



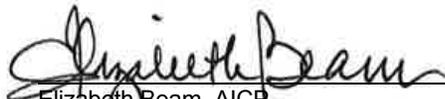
## Phase I Environmental Site Assessment

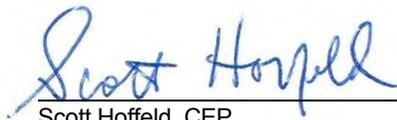
Stage 1 Environmental Assessment/  
Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish  
RPC Task LA434EA (H.004981)

1 May 2014



  
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**Phase I Environmental  
Site Assessment**

Stage 1 Environmental  
Assessment/  
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Prepared for:  
New Orleans Regional Planning  
Commission

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**Acronyms and Abbreviations**

ACM	asbestos-containing material
ARCADIS	ARCADIS U.S., Inc.
ASTM	ASTM International
CRECs	Controlled Recognized Environmental Conditions
EDMS	Electronic Document Management System
EDR	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
FINDS	Facility Index System
HRECs	Historical Recognized Environmental Conditions
I-12	Interstate 12
LA 434	Louisiana Highway 434
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
NAVD 88	North American Vertical Datum of 1988
NORPC	New Orleans Regional Planning Commission
NPDES	National Pollutant Discharge Elimination System
PCBs	polychlorinated biphenyls
pCi/L	picocuries per liter
REC	Recognized Environmental Condition
ROW	right-of-way
SONRIS	Strategic Online Natural Resource Information System
SPILLS	Emergency Response Section Incidents
SWF/LF	Solid Waste Facility/Landfill
US Hist Auto	Historic Gas Stations
USEPA	U.S. Environmental Protection Agency

## **1. Introduction**

### **1.1 Purpose and Scope**

The New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development proposes widening Louisiana Highway 434 (LA 434) from two lanes to four lanes from LA 36 south to its junction with the proposed LA 3241. The length of improvements is approximately 4.5 miles and includes replacement of the bridge over Bayou Lacombe in St. Tammany Parish, Louisiana (Figure 1).

The existing LA 434 roadway is the primary alternative for the proposed roadway widening and bridge replacement improvements. The proposed project will improve existing roadway infrastructure and require additional right-of-way (ROW).

The Phase I Environmental Site Assessment (ESA) was conducted in general accordance with the ASTM International (ASTM) E1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The goal of the Phase I ESA was to identify recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) associated with the Site in conformance with ASTM E 1527-13. Areas of potential concern as well as other observations were noted.

A Phase I Environmental Site Assessment (ESA) conducted for the proposed project focused on the Study Area which is the anticipated limits of any alternative alignment developed. The purpose of an ESA is to identify, to the extent feasible, recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) within the Study Area in accordance with the methodologies and procedures described in ASTM E1527 13.

A REC is defined as the presence, or likely presence, of hazardous substances or petroleum products on property under conditions that indicate an existing release, past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public



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health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A CREC is defined as a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority and that subjects the property to activity and use limitations (e.g., restrictive covenants for property use or groundwater use). An HREC is defined as an environmental condition that would have been considered a REC in the past, but may or may not be considered a REC currently.

ASTM E1527-13 was generally used as guidance to conduct the Phase I ESA. A Phase I ESA is intended to reflect a commercially prudent and reasonable inquiry in order to satisfy one of the requirements to qualify for the innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act.

### 1.2 Special Terms and Conditions

The findings and conclusions of this report are not scientific facts, but rather probabilities based on professional judgment concerning the significant data gathered during the course of the assessment. ARCADIS U.S., Inc. (ARCADIS) is not able to verify that the properties within the assessment area or adjoining land contain no hazardous substances, petroleum products, or other latent conditions beyond those detected or observed during the assessment. There are always possibilities for contaminants to migrate through surface water, air, soil, or groundwater. The ability to accurately ascertain and address the environmental risks associated with transport in these media is beyond the scope of this assessment. The opinions expressed with reference to the properties within the Study Area only pertain to the conditions that existed within the Study Area during the time in which the site inspections and research were conducted.

The Phase I ESA is a supporting document to the Environmental Assessment (EA) prepared for the project. This ESA is relevant only in the context of existing preliminary design concepts. If the project's design parameters or criteria change, additional investigations may need to be conducted.

### 1.3 Limitations and Exceptions of Assessment

The evaluations and recommendations presented in this Phase I ESA are based exclusively on information provided by available public records, interviews with regulatory personnel and area residents, and observations made during the site



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reconnaissance. In preparing this report, ARCADIS has accepted as true the information provided by contacted individuals or documents reviewed. ARCADIS warrants that the services performed were conducted in a competent and professional manner in accordance with sound consulting practices and procedures. ARCADIS cannot warrant the actual site conditions described in this report beyond matters amenable to visual confirmation within the limits of the site reconnaissance. ARCADIS makes no warranties of any kind whatsoever, whether expressed or implied.

Because of the length of the project and number of landowners involved, the following limitations of this assessment were recognized:

- No detailed legal descriptions of property boundaries were utilized.
- No interior inspections of structures were completed.
- Historical land use was limited to review of aerial photography and Sanborn<sup>®</sup> Maps, if available.
- When possible, interviews with landowners potentially impacted by a proposed alignment were conducted. Local parish and city officials were also interviewed.
- Only sites of environmental concern and within the ASTM Standard search distances for the alternative alignments were assessed.
- Physical inspection of the interior of buildings or the identification of asbestos-containing materials (ACMs) was not included in this scope of work.
- The scope of work did not include air, surface water, groundwater, lead-based paint, or polychlorinated biphenyl (PCB) sample collection or testing, nor did it include a title search.

Use of this report is limited to NORPC and the results of the assessment of the Study Area can be relied upon by NORPC. The contents thereof may not be used or relied upon by persons or entities without the written consent and authorization from the NORPC Executive Director.

NORPC is not responsible for changes in conditions that occurred or changed after the field surveys were performed. All information in this report is from sources deemed reliable; however, no representation or warranty is made as to the accuracy thereof.

#### **1.4 Assessment Methodology**

This Phase I ESA was conducted utilizing the following methods:

- Environmental Records Review. A review of federal and state regulatory agency files or databases along with historical documents was conducted.
- Site Reconnaissance. A reconnaissance-level site visit was conducted to look for visual evidence of the release(s) of hazardous materials and/or petroleum products and to assess the potential for on-site releases of hazardous materials and/or petroleum products within the Study Area. Observations of properties within and adjacent to the Study Area were also conducted.
- Adjacent Land Use. Land uses adjacent to the Study Area and alternative alignments were evaluated for current and historical use in order to make a determination of the potential impact to the proposed project. Evaluations were primarily made from historical and current aerial photography and Study Area information gathered during site reconnaissance activities.
- Interviews. Limited landowner interviews were conducted. When possible, interviews with landowners potentially impacted by a proposed alignment were conducted. Local, parish, and city officials were also interviewed.
- Report Preparation. This report was prepared to document current observations and known RECs that could impact one or more of the proposed alignments. Photographs of the Study Area and surrounding areas were taken to document current conditions and are included in Appendix A.

#### **2. Site Description and Vicinity Characteristics**

The Study Area is generally 300 feet wide and extends south along LA 434 from LA 36 to the proposed intersection of LA 434 with LA 3241 in St. Tammany Parish, Louisiana. The Study Area is located to the north of Interstate 12 (I-12), east of LA 41, west of LA 1088, and south of LA 36 in St. Tammany Parish, Louisiana. The logical termini for the proposed project are LA 434 at LA 36 and LA 434 at Station 3061 of LA 3241 (Alternative Q from the I-12 to Bush Environmental Impact Statement) (Figure 1). Limits of construction for LA 434 extend from LA 36 south to Vortisch Road. LA 434 then narrows to the existing two-lane roadway south of the LA 434 EA construction limits and would remain a two-lane roadway until the first segment of LA 3241 is constructed.



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### 2.1 Physical Setting

The following sections summarize the physical setting of the Study Area.

#### 2.1.1 Topography

The topography of the Study Area is characterized by broad terraces characteristic of the southern part of the parish. According to the St. Tammany and Lacombe, Louisiana, U.S. Geological Survey topographic maps, topography in the Study Area is associated with broad and low ridges. Elevations across the Study Area rise from 25 feet North American Vertical Datum of 1988 (NAVD 88) at the junction of LA 434 and LA 3241 to an elevation of 40 feet NAVD 88 at the intersection of LA 434 and LA 36.

#### 2.1.2 Geology/Soils

The Study Area is located within the Gulf Coastal Plain of Louisiana. Surface exposures consist of Quaternary sediment occupied by Pleistocene terraces. Soils within the Study Area are primarily composed of the Myatt-Stough-Prentiss; Latonia; and Ouachita and Bibb map units as classified by the U.S. Department of Agriculture, *Soil Survey of St. Tammany Parish, Louisiana* (March 1990). These associations are located on broad terraces in the southern part of the parish. The Myatt soils are level and poorly drained. The Stough soils are level and somewhat poorly drained, while the Prentiss soils are level, very gently sloping, and moderately well drained. The Latonia and Ouachita and Bibb series are well-drained fine sandy loam and silt loam, respectively.

#### 2.1.3 Hydrology

The Study Area is located within the Pontchartrain Basin of Louisiana, which is bounded by the state of Mississippi to the north, the Gulf of Mexico to the south, the Mississippi River to the west, and the Pearl River to the east. Lake Pontchartrain and the Pearl, West Pearl, Tchefuncte, and Bogue Chitto Rivers are the primary sources of surface water in St. Tammany Parish.

Groundwater resources of St. Tammany Parish include the Chicot equivalent aquifer system which is underlain by the Evangeline equivalent and the Jasper equivalent aquifer systems. The Chicot equivalent aquifer system consists of the Upper Ponchatoula aquifer. The Evangeline equivalent aquifer system consists of the Lower



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Ponchatoula, Big Branch, Abita, Covington, and Slidell aquifers (from near surface to deepest).

### 2.2 Current and Historical Land Use within the Study Area

Historical aerial photographs and historical topographic maps of the Study Area and adjoining properties were reviewed for evidence of environmental concerns. The aerial photograph dates are 1969, 1976, 1985, 1994, and 2004 and the historical topographic maps range in date from 1935 to 1998. Sanborn<sup>®</sup> map coverage for the Study Area is not available (Appendices B, C, and D, respectively).

#### 2.2.1 Current Land Use

Current land use within the Study Area was identified during the site reconnaissance. The dominant land use is transportation with some residential surrounded predominantly by undeveloped woodlands.

#### 2.2.2 Historical Land Use

Historical aerial photographs and topographic maps of the Study Area and immediate adjacent areas were reviewed for evidence of environmental concerns. Review of the 1969 aerial photograph shows the majority of the Study Area as undeveloped with some residential and agricultural lands. LA 434 and LA 36 are visible. Several logging roads are visible to the east of LA 434. Review of the 1976 aerial photograph shows the Study Area, adjacent properties, and surrounding area appear similar to the 1969 photograph. The 1985 aerial photograph depicts additional residential development along the Study Area. Additional logging roads are visible along with associated cleared areas within the adjacent properties. A surface water feature associated with a quarry on the west side of LA 434 near the southern Study Area boundary is visible. Review of the 1994 aerial photograph shows the Study Area, adjacent properties, and surrounding area appear mostly similar to the 1985 photograph. Several areas that were cleared as part of logging operations show returning timber growth while additional areas have been cleared since 1985. Review of the 2004 aerial photograph shows the Study Area, adjacent properties, and surrounding area appear similar to the 1994 photograph.

Review of historical topographic maps included the 1935 and 1951 Slidell maps, the 1970, 1979, and 1994 Saint Tammany maps, and the 1971, 1979, 1994, and 1998 Lacombe maps. Review of these maps shows the Study Area, adjacent properties, and



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surrounding area features are consistent with the aerial photographs with the addition of the I-12/LA 434 interchange visible on the 1994 and 1998 Lacombe maps.

### 2.2.3 Sanborn® Maps

According to EDR, Sanborn® Fire Insurance Maps are not available for the Study Area indicating the area was not considered a “high” fire risk for insurance purposes. The “No Coverage” report is presented in Appendix D.

## 3. Records Review

A standard environmental records review was completed in order to identify, to the extent feasible, sites of potential concern within the Study Area.

A records search was conducted by Environmental Data Resources, Inc. (EDR) for the Study Area and immediate surrounding area (Appendix E). Because EDR locates sites based on addresses, which are not always representative of the actual location of a site, the results of the EDR search were supplemented with a review of the Louisiana Department of Environmental Quality (LDEQ) Electronic Document Management System (EDMS) records (Appendix F). EDMS is LDEQ’s electronic repository of official records that have been created or received by LDEQ.

The locations of some sites were found to differ slightly from their placement on the EDR map. Displaced sites determined to be outside the Study Area were removed from consideration for further investigation because they would not present a material risk of harm to public health or the environment. Certain sites listed in the EDR report are considered to represent *de minimis* conditions that generally do not present a material risk of harm to public health or the environment. These sites were also removed from consideration for further investigation.

The EDR report provides a list of unmapped sites with inadequate location information. The list of unmapped sites was reviewed to determine if any are located directly adjacent to or within the preliminary corridors. None of the unmapped sites are located within the Study Area and have been removed from consideration.

The database searches were followed by a site reconnaissance of the Study Area. The site reconnaissance also identified sites not documented in the environmental databases.



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The EDR records search identified four sites or properties with known environmental conditions to be present within the boundaries of or adjacent to the Study Area. The EDMS search, historical documents, and site reconnaissance identified three additional sites or properties with known environmental conditions to be present within the boundaries of or adjacent to the Study Area. Table 1 lists and Figure 2 identifies these sites.

**Table 1. Identified Hazardous Materials Sites and UST Sites**

Site Number	Site Name/Address	Site Type/ Database	Source	Within or Adjacent to the Study Area
1	St. Tammany Parish Coroner's Office 65278 Highway 434 Lacombe, LA 70445	NPDES; Radiation (X-Ray); Biosolids	EDMS	Within Study Area
2	McDonald Enterprises 65301 Highway 434 Lacombe, LA 70445	FINDS; NPDES; SPILLS	EDR; EDMS	Adjacent to Study Area
3	Mark Hardy Sand Pit 65301 Highway 434 Lacombe, LA 70445	NPDES	EDR; EDMS	Adjacent to Study Area
4	St. Tammany Parish Hurricane Debris Site 65501 Highway 434 Lacombe, LA 70445	SWF/LF	EDR	Adjacent to Study Area
5	24458 Azalea Lane Lacombe, LA 70445	Illegal Dumping	EDMS	Adjacent to Study Area
6	Vernon Vaughn Street Lacombe, LA 70445	Dirt Piles	Site Reconnaissance	Adjacent to Study Area
7	31075 Marshall Vaughn Road Lacombe, LA 70445	US Hist Auto	EDR	Adjacent to Study Area

Sources: EDR DataMap™ Area Study, Stage 1 EA / L&G Study, Lacombe, LA 70445, February 21, 2104; EDMS Review, Field Reconnaissance, February - March 2014.

- FINDS Facility Index System.
- NPDES National Pollutant Discharge Elimination System.
- SPILLS Emergency Response Section Incidents.
- SWF/LF Solid Waste Facility/Landfills.
- US Hist Auto Historic Gas Stations.

### 3.1 Regulated Sites

Based on the results of the environmental records review and site reconnaissance, evidence of HRECs has been identified on properties within or in proximity to the Study Area.

- **St. Tammany Parish Coroner, St. Tammany Parish.** Site No. 1 is located at 65278 Highway 434. According to EDMS records, the facility was constructed around 2009 and maintains a National Pollutant Discharge Elimination System (NPDES) permit for sanitary discharge that was renewed in 2013. The facility monitors its sewage sludge disposal and has a registered radiation source (X-Ray). No violations were reported and, based on the location of the facility relative to the Study Area, direct impacts are not expected.
- **McDonald Enterprises, St. Tammany Parish.** Site No. 2 is located at 65301 Highway 434. According to the EDR report, the facility is listed in the NPDES, SPILLS, and FINDS databases. The facility is also identified in EDMS. In 2003 and 2004, the facility was reported for NPDES discharge violations for turbidity associated with the discharge of muddy water into Bayou Lacombe. The last Discharge Monitoring Report was submitted September 2010 indicating “no discharge”. The violation was corrected and the facility is no longer in operation. Abandoned earth moving equipment is located at the facility. Based on the location of the facility relative to the Study Area, direct impacts are not expected.
- **Mark Hardy Sand Pit, St. Tammany Parish.** Site No. 3 is located at 65301 Highway 434. According to EDMS records, the facility operated as a sand extraction operation with an unauthorized discharge into Bayou Lacombe. Documents indicate that the facility ceased operation before obtainment of necessary NPDES permits. Based on the location of the facility relative to the Study Area, direct impacts are not expected.
- **St. Tammany Parish Hurricane Debris Site, St. Tammany Parish.** Site No. 4 is located at 65501 Highway 434. According to the EDR report, the facility is listed in the SWF/LF database. The facility is pre-approved as an emergency debris management site to handle debris generated from natural disasters including chipping, grinding, and burning of vegetative debris. The pre-approval has been renewed through June 2014. Based on the location of the facility relative to the Study Area, direct impacts are not expected.

- **Illegal Dump Site, St. Tammany Parish.** Site No. 5 is located at 24458 Azalea Lane. According to EDMS records, the facility is listed as an unauthorized solid waste facility. Inspection of the site noted empty drums, white goods, air conditioning units, and other miscellaneous waste located at the rear of the property. A compliance order was issued requiring removal and proper disposal of the waste or capping in accordance with Louisiana solid waste regulations. In February 1996, correspondence was issued indicating satisfactory clean-up had taken place at the property. Based on the location of the property relative to the Study Area, direct impacts are not expected.
- **Galatas Automotive, St. Tammany Parish.** Site No. 7 is located at 31075 Marshall Vaughn Road. According to the EDR report, the facility is listed in the EDR proprietary record US Hist Auto. Attempted research of state and federal databases and records indicates the facility has operated as an auto repair and service location since 2006. Based on the location of the property relative to the Study Area, direct impacts are not expected.

### 3.2 Other Sites

- **Dirt Piles, St. Tammany Parish.** Site No. 6 is located at the intersection of Marshall Vaughn Road and Vernon Vaughn Street. During the site reconnaissance, numerous dirt piles were observed placed on the property. Review of historical aerial photography indicates that the piles were placed in the recent past. It did not appear that the material was native to the site. Based on the location of the property relative to the Study Area, direct impacts are not expected.

## 4. Site Reconnaissance

A site reconnaissance of the Study Area and immediate adjacent areas was conducted on March 18, 2014, to identify properties indicating a presence of RECs. Inspections were limited to areas accessible from public ROW, private properties where permission to access was granted, and parking lots. Inspections were not conducted within the interior areas of private residential or commercial buildings or gated/enclosed areas. Limited visual inspection of these areas was conducted where possible. Figure 2 includes an aerial photograph depicting the Study Area boundaries and identified sites.

#### 4.1 Oil & Gas and Water Wells

A query of the Louisiana Department of Natural Resources (LDNR), Strategic Online Natural Resource Information System (SONRIS) database was performed to identify registered wells within the Study Area. Table 2 identifies the wells by use category and status and Figure 2 depicts the location of the active wells. This query resulted in six wells being identified within the Study Area.

**Table 2. Oil & Gas and Water Wells**

Use Category and Description		Quantity Within Study Area	Quantity Within 1 Mile of Study Area
Water	Public Supply - Institution	0	3
	Public Supply - Commercial	0	2
	Domestic Supply	6	137
	Irrigation	0	3
	Oil & Gas Supply	0	2
	Plugged & Abandoned		6
Oil & Gas	Producing	0	2
<b>Total</b>		<b>6</b>	<b>155</b>

Source: LDNR SONRIS database. Accessed April 2014.

#### 4.2 Power Lines, Pipelines, and other Infrastructure

Overhead utility lines parallel LA 434 on the west side of the roadway from LA 36 south. Overhead utility lines cross LA 434 from west to east, north of Sticker Bay Road, crossing back to the west, south of Sticker Bay Road. The overhead lines continue south and then follow Vortisch Road crossing LA 434 to the east side and continuing south through the Study Area. The Study Area is traversed by a high-pressure natural gas pipeline approximately 1,500 feet south of the intersection of LA 434 and Marshall Vaughn Road. Underground fiber optic lines also parallel LA 434 through the Study Area.

#### 4.3 Solid Waste

Solid waste is defined as garbage, refuse, or other discarded material (LDEQ Title 33, Part VII). Site Nos. 5 and 6 were identified as locations with discarded materials. Based on the location of the facilities relative to the proposed improvements, direct impacts are not expected.

#### **4.4 Radon**

A radon gas survey was not conducted during this assessment. However, information obtained from the LDEQ *1990 Louisiana State Indoor Radon Survey in Homes* indicates the Study Area is located in an area where the average indoor radon level is 0.49178 picocurie per liter (pCi/L). Radon mitigation measures are recommended by the U.S. Environmental Protection Agency (USEPA) when concentrations of radon exceed 4 pCi/L. Based on results reported in the state radon assessment, radon is not expected to be a concern.

#### **4.5 Asbestos-Containing Materials**

Asbestos was banned in most friable building materials (spray-applied surfacing materials and thermal system insulation) in 1978, but the U.S. Occupational Safety and Health Administration deems spray-applied surfacing materials, thermal system insulation materials, and vinyl flooring materials as presumed ACMs if they are present in pre-1980 buildings (29 Code of Federal Regulation, Subparts 1910.1001 and 1926.1101).

A visual inspection of potential ACM in easily accessible areas was not conducted and no samples were collected or analyzed. ACM may have been used in building materials for structures located within the Study Area.

#### **4.6 Polychlorinated Biphenyls**

Utility lines and associated transformers, capacitors, or other electrical equipment are located within the Study Area and are crossed by the proposed improvements. Prior to USEPA's ban on PCBs and the Toxic Substance Control Act of 1976, these types of equipment have been historically associated with the use of PCBs as a dielectric fluid coolant and stabilizer, unless testing proves otherwise. Inspection or testing of these types of equipment has not been performed as part of this assessment.

### **5. Interviews**

In general, due to the length of the project, interviews with individual landowners potentially impacted were not conducted. The Parish officials listed below were contacted to discuss the location of infrastructure and discuss past and current development activities in order to identify or dismiss areas of environmental concern or



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possible contamination. No other areas were identified in addition to those previously discussed in this report.

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### 6. Findings, Opinions, and Conclusions

A Phase I ESA was conducted for the LA 434 project in general accordance with ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. This assessment consisted of a review of regulatory records, site reconnaissance, and interviews with knowledgeable persons for the Study Area and the proposed improvements. Any exceptions to or deletions from this practice are described in Section 1.3.

Seven sites with known environmental conditions were identified to be present within or adjacent to the Study Area. The findings identified are summarized below and discussed in greater detail in this report.

#### 6.1 Recognized Environmental Conditions

No RECs or CRECs were identified as part of the Phase I ESA.

The HRECs identified as part of the Phase I ESA include facilities with NPDES discharge violations that were corrected, illegal waste disposal that was corrected under a compliance order, and permitted facilities. Based on issued compliance documentation and the location of the properties relative to the Study Area, direct impacts are not expected.

#### 6.2 Conclusions

Based on the analysis provided in this Phase I ESA relative to the Study Area, potential direct impacts to sites of concern are not anticipated. Further review relative to the sites identified in this report or the identification of additional sites should be performed if refined or alternative alignments are developed and located outside the Study Area. In



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In addition, refinement of the proposed improvements may result in elimination of any identified direct impacts.

Proposed crossing of utility corridors, pipelines, and oil & gas wells should be coordinated with the appropriate utility company during final design.

Further investigation is recommended for any improvement that includes the demolition of existing structures.

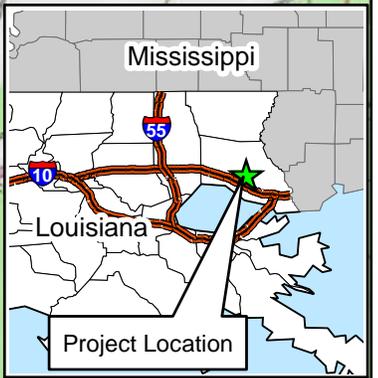
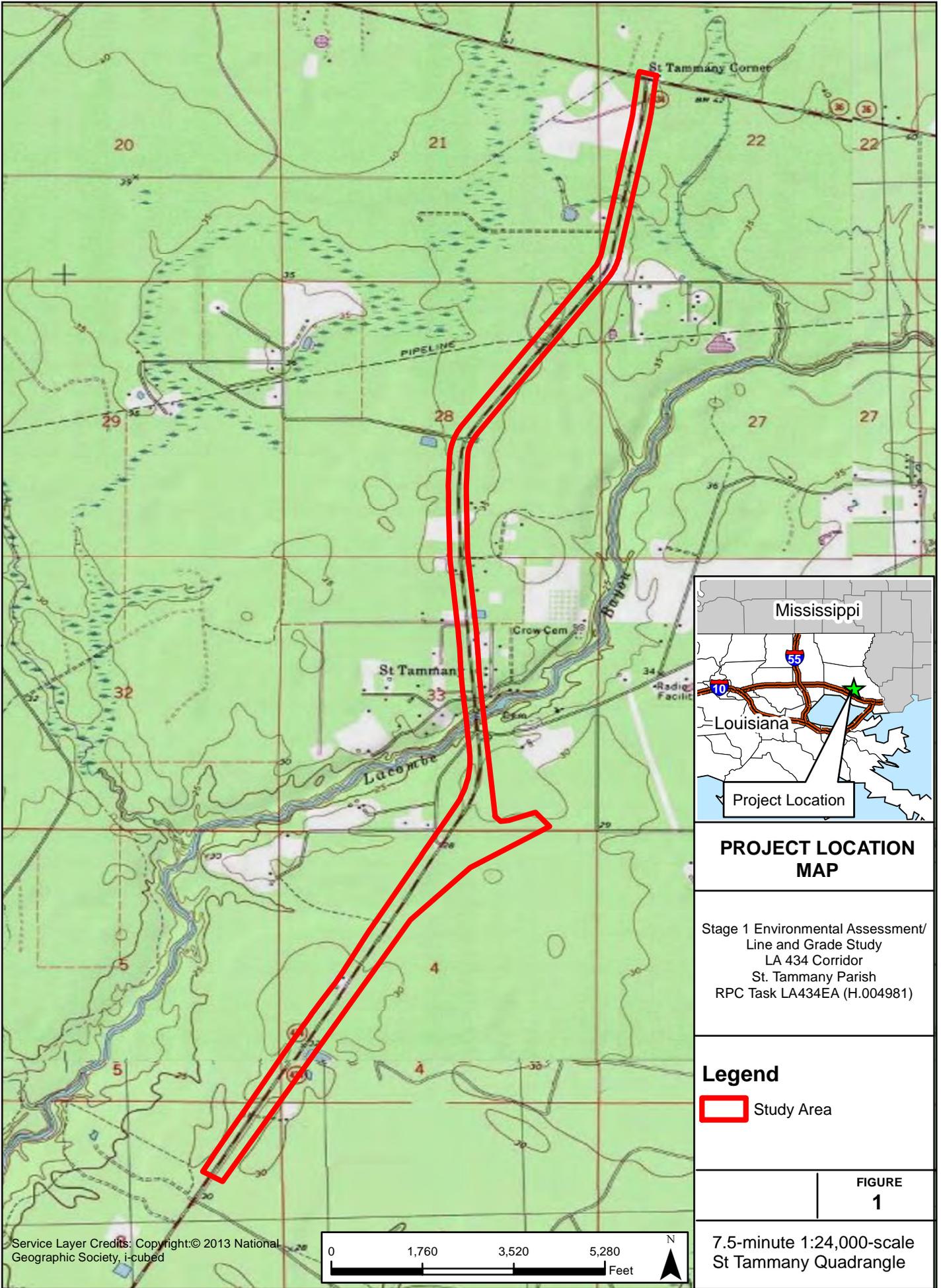
### **7. Qualifications of Environmental Professionals**

This assessment was completed by personnel who meet the definition of “environmental professional” as defined in ASTM E 1527-13. Ms. Beth Beam and Mr. Gregory Badon conducted the site visit and prepared this report. The work was conducted under the supervision and review of Mr. Scott Hoffeld. Resumes for these individuals are attached as Appendix G.

## Figures

Date Saved: 4/10/2014 5:01:44 PM

Path: \\LA01FP02\Data\TRAP\Projects\LA003230\0000 LA 4342-Data\GIS\_CADD\ArcMap\Project\Locaton\_8.5X11.mxd



**PROJECT LOCATION MAP**

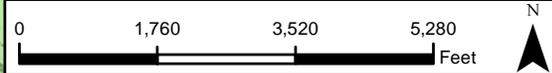
Stage 1 Environmental Assessment/  
Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish  
RPC Task LA434EA (H.004981)

**Legend**  
 Study Area

**FIGURE 1**

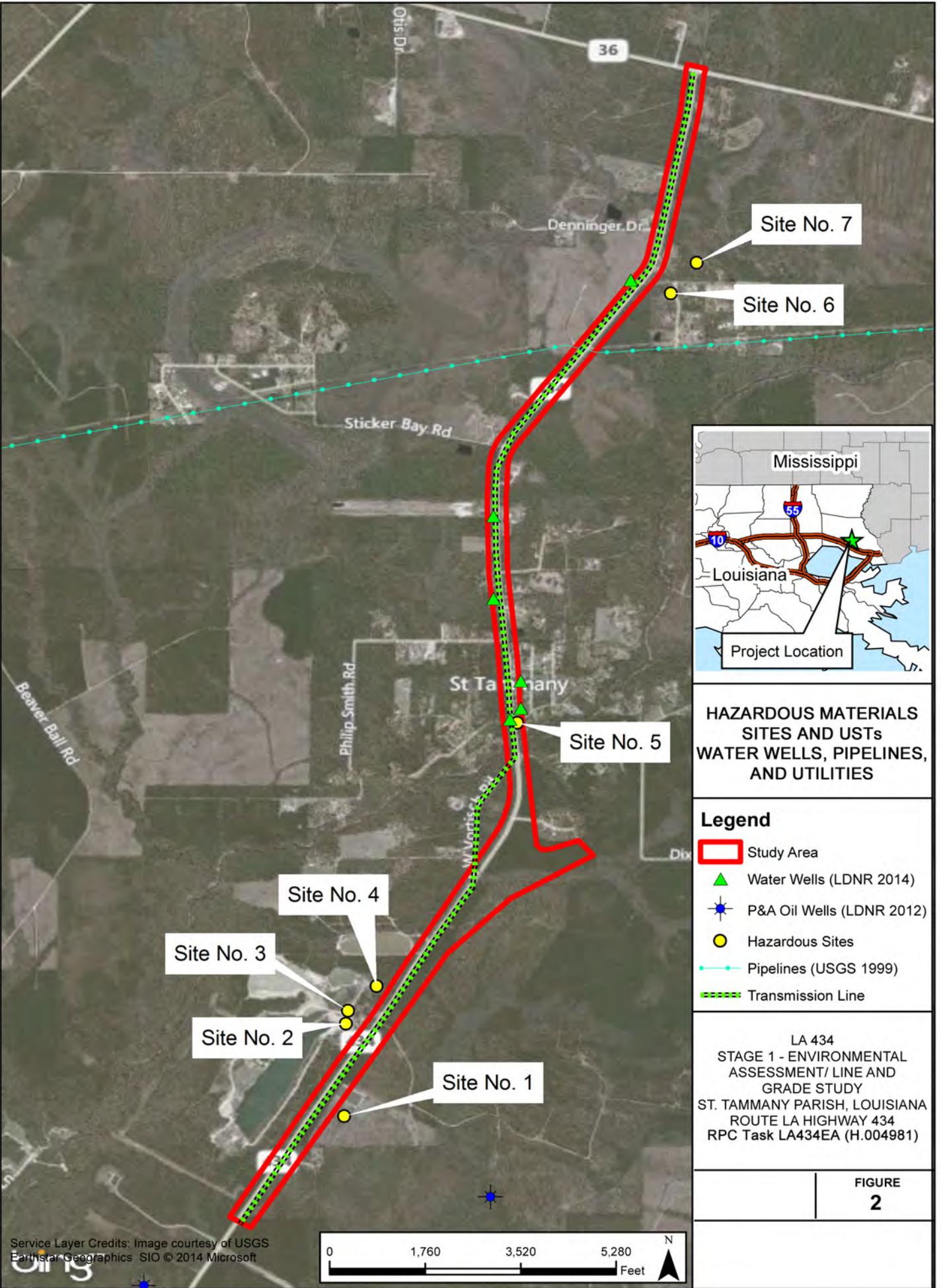
7.5-minute 1:24,000-scale  
St Tammany Quadrangle

Service Layer Credits: Copyright© 2013 National Geographic Society, i-cubed



Date Saved: 4/7/2014 5:34:40 PM

Path: \\L:\A01\FP02\Data\TRAP\Projects\LA003230.0000 LA 434\2-Data\GIS\_CADD\ArcMap\HazSites.mxd



**HAZARDOUS MATERIALS SITES AND USTs WATER WELLS, PIPELINES, AND UTILITIES**

- Legend**
- Study Area
  - ▲ Water Wells (LDNR 2014)
  - ★ P&A Oil Wells (LDNR 2012)
  - Hazardous Sites
  - - - Pipelines (USGS 1999)
  - - - ▲ - - - Transmission Line

LA 434  
 STAGE 1 - ENVIRONMENTAL ASSESSMENT/ LINE AND GRADE STUDY  
 ST. TAMMANY PARISH, LOUISIANA  
 ROUTE LA HIGHWAY 434  
 RPC Task LA434EA (H.004981)

**FIGURE 2**

Service Layer Credits: Image courtesy of USGS Earthstar Geographics SIO © 2014 Microsoft



## **Appendix A**

Photographic Log

<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
---	--	---

<b>Photo No.</b>  1	<b>Date:</b>  03/18/2014
<b>Description:</b> View looking north along LA 434 from entrance to St. Tammany Parish Coroner's office.	



<b>Photo No.</b>  2	<b>Date:</b>  03/18/2014
<b>Description:</b> View looking south along LA 434 from entrance to St. Tammany Parish Coroner's office.	



<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
---	--	---

<b>Photo No.</b>  3	<b>Date:</b>  03/18/2014	
<b>Description:</b> View looking north/northeast at St. Tammany Parish Coroner's office (Site No. 1).		

<b>Photo No.</b>  4	<b>Date:</b>  03/18/2014	
<b>Description:</b> View looking west at water treatment facility located behind St. Tammany Parish Coroner's office.		

<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
---	--	---

<b>Photo No.</b>  5	<b>Date:</b>  03/18/2014
<b>Description:</b> View looking west at water treatment facility located behind St. Tammany Parish Coroner's office.	



<b>Photo No.</b>  6	<b>Date:</b>  03/18/2014
<b>Description:</b> View looking west from LA 434 along entrance to McDonald Enterprises, Mark Hardy Sand Pit, and St. Tammany Parish hurricane debris site (Site Nos. 2, 3, and 4).	



<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
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<b>Photo No.</b>  7	<b>Date:</b>  03/18/2014
<b>Description:</b> View of sign at entrance to McDonald Enterprises and Mark Hardy Sand Pit (Site Nos. 2 and 3).	



<b>Photo No.</b>  8	<b>Date:</b>  03/18/2014
<b>Description:</b> View looking west from LA 434 at high-pressure natural gas pipeline.	



<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
---	--	---

<b>Photo No.</b> 9	<b>Date:</b> 03/18/2014	
<b>Description:</b> View looking east across LA 434 along high-pressure natural gas pipeline crossing.		

<b>Photo No.</b> 10	<b>Date:</b> 03/18/2014	
<b>Description:</b> View looking west from Vernon Vaughn Street at dirt piles (Site No. 6).		

<b>Client Name:</b> New Orleans Regional Planning Commission	<b>Project:</b> Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor, St. Tammany Parish RPC Task LA434EA (H.004981)	<b>ARCADIS Project No.</b>  LA003230.0001.00004
---	--	---

<b>Photo No.</b>  11	<b>Date:</b>  03/18/2014	
<b>Description:</b> View looking southwest from Vernon Vaughn Street at property with dirt piles and abandoned trailers (Site No. 6).		

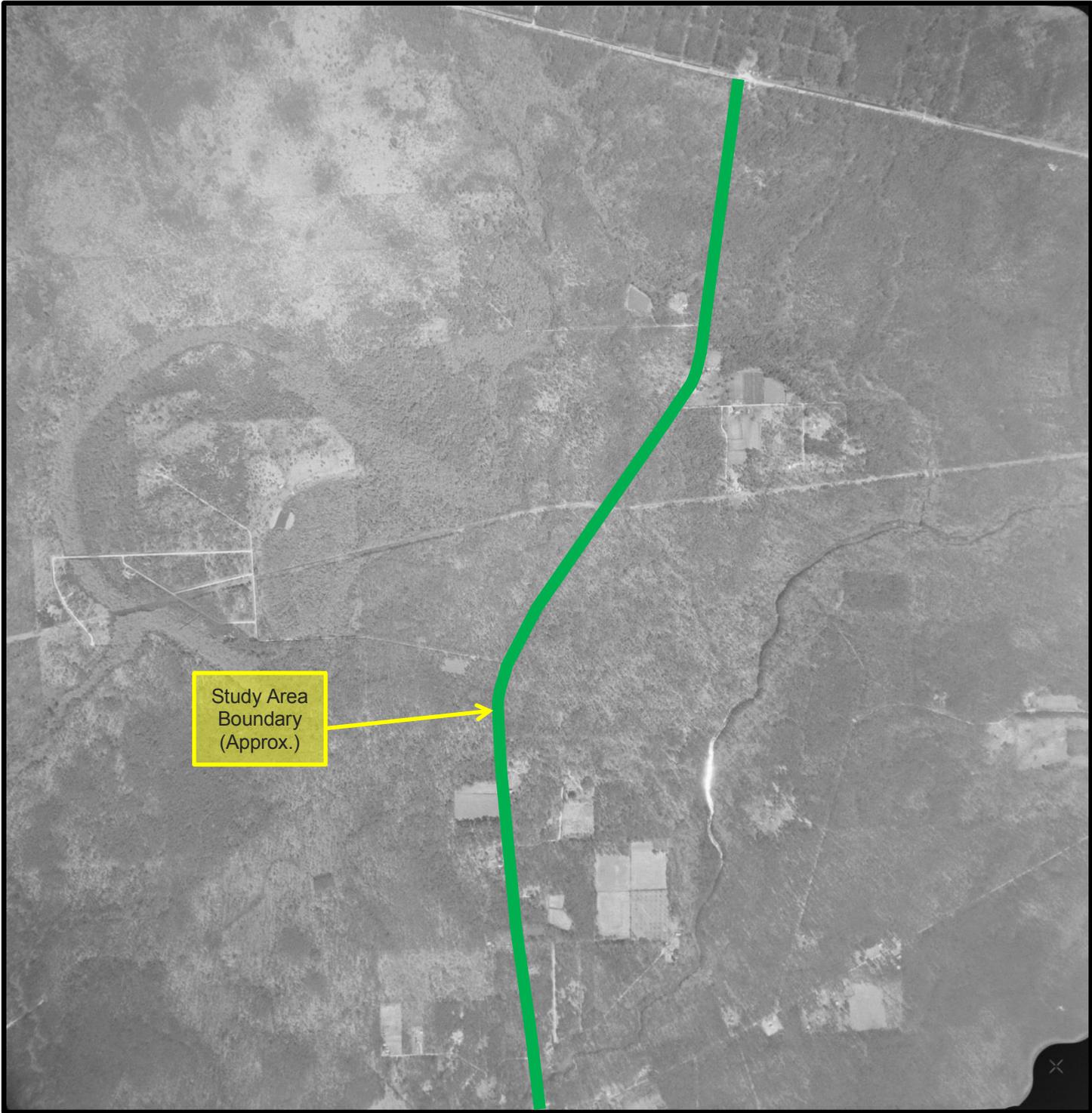
<b>Photo No.</b>  12	<b>Date:</b>  03/18/2014	
<b>Description:</b> View looking south along LA 434 from intersection with LA 36.		



## **Appendix B**

Historical Aerial Photographs

# Historical Aerial Photographs



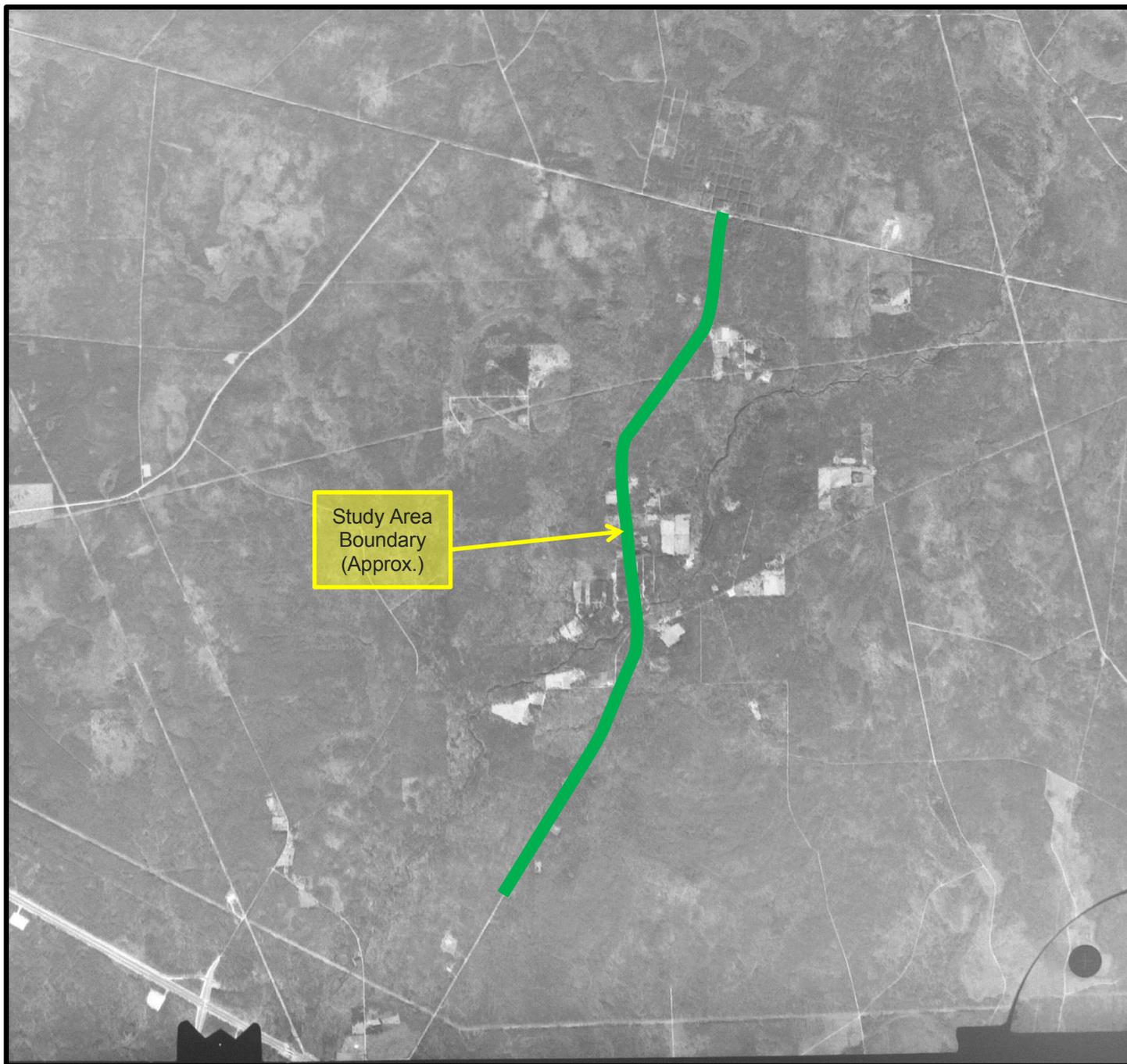
 <p>North</p>	<p>Aerial Photograph Year: March 1969 1 of 2 Scale: No Scale</p>	<p><b>SITE NAME:</b> LA 434 Stage 1 Environmental Assessment/ Line and Grade Study <b>ADDRESS:</b> LA 434 Corridor north of I-12 and south of LA 36 St. Tammany Parish, Louisiana 70445 <b>LAT/LONG:</b> 30.4065/-89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc. <b>CONTACT:</b> Elizabeth Beam <b>INQUIRY#:</b> 3858750.7 <b>RESEARCH DATE:</b> Feb 21, 2014</p>
---	--	---	---

# Historical Aerial Photographs



 <p>North</p>	<p>Aerial Photograph Year: March 1969 2 of 2 Scale: No Scale</p>	<p><b>SITE NAME:</b> US 11 Norfolk Southern Railroad <b>ADDRESS:</b> Study Area between along US 11 between I-12 and US 190 Slidell, LA 70458 <b>LAT/LONG:</b> 30.312114/-89.769917</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc. <b>CONTACT:</b> Elizabeth Beam <b>INQUIRY#:</b> 3594308.1s <b>RESEARCH DATE:</b> 05/01/2013</p>
---	--	---	--

# Historical Aerial Photographs



 <p>North</p>	<p>Aerial Photograph Year: Feb 1976 Scale: No Scale</p>	<p><b>SITE NAME:</b> LA 434 Stage 1 Environmental Assessment/ Line and Grade Study <b>ADDRESS:</b> LA 434 Corridor north of I-12 and south of LA 36 St. Tammany Parish, Louisiana 70445 <b>LAT/LONG:</b> 30.4065/-89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc. <b>CONTACT:</b> Elizabeth Beam <b>INQUIRY#:</b> 3858750.7 <b>RESEARCH DATE:</b> Feb 21, 2014</p>
---	---	---	---

# Historical Aerial Photographs



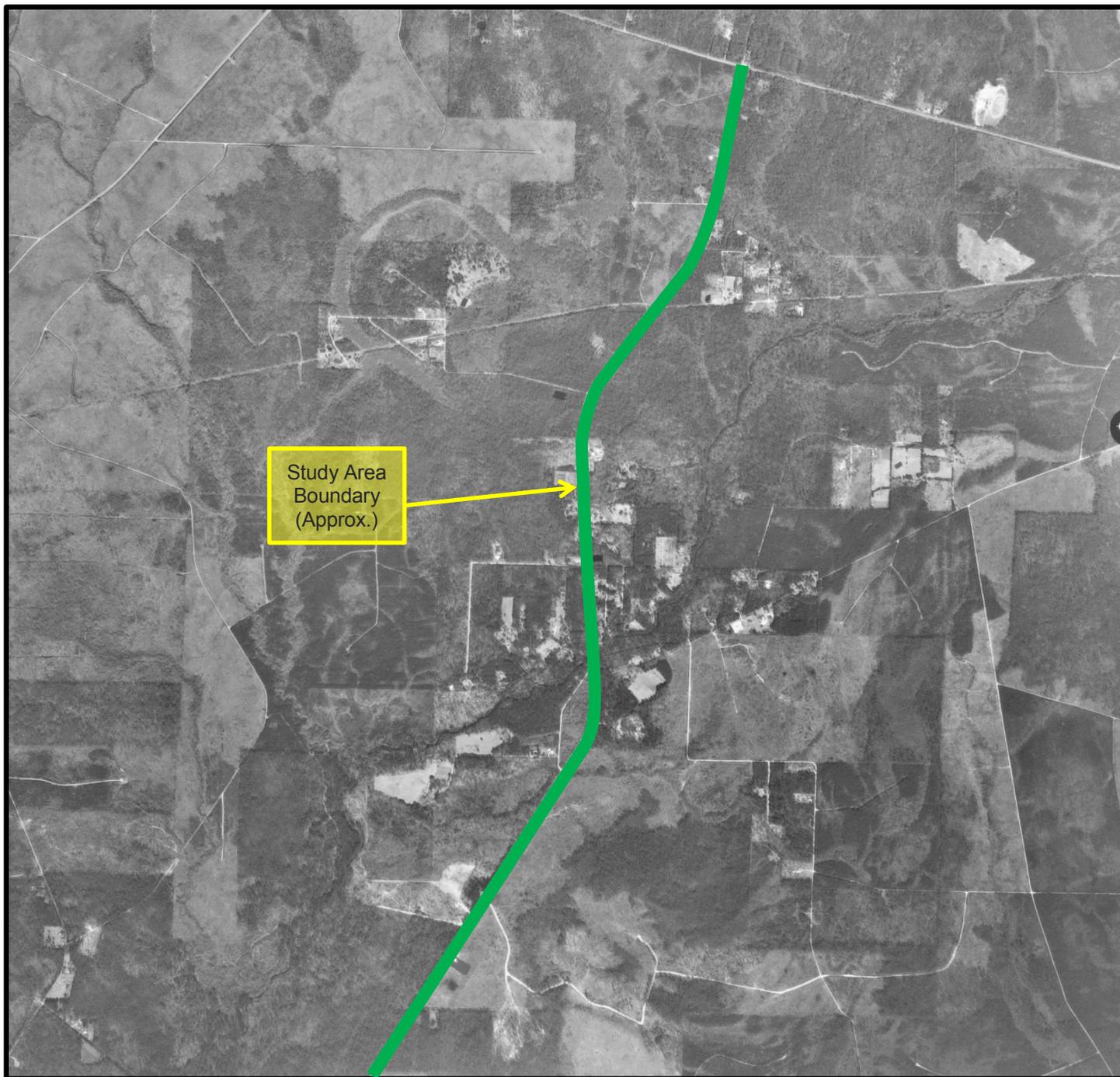
 <p>North</p>	<p>Aerial Photograph</p> <p>Year: Oct 1985</p> <p>Scale: No Scale</p>	<p><b>SITE NAME:</b> LA 434 Stage 1 Environmental Assessment/ Line and Grade Study</p> <p><b>ADDRESS:</b> LA 434 Corridor north of I-12 and south of LA 36 St. Tammany Parish, Louisiana 70445</p> <p><b>LAT/LONG:</b> 30.4065/-89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc.</p> <p><b>CONTACT:</b> Elizabeth Beam</p> <p><b>INQUIRY#:</b> 3858750.7</p> <p><b>RESEARCH DATE:</b> Feb 21, 2014</p>
---	---	---	--

# Historical Aerial Photographs



 <p>North</p>	<p>Aerial Photograph</p> <p>Year: Jan 2004</p> <p>Scale: No Scale</p>	<p><b>SITE NAME:</b> LA 434 Stage 1 Environmental Assessment/ Line and Grade Study</p> <p><b>ADDRESS:</b> LA 434 Corridor north of I-12 and south of LA 36 St. Tammany Parish, Louisiana 70445</p> <p><b>LAT/LONG:</b> 30.4065/-89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc.</p> <p><b>CONTACT:</b> Elizabeth Beam</p> <p><b>INQUIRY#:</b> 3858750.7</p> <p><b>RESEARCH DATE:</b> Feb 21, 2014</p>
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# Historical Aerial Photographs



 <p>North</p>	<p>Aerial Photograph Year: Feb 1994 Scale: No Scale</p>	<p><b>SITE NAME:</b> LA 434 Stage 1 Environmental Assessment/ Line and Grade Study <b>ADDRESS:</b> LA 434 Corridor north of I-12 and south of LA 36 St. Tammany Parish, Louisiana 70445 <b>LAT/LONG:</b> 30.4065/-89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc. <b>CONTACT:</b> Elizabeth Beam <b>INQUIRY#:</b> 3858750.7 <b>RESEARCH DATE:</b> Feb 21, 2014</p>
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## **Appendix C**

Historical Topographic Maps



**Stage 1 EA / L&G Study**

Route LA 434

Lacombe, LA 70445

Inquiry Number: 3858750.4

February 19, 2014

# EDR Historical Topographic Map Report



6 Armstrong Road, 4th Floor  
Shelton, Connecticut 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

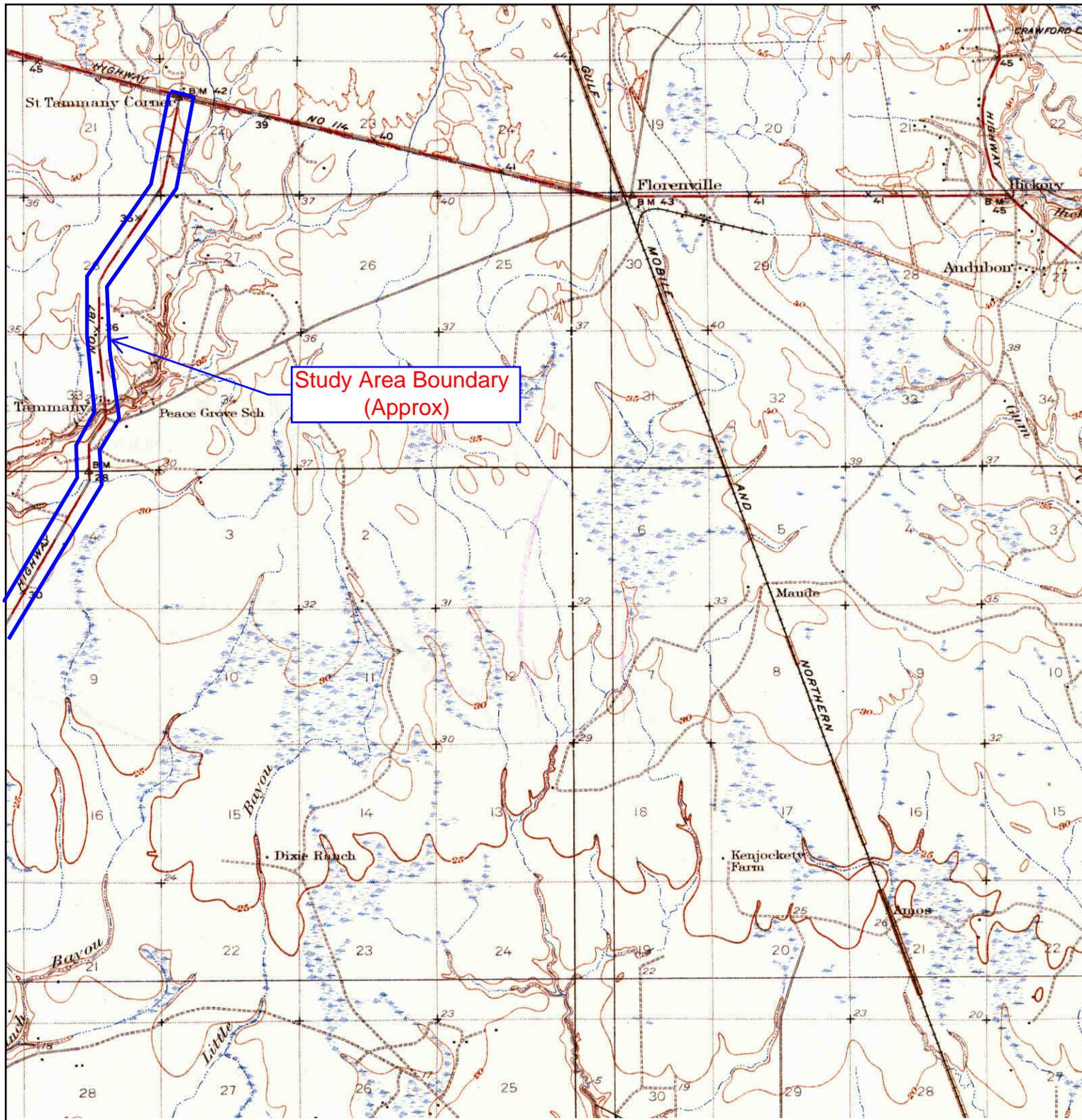
## **Disclaimer - Copyright and Trademark Notice**

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report AS IS. Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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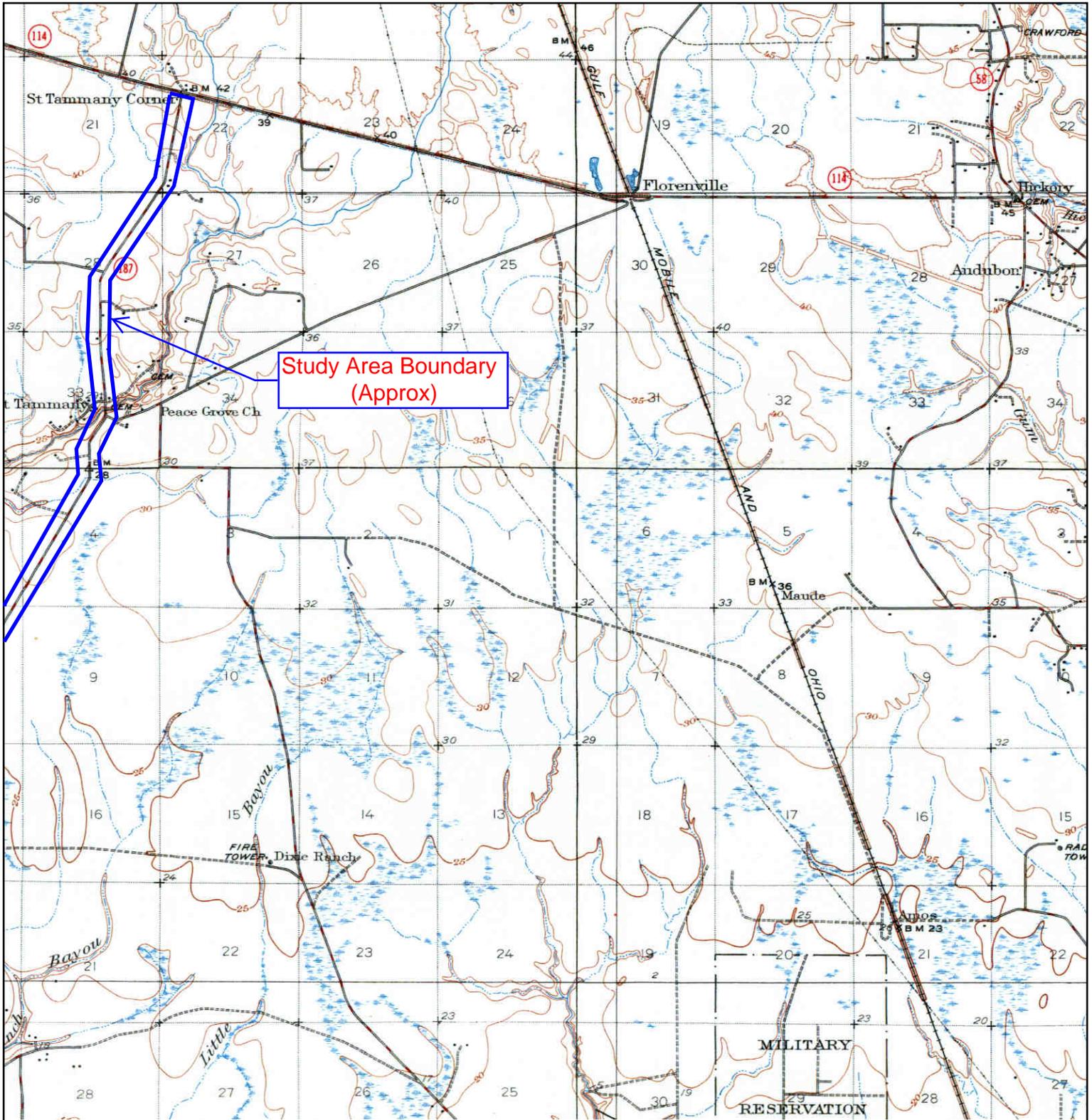
# Historical Topographic Map



Study Area Boundary  
(Approx)

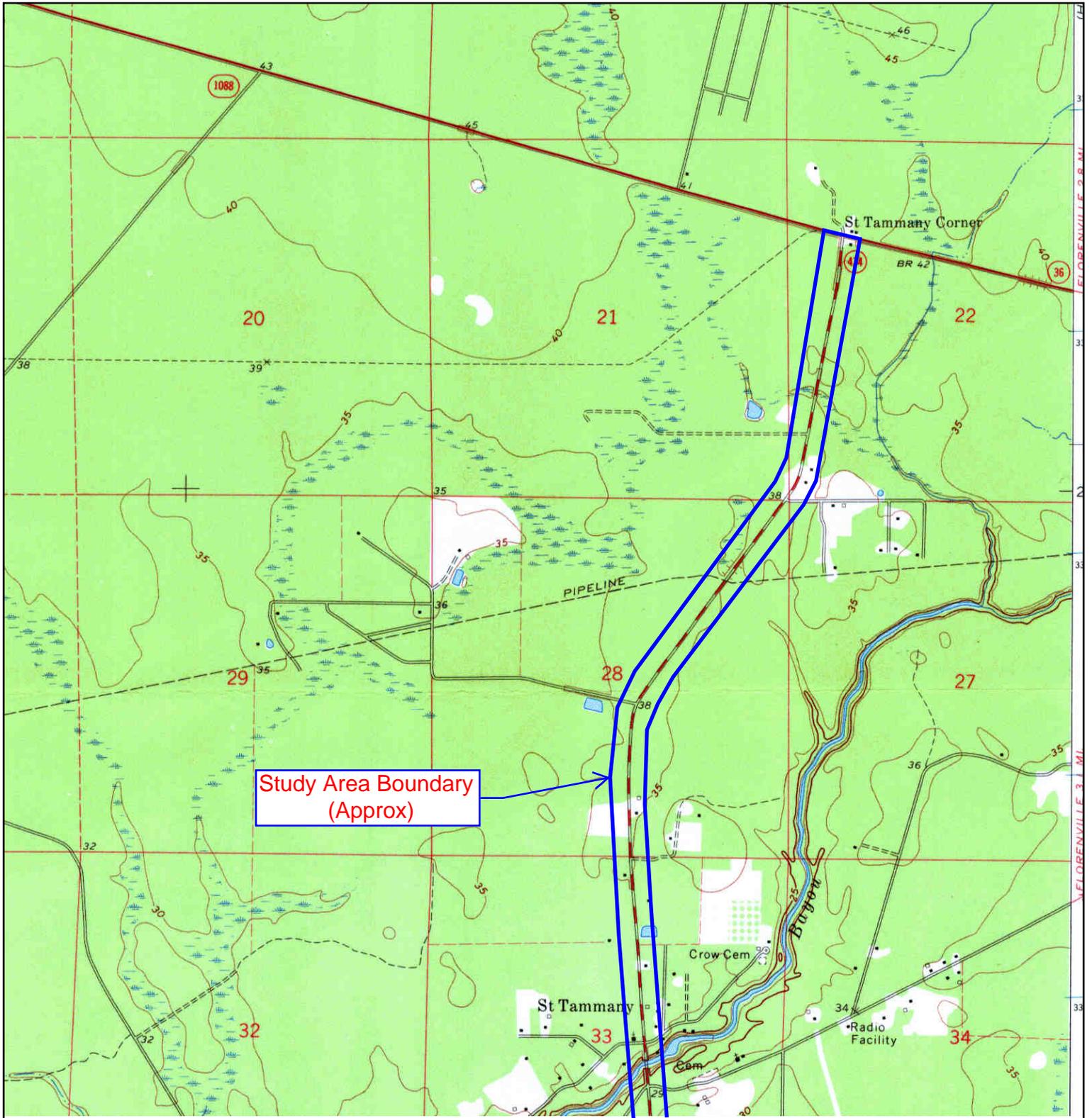
<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: SLIDELL                  MAP YEAR: 1935</p>	<p><b>SITE NAME:</b> Stage 1 EA / L&amp;G Study  <b>ADDRESS:</b> Route LA 434                  Lacombe, LA 70445  <b>LAT/LONG:</b> 30.4065 / -89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc.  <b>CONTACT:</b> Beth Beam  <b>INQUIRY#:</b> 3858750.4  <b>RESEARCH DATE:</b> 02/19/2014</p>
	<p><b>SERIES:</b> 15  <b>SCALE:</b> 1:62500</p>		

# Historical Topographic Map



<p>N ↑</p>	TARGET QUAD	SITE NAME:	Stage 1 EA / L&G Study	CLIENT:	ARCADIS U.S., Inc.	
	NAME:	SLIDELL	ADDRESS:	Route LA 434	CONTACT:	Beth Beam
	MAP YEAR:	1951		Lacombe, LA 70445	INQUIRY#:	3858750.4
	CORRECTED FROM :	:1935	LAT/LONG:	30.4065 / -89.8923	RESEARCH DATE:	02/19/2014
	SERIES:	15				
	SCALE:	1:62500				

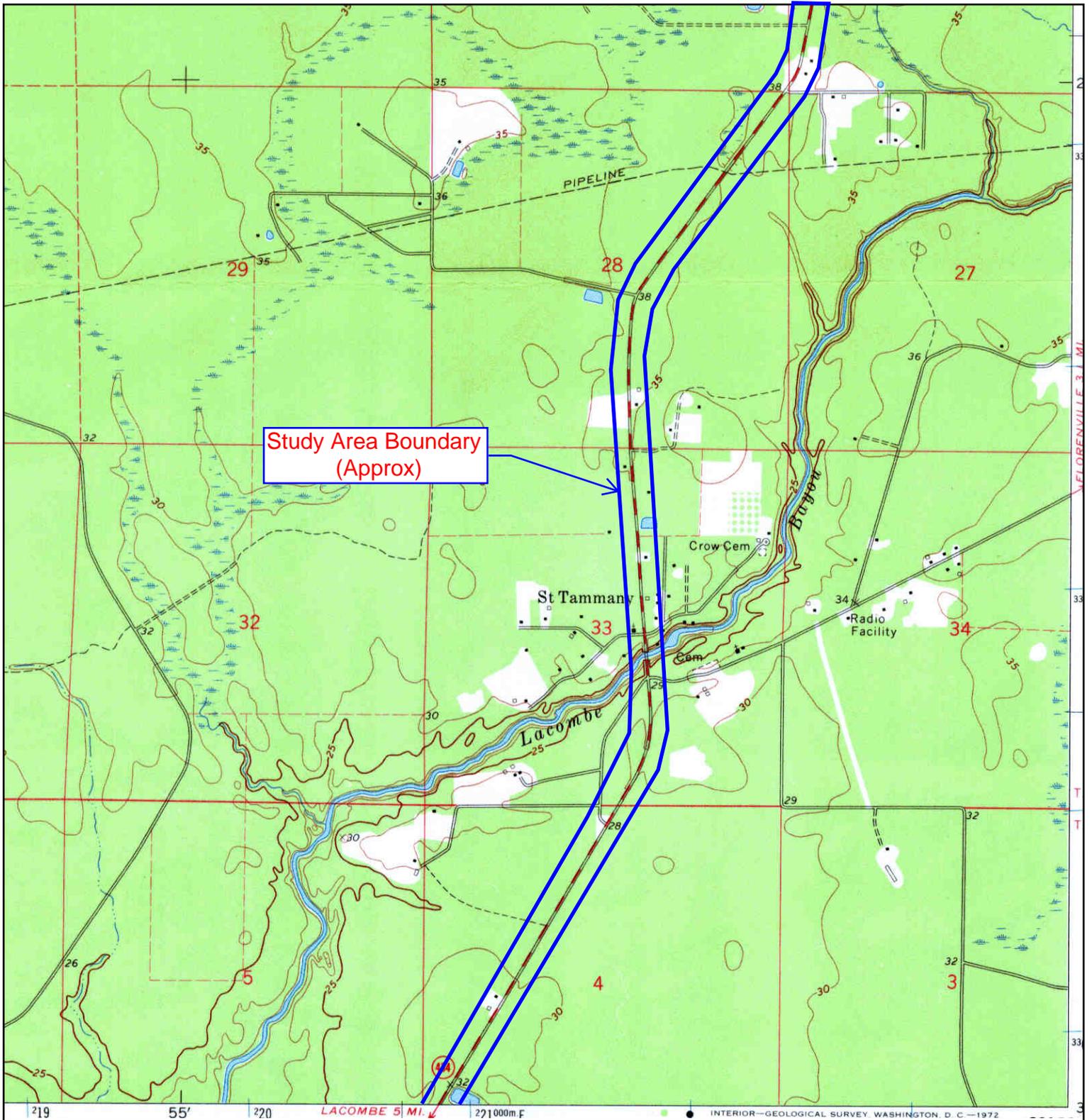
# Historical Topographic Map



Study Area Boundary  
(Approx)

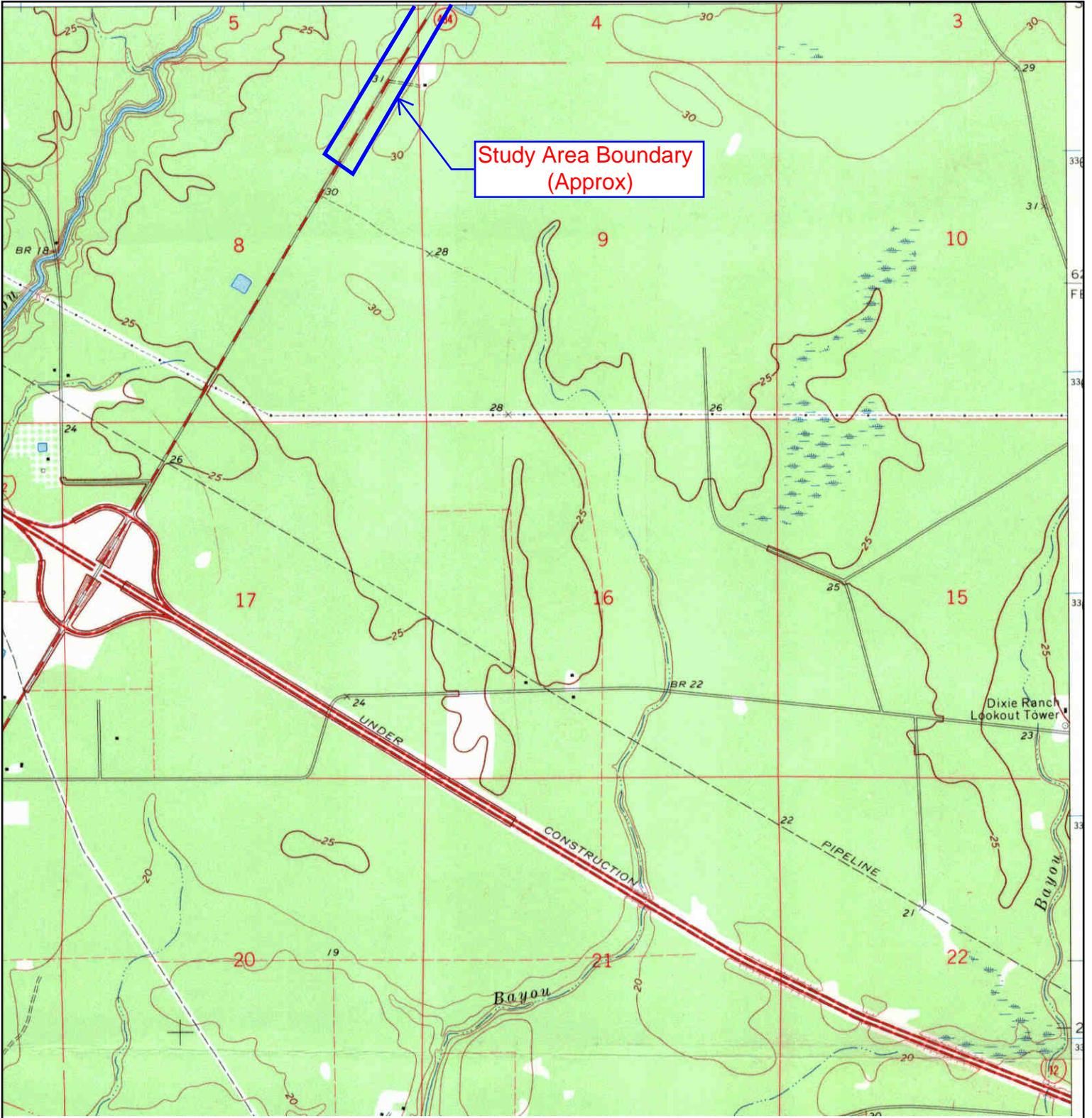
	<b>TARGET QUAD</b> NAME: SAINT TAMMANY MAP YEAR: 1970	SITE NAME: Stage 1 EA / L&G Study ADDRESS: Route LA 434 Lacombe, LA 70445 LAT/LONG: 30.4065 / -89.8923	CLIENT: ARCADIS U.S., Inc. CONTACT: Beth Beam INQUIRY#: 3858750.4 RESEARCH DATE: 02/19/2014
	SERIES: 7.5 SCALE: 1:24000		

# Historical Topographic Map



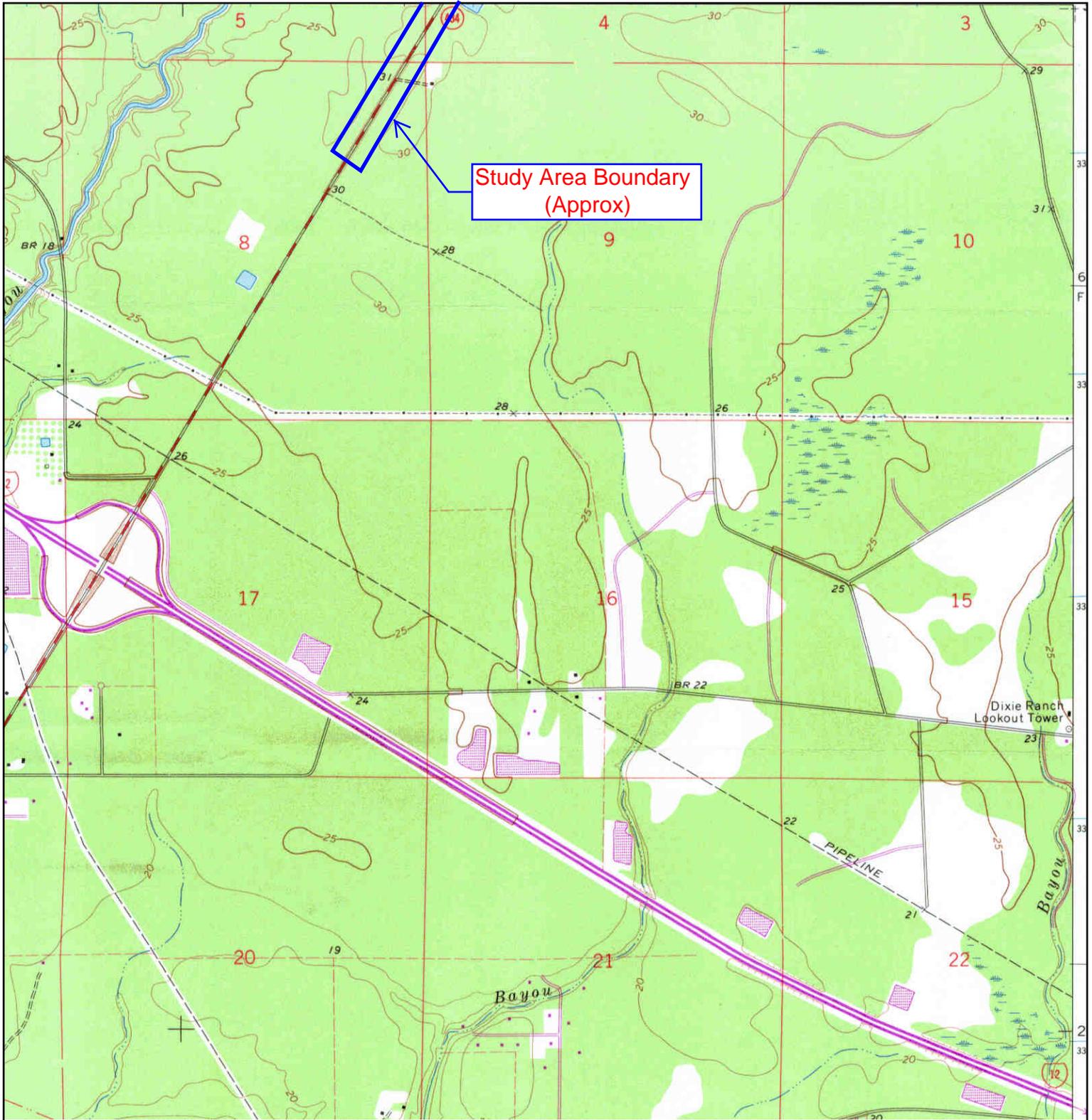
<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: SAINT TAMMANY                  MAP YEAR: 1970</p>	<p><b>SITE NAME:</b> Stage 1 EA / L&amp;G Study  <b>ADDRESS:</b> Route LA 434                  Lacombe, LA 70445  <b>LAT/LONG:</b> 30.4065 / -89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc.  <b>CONTACT:</b> Beth Beam  <b>INQUIRY#:</b> 3858750.4  <b>RESEARCH DATE:</b> 02/19/2014</p>
	<p><b>SERIES:</b> 7.5  <b>SCALE:</b> 1:24000</p>		

# Historical Topographic Map



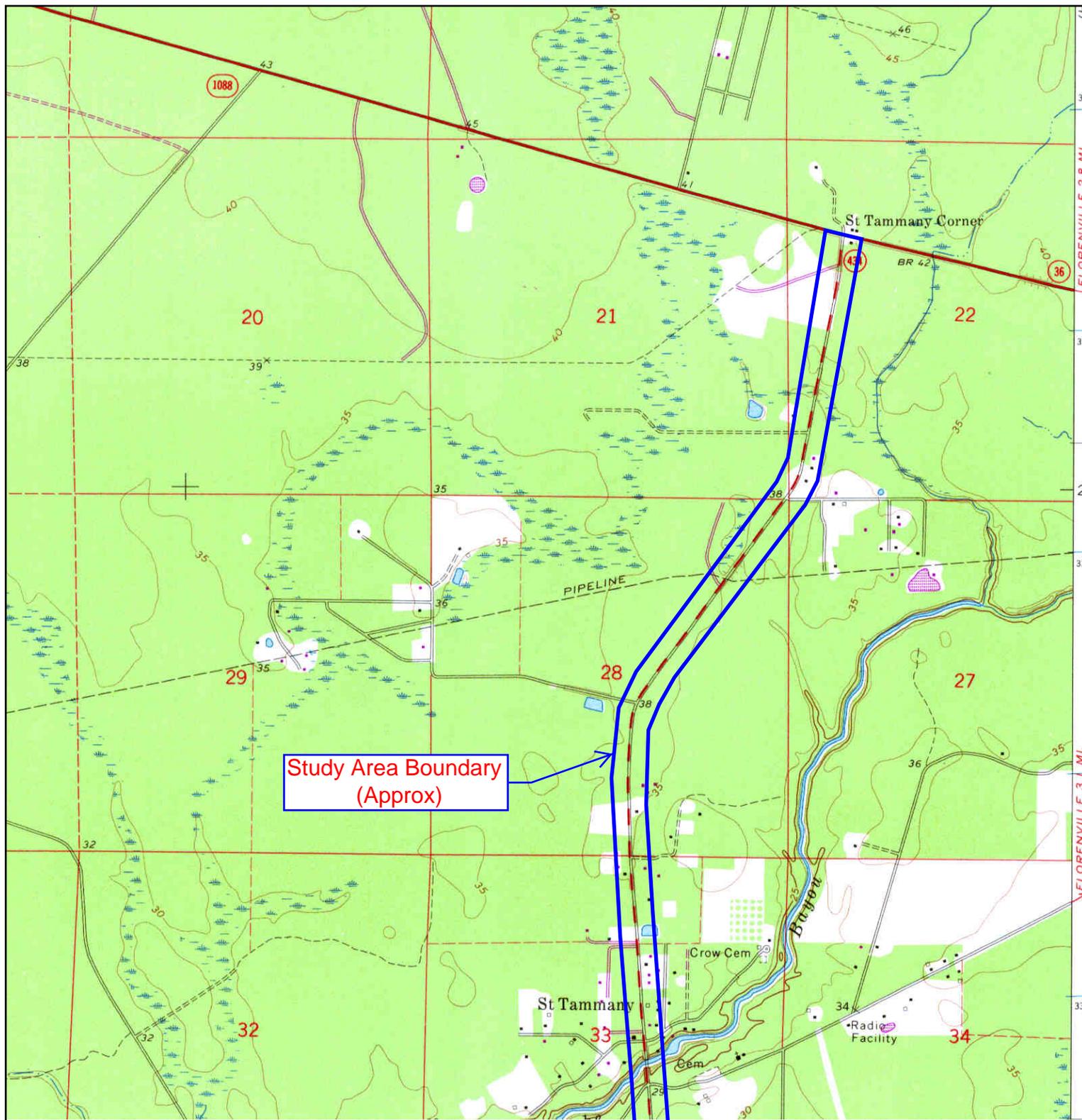
<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: LACOMBE                  MAP YEAR: 1971</p>	<p><b>SITE NAME:</b> Stage 1 EA / L&amp;G Study  <b>ADDRESS:</b> Route LA 434                  Lacombe, LA 70445  <b>LAT/LONG:</b> 30.4065 / -89.8923</p>	<p><b>CLIENT:</b> ARCADIS U.S., Inc.  <b>CONTACT:</b> Beth Beam  <b>INQUIRY#:</b> 3858750.4  <b>RESEARCH DATE:</b> 02/19/2014</p>
	<p><b>SERIES:</b> 7.5  <b>SCALE:</b> 1:24000</p>		

# Historical Topographic Map



<p>N ↑</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: LACOMBE	<b>ADDRESS:</b> Route LA 434	<b>CONTACT:</b> Beth Beam
	MAP YEAR: 1979	Lacombe, LA 70445	<b>INQUIRY#:</b> 3858750.4
	PHOTOREVISED FROM :1971	<b>LAT/LONG:</b> 30.4065 / -89.8923	<b>RESEARCH DATE:</b> 02/19/2014
	SERIES: 7.5		
	SCALE: 1:24000		

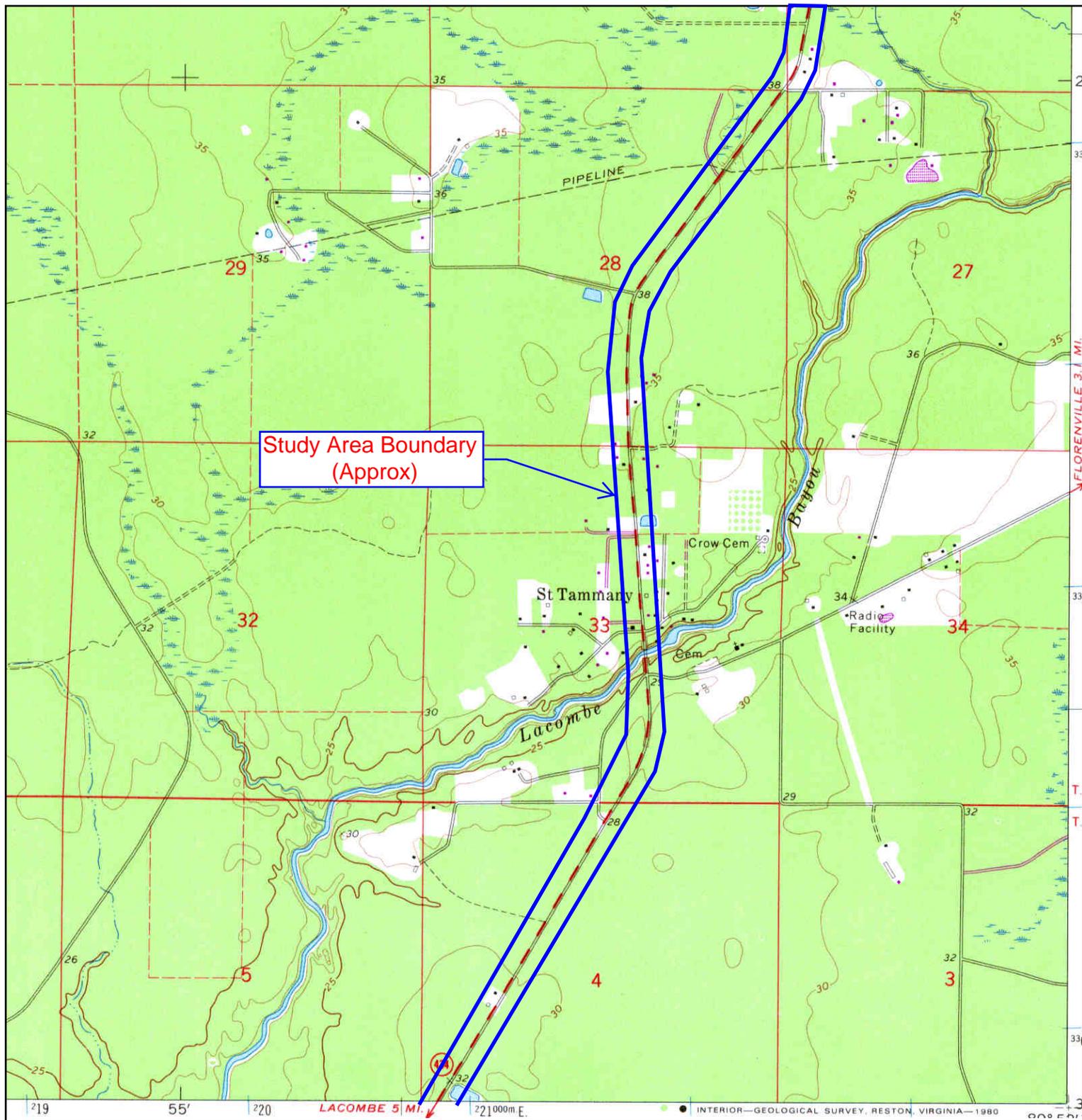
# Historical Topographic Map



Study Area Boundary  
(Approx)

<p>N ↑</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: SAINT TAMMANY	ADDRESS: Route LA 434	CONTACT: Beth Beam
	MAP YEAR: 1979	Lacombe, LA 70445	INQUIRY#: 3858750.4
	PHOTOREVISED FROM :1970	LAT/LONG: 30.4065 / -89.8923	RESEARCH DATE: 02/19/2014
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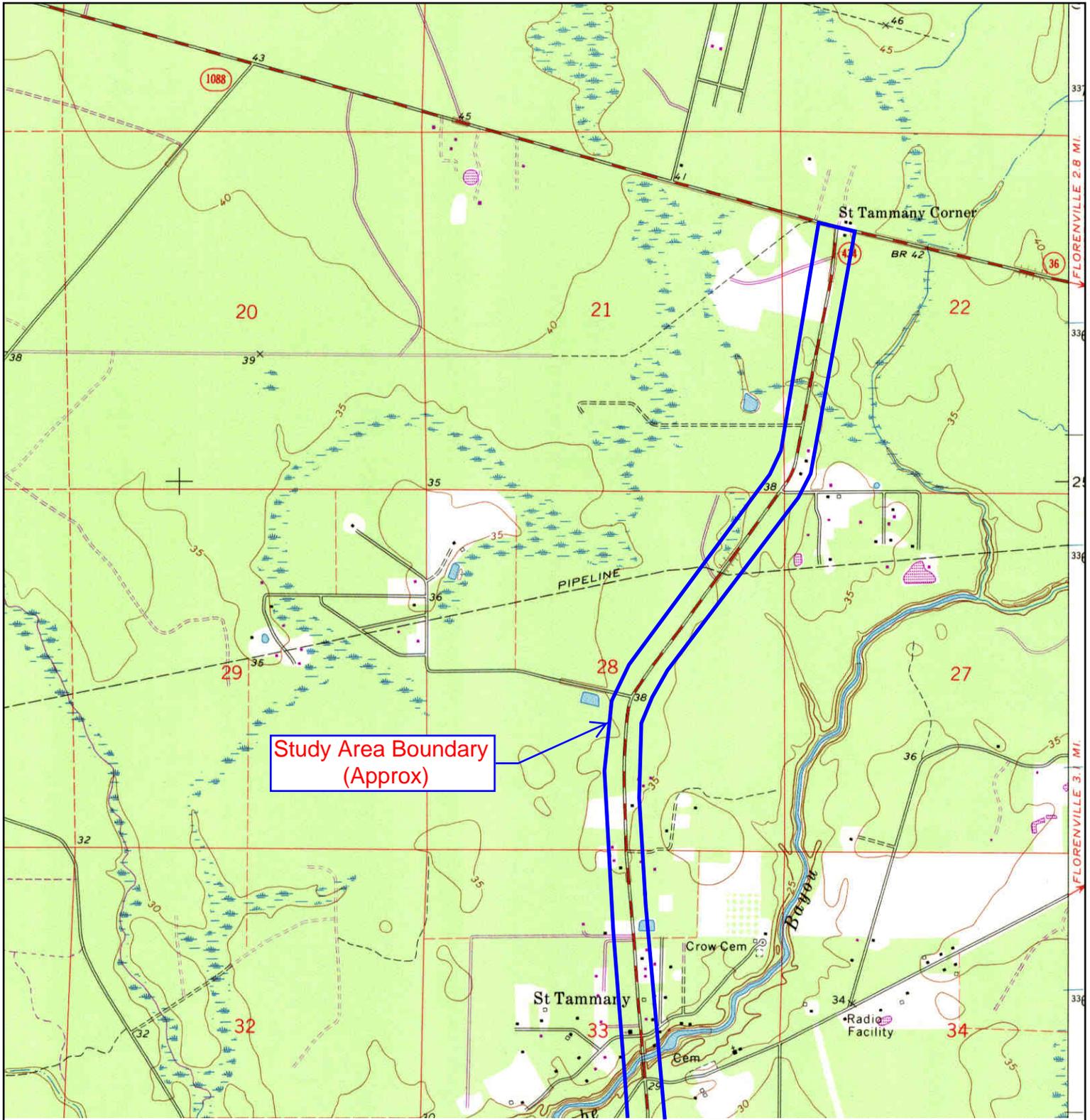
# Historical Topographic Map



Study Area Boundary  
(Approx)

	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: SAINT TAMMANY	ADDRESS: Route LA 434	CONTACT: Beth Beam
	MAP YEAR: 1979	Lacombe, LA 70445	INQUIRY#: 3858750.4
	PHOTOREVISED FROM :1970	LAT/LONG: 30.4065 / -89.8923	RESEARCH DATE: 02/19/2014
	SERIES: 7.5		
	SCALE: 1:24000		

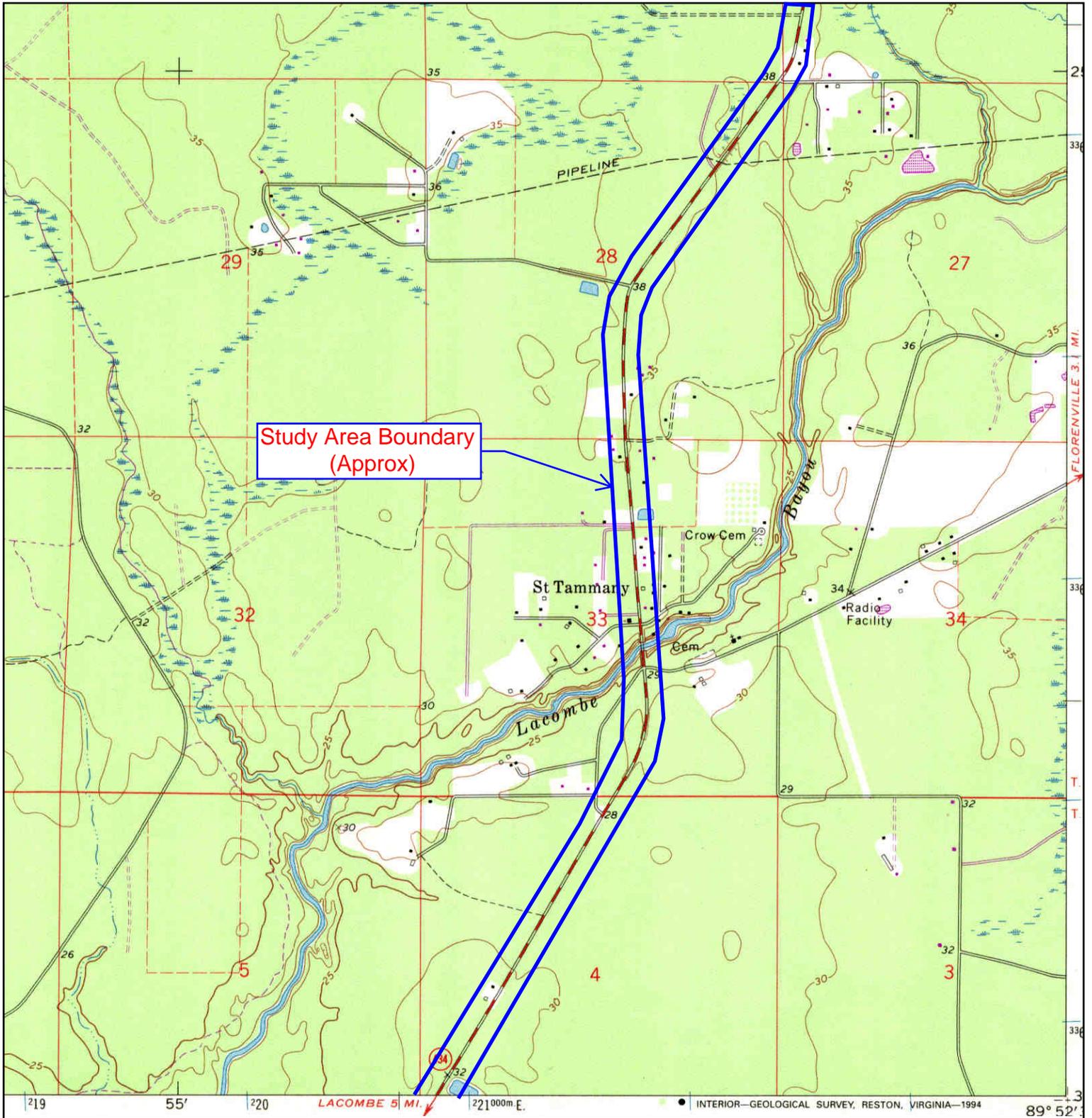
# Historical Topographic Map



Study Area Boundary  
(Approx)

<p>N</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: SAINT TAMMANY	ADDRESS: Route LA 434	CONTACT: Beth Beam
	MAP YEAR: 1994	Lacombe, LA 70445	INQUIRY#: 3858750.4
	REVISED FROM :1970	LAT/LONG: 30.4065 / -89.8923	RESEARCH DATE: 02/19/2014
	SERIES: 7.5		
	SCALE: 1:24000		

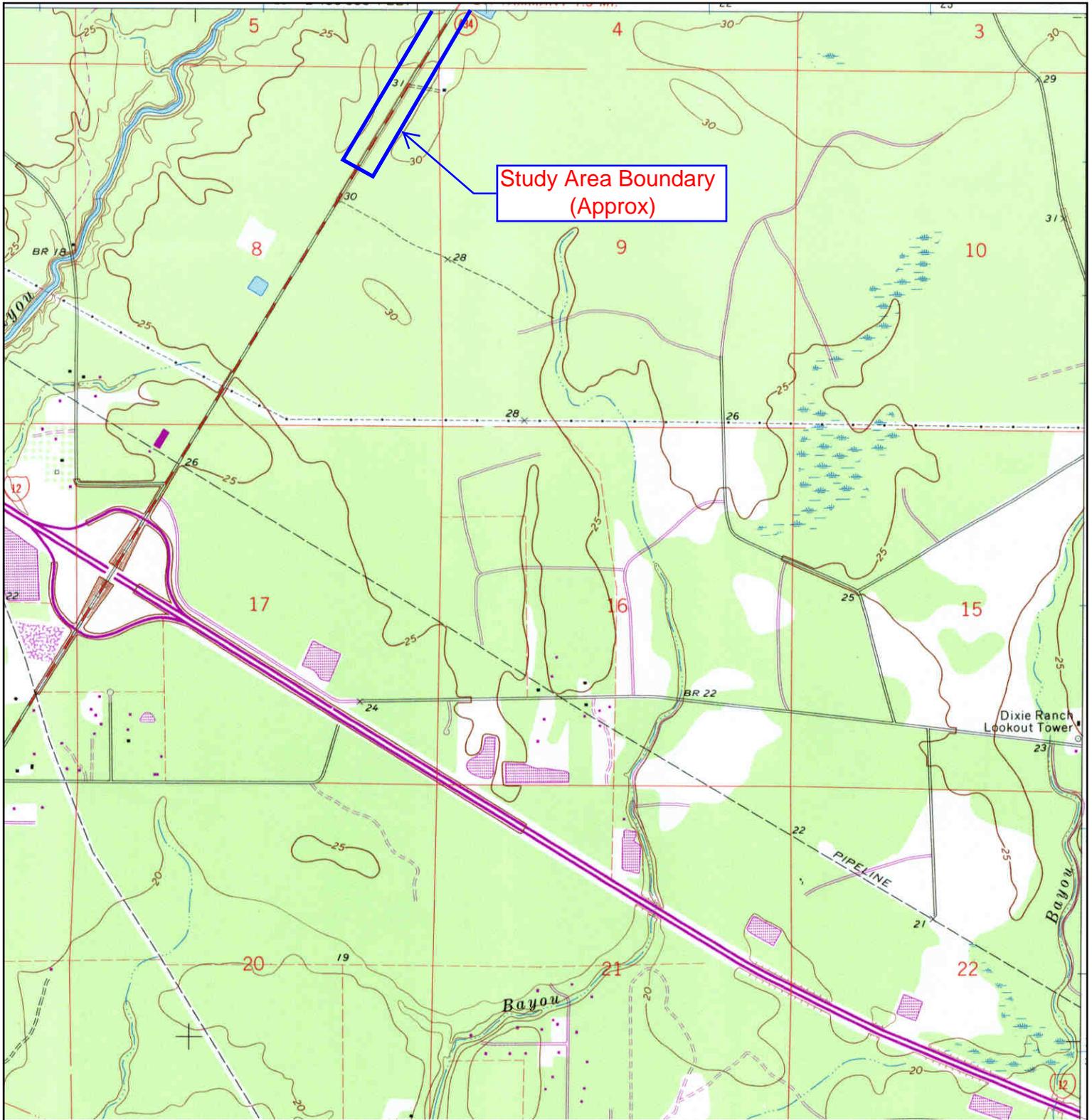
# Historical Topographic Map



Study Area Boundary  
(Approx)

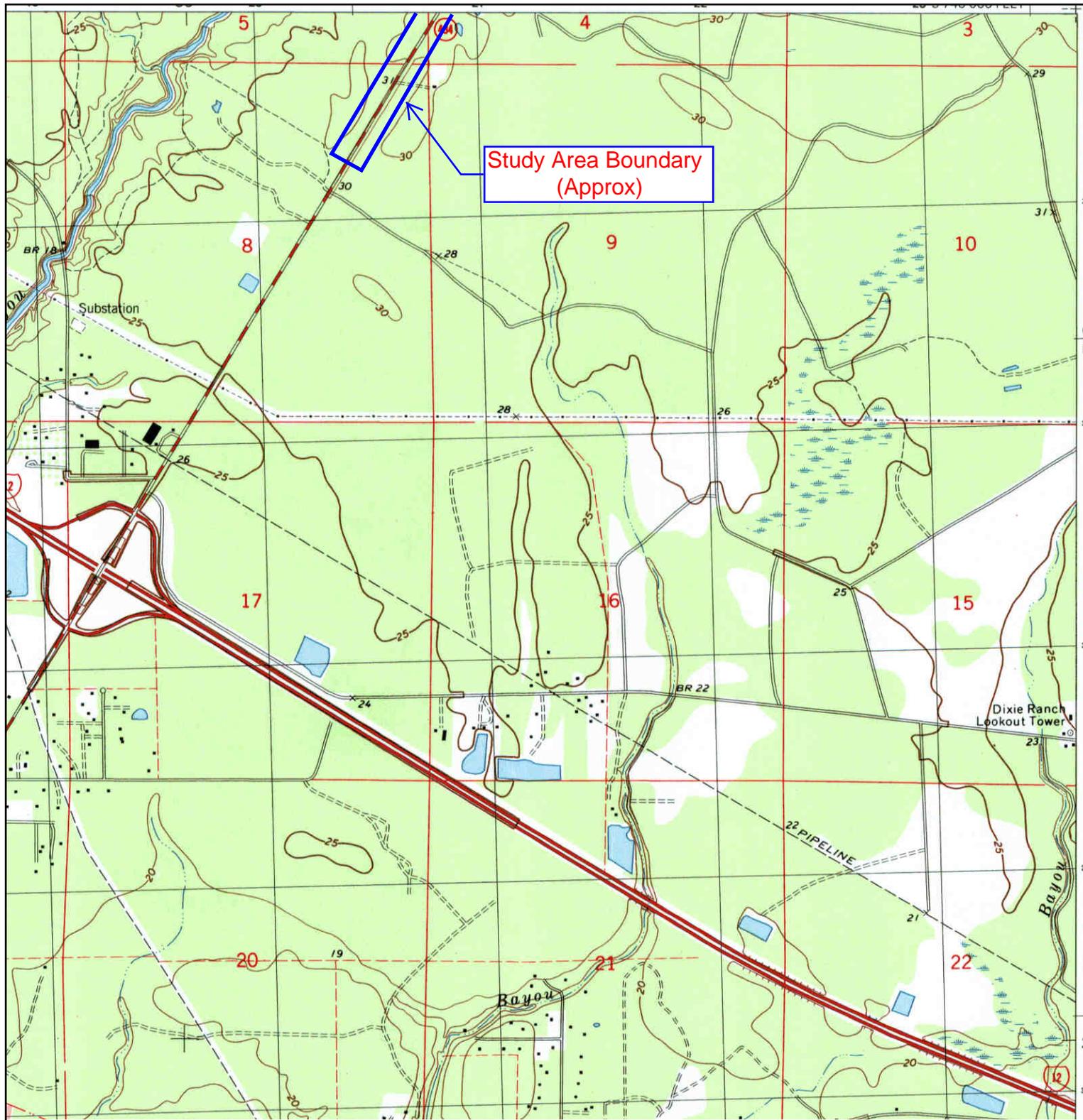
<p>N ↑</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: SAINT TAMMANY	ADDRESS: Route LA 434	CONTACT: Beth Beam
	MAP YEAR: 1994	Lacombe, LA 70445	INQUIRY#: 3858750.4
	REVISED FROM :1970	LAT/LONG: 30.4065 / -89.8923	RESEARCH DATE: 02/19/2014
	SERIES: 7.5		
	SCALE: 1:24000		

# Historical Topographic Map



<p>N ↑</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> Stage 1 EA / L&G Study	<b>CLIENT:</b> ARCADIS U.S., Inc.
	NAME: LACOMBE	ADDRESS: Route LA 434	CONTACT: Beth Beam
	MAP YEAR: 1994	Lacombe, LA 70445	INQUIRY#: 3858750.4
	REVISED FROM :1971	LAT/LONG: 30.4065 / -89.8923	RESEARCH DATE: 02/19/2014
	SERIES: 7.5		
	SCALE: 1:24000		

# Historical Topographic Map



<b>N</b> 	<b>TARGET QUAD</b> NAME: LACOMBE MAP YEAR: 1998	SITE NAME: Stage 1 EA / L&G Study ADDRESS: Route LA 434 Lacombe, LA 70445 LAT/LONG: 30.4065 / -89.8923	CLIENT: ARCADIS U.S., Inc. CONTACT: Beth Beam INQUIRY#: 3858750.4 RESEARCH DATE: 02/19/2014
	SERIES: 7.5 SCALE: 1:24000		



## **Appendix D**

Sanborn<sup>®</sup> Map Report



**Stage 1 EA / L&G Study**

Route LA 434

Lacombe, LA 70445

Inquiry Number: 3858750.5

February 18, 2014

**Certified Sanborn® Map Report**



6 Armstrong Road, 4th Floor  
Shelton, Connecticut 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

# Certified Sanborn® Map Report

2/18/14

**Site Name:**

Stage 1 EA / L&G Study  
Route LA 434  
Lacombe, LA 70445

**Client Name:**

ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816



EDR Inquiry # 3858750.5

Contact: Beth Beam

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by ARCADIS U.S., Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn).

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## Certified Sanborn Results:

**Site Name:** Stage 1 EA / L&G Study  
**Address:** Route LA 434  
**City, State, Zip:** Lacombe, LA 70445  
**Cross Street:**  
**P.O. #** RPC Task LA 434 EA  
**Project:** RPC Task LA 434 EA  
**Certification #** ODD0-46A6-811C



Sanborn® Library search results  
Certification # ODD0-46A6-811C

## UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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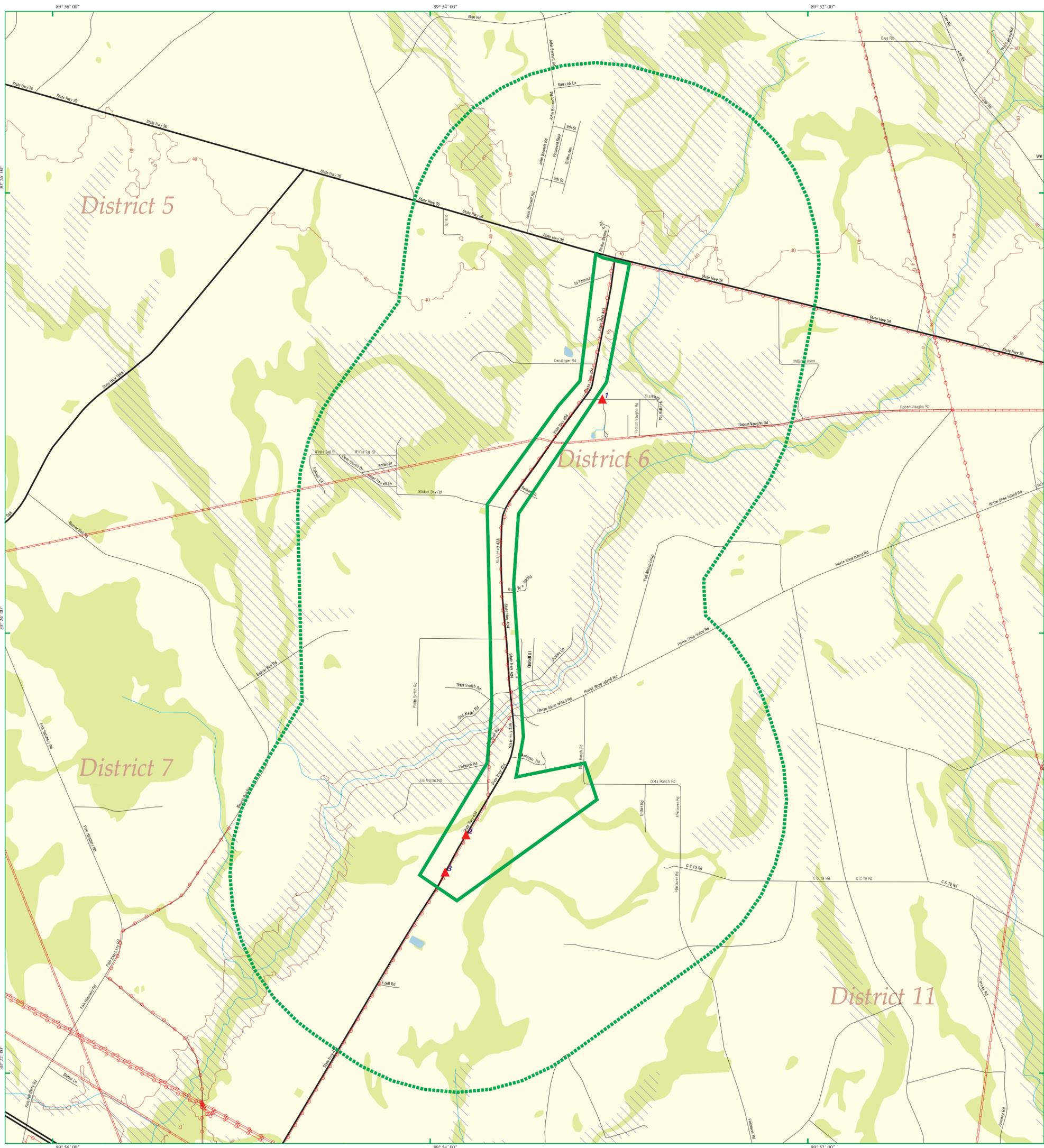
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## **Appendix E**

EDR DataMap™ Area Study



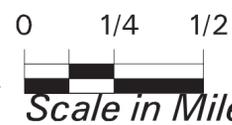
# EDR DataMap® - Area Study

## Stage 1 EA / L&G Study



Lacombe, LA

- |  |             |               |                            |
|--|-------------|---------------|----------------------------|
| Listed Sites                                 | Roads       | Contour Lines | Water                      |
| Earthquake Epicenters (Richter 5 or greater) | Major Roads | Pipelines     | Superfund Sites            |
| Search Boundary                              | Waterways   | Powerlines    | Federal DOD Sites          |
|  | Railroads   | Fault Lines   | Indian Reservations BIA    |
|  |             |               | 100-Yr Flood Zones         |
|  |             |               | National Wetland Inventory |





## **Appendix F**

LDEQ Electronic Document  
Management System Records



State of Louisiana  
Department of Environmental Quality



M.J. "MIKE" FOSTER, JR.  
GOVERNOR

February 12, 1996

F. DALE GIVENS  
SECRETARY

CERTIFIED MAIL Z 030 749 344  
RETURN RECEIPT REQUESTED

Mr. Fredrick Rouquette  
24458 Azalea Drive  
Big Branch, Louisiana 70445

RE: Compliance Order  
Rouquette Unauthorized  
Disposal Site  
D-103-7397  
St. Tammany Parish  
Log Number SE-C-95-0075

Dear Mr. Rouquette:

A follow-up inspection of the above-referenced site was conducted on August 15, 1995.

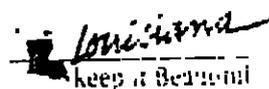
It was noted at the time of the investigation, that the violations listed in the Compliance Order, Log Number SE-C-95-0075, have been corrected.

Your efforts expended in attaining compliance are appreciated by this office.

If you have any questions or need additional information, please contact Mrs. Jessica P. Brown of this office at (504) 765-0249.

Sincerely,  
  
William J. Mollere  
Administrator  
Solid Waste Division

WJM:JPB:tgc



DEANO AND DEANO

A PROFESSIONAL LAW CORPORATION  
895 PARK AVENUE  
P.O. BOX 1210  
MANDEVILLE, LOUISIANA 70470

*Notification  
Received*

OF COUNSEL:  
GUY L. DEANO, JR.  
NOTARY:  
PAULETTE SINGLETARY

RECEIVED

SEP 11 1995

Dept. of Environmental Qual.  
Solid Waste Division

September 8, 1995

La. Dept. of Environmental Quality  
Office of Solid and Hazardous Waste  
Solid Waste Division  
P.O. Box 82178  
Baton Rouge, Louisiana 70884-2178

Attention: Mr. Monroe Penrod

Re: Rouquette Unauthorized Disposal Site  
D-103-7397  
St. Tammany Parish  
Compliance Number SE-C-95-0075  
Our File: #15,182

Dear Mr. Penrod:

With regard to the above captioned matter, I have spoken to the Department's field inspector who advises that he has found satisfactory clean up work at the site in question. It is my understanding that my clients have executed the notification affidavits presented to them by the Department.

Please advise when a clearance letter will be issued. Upon receipt of the clearance letter, I will withdraw our request for a hearing.

Sincerely,

*Edward J. Deano, Jr.*  
EDWARD J. DEANO, JR.

EJDjr:ps  
cc: Mr. and Mrs. Malcom Rouquette

*Check for notification*  
EDWARD J. DEANO, JR.  
KARL J. GUILBEAU

21  
JLD  
W.C

RECEIVED

First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

FEB 21 1996

• Print your name, address, and ZIP Code in this box •

Dept of Environmental Quality  
Solid Waste Division

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
SOLID WASTE DIVISION  
ENFORCEMENT SECTION  
POST OFFICE BOX 82178  
BATON ROUGE, LOUISIANA 70884-2178

RL  
SWD  
JGC



0-1037397

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:  
Mr. Fredrick Rouquette  
24458 Azalea Drive  
Big Branch, Louisiana 70445

4a. Article Number  
Z 030 749 344

4b. Service Type

<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Certified
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Insured
<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> COD

7. Date of Delivery  
2-14-96

5. Received By: (Print Name)  
N.O.

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)  
X Fred Rouquette

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.



State of Louisiana  
Department of Environmental Quality



KATHLEEN BABINEAUX BLANCO  
GOVERNOR

December 21, 2005

MIKE D. McDANIEL, Ph.D.  
SECRETARY

CERTIFIED MAIL (7003 2260 0001 2748 5506)  
RETURN RECEIPT REQUESTED

Mark Hardy  
Post Office Box 701  
Slidell, LA 70459

**RE: UNNAMED SANDPIT  
WARNING LETTER  
ENFORCEMENT TRACKING NO. WE-L-05-0539  
AI No. 118863**

Dear Sir:

On or about May 31, 2005, an inspection of the above referenced facility was conducted to determine compliance with the Louisiana Environmental Quality Act and supporting regulations. The inspection report, noting areas of concern, has been forwarded to the Enforcement Division. All violations at your facility will be taken into consideration in determining what further actions this office will take.

We strongly encourage you to review the findings of our most recent inspection and immediately take any and all steps to ensure compliance with all environmental regulations at your facility.

Please address any questions or comments regarding this potential civil enforcement matter to Kelli Smith McNulty at (225) 219-3811, or send written comments to the address below.

Sincerely,

Peggy M. Hatch  
Administrator  
Enforcement Division

PMH/KSM/ksm  
Alt. ID No. LAU004090

c: Blaise Guzzardo, Regional Manager  
Southeast Regional Office

**RECEIVED**  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS  
 (Include Facility Name/Location if different from above)  
 NAME McDonald Enterprises Inc.  
 ADDRESS P.O. Box 5129  
 Slidell, LA 70469

NOV 01 2013

Office of  
 Environmental Compliance

FACILITY 65301 Highway 434  
 LOCATION Lacombe, LA 70445

DISCHARGE OF A SAND AND GRAVEL OPERATION

MINOR / MAJOR

Outfall 001-A  
 DISCHARGE NUMBER

LAG490001  
 PERMIT NUMBER

\*\*\*\*\* NO DISCHARGE [ X ] \*\*\*\*\*

MONITORING PERIOD

YEAR	MO	DAY	TO	YEAR	MO	DAY
2010	09	01		2010	09	30

(7-2-23) (7-2-23) (7-2-23) (7-2-23) (7-2-23) (7-2-23) (7-2-23)

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)	(3 Card Only) QUANTITY OR LOADING (46-53)		(4 Card Only) QUANTITY OR CONCENTRATION (54-61)		NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
	AVERAGE	MAXIMUM	MINIMUM	MAXIMUM			
TSS			***		0	1/1 Month	Grab
OIL & GREASE			***	15	0	1/1 Month	Grab
TURBIDITY			***	25	0	1/1 Month	Grab
PH			6.0	9.0	0	1/1 Month	Grab
FLOW			***	Report	0	1/1 Month	Estimate

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
 President  
 TYPED OR PRINTED  
 Donna P. McDonald

Signature: *Donna P. McDonald*

TELEPHONE: 985 641-8621  
 DATE: 2010 10 31

AREA CODE: 985  
 NUMBER: 641-8621  
 YEAR: 2010  
 MO: 10  
 DAY: 31

NO DISCHARGE



## **Appendix G**

Resumes of Environmental  
Professionals



#### Education

BS, Natural Resources Ecology  
Management, Wildlife  
Ecology, Louisiana State  
University, 2008

#### Years of Experience

Total – 5  
With ARCADIS – 1

#### Professional Qualifications

LDNR OLDEB (Louisiana  
Department of Natural  
Resources Oyster Lease  
Damage Evaluation Board)  
Certified Oyster Biologist

## Gregory Badon

### Project Scientist/Ecologist

As a project scientist and ecologist for ARCADIS, Gregory Badon performs wetland delineations, threatened and endangered species surveys; biological resource surveys; composes technical reports; and assists with National Environmental Policy Act (NEPA) documentation, field work, research, and data analysis.

Prior to joining ARCADIS, he worked as a Staff Scientist for 4 years where he gained experience as a field lead for water quality, hydrologic and river/channel discharge monitoring projects, oyster bottom-type assessments and habitat surveys, and as a QA/QC officer for data integrity. Mr. Badon is highly skilled with ESRI ArcMap 9.X and 10.X, Garmin MapSource, and MS Excel. He is proficiently skilled with GeoMedia Pro & Webmap, PathfinderOffice, some Linux distributions -, MS Access, Adobe Photoshop & Dreamweaver, HTML & CSS development, and basic VBScript coding.

Mr. Badon is also highly skilled with the following hardware: Trimble, Garmin and Magellan GPS Units; TempHion; YSI 600 OMS/ XL, 650, 30 and 6920 water quality sondes; InSitu Aqua Troll 200 water quality sondes; OTT Orpheus Mini CDT water quality sondes and ITC communication modules; NexSens and Campbell Scientific data loggers; Vaisala multi-parameter weather stations; SonTek River Surveyor M9 and Argonaut SL Acoustic Doppler Current Profilers (ADCP); and Teledyne RD Workhorse Monitor and ChannelMaster ADCPs.

#### Project Scientist and Ecologist

##### US 11 Norfolk Southern Railroad Bridge Replacement and Widening EA

Project planner/scientist responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, Environmental Assessment (EA) document preparation, noise modeling and traffic count field work, Phase I Environmental Site Assessment (ESA) fieldwork, wetland delineation, threatened and endangered species survey, stream assessments, document/records research, and technical report preparation.

##### LA 594 (Millhaven Road) Stage 0 Compliant Study

Environmental planner for a Louisiana Department of Transportation and Development (LADOTD) Stage 0 study to improve LA 594 between Garrett Road and Russell Sage Road in Monroe, Louisiana. Both curb and gutter and shoulder UA-2 alternatives were developed,

abutting the Kansas City Southern right of way. Two roundabouts were evaluated in compliance with LADOTD EDSM V.1.1.5 (Analysis) and EDSM V.1.1.6 (Design). Responsibilities included identification of potential wetlands, document/records research, and technical report preparation

**I-210 Cove Lane / Nelson Road Interchange Improvements Project EA**

Project planner/scientist responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, EA document preparation, Phase I ESA fieldwork, document/records research, and technical report preparation.

**LA 143-US 165 Connector and Ouachita River EIS**

Project planner/scientist responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, Environmental Impact Statement (EIS) document preparation, Phase I ESA fieldwork, wetland delineation, threatened and endangered species survey, stream assessments, document/records research, and technical report preparation.

**Chef Menteur Bridge and Approaches Replacement EA and Line and Grade Study**

Environmental planner assisted with the technical document preparation for a bridge rehabilitation alternative along with presentation documents for Section 106 Consulting Parties meeting. Responsibilities included fieldwork, desktop research, and related coordination of the Phase I ESA.

---

**Oyster Biologist****Oyster Habitat and Bottom Type Assessments**

Mr. Badon acted as assistant Oyster Biologist from 2008 to 2010 under the supervision of a senior Louisiana Department of Natural Resources (LDNR) Oyster Lease Damage Evaluation Board (OLDEB) Certified Oyster Biologist. Mr. Badon gained OLDEB certification in 2009 and became lead oyster biologist for habitat and bottom type assessments in 2010. Mr. Badon was responsible for outlining project goals and procedures following OLDEB protocols for classifying reef habitat. Mr. Badon created geo-referenced poling transects and collected real-time habitat and bathymetry data into a GIS database. Mr. Badon used ESRI's Spatial Analyst to interpolate raw data into bathymetry figures and calculated bottom type coverage, oyster density, and approximate oyster-plot value based on field data. Mr. Badon assisted in writing and reviewing habitat assessment reports which were submitted to the Louisiana Department of Wildlife and Fisheries (LDWF) for LDNR Coastal Use Permit applications.

**Date: September 2008****Client: Louisiana Dept. of Wildlife and Fisheries; Contract No. 669712**

Description: Sabine Lake Oyster Assessment, Cameron Parish, Louisiana  
In conjunction with senior biologists, Mr. Badon performed a water bottom assessment of selected portions of the public oyster seed grounds of Cameron Parish (portions of Calcasieu and Sabine Lakes). Mr. Badon performed poling, oyster sample measurements, and calculated oyster seed ground statistics on live resource collected during the bottom type assessment for this project.

Mr. Badon served as part of the field crew in performing poling, dredging, bathymetry collection, and assisted divers during the following oyster habitat assessments.

**Date: October 2008****Client: Castex Energy, Inc.; CUP No. 20081268**

Description: Biological Oyster Assessment, Eugene Island, Iberia Parish, Louisiana

**Date: November 2008****Client: Summit Energy Company; CUP No. 20081254 & 20081259**

Description: Biological Oyster Assessment, Eugene Island, Iberia Parish, Louisiana

**Date: November 2008****Client: Devon Energy Prod. Co, LP; CUP No. 20081333 & 20081432**

Description: Biological Oyster Assessment, Main Pass, Plaquemines Parish, Louisiana

**Date: December 2008****Client: Manti Operation Company; CUP No. 20081288**

Description: Biological Oyster Assessment, Lake Borgne, St. Bernard Parish, Louisiana

**Date: December 2008****Client: Manti Operation Company; CUP No. 20081128**

Description: Biological Oyster Assessment, Lake Borgne, St. Bernard Parish, Louisiana

**Date: December 2008****Client: Castex Energy; CUP No. 20081480**

Description: Biological Oyster Assessment, East Cote Blanche, St. Mary, Louisiana

**Date: December 2008****Client: Castex Energy; CUP No. 20081487**

Description: Biological Oyster Assessment, East Cote Blanche, St. Mary, Louisiana

**Date: January 2009****Client: Manti Operation Company; CUP No. 20090006**

Description: Biological Oyster Assessment, Chandeleur Sound, St. Bernard Parish, Louisiana

**Date: January 2009****Client: Manti Operation Company; CUP No. 20081116**

Description: Biological Oyster Assessment, Chandeleur Sound, St. Bernard Parish, Louisiana

**Date: February 2009****Client: Manti Operation Company; CUP No. 20081117**

Description: Biological Oyster Assessment, Chandeleur Sound, St. Bernard Parish, Louisiana

**Date: February 2009****Client: Manti Operation Company; CUP No. 20081127**

Description: Biological Oyster Assessment, Lake Borgne, St. Bernard Parish, Louisiana

**Date: March 2009****Client: Badger Oil Company; CUP No. 20090098 & 20090099**

Description: Biological Oyster Assessment, West Cote Blanche Bay, Iberia, Louisiana

**Date: September 2009****Client: Samuel Gary, Jr. & Assoc. Inc.; CUP No. 20090968**

Description: Biological Oyster Assessment, Sabine Lake, Cameron Parish, Louisiana

**Date: December 2009****Client: Office of Coastal Planning and Restoration (OCPR)**

Description: Biological Oyster Assessment and Consulting for Madison Bay Marsh Creation and Terracing Project (TE-51); Terrebonne Parish, Louisiana

Mr. Badon served as primary GIS analyst for the project and digitized access routes for drilling vessels which: a) avoided oyster leases as much as possible; and b) when not possible to avoid oyster leases, traversed said leases where water depth was greater than vessel draft.

Mr. Badon also served as on-site biologist to ensure drilling vessels did not disrupt oyster leases or stray from access routes and documented all field activities of the geotechnical investigation.

**Date: January 2010****Client: Hilcorp Energy Company; CUP No. P2020048**

Description: Biological Oyster Assessment, Vermilion Bay, Vermilion Parish, Louisiana

---

**GIS Analyst / Staff Scientist****Date: 2011****Client: Free Flow Power; Baton Rouge, Louisiana**

Description: Dow Free Flow Energy Velocity Survey

Mr. Badon created georeferenced transects and grids within the project area to perform river velocity and current surveys in the Mississippi River, Plaquemines Parish, Louisiana. He

combined georeferenced transect data from Acoustic Doppler Current Profilers (ADCP) with GPS data to create figures and a GIS database of collected velocity data for the client.

**Date: 2008 - 2012**

Baton Rouge, Louisiana

Mr. Badon served as field lead by coordinating field dates with landowners and oil field service personnel. He oversaw installation of water quality sondes, monthly data retrieval, sonde maintenance, data QA/QC, wrote monthly service reports, and updated rental / budget sheets.

**Date: 2008 - 2012**

Baton Rouge, Louisiana

As the QA/QC officer for monitoring projects, Mr. Badon ensured all data recovered from monthly service events was processed following LDNR data protocols and submitted to clients promptly. He also instructed staff personnel how to process and submit data to LDNR FTP sites.

**Date: 2008 – 2012**

Baton Rouge, Louisiana

Mr. Badon acted as the primary instrument, field, and office computer technician. Mr. Badon maintained and troubleshoot hydrologic and ADCP instruments, GIS / GPS field computers, weather systems, and prepared instruments for deployment. Badon also built GIS and office computers and maintained a simple MS 2000 data server.



#### Education

M.S., Environmental Science,  
Drexel University, 1993

B.A., Urban and Regional  
Planning, University of Illinois,  
Urbana, 1984

#### Years of Experience

Total - 24

With ARCADIS –2

#### Professional Certifications/ Registrations

1997, American Institute of  
Certified Planners (AICP)

1997, Professional Planner,  
New Jersey

2009, NHI NEPA and  
Transportation Decision  
Making Certification and  
Training,

40-Hour HAZWOPER Training  
Certification

e-RAILSAFE Training and  
Certification

#### Professional Associations

American Planning Association

Louisiana Chapter, APA

## Elizabeth J. Beam MS, AICP

### Senior Planner / Scientist

As a scientist, Ms. Beam is responsible for National Environmental Policy Act (NEPA) documentation including, Environmental Impact Statement (EIS)/Environmental Assessment (EA) preparation, Needs Analysis, and Alternatives Analysis along with Phase I/Phase II Environmental Site Assessments (ESAs). Permit document preparation and multi-agency coordination for including wetlands, storm water, stream encroachment, U.S. Army Corps of Engineers (USACE), National Pollutant Discharge Elimination System (NPDES). Wetland delineations, mitigation site design, and monitoring. As a planner, Ms. Beam is involved in land use analysis, site redevelopment analysis, socio-economic impact analysis, zoning map amendments and fiscal impact analysis, single-family, multi-family and mixed-use project designs, conservation planning, landscape design, and project evaluation for compliance with local, county, and state requirements and regulations.

#### Environmental Impact Statements/Environmental Assessments

##### US 11 Norfolk Southern Railroad EA

St. Tammany Parish

Project planner/scientist responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, EA document preparation, Phase I ESA field work, document/records research and technical report preparation.

##### I-210 Cove Lane / Nelson Road Interchange Improvements Project EA

Calcasieu Parish, Louisiana

Louisiana Department of Transportation and Development (LADOTD),

Task Leader, project planner/scientist responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, EA document preparation, Phase I

Environmental Site Assessment (ESA) field work, document/records research and technical report preparation.

##### LA 143 – US 165 Connector and Ouachita River Bridge, Environmental Impact Statement

Ouachita Parish, Louisiana

Louisiana Department of Transportation and Development (LADOTD),

Project planner/scientist responsible for public outreach, interagency meeting presentation preparation, technical document preparation for Phase I ESA.

**Chef Menteur Bridge and Approaches, Route US 90 Environmental Assessment**

Orleans Parish, Louisiana

Louisiana Department of Transportation and Development (LADOTD),

Project planner/scientist assisted with the technical document preparation for a bridge rehabilitation alternative along with presentation documents for Section 106 Consulting Parties meeting.

**Burlington Northern Santa-Fe (BNSF), Amarillo Texas Rail Yards**

Potter and Randall Counties, Texas

BNSF Railway Company

Project Planner/Scientist responsible for site evaluation of six rail yards including visual inspections of surface areas and identification of impervious area type (e.g. asphalt, concrete, compacted gravel, building), field mapping of impervious and pervious areas, notation of drainage patterns and storm water discharge points, identification of parcel boundary anomalies, infiltration testing, collection of GPS coordinates throughout the Yard areas in order to support detailed desk-top review findings, determination of benefitted/non-benefitted property areas, review of City drainage utility ordinances, and stormwater drainage fee assessment technical document preparation.

**East-West Corridor (Winfield Road Extension)**

Bossier Parish, Louisiana

Northwest Louisiana Council of Governments

Senior Environmental Planner. Responsible for preparation of the Draft and Final Environmental Assessment; Wetland and Surface Waters, Noise, and Phase I ESA technical reports; Draft Section 404 Permit application for the preliminary development of a new 8-mile, two-lane urban collector with right-of-way clearance for possible expansion to a four-lane urban collector. The study area includes the Flat River, Cypress Bayou, Red Chute Bayou, Benoit Bayou and Willow Chute and the expansive floodplain created by these watercourses and public/stakeholder outreach. Finding of No Significant Impact (FONSI).

**Bolivar Ferry Landing Basin Maintenance**

Galveston County, Texas

Texas Department of Transportation

Senior Environmental Planner. The proposed action included the creation of beneficial use (BU) areas associated with the maintenance dredging of the Bolivar Ferry landing basin located at the western tip of the Bolivar Peninsula (Peninsula), along State Highway (SH) 87 in Galveston County, Texas. The Peninsula is located along the Texas Gulf Coast and forms a boundary from northeast to southwest between Galveston Bay and the Gulf of Mexico Responsible for evaluation of socio-economic, land use and Environmental Justice impacts of the proposed creation of BU areas for the Categorical Exclusion (CE).

**DeQuincy Industrial Airpark**

DeQuincy, Calcasieu Parish, Louisiana

City of DeQuincy

Environmental Planner/Scientist. The proposed action involves application for a Categorical Exclusion, Taxiway Extension at the DeQuincy Industrial Airpark (Airpark) located on the north side of Highway 12 West approximately 2 miles southwest of the City of DeQuincy. The proposed action consists of the extension of the existing parallel taxiway approximately 1,730 feet in order to provide a full-length parallel taxiway system. Responsible for preparation of the CatEX and on-site wetland presence/absence determination and delineation along with coordination with the USACE MVN District and FAA Southwest region.

**SH35 from IH 45 to IH-610, Houston, Harris County, Texas.**

Texas Department of Transportation.

Senior Environmental Planner. The proposed action includes a four to eight main lane tolled section of SH 35 on new location, approximately 4.19 miles in length, for State Highway 35 from Interstate Highway 45 to Interstate Highway 610 in Harris County. Responsible for evaluation of socio-economic, land use and Environmental Justice impacts and identification and evaluation of indirect and cumulative impacts in accordance with TXDOT's 7-Step Indirect and 8-Step Cumulative impact analyses.

**Piney Woods Fiber Project #7523**

Rapides, Grant, Winn, Jackson, and Lincoln Parishes, Louisiana

U.S. Department of Commerce, NTIA

Project Manager responsible for preparation of the Draft and Final Environmental Assessment for 121 miles of fiber route along US 167, LA4 and US 80. Evaluations included Wetland and Surface Waters, Noise and Phase I ESA, agency coordination, oversight of Section 106 process, Endangered Species Act Section 7 consultation and USACE process for Section 404, US Forest Service Special Use Permit application; Stormwater Pollution Prevention Plan (SWPPP) preparation. Project received FONSI from USDOC, NTIA.

**Environmental Impact Assessment and Permitting, New Jersey Highway Authority, Garden State Parkway.**

New Jersey Highway Authority.

As an Environmental Scientist, inspected approximately 200 drainage structures along the Garden State Parkway from the Great Egg harbor River to the Raritan River. Field work included wetland delineation at each location including freshwater and coastal systems. Stream encroachment and flood plain analyses were completed. Preparation of environmental impact assessment and permitting in accordance with New Jersey's Freshwater Wetlands Program, Waterfront Development Program and Riparian Grant regulations. All permits were obtained for all improvements.

**Preliminary Design and EIS for Grade Separation Improvements, Garden State Parkway**

Cape May County. New Jersey Highway Authority.

Environmental Scientist team member responsible for environmental impact statement preparation for intersection improvements along the Garden State parkway in Cape May County, New Jersey. The Parkway, in association with Cape May County, has proposed the elimination of all at-grade intersections along the portion of four lane roadway located within the County boundaries. Alternatives were developed at each intersection and evaluated against a range of environmental elements. The EIS was completed in accordance with New Jersey's Coastal Area Facility Review Act (CAFRA). Field work included the delineation of freshwater and coastal wetlands.

---

**Environmental Site Assessments/Compliance Audits**

**Kirby Corporation**

Completed Phase I ESAs and Compliance Audits for facilities in, Texas, Louisiana, and Colorado.

**Confidential Client**

Texas

Conducted Phase I ESAs and Limited Compliance Assessments for two facilities in Texas to support client purchase of the facilities.

**Confidential Client**

Arkansas

Coordinated subcontractor for environmental site investigation activities including the use of ground penetrating radar, geotechnical and analytical services for a Phase I ESA and Limited Phase II ESA for a prior gasoline service station. Responsible for report preparation.

**CJ Brown / Exxon/Mobil Corporation**

Louisiana

Completed numerous Phase I ESAs as part of the Greenbelt Expansion Project for the Baton Rouge refinery.

**Momentive**

Arkansas

Conducted site visit for the development of start-up facility Stormwater Pollution Prevention Plan (SWPPP). Responsibilities included preparing and the SWPPP Plan.

**Confidential Client**

Participated in Emergency Response activities for a large surface water discharge. Liaison responsibilities between DHS and facility. Responsible lead for the file

management effort in order to meet the conditions of a court order submission.  
Assisted DHS GIS staff with emergency response mapping and management.

**Confidential Client**

Assisted in evaluation and document development for upstream oil and gas regulations at the federal and state levels.

**East-West Corridor (Winfield Road Extension)**

Bossier Parish, Louisiana

Northwest Louisiana Council of Governments

Senior Environmental Planner. Responsible for preparation of the Phase I ESA technical report for the preliminary development of a new 8-mile, two-lane urban collector with right-of-way clearance for possible expansion to a four-lane urban collector in Bossier Parish, Louisiana.

**Piney Woods Fiber Project #7523**

Rapides, Grant, Winn, Jackson, and Lincoln Parishes, Louisiana

Responsible for preparation of Phase I ESA for 121 miles of fiber route along US 167, LA 4, and US 80. Information was incorporated into an EA prepared for the project in order to receive a Finding of No Significant Impact (FONSI).

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**Additional Phase I Environmental Site Assessments**

**Associates Financial Services, Inc.**

Dickinson Township, Cumberland County, Pennsylvania

Phase I Environmental Assessment and Phase II Site Characterization to PA DEP Land Recycling Act (Act 2) standards for a previously operated gasoline service station in order to close and remove several USTs in accordance with Storage Tank and Spill Prevention Act (Act 32).

**Pennsylvania Cellular Telephone Corporation**

Lower Allen Township, Cumberland County, Pennsylvania

Phase I ESA and Phase II Site Characterization including field sampling and analysis in compliance with PA DEP Land Recycling Act (Act 2) and underground storage tank closure including removal in accordance with Storage Tank and Spill Prevention Act (Act 32).

**Capital City Telecommunications Site**

Defense Distribution Region East, New Cumberland, Pennsylvania

Prepared an Abbreviated Phase II Site Characterization including evaluation of analytical data regarding groundwater contamination and plume migration.

**Hummelstown Beverage Distributors, Inc.**

Hummelstown Borough, Dauphin County, Pennsylvania

Coordinated geophysical investigation utilizing GPR and electromagnetic detection to determine presence and size of USTs at previously operated gasoline station.

**Members 1<sup>st</sup> Federal Credit Union**

North Middleton Township, Cumberland County, PA and Carroll Township, York County, PA  
Phase I ESAs for two 4,200-square-foot branch credit union facilities.

**Phase I ESAs:**

**F.B. Leopold, Inc.** – Zelienople, Pennsylvania.

**Taneycomo Country Club** – Highway 160, Forsyth, Taney County, Missouri.

**Dogwood Inn** – Highway 76, Branson, Taney County, Missouri.

**Tinker Commercial Corner, Lot #1** – Branson, Taney County, Missouri.

**Phase I ESA/HUD Evaluation** – Bee Creek Commons, Bee Creek Road, Branson, Taney County, Missouri.

**Stoney Creek Pointe, LLC** – Gretna Road, Branson, Taney County, Missouri.

**Terrell Creek Development Phase I ESA** – Completed for 1,600-Acre Tract, Highway ZZ, Christian County, Missouri.

**Emory Creek Ranch Phase I ESA** – Completed for +/- 1,000-Acre Tract, Highway 248, Taney County, Missouri.

**Stonebridge Phase I ESA** – Completed for 300 Acre Tract, Hwy 76, Branson West, Stone County, Missouri.

**Wildwood Drive Parcel** – Wildwood Drive and Gretna Road, Branson, Taney County, Missouri.

**Discount City** – Gretna Road and Rosalie, Branson, Taney County, Missouri.

**Skyline Baptist Church Parcel** – Highway 165, Branson, Taney County, Missouri.

**Forty five Phase I ESAs** – Telecommunications facilities throughout south-central and western Pennsylvania.

**Checker's Drive-In Restaurants** – Street & Mechanicsville Roads, Bensalem, PA; 20<sup>th</sup> & Oregon Streets, Philadelphia, PA; McDade Blvd./Ashland Avenue, Glenolden, PA; Oxford Avenue/Roosevelt Blvd., Phila., PA; Baltimore Pike & Union, Upper Darby, PA.



#### Education

MS, Resource Management and Administration, Antioch New England Graduate School, 1994  
BA, Economics, Louisiana State University, 1989

#### Years of Experience

Total - 16  
With ARCADIS - 1

#### Professional Registrations

Certified Environmental Professional, No. 02040408

#### Professional Qualifications

National Association of Environmental Professionals  
Academy of Board Certified Environmental Professionals  
HAZWOPER Site Worker and Site Supervisor trained 29 CFR 1910.120(e) 3 and 4

#### Professional Memberships

National Association of Environmental Professionals (NAEP)  
Academy of Board Certified Environmental Professionals (ABCEP)

## Scott L. Hoffeld, CEP

Associate Vice President / Senior Environmental Planner

Mr. Hoffeld is an ABCEP Certified Environmental Professional (CEP) with expertise in benefit to cost analysis, NEPA documentation and compliance, as well as public and agency participation tools and techniques. Scott is well-versed in environmental and socioeconomic impact analysis, including environmental justice evaluations. His project experience includes a variety of environmental, transportation, and economic planning evaluations for public infrastructure, industrial siting studies, solid waste management, and other areas. Mr. Hoffeld's computer skills include the MicroBENCOST transportation benefits model, emissions inventory and dispersions models, noise models, traffic simulation models, and other scheduling, database, graphics, spreadsheet, and miscellaneous software packages.

### NEPA and Related Projects

#### I-69 Environmental Impact Statement

LDOTD and AR Highway and Transportation Department

Deputy Project Manager for section of independent utility number 14, spanning between Shreveport, LA and El Dorado, AR through a rural timber and poultry farming area. The study area is studded with historic properties and oil wells among parcels of the Kisatchie National Forest properties, the Bodcau Wildlife Management Area, and the Bodcau Reservoir Recreational Area. Bayou Dorcheat, a Louisiana scenic stream, must be crossed with a new structure that must be designed and ameliorated to avoid and minimize adverse effects to Bayou Dorcheat's scenic uses.

#### US-190 Environmental Assessment

LDOTD, Mandeville, LA

Environmental Planner for the development of Environmental Assessment and Preliminary Plans for US 190 in Mandeville, approximately 9.2 kilometers in length, including both urban and rural roadway segments. Context-sensitive design elements were used to minimize adverse effects to Fountainsbleu State Park. This was a high profile project for the LDOTD as it has received intense attention from residents, local organizations, and state and federal entities. This project won praise from local and state officials concerning the efficiency of the environmental process and was selected by LDOTD as a "model project" for performance of environmental services for a roadway corridor project.



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**US-62 Environmental Assessment and Section 4(f) Statement**

AR Highway & Transportation Department, Avoca, AR and Gateway, AR  
Project Manager for roadway improvements to US 62 between Avoca and Gateway, Arkansas. This 14-mile section of roadway abuts the Pea Ridge National Military Park on both sides of the highway, as well as traverses an area of karst topography with historic structures and a local town park. The project included an aggressive outreach effort with over 3,000 direct mailers, flyers and other, with excellent participation.

**East-West Corridor Multi-modal Transportation Improvement Environmental Impact Statements**

LDOTD, New Orleans, LA

Senior Environmental and Transportation Planner for a multi-modal transportation improvement project for a corridor that spans between the Louis Armstrong International Airport and the Central Business District of New Orleans. In accordance with a 1997 Major Investment Study for this Corridor, the LDOTD and Regional Planning Commission propose both highway and transit improvements. A URS-developed hybrid approach was used to comply with the FHWA and FTA NEPA requirements for the project, which includes a joint scoping effort for both the highway and transit components, followed by separate NEPA studies.

**I-10 Widening Environmental Support Contract**

LDOTD

Project Transportation and Environmental Planner responsible for environmental support including data collection, analysis, and documentation of project purpose and need; internal and public meeting graphics design and development; public meeting arrangements; and on-call support including traffic analysis and other.

**Globalplex Internal Roadway Improvements Environmental Assessment**

N.O. Regional Planning Commission and Port of South Louisiana

Project Manager for environmental assessment for the FHWA, who is the lead federal agency for the project. The project would improve the connection or provide a new connection between the Port of South Louisiana's Globalplex facility in Reserve, Louisiana and US 61, approximately 2 miles north of the facility. Improvements will involve some new right of way in an area of mixed commercial/industrial and residential land use. Because of financial assistance associated with the project, the US Department of Housing and Urban Development will cooperate on the EA for joint FHWA/US HUD NEPA compliance.



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**Jefferson Parish Roadway Improvement Program Management NEPA Studies**

Jefferson Parish, LA

NEPA documentation Quality Assurance Coordinator for the Jefferson Parish Roadway Improvement Program, which consists of forty-seven (47) individual road projects ranging from intersection improvements to new roadways. Mr. Hoffeld is responsible for conducting scheduled reviews of environmental documentation and analyses prior to submittal to the LDOTD and FHWA, as well as coordinating the delivery of all environmental documentation between the LDOTD and the consultants working on the effort, which number over 20.

**Categorical Exclusion for Globalplex Internal Roadway Improvements**

Port of South Louisiana

Project Manager for categorical exclusion from further documentation under the National Environmental Policy Act. The Port of South Louisiana proposes to improve the internal operations at its Globalplex facility by extending existing roadways and paving unimproved paths presently and wholly on the Globalplex property. The action will be partly funded by the US Department of Housing and Urban Development, which triggered NEPA compliance. A Phase I Environmental Site Assessment was completed, as well as an environmental issues analysis. Because the project included improvements wholly on Port property, and no significant adverse effects were evaluated as likely from the issues analysis, a Categorical Exclusion was proposed by the Port and approved by the US Department of Housing and Urban Development. No adverse effects were of concern; however, coordination with the USACE and LDNR was required as the project is located in the Louisiana Coastal Zone.

**Categorical Exclusion for Patricia Street Reconstruction**

St. Bernard Parish, LA

Project Transportation and Environmental Planner for the Categorical Exclusion from detailed NEPA analysis of the Patricia Street Reconstruction Project. The project comprises the reconstruction of approximately 0.46 miles of two-lane roadway in a residential neighborhood in Chalmette, Louisiana. No significant concerns were identified in records research or field reconnaissance. The project met the conditions for a programmatic Categorical Exclusion as defined by the March 1995 agreement between the FHA and LDOTD.



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**NEPA Documentation for Establishment of Temporary Housing Facilities**

FEMA, New Orleans, LA

From December 2005 thru February 2005, worked as lead NEPA documentation specialist in Orleans and surrounding parishes to establish group temporary housing facilities for residents displaced by Hurricane Katrina. Responsibilities included performing site reconnaissance; identifying potential environmental and socioeconomic constraints associated with the site; performing historical research on site use; identifying and performing necessary level of documentation; and determining overall site suitability for use as temporary housing facilities.

**US-165 Expansion Environmental Assessment**

LDOTD, South-Central LA

Responsible for socioeconomic data collection from site reconnaissance, printed and CD-ROM Census data, and "on-line" Census databases. These data were used to project the socioeconomic impact from the project to local income, employment, neighborhood cohesion, and other social factors.

**Fort Buhlow Bridge Replacement Environmental Assessment**

LDOTD, Pineville, LA

Responsible for data collection and impact projections to socioeconomic environment from the replacement of the Fort Buhlow Bridge. The project would replace the existing bridge with a high-span bridge. Several federally funded areas may be impacted from the construction, as well as the Central Louisiana State Hospital.

**LA-115 Improvements Environmental**

LDOTD, Bunkie, LA

Project Quality Assurance Reviewer and environmental planner responsible for performing comprehensive review of draft final Environmental Assessment. The proposed alternative in the Final EA evolved from over ten years of proposal reevaluations. Two public meetings and one public hearing were conducted for the project. The preferred alternative provides improvements to an existing part rural and part urban route from I-19 through Bunkie, Louisiana, and effects the least adverse environmental impacts of all alternatives considered. Mr. Hoffeld's detailed review revealed several important technical problems and inconsistencies among the resource analyses, as well as non-standard language that had to be corrected. Alignment considerations included two Section 4(f) parklands, several historic structures listed or eligible for listing on the National Register, an abandoned junkyard, and minority and low-income populations.

**Sunset Beach Bridge Replacement, Environmental Impact Statement and Section 4(f)  
Statement**

Brunswick County, NC



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Environmental Planner for this project involving the replacement of the Sunset Beach Bridge over the Atlantic Intracoastal Waterway. Social and economic issues are extremely apparent, especially with regard to secondary and cumulative impacts. Impacts to natural resources, including wetlands and endangered species, also present concern.

**Wilmington Bypass Environmental Impact Statement/Corridor**

Wilmington, NC

Environmental Planner for preparation of Environmental Impact Statement and Corridor Location Report for the Wilmington Bypass, a 10-mile controlled-access roadway from I-40 to US 421 northeast of Wilmington. The project area includes large expanses of wetlands, and requires the crossing of a major navigable waterway.

**New I-40 Interchange Environmental Assessment**

City of Lonoke, AR

Project Manager for Environmental Assessment and traffic analysis associated with a new interchange on I-40 near Highway 89 near Lonoke, Arkansas. The project is rural but there are concerns related to the effects to Highway 89 and existing bait fish farming operations and wetlands in the region.

**Wilmington Bypass Environmental Impact Statement/Corridor Study**

Brunswick County, NC

Environmental Planner for preparation of Environmental Impact Statement and Corridor Location Report for the Wilmington Bypass, a 13-mile controlled-access roadway from US 17 to US 421 northeast of Wilmington. The project area includes large expanses of wetlands, and requires the crossing of a major navigable waterway.

**Crescent Road Connector Environmental Assessment**

Kinston, NC

Project Coordinator for preparation of land suitability mapping and preparation of an Environmental Assessment for the Crescent Road Connector extending from US 70 to US 258 in Kinston. The 2.5-mile, controlled access roadway is proposed on new location. Project issues include historic architectural resources, wetland impacts, economic considerations, a crossing of the Neuse River, and consideration of traffic demands that will occur as a result of the Global TransPark development.



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**Region III Coast of Florida Study Environmental Impact Statement**

USACE, Palm Beach, Broward, and Dade Counties, FL

Responsible for data collection and analysis of physical, biological, and socioeconomic environments for project locations in Palm Beach, Broward, and Dade counties, Florida. The EIS reviews the currently proposed combination of alternatives for the amelioration of storm damages to beaches and coastal property. Although other alternatives are incorporated, beach nourishment is proposed as the primary alternative for many degrading beaches in this region, with sand sources either dredged from nearby offshore areas or imported from upland sites or the Bahamas. Impacts would largely be confined to direct and indirect impacts of beach nourishment activities to hardground communities around Region III borrow and fill sites.

**Environmental Assessment with Finding of No Significant Impact**

Kuhs Private Levee System and Consolidated North County Drainage and Levee Districts, St. Charles County, MO

Responsible for data collection and coordination for emergency repair actions to be conducted by the U.S. Army Corps of Engineers, St. Louis District. These actions required Environmental Assessments that projected the environmental consequences of the repair activities associated with Missouri and Mississippi River summer floods, 1995. The action alternative for all projects comprised general repair activities to damaged levees using borrow material from the toe of slumped levees and from other areas. It was determined in both analyses that no resource would be significantly affected in any adverse manner, resulting in a Findings of No Significant Impact.

**Environmental Assessment with Finding of No Significant Impact**

USACE, Augusta Bottoms, Dutzow Bottoms, Missouri University, and Missouri Bottoms Drainage and Levee Districts, St. Louis, MO

Responsible for data collection and coordination for emergency repair actions to be conducted by the U.S. Army Corps of Engineers, St. Louis District. These actions required Environmental Assessments that projected the environmental consequences of the repair activities associated with Missouri and Mississippi River summer floods, 1995. The action alternative for all projects comprised general repair activities to damaged levees using borrow material from the toe of slumped levees and from other areas. It was determined in both analyses that no resource would be significantly affected in any adverse manner, resulting in a Findings of No Significant Impact.

**Bayport Terminal Environmental Impact Statement**

USACE, Galveston, TX

Project Environmental Planner responsible for addressing coastal zone management constraints and impact analysis thereto. The Port of Houston proposes to develop and operate a new marine terminal complex on the Bayport Ship Channel. Section 404 and Section 10 permits are required. The proposed facilities would require approximately 12,000



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linear feet of new wharves and berths within over 1,000 acres. Many of the proposed sites (i.e., alternatives) would affect coastal natural resource areas as defined by 31 TAC Section 501, which include among other resources, coastal barrier resources, intertidal sand and mud flats, oyster reefs, coastal historic areas, and coastal wetlands.

**North Parallel East-West Taxiway Conversion Environmental Assessment**

New Orleans Aviation Board, Kenner, LA

Responsible for data collection and impact projections for water quality, socioeconomic environmental quality, hazardous and solid waste generation and disposal sites, soils, geology, and other issues. The proposed Federal Aviation Administration (FAA) project would convert an existing taxiway at the New Orleans International Airport into a fully functional runway and would require the construction of a north parallel taxiway to serve the newly converted runway. This construction would displace approximately 32 light industrial businesses and require the clearing of a parcel of wetlands.

**South Brunswick Water and Sewer Authority Environmental Impact Statement**

Brunswick County, NC

Environmental Planner responsible for data collection and analysis in the socioeconomic and physical environments in the preparation of an Environmental Impact Statement for a proposed regional wastewater collection, treatment and spray effluent system for the South Brunswick Water and Sewer Authority in Brunswick County, North Carolina. The EIS is being prepared following a Contested Case Administrative Hearing which resulted in a determination that a previously prepared EA/FNSI was inadequate in addressing indirect effects. The project involves the assessment of impacts that may result from induced development pressures likely to occur to this predominantly rural resort coastal area as a result of plan implementation. Project tasks include public involvement opportunities, a stormwater management program, and assessment of impacts to human, natural and physical environments.



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**Individual Environmental Report (IER) Environmental NEPA Compliance**

USACE, Chalmette Loop Levee, St. Bernard Parish, LA

Project manager for investigations and preparations for NEPA compliance documentation for the Chalmette Loop portion of the Lake Pontchartrain and Vicinity Hurricane Protection Project in St. Bernard Parish, Louisiana. The IER will investigate the improvement of 22 miles of levee, approximately 2,500 feet of floodwalls, a ramp for LA 46 over the levee, and the replacement or modification of all structures in the levee system. Earthen berms, T-walls, and T-wall caps atop earthen berms are the three principal alternative types or scales. Alignment options include straddling the existing alignment, and either a floodside or protected side shift.

**Louisiana Coastal Restoration and Protection Program (LACPR), Cumulative Effects Analysis**

USACE, South Louisiana

Consultant project manager for the development of a cumulative effects analysis for various structural, restoration, and other alternative components under consideration for the LACPR program, whose goal is to develop a system that will provide enhanced protection of coastal communities and infrastructure, as well as for restoration of coastal ecosystems. The scope of the project is to address the full range of flood control, coastal restoration, and hurricane protection measures available, including those needed to provide comprehensive "Category 5" protection. Various combinations of alternative measures are being combined by planning unit as alternative plans. Plans will be ranked and evaluated. The cumulative effects analysis focused on key issues of evaluation: wetlands, water quality, diversion sediment and freshwater availability, levee borrow availability, socioeconomic effects, cultural resources, and recreational resources. Existing conditions were assumed to be 2011, which were compared to with-project scenarios and without project scenarios for the five planning areas in south Louisiana.

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## **Transportation Planning and Economics**

### **LDOTD Port Priority Construction Program**

Kinder-Morgan Dock and Crane Rehabilitation, Port of South Louisiana  
Project Coordinator and Transportation Economist for the application for rehabilitation funds for the Kinder-Morgan dock and crane. The dock's fender system and some supports needed replacement as well as an overhaul of the crane. Benefits were largely avoided losses were the dock out of commission for a period of time. The \$1.5 Million project had a total benefit to cost ration of 2.8, with a program benefit to cost ratio of 4.2.

### **LDOTD Port Priority Program**

Associated Terminals Bulk Storage Facility Port of South Louisiana  
Transportation Economist responsible for coordinating with LDOTD Port Priority Program personnel and the successful evaluation and proposal to use \$4.8million in prior allocated PPP funds. The analysis required the assessment of direct and indirect revenues expected to be induced from the action, and the establishment of the total use fees that would be required by Associated Terminals to achieve the required 3.7 percent Internal Rate of Return on the PPP's \$4.8 million investment.

### **LDOTD Port Priority Construction Program**

Globalplex Finger Pier, Port of South Louisiana  
Project Coordinator and Transportation Economist for several projects for the Port of South Louisiana for a proposed finger pier. The proposed finger pier would allow a more full utilization of equipment and increase the capacity of the Globalplex Terminal operations. The \$12.6 Million project was noted as being on the list of projects to receive funds in 2006. Revenues of approximately \$1.7 Million per year were projected and insured the required 3.7 percent internal return on the LDOTD's \$9 Million investment.

### **LDOTD Port Priority Construction Program**

Globalplex On-Dock Transit Shed, Port of South Louisiana  
Evaluation and December 2007 application for development of a new transit shed to be located atop a dock to be constructed soon with Louisiana Capital Outlay funds.

### **LDOTD Port Priority Construction Program**

St. James Liquid Bulk Dock, Port of South Louisiana  
Evaluation and December 2007 application for development of a liquid bulk dock in St. James Parish, Louisiana.

### **Siting Study for Louisiana Transportation Center**

Louisiana Airport Authority and Federal Aviation Administration



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Surface Transportation Task Leader, and Transportation and Environmental Planner for the site suitability study for the proposed Louisiana Transportation Center, a 25,000-acre multi-modal airport in southeastern Louisiana. Extending the study completed in a previous contract to determine if such a facility would be financially feasible, the study team will conduct a detailed siting study that will conclude with NEPA EIS-level environmental evaluations and master planning efforts for one or two alternate sites. The Louisiana Airport Authority, the independent state entity established to develop this airport, will provide this evaluation to the selected private developer in order to expedite implementation.

#### **Feasibility Study - Liquid Bulk Dock and Tank Farm**

Enbridge Energy, Various Locations in WI

Deputy Project Manager for feasibility study to assess site locations, costs, and other considerations for proposed liquid bulk dock and tank farm. Alternative sites are located on the Mississippi River in various areas. Served as liaison between Enbridge Energy and parish economic development coordinators and the Port of South Louisiana. Coordination with the Mississippi River pilots' association was also required to determine feasibility of alternate sites given historic river stages, thalweg, and existing and planned navigational aids and obstructions.

#### **Feasibility Study for LA 3235 Extension**

Louisiana DOTD

Project Economist and Environmental Planning Coordinator to evaluate alternatives to connect LA to Relocated US 90. This study, investigated the economic, environmental, and engineering feasibility of connecting LA 3235 to alternatives identified in the Hurricane Evacuation Corridor Study. Feasibility considered freight movement, connectivity, daily travel, and other purposes for the project in addition to hurricane evacuation effectiveness. Alternatives were evaluated with the use of the MicroBENCOST computer model, which is a computer application of the AASHTO's "Red Book" user benefit methodology (User Manual on Bus Transit and Highway Improvements (AASHTO, 1977). Costs, depreciated values, avoided accidents, and cross traffic benefits were evaluated with the model. Due to the existence of mechanical waterway bridges along existing routes, the MicroBENCOST rail crossing delays were adjusted to account for average draw-bridge delays.

#### **Maglev Feasibility Study**

New Orleans, LA

Project Economist and Transportation Planner responsible for the development of the regional transportation benefits that are anticipated from the implementation of a magnetic levitation rail line (Maglev) in the New Orleans MSA. Tasks included development of travel timesavings, potential accident costs avoided, reduced vehicle emissions, and other benefits expected from the implementation of the project. Both highway-user and magnetic levitation rail line-user benefits were estimated, adjusted to present value, and compared to the associated costs of implementing the program. The resulting net transportation and resource



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benefits will be used with other project benefits in an analysis that will evaluate the project's overall potential ratio of regional societal benefits to societal costs.

#### **Household Travel Survey**

Greenville Urban Area MPO, Pitt County, NC

Transportation Planner and Methodologist for a combination telephone interview and mailback survey of households in the Greenville area. The objective of the survey is to determine individual trip frequency and duration, by trip purpose and household classification. The sample size will be 1,000 households and will be random and stratified by NCDOT household classification. Results will be statistically described and provided for incorporation into the NCDOT Statewide Planning TRANPLAN model for the Greenville area.

#### **Baton Rouge North Bypass Feasibility Study**

LDOTD, Baton Rouge, LA

Project Economist and Transportation and Environmental Planner responsible for the environmental inventory, alternatives development and screening, and transportation benefits evaluation of alternatives. Transportation benefits analysis will generally comply with the of the AASHTO *User Benefit Analysis for Highways Manual* (AASHTO 2003), but be abbreviated in scope as only mesoscale measures of effectiveness will be available to assess transportation effects. Particular attention will be paid to the benefits of the bypass to peak period congestion along several I-10 sections that have no shoulders and create substantial non-recurrent congestion delays during incidents. Tolls and other innovative funding and financing alternatives will be evaluated in order to provide the most palatable implementation options for the region.

#### **Baton Rouge Loop Implementation Plan**

Baton Rouge, LA

Project Transportation and Environmental Planner responsible for agency and stakeholder coordination, environmental inventory, corridor development and screening, and evaluation of corridors. With its limited east-west arterials and explosive growth since Hurricane Katrina, City of Baton Rouge residents and officials relegated themselves to the need for a new loop roadway. Traffic and revenue forecasts were completed to determine the potential feasibility and priority of various sections of the Loop. The best corridors will be retained for study in a two-tier NEPA documentation process, where Tier 1 will select the best corridor for subsequent Tier 2 NEPA documentation for the various sections of independent utility.



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### **Southeast Little Rock, AR New Roadway Feasibility Study**

Little Rock, AR

Deputy Project Manager, Transportation Planner and Economist to evaluate the feasibility of a new uncontrolled-access roadway in rural southeast Little Rock. The location abuts the Arkansas River and the Port of Little Rock and would connect I-440 to I-540 and I-30 in two independent projects: between I-540 and I-530; and between I-530 and I-30. Feasibility will include the evaluation of transportation benefits associated with the alternatives with an abbreviated application of the 2003 AASHTO *User Benefit Analysis of Highways*. If feasible, alternatives evaluation and environmental constraints analysis will commence with the result of NEPA document under a potential supplemental contract.

### **Randall Parkway Feasibility Study**

Brunswick County, NC

Environmental Planner and Principal Economist for the preparation of an environmental feasibility study for the proposed extension of the Randall Parkway in Wilmington, North Carolina. Alternatives include extension through an established neighborhood, extension through land owned by the University of North Carolina at Wilmington, improvement of an existing alternative corridor, and the No-Action Alternative. A revised TRANPLAN model scenario was run by alternative, producing traffic turning movements for use in a capacity analysis and resulting benefit/cost analysis based on an abbreviated analysis roughly based on the AASHTO guidebook, *A User Manual on Bus Transit and Highway Improvements* (AASHTO, 1977).

### **Globalplex Facility Stage 0 Feasibility Study**

Port of South Louisiana, Reserve, LA

Project Manager for Stage 0 feasibility study for the Globalplex Access Road. This Feasibility Study was completed using the LDOTD *Program Development and Project Delivery Systems Manual* for these studies. Alternatives previously identified by URS in an Alternatives Evaluation conducted for the Port of South Louisiana were evaluated in this study. Two principal alternatives were identified: a mostly new alignment roadway, connecting the Globalplex facility to Avenue of Americas; and an alternative that connects the Globalplex facility with US 61 east of Avenue of Americas that requires a new grade separation with the Kansas City Southern rail line. Conceptual costs were developed for both alternatives, and the alternatives were determined to have no likely adverse impacts whose magnitude would be considered "significant" within the NEPA context.

### **LA-930 Improvement Project Stage 0 Feasibility Study**

Prairieville, LA

Project Manager for Stage 0 feasibility study for roadway widening improvements of the LA 930 in Prairieville, Louisiana. This roadway is an urban local roadway that is the only access for Prairieville School and two churches. The existing road has lane widths between 8 to 10



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feet, no shoulders, tight curves, and deep roadside drainage ditches. Study revealed no fatal flaws with improvements; however, several significant trees would require removal.

#### **LA-311 Improvement Project Stage 0 Feasibility Study**

Houma, LA

Project Manager for Stage 0 feasibility study for roadway widening improvements of LA 311 in Houma, Louisiana. This roadway is a minor arterial in Houma. Improvements proposed include the addition of two lanes and a divided, raised median for approximately 3.7 miles. No fatal flaws to the improvements were noted; however, a pumping station would have to be relocated along with removal of several significant trees and right of way requirements from both businesses and residential yards.

#### **Hurricane Evacuation Study**

Houma/Thibodaux, LA

Environmental and Transportation Planner for a corridor study to connect relocated US 90 near Houma/Thibodaux to LA 3127. This project involved the development of various alternatives, including the no-build option, transportation system management measures, and several build alternatives for a hurricane evacuation route. A dedicated hurricane evacuation travel demand model was developed with TRANPLAN to simulate evacuation and estimate roadway clearance times. This evaluation and project purpose (evacuation) drove the preference for an alternative corridor located mid-way between two Mississippi bridges, which more evenly distributed cross-river traffic.

#### **Strategic Highway Research Program (SHRP II), Capacity 01 Project: “A Framework for Collaborative Decision Making and Solution Screening on Additions to Highway Capacity,”**

Transportation Research Board, TX

Lead URS investigator in the I-69 Trans Texas Corridor Case Study associated with a program to evaluate highway project streamlining and decision-making programs and processes currently being implemented throughout the country. The project will culminate in the development of a program that combines elements from of the programs studied. Phase 2 pertains to tools and processes used to identify and evaluate alternative highway capacity solutions.



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**Palm Valley Bridge Economic Analyses of Replacement or Rehabilitation Alternatives**

USACE, St. Johns County, Jacksonville, FL

Responsible for analyzing transportation costs for trips over the existing Palm Valley Bridge and theoretical costs associated with trips over a proposed high-span replacement bridge. Palm Valley Bridge is a narrow drawbridge imposing vehicle delays. Avoided costs (benefits) included operating costs, idling costs, costs of changing speeds, costs of maneuvering curves, and the opportunity costs of vehicle operators' time. American Association of State Highway and Transportation Officials (AASHTO) planning guidelines were followed, (*A User Manual on Bus Transit and Highway Improvements* (AASHTO, 1977)), augmented with suggested updating methodology of the Florida Department of Transportation. After transportation costs were revised, total costs were calculated and discounted over the 50-year planning period.

**Palm Valley Bridge Supplemental Transportation Benefits Analysis of Replacement**

USACE, St. Johns County, Charleston, FL

Analyzed additional benefits that were not quantified in the Economic Analyses of Replacement or Rehabilitation Alternatives for Palm Valley Bridge, St. Johns County, Florida. Avoided costs from traffic realignment caused during construction period and periods of excess capacity were calculated. Costs of captured operator's time saved from the decreased transit duration over the proposed bridge were calculated over a 50-year period. All costs were aggregated, resulting in an average annual benefit from the project of over \$200,000.

**US 90 Bridge Closure Transportation Cost Analysis for Detours**

MDOT, Harrison and Hancock Counties, MS

Transportation Economist responsible for quantifying the added network vehicle operating costs and value of time spent in delays resulting from detours around the Hurricane-Katrina damaged US 90 bridges in Hancock and Harrison Counties. In accordance with AASHTO's 2003 publication, *User Benefit Analysis of Highways*, running costs associated with fuel, tire wear, and other were assessed, as was the detour route time and the added delay imposed on other users of the network encumbered by detour traffic congestion. An estimate of the additional net transportation cost per day was estimated for use in assigning incentives/disincentives in the Design-Build project management services for MDOT.

**Early Deployment Program of Intelligent Transportation Systems (ITS)**

Baton Rouge, LA

Project Economist and Transportation Planner responsible for data collection and analysis of the anticipated benefits of the deployment of the ITS system in Baton Rouge. The Master Plan will be used as a blueprint for the strategic deployment of ITS Technologies such as, CCTV surveillance cameras and variable message signs in conjunction with a central traffic management center to reduce congestion, improve traffic flow, and maximize the capacity of the existing transportation network. Travel time savings and reduced potential for accidents were the major contributors to total benefits. These benefits were adjusted to their present



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value using a discount rate and compared to discounted deployment costs for the project over the evaluation period. The resulting net present benefit of the project deployment was described in the Deployment Plan.

**Economic Impact Study of the Intercounty Connector, Preliminary Draft Interim Report - Peer Review (March 2004)**

MDDOT

Peer Reviewer and Transportation Economist to review the methods, scope, and assumptions employed by the Maryland Transportation Initiative in conducting a study of the effects to region employment and commercial development of alternative routes of the Intercounty Connector. The transportation benefits analysis complied with the new *AASHTO User Benefit Analysis for Highways Manual* (AASHTO 2003). Commercial development and employment effects were projected through use of econometric regression analysis techniques using establishment density and other variables.

**St. Claude Avenue and Claiborne Avenue Bridge Replacement Reconnaissance Study for Tunnel Alternatives**

USACE, New Orleans, LA

Project Coordinator and Environmental Planner for the reconnaissance evaluation of providing tunnels in lieu of bridge crossings over the Inner Harbor Navigation Canal in New Orleans. In 1997, the USACE, NOD evaluated plans to improve navigation between the Mississippi River and the Gulf Intracoastal Waterway and Mississippi River-Gulf Outlet. Proposed improvements included replacement of the St. Claude Avenue Bridge with a new bridge and the reconstruction of the bridge at Claiborne Avenue Bridge. Tunnel concepts were investigated at a reconnaissance-level study to determine if the concept warranted additional investigation. Alignment, construction techniques, maintenance of traffic, effects to the socioeconomic and natural environments, and costs were evaluated for both crossings (i.e., tunnel sites). Several alternatives were determined to be feasible; however, all were more expensive than associated bridge improvement alternatives. Limitations of tunnel schemes include maintenance of traffic, pedestrian and cyclists' access, displacements, local traffic circulation, and adverse effects or displacement to structures listed or potentially eligible for listing on the National Register of Historic Sites.

**St. Tammany, Tangipahoa, and Washington Parishes Northshore Transit Study**

New Orleans Regional Planning Commission, New Orleans, LA

Project Manager and Transportation Planner for a high-level feasibility study for transit on the north shore of Lake Pontchartrain. Growth in this fast growing region has become explosive since Hurricane Katrina. Urbanized areas have little affordable housing at this time, and there is a need to connect areas of moderate housing to these urbanized areas for employment. The study will focus on the identification and quantification of the need and some basic transit route/system alternatives and operational costs that should be pursued for implementation.



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### **New Orleans Rail Gateway Regional Rail Operational Analysis**

LDOTD, New Orleans, LA

Mr. Hoffeld was the Transportation Planner for an operational systems analysis of the existing New Orleans rail gateway and regional railroad network located in Orleans, Jefferson, Plaquemines, St. Bernard, and St Charles Parishes. Phase I included engineering, planning and environmental services necessary to develop a working passenger and freight rail operational analysis model, conduct on-going coordination with identified project stakeholders, evaluate alternative strategies for improving rail operations within the gateway, and develop an action plan detailing the consensus strategy supported by the identified stakeholders. Phase II of the project, if determined necessary, will include engineering, planning, environmental and land surveying services required to conduct line and grade studies, and environmental documentation (EA and/or EIS) for the identified corridor(s) and/or strategies.

### **Alternatives Analysis, Port of South Louisiana Access Road**

St. John the Baptist Parish, LA

Project Transportation and Environmental Planner responsible for preparing a concise report of the alternatives analysis conducted for this project. Consideration of 1) existing commercial vehicle operations (CVOs) through adjacent residential neighborhoods, 2) an existing railroad mainline and siding track crossing, 3) the location of the Port's main cargo wharf, and 4) other Port facilities provide the principal constraints for the analysis. Five alignments were considered, but only two alignments that minimized the impacts to the railroad siding track and crossing, while reducing CVOs through a low-income community, were proposed for further evaluation. The project is currently under consideration by the Client.

### **Central Louisiana Intermodal Facility Risk Evaluation**

Central Louisiana Intermodal Transportation Development Group, LA

Project Transportation and Transportation Economist for risk evaluation to determine if improving the intermodal freight connections in Alexandria warranted detail study. Inventories of the existing condition of the region's physical transportation infrastructure, socioeconomic setting, and potential user markets were completed. Interviews were also conducted with regional industry leaders, state economic development authorities and elected officials to determine the potential utility of such improvements. Evaluation resulted in the identification of existing pent-up demand for improved rail-to-truck and truck-to-rail movements and substantial benefits that could be realized from such improvements.

### **Louisiana Transportation Center Risk Analysis**

Louisiana Airport Authority and Federal Aviation Administration

Transportation Planner for the constraints and master planning components of the risk analysis conducted for the FAA to determine if a 25,000-acre multi-modal airport in southeastern Louisiana would be a financially-feasible venture. Anticipated Latin American trade over the next several decades result in forecasts of substantial unmet potential



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warehousing and transportation distribution needs for the region. Forecasts include the need for up to 29 million square feet of additional warehousing space and 0.5 million square feet of air cargo building space.

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## Siting Studies

### **Siting Study for Project “Bond”**

Louisiana Department of Economic Development (LDED)

Project Manager in preparing site packets for consideration for a new chemical manufacturing plant for five sites in southeast Louisiana. Invitations to participate in Project “Bond” were distributed to state Departments of Economic Development. While the client is confidential and unknown to the state Departments of Economic Development, criteria needed by the Company at the site were specified. Packets prepared from consideration included maps that provided details of terrain, services and other details requested in the packet. GIS analysis and mapping was used extensively to provide answers to the many and varied questions in the packet request.

### **Siting Study for Project “Compass”**

ThyssenKrupp Steel Conglomerate, Port of South Louisiana and LDED

Transportation Planner for a large steel mill siting study initially confidential but became public in late 2006. Alternative sites included Mobile, Alabama, and Eceola, Arkansas. Responsible for coordination with LED and PSL team members in providing various responses to questions related to one of the preferred sites of TK located in the PSL's jurisdiction. Preparation of operational cost estimate packages that included stevedoring, dock and appurtenant facility maintenance and other was coordinated and packaged for submittal and consideration.

### **River Birch Landfill Alternative Sites Analysis**

River Birch, Inc., Kenner, LA

Responsible for disposal costs analysis and major contributor to the alternative sites analysis conducted as part of the permit application of the proposed River Birch Landfill. This permit application was the first solid waste disposal site application submitted in Louisiana under new regulations of the Department of Environmental Quality, Division of Solid and Hazardous Waste. Based on transportation and disposal costs from the Greater New Orleans Area, an initial area was delineated within which alternative sites could be located. Overlay maps were developed, limiting the area to sites that were uplands (dry) and that were not underlain by prime farmland soils. Tipping fees and transportation costs were estimated for each alternative site. These costs were used to determine financial feasibility of potential disposal sites. Map research and site reconnaissance were used as a final site filter.



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**Alternative Site Analysis for an Intermediate Staging Base of the U.S. Air Combat Command Maneuvers**

USACE, Fort Worth, TX

Responsible for socioeconomic data collection and economic impact projection assistance for the siting of an intermediate staging base at one of three locations in Louisiana: Barksdale AFB in Shreveport; England Industrial Airpark in Alexandria; and Chennault Industrial Airpark in Lake Charles. Air combat maneuvers would occur 10 times a year and operate out of the intermediate staging base. Socioeconomic impacts to the local community from these maneuvers were projected using the Corps of Engineers Economic Impact Forecast System (EIFS), an on-line computer model developed for socioeconomic impact projection for military base developments and realignments.

**Alternative Site Analysis for U.S. Army National Guard Headquarters**

USACE, Carlisle Barracks, Carlisle, PA

Responsible for site data collection, including land use, socioeconomic environment, natural environment, and available infrastructure. Information collected was used in comparing potential sites for the new location of the U.S. Army National Guard Headquarters.

**Proposed Beechwood Ridge Subdivision Needs and Alternative Sites Analysis**

Livingston Parish, LA

Responsible for methodology development, data collection, and coordination for a needs assessment and alternative sites analysis conducted in partial fulfillment of the Department of the Army Section 404 wetlands permit process. The permit was necessary for the development of a 106-acre tract of land in northwest Livingston Parish, Louisiana, having approximately 17 acres of wetlands that may be impacted by the proposed residential development. Need for the development was established using an abbreviated methodology of the U.S. Corps of Engineers, New Orleans District, which inventoried all existing subdivisions and compared the housing supply with projected demand. The study area was delineated by the Live Oak School District. Census data were collected and analyzed, illustrating high growth areas and the projected number of housing units needed by price class. Resulting need by price class was compared to the inventoried and projected new housing supply to determine unmet housing need for the targeted price classes. Impacts on public services were estimated and reported along with private benefits.

**Gramercy-Wallace Bridge Needs and Alternatives Analysis, and Wetland Permitting Assistance**

LDOTD, St. John the Baptist and James Parishes, LA

Project Transportation and Environmental Planner responsible for developing needs statement, alternate constraints map, and alternate alignments, as well as the preparation of the supplemental information report and graphics. The project proposes to complete a section of a bridge approach, delayed by funding issues. The extension/completion of the West Bank Approach was documented as a very important link for hurricane evacuation, as



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well as providing local and commercial transportation benefits through reduced travel times and lower average operational costs per mile. Eight alternate alignments were developed. Detailed preliminary conceptual cost estimates were prepared, and all alignments were compared in a matrix. The proposed alignment is currently under permitting with the USACE.

### **Proposed Carter Hill Subdivision Needs and Alternative Site Analysis**

Livingston Parish, LA

Responsible for methodology development, data collection, and coordination for a needs assessment and alternative sites analysis conducted in partial fulfillment of the Department of the Army Section 404 wetlands permit process. The permit was necessary for the development of a 130-acre tract of land in northwest Livingston Parish, Louisiana, having approximately 35 acres of wetlands that may be impacted by the proposed residential development. The study area comprised two school districts in western Livingston Parish Louisiana. Multiple Listing Service time series data were used to establish listings and sales by area. When combined with historic demographic trends and development patterns of the area, it was concluded that the area of interest had a greater housing demand than the existing and presently anticipated housing supply.

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## **Public Involvement Programs**

### **Public Meeting Preparation and Facilitation, Category 5 Louisiana Coastal Protection & Restoration Project**

USACE NOD

Deputy Project Manager and local coordinator for the preparation for public scoping meetings on the proposed programmatic EIS for coast-wide Category 5 hurricane protection. The effort including securing meeting venues, preparing public notices, meeting literature and graphics and securing all equipment and arrangements. The URS team provided main meeting facilitation as well as break-out group facilitation. Meetings were held in New Orleans, Thibodaux, Lake Charles and Lafayette. Smaller, break-out groups were planned and employed at the New Orleans, Thibodaux, and Lafayette meetings. Break-out groups used a variety of brainstorming and ranking techniques with participants to identify the issues that should be considered in the development and evaluation of project alternatives. Following the four public scoping meetings, a Scoping Document will be prepared that summarizes the presentations made in the meetings, as well as the comments and discussion provided in the break-out groups.

### **Public Involvement Support, Mississippi River Gulf Outlet Deep Draft De-authorization Study USACE NOD**



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Deputy Project Manager and Local Coordinator for logistical arrangements, communications, and meeting participation associated with the Mississippi River Gulf Outlet De-authorization Study. The MRGO provides a bypass of the Mississippi River outlet to the Gulf from New Orleans. This dredged channel is maintained by the USACE and was seen by many as a contributing factor to flooding associated with past hurricanes. Congress mandated a study to de-authorize its use via a variety of alternatives. Passions related to the need for full closure were high but were in conflict to commercial interests. URS provided assistance with the meeting to ensure that the USACE would be properly prepared for the unknown turn-out and public ire.

**Public Involvement Support, Mississippi River Gulf Outlet Deep Draft De-authorization and Louisiana Coastal Protection and Restoration Projects**

USACE, NOD

Meeting Facilitator and Local Project Coordinator for assistance related to the preparations and conduct of stakeholder and public meetings for the project. Preparations included communications materials preparation, meeting logistics coordination and format planning, meeting conduct, and follow-up record preparation. A number of stakeholder groups must be notified some of which have interest in both projects. Up to 50 meetings are anticipated for the program.

**Public Involvement Program for the Upper Yazoo Projects Reformulation Study, Southwest Mississippi**

USACE, Vicksburg, MS

Responsible for review and compilation of public and private concerns regarding the Upper Yazoo Projects, which consist of channel enlargements and levee construction along the main stem of the Yazoo River and its tributaries.

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**Planning / Research Studies**

**Cost Shifting in Relation to No-Fault Automobile Insurance**

Louisiana Trial Lawyers Association, Baton Rouge, LA

Responsible for coordination and collection of data associated with the effects of no-fault automobile insurance laws. State Commissions of Insurance, State Trial Lawyers Associations, State Legislatures, Insurance Companies, and other organizations and associations were contacted to develop a database of information related to the cost-shifting aspects of implementing a no-fault automobile insurance system. The study concluded that cost-shifting associated with uninsured motorist is the only intrinsic cost-shifting element in such laws. The study will be used by the Louisiana Trial Lawyers Association in its efforts to debate a proposed no fault law in the State of Louisiana.



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### **Lake Charles Community Assessment**

Lake Charles, LA

Technical and Research coordination/research for a project to analyze the economic patterns for Lake Charles, Louisiana. Gathered buying power data and county business patterns from the U.S. Census Bureau. This data was manipulated and formatted to be used in various capacities. The data showed those sectors of the community in need of economic stimulation and redevelopment.

### **Metairie CBD Land Use Study for Metairie CBD**

Regional Planning Commission, Metairie, LA

Land Use Planner for the land use and transportation plan development for the central business district of Metairie, Louisiana. As one of the most dynamic commercial regions of the New Orleans Metropolitan Area the Metairie CBD has evolved in a rapid manner, given need for a new, updated land use and transportation plan using a marketing analysis for the CBD that projected absorption rates, by land use. Brainstorming, focus group, and steering committee meetings guided the process. Responsible for developing several conceptual land use schemes and combining them into a cohesive, composite "vision" of future land use. This "vision" includes improvements to pedestrian access, land use compatibility, and commercial and entertainment venues. The project includes a full land use and activity inventory, by parcel, for the Metairie CBD, and the final report provides constraints graphics, the future composite land use plan, and an action plan that includes specific items that must be addressed for the successful implementation of the community's "vision."

### **St. Bernard CBD Land Use Study for St. Bernard CBD**

Regional Planning Commission, St. Bernard Parish, LA

Land Use Planner and Principal Methodologist for the development of a future land use scenario for St. Bernard Parish. Seated in the southeastern corner of the New Orleans Metropolitan Area, St. Bernard Parish has evolved into a bedroom community for the New Orleans workforce. The St. Bernard Parish region has experienced explosive residential growth in recent years; however, in order to provide a realistic future land use scenario, Census and building permit data were obtained and analyzed, as well as interviews conducted to determine the anticipated infrastructure improvements and absorption rates and development location, by land use. The study includes a comprehensive inventory of land uses in the study area, and a GIS that includes existing and future land use layers.

### **Pope Air Force Base Integrated Natural Resources Management Plan**

USACE, Fayetteville, NC

Responsible for data collection and compilation of land management and outdoor recreation management practices for Pope Air Force Base grounds. The INRMP is a compilation of available management information, organized in an ergonomic format that facilitates plan implementation. Component Implementation Plans were developed by natural resource and segregated by project for implementation.



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### **Environmental Justice Analysis: Wilmington Bypass Corridor Study**

Wilmington, NC

Methodologist and Principal Author. A method was developed to determine if the proposed project would effect disproportionate impacts to any minority or low-income population. Census data (block and block group) were aggregated in the development of reference populations for both minority and low-income populations in the study area. This reference population was used to determine a theoretical proportionally impacted populations (minority and low-income) that were then compared to the affected populations to determine if the project effected disproportionate impacts and these sub-groups.

### **Demographic Analysis of the Catholic Diocese of Baton Rouge, Louisiana: Trends and Projections**

Baton Rouge, LA

Responsible for data collection and analysis of socioeconomic census data for 1980, 1990 by zip code and by census tract. Commercial census tract estimates for 1980, 1990, 1995 estimates, and 2000 projections were obtained by census tract, by parish, and manipulated to display annual average and period growth rate trends and numeric changes by tract. Median family income data for 1980, 1990, 1995, and 2000 were adjusted using consumer price indices for small and average sized urban communities to illustrate real purchasing power growth or decline, by tract and parish. Geographic Information System analysis was used to illustrate with color maps of the Diocese low, medium, and high growth tracts for all data periods. High numeric growth areas were also highlighted as well as other high growth areas such as minority population growth and real purchasing power. This study will be used in the Diocese educational system planning efforts.

### **Recreational Benefits Study Plan for White River Navigational Improvements**

USACE, Memphis, TN

Project Planner and Analyst for development of study plan to evaluate recreational benefits of proposed navigational improvements to the White River in Arkansas. A comprehensive inventory of outdoor recreational opportunities inside of both 30- and 60-minute travel radii was conducted and entered into a GIS database. This GIS will be used in identifying survey sites to conduct contingent value surveys to determine an individual's willingness to pay for a change in recreational site features. Survey results will be used in the development of an econometric model to forecast the future monetary values of the additional recreational opportunities and/or enhanced access to existing sites resulting from the proposed navigational improvements.



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**Facility Inventory, Apalachicola-Chattahoochee-Flint/Alabama-Coosa-Tallapoosa  
Drainage Basins**

USACE, Mobile, AL

Alabama, Georgia, and Florida (U.S. Army Corps of Engineers, Mobile District). Responsible for organization and analysis of water level, discharge, and inflow hydrologic data; various climatic data; recreation visitation data; and recreation facility data for reservoirs. DBXL database programs were developed to develop mean, maximum, and minimum water levels and discharges, temperatures, and precipitation by month and by year for a 13-year observation period. Also developed several data checking programs to find anomalous data points for data quality evaluation. These data were used to develop a multiple regression equation for recreational visitation projection on reservoirs.

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**Miscellaneous Environmental Analyses**

**Wilmington Bypass Corridor Study Air Quality Assessment**

Wilmington, NC

Analyst responsible for the build and no-build free-flow and intersection analysis for the Brunswick County Segment of the Wilmington Bypass project. This segment of the project includes a proposed interchange at US 421 that had to be modeled as partially constructed (no-build scenario) and fully constructed (build scenario) with the use of Mobile5a and the CAL3QHC models.

**I-10 Widening Acadian Thruway Air Quality Assessment**

East Baton Rouge Parish, LA

Analyst for emissions inventory and carbon monoxide concentration modeling with Mobile5a and the CAL3QHC. I-10 to U.S. 61 Route I-12. January rush hour model runs were completed under both a with IM and without IM program. Results suggest that although estimated eight-hour average carbon monoxide concentration NAAQS exceedences were modeled under all future, the fewest exceedences were modeled under IM scenarios.

**Hill Carter Parkway Categorical Exclusion Air Quality Assessment**

Ashland, VA

Analyst responsible for the build and no-build free-flow analysis with the VDOT abbreviated emissions inventory and carbon monoxide model, VACAL5AT.

**North Parallel East-West Taxiway Conversion Air Quality Analysis, Environmental  
Assessment**

Kenner, LA

Responsible for emissions inventory estimates and projections associated with the conversion of an existing taxiway into a runway. Although aircraft operation levels would not differ



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between the with and without action future alternatives, future delays in operations would be slightly longer under the no-action scenario; hence, corresponding emissions would be slightly higher. The effect of the action alternative on emissions would be positive but insignificant.

#### **Zachary-Taylor Parkway Value of Improved Air Quality**

LDOTD, East-Central

Responsible for emissions inventory estimates along the alignment of the proposed Zachary-Taylor Parkway for the existing, future action, and future no-action scenarios. Because it was determined that the construction of the Zachary-Taylor Parkway would not increase traffic volume along this corridor to levels high enough to produce dangerous carbon monoxide concentrations along the project corridor, it was concluded that there would be no significant impact on air quality attributable to the action alternative. It was therefore concluded that there would be no value in improving the air quality along this corridor.

#### **Wilmington Bypass Final Design Noise Impact Analysis**

Wilmington, NC

Modeler for the final noise impact analysis for the Wilmington Bypass Final Design. Ambient modeling was completed, and both with and without action scenarios were modeled. Although sparsely developed, results suggest that several barriers would be cost effective in accordance with the North Carolina reasonableness criteria.

#### **South College Road Extension Noise Impact Analysis**

Lafayette Consolidated Government, Lafayette Parish, LA

Modeler and Principal Author of the noise impact analysis addendum for the South College Road Extension. Located from Pinhook to Kaliste Saloom Road, the new location roadway would traverse undeveloped pasture, flanked by a single-family residential community. The project was studied in the early 1980s but not implemented. This addendum study reviewed the past study, considered a proposed modification to the alignment and new traffic projections, and estimated effects of the project. While 30 receivers were modeled to be affected by adverse noise levels or substantial increases, no mitigation measures were evaluated as both feasible and cost-reasonable.

#### **Facility Pollution Prevention Plans**

Louisiana Army National Guard, State of Louisiana

Project Manager and major contributor for the development of Pollution Prevention Plans for 23 Louisiana Army National Guard facilities in the State of Louisiana. Surveys were developed and circulated to facility managers requesting information on existing waste streams, current disposal and/or recycling practices, and waste minimization techniques already reviewed by facility managers. Remaining efforts include computing actual and accounted waste generation by waste stream, which will highlight waste minimization opportunities. Assessments will be made, with corresponding implementation plans developed by facility.



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**ASTM Phase I Site Assessments: Hazardous, Toxic, and Radioactive Waste  
Investigations** USACE, New Orleans, LA

Field Investigator for six Hazardous, Toxic, and Radioactive Waste Investigations in southeastern Louisiana. Prior to the construction of USACE sponsored canal and levee improvements in southeastern Louisiana, pedestrian surveys were completed along project corridors in order to form a reasonable opinion on the existence of HTRW sites that may be disturbed or otherwise encountered during proposed construction activities. All reconnaissance activities and research efforts were conducted in accordance with the American Society for Testing and Materials (ASTM) E1527-94 standards. Habitat, soil and water conditions, and other environmental data were also recorded at potential HTRW sites. Interviews with present and former landowners were conducted and recorded, and historical land uses were investigated with the aid of Sanborn Fire Insurance and historical USGS quadrangle topographic maps.

**Fort Sill Consolidated Hazardous Materials Management Program Business Plan**

Fort Sill, OK

Project Manager and Primary Contributor for the preparation of a business plan to implement one of two program alternatives formulated to help Fort Sill, Oklahoma comply with the hazardous waste generation reductions mandated under Executive Order 12856 of August 1993. The two alternatives evaluated were: (1) a consolidated hazardous materials "pharmacy" that would temporarily store hazardous waste; serve as the sole procurement, storage and issue entity of new hazardous materials on-base; and serve as a storage and reuse center for partially-used materials; and (2) a reduced program that would only include the storage and reuse center for partially-used materials. It was determined that the avoidance of disposal of partially-used materials and the subsequent avoidance corresponding new product purchases provided the largest benefit (greater than \$90,000 per annum). Combined with the necessary construction costs under the full-scale option, it was determined that the reduced program would be the more cost beneficial alternative.

**Solid Waste Management Plan**

City of Keene, NH

Project Manager and major contributor to the solid waste management plan for the city, which had to complete a plan compatible with New Hampshire regulations that would resolve the city's growing municipal solid waste disposal concerns. Transportation cost analyses were completed to determine the best final disposal option. Solid waste composition and generation were estimated using waste audit reports for a similar community in Rhode Island, resulting in recyclables generation rates by component. Recycling program participation and capture rates were projected for use in recyclables revenues projections. Orphan waste generation and disposal options were also addressed. The plan will facilitate implementation of a new materials recovery facility/transfer station in Keene.