

## TRANSPORTATION PROJECTS

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**Waterville Road, Jacksonville, Florida, City of Jacksonville.** ESI conducted wetland and endangered and threatened species assessment, wetland delineation, permitting and mitigation plan development for the construction of Waterville Road.

**Collins Road Improvements, Duval County, Florida, City of Jacksonville.** ESI provided services including wetland assessment, permitting and mitigation planning for the widening of Collins Road from Blanding Boulevard to Shindler Drive.

**U.S. Highway 301/Baldwin Bypass, Duval County, Florida.** ESI was part of the team conducting the Project Development and Environment study for an alternate corridor for U.S. Highway 301 to bypass the Town of Baldwin. Tasks included wetland functional assessments and threatened and endangered species surveys of the project area as part of the initial study.

**J. Turner Butler Boulevard Improvements, Jacksonville, Florida, Jacksonville Transportation Authority.** ESI conducted wetland assessment, wetland delineation, permitting and mitigation plan development for the widening of JTB from I-95 to Gate Parkway.

**Soutel Road Improvements, Jacksonville, Florida, Jacksonville Transportation Authority.** ESI conducted wetland assessment, wetland delineation, permitting and mitigation plan development for the widening of an existing road.

**Interstate 95/Old St. Augustine Road Interchange, Duval County.** ESI conducted a FDOT Project Development and Environment assessment of wetlands, water quality, wildlife, endangered and threatened species, archaeological/cultural resources, and environmental contamination for a new interchange in Duval County. The project included the flagging of wetlands in the project area and an evaluation of wetland impacts using WRAP (Wetland Rapid Assessment Procedure). Following approval of the NEPA documentation, ESI prepared environmental portions of permitting required for the St. Johns River Water Management District and the U.S. Army Corps of Engineers and developed a wetland mitigation plan for the project. ESI has reviewed the construction of the 13+-acre wetland creation area and has installed wetland vegetation; ongoing maintenance and monitoring of the area will occur through 2009.

**Interstate 10/ U.S. Highway 301 Interchange Improvements, Duval County, Florida.** ESI participated on the team conducting the FDOT Project Development and Environment study for improvements to the Interstate 10/U.S. Highway 301 interchange. Tasks included conducting the wetland functional assessment, contamination screening assessment, threatened and endangered species surveys, and an archaeological/cultural resources assessment as part of the study.

**Atlantic Boulevard/Mayport Road Interchange Realignment and Roadway Widening, Duval County.** ESI delineated wetlands and conducted regulatory agency coordination for the interchange improvements at Atlantic Boulevard and Mayport Road. Additionally ESI identified potential sites for construction of salt marsh habitat to mitigate for the unavoidable wetland impacts.

**Pulaski Road Widening, Duval County.** ESI performed a preliminary wetland assessment on Pulaski Road from Eastport Road to north of State Road 9A, including evaluation of potential stormwater pond locations.

**Argyle Forest Boulevard, Duval County.** ESI has delineated wetlands, conducted protected species surveys, and conducted a contamination assessment on Argyle Forest Boulevard from Blanding Boulevard to Westport Road. Additional follow-on studies included assessments related to flood plain encroachment. Results of these studies are being used in determining the optimum alignment of proposed new lanes of the roadway and in describing impacts of the project at public meetings.

**State Road 10 Bridge Replacements, Duval and Nassau counties.** ESI prepared FDOT Project Development and Environment wetland and protected species assessments for each bridge and in the next phase of the project delineated wetlands and assisted in preparing environmental permits for the bridges.

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**Proposed Baymeadows/Southside Overpass, Duval County.** ESI performed Level II Contamination Assessment of recognized environmental conditions within the proposed right-of-way.

**State Road 23/State Road 21, St. Johns and Clay Counties.** ESI completed a Contamination Screening Evaluation (CSE) for a proposed, 4-lane, limited access highway from the SR 23 (Brannan Field Chaffee Rd.) / SR 21 (Blanding Blvd.) interchange in Clay County, to the I-95/SR 9B interchange in St. Johns County.

**U.S. Highway 17/State Road 15, Putnam County.** ESI conducted the wetland assessment portion of the FDOT Project Development and Environment study to widen U.S. Highway 17 from two lanes to four lanes from the Volusia County line to Satsuma.

**State Road 313 (formerly State Road 312 Extension)** – Conducted wetland functional assessment and threatened and endangered species survey of the corridor from State Road 207 to State Road 16 (9.3 miles) as part of a study to add lanes to this portion of the roadway.

**Interstate 95 Widening.** ESI participation in environmental analyses for the multilaning and reconstruction of Interstate 95 has included environmental permitting as well as FDOT Project Development and Environment level wetland functional assessment, water quality studies, contamination screening assessments, and endangered and threatened species surveys in Duval and Nassau counties, Florida. The company has worked on three segments of the roadway:

**Nassau County** throughout its length in the county. A small area of salt marsh impacted by the project was designated Essential Fish Habitat by National Marine Fisheries Service, and consultation and mitigation were required.

**Northern Duval County** from south of the Lem Turner Road interchange north to north of State Road 9A (Interstate 295), including the Interstate 295 interchange and the Trout River Bridge. Additionally, wetlands north of Interstate 295 to the Nassau County line were reviewed during the permitting process to confirm the accuracy of delineation by another consultant.

**Southern Duval County** from the Interstate 295 interchange north to south of J. Turner Butler Boulevard and a second segment from Greenland Road to the St. Johns County line.

**State Road 500 Multilaning, Brevard and Osceola Counties.** ESI conducted FDOT Project Development and Environment assessments for wetlands and protected species on the 33-mile section of State Road 500 (U.S. 192) from Melbourne to St. Cloud (Brevard and Osceola counties) in central Florida. ESI additionally delineated wetlands, conducted protected species surveys, and assisted with agency coordination efforts for the 16-mile length of State Road 500 through Brevard County. The project included bridge construction through the environmentally sensitive St. Johns River Marsh and other wetlands. The protected species work included a helicopter survey, primarily for breeding Audubon's crested caracara and wood storks. ESI also has prepared application materials for environmental permits for the roadway, and we negotiated with Florida Fish and Wildlife Conservation Commission to develop mitigation for sandhill crane nesting habitat.

**U.S. Highway 301/Starke Corridor Selection.** ESI conducted FDOT Project Development and Environment assessments for wetlands, endangered species, contamination, and archaeological/cultural resources for the selection of alternative corridors (including urban and rural) for U.S. Highway 301 through Starke/Bradford County. The proposed rural bypass alternative comprised approximately nine miles of roadway on a new alignment. ESI participated in preparation of an Environmental Assessment document for the project.

**U.S. Highway 1 Mill and Resurfacing, Bayard to St. Johns County Line, Duval County.** ESI delineated wetlands and prepared environmental permitting packages for the U.S. 1 resurfacing project, including the reconditioning of culverts and ditches and reconfiguration of shoulders.

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**U.S. Highway 301/Baldwin to the Nassau County Line.** ESI delineated wetlands and prepared environmental permitting packages for multilaning U.S. 301 and upgrading stormwater management in the corridor.

**State Road 373/371 (Orange Avenue).** ESI conducted FDOT Project Development and Environment assessment of wetlands, water quality, endangered and threatened species, and environmental contamination in relation to the proposed multilaning of Orange Avenue through Tallahassee in Leon County. One portion of the corridor passed through sensitive wetland areas, whereas the extreme western end of the project occurred in xeric upland habitat that was occupied by a state-threatened plant.

**State Road 20 Bridges, Putnam County.** ESI delineated wetlands and prepared permit applications for replacement of State Road 20 bridges over Sweetwater Creek and Rice Creek near Palatka, FL.

**State Road 100 Bridges, Flagler County.** ESI delineated wetlands and prepared permitting materials for replacement of four crossings of State Road 100 near Bunnell, FL.

**U.S. Highway 90/CSX Railroad Crossing.** ESI delineated wetlands associated with the CSX Railroad crossing sites at U.S. 90 in Milton, FL, as well as at possible pond sites for the project.

### **FDOT District 5 Open-Ended Services Contract.**

**State Road 500 Tavares.** ESI performed wetland flagging associated with 1.2-mile road corridor and stormwater management ponds as well as assessment of mitigation requirements.

**State Road 200 Marion and Citrus counties.** ESI identified potential treatment pond locations associated with a 28.5-mile widening project.

**State Road 44 Roadway Improvement.** ESI delineated wetland limits along a 5.25-mile corridor of State Road 44 in Volusia County; included delineation of proposed stormwater pond locations.

**U.S. 1 Improvements, Brevard County.** Conducted Phase I cultural resource survey.

**State Road 326, Marion County.** ESI conducted a FDOT Project Development and Environment study, including assessment of wetlands, endangered and threatened species, archaeological/cultural resources, and environmental contamination for roadway realignment.

**State Road 71, Jackson County.** ESI prepared a mitigation planting plan for stormwater ponds.

**State Road 89, Santa Rosa County.** ESI delineated wetlands, coordinated with the regulatory agencies, and assisted in preparing permitting for the highway widening.

**State Road A1A South Retention Ponds.** ESI conducted a Phase I archaeological/cultural resource survey of pond sites.

**State Road 100 Multilane Reconstruction, Flagler County.** ESI conducted an environmental assessment investigation and prepared Categorical Exclusion documents for the multilaning of State Road 100 from Bunnell to Flagler Beach, a length of approximately 8 miles. Included analyses for wetlands, Outstanding Florida Waters, floodplains and floodways, soils, floral and faunal communities, prime and unique farmland, endangered and threatened species, and cultural features and community services (Section 4(f) land, historic sites or districts, and recreation areas).

**FDOT District 5 Archaeological Open-Ended Services Contract.** Under the archaeological services contract, 19 surveys have been conducted, including studies on the following roadways:

**State Road 435** ( 4 miles)

**State Road 500** (88 miles)

**State Road 40 and C.R. 42.** Evaluated project alternatives.

**State Road 40** (16 miles and 30 potential stormwater management pond locations)

**Conway Road** (6 miles)

**Maitland Boulevard** (2.4 miles)

**State Road 434** (3.8 miles and 6 potential stormwater management pond locations)

**Interstate 4 in Lake Mary** (6 miles and potential stormwater management pond locations)

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**FDOT District 2 Mitigation Monitoring.** Open-ended contract to assist in inspection and verification of compliance with performance criteria of maintenance and operation of surface and storm water management and conveyance systems. Projects included three Duval County sites:

**Interstate 295 and Interstate 10 Interchange**  
**Chaffee Road Bridge**  
**San Carlos Creek/Hecksher Drive**

**Monroe County Historical/Archaeological Enhancement.** Evaluation of historical and archaeological resources of the northern portion of The Overseas Highway (U.S.1) in the Florida Keys, including interpretation of the resources for public display in the area and design of a display kiosk. ESI was the prime consultant for this FDOT District 6 contract.

**State Road 9A Mitigation.** Permitting and mitigation planning services for the eastern bypass around Jacksonville, Duval County.

**Palatka River/State Road 19 Bridge Replacement.** ESI conducted an environmental assessment of the corridor for a bridge replacement project in Lake County. Specifically, the study included an assessment of the wetlands, wildlife, protected species, and water quality concerns for the project. In addition, the wetlands were delineated and approved by the agencies and the environmental permits were obtained for the project.

**State Road 200 Widening.** ESI conducted a wildlife and habitat survey and impact evaluation of the State Road 200 widening project. Included vegetative community mapping and descriptions of the communities, wildlife, and protected species along with an impact analysis of the proposed project on the wildlife and vegetative communities.

**Gate Parkway Extension West, Jacksonville Florida.** ESI conducted wetland and listed species assessments, wetland delineation, permitting, mitigation plan development, and gopher tortoise permitting for the extension of Gate Parkway from Southside Boulevard to Belfort Road.

**I-95/SR207 Ramp Improvements, St. Johns County, Florida.** ESI conducted an environmental assessment of the corridor for ramp improvements associated with the interchange of SR 207 and I-95 in St. Johns County, Florida. In addition, ESI conducted wetland delineation and multi-agency permitting for the project.

**CR 208 Culvert Replacement, St. Johns County, Florida.** ESI conducted a Phase I environmental assessment of the corridor for culvert replacement associated with CR 208 in St. Johns County, Florida. The Phase I study included site reconnaissance, review of historical resource documents, property owner/occupant and regulatory agency interviews, review of regulatory agency records, and completion of a written report signed by an AAI-defined Environmental Professional (EP) for the project. In addition, ESI conducted wetland delineation, multi-agency permitting, and mitigation plan development for the project.

**CR 220/Baxley Road Intersection Improvement, Clay County, Florida.** ESI conducted an environmental assessment of the corridor for road improvement associated with the intersection of CR 220 and Baxley Road in Clay County, Florida. The study included delineation and analysis of wetlands and a Phase I environmental assessment for the project.

**McClimon's Pond Dam Removal, Spartanburg, South Carolina.** ESI was selected by SCDOT for the dam removal of McClimon's Pond located in Spartanburg, SC. Following dam removal ESI designed and restored Vine Creek, implementing natural stream design. Vine Creek is a first order, spring fed stream. The SCDOT funded the dam removal and stream design and construction. The project consisted of removing a dam for draining the 1.5-acre McClimon's Pond and the restoration of 540 linear feet of Vine Creek. The project also entails the restoration of approximately 4 acres of floodplain through the eradication of invasive species and replanting of native riparian floodplain species.

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**Monroe Connector-Bypass (R-3329 & R-2559), Union County, North Carolina.** ESI was recently tasked with completing a comprehensive natural resource assessment for the 22-mile Monroe Bypass project located in Union County, North Carolina for the North Carolina Turnpike Authority (NCTA). The study corridor ranged from 1,000 to 2,000 feet wide with expanded interchange areas for a total of approximately 7,800 acres. ESI completed the wetland delineation, GPS data capture, and natural resource studies in 5 weeks by utilizing staff from all six North Carolina offices.

**NC 68 Connector-US 220 (R-2413), Guilford County, North Carolina.** ESI was tasked with updating the jurisdictional wetland delineation for this 12-mile study corridor consisting of new location and widening located in Guilford County, North Carolina. Specifically, ESI conducted a formal delineation, GPS data capture, agency coordination, and a protected species habitat assessment.

**Bridge Replacement Group 55, Eastern North Carolina.** ESI was tasked with conducting comprehensive natural resource investigations for eleven (11) bridge replacement project located throughout eastern North Carolina. This project included wetland delineation, GPS data capture, agency review, protected species surveys, and preparing Natural Resource Technical Reports for each bridge replacement.

**I-485 Widening, Mecklenburg County, North Carolina.** ESI was responsible for the completion of the Delineation, Endangered Species Surveys, and Natural Resource Technical Report for this project.

**I-95/SC 327 Interchange, Florence County, South Carolina.** ESI was responsible for all aspects of environmental permitting including: wetland and stream delineation, federal and state threatened and endangered species surveys, limited liabilities assessment, limited noise assessment, preparation and submittal of all pertinent environmental permits, and agency coordination.

**US 70 Havelock Bypass, Havelock, North Carolina.** Natural resource assessment conducted for NCDOT. Three alternative 1000-foot wide study corridors, each approximately 10 miles in length, were investigated. Field work for natural resource assessment included: wetland and stream delineation; GPS data collection for jurisdictional features; agency concurrence meetings; biotic community mapping; federally protected species habitat evaluations and surveys; U.S. Forest Service Proposed, Endangered, Threatened, and Sensitive Species (PETS) surveys and analyses; and preparation of a Natural Resource Technical Report to NCDOT specifications.

**US 221 Improvements, Ashe and Watauga Counties, North Carolina.** ESI completed jurisdictional evaluation of the 16-mile long study corridor of US 221 to determine if wetlands or surface waters (*i.e.* streams, ponds, *etc.*) existed within the proposed study corridor, which are subject to permit review by the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act and the N.C. Division of Water Quality (DWQ) under Section 401 of the Act. Wetlands and surface waters were delineated following the parameters outlined in the *1987 COE Wetlands Delineation Manual*. ESI also completed ACOE wetland data forms for individual wetland systems delineated within the study corridor and completed a Natural Resource Technical Report for NCDOT.

**US 17 Windsor Bypass, Archaeological Data Recovery, Windsor, Bertie County, North Carolina.** Phase III archaeological data recovery of two archaeological sites along US 17 Windsor Bypass in Bertie County for NCDOT. Investigations included excavation of an early-20<sup>th</sup> century tenant house and large-scale excavation of a Late Archaic to Early Woodland prehistoric site along the Cashie River.

**US 64 Asheboro Bypass, Asheboro, North Carolina.** Phase I archaeological survey and Phase II testing of an approximately 14-mile long preferred corridor, which encompassed 1,200 acres. The survey included full coverage shovel testing to aid in the testing of the NCDOT Archaeological Predictive Modeling Project. Eighty-two archaeological sites were recorded during the project, three of which were recommended eligible for listing in the *National Register of Historic Places*.

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**US 17 Washington Bypass, Washington, North Carolina.** Terrestrial and underwater archaeological surveys for the US 17 Washington Bypass in Beaufort County, North Carolina, for NCDOT. The investigation covered the 1,559-acre preferred corridor, including approximately 40 acres of underwater survey at the Tar River crossing. A total of 64 archaeological sites were recorded, one of which was determined eligible for the *National Register of Historic Places*.

**NCDOT Bridge Group, Avery, McDowell, and Wilkes Counties, North Carolina.** Four terrestrial Phase I archaeological investigations for NCDOT bridge replacement projects.