road crossing is 12 feet wide at the top and is in good condition. The second road crossing is associated with Wwc 1 and is an at-grade dirt agricultural road with no pipe.

VI. THREATENED AND ENDANGERED SPECIES

The United States Fish and Wildlife Service (USFWS) County Listing of Threatened and Endangered Species in Miller County, Georgia, the Georgia Department of Natural Resources (GDNR) County Listing of Locations of Special Concern Animals, Plants, and Natural Communities in Miller County, Georgia, and the GDNR Listing of Locations of Special Concern Animals, Plants and Natural Communities by Quarter Quad for the Donalsonville NE Quadrangle were reviewed to determine the proposed project's potential impact to protected species in Miller County. Pursuant to the Endangered Species Act of 1973, a pedestrian survey was conducted to identify protected individuals and/or potential habitat for protected individuals within the project area. The most current list of protected species for Miller County (last updated May 2004) is attached to this report. These species include:

Bald Eagle (*Haliaeetus leucocephalus*)	Protected
Red Cockaded Woodpecker (*Picoides borealis*)	Federally Endangered
Wood Stork (*Mycteria americana*)	Federally Endangered
Alligator Snapping Turtle (*Macroclemys temminckii*)	State Threatened
Eastern Indigo Snake (*Drymarchon corais couperi*)	Federally Threatened
Gopher tortoise (*Gopherus polyphemus*)	State Threatened
Flatwoods Salamander (*Ambystoma cingulatum*)	Federally Threatened
Oval Pigtoe Mussel (*Pleurobema pyriforme*)	Federally Endangered
Shiny-Rayed Pocketbook Mussel (*Hamiota subangulata*)	Federally Endangered
American Chaffseed (*Schwalbea americana*)	Federally Endangered
Buckthorn (*Sideroxylon thornei*)	State Endangered
Curtis Loosestrife (*Lythrum curtissii*)	State Threatened

Pondspice (*Litsea aestivalis*)..... State Threatened
Variable-Leaf Indian Plantain (*Cacalia diversifolia*)..... State Threatened

During the pedestrian survey of the project area, five possible gopher tortoise burrows were identified within an existing transmission line ROW. Four of these holes are apparently abandoned and are not currently being used by the gopher tortoise. One, however, is active. Each hole was GPS located and flagged for easy identification in the field. Holes 1 and 2 were scoped with an infrared camera to determine the exact depth / composition of the burrow and to see if any gopher tortoises were in the burrow. Holes 3, 4, and 5 which are obviously inactive were found to be shallow and not inhabited by the gopher tortoise and were not scoped. Following is a description of each area evaluated by SECI, and photographs of each hole are attached to this report.

Burrow 1:
Burrow 1 is located at 84°45' 40"W 31°9' 13.53"N approximately 127 feet southeast of the northwestern corner of the project area. This burrow is approximately 5 feet deep, and the opening is approximately 12 inches wide and 8 inches tall. It is clear that this burrow is being actively used due to the fresh mounded apron, fresh tracks, and fresh plastron markings at the entrance of the hole and within the burrow. Upon scoping the burrow with the infrared camera, a gopher tortoise was positively identified approximately five feet in the hole. Burrow 1 is an active gopher tortoise burrow. Photographic documentation of Burrow 1 is included in Figure 4 attached to this report.

Hole 2:
Hole 2 is located approximately 250 feet south-southeast of Burrow 1 at 84°45' 38.03"W 31°9' 11.28"N. This hole was only three feet deep, and the opening was rather circular and eight inches in diameter indicating that it could be an old gopher tortoise burrow or even an armadillo hole. There were no fresh tracks or markings at the entrance of the hole and no fresh apron. Also, there was debris such as leaves, sticks, and grass at the entrance of the burrow as well as vegetation such as blackberry and ragweed growing around the hole. Upon scoping the hole, no gopher tortoise was identified. It is our opinion that this hole has been abandoned for some time and is not being used by the gopher tortoise. A photograph of Hole 2 is included in Figure 5 attached to this report.

Holes 3, 4, and 5:
Holes 3, 4, and 5 are located in close proximity to each other approximately 255 feet south-southeast of Hole 2 at approximately 84°45' 38.15"W 31°9' 8.78"N. These holes are shallow (three feet, one foot, and four feet respectively) and contain no fresh tracks, markings, or aprons that would indicate they are active. Additionally, vegetation is growing around all of the openings and within the entrances, and there is no evidence that any of these holes are being used by the gopher tortoise. It is our opinion that these holes have not been active for quite some time. Upon close examination, no gopher tortoise was identified. It is our opinion that these holes have been abandoned for some time and are no longer being used by the gopher tortoise. A photograph of Hole 3 is included in Figure 5 attached to this report. Photographs of Holes 4 and 5 are included in Figure 6.

Eastern Indigo Snake:
Because the site contains one active and several possible old, inactive gopher tortoise burrows, the project site was thoroughly evaluated for the presence of the eastern indigo snake. Throughout its range, habitat for the eastern indigo snake may include flatwoods, hammocks, dry glades, stream bottoms, cane fields, riparian thickets, and high ground with well-drained, sandy soils. In Georgia, however, the snakes prefer excessively drained, deep sandy soils along major streams, as well as dry longleaf pine (*Pinus palustris*)/turkey oak (*Quercus laevis*) sandhill communities and xeric slash pine plantations all in association with significant wetlands or stream systems. They spend much of their time in underground burrows and feed on rodents, birds, other snakes, and frogs. They often use gopher tortoise burrows as suitable dwellings. The species is listed as state and federally threatened.

As described above, the eastern indigo snake is often found in conjunction with the gopher tortoise. Although the project area contains an active gopher tortoise burrow and several abandoned ones, it is our opinion that the site does not contain suitable habitat for the eastern indigo snake as described above. These snakes are typically found along xeric sandhill habitats near major river bottoms. The project area consists of mixed hardwood forest, active agricultural field, and maintained transmission line right-of-way. Although there may be some relatively well drained sandy soils on the site, there are no xeric, excessively drained habitats with adjacent bottomland hardwood forest that are typically associated with indigo snakes. The upland habitats on-site consist of common water oak/gum/live oak dominated forested upland,

and the wetland on-site consists of cypress/tupelo dominated forest or emergent wetland not associated with a major creek or stream. There were no snakes observed near or within any of the burrows/holes on-site, and no snake skins or other evidence of the snake was found. It is therefore our opinion that the project area does not contain suitable habitat for the eastern indigo snake, and the proposed project would have no effect on this species.

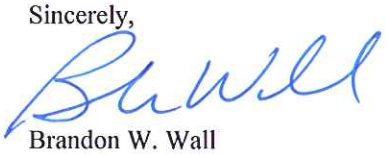
Proposed Management:
Based on our discussion of these findings with you, it is our understanding that your company proposes to maintain at least a 15-foot wide buffer from the active gopher tortoise burrow to the footprint of the proposed substation facility. In addition, you propose to erect some type of barrier fencing between the active burrow and the project construction area in order to protect the existing gopher tortoise. With this plan in mind, SECI contacted Ms. Sandy Abbott of the USFWS – Fort Benning field office to discuss the project and the proposed gopher tortoise management plan. She stated that the gopher tortoise is not a federally listed species, and as such, the USFWS has no regulation over its management. Their involvement would only arise if the burrow provided habitat for the eastern indigo snake which is a federally threatened species. We explained that we scoped the borrow, saw the tortoise, and did not observe an eastern indigo snake. We also explained that it is our opinion that the project area does not contain suitable habitat for the eastern indigo snake. Although she did not state it directly, Ms. Abbott seemed satisfied with our findings that the project would not impact the eastern indigo snake. Ms. Abbott did not recommend any further coordination with her office, but she did suggest that if GTC had any further interest in the gopher tortoise, then you should contact GDNR for more information.

Conclusion:
None of the other species as listed above were observed during the pedestrian survey of the project area. Also, it is our opinion that no suitable habitat is located within or immediately adjacent to the project area for any of these species. The upland habitats within the project area consist of regularly maintained areas, mixed hardwood upland, natural pine forest, and pine plantation areas which are typical for similar habitats within Miller County and the Georgia Southeastern Plain. The wetland habitats consists of cypress/tupelo dominated forest and emergent wetland within an existing transmission line ROW which are common to this area of Georgia as well. Due to the lack of suitable habitat and the lack of species observations, it is our opinion that no other threatened, endangered, or otherwise protected species are located within or immediately adjacent to the project area. Although the current absence of any listed species does not necessarily preclude the possibility of the future occupation, the available habitats found on the subject property are common throughout the region, and any future on-site habitat modification or land disturbance activities should not adversely affect the remainder of the above listed species.

Based on the proposed gopher tortoise management plan as outlined above, and upon our brief conversation with USFWS, it is our opinion that the installation of the substation facility should have no negative impact on the active gopher tortoise burrow, or any abandoned burrow on the site. It is our opinion that these management measures would sufficiently protect the existing gopher tortoises on this project site. Additionally, because no suitable eastern indigo snake habitat is present, and no evidence of the snake was observed on-site, it is our opinion that the proposed project would have no effect on the eastern indigo snake.

We greatly appreciate the opportunity to provide you with this report of findings. If you require any additional information pertaining to this project, or should you have any questions or comments, please do not hesitate to contact us at (912) 232-0451.

Sincerely,



Brandon W. Wall
Project Biologist
Sligh Environmental Consultants, Inc.

Enclosures

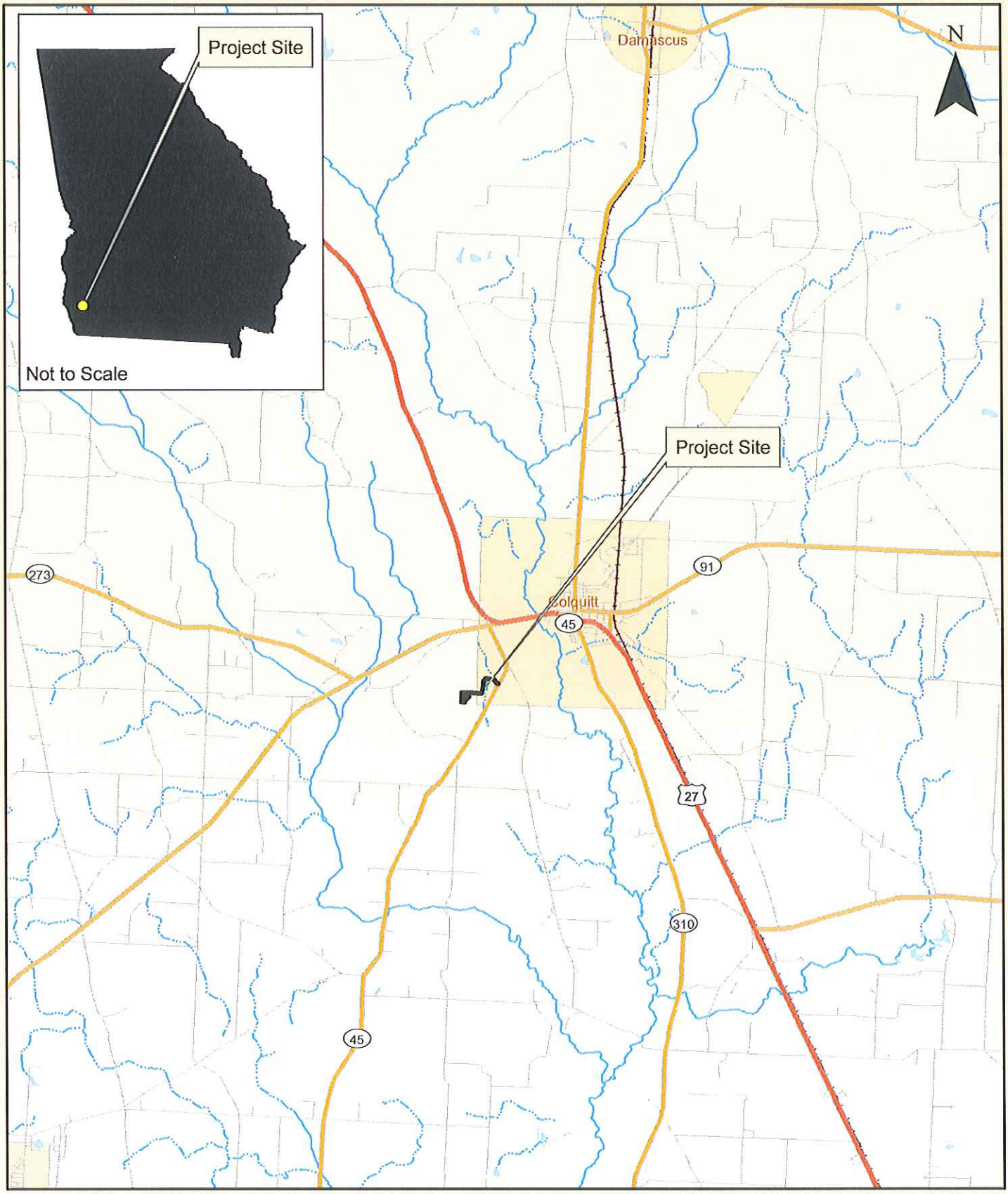


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Figure 1: Project Location Map
Spring Creek 115kV Substation
Project Number: P79262
Miller County, Georgia

2
Miles

Exhibit Date: June 29, 2011
Drawn By: BWW
Reviewed By: DJP
Job Number : 01-11-029

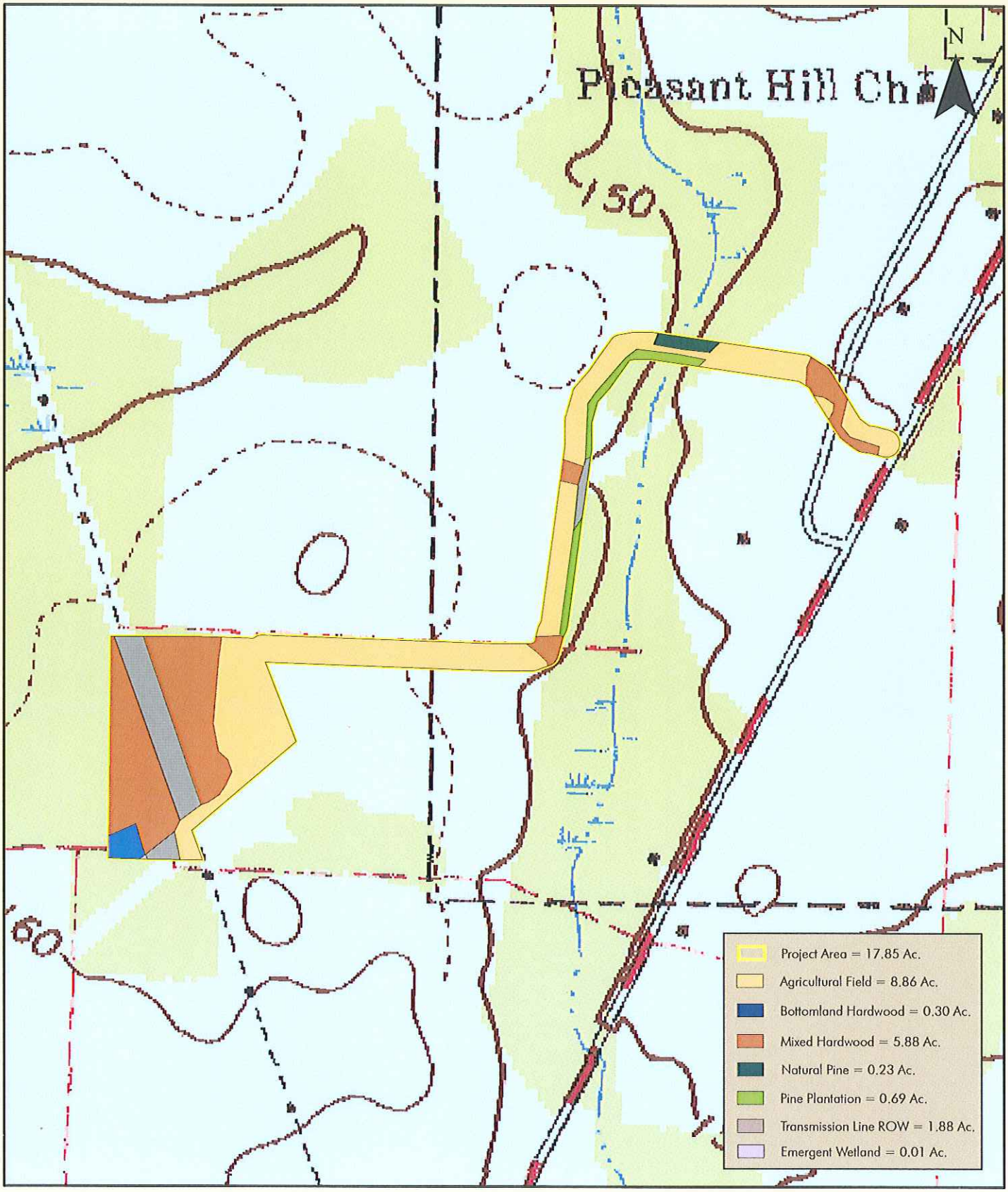

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Figure 2: Habitat Delineation Map
Spring Creek 115 kV Substation
Project Number: P79262
Miller County, Georgia

500 Feet

Exhibit Date: June 29, 2011
Drawn By: BWW
Reviewed By: DJP
Job Number : 01-11-029

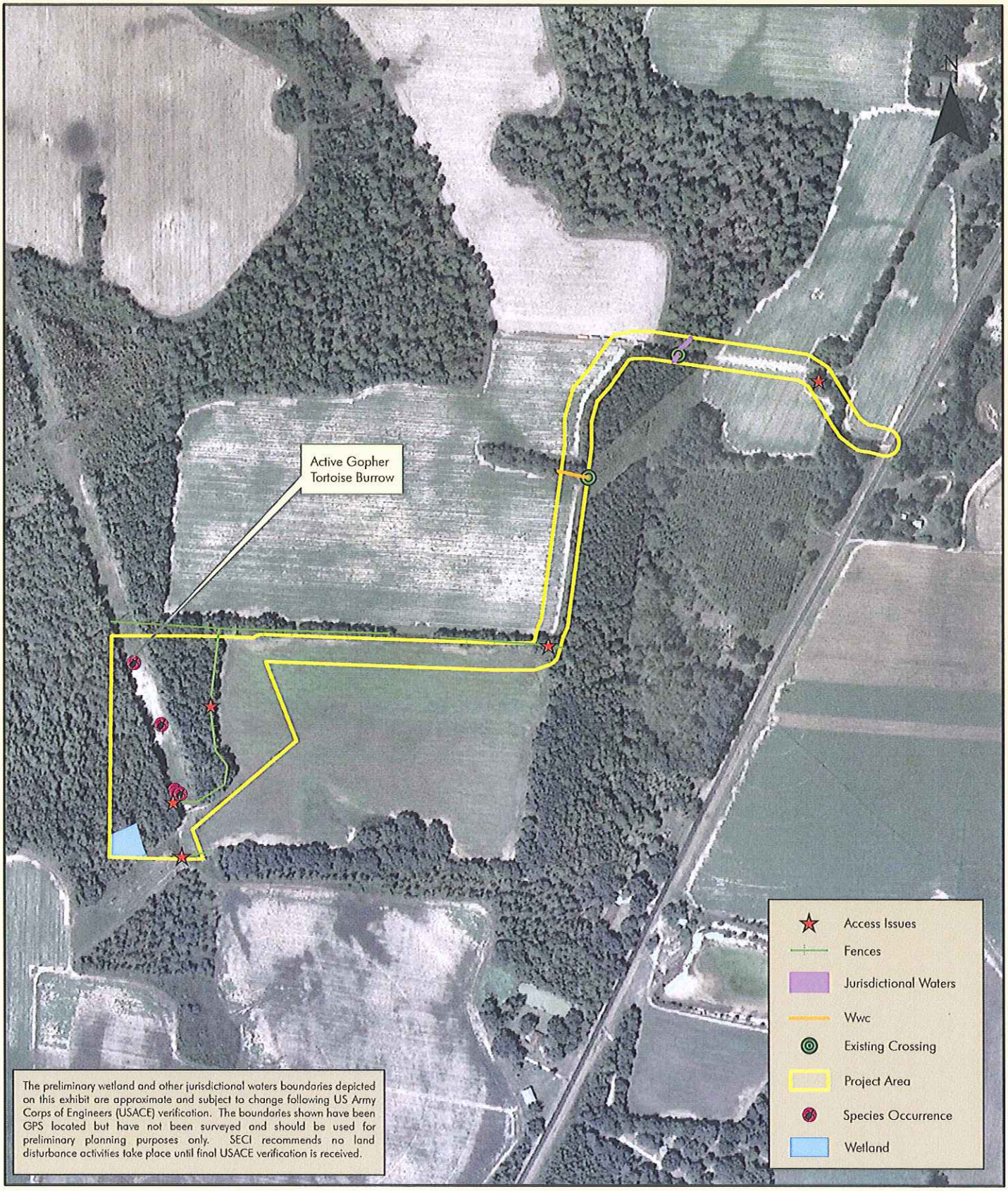

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Figure 3: Map of Ecological Features
Spring Creek 115 kV Substation
Project Number: P79262
Miller County, Georgia

500 Feet

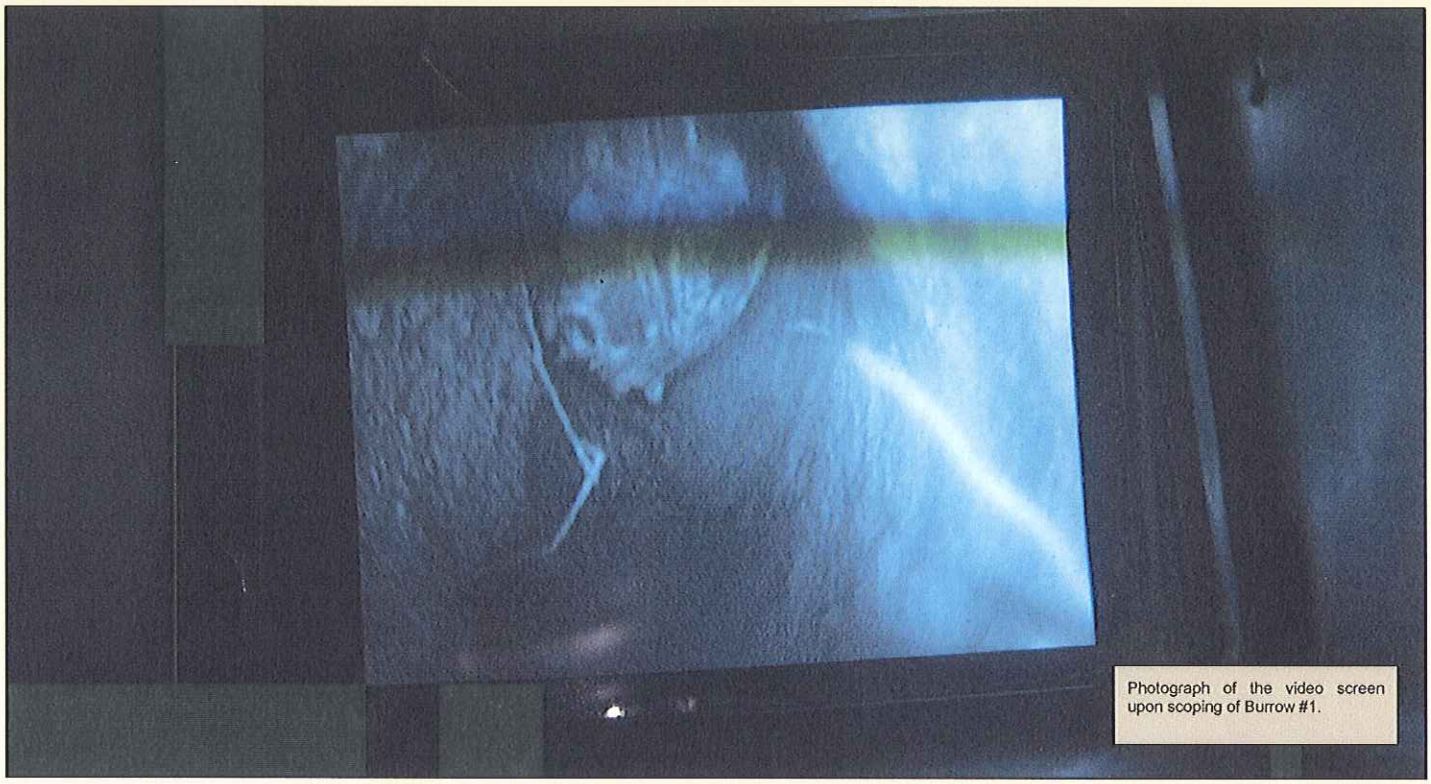
Exhibit Date: June 29, 2011

Drawn By: BWW

Reviewed By: DJP

Job Number : 01-11-029

Active gopher tortoise burrow #1. Fresh tracks, markings, and apron. Confirmed tortoise siting in the hole.



Photograph of the video screen upon scoping of Burrow #1.

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Figure 4: Gopher Tortoise Burrow #1
Spring Creek 115kV Substation
Project Number: P79262
Miller County, Georgia

Exhibit Date: June 30, 2011
Drawn By: BWW
Reviewed By: DJP
Job Number : 01-11-029

Hole #2. No fresh tracks, markings, or apron. No tortoise observed during scoping.

Hole 3. Hole is covered by vegetation, is shallow and has no fresh tracks, markings, or apron.

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Figure 5: Gopher Tortoise Holes #2 and #3
Spring Creek 115kV Substation
Project Number: P79262
Miller County, Georgia

Exhibit Date: June 30, 2011

Drawn By: BWW

Reviewed By: DJP

Job Number : 01-11-029

Hole #4. Hole is shallow and has no fresh tracks, markings, or apron.

Hole 5. Hole is covered by vegetation, is shallow and has no fresh tracks, markings, or apron.

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Figure 6: Gopher Tortoise Holes #4 and #5
Spring Creek 115kV Substation
Project Number: P79262
Miller County, Georgia

Exhibit Date: June 30, 2011

Drawn By: BWW

Reviewed By: DJP

Job Number : 01-11-029

Table 1: Listed Species in Miller County
(updated May 2004)

Species	Federal Status	State Status	Habitat	Threats
Bird				
Bald eagle *Haliaeetus leucocephalus*	T	E	Inland waterways and estuarine areas in Georgia.	Major factor in initial decline was lowered reproductive success following use of DDT. Current threats include habitat destruction, disturbance at the nest, illegal shooting, electrocution, impact injuries, and lead poisoning.
Red-cockaded woodpecker *Picoides borealis*	E	E	Nest in mature pine with low understory vegetation (<1.5m); forage in pine and pine hardwood stands > 30 years of age, preferably > 10" dbh	Reduction of older age pine stands and to encroachment of hardwood midstory in older age pine stands due to fire suppression
Wood stork *Mycteria americana*	E	E	Primarily feed in fresh and brackish wetlands and nest in cypress or other wooded swamps	Decline due primarily to loss of suitable feeding habitat, particularly in south Florida. Other factors include loss of nesting habitat, prolonged drought/flooding, raccoon predation on nests, and human disturbance of rookeries.
Reptile				
Alligator snapping turtle *Macroclemys temminckii*	No Federal Status	T	Rivers, lakes, and large ponds near stream swamps.	Destruction and modification of habitat and overharvesting.
Eastern indigo snake *Drymarchon corais couperi*	T	T	During winter, den in xeric sandridge habitat preferred by gopher tortoises; during warm months, forage in creek bottoms, upland forests, and agricultural fields	Habitat loss due to uses such as farming, construction, forestry, and pasture and to overcollecting for the pet trade
Gopher tortoise *Gopherus polyphemus*	No Federal Status	T	Well-drained, sandy soils in forest and grassy areas; associated with pine overstory, open understory with grass and forb groundcover, and sunny areas for nesting	Habitat loss and conversion to closed canopy forests. Other threats include mortality on highways and the collection of tortoises for pets.
Amphibian				
Flatwoods salamander *Ambystoma cingulatum*	T	T	Adults and subadults are fossorial; found in open mesic pine/wiregrass flatwoods dominated by longleaf or slash pine and maintained by frequent fire. During breeding period, which coincides with heavy rains from Oct.-Dec., move to isolated, shallow, small, depressions (forested with emergent vegetation) that dry completely on a cyclic basis. Found in Miller County on Mayhaw WMA in 1998	Habitat destruction as a result of agricultural an silvicultural practices (e.g., clearclutting, mechanical site preparation), fire suppresion and residential and commercial development.

Invertebrate				
Oval pigtoe mussel *Pleurobema pyriforme*	E	E	River tributaries and main channels in slow to moderate currents over silty sand, muddy sand, sand, and gravel substrates	Habitat modification, sedimentation, and water quality degradation
Shiny-rayed pocketbook mussel *Hamiota subangulata*	E	E	Medium creeks to the mainstems of rivers with slow to moderate currents over sandy substrates and associated with rock or clay	Habitat modification, sedimentation, and water quality degradation
Plant				
American chaffseed *Schwalbea americana*	E	E	Fire-maintained wet savannahs in the Coastal Plain (with grass pinks, colic root, huckleberry and gallberry); grassy openings and swales of relict longleaf pine woods in the Piedmont; the known population of this species in Miller County has been extirpated	Fire suppression, habitat conversion, and incompatible agriculture and forestry practices
Buckthorn *Sideroxylon thornei*	No Federal Status	E	Oak flatwoods where soil normally is saturated for long periods after floods/heavy rain (i.e., calcareous swamps; woods bordering cypress ponds)	
Curtiss loosestrife *Lythrum curtissii*	No Federal Status	T	Swamps over limestone, boggy open areas in pinelands, shallow water of wet thickets and floodplains, and occasionally in openings along right-of-ways	
Pondspice *Litsea aestivalis*	No Federal Status	T	Margins of swamps, cypress ponds, and sandhill depression ponds and in hardwood swamps	
Variable-leaf indian-plantain *Cacalia diversifolia*	No Federal Status	T	Swamps and muddy stream and river banks	

sligh environmental consultants, inc

August 4, 2011

Ms. Tasha Brooks
Georgia Transmission Corporation
2100 East Exchange Place
Tucker, Georgia 30084

Subject: **Addendum to Ecology Report of Findings** **SECI#: 01-11-029**
Spring Creek 115 kV Substation
Project Number: P79133
Miller County, Georgia

Dear Ms. Brooks:

Sligh Environmental Consultants, Inc. (SECI) is pleased to provide you with this addendum to the ecology letter report of findings for the Spring Creek Substation project (Project Number: P79262). The project site is located west of Georgia Highway 45, approximately one mile south of Georgia Highway 91, west of Colquitt, Miller County, Georgia.

I. SUMMARY

The initial ecology field survey of the proposed project area was completed by SECI on June 28, 2011, and our findings were summarized in the Report of Findings dated July 1, 2011. A subsequent site visit was performed on August 1, 2011 to obtain ecological information on two alternative access routes to access the proposed substation site. The project area for this investigation included a +/-1,900 linear foot corridor, approximately 100 feet wide, extending from Georgia Highway 45 westward to the proposed substation area (Alternative #1). Alternative #2 is located north of Alternative #1 and is an approximately 5.9 acre wooded area west of and adjacent to GA Highway 45 on property owned by Kenneth L. Roberts. The site visit was performed to collect information on vegetation communities, threatened and endangered species occurrences, habitats of concern, jurisdictional wetlands and other waters of the United States, non-jurisdictional wet weather conveyances, access issues, and existing road crossings. The results of our field survey are outlined below.

II. ALTERNATIVE #1

As mentioned above, Access Alternative #1 is approximately 1,900 feet long and extends from GA Highway 45 westward to the proposed substation site. For the purposes of our evaluation, a 100 foot total width was assigned to this access corridor. As depicted in Figure 1, a jurisdictional wetland is located within this access corridor and is approximately 200 – 280 feet wide at the proposed road centerline. This wetland (JWET 4) which extends north and south of the access corridor is a forested wetland and was inundated at the time of the August 1 site visit. The overstory is dominated by bald cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*) with lesser amounts of red maple (*Acer rubrum*) and willow oak (*Quercus phellos*). Understory species consist of sweetgum (*Liquidambar styraciflua*), swamp tupelo, buttonbush (*Cephalanthus occidentalis*), sedges (*Carex spp.*), and greenbrier (*Smilax rotundifolia*). The habitat immediately east and west of JWET 4 consists of mixed hardwood upland with species such as water oak (*Quercus nigra*), blackgum (*Nyssa sylvatica*), live oak (*Quercus virginiana*), privet (*Ligustrum sinense*), beautyberry (*Callicarpa americana*), greenbrier, and Japanese climbing fern (*Lygodium japonicum*). West of the wooded parcel, the access road is located along the edge of an active agricultural field until it terminates at the proposed substation site. At the time of the site visit, the field was planted with cotton. Adjacent to GA Highway 45, a house with yard and detached carport are located just south of the access corridor. This residential feature was noted in the "Access Issues" shapefile. Also during the field visit, an existing access road was noted 100 to 150 feet south of the proposed access road centerline extending westward from the aforementioned residence to the agricultural field. This existing road was located with GPS and included as an "Access Road" shapefile. The road is above grade and is approximately 10 feet wide. It contains a low water crossing where JWET 4 crosses it, but the crossing is only 28 to 30 feet long. It appears that if the existing residence adjacent to GA Highway 45 could be avoided, then with a little improvement, this existing access road could provide reasonable access to the substation site while minimizing construction costs and wetland impacts.

III. ALTERNATIVE #2

Access Alternative #2 is a +/- 5.9 acre rectangular parcel extending westward from GA Highway 45 on land owned by Kenneth L. Roberts. As depicted on Figure 1, this parcel of land contains approximately 3.13 acres of forested bottomland wetland which is dominated by bald cypress and swamp tupelo (JWET 3). Other species include sweetgum, willow oak, sedges, smartweed (*Polygonum spp.*), greenbrier, and lizard's tail (*Sarurus cernuus*). Most of the remainder of the parcel consists of mixed hardwood upland dominated by water oak, blackgum, live oak, beautyberry, privet, greenbrier, and Japanese climbing fern. There is an existing road into the parcel from GA Highway 45 that is locked with a gate, but this road does not extend across the wetland. The gate and an adjacent tractor shed were identified as access issues and were included in the "Access Issues" shapefile.

IV. CONCLUSION

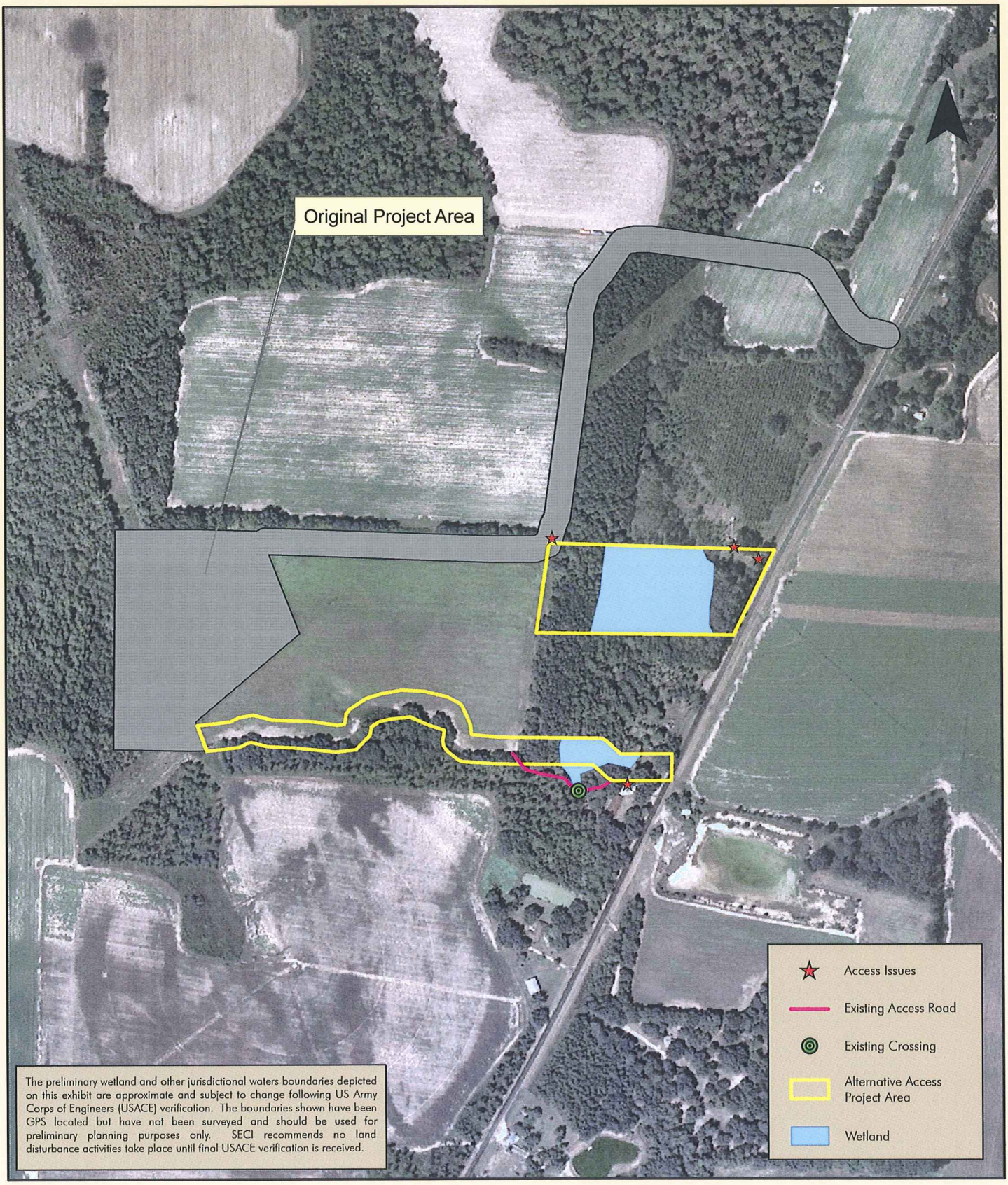
Both of the alternative access corridors were evaluated for the presence of threatened or endangered species listed in Miller County, Georgia. None of the listed species for Miller County were observed within or immediately adjacent to the two proposed access road corridors. The upland habitats within the project area consist of mixed hardwood upland or regularly maintained agricultural field which are typical for similar habitats within Miller County and the Georgia Southeastern Plain. The wetland habitat consists of cypress/tupelo dominated forest which is common to this area of Georgia as well. Due to the lack of suitable habitat and the lack of species observations, it is our opinion that no threatened, endangered, or otherwise protected species are located within or immediately adjacent to the project area. Although the current absence of any listed species does not necessarily preclude the possibility of the future occupation, the available habitats found on the subject property are common throughout the region, and any future on-site habitat modification or land disturbance activities should not adversely affect the listed species for Miller County.

We appreciate the opportunity to provide you with this information, and hope it helps in your future decision making process. If you require any additional information, or if you have any questions or comments, please do not hesitate to call me at (912) 232-0451.

Sincerely,

Brandon W. Wall
Project Biologist
Sligh Environmental Consultants, Inc.

Enclosures:



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Map of Ecological Features
Spring Creek 115 kV Substation
Alternative Access Options
Project Number: P79262
Miller County, Georgia

500 Feet

Exhibit Date: August 2, 2011
Drawn By: BWW
Reviewed By: DJP
Job Number : 01-11-029

9.4 Cultural Resources Survey (Archeology) – Southern Research HPC

Cultural Resources Survey of the Proposed Spring Creek Substation, Miller County, Georgia GTC Project No. P79262 (WA #13)

SOUTHERN RESEARCH

Historic Preservation Consultants

Cultural Resources Survey of the Proposed Spring Creek Substation, Miller County, Georgia GTC Project No. P79262 (WA #13)

Submitted to:

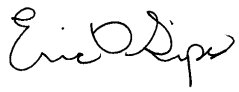
Georgia Transmission Corporation
2100 East Exchange Place
PO Box 2088
Tucker, Georgia 30085-2088

Prepared by:

Southern Research, Historic Preservation Consultants, Inc.
PO Box 250
Ellerslie, Georgia 31807

Elizabeth E. Lovett, MA
Staff Archaeologist

Under the Direction of:



Eric D. Sipes, RPA
Principal Investigator

SOUTHERN RESEARCH
Historic Preservation Consultants

July 2011

Management Summary

Southern Research, Historic Preservation Consultants, Inc., conducted an intensive cultural resources survey of the proposed location for the Spring Creek 115 kV substation in Miller County, Georgia. The proposed substation compound encompasses approximately 10 acres and has an approximately 3430 ft access road. The site is located on the west side of Highway 45. The purpose of this investigation was to identify potentially significant cultural resources within the Area of Potential Effect (APE).

Archaeologists excavated shovel tests and examined available surface exposures within the proposed Spring Creek substation site and access road in July 2011. Two isolated finds and one historic farmstead (9Mi166) were identified within the APE. Site 9Mi166 consists of a partially collapsed twentieth century house and barn with a surrounding surface and subsurface artifact scatter. The partially standing structures at the site lack integrity, while shovel test data and surface collections indicate site 9Mi166 is unlikely to have significant research potential. Site 9Mi166 is recommended not eligible for inclusion in the National Register of Historic Places and does not warrant further management consideration.

Table of Contents

List of Figures

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I. Introduction

In July of 2011, Southern Research, Historic Preservation Consultants, Inc., conducted an intensive cultural resources survey of the proposed location for the Spring Creek 115 kV substation in Miller County, Georgia. The proposed substation site encompasses approximately 10 acres, with an approximately 3430 ft access road. The site is located west of Highway 45, at the junction of the Blakely Primary-East Bainbridge 115 kV, the East Colquitt 115 kV TAP, and West Donaldsonville 115 kV TAP transmission lines (Figures 1 and 2).

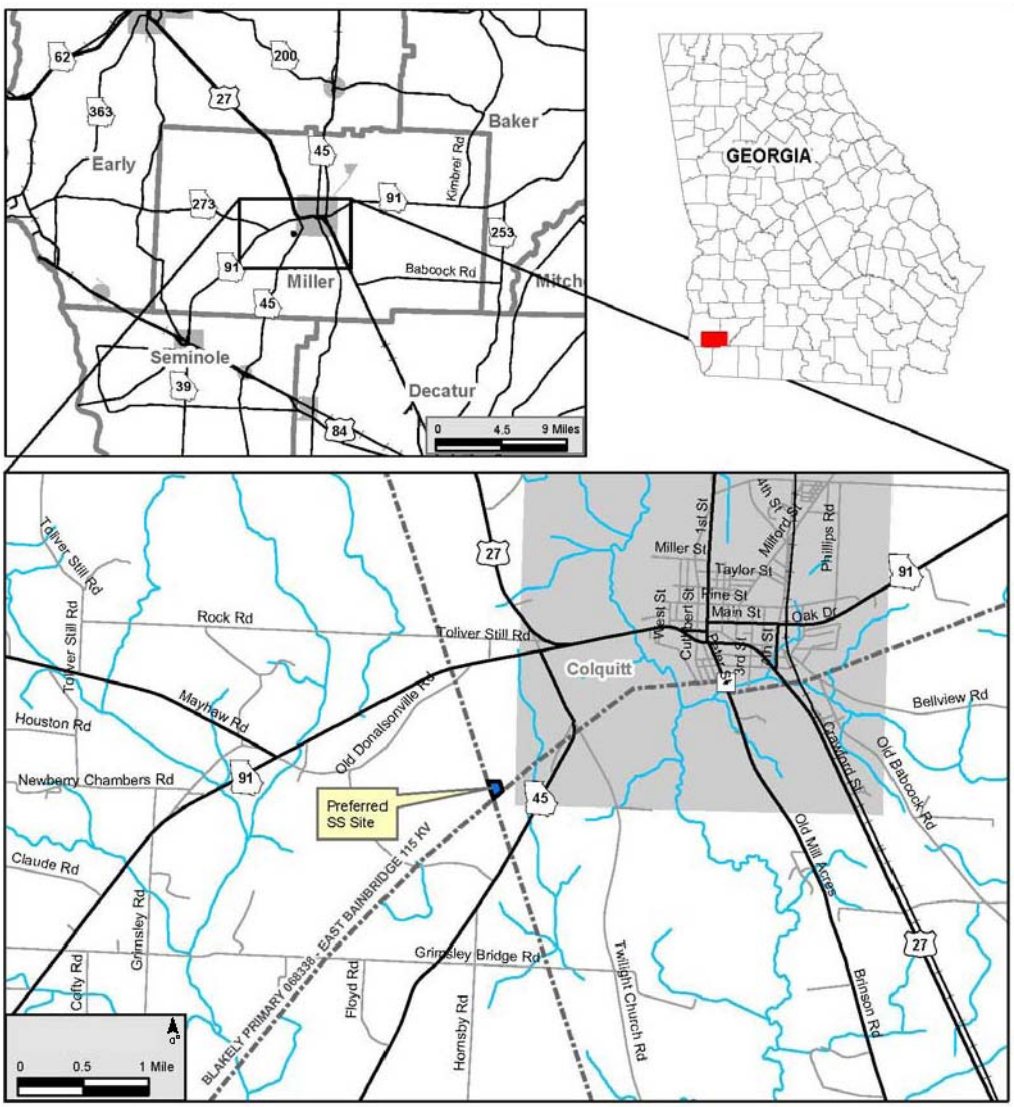


Figure 1. Maps showing location of project area.

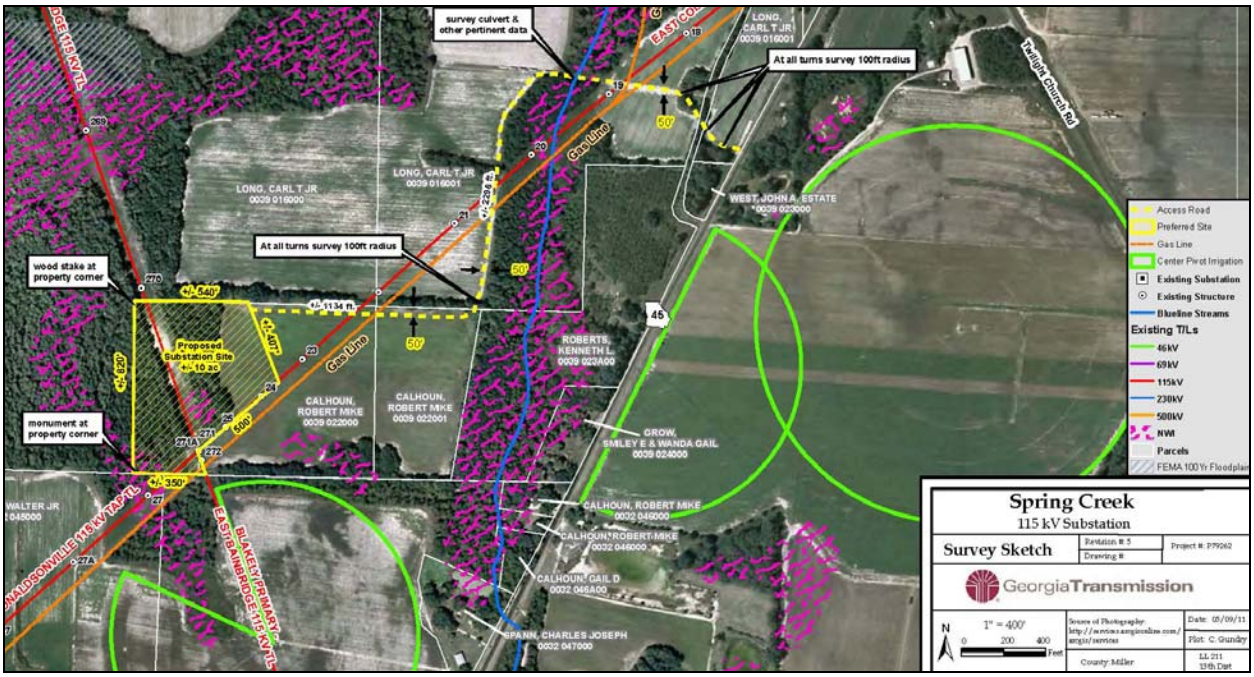


Figure 2. Aerial photograph illustrating project area.

This archaeological survey was sponsored by Georgia Transmission Corporation, in compliance with Section 106 of the National Historic Preservation Act of 1966 (16 USC 470), as amended, concerning the management of historic properties (i.e., archaeological sites, buildings, structures, objects, or districts listed on or eligible for the National Register of Historic Places [NRHP]) that may be affected by a ground disturbing activities associated with proposed substation and access road. Compliance is administered by Georgia Transmission Corporation through means of a Programmatic Agreement with the Georgia Department of Natural Resources. The goal of this cultural resources survey was to identify all potentially significant archaeological resources within the APE and to evaluate the eligibility of the identified resources for inclusion on the NRHP. The APE for this investigation consisted of the entire substation area and access road right-of-way.

Land usage within the substation compound consists of a fallow field, woodlands, and a 100 ft Georgia Power transmission line easement (Figure 3). The proposed access road is located along existing field roads. Current vegetation includes mixed pine and hardwoods in the western portion of the proposed substation compound and cotton and weeds in the fallow field in the eastern portion of the proposed substation compound. Surface exposure in the fallow field is approximately 80 percent; subsoil was visible on the surface throughout the field. Surface exposure along the proposed access road was 80 to 90 percent, depending on location along the road.

During the course of this investigation, two isolated finds, IF1 and IF2, and one archaeological site, 9Mi166, were identified within the APE. The two isolated finds are

coastal plain chert debitage. Site 9Mi166 consists of a partially collapsed twentieth century house and well house on the north side of the proposed access road and a standing, though dilapidated, outbuilding on the south side of the proposed access road. Data from extensive surface examination and shovel tests indicate this site is unlikely to have significant research potential. Archaeological site 9Mi166 is recommended not eligible for inclusion in the NRHP, and does not merit further management consideration.

Figure 3. View of project area, looking south/southeast along the Blakely Primary-East Bainbridge 115 kV transmission line (top) and view of project area looking east along proposed access road from northeast section of proposed substation compound (bottom).

II. Methods

Archival Research

Before fieldwork at the project area began, we conducted a search of the existing records at the Georgia State Archaeological Site Files in Athens, Georgia to determine if any previously recorded archaeological sites were present in or near the proposed Spring Creek 115 kV substation site.

Field Methods

The archaeological survey followed the guidelines set forth by the Georgia Council of Professional Archaeologists (2001), and was designed to discover all significant archaeological sites within the APE and evaluate their eligibility for listing on the NRHP. Elizabeth E. Lovett (Field Director) and Matthew D. Wood conducted fieldwork for this project in July 2011.

Shovel tests, measuring at least 30 cm in diameter, were excavated to yellowish-brown clay subsoil (generally 30 to 40 cm below surface, depending upon location within the APE). In areas where ground surface visibility was excellent, we examined the surface exposure thoroughly. All sediments from shovel tests were passed through 0.25" hardware cloth. Data from shovel tests, including total depth, artifact presence/absence, artifact depth, and soil stratigraphy, were recorded on standardized forms by the excavator(s). Archaeological site boundaries were determined by visual examination where possible, and by excavating shovel tests at 30 and 15 meter intervals. Additionally, excavators prepared a sketch map using a compass and pacing. This map shows both cultural and natural features for the site as well as excavation and surface collection areas.

The location of the archaeological site was recorded on 1:24,000 scale topographic map. Positive shovel tests were geo-referenced by using WAAS-enabled *Garmin GPS Venture HC* handheld Global Positioning System (GPS) receivers capable of one to three meter accuracy, and the ability to average multiple readings for a single waypoint. In addition, areas of surface artifact concentrations and selected natural features were recorded using the GPS units.

Laboratory

Artifacts and field records were inventoried as they arrived at the Southern Research laboratory and were integrated into the quality control system. Artifacts were washed and allowed to air dry. Artifact data were entered into a computer database at the time of analysis. Artifacts were subdivided into specific categories, as detailed below.

Prehistoric lithic artifacts were analyzed by material, method of manufacture, and function. Historic artifacts were analyzed and sorted into classes based on the typological system developed by Stanley South in *Method and Theory in Historical Archaeology* (1977). In addition, historic ceramics were further analyzed based on

Miller's (1980) categories of decoration such as distinctive paint, slip, or glaze colors; polychrome or monochrome characteristics; hand painting or transfer printing; transfer print colors; and molding shapes and colors of edgeware. Both descriptive schemes were utilized for maximum diagnostic benefit. Bottle glass was identified by color and, when possible, by method of manufacture and function.

Curation

The artifacts, notes, photographs and other records from this project will be curated at the University of Georgia in Athens, Georgia. Prior to the completion of the ongoing contract these materials are temporarily housed at the laboratory facilities of Southern Research. A complete photograph log notebook will accompany all photographs taken during the project. Field and laboratory forms and notes are submitted on acid-free paper and placed in acid-free folders. Artifacts are put in acid-free sealable bags labeled on the outside and with corresponding acid-free labels on the inside. Inventory sheets are also submitted which track artifacts by box and provenience.

Site Evaluation for the NRHP

This report contains recommendations for the site's significance using the criteria established for the NRHP. In terms of archaeological resources like those investigated during the current project, sites may be considered eligible or potentially eligible under Criterion D if they:

Have yielded or may be likely to yield, information important in prehistory or history.

While determining the NRHP eligibility of a site is necessarily partially subjective, every effort was made to examine each site from an objective perspective. Two primary aspects of the site were taken into consideration when making the NRHP determination. These were the physical condition of the site in regards to its contextual integrity and the research potential of the site within the local, state, and national contexts.

III. Results

Archival Research

The Georgia State Archaeological Site Files were consulted using the Natural Archaeological Historic resource GIS online database (NAHRGIS) to determine if any previous investigations and/or previously recorded archaeological sites are present within the vicinity of the proposed project area. This search indicated there are no previous investigations or recorded sites within the APE.

Archaeological Survey

Site 9Mi166

State Site Number: 9Mi166
Field Number: 596-1
Site Type: Historic farmstead
Temporal Component(s): Late 19th to Late 20th century
Site Size: Unknown length x 20 m
Landform: Very slight rise
NRHP Recommendation: Not Eligible

One archaeological site, 9Mi166, was identified within the APE (Figure 4). Site 9Mi166 is a late nineteenth to late twentieth century historic farmstead located in Miller County, Georgia, west of Highway 45. This site consists of a partially collapsed house and barn, with a light surrounding surface and subsurface scatter of historic artifacts. The site is situated in a grove of trees on a slight rise between two cultivated fields. Vegetation around the house and barn consists of mixed pine and hardwoods with dense undergrowth. Figure 5 presents a plan of site 9Mi166. Figure 6 presents views of the partially collapsed house and barn at the site.

One shovel test was excavated between the house and the barn. The single shovel test had a total depth of 15 cm. The soil of this shovel tests consisted of 10 cm of grey brown sandy loam over yellow brown sandy clay subsoil. Although numerous artifacts were visible on the surface, only one artifact was recovered from this shovel test. Surface collection and visual inspection, therefore, were the primary means of delineating site boundaries within the APE. The northern and southern boundaries of site 9Mi166 could not be determined due to the limits of the APE. The east-west axis of this site is approximately 20 meters.

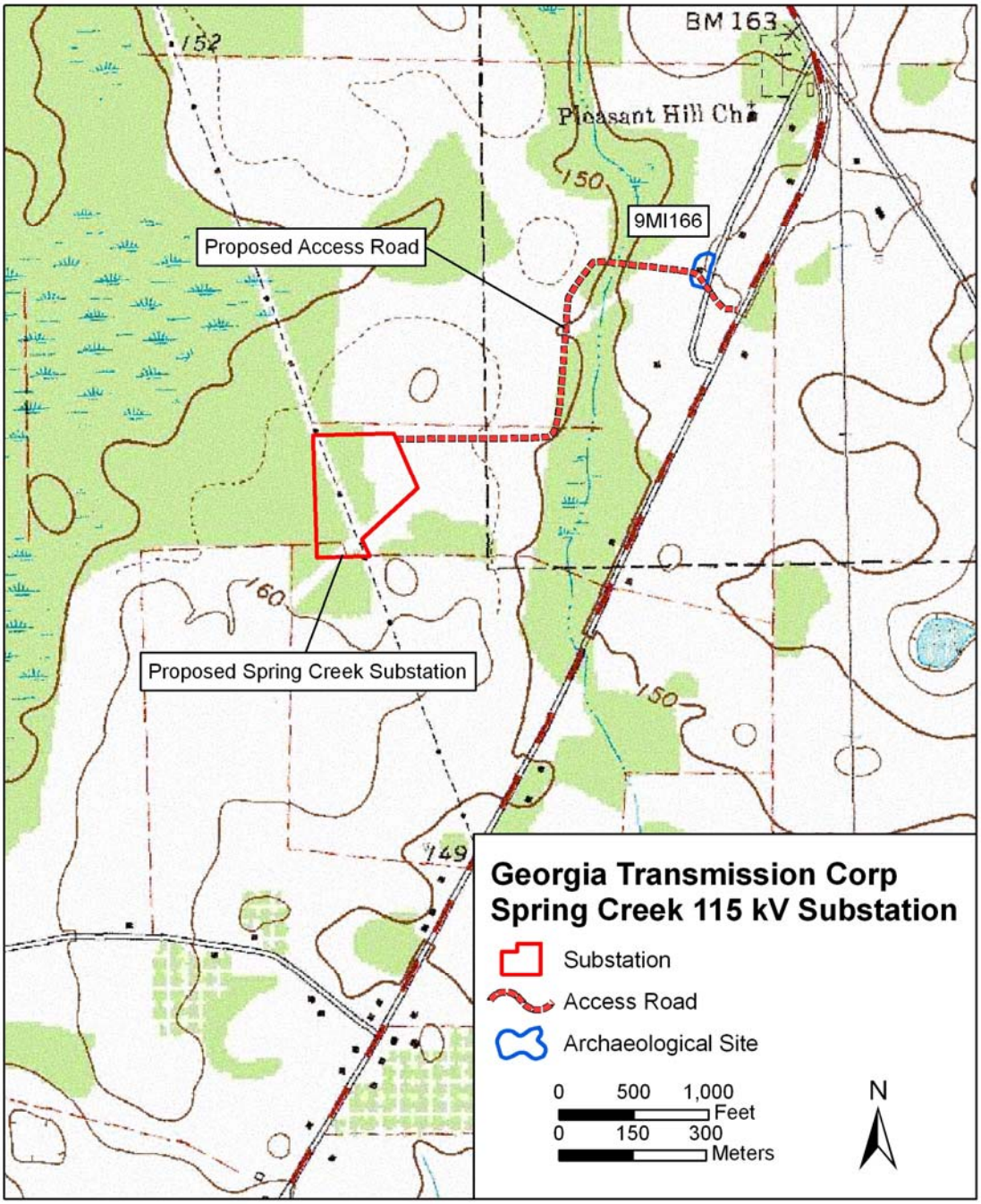


Figure 4. Location of the APE and all relevant cultural resources (USGS 7.5' Donalsonville, Georgia quadrangle).

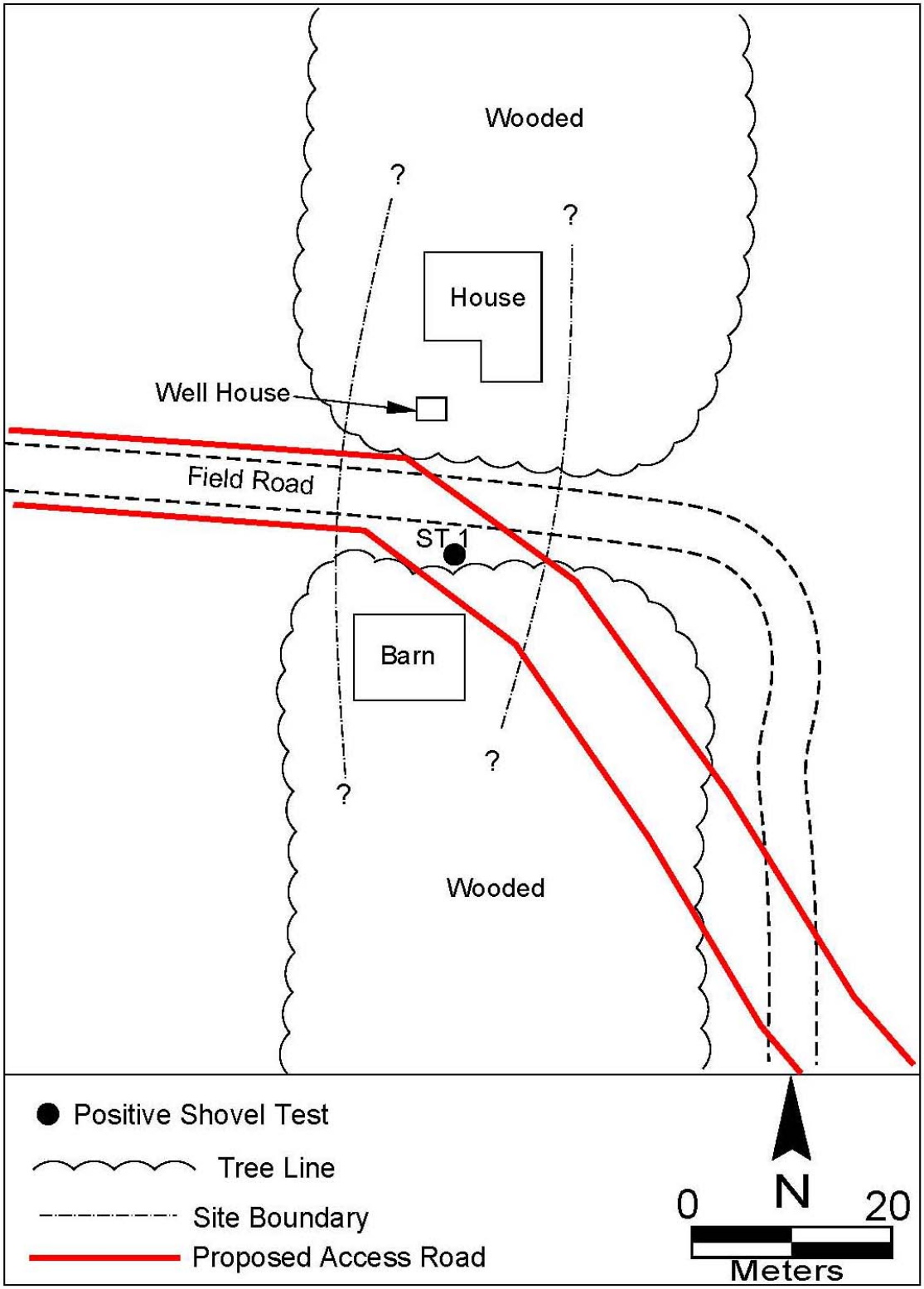


Figure 5. Sketch map of 9Mi166.

Figure 6. View of house, looking north (top) and view of barn, looking south (bottom).

A total of 16 artifacts were recovered from Site 9Mi (Table 1). The majority of these artifacts consisted of ironstone. Other artifacts include glass, both clear and cobalt blue, porcelain, and unidentified metal.

Site 9Mi166 is a late nineteenth to late twentieth century farmstead consisting of a partially collapsed house with an associated well house and an unstable but standing barn with a light surrounding surface and subsurface artifact scatter. The northern and western walls and roof of the house are intact, but the remainder of the house has collapsed. Electrical wires and sockets were observed, as was a bathtub and sink, and the accompanying plumbing. The barn/outbuilding is standing, but unstable. The two structures at the site lack integrity and do not contribute to the NRHP eligibility of the site. Thus, this site was evaluated for National Register of Historic Places (NRHP) eligibility under Criterion D of the National Register Bulletin No. 15, "Have yielded or may be likely to yield, information important in prehistory or history." Although two partially standing structures are present at the site, given the late occupation dates and the lack of additional features at the site, 9Mi166 would be unlikely to provide significant additional knowledge to our understanding of historic settlement and subsistence patterns in the region. We recommend the site not eligible for the NRHP. No further management consideration is warranted for the site.

Isolated Finds

Isolated Find 1 (IF1) is a single piece of coastal plain chert debitage recovered from a shovel test in the north central portion of the proposed substation compound. Eight shovel tests were excavated at 15 m intervals in the four cardinal directions around the positive shovel test; none of these shovel tests produced cultural material.

Isolated Find 2 (IF2) is a single piece of coastal plain chert debitage recovered from the surface in the fallow cotton field in the northeastern portion of the proposed substation compound. Surface exposure in the fallow cotton field is approximately 80 percent. During a thorough surface inspection, numerous fragments of naturally-occurring coastal plain chert were observed in field; however, excepting IF2, the chert fragments observed did not appeared to be modified by humans.

Table 1. Artifact Inventory for 9Mi166 and Isolated Finds, Spring Creek Substation, Miller County, Georgia.

Site	Provenience	Depth	Artifact Description	Comments	Count
9Mi166	Surface		Glass, Cobalt Blue		2
			Glass, UID Melted		1
			Ironstone, Plain		9
			Metal, UID Melted		1
			Porcelain	Insulator	1
			Porcelain, UID	Blue Decorated	1
				Subtotal	15
	ST 1	0-15	Glass, Clear		1
				Subtotal	1
				Site Total	**16**
IF 1	N500 E500	0-20	Debitage, Coastal Plain Chert		1
				Total	**1**
IF 2	Surface		Debitage, Coastal Plain Chert		1
				Total	**1**

UID = Unidentified

IV. Summary and Recommendations

Southern Research, Historic Preservation Consultants, Inc., conducted an intensive cultural resources survey of the proposed location for the Spring Creek 115 kV substation and accompanying access road in Miller County, Georgia. The proposed substation compound encompasses approximately 10 acres, with an approximately 3430 ft access road. The site is located west of Highway 45. The purpose of this investigation was to identify potentially significant cultural resources within the APE.

Surface collection and shovel tests at 30 m intervals revealed two isolated finds and one archaeological site, 9Mi166, within the APE. Shovel test and surface collection data indicate site 9Mi166 is unlikely to yield significant information concerning historic life-ways. Thus, 9Mi166 is recommended not eligible for inclusion in the NRHP. Further management consideration of the cultural resources at the Spring Creek 115 kV substation and access road is not warranted.

V. References Cited

Georgia Council of Professional Archaeologists
2001 Georgia Standards and Guidelines for Archaeological Surveys. Electronic document, http://georgia-archaeology.org/GCPA/standards_for_survey/, accessed January 30, 2011.

Miller, George
1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology* 14:1-40.

South, Stanley
1977 *Method and Theory in Historical Archaeology*. Academic Press, Boston.

VI. Appendix I: Georgia State Site Form for 9Mi166

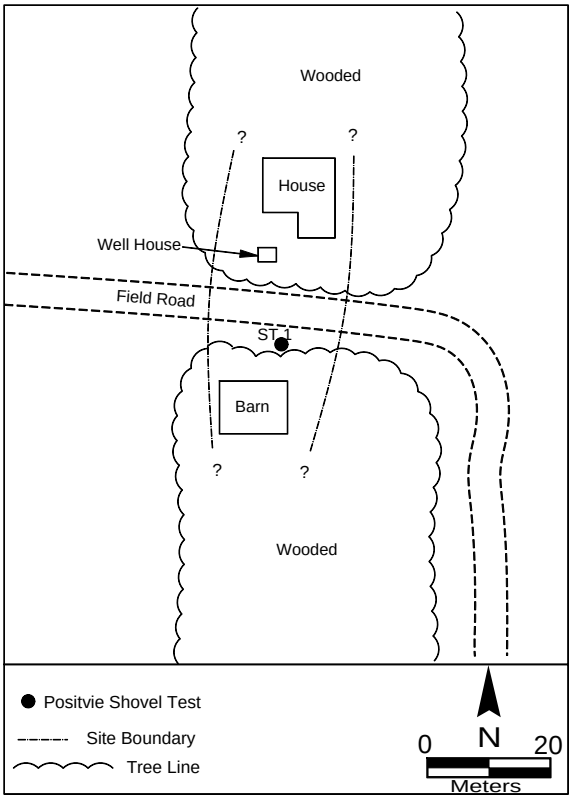
GEORGIA ARCHAEOLOGICAL SITE FORM
1990
Official Site Number: 9Mi166

Institutional Site Number: 596-1 **Site Name:**
County: Miller **Map Name:** Donalsonville NE **USGS or USNOAA**
UTM Zone: 16 **UTM East:** 07 14 161 **UTM North:** 34 48 937
Owner: Carl T. Long Jr. **Address:**
Site Length: unknown **meters Width:** 20 **meters Elevation:+ -** 48 **meters**
Orientation: **1. N-S** 2. E-W 3. NE-SW 4. NW-SE 5. Round 6. Unknown
Kind of Investigation: **1. Survey** 2. Testing 3. Excavation 4. Documentary
5. Hearsay 6. Unknown 7. Amateur
Standing Architecture: **1. Present** 2. Absent
Site Nature: **1. Plowzone** 2. Subsurface 3. Both 4. Only Surface Known
5. Unknown 6. Underwater
Midden: 1.Present 2.Absent **3.Unknown** **Features:** **1.Present** 2.Absent 3.Unknown
Percent Disturbance: 1. None 2. Greater than 50 3. Less than 50 **4.Unknown**
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.) historic house site with partially collapsed house and partially collapsed barn

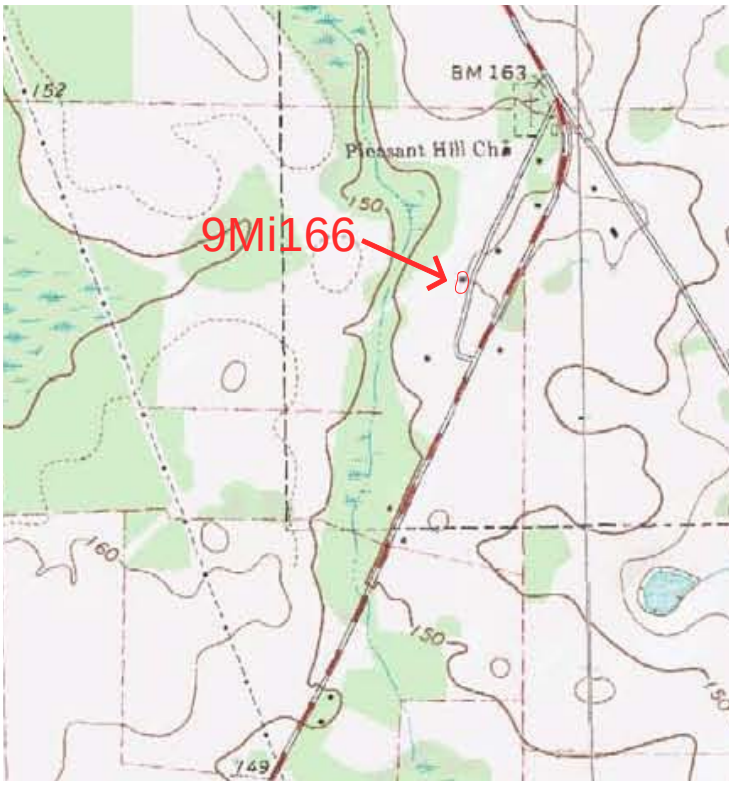
Topography (Ridge, Terrace, etc.): very slight rise

Current Vegetation (Woods, Pasture, etc.): mixed pine and hardwoods, cultivated fields

Additional Information:



SKETCH MAP
(Include sites, roads, streams, landmarks)



OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9Mi166 **Institutional Site Number:** 596-1

Public Status: 1. National Historic Landmark 2. National Natural Landmark 3. Georgia Register 4. Georgia Historic Trust 5. HABS 6. HAER

National Register Standing: 1. Determined Eligible 2. Recommended Ineligible 3. Recommended Eligible 4. Nominated 5. Listed 6. Unknown 7. Removed

National Register Level of Significance: 1. Local 2. State 3. National

Preservation State (Select up to Two): 1. Undisturbed 2. Cultivated 3. Eroded 4. Submerged 5. Lake Flooded 6. Vandalized 7. Destroyed 8. Redeposited 9. Graded 10. Razed

Preservation Prospects: 1. Safe 2. Endangered by: construction of access road for proposed Spring Creek substation 3. Unknown

RECORD OF INVESTIGATIONS

Supervisor: Eric D. Sipes **Affiliation:** Southern Research, HPC, Inc. **Date:** 7/11/2011

Report Title: Archaeological Survey of the Proposed Spring Creek Substation, Miller County, Georgia, GTC Project No. P79262 (WA #13)

Other Reports:

Artifacts Collected: ironstone, porcelain, glass (clear and cobalt blue), UID metal

Location of Collections:

Location of Field Notes:

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods: 20th century

Phase:

FORM PREPARATION AND REVISION

Date	Name	Institutional Affiliation
7/11/2011	Elizabeth E. Lovett	Field Director, Southern Research, HPC, Inc.

VII. Appendix II: Resume of the Principle Investigator

Eric D. Sipes, M. A., RPA

Principal Investigator

Education

M.A., Anthropology, Southern Illinois University Carbondale, 2005
B.A., Anthropology, Indiana University, 1993

Professional Experience

2007 – Present	Senior Archaeologist, Southern Research Historic Preservation Consultants, Inc., Ellerslie, Georgia.
2001 – 2007	Senior Project Manager, Brockington and Associates, Inc., Charleston, South Carolina.
2001	Field/Laboratory Supervisor, Center for Archaeological Investigations, Southern Illinois University Carbondale.
1998 – 2000	Graduate Research Assistant, Center for Archaeological Investigations, Southern Illinois University Carbondale.
1994 – 1998	Staff Archaeologist, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington.
1993 – 1994	Field Technician, Center for Archaeological Investigations, Southern Illinois University at Carbondale.
1991 – 1993	Student Field/Lab Technician, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington.

Mr. Sipes has 18 years of experience in historic preservation in the Southeastern and Midwestern United States. He has conducted numerous cultural resource surveys and excavated both prehistoric and historic archaeological sites across the Southeast and Midwest. He is also well-versed in survey technology, global positioning systems, and geographical information systems.

Professional Affiliations

Register of Professional Archaeologists
Georgia Council of Professional Archaeologists
South Carolina Council of Professional Archaeologists
Alabama Archaeological Society (Board of Directors, 2009-2011)
Southeastern Archaeological Conference
Society for Georgia Archaeology
Society for American Archaeology
American Anthropological Association
American Association of Physical Anthropologists

9.5 Historic Preservation Consulting – Historic Resources Survey Report

GEORGIA TRANSMISSION CORPORATION

Historic Resources Survey

Spring Creek 115 kV Substation

Miller County, Georgia / Project Number P79262

Prepared by Maurie Van Buren / June 25, 2010

HISTORIC PRESERVATION CONSULTING

2651 Midway Road, Decatur, GA 30030 / Phone 404-488-7728 / e-mail maurievb@gmail.com

SPRING CREEK / HISTORIC RESOURCES SURVEY

Scope of Work:
The Spring Creek Historic Resources Survey documents historic resources within the project boundaries identified on the *Project Boundary and Map of Resources Surveyed.* The general vicinity study area is located on both sides of Highway 45, a short distance southwest of the town of Colquitt in Miller County, Georgia.

Project Goals:
The goal of this project is to complete a Historic Resources Survey within the project boundaries in order to determine whether any historic resources present are eligible for the National Register of Historic Places. Resources that appear to be more than 50 years old have been identified on the map and photographed. The consultant has made a preliminary determination as to whether or not the existing historic resources are potentially eligible for the National Register of Historic Places. This report will be used as a planning tool by Georgia Transmission Corporation to select a Substation site with the least adverse effect on historic resources.

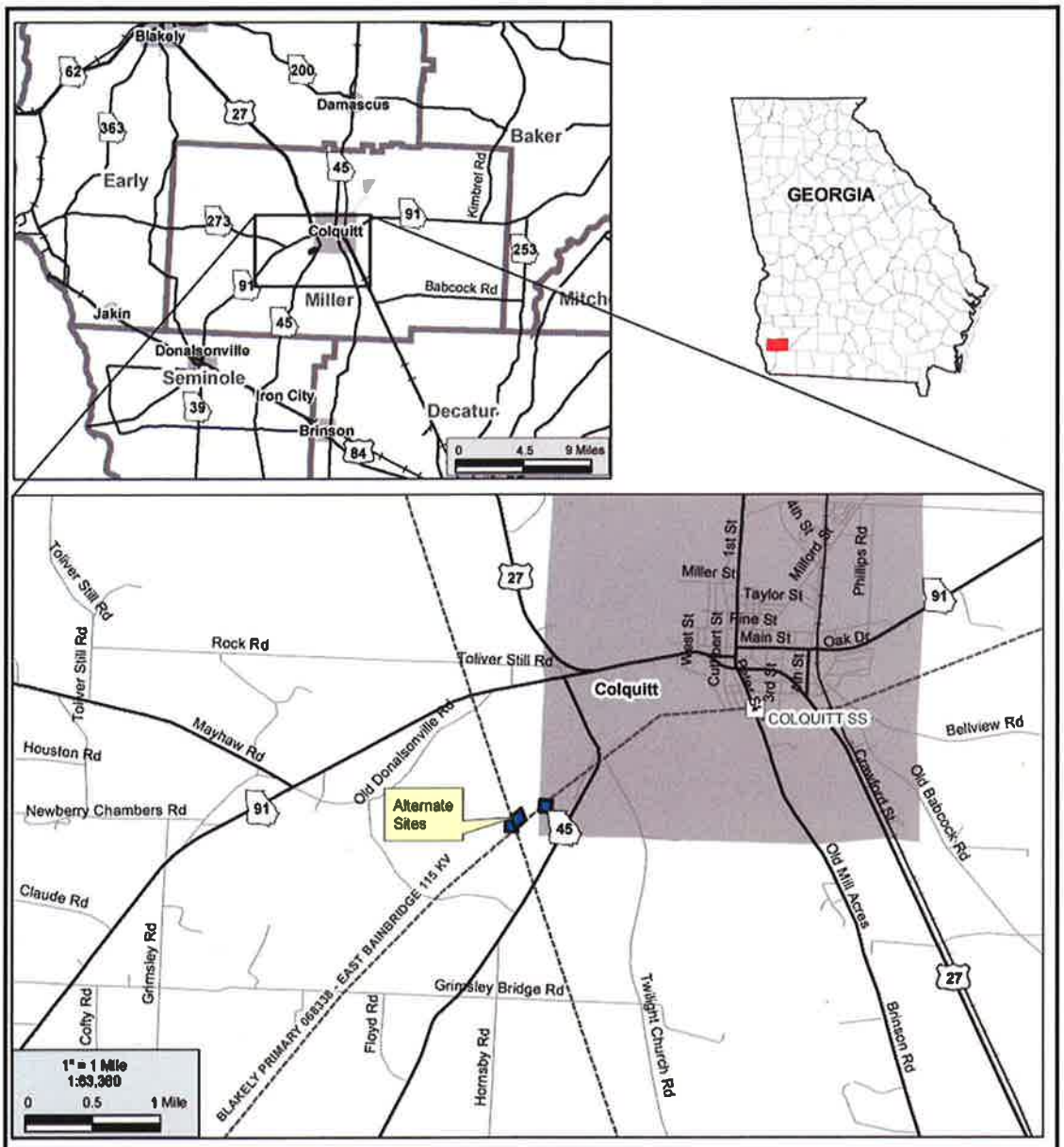
Contents of this Report:
This report contains a *Project Location Map*, which identifies the general location of the study area, and a *Project Boundary and Map of Resources Surveyed*, which identifies the project boundaries on a USGS Quadrangle map. Numbers on this second map are keyed to survey forms on each resource. This is followed by seven *Spring Creek Historic Resources Survey* forms. Each form contains a photograph of the resource, a description of its site, the approximate date of construction, an architectural description, and an assessment of its National Register eligibility.

Survey Methodology:
A windshield survey identifying all architectural resources 50 years old or older within the project boundaries was conducted by principal investigator Maurie Van Buren. Visual inspection determined the approximate age of the resources. It should be noted that the consultant was able to view the houses and their dependencies only from the public right-of-way and did not have access to interiors. Color photographs were taken of each resource that appeared to be 50 years old or older, and those photographs were keyed to the *Project Boundary and Map of Resources Surveyed.* The National Register eligibility of each resource was then evaluated based on the level of architectural integrity and visually evident significance. (See *Historic Resources Survey* forms.)

SPRING CREEK / SUMMARY TABLE OF FINDINGS

Resource Number	NR Eligible	NR Possibly Eligible	NR Not Eligible
1			X
2			X
3			X
4			X
5			X
6			X
7			X

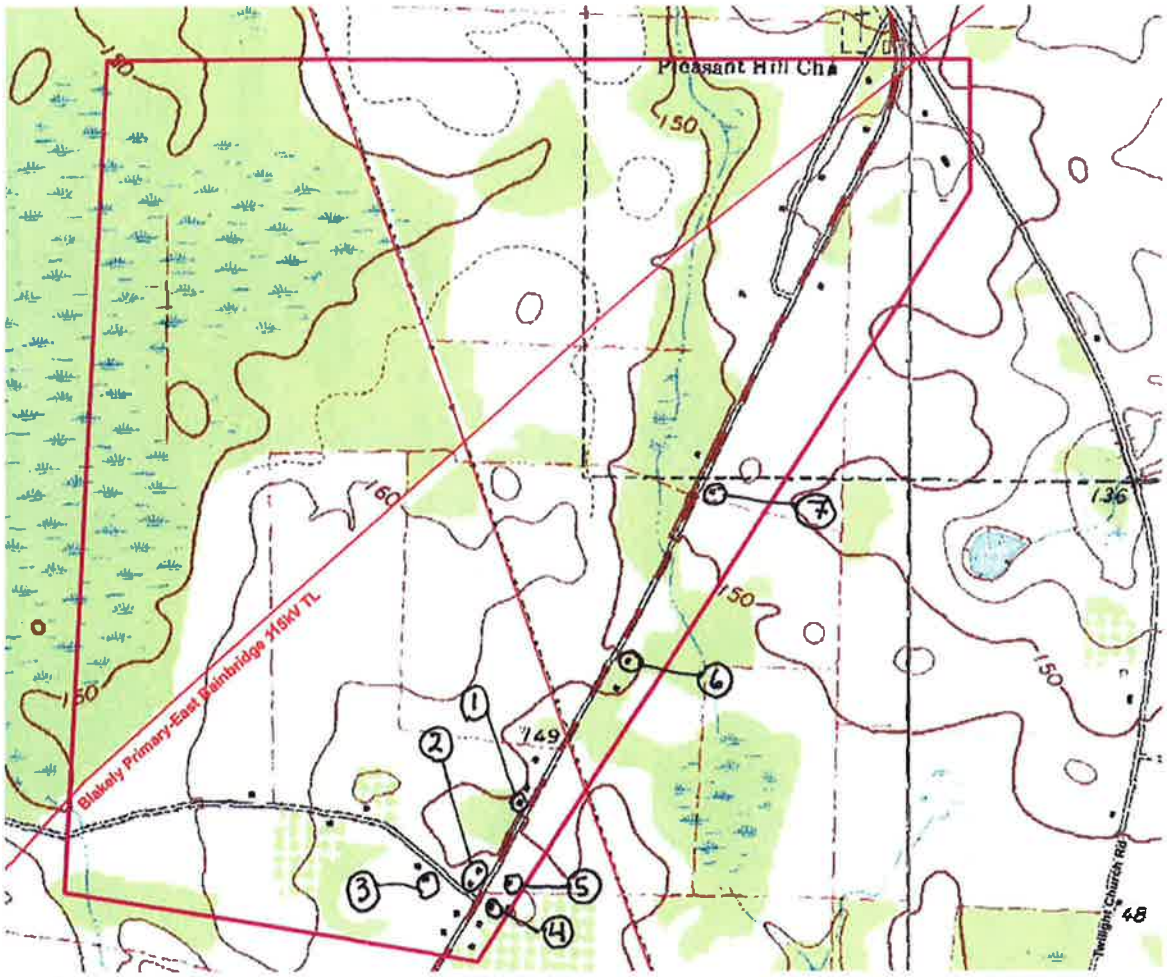
PROJECT LOCATION MAP



Spring Creek 115kV Substation	**Project Location Map**	
From GTC travel to I-285 south. Take I-285 approx 23 miles to exit 61, I-85 South. Travel approx. 50 miles to exit 21, I-185 South. Travel approx. 50 miles to exit 1A, Hwy 27 South. Follow Hwy 27 for approx. 100 miles. Turn right on Hwy 45 near the town of Colquitt. Follow Hwy 45 approx. 1.5 miles. At this point, the alternate substation sites are directly through the fields to the west.	N	GeorgiaTransmission
	Project No: P79262	Date: 06/21/10
	Source: Georgia DOT	Plot: C. Gundry

PROJECT BOUNDARY AND MAP OF RESOURCES SURVEYED

Numbers on map are keyed to survey forms



Site: This house is located at 364 Highway 45. It sits close to the road with a small grassy yard, mature shade trees and ornamental shrubs.

Date of Construction and Description: Circa 1930s. This one-story, frame American Small House has an interior brick chimney and paired 3/1 windows. The front porch columns have been replaced. There are side and rear additions that alter the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the alterations to the porch and the side and rear additions that alter the shape of the original structure.

Side view of Resource 1, showing side and rear additions

Site: This house is located on Highway 45 (no visible street address). It sits close to the road with a small grassy yard and mature shade trees. Adjacent to the house is a circa 1960s concrete block ruin that appears to have been a store.

Date of Construction and Description: Circa 1940s. This one-story, frame Front Gable Bungalow has 3/1 windows and board and batten siding. There are rear additions that alter the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the rear additions that alter the shape of the original structure.

This circa 1960s concrete block ruin is associated with Resource 2.

SPRING CREEK HISTORIC RESOURCES SURVEY / RESOURCE 3

Site: This house is located at 115 Drew Floyd Road. It sits close to the road with a small grassy yard and mature shade trees.

Date of Construction and Description: Circa 1940s. This one-story, frame Front Gable Bungalow has vertical 2/2 windows, exposed rafter tails and asbestos siding. The chimney is missing. Shutters have been added to the windows. The front porch has been altered. There is a rear addition that alters the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the missing chimney, the new shutters, the alterations to the porch, and the rear addition that alters the shape of the original structure.

Site: This house is located at 395 Highway 45. It sits close to the road with a small grassy yard and mature shade trees.

Date of Construction and Description: Circa 1940s. This one-story, frame Front Gable Bungalow has new 4/4 windows and a new front porch. There are side additions that alter the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the new windows, the alterations to the porch, and the side additions that alter the shape of the original structure.

Site: This house is located at 387 Highway 45. It sits close to the road with a small grassy yard and mature shade trees.

Date of Construction and Description: Circa 1910s. This one-story, frame Hip Roof House has a central front-facing gable, new windows and vinyl siding. The front porch has been replaced. There is a rear addition that alters the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the new windows, the vinyl siding, the alterations to the porch, and the rear addition that alters the shape of the original structure.

Site: This building is located at 315 Highway 45. It sits close to the road with a small grassy yard, mature shade trees and foundation shrubs.

Date of Construction and Description: Circa 1930s. This one-story, frame Side Gable tenant house has been converted to a bait and tackle shop. New siding has been added, and the windows have been removed, altering the original fenestration pattern. The front door, front porch and chimney have been altered. There is a rear addition that alters the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the new siding, the altered fenestration pattern, the alterations to the front door, porch and chimney, and the rear addition that alters the shape of the original structure.

Site: This house is located at 265 Highway 45. It sits close to the road with a small grassy yard, mature shade trees and foundation shrubs.

Date of Construction and Description: Circa 1940s. This one-story, frame Front Gable Bungalow has an exterior brick chimney, 4/4 windows and asbestos siding. The front porch has been altered and partially enclosed. There is a large side carport addition that alters the shape of the original structure.

National Register Eligibility: This resource does not retain the physical integrity to be eligible for the National Register of Historic Places because of the alterations to the porch and the side carport addition that alters the shape of the original structure.

Side view of Resource 7, showing side carport addition