

SEPTEMBER 2012

**LA 3132 INNER LOOP EXTENSION
STAGE 0 FEASIBILITY STUDY
STATE PROJECT NO. H.009213.1**



**ENVIRONMENTAL
SUMMARY**

**SHREVEPORT, CADDOPARISH,
LOUISIANA**



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ACRONYMS AND ABBREVIATIONS

ACS	American Community Survey
AFF	American Fact Finder
AFS	Air Facility System
ASTM	American Society for Testing and Materials
CERC-NFRAP	Comprehensive Environmental Response Compensation and Liability Information System-No Further Remedial Action Planned
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CORRACTS	Corrective Action Activity
DOT	Department of Transportation (United States)
DOTD	Department of Transportation and Development (Louisiana)
EDR	Environmental Data Resources
EDSM	Engineering Directives and Standards Manual
EFHs	Essential Fish Habitats
EO	Executive Order
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FINDS	Facility Index System
FIRMS	Flood Insurance Rate Maps
FSA	Farm Service Agency
HIST LUST	Historical Incident Leaking Underground Storage Tank
HMIRS	Historic Materials Incident Report System
I-49	Interstate 49
I-69	Interstate 69
ICIS	Integrated Compliance Information System
LA	Louisiana Highway
LA-TEMPO	Louisiana Tools for Environmental Management and Protection Organizations
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LOSCO	Louisiana Oil Spill Coordinator's Office
LUST	Leaking Underground Storage Tank
MPH	Miles Per Hour
MSGP	Multi-Sector General Permit
NEI	National Emissions Inventory
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
ODI	Open Dump Inventory
OMB	Office of Management and Budget
PCS	Permit Compliance System
Providence	Providence Engineering and Environmental LLC
RCRA-CESQG	Resource Conservation and Recovery Act – Conditionally Exempt Small Quantity Generators

**ACRONYMS AND ABBREVIATIONS
(Continued)**

RCRA-LQG	Resource Conservation and Recovery Act – Large Quantity Generators
RCRA-NonGen	Resource Conservation and Recovery Act – Non-Generators
RCRA-SQG	Resource Conservation and Recovery Act – Small Quantity Generators
RCRA-TDSF	Resource Conservation and Recovery Act – Treats, Stores, Disposes
RCRAInfo	Resource Conservation and Recovery Act Information
RMP	Risk Management Plan
ROW	Right-of-Way
SHWS	State Superfund Sites
SONRIS	Strategic Online Natural Resources Information System
SPUI	Single Point Urban Interchange
SSA	Sole Source Aquifer
SWF/LF	Solid Waste Facilities/Landfill Sites
TMDL	Total Maximum Daily Load
TRIS	Toxic Chemical Release Inventory System
UIC	Underground Injection Well
USACE	United States Army Corps of Engineers
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

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1.0 INTRODUCTION

Providence Engineering and Environmental Group LLC (Providence) prepared this environmental summary and checklist as part of the Louisiana Highway (LA) 3132 Inner Loop Extension. The purpose of this environmental summary is to identify resources associated with the natural and human environment as they relate to extending LA 3132 from its current terminus at LA 523 (East Fournoy Lucas Road) to the future Interstate 69 (I-69) near LA 1 in Caddo Parish, Louisiana. The four-lane controlled access extension of LA 3132 is proposed to run generally north-south, and provide an alternative route for industrial and residential traffic to Shreveport and Bossier City. This study is part of the contract for the Louisiana Department of Transportation and Development (DOTD) Project No. H.009213.1.

The study area for the project consists of 9,466.9 acres, and is centered at Latitude 32°22'51.07"N and Longitude 93°41'4.14"W (see **Figure 1**).

2.0 ALTERNATIVES

The purpose of the Stage 0 is to determine the feasibility of constructing and operating a roadway project. There are four Build Alternatives for the LA 3132 Inner Loop Extension: Alternative A, Alternative B1, Alternative B2, and Alternative C. **Figure 2** shows the location of these Build Alternatives. All Build Alternatives propose two, 12-foot travel lanes in each direction with six-foot interior shoulders, ten-foot exterior shoulders, and a depressed median ranging from 52 to 68 feet. The proposed design speed is 60 miles per hour (mph) for all proposed Build Alternatives. The ramps have been proposed as 15-foot travel lanes with a four-foot inside shoulder and an eight-foot outside shoulder.

2.1 Alternative A

Alternative A proposes to extend LA 3132 from its current terminus with LA 523 to LA 1 at Leonard Road. The length of the mainline for Alternative A is approximately 3.3 miles, which initiates with a single point urban interchange (SPUI) and terminates with a trumpet interchange.

2.2 Alternative B

Alternative B proposes to extend LA 3132 from its current terminus with LA 523 to the future I-69. Alternative B initiates with a SPUI at the intersection of LA 3132 and LA 523. A diamond interchange is proposed at the intersection of LA 3132 at Leonard Road, and direct connectors are proposed at its termination point with the future I-69. Alternatives B1 and B2 have different geometric alignments south of Leonard Road.

2.2.1 Alternative B1

The length of the mainline for Alternative B1 is approximately 6.6 miles.

2.2.2 Alternative B2

The length of the mainline for Alternative B2 is approximately 5.9 miles.

2.3 Alternative C

Alternative C proposes to extend LA 3132 from its current intersection with LA 526 (East Bert Kouns Industrial Loop) to LA 1 at Leonard Road. The length of the mainline for Alternative C is approximately 3.8 miles. Alternative C will not initiate with an interchange because it proposes to continue LA 3132 and remove the existing connection to LA 523. This alternative is proposed to overpass LA 523 without providing access to LA 523. Alternative C will terminate with a trumpet interchange at LA 1.

3.0 AFFECTED ENVIRONMENT

This section of the environmental summary will identify existing resources associated with the natural environment within the study area. Section 4.0 discusses the resources associated with the human environment and **Table 1** is a summary of the resources discussed below associated with each of the Build Alternatives discussed in Section 2.0.

3.1 Prime and Unique Farmland

Prime and other important farmlands have been identified by the United States Department of Agriculture (USDA) because they are of major importance in meeting the nation's short and long range needs for food and fiber. Prime farmland, as defined by the USDA, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Prime farmland soils have properties that are favorable for the economy, and produce the highest yields with minimal inputs of energy and other economic resources.

The vast majority of the study area, approximately 7,698.7 acres or 81.3%, is mapped as potential prime farmland soils (**Figure 3**). These soils include Armistead clay, Moreland clay, Severn very fine sandy loam, Norwood silt loam, Ruston fine sandy loam, Moreland silt loam, Gallion silty clay loam, Gallion silt loam, Caspiana silt loam, Moreland clay, Norwood silty clay loam, Severn very fine sandy loam, Wrightsville-Messer complex, Caspiana silty clay loam, and Metcalf-Messer complex.

3.2 Threatened and Endangered Species

According to the United States Fish and Wildlife Service (USFWS) *Endangered, Threatened, and Candidate Species of Louisiana*, species listed in Caddo Parish include the pallid sturgeon (*Scaphirhynchus albus*), least tern (*Sterna antillarum*), red-cockaded woodpecker (*Picoides borealis*), earth fruit (*Geocarpon minimum*), and candidate species Sprague's pipit (*Anthus spragueii*).

3.3 Essential Fish Habitat

Under the Magnuson-Stevens Fisheries Conservation and Management Act of 1996 (Public Law 104-297), the Gulf of Mexico Fishery Management Council identified Essential Fish Habitats (EFHs) for those species managed under its fishery management plans. EFHs are defined by the act as being "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." There are no marine environments in the study area that would support EFHs.

3.4 Wetlands

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (USEPA) jointly define wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands have the following characteristics: (1) vegetation consisting of macrophytes that are typically adapted to soil conditions found in wetland environments; (2) soils that have been classified as hydric or possess characteristics that are associated with reducing soil conditions; and (3) hydrology, meaning that the area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

A preliminary desktop wetland investigation was conducted on the proposed study area using soils data and local knowledge. **Figure 3** shows the location of hydric soils in the project area. A majority of the study area is located on non-hydric soils. Only 23.7 acres or 0.3% of the study area is underlain with Metcalf-Messer complex, which is a partially hydric soil. Aerial photography and site visit confirmation identified this area as a residential street known as Red Oak Lane. The National Wetlands Inventory did not have data on the project study area.

3.5 Waters Resources

Water quality in the study area is affected by both point source and nonpoint source discharges. Point sources include industrial, municipal, and sewer discharges. Nonpoint sources include storm water runoff, landscape maintenance activities, agriculture, and natural sources. The Red River and Bayou Pierre are the largest water bodies in the project area. Smaller waterways including Mile Bayou, Sand Beach Bayou, Kelley Bayou, and Chico Bayou are tributaries to Bayou Pierre. Tones Bayou is also located in the study area, and is a tributary to the Red River. Water resources are shown on **Figure 4**.

Surface Water

The surface waters in and adjacent to the project area are included in the Louisiana Department of Environmental Quality (LDEQ) subsegments of the Red River Water Quality Management Basin. The *2010 Louisiana Water Quality Inventory Integrated Report - Fulfilling the Requirements of the Federal Clean Water Act Sections 305(b) and 303(d)* (LDEQ, 2010) provided the following detail on each subsegment:

- LA100101 – Red River from Arkansas State Line to United States Highway 165 in Alexandria. This subsegment of the Red River Basin is fully supporting all of its uses of primary contact recreation, secondary

contact recreation, fish and wildlife propagation, drinking water supply, and agriculture.

- LA100601 – Bayou Pierre from its headwaters to Sawing Lake. This subsegment of the Red River Basin is fully meeting its designated uses of primary contact recreation, secondary contact recreation, and agriculture, but is not meeting fish and wildlife propagation as a result of low dissolved oxygen levels. A Total Maximum Daily Load (TMDL) was issued for dissolved oxygen and nutrients in 2008.

Aquifers

A Sole Source Aquifer (SSA) is an aquifer designated by USEPA as the "sole or principal source" of drinking water for a given service area. A SSA is one that is used to supply 50% or more of the drinking water for a particular area. There are no SSAs in the project area.

Water Wells

A search was performed for water wells, including public water supply wells, United States Geological Survey (USGS) water wells, DOTD registered water wells, and Louisiana Department of Natural Resources (LDNR) registered water wells located within the study area. Public water supply wells supply water to at least 25 people for a minimum of 60 days. USGS water well data includes groundwater data on springs, wells, and other sources of groundwater input into their national water resource information tracking system. DOTD maintains a database on all water wells registered in the State of Louisiana. DOTD's database includes public and private drinking water supply wells, irrigation wells, livestock watering wells, and groundwater monitoring wells.

There are 445 registered wells within the study area. **Table 2** is a summary of these registered water wells. **Figure 4** shows all water wells in the vicinity of the study area. Of the 445 registered wells, six are active commercial public supply wells, four are active institution public supply wells, and two are abandoned public supply wells. It is possible that in the study area additional wells have been drilled but are not registered.

A search was performed for water wells that were within 50 feet of the proposed project areas. There are three active monitoring wells within 50 feet of Alternative A. Seven wells are within 50 feet of Alternative B1. These include one active monitoring well, one active irrigation well, one active oil and gas rig supply well, one plugged and abandoned oil and gas rig supply wells, and two plugged and abandoned borehole wells. Seven wells are also within 50 feet of Alternative B2. These include one active monitoring well, one active irrigation well, two plugged and abandoned oil and gas rig supply wells, and three plugged and abandoned borehole wells. There are three active monitoring wells within 50 feet of Alternative C.

3.6 Floodplains

Executive Order (EO) 11988 “Floodplain Management” requires federal agencies to avoid actions, to the extent practicable, which will result in the location of facilities within floodplains and/or affect floodplain values. Facilities located in a floodplain may be damaged or destroyed by a flood or may change the flood-handling capability of the floodplain or the pattern or magnitude of the flood flow.

The study area is primarily located outside the 100-year floodplain. There are approximately 887.5 acres or 9.4% of the study area within the 100-year floodplain. The 100-year flood plain is primarily along the Red River and in the southeast corner of the study area, near Kelly and Chico Bayous (see **Figure 5**).

3.7 Natural and Scenic Rivers

The Louisiana Natural and Scenic River Act of 1970 established the Louisiana Natural and Scenic River System, a state river protection initiative to limit impacts to those rivers, streams, and bayous afforded protection through the Act. The Louisiana Department of Wildlife and Fisheries (LDWF) was charged with regulatory authority over the program. There are no federal designated Wild or Scenic Rivers or state designated Natural and Scenic Rivers in the project study area.

3.8 Unique and Environmentally Sensitive Areas

The DOTD Office of Engineering in the Engineering Directives and Standards Manual (EDSM No: I.1.1.21) Treatment of Significant Trees in DOTD Right-of-Way (ROW) defines for the purposes of this policy, a significant tree as a Live Oak, Red Oak, White Oak, Magnolia or Cypress that is considered aesthetically important, 18-inches or greater in diameter at breast height (4-6 feet above the ground), and having a form that separates it from the surrounding vegetation or is considered historic. Additionally, significant trees must be in good health and not in a declining condition. There are no significant trees located in the project work areas based on field observation; however, access was limited in some areas of the proposed alignments, and the lack of significant trees will need to be confirmed.

3.9 Noise

Existing ambient noise levels in the project area are those associated with the existing roadways and industrial facilities along LA 1. The proposed roadway and construction activities may impact existing ambient noise in the project area. A noise study will be conducted as part of the Stage 1 process.

3.10 Air Quality

The proposed project is in Caddo Parish, which is considered an air quality attainment area for ozone, lead, carbon monoxide, sulfates, nitrous oxide, and particulate matter. No impact to air quality is anticipated as a result of the project.

3.11 Cultural Resources

As part of the environmental summary, a preliminary assessment of cultural resources formerly documented in the study area was conducted. Data reviewed included previously recorded archaeological sites, cultural resources investigations, and properties listed on the National Register of Historic Places (NRHP).

Based on data gathered from the Louisiana Office of Cultural Development, there are no historic districts or historic structures in the study area. There are 69 archaeological sites in the study area. Of these 69 sites, six are located within the required ROW for the proposed project areas. During the Stage 1, consultation with the Louisiana State Historic Preservation Office will determine if a Phase I Cultural Resources Study is necessary to assess the status of any cultural resources recorded in the project area.

3.12 Hazardous and Solid Waste Concerns

A survey of the study area was conducted to identify sites that contain or potentially contain hazardous or toxic materials and/or wastes. Environmental Data Resources (EDR) was contracted to conduct a records search of the study area with a one mile buffer, using the standard American Society for Testing and Materials (ASTM) format for Phase I Environmental Site Assessments. Their report included regulatory agency record reviews, including a search of federal and state environmental compliance databases. A copy of the EDR report is provided as **Appendix A** on the enclosed CD. A summary of the sites identified on the EDR report can be found on **Table 3**. Site reconnaissance was conducted to confirm reported information. **Figure 6** demonstrates the location of potential environmental liability sites.

The database search and regulatory agency records review were conducted to determine what, if any, information, release reporting, or registrations exist, or have been applied for, which might reveal a potential for contamination, indicate the possible presence of contamination, or assist in identifying recognized environmental conditions in connection with the study area. This procedure includes the examination of standard environmental record sources identified within Section 7.2.1.1 of ASTM Standard Practice E 1527-05, along with other appropriate agencies as deemed necessary. The databases searched include: Federal ASTM E 1527-05 Databases, Federal ASTM E 1527-05 Supplemental Databases, and State ASTM E 1527-05 Databases.

Two types of sites were considered to be of particular interest for this project:

- Sites containing underground storage tanks (USTs)
- Sites where hazardous materials or wastes are generated, stored, handled, or disposed

These sites, should they be contaminated, have the potential to directly impact the study area if located in the existing or proposed ROW, or indirectly through migration of contamination off site and into the project ROW. The following two sections address the findings associated with the presence of hazardous waste sites and/or USTs in the vicinity of the project area.

3.13 Hazardous Waste Sites

Hazardous waste is defined by 42 United States Code (USC) § 6903 as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.” Federal and state databases were used to identify known hazardous waste sites.

Hazardous waste sites were identified within a mile of the study area. Within the search, 21 sites were identified: three Resource Conservation and Recovery Act (RCRA) - Large Quantity Generator (RCRA-LQG), three Small Quantity Generators (RCRA-SQG), 11 Conditionally Exempt Small Quantity Generators (RCRA-CESQG), three Non-Generators (RCRA-NonGen), and one site that treats, stores, or disposes of hazardous waste (RCRA-TDSF). None of these sites were identified within or adjacent to the proposed project areas.

The Facility Index System (FINDS) maintained by the USEPA contains both facility information and “pointers” to other sources of information that contain more detail. The FINDS database contains information on sites listed in the RCRA Information (RCRAInfo) system; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Louisiana Tools for Environmental Management and Protection Organizations (LA-TEMPO); National Emissions Inventory (NEI); Air Facility System (AFS); Permit Compliance System (PCS); USEPA Risk Management Plan (RMP); and a number of other federal databases. There were 21 sites identified in the FINDS database within one mile of the study area center. None of these sites were identified within or adjacent to the proposed project areas.

The Emergency Response Notification System (ERNS) is a database of incidents reported to the National Response Center including chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals,

and incidents where illegally dumped chemicals have been found. The ERNS list recorded four incidents within one mile of the study area center. None of these sites were identified within or adjacent to the proposed project areas.

SPILLS is a database of spills and/or releases to land, reported to the ERNS. The file search captured 18 SPILLS sites containing 49 spill events within one mile of the project center. All of the reports for the 49 spill events have been closed with the exception of ten. Of these ten, six are listed as open, two are still pending review, one was referred to enforcement, and one was referred to an outside agency. Only one spill event was identified within or adjacent to the proposed project areas. The event occurred in October 2003 at 1601 Leonard Road, which is east of the proposed Leonard Road interchange for Alternative B1 and B2. This event contained approximately 10-15 gallons of triethylene glycol mixed with freshwater. This event has been closed and should not be a concern for the project.

Seven sites were identified in the Underground Injection Wells (UIC) database within one mile of the project center. All of these wells are still active with the exception of one. Of the six active sites, two are located within or adjacent to the proposed project areas. There is one active site adjacent to Alternatives B1 and B2. The other active site is within the required ROW near the south end of Alternative B2.

The EDR report also identified sites in the following databases: the Leaking Underground Storage Tank (LUST), the Historic (HIST) LUST, the Hazardous Materials Incident Report System (HMIRS), the Toxic Chemical Release Inventory System (TRIS), the CERCLIS and No Further Remedial Action Planned (CERC-NFRAP), the Integrated Compliance Information System (ICIS), the State Superfund Sites (SHWS), the Solid Waste Facilities/Landfill Sites (SWF/LF), the National Pollutant Discharge Elimination System (NPDES) for Louisiana, the ASBESTOS, the Corrective Action Activity (CORRACTS), and the Open Dump Inventory (ODI) databases. None of these sites were identified within or adjacent to the proposed project areas.

3.14 Underground Storage Tanks

USTs are defined as any one or a combination of tanks used to contain regulated substances, the volume of which, including connecting underground pipes, is 10% or more beneath the surface of the ground. The LDEQ requires by law that all USTs within the state be registered. The data search queried UST records maintained by LDEQ. The file search located 17 UST sites containing records for 38 USTs within one mile of the study area. Of these, nine sites are located within the study area. The tanks have been removed from four of these sites. Two sites contain closed USTs (Caddo Bossier Port Commission and Nor Wes Inc.), and three sites contain active USTs (East Ridge Grocery, Raceway, and Relay Station Port). The Relay Station Port, located at 10281 LA 1 South, is the only UST site within or adjacent to the proposed project areas. This site is adjacent to Ramp D of Alternatives A and C.

3.15 Oil and Gas Wells

To determine the location of oil and gas wells in the study area, data was obtained from the LDNR's Strategic Online Natural Resources Information System (SONRIS) database system. There are 126 registered oil and gas wells within the study area. **Table 4** is a summary of these registered wells. **Figure 6** shows all oil and gas wells in the study area. It is possible that additional wells have been drilled in the study area but are not registered.

A search was performed for wells that were within 50 feet of the proposed project areas. There is one oil and gas well, Well Serial No. 238921, within 50 feet of Alternative A. Seven wells are within 50 feet of Alternative B1 (Well Serial Nos. 238806, 234370, 237358, 232084, 233484, 16371, and 227999). Six wells are within 50 feet of Alternative B2 (Well Serial Nos. 238806, 234370, 237358, 973230, 149778, and 227999). Two oil and gas wells, Well Serial Nos. 145358 and 238921, are within 50 feet of Alternative C. Additional information including location, status, and description can be found by looking up the well serial number on LDNR's SONRIS website.

4.0 HUMAN ENVIRONMENT

4.1 Land Use

Land use categories within and adjacent to the project area include agricultural land, commercial, industrial, residential, water, urban, and urban or build-up. These areas can be seen on **Figure 7**. This data was initially obtained from the USGS data set and was updated based on aerial photography and field observations.

4.2 Community Demographic

A majority of the study area and all of the proposed project areas fall within two census tracts in Caddo Parish, Tracts 239.03 and Tract 240. Demographic data for these two tracts relating to the project area's employment status, industry, transportation methods, etc. was obtained from the United States Census Bureau (USCB), 2006-2010 American Community Survey (ACS) 5-Year Estimates (see **Table 5**). The data was available on the USCB's American Fact Finder (AFF) website and is the most recent data currently available for the project area. Race and minority data was obtained from the 2010 Census dataset on the AFF website (see **Table 6**). Poverty status was also obtained from the 2006-2010 ACS dataset on the AFF website (see **Table 7**). According to the census tract data, the project areas do not contain minority and/or low-income populations.

4.3 Community Facilities

Community facilities and services in the study area were initially identified using Google Earth. Various churches, schools, and recreational areas were identified along Ellerbe Road. During the site visit, two community facilities were identified adjacent to the project area. St. Elizabeth Ann Seton Catholic Church, located at 522 East Flournoy Lucas Road, is adjacent to Alternative C. Caddo Parish District 5 Fire Department, located at 1675 Leonard Road, is adjacent to Alternatives B1 and B2.

5.0 PERMITS

Permits that may be required to implement the proposed project include:

- USACE Section 10/404 permit
- Clean Water Act Section 401 Water Quality Certification
- United States Coast Guard Bridge Permit (if bayous in project area are determined to be navigable)
- Louisiana Pollutant Discharge Elimination System Permits (storm water, sanitary wastewater discharges)
- Local Levee District Permits
- Local Building Permits

6.0 REFERENCES

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7.0 FIGURE REFERENCES

Figure 1 Project Location Map

Base map comprised of USGS 100K topographic maps, "Shreveport, LA" and "Shreveport, North" dated 1998.

Figure 2 Alternatives

Base map comprised of 2010 aerial photograph from USDA/Farm Service Agency (FSA)-Aerial Photography Field Office.

Figure 3 Hydric and Prime Farmland Soils

Base map comprised of 2010 aerial photograph from USDA/FSA-Aerial Photography Field Office. Soils data obtained from Natural Resources Conservation Service (NRCS) data-server.

Figure 4 Water Resources

Base map comprised of 2010 aerial photograph from USDA/FSA-Aerial Photography Field Office. Registered Water Wells obtained from the LDNR SONRIS water well data-server as of 06/08/2012.

Figure 5 Floodplains

Base map comprised of 2010 aerial photograph from USDA/FSA-Aerial Photography Field Office. The Q3 Flood Data obtained from the Flood Insurance Rate Maps (FIRMS) published by the Federal Emergency Management Agency (FEMA).

Figure 6 Environmental Liability

Base map comprised of 2010 aerial photograph from USDA/FSA-Aerial Photography Field Office. Oil and gas well data obtained from Louisiana Oil Spill Coordinator's Office (LOSCO) 2007 dataset. Potential hazardous sites obtained from EDR report.

Figure 7 Land Use

Base map comprised of 2010 aerial photograph from USDA/FSA-Aerial Photography Field Office. Land Use Land Cover Data obtained from the USGS data set.

TABLE 1
BUILD ALTERNATIVES COMPARISON MATRIX

**TABLE 1
 BUILD ALTERNATIVES COMPARISON MATRIX**

EVALUATION CRITERIA	BUILD ALTERNATIVE SCENARIOS			
	Alternative A	Alternative B1	Alternative B2	Alternative C
Mainline Length (miles)	3.3	6.6	5.9	3.8
Access to LA 523 from Proposed LA 3132	Yes	Yes	Yes	No ^(A)
Structures ^(B)				
Residential	2 ^(C)	9 ^(D)	2 ^(E)	2 ^{(C)(F)}
Commercial	0	2 ^(G)	2 ^(G)	0
Other Structures	0	0	1 ^(H)	0
Crossings				
Water Body Crossings	4	10	8	10
Railroad Crossings	3 ^(I)	0	0	3 ^(I)
Cultural Resources				
Potential to Impact Historic Structures	0	0	0	0
Potential to Impact Archaeological Sites	2	6	6	2
Potential Environmental Liability ^(K)				
Underground Storage Tanks	1 ^(K)	0	0	1 ^(K)
Oil and Gas Wells	1	7	6	2
Water Wells	3	7	7	3
Natural Resources				
100-year Flood Plain (acres)	0.0	13.9	9.3	0.0
Potential Hydric Soils (acres)	0.0	0.0	0.0	0.0
Potential Prime Farmlands (acres)	74.4	187.9	211.5	79.5

NOTES:

- ^(A) This alternative is proposed to overpass LA 523 without providing access to LA 523. The existing connection from LA 526 to LA 523 is proposed to be removed.
- ^(B) These structure were first identified using aerial photography. Field confirmation was made where ROW was accessible; however, due to the new alignment and limited public access, some structures may not be accounted for. These numbers are an estimate, and the actual number depends on which of the alternative routes would be selected and how much redevelopment occurs prior to Stage 1.
- ^(C) One residential structure is associated with required ROW for the new LA 1 frontage road. The other structure is north of the levee and is associated with control of access for the LA 1 northbound traffic entrance ramp.
- ^(D) Two residential structures are associated with the interchange at Leonard Road. One structure on Robinson Road may fall within the ROW; however, due to canopy coverage, the exact location in relation to the ROW is unknown. Six structures near Station No. 418+00 fall within the required ROW. One structure is a residence and the remaining five are unknown.
- ^(E) Two residential structures are associated with the interchange at Leonard Road.
- ^(F) A potential third structure may be impacted based on construction activity observed during field observation at The Oaks, adjacent to beginning of the mainline.
- ^(G) One commercial structure falls within the required ROW for the LA 3132 entrance ramp from the future I-69 eastbound traffic. The other commercial structure will be affected by control of access along Jeter Road.
- ^(H) A meter station is located within the required ROW south of Robinson Road. Naylor Airport was also identified in Google Earth off Robinson Road. Field confirmations confirmed the runway strip at the Petrohawk Facility approximately 1,000 feet east of the required ROW.
- ^(I) These railroad crossings are associated with the interchange at LA 1.
- ^(J) Data is based on sites identified in the EDR report and the LDNR SONRIS database within required ROW or within 50 feet. A Phase I Environmental Site Assessment will be conducted as part of the Stage 1 process.
- ^(K) The Relay Station Port, located at 10281 LA 1 South, is adjacent to the entrance ramp for LA 1 northbound traffic.

TABLE 2
REGISTERED WATER WELLS IN THE STUDY AREA

Louisiana Department of Transportation and Development
 LA 3132 Inner Loop Extension
 Stage 0 - Feasibility
 State Project No. H.009213.1

**TABLE 2
 REGISTERED WATER WELLS IN THE STUDY AREA**

WELL TYPE	QUANTITY
Active Domestic	248
Active Monitor	27
Active Irrigation	26
Plugged and Abandoned Domestic	24
Active Oil/Gas Well Rig Supply	21
Plugged and Abandoned Rig Supply	21
Plugged and Abandoned Oil/Gas Well Rig Supply	15
Plugged and Abandoned Borehole	13
Plugged and Abandoned Dewatering	12
Active Commercial Public Supply	6
Active Institution Public Supply	4
Active Unknown	4
Plugged and Abandoned Test Hole	4
Active Dewatering	2
Active Heat Pump Hole	2
Active Test Hole	2
Active Water Level Observation	2
Plugged and Abandoned Domestic	2
Plugged and Abandoned Monitor	2
Plugged and Abandoned Observation	2
Plugged and Abandoned Public supply	2
Active Abandoned Observation	1
Active Industrial	1
Plugged and Abandoned Unknown	1
Plugged and Abandoned Irrigation	1
TOTAL	445

TABLE 3
EDR REPORT SUMMARY

TABLE 3
 EDR REPORT SUMMARY

MAP ID	INSIDE STUDY AREA	NAME	CODE	NOTES
1	No	AUTO MALL CAR WASH	HIST LUST	1993 pipe leak.
1	No	AUTO MALL CAR WASH	UST	Three active 6,000 gallon gasoline tanks.
1	No	HEBERT TOWN & COUNTRY	FINDS	NPDES, RCRAInfo, PCS databases.
1	No	HEBERT TOWN & COUNTRY	RCRA-SQG	
1	No	SOUTH SHREVEPORT ANIMAL HOSPITAL	FINDS	RCRAInfo database.
1	No	SOUTH SHREVEPORT ANIMAL HOSPITAL	RCRA-CESQG	
2	No	CITY OF SHREVEPORT (BAGLEY) LANDFILL	CERC-NFRAP	
2	No	CITY OF SHREVEPORT (BAGLEY) LANDFILL	ODI	
3	Yes	LA 3132 / HWY 526	SPILLS	One closed spill event.
4	No	ORR ACURA (POSSIBLY OLD SITE)	FINDS	RCRAInfo database.
4	No	ORR ACURA (POSSIBLY OLD SITE)	RCRA-CESQG	
4	No	PORTERS CARPET CLEANERS	FINDS	RCRAInfo database.
4	No	PORTERS CARPET CLEANERS	RCRA-CESQG	
4	No	RICHARDSON'S PLUMBING & HEATING	UST	Removed one 4,000 gallon gasoline tank.
5	No	STANDARD WOOD PRESERVERS, INC	CORRACTS	
5	No	STANDARD WOOD PRESERVERS, INC	RCRA-LQG	
5	No	STANDARD WOOD PRESERVERS, INC	RCRA-TSDF	
5	No	STANDARD WOOD PRESERVERS, INC	SHWS	
5	No	STANDARD WOOD PRESERVERS, INC	UST	Closed one 1,000 gallon gasoline tank.
6	No	AUTUMN WOODS APARTMENTS	SPILLS	One closed spill event.
6	No	CIRCLE K #8190	UST	Three active 10,000 gallon gasoline tanks.
6	No	CIRCLE K #8191	LUST	LDEQ AI No. 75305.
7	No	MORRIS AND DICKSON COMPANY, LTD	FINDS	NPDES, PCS databases.
7	No	MORRIS AND DICKSON COMPANY, LTD	HIST LUST	EDR shows contamination found upon removal of tank. Last item noted was on July 29, 1996, LDEQ approved remedial action plan modification.
7	No	MORRIS AND DICKSON COMPANY, LTD	NPDES	LDEQ approved remediation action plan n July 1996 .
7	No	MORRIS AND DICKSON COMPANY, LTD	SPILLS	Two closed spill events.
7	No	MORRIS AND DICKSON COMPANY, LTD	UST	Removed one 6,000 gallon gasoline tank.
8	Yes	849 KING'S PLACE	SPILLS	One closed spill event.
8	Yes	MASTER MECHANICS	FINDS	RCRAInfo database.
8	Yes	MASTER MECHANICS	RCRA-CESQG	
8	Yes	SOUTHERN LANDSCAPED	FINDS	RCRAInfo database.
8	Yes	SOUTHERN LANDSCAPED	RCRA-NONGEN	
9	Yes	TWELVE OAKS SUBDIVISION	NPDES	LDEQ AI No. 154694. Water Program General Construction Permit.
10	Yes	PEL STATE OIL CO #29	UST	Removed three tanks: one 4,000 gallon diesel and two 8,000 gallon gasoline tanks.
10	Yes	TOWN SOUTH FOOD MART	UST	Removed four 6,000 gallon gasoline tanks.
11	Yes	RACEWAY (#6833 BERT KOONS)	UST	Three active tanks: two 12,000 gallon gasoline tanks and one 12,000 gallon diesel tank.
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	FINDS	NPDES, RCRAInfo, PCS, ICIS, RMP databases.
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	ICIS	
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	NPDES	LDEQ AI No. 8848. Water Program Individual Major Sanitary Permit, MSGP, and General Construction Permit.
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	RCRA-CESQG	
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	SPILLS	Ten spill events: eight closed, one reported to enforcement in 2005 for wastewater trickling over the levee, and one open from 2011 for sewage overflow.
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	SWF/LF	
12	Yes	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	UST	Removed one 2,000 gallon gasoline tank.
13	No	ELLERBE STORAGE, LLC	SHWS	
14	Yes	GLEN OAKS RETIREMENT VILLAGE	FINDS	RCRAInfo database.
14	Yes	GLEN OAKS RETIREMENT VILLAGE	NPDES	LDEQ AI No. 25721. Water Program General Construction Permit.
14	Yes	GLEN OAKS RETIREMENT VILLAGE	RCRA-CESQG	
15	Yes	WILLIS-KNGHTON HEALTH SYSTEM	NPDES	LDEQ AI No. 157852. Water Program General Construction Permit.
16	Yes	EAST RIDGE GROCERY	UST	Four tank records. Three are removed (two 1,000 gallon and one 2,000 gallon gasoline tanks) and one is still active (12,000 gallon gasoline tank).
17	Yes	TWELVE OAKS-ROGER L RADCLIFF CONSTRUCTION	FINDS	NPDES and PCS databases.
17	Yes	TWELVE OAKS-ROGER L RADCLIFF CONSTRUCTION	NPDES	LDEQ AI No. 156086. Water Program General Construction Permit.
18	Yes	AGNEW SCHOOL	UST	Removed one 4,000 gallon gasoline tank.
19	No	SEMON MACHINE CO INC	FINDS	RCRAInfo database.

TABLE 3
EDR REPORT SUMMARY

MAP ID	INSIDE STUDY AREA	NAME	CODE	NOTES
19	No	SEMON MACHINE CO INC	RCRA-CESQG	
20	Yes	440 RAILSBACK ROAD	SPILLS	One closed spill event.
21	Yes	PRATT INDUSTRIES	FINDS	NPDES and PCS databases.
22	Yes	PETROHAWK OPERATING	SPILLS	One closed spill event.
23	Yes	CADDO BOSSIER PORT 13 SWD	UIC	Active injection well.
24	Yes	RELAY STATION PORT	UST	Four active tanks: one 20,000 gallon gasoline, one 6,000 gallon diesel, one 8,000 gasoline, and one 26,000 gallon diesel.
25	Yes	PREST 13 SWD	UIC	Active injection well.
26	Yes	PREST 13 SWD	UIC	Active injection well.
27	Yes	1601 LEONARD RD	SPILLS	One closed spill event.
28	Yes	SMITH ETAL 14 SWD	UIC	Active injection well.
29	Yes	CADDO BOSSIER PORT COMMISSION	UST	One closed 560 gallon gasoline tank.
29	Yes	OMNI SPECIALTY PACKAGING INC	FINDS	AFS, TRIS, NPDES, RCRAInfo, PCS databases.
29	Yes	OMNI SPECIALTY PACKAGING INC	NPDES	LDEQ AI No. 83624. Water Program General MSGP and General Light Commercial.
29	Yes	OMNI SPECIALTY PACKAGING INC	RCRA-CESQG	
30	Yes	ADS LOGISTICS DISTRIBUTION-WIELAND-DAVCO	NPDES	LDEQ AI No. 168123. Water Program General Construction Permit.
31	No	HOLY ANGELS RESIDENTIAL FACILITY	UST	Removed two 500 gallon gasoline tanks.
32	Yes	MCH CARRIERS @ TERNIUM	NPDES	LDEQ AI 52927. Water Program MSGP.
32	Yes	MCH CARRIERS @ TERNIUM	SPILLS	Two closed 2009 spill events.
32	Yes	STEELSCAPE INC	FINDS	AFS, LA-TEMPO, TRIS, NPDES, RCRAInfo, and PCS databases.
32	Yes	TERNIUM USA INC	ERNS	Three reported releases for one event.
32	Yes	TERNIUM USA INC	RCRA-LQG	
32	Yes	TERNIUM USA INC	TRIS	
33	No	VICTOR J SCARBRO	UST	Removed three 500 gallon gasoline tanks.
34	No	SOUTHERN COMPOSITE YACHTS INC	FINDS	RCRAInfo database.
34	No	SOUTHERN COMPOSITE YACHTS INC	RCRA-SQG	
35	Yes	JETER SWD	UIC	Expired injection well permit.
36	Yes	10300 HARTS ISLAND RD	SPILLS	One closed spill event.
37	No	CCS MIDSTREAM SERVICES LLC	ERNS	Two reported releases.
37	No	CCS MIDSTREAM SERVICES LLC	NPDES	LDEQ AI No. 29835. Water Program Fiscal Migration.
37	No	CCS MIDSTREAM SERVICES LLC	RCRA-NONGEN	
37	No	CCS MIDSTREAM SERVICES LLC	SPILLS	Four spill events: two closed, one pending review from 2008, and one open from 2010.
37	No	CCS MIDSTREAM SERVICES LLC	SWF/LF	LDEQ AI No. 29835. Solid Waste Program Type I Permit.
38	No	ARCH CHEMICAL	HMIRS	April 2003 sodium hydroxide solution mist
38	No	ARCH CHEMICAL	SPILLS	Two closed spill events.
38	No	CHEMTRADE REFINERY	ASBESTOS	Four asbestos removal events associated with boiler piping. Most recent was in May 2010.
38	No	CHEMTRADE REFINERY	ERNS	Fourteen reported releases.
38	No	CHEMTRADE REFINERY	HMIRS	November 1994 about 50 gallons of sulfuric acid spilled on the ground.
38	No	CHEMTRADE REFINERY	NPDES	LDEQ AI 2340. Water Program Individual Minor Industrial Permit.
38	No	CHEMTRADE REFINERY	SPILLS	Seventeen spill events. All closed except two. One is listed as open from 2009 and one is listed as pending review however EDR states LDEQ-ER NFA required.
38	No	OLIN CORP SHREVEPORT ACID PLANT	CERC-NFRAP	
38	No	OLIN CORP SHREVEPORT ACID PLANT	CORRACTS	
38	No	OLIN CORP SHREVEPORT ACID PLANT	FINDS	AFS, NEI, LA-TEMPO, USEPA TRIS, NPDES, RCRAInfo, PCS, USEPA RMP databases.
38	No	OLIN CORP SHREVEPORT ACID PLANT	RCRA-LQG	
38	No	OLIN CORP SHREVEPORT ACID PLANT	TRIS	
38	No	PEAK SULFUR	SPILLS	One closed spill event.
39	No	LAKE SIDE ON LONGLAKE-SR HOMES	NPDES	LDEQ AI No. 169237. Water Program General Construction Permit.
39	No	LAKESIDE ON LONGLAKE - BILL BLACK	NPDES	LDEQ AI 175968. Water Program General Construction Permit.
40	Yes	JETER SWD	UIC	Active injection well.
41	Yes	EXXON MOBIL FINLEY STATION	ASBESTOS	Two asbestos removal events, both in 2009.
41	Yes	EXXON MOBIL FINLEY STATION	FINDS	AFS, LA-TEMPO, RCRAInfo databases.
41	Yes	EXXON MOBIL FINLEY STATION	RCRA-CESQG	
41	Yes	EXXON MOBIL FINLEY STATION	SPILLS	One event, still open from August 2011 (Facility Air Release).
41	Yes	EXXON MOBIL FINLEY STATION	SPILLS	One closed spill event.
42	Yes	NOR WES INC	FINDS	RCRAInfo database.
42	Yes	NOR WES INC	RCRA-NONGEN	
42	Yes	NOR WES INC	UST	Two closed tanks of unknown substance: one 12,000 gallons and one 1,000 gallons.

**TABLE 3
 EDR REPORT SUMMARY**

MAP ID	INSIDE STUDY AREA	NAME	CODE	NOTES
43	Yes	SORENSEN SWD	UIC	Active injection well.
44	Yes	12345 ELLERBE RD	SPILLS	One spill event referred to outside agency.
45	No	DICK GRyder (HILL COUNTRY FURNITURE REFINISHER)	SPILLS	One closed spill event.
46	No	PORT OF SHREVEPORT BOSSIER	ERNS	
46	No	RED RIVER TERMINALS LLC	NPDES	LDEQ AI No. 43014. Water Program Hydrostatic Test Permit and MSGP.
47	Yes	SHREVEPORT PACKAGING PARTNERS LLC	FINDS	AFS and LA-TEMPO
48	No	CADDO PAINT COMPANY	RCRA-SQG	
49	No	HI TEC EQUIP CO INC	FINDS	RCRAInfo database.
49	No	HI TEC EQUIP CO INC	RCRA-CESQG	
49	No	METROPOLITAN AUTO PAINTING & COLLISION	FINDS	RCRAInfo database.
49	No	METROPOLITAN AUTO PAINTING & COLLISION	RCRA-CESQG	
49	No	WINDHAM WOOD WORK & SUPPLY CO	UST	One closed 1,000 gallon gasoline tank.

TABLE 4
REGISTERED OIL AND GAS WELLS IN THE STUDY AREA

**TABLE 4
 REGISTERED OIL AND GAS WELLS IN THE STUDY AREA**

WELL TYPE	QUANTITY
Active Gas/Condensate Producer	82
Permit Expired with Unknown Product Code	14
Plugged and Abandoned Dry Hole	8
Plugged and Abandoned Producer	7
Active Injection Wells	6
Plugged and Abandoned Gas/Condensate Producer	6
Permitted with Unknown Product Code	1
Shut-in Productive-Future Utility Gas/Condensate	1
Shut-in Productive-Future Utility	1
TOTAL	126

TABLE 5
DEMOGRAPHIC DATA

**TABLE 5
 DEMOGRAPHIC DATA**

LOCATION	TRACT 239.03		TRACT 240	
	Estimate	Percent	Estimate	Percent
Household by Type				
Total households	1,286	-	3,178	-
Family households (families)	853	66.3%	2,544	80.1%
Married-couple family	680	52.9%	2,341	73.7%
Male householder, no wife present, family	17	1.3%	67	2.1%
Female householder, no husband present, family	156	12.1%	136	4.3%
Nonfamily households	433	33.7%	634	19.9%
Households with one or more people under 18 years	400	31.1%	1,233	38.8%
Households with one or more people 65 years and over	424	33.0%	699	22.0%
Average household size	2.56	-	2.69	-
Average family size	3.11	-	3.06	-
Educational Attainment				
Population 25 years and over	2,654	-	6,156	-
Percent high school graduate or higher	2,284	86.1%	5,969	97.0%
Percent bachelor's degree or higher	652	24.6%	3,668	59.6%
Employment Status				
Population 16 years and over	3,082	-	6,886	-
In labor force	1,625	52.7%	4,295	62.4%
Civilian labor force	1,613	52.3%	4,257	61.8%
Employed	1,555	50.5%	4,184	60.8%
Unemployed	58	1.9%	73	1.1%
Armed Forces	12	0.4%	38	0.6%
Not in labor force	1,457	47.3%	2,591	37.6%
Commuting to Work				
Workers 16 years and over	1,541	-	4,166	-
Car, truck, or van -- drove alone	1,386	89.9%	3,528	84.7%
Car, truck, or van -- carpooled	65	4.2%	479	11.5%
Public transportation (excluding taxicab)	9	0.6%	14	0.3%
Walked	0	0.0%	26	0.6%
Other means	0	0.0%	33	0.8%
Worked at home	81	5.3%	86	2.1%
Mean travel time to work (minutes)	18.1	-	19.8	-
Industry				
Civilian employed population 16 years and over	1,555	-	4,184	-
Agriculture, forestry, fishing and hunting, and mining	76	4.9%	222	5.3%
Construction	74	4.8%	119	2.8%
Manufacturing	115	7.4%	329	7.9%
Wholesale trade	101	6.5%	199	4.8%
Retail trade	234	15.0%	344	8.2%
Transportation and warehousing, and utilities	134	8.6%	149	3.6%
Information	45	2.9%	99	2.4%
Finance and insurance, and real estate and rental and leasing	58	3.7%	313	7.5%
Professional, scientific, management, administrative, waste mgmt	117	7.5%	302	7.2%
Educational services, and health care and social assistance	330	21.2%	1,473	35.2%
Arts, entertainment, recreation, accommodation, food services	176	11.3%	309	7.4%
Other services, except public administration	65	4.2%	220	5.3%
Public administration	30	1.9%	106	2.5%
Income and Benefits (in 2009 Inflation-Adjusted Dollars)				
Total households	1,286	-	3,178	-
Less than \$10,000	92	7.2%	113	3.6%
\$10,000 to \$14,999	58	4.5%	18	0.6%
\$15,000 to \$24,999	121	9.4%	91	2.9%
\$25,000 to \$34,999	114	8.9%	177	5.6%
\$35,000 to \$49,999	193	15.0%	215	6.8%
\$50,000 to \$74,999	248	19.3%	411	12.9%
\$75,000 to \$99,999	177	13.8%	361	11.4%
\$100,000 to \$149,999	105	8.2%	685	21.6%
\$150,000 to \$199,999	134	10.4%	422	13.3%
\$200,000 or more	44	3.4%	685	21.6%
Median household income (dollars)	53,386	-	114,327	-

NOTES:

1. Although the ACS produces population demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.
2. An estimated margin of error was given for each category and is available on the AFF website.

Source: USCB, 2006-2010 ACS 5-Year Estimates Table DP-02 and DP-03

TABLE 6
MINORITY DATA FROM 2010 CENSUS

**TABLE 6
 MINORITY DATA FROM 2010 CENSUS**

Census Tract	Subject	Total Population (all races)	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic ^(A)	Minority Calculation ^(B)
Tract 239.03	Number	4,014	3,030	684	19	72	6	7	71	125	984
	Percent	100.0%	75.5%	17.0%	0.5%	1.8%	0.1%	0.2%	1.8%	3.1%	24.5%
Tract 240	Number	10,420	9,148	568	35	295	6	11	110	247	1,272
	Percent	100.0%	87.8%	5.5%	0.3%	2.8%	0.1%	0.1%	1.1%	2.4%	12.2%

NOTES:

^(A) Since all Hispanics regardless of race are considered a minority, the population with Hispanic ethnicity is identified in this column, and all the other race categories do not include Hispanic ethnicity.

^(B) In accordance with FHWA Order 6640.23 and DOT Order 5610.2, a minority means a person who is Black, Asian American, American Indian/Alaskan Native, or Hispanic (regardless of race). To determine the number of minorities, the total population minus the "white alone" population was determined.

Source: USCB, 2010 Census Summary File 1 (SF 1) 100-Percent Data, Table P9 Hispanic or Latino, and not Hispanic or Latino by Race.

TABLE 7
POVERTY STATUS IN THE PAST 12 MONTHS

**TABLE 7
 POVERTY STATUS IN THE PAST 12 MONTHS**

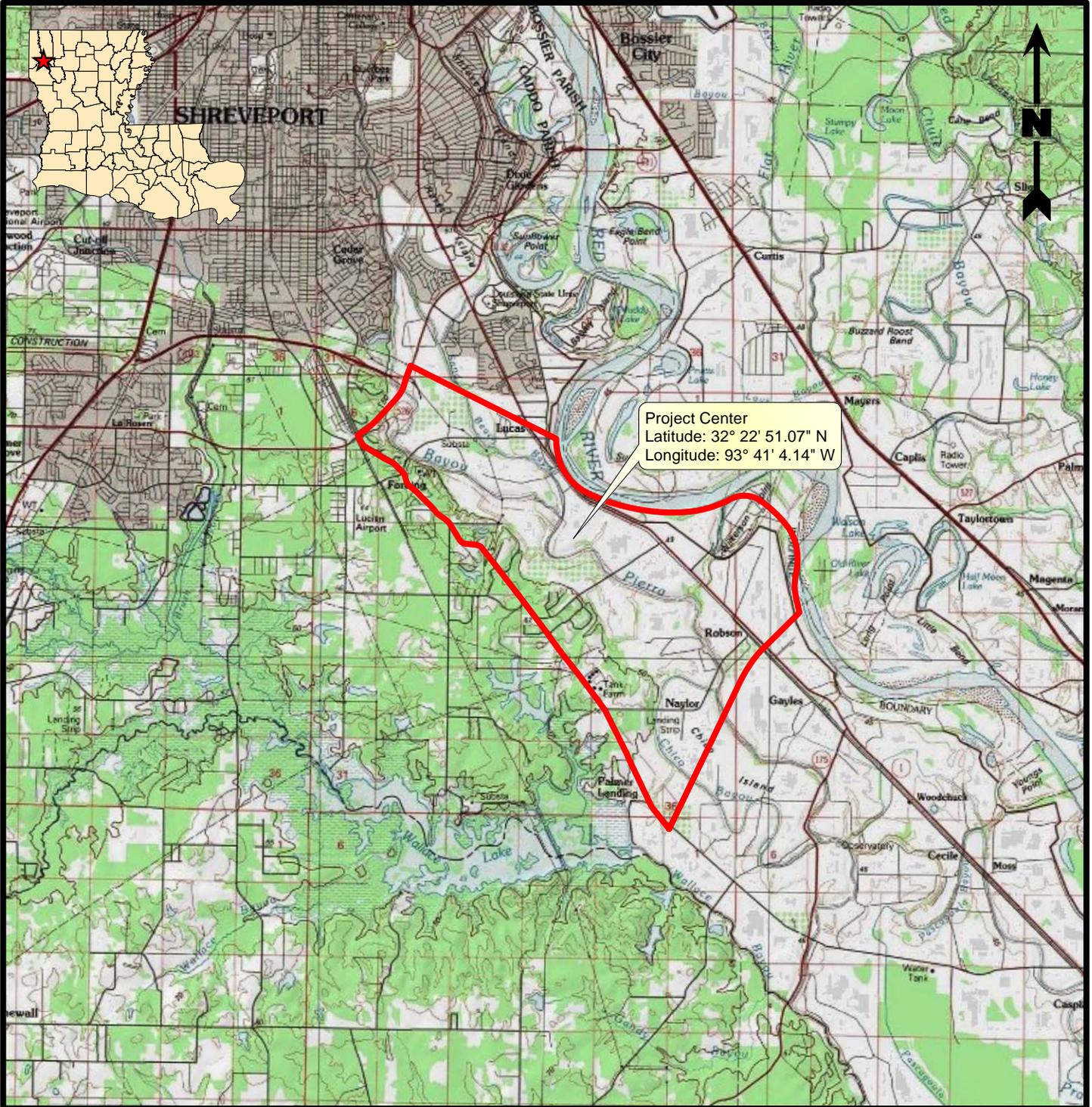
Census Tract	Subject	Population for whom Poverty Status is Determined
Tract 239.03	Total Population Status Determined	3,294
	Below Poverty Level	306
	Percent Below Poverty Level	9.3%
Tract 240	Total Population Status Determined	8,717
	Below Poverty Level	405
	Percent Below Poverty Level	4.6%

NOTES:

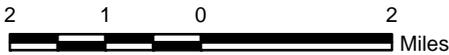
1. Although the ACS produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.
2. While the 2006-2010 ACS data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.
3. An estimated margin of error was given for each category and is available on the AFF website.

Source: USCB, 2006-2010 ACS 5-Year Estimates Table S1701: Poverty Status in the Past 12 Months

FIGURE 1
SITE LOCATION MAP



Project Center
 Latitude: 32° 22' 51.07" N
 Longitude: 93° 41' 4.14" W



Legend

 Study Area

Reference

Base map comprised of USGS 100K topographic maps, "Shreveport, LA" and "Shreveport, North" dated 1998.

Site Location Map

LA 3132 Inner Loop Extension Feasibility Study
 SPN H.009213.1
 Shreveport, Caddo Parish, Louisiana

**Louisiana Department
 of Transportation and Development**

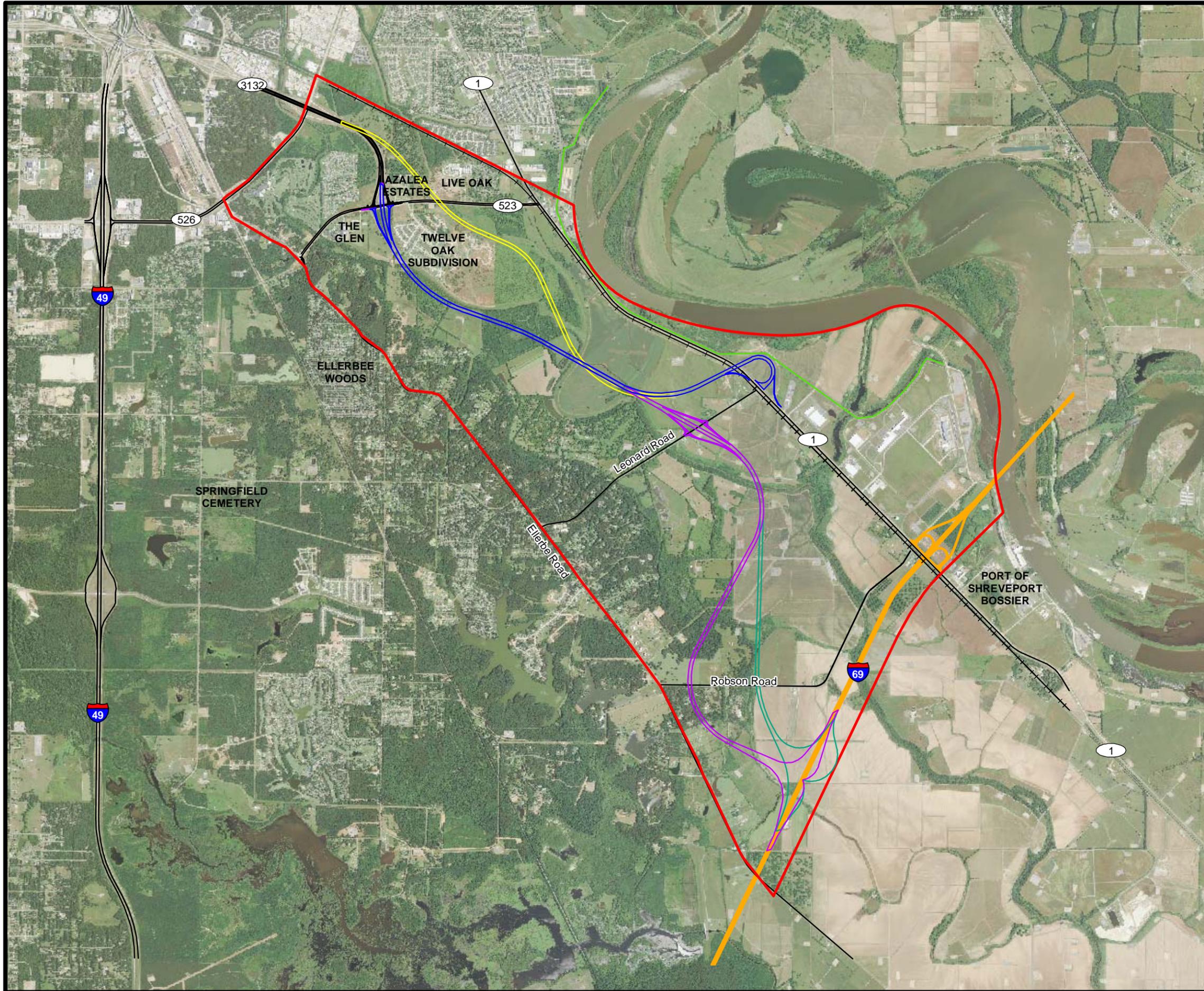


PROVIDENCE

Drawn By	LMM	06/26/12
Checked By	LMH	06/26/12
Approved By	MPH	06/26/12

Project Number	1
547-004	
Drawing Number	Figure
547-004-A001	

FIGURE 2
ALTERNATIVES

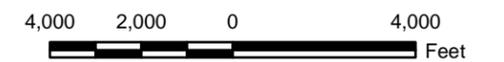


Legend

- Study Area
- Alternative A
- Alternative B1
- Alternative B2
- Alternative C
- Future I-69
- Roadways
- Railroad
- Levee

Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office.



Alternatives

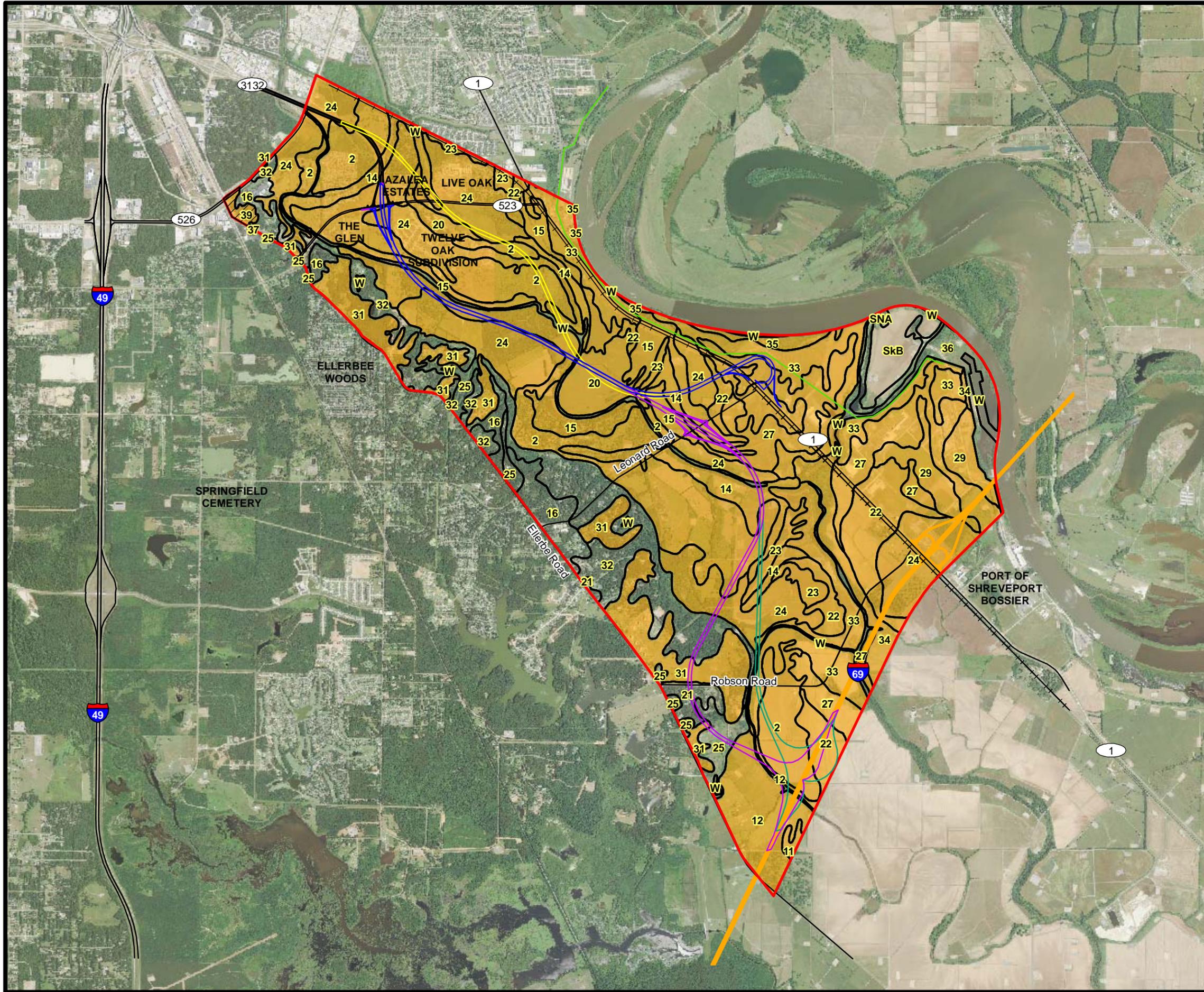
**LA 3132 Inner Loop Extension Feasibility Study
SPN H.009213.1**
Shreveport, Caddo Parish, Louisiana

**Louisiana Department
of Transportation and Development**



Drawn By	LMM	06/26/12
Checked By	LMH	06/26/12
Approved By	MPH	06/26/12
Project Number	547-004	
Drawing Number	547-004-B002	
Figure	2	

FIGURE 3
HYDRIC AND PRIME FARMLAND SOILS



Legend

- Study Area
 - Alternative A
 - Alternative B1
 - Alternative B2
 - Alternative C
 - Future I-69
 - Roadways
 - Railroad
 - Levee
 - Prime Farmlands
 - Hydric Soils
 - Soils Data:
- 2 - Armistead clay
 - 11 - Caspiana silty clay loam
 - 12 - Caspiana silt loam
 - 14 - Gallion silt loam
 - 15 - Gallion silty clay loam
 - 16 - Gore silt loam, 1 to 5 percent slopes
 - 20 - Moreland clay, gently undulating
 - 21 - Forbing silt loam, 1 to 3 percent slopes
 - 22 - Moreland silt loam
 - 23 - Moreland silty clay loam
 - 24 - Moreland clay
 - 25 - Forbing silt loam, 3 to 8 percent slopes
 - 27 - Norwood silt loam
 - 29 - Norwood silty clay loam
 - 31 - Ruston fine sandy loam, 1 to 5 percent slopes
 - 32 - Smithdale fine sandy loam, 12 to 20 percent slopes
 - 33 - Severn very fine sandy loam
 - 34 - Severn very fine sandy loam, gently undulating
 - 35 - Severn very fine sandy loam, occasionally flooded
 - 36 - Severn very fine sandy loam, frequently flooded
 - 37 - Metcalf-Messer complex
 - 39 - Wrightsville-Messer complex
 - Skb - Severn very fine sandy loam, 1 to 3 percent slopes, occasionally flooded
 - SNA - Severn very fine sandy loam, frequently flooded
 - W - Water



Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office. Soils data obtained from NRCS data-server.



Hydric and Prime Farmland Soils

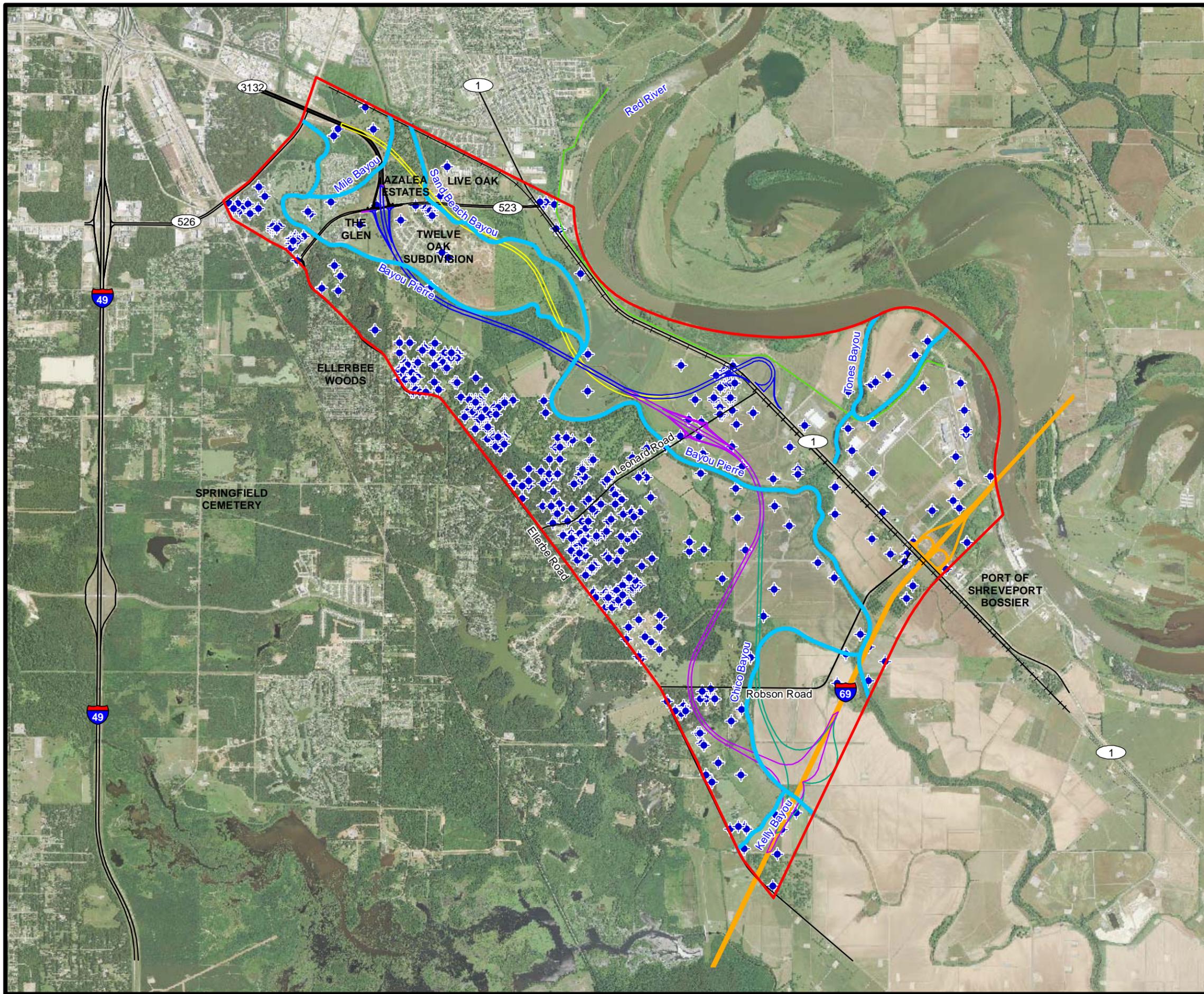
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SPN H.009213.1
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Project Number		3
547-004		
Drawing Number		Figure
547-004-B003		

FIGURE 4
WATER RESOURCES



Legend

- Study Area
- Alternative A
- Alternative B1
- Alternative B2
- Alternative C
- Future I-69
- Roadways
- Railroad
- Levee
- Waterway
- ◆ Water Well Location

Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office. Registered Water Wells obtained from the LDNR SONRIS water well server as of 06/27/12.



Water Resources

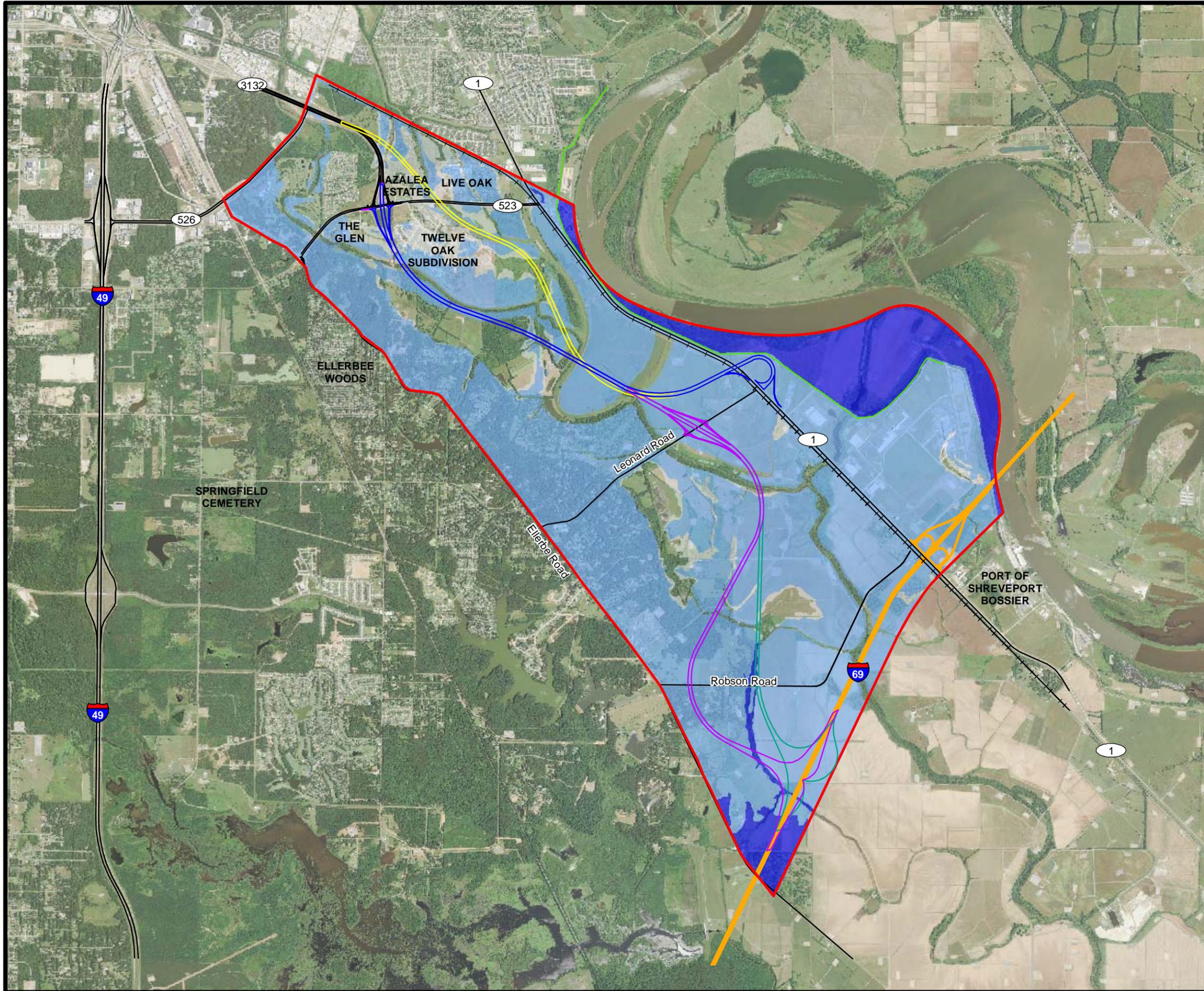
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	4	Figure

FIGURE 5
FLOODPLAINS

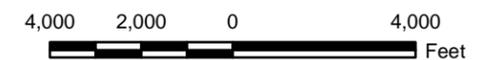


Legend

- Study Area
 - Alternative A
 - Alternative B1
 - Alternative B2
 - Alternative C
 - Future I-69
 - Roadways
 - Railroad
 - Levee
- Flood Zone Designation**
- Zone A = 100-Year Floodplain (No Elevation)
 - Zone X = Area of Minimal Flood Hazard
 - Zone X500 = Outside of the 500-Year Floodplain

Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office. The Q3 Flood Data obtained from the Flood Insurance Rate Maps (FIRMS) published by the FEMA.



Floodplains

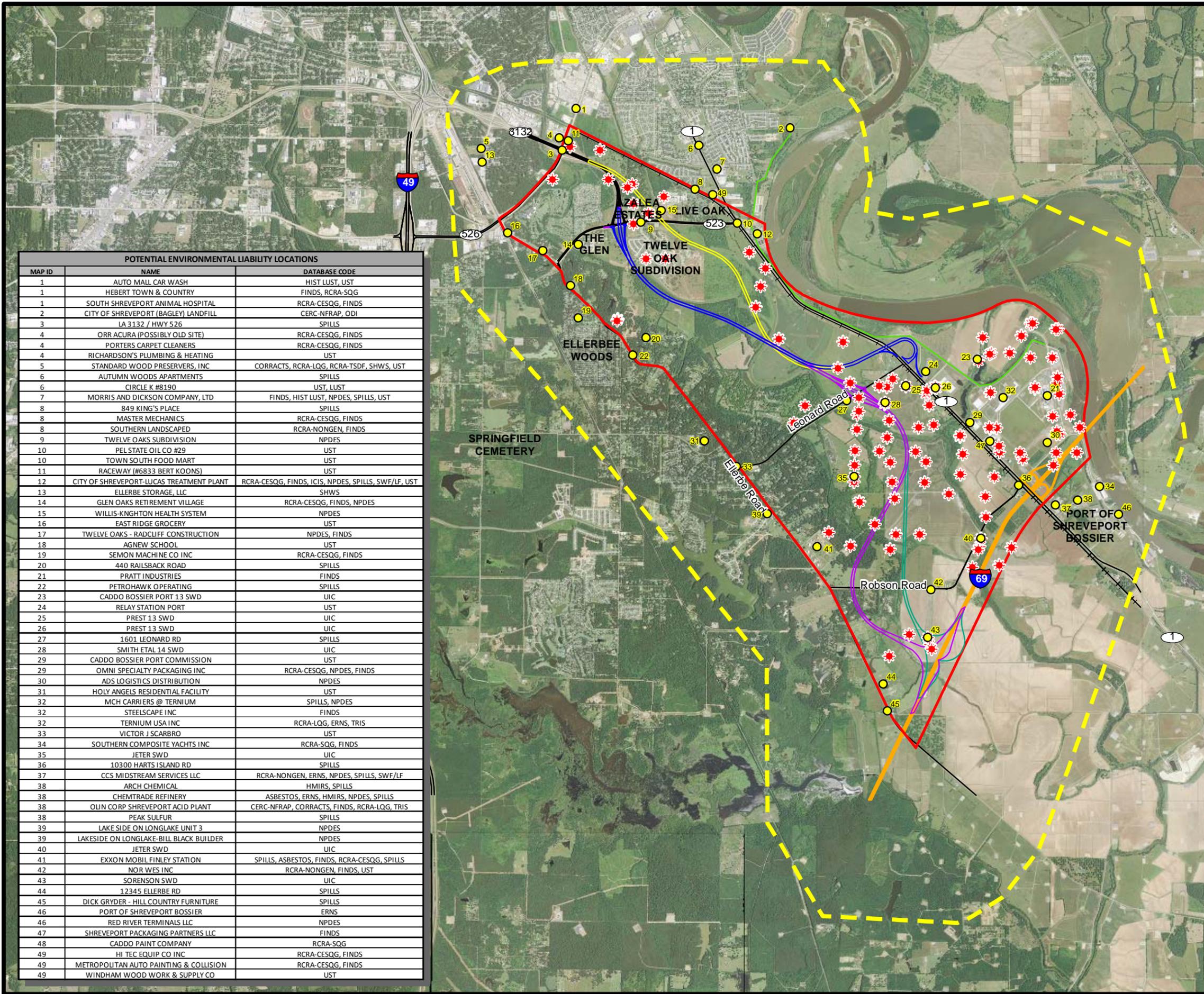
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	5	Figure

FIGURE 6
POTENTIAL HAZARDOUS SITES AND OIL & GAS WELLS



POTENTIAL ENVIRONMENTAL LIABILITY LOCATIONS		
MAP ID	NAME	DATABASE CODE
1	AUTO MALL CAR WASH	HIST LUST, UST
1	HEBERT TOWN & COUNTRY	FINDS, RCRA-SQG
1	SOUTH SHREVEPORT ANIMAL HOSPITAL	RCRA-CESQG, FINDS
2	CITY OF SHREVEPORT (BAGLEY) LANDFILL	CERC-NFRAP, ODI
3	LA 3132 / HWY 526	SPILLS
4	ORR ACURA (POSSIBLY OLD SITE)	RCRA-CESQG, FINDS
4	PORTERS CARPET CLEANERS	RCRA-CESQG, FINDS
4	RICHARDSON'S PLUMBING & HEATING	UST
5	STANDARD WOOD PRESERVERS, INC	CORRACTS, RCRA-LQG, RCRA-TSDF, SHWS, UST
6	AUTUMN WOODS APARTMENTS	SPILLS
6	CIRCLE K #8190	UST, LUST
7	MORRIS AND DICKSON COMPANY, LTD	FINDS, HIST LUST, NPDES, SPILLS, UST
8	849 KING'S PLACE	SPILLS
8	MASTER MECHANICS	RCRA-CESQG, FINDS
8	SOUTHERN LANDSCAPED	RCRA-NONGEN, FINDS
9	TWELVE OAKS SUBDIVISION	NPDES
10	PELSTATE OIL CO #29	UST
10	TOWN SOUTH FOOD MART	UST
11	RACEWAY (#6833 BERT KOONS)	UST
12	CITY OF SHREVEPORT-LUCAS TREATMENT PLANT	RCRA-CESQG, FINDS, ICIS, NPDES, SPILLS, SWF/LF, UST
13	ELLERBE STORAGE, LLC	SHWS
14	GLEN OAKS RETIREMENT VILLAGE	RCRA-CESQG, FINDS, NPDES
15	WILLIS-KIGHTON HEALTH SYSTEM	NPDES
16	EAST RIDGE GROCERY	UST
17	TWELVE OAKS - RADCLIFF CONSTRUCTION	NPDES, FINDS
18	AGNEW SCHOOL	UST
19	SEMON MACHINE CO INC	RCRA-CESQG, FINDS
20	440 RAILSBACK ROAD	SPILLS
21	PRAIT INDUSTRIES	FINDS
22	PETROHAWK OPERATING	SPILLS
23	CADDO BOSSIER PORT 13 SWD	UIC
24	RELAY STATION PORT	UST
25	PREST 13 SWD	UIC
26	PREST 13 SWD	UIC
27	1601 LEONARD RD	SPILLS
28	SMITH ETAL 14 SWD	UIC
29	CADDO BOSSIER PORT COMMISSION	UST
29	OMINI SPECIALTY PACKAGING INC	RCRA-CESQG, NPDES, FINDS
30	ADS LOGISTICS DISTRIBUTION	NPDES
31	HOLY ANGELS RESIDENTIAL FACILITY	UST
32	MCH CARRIERS @ TERNIUM	SPILLS, NPDES
32	STEELSCAPE INC	FINDS
32	TERNIUM USA INC	RCRA-LQG, ERNS, TRIS
33	VICTOR J SCARBRO	UST
34	SOUTHERN COMPOSITE YACHTS INC	RCRA-SQG, FINDS
35	JETER SWD	UIC
36	10300 HARTS ISLAND RD	SPILLS
37	CCS MIDSTREAM SERVICES LLC	RCRA-NONGEN, ERNS, NPDES, SPILLS, SWF/LF
38	ARCH CHEMICAL	HMIRS, SPILLS
38	CHEMTRADE REFINERY	ASBESTOS, ERNS, HMIRS, NPDES, SPILLS
38	OLIN CORP SHREVEPORT ACID PLANT	CERC-NFRAP, CORRACTS, FINDS, RCRA-LQG, TRIS
38	PEAK SULFUR	SPILLS
39	LAKE SIDE ON LONGLAKE UNIT 3	NPDES
39	LAKESIDE ON LONGLAKE-BILL BLACK BUILDER	NPDES
40	JETER SWD	UIC
41	EXXON MOBIL FINLEY STATION	SPILLS, ASBESTOS, FINDS, RCRA-CESQG, SPILLS
42	NOR WES INC	RCRA-NONGEN, FINDS, UST
43	SORENSEN SWD	UIC
44	12345 ELLERBE RD	SPILLS
45	DICK GRYDER - HILL COUNTRY FURNITURE	SPILLS
46	PORT OF SHREVEPORT BOSSIER	ERNS
46	RED RIVER TERMINALS LLC	NPDES
47	SHREVEPORT PACKAGING PARTNERS LLC	FINDS
48	CADDO PAINT COMPANY	RCRA-SQG
49	HI TEC EQUIP CO INC	RCRA-CESQG, FINDS
49	METROPOLITAN AUTO PAINTING & COLLISION	RCRA-CESQG, FINDS
49	WINDHAM WOOD WORK & SUPPLY CO	UST

Legend

- Study Area
- Alternative A
- Alternative B1
- Alternative B2
- Alternative C
- Future I-69
- Roadways
- Railroad
- Levee
- EDR Search Area
- ★ Oil and Gas Well Location
- Potential Environmental Liability Location

Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office. Oil and gas well data obtained from the LDNR SONRIS water well server as of 06/27/12. Potential hazardous sites obtained from EDR report.

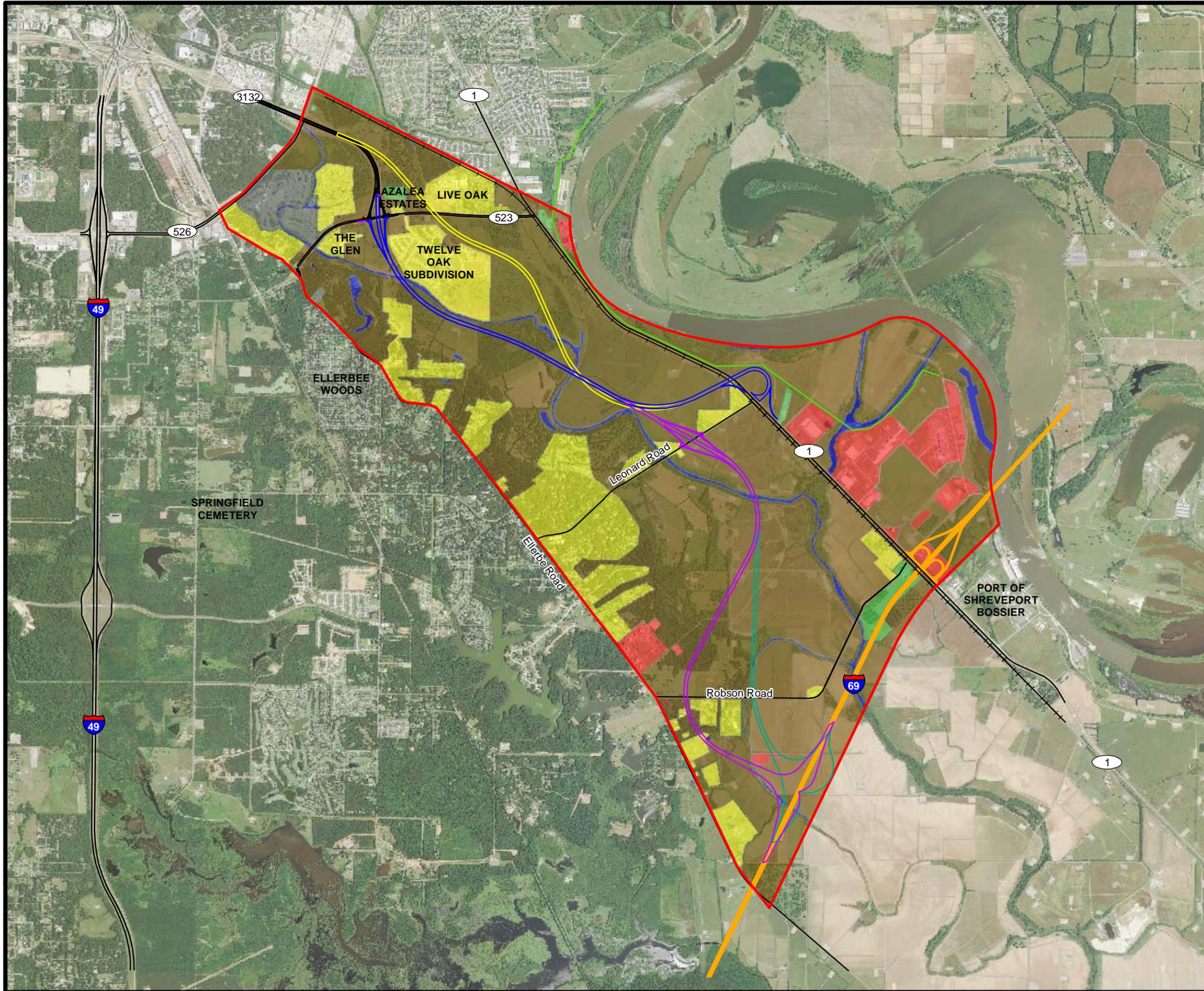


**Potential Hazardous Sites
and Oil & Gas Wells**
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		6
		Figure

FIGURE 7
LAND USE

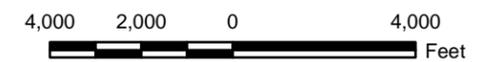


Legend

- Study Area
 - Alternative A
 - Alternative B1
 - Alternative B2
 - Alternative C
 - Future I-69
 - Roadways
 - Railroad
 - Levee
- Land Use**
- Agricultural Land
 - Commercial
 - Industrial
 - Residential
 - Urban or Built-Up
 - Water

Reference

Base map comprised of 2010 aerial photograph from USDA/FSA - Aerial Photography Field Office. Land Use Land Cover Data obtained from the USGS data set and field confirmation.



Land Use Map

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Drawing Number		
547-004-B007		

APPENDIX A
EDR REPORT (CD)