LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ARCADIS

CONTRACT NO. 4400033077 / STATE PROJECT NO. H.015641.5 / FEDERAL AID PROJECT NO. H015641

September 23, 2025

US 165: SUPERSTREET, DELOACH ST – WHITE ST
ROUTE: US 165, OUACHITA PARISH

Tuesday, September 23, 2025

Louisiana Department of Transportation and Development
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802-4438

Arcadis U.S., Inc.
6100 Corporate Blvd, Suite 325
Baton Rouge, LA 70808
Phone: 225 292 1004
Fax: 225 218 9677
www.arcadis.com

Subject: **CONTRACT NO. 4400033077,**
US 165: SUPERSTREET, DELOACH ST – WHITE ST, OUACHITA PARISH

Dear Mr. Nur and Selection Committee,

On behalf of Arcadis, we are pleased to present our proposal for the US 165 Superstreet project. ***Having authored the Stage 0 Study*** for this corridor, our team offers a unique and comprehensive understanding of its challenges, opportunities, and foundational planning context. This prior engagement allows us to hit the ground running, ensuring an efficient and seamless transition into the detailed design phase.

We understand the critical objectives of improving safety, operational efficiency, and multi-modal access on US 165. Our approach is specifically crafted to build directly upon the ***Stage 0 Study*** foundation, leveraging the data provided and our intrinsic project knowledge to advance the design effectively while adhering to LADOTD's standards and schedule.

Our proposal is strengthened by this continuity and outlines a clear path forward:

- **Leveraging Foundational Knowledge**: Our firsthand experience from the ***Stage 0 Study*** provides invaluable insights into the corridor's traffic patterns, geometric constraints, and stakeholder considerations, allowing us to avoid revisiting settled issues and focus on innovative design solutions.
- **A disciplined, transparent process**: We will maintain a structured, multi-phase design schedule with clear submittals and detailed monthly progress packages. This ensures transparency and provides LADOTD with consistent opportunities for guidance, including updated cost estimates at every stage.
- **End-to-End Commitment**: Our services extend through bidding support, where we will assist in reviewing contractor bids, to ensure a smooth handoff to construction.

Our team, which includes our trusted partners Marrero, Couvillon & Associates, LLC. (MCA) and APS Engineering and Testing, LLC (APS), brings proven expertise in LADOTD projects, complex traffic design, and modern illumination systems. We are not just consultants; we are invested partners committed to delivering a safe, cost-effective, and constructible project that serves the citizens of Ouachita Parish and the traveling public.

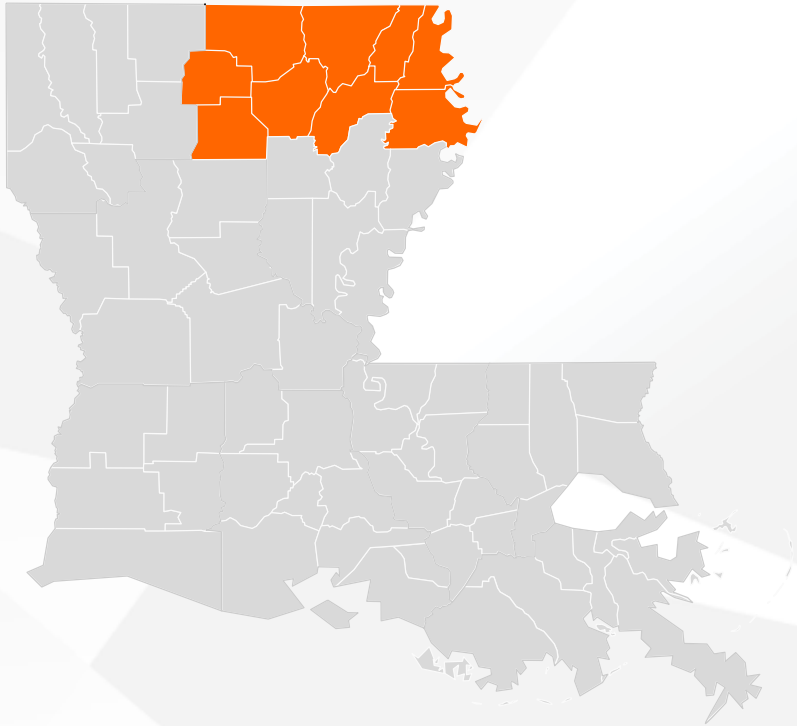
Thank you for considering our proposal for this important project. We are confident that our prior involvement and detailed approach position us to deliver exceptional value and we look forward to discussing this further.

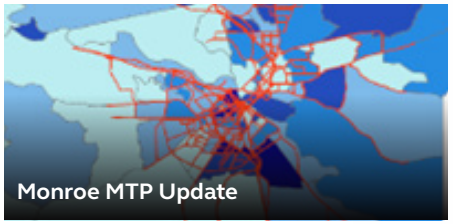
Sincerely,

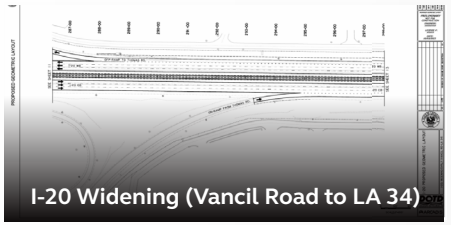
Arcadis

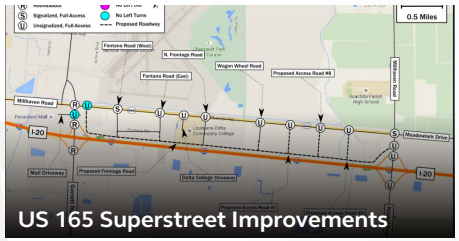
Akhil Chauhan PE, PTOE, PTP, PMP
Principal Transportation Engineer

Jose L. Rodriguez, PE
Principal Roadway Engineer / Project Manager









District 05 Transportation Projects Completed by Arcadis

Arcadis developed the improvement concepts included in the US 165 Superstreet project as part of the Stage 0 Feasibility Study, providing our team with key insights into the project background and design considerations.

Sections 1-11

DOTD FORM: 24-102

(Revised August 11, 2025)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

1. Contract Name as shown in the advertisement	US 165: SUPERSTREET, DELOACH ST – WHITE ST ROUTE: US 165 OUACHITA PARISH
2. Contract Number(s) as shown in the advertisement	CONTRACT NO. 4400033077
3. State Project Number(s), if shown in the advertisement	STATE PROJECT NO. H.015641.5 FEDERAL AID PROJECT NO. H015641
4. **Prime consultant name (name must match exactly as registered with the Louisiana Secretary of State (SOS) where such registration is required by law; including punctuation; include screenshot from SOS at the end of Section 20**)	ARCADIS **Arcadis U.S., INC.**
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0002808 DUNS 057690414
6. Prime consultant mailing address	6100 Corporate Blvd., Suite 325 Baton Rouge, LA 70808
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	6100 Corporate Blvd., Suite 325 Baton Rouge, LA 70808
8. **Name, title, phone number, and email address of prime consultant's contract point of contact**	Jose L. Rodriguez, PE *Principal Roadway Engineer / Project Manager* P. 504 648-3600 | E. Jose.L.Rodriguez@arcadis.com
9. **Name, title, phone number, and email address of the official with signing authority for this proposal**	Akhil Chauhan, PE, PTOE, PTP, PMP *Principal Transportation Engineer* P. 225 368 6563 | E. akhil.chauhan@arcadis.com

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response. **Pursuant to Act No. 581 of the 2024 Louisiana Legislature Regular Session, proposer further certifies that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association based solely on the entity's or association's status as a firearm entity or firearm trade association. In addition, proposer certifies it will not discriminate against a firearm entity or firearm trade association during the term of the contract based solely on the entity's or association's status as a firearm entity or firearm trade association.**	 Signature above shall be the same person listed in Section 9: Date: September 23, 2025

11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	**Firm(s):**	**Firm(s)' %:**
	Marrero, Couvillon & Associates, LLC.	8%
	APS Engineering and Testing, LLC	4%

US 165 Corridor Study

Superstreet and access management concepts on US 165 developed by Arcadis as part of the Stage 0 Feasibility Study.

Sections 12-14

12 DISCIPLINE TABLE:

As indicated in the advertisement, insert a completed table here. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract.

The only past performance evaluation disciplines to be used are listed in the drop down in each row (Appraiser, Bridge, CE&I/OV, CPM, Data Collection, Environmental, Geotech, ITS, Other (must specify), Planning, Right-of-Way, Road, Survey, and Traffic). Remove rows as needed.

Discipline(s)	% of Overall Contract	Arcadis	MCA	APS	Each Discipline must total to 100%
Road	68	100			**100%**
Other (Electrical/Lighting)	8		100		**100%**
Geotech	4			100	**100%**
Traffic	20	100			**100%**
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.					
Percent of Contract	**100%**	88	8	4	**100%**

14 ORGANIZATIONAL CHART

Principal in Charge

Akhil Chauhan, PE, PTOE, PMP, PTP[1]★★

Project Manager

Jose L. Rodriguez, PE[1]★★

QA/QC

Mark Dennis, PE[1]

Technical Advisor

Roadway Design
Buddy Porta, PE[1]

Traffic
Kester Hollier, PE, PTOE[1]★★★

Traffic Engineering

Signal Design
Ari Deitch, PE, PTOE, PTP, RSP[1]★★★
Max Aguirre, PE, PTOE, RSP2I[1]★★

ITS
Paul Hsu, PE[1]★
Cody Lemoine[1]★

Lighting / Electrical

Kimball Schlafly, PE[3]★
Christian Schade, PE[3]★

Roadway/Drainage Design

Roadway
Jose L. Rodriguez, PE[1]★★
David Fulks, PE[1]★
Gabriel Arias, PE[1]
Garrett Keller, PE[1]
Craig Raymond, PE[1]

Drainage
Colin Sarratt, PE[1]
Amanda Check, PE[1]
Cailyn Youmans, PE[1]
Justin Corbitt, PE[1]

Construction Support

Jose L. Rodriguez, PE[1]★★
Colin Sarratt, PE[1]
Ari Deitch, PE, PTOE, PTP, RSP[1]★★★
Kimball Schlafly, PE[3]★

Value Added

Constructability
Buddy Porta, PE[1]
Thomas Landry, PE[1]

Bike/Ped Improvements

Matt McDow, PE, MSP[1]
Ari Deitch, PE, PTOE, PTP, RSP[1]★★★
Max Aguirre, PE, PTOE, RSP2I[1]★★

Structural Support

Victor Sanchez, PE[1]★
Osama Shahawy, PE[1]★

Geotechnical

Sergio Aviles, PE[2]★
Sairam Eddanapudi, PE, ME[2]★
Surendra Pathak, PE[2]★

LEGENDS: 1 - Arcadis 2 - APS 3 - Marrero Couvillon & Associates ★ Fulfillls MPR ★ TEPR Modules 1-3 Training ★ Workzone Training

13 TEAM SIZE:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (must specify)" and include the classification title inside the parentheses. The DOTD Job Classification(s) to be used can be found at the following link: https://bit.ly/DOTDJobClassifications

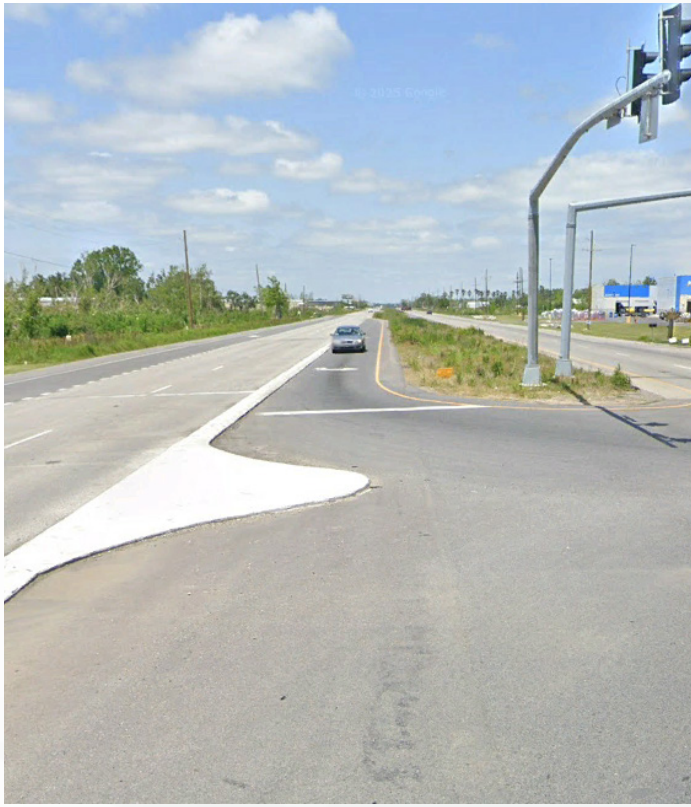
Firm name	DOTD Job Classification	Number of personnel committed to this contract*	Total number of personnel available in this DOTD Job Classification (if needed)
ARCADIS	Engineer[1]	11	13
	Engineer - Other	1	1
	Senior Technician	1	1
	Principal	3	3
	Supervisor-Engineer[1]	7	7
MCA Engineering & Construction	Supervisor Engineer	1	1
	Engineer	1	3
APS Engineering and Testing	Engineer	1	3
	Senior Technician	1	3
	Technician	1	2

***For evaluation purposes only**, and as referenced in the Scope of Services on page 2 of IDIQ advertisements only, the consultant shall assume the number of concurrently active task orders specified in the advertisement and shall identify the number of **committed** personnel accordingly.

[1]*Includes discipline leads and support staff for multiple disciplines required for the project.*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ARCADIS



Implemented superstreet improvements on LA 3235 developed by Arcadis.

Sections 15-16

"It is my great pleasure to provide this reference letter for an outstanding performance by Arcadis' staff on this project. From scope development, to project planning, to budget and schedule control, to technical quality and delivery, its execution was flawless. Arcadis went above and beyond to successfully deliver this project and significantly exceeded our expectations, especially through communication and outreach. The success of this project has been showcased in many professional conferences and meetings. I would very strongly recommend Arcadis' safety services, and we look forward to working with them again."

- April Renard, PE, PTOE, Project Manager, LADOTD

15 MINIMUM PERSONNEL REQUIREMENTS:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Akhil Chauhan, PE, PTOE, PTP, PMP *(>23 years' experience)*	ARCADIS	PE	LA	PE. 33703 / 09/2026
2	Akhil Chauhan, PE, PTOE, PTP, PMP *(>23 years' experience)*	ARCADIS	PE	LA	PE. 33703 / 09/2026
3	Jose L. Rodriguez, PE *(>27 years' experience)*	ARCADIS	PE	LA	PE. 30492 / 3/2027
	David Fulks, PE *(>29 years' experience)*	ARCADIS	PE	LA	PE. 30151 / 9/2026
4	Ari Deitch, PE, PTOE, PTP, RSP *(>13 years' experience)*	ARCADIS	PE	LA	PE. 41842 / 3/2026
	Kester Hollier, PE, PTOE *(>20 years' experience)*	ARCADIS	PE	LA	PE. 34304 / 3/2027
5	Paul Hsu, PE *(>20 years' experience)*	ARCADIS	PE	LA	PE. 35983 / 3/2027
6	M. Kimball Schlafly, PE *(>32 years' experience)*	MCA	PE	LA	PE. 27699 / 9/2026
	Christian Schade, PE *(>32 years' experience)*	MCA	PE	LA	PE. 32483 / 9/2026
7	Victor Sanchez, PE, MSCE *(>23 years' experience)*	ARCADIS	PE	LA	PE. 33976 / 09/2026
	Osama Shahawy, PE *(>34 years' experience)*	ARCADIS	PE	LA	PE. 35652 / 09/2027

16 STAFF EXPERIENCE:

Contract Leadership

16 STAFF EXPERIENCE.

Firm employed by. ARCADIS				Meet MPR Nos. 1 & 2
Name	Akhil Chauhan, PE, PTOE, PTP, PMP		Years of relevant experience with this employer	17
Title	Principal Engineer		Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			MS / 2003 / Transportation Engineering, Massachusetts Institute of Technology BS / 2001 / Civil Engineering, Indian Institute of Technology	
Active registration number / state / expiration date			PE.0033703 / LA / Exp. 09/2026; PTOE 2544 / USA / Exp. 11/2026 PTP 246 / USA / Exp. 12/2027; PMP 1444676 / USA / Exp. 08/2026	
Year registered	2008	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities			**Principal-in-Charge**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Chauhan is a principal engineer with **22 years of applied research and industry experience** in transportation planning and design. Akhil has successfully led, managed, and mentored numerous transportation improvement projects for public agency clients located across the nation including several state Departments of Transportation. Projects include transportation planning and feasibility studies, environmental studies, and large scale design projects including alternative delivery (CMAR, Design Build, P3). **Mr. Chauhan meet Minimum Personnel Requirement Numbers 1 & 2.**
09/15 – 06/18	**US 165 Corridor Improvements, Ouachita Parish, LA.** *Principal Engineer.* Responsible for contract management for the Stage 0 Feasibility Study to develop ***superstreet, access management, and safety improvements for the US 165 corridor***. The project was divided into 3 distinct segments for analysis purposes, as different software tools were needed to effectively analyze operational conditions for existing and future years. Arcadis prepared all materials and conducted a public meeting to present concepts to the public and local stakeholders.
04/13 – 10/20	**LADOTD, US 11 Railroad Bridge Replacement and Corridor Improvements Environmental Assessment, LADOTD, St. Tammany Parish.** *Principal Engineer*. Responsible for crash analysis, operating speed tabulations, intersection and corridor analysis, ***line and grade*** and public outreach for the proposed widening of US 11 between US 190 (Gause Boulevard) and I-12 in Slidell. Proposed improvements include the ***replacement of a bridge crossing the Norfolk Southern Railroad.*** Critically, this project includes analysis of several innovative alternatives for the proposed corridor, including "***superstreets***" and J-turn concepts.
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Principal Engineer.* Responsible for technical advisory and QAQC of all traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of I-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. One critical component of the project is ***maintaining traffic during the construction of new bridge structures.*** Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to minimize delay.

01/14 – Ongoing	**Pete's Highway Traffic Study and Environmental Assessment, LADOTD, Denham Springs, LA.** *Principal Engineer*. Responsible for contract management and deliverables for the project which included traffic and safety analysis, signal timing and warrant analysis, alternative screening and analysis, ***preliminary roadway and bridge design, line and grade***, Interchange Modification Report, and Environmental Assessment. Purpose of the project is to improving operations and safety along Range Avenue.
04/16 – Ongoing	**Florida Avenue Environmental Assessment, LADOTD, Orleans Parish, LA.** *Principal Traffic Engineer*. Responsible for QA/QC and documentation for the project that includes traffic, environmental, ***line and grade***, and public outreach and involvement services for one of the last projects funded by Louisiana's TIMED Program. The project traverses post-Katrina re-development areas in both Orleans and St. Bernard Parishes. ***Key considerations include the type and height of the bridge*** and controlling truck traffic diversion through neighborhoods. Using the New Orleans Regional Planning Commission's SELATRAM travel demand model (TDM), Arcadis coded alternatives for a comparative analysis of partial and full build scenarios.
05/19 – 11/22	**I-20/I-220 Interchange Improvements and BAFB Access Design-Build, LADOTD, Bossier Parish, LA.** *Principal Engineer.* Responsible for overseeing the development of addendum to ***I***nterchange Modification Report, Transportation Management Plan, temporary sign timing and design plans, Temporary Traffic Control Plans, and Permanent Signing Plans to accommodate the design and construction of the project. The design-build project includes the modification of the existing interchange at I-20/I-220 with additional ramps and extension of I-220 to provide access to Barksdale Air Force Base.
12/13 – 06/15	**LA 3235 Corridor Safety Improvements, LADOTD, Lafourche Parish, LA.** *Project Manager and Principal Engineer*. Responsible in the preparation of a formal traffic and access management Stage 0 study, in accordance with LADOTD Stage 0: Manual of Standard Practice, that analyzed alternatives and enhanced mobility and safety on LA 3235. Main tasks included traffic data collection, warrant studies, traffic analysis, safety analysis, ***design development,*** and public outreach. Intersections found to warrant signalization were also modeled in unconventional designs including U-turns, J-turns, and RCUTs. A cost estimate and conceptual layout drawings were also produced.
02/23 – 05/24	**District 04 Pedestrian Safety Improvements, LADOTD, Caddo and Bossier Parish, LA.** *Principal Engineer & Technical Advisor*. Responsible for ***contract management and technical advisory*** for this Stage 0 Feasibility study to develop and evaluate safety countermeasures to address pedestrian safety needs on 7 corridors within Caddo and Bossier Parish. The study methodology was similar to that of a Road Safety Assessment, and included historical crash analysis and on-site field reviews to identify pedestrian safety needs. Countermeasures were developed in close coordination with project stakeholders including City of Bossier, City of Shreveport, NLCOG, Downtown Development Distriction, and District 04. Stakeholders also participated in virtual and on-site field reviews. Study data, methods, and results were documnted in a Stage 0 Feasibility Reports were completed for all 7 study corridors with Preliminary Scope and Budget Checklist and Environmental Checklist. Benefit-cost analysis was provided to aid in prioritizing the implementation of countermeasures.
04/16 – 10/19	**I-12 Hard Shoulder Running Feasibility Study and Preliminary Design, LADOTD, East Baton Rouge and Livingston Parishes, LA.** *Principal Engineer.* Responsible for ***contract management and technical advisory*** of project tasks. Arcadis researched best practices around the country to develop potential alternatives. Highway Safety Manual methods were applied to quantify the safety performance of proposed alternatives. Traffic analysis was performed using a calibrated microsimulation model to evaluate the operational performance of HSR and HOV lane alternatives. ***Conceptual drawings*** and ***construction cost estimates*** were developed to evaluate the feasibility of proposed alternatives.

Firm employed by. ARCADIS				Meets MPR No. 3
Name	**Jose L. Rodriguez, PE**		Years of relevant experience with this employer	3
Title	Senior Roadway Engineer		Years of relevant experience with other employer(s)	24
Degree(s) / Years / Specialization			BS / 1992 / Civil Engineering, University of New Orleans	
Active registration number / state / expiration date			PE.0030492 / LA / Exp. 03/2027	
Year registered	2003	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Project Manager, Roadway Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Rodriguez has more than 27 years of experience with roles of progressive responsibility as a civil engineer performing **roadway design**, bridge design, project management, hydraulic analysis, utility coordination, construction supervision, **cost estimating**, and project implementation for various clients in the states of Louisiana, Texas, Georgia, and North Carolina. Worked in close relationship with the Louisiana Department of Transportation, City of New Orleans Department of Public Works, New Orleans Sewer and Water Board, Plaquemines Parish, Jefferson Parish, St. Bernard Parish, U.S. Army Corps of Engineers, New Orleans Regional Planning Commission. Experience includes a wide range of project applications including **Stage 0 feasibility and safety studies**, **safety design**, environmental assessments, and design projects. Extensive experience in Inroads, Autodesk Civil 3d, Leap Bridge for Concrete Bridge Design, and Excel Spread Sheets. Served on the American Concrete Institute (ACI) Louisiana Board, becoming president of the Louisiana Chapter in 2010. **Mr. Rodriguez meets Minimum Personnel Requirement Number 3.**
02/07 – 10/09	**John James Audubon Bridge Approach (Design-Build [DB]), LADOTD, New Roads, LA.** *Roadway Designer.* Responsible for the ***geometric horizontal and vertical alignment for five approach bridges*** to the John James Audubon Cable Stay Bridge. The longest cable-stayed bridge in the Western Hemisphere consisting of 1,583' main span. Also in charge of the quality control for all bridge approaches and the design of all precast concrete girders for the project.
02/22 – 04/25	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** *Senior Roadway Engineer* for the I-10 Calcasieu Bridge Replacement P3 project to ***replace the existing I-10 bridge over the Calcasieu River with a new bridge north of I-10.*** The project also includes the construction of ***several new bridge structures*** within the project limits, both inside and outside widening of I-10, improvements and modifications to existing interchanges, and improvements to other associated roadways within the project limits.
04/21- 04/22	**Lee Drive (Highland Road to Perkins) Final Design Study Report, MOVEBR, Baton Rouge, LA**. *Senior Roadway Engineer. Designer,* Responsible for coordinating and developing concept drawings to evaluate the geometric feasibility of different roadway alternatives, proposed improvements, and anticipated right-of-way needs. Provided technical guidance to help identify green infrastructure opportunities along the project. Also assisted in the implementation of Complete Street regulations for the corridor. During the alternative's selection process, conducts cost estimates to evaluate and select the preferred alternative.
04/23 – 01/25	**LA 22 Tchefuncte River Bridge, LADOTD, St. Tammany Parish, LA.** *Lead Roadway Engineer*. Responsible for ***preliminary roadway and drainage design*** for a *Stage 0 Feasibility Study* to develop and evaluate feasible alternatives for the replacement of the LA 22 Tchefuncte River Bridge in Madisonville, LA. The bridge has a high frequency of opening due to marine traffic and low elevation above the river. Arcadis developed several bridge alternatives including fixed and moveable

	bridge options. Alternatives were evaluated with respect to ***construction cost***, ***ROW***, traffic and safety, and environmental. All study methods and results were documented in a ***Stage 0 Feasibility Report*** with ***Preliminary Scope and Budget Checklist*** and ***Environmental Checklist.***
01/08 – 05/08	**I-12 to Bush Corridor Study Phase III, LADOTD, St. Tammany Parish (STP), LA.** *Roadway Designer.* Responsible for ***evaluating environmental issues and developing design alternatives*** in accordance with the ***National Environmental Policy Act (NEPA)*** for transportation improvements.
05/12 – 12/15	**Earhart Boulevard Causeway Interchange, LADOTD, New Orleans, LA.** *Roadway Designer.* Responsible for the ***geometric design and roadway plan preparation*** for the Earhart Boulevard-Causeway Interchange. The Earhart Boulevard Causeway Interchange purpose was to assist in traffic congestion relief for the east-west flow in traffic for the New Orleans Metro Area. It consisted of the development roadway and bridge ramps for the creation of an elevated signal-controlled interchange. The estimated construction cost for this project was approximately fifty-nine million dollars. Responsible for the ***development of all horizontal and vertical alignments*** for this project as well as roadway plan preparation, developing all ***roadway cross sections,*** drainage design, utility conflict resolution and ***cost estimating*** for the project. Bentley InRoads was used for the development of the roadway plans for this project.
02/10 – 06/11	**I-10 from Veterans to Clearview, LADOTD, Metairie, LA.** *Roadway Designer.* Responsible for ***roadway plan preparation*** for widening 1.2 miles of I-10 from three lanes to five lanes in each direction. The project also included bridge work to accommodate the new roadway widening. Jose was also responsible for the alignment and design of concrete sound walls along the corridor. He helped implement an innovative two-sided concrete stamp process for the noise wall precast concrete panels.
07/09 – 07/15	**Peters Road Expansion, Phases I, II and III, LADOTD, Plaquemines, LA.** *Roadway Designer.* Responsible for the ***geometric design, plan preparation and wetland delineation*** of Peters Road Phases I, II and III. The projects consisted of a new roadway, elevated crossing over the Intracoastal Waterway, approach roadways in Jefferson and Plaquemines Parishes to tie Peters Road to Louisiana 23 near Barrier Road. The projects were prepared in coordination with Plaquemines, DOTD and the U.S. Army Corps of Engineers.
10/17 – 03/18	**Traffic Turn Lanes on Highway LA 3127, Yuhuang Chemical Inc., St. James, LA.** *Quality Control (QC).* Review for the ***design of two turn lanes*** into the Yuhuang Chemical Methanol plant in St. James Louisiana. During construction, Jose provided the owner, with construction design services for the duration of the construction phase.
12/15 – 01/16	**Magnolia Ridge Levee Project, City of New Orleans, St. Charles Parish, LA.** *Quality Control (QC).* QC review and ***plan preparation*** for the Magnolia Ridge Levee project for St. Charles Parish.
06/04 – 01/11	**Causeway Boulevard Interchange Improvements Phase I and II, LADOTD, Metairie, LA.** *Roadway Designer.* For the project, which consisted of widening Causeway Boulevard elevated structure at Veterans Boulevard and the construction of new at grade and elevated ramps to provide better accesses, ***improve safety and ease congestion at this heavily travel interchange.*** Responsible for evaluating existing girders, the ***design of new precast concrete girders*** and the ***roadway plan preparation*** for this project. Also, responsible for evaluating and design of new sewer and water lines for the project as well as coordinating the removal and replacement of all utilities affected by the new roadways or/and structure foundations.

16 STAFF EXPERIENCE:

Roadway / Drainage Design Engineers

Firm employed by. ARCADIS			Meets MPR No. 3
Name	**David Fulks, PE**	Years of relevant experience with this employer	18
Title	Roadway Design Engineer	Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization		MS / 2019 / Engineering Management, The George Washington University BS / 1997 / Civil Engineering, Portland State University	
Active registration number / state / expiration date		PE.0030151 / LA / Exp. 09/2026	
Year registered	2002	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Fulks has more than **30 years of experience in the design of roadways and pedestrian facilities**, land developments, flood protection systems, and airports. His experience encompasses analysis and design of **geometric design** of highways, streets, sidewalks, restrictive intersections, roundabouts, and interchanges; site hydrology and hydraulics; and traffic impact analysis. His experience has been applied to a range of projects, from Stage 0 feasibility and safety studies, to **design and construction plan development.** His responsibilities have included preparing engineering designs, reports, plans, and specifications preparing and managing project schedules and cost estimates and providing construction administration.
09/12 – 09/13	**US 165 Connector and Ouachita River Bridge EIS, LADOTD, Ouachita Parish, LA.** *Roadway Design Engineer.* Responsible for preparing ***roadway and bridge general plan designs, line and grade*** report development, and ***cost estimates*** for a new five-mile elevated highway through Chauvin Swamp north of Monroe, LA. An in-town corridor was also developed which entailed upgrading Louisville Avenue and Hudson Lane in Monroe, the Lea Joyner Bridge over the Ouachita River, and Stella Street in West Monroe to function as a one-way couplet. ***Early coordination with Delta Southern Railroad*** was included.
04/13 – 07/14	**US 11 Environmental Assessment, Bridge Replacement, and Roadway Improvements, LADOTD, St. Tammany Parish, LA.** *Lead Roadway Engineer.* ***Geometry and roadway design, line and grade study*** development, and ***cost estimates*** for the replacement of an historic railroad overpass bridge and upgrading an existing two-lane rural highway to a four-lane divided highway with access control. Early coordination with Norfolk Southern Railroad.
05/14 – 05/15	**Joe Sevario / Roddy Road Roundabouts, LADOTD, Ascension Parish, LA.** *Task Manager and Lead Roadway Engineer.* ***Geometric and roadway design*** and ***cost estimates*** for the replacement of ten existing stop-controlled intersections with single-lane roundabouts.
07/15 – 06/17	**US 190B at Jefferson Ave Roundabout, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer.* ***Geometric and roadway design, preliminary plans preparation***, and ***cost estimate*** for replacing an existing four-way signalized intersection with a single-lane elliptical roundabout.
12/13 – 06/15	**LA 3235 Corridor Safety Feasibility Study, LADOTD, Lafourche Parish, LA.** *Lead Roadway Geometrics and Cost Engineer.* Designed ***geometric layout*** of safety improvements including ***access management, restrictive intersections***, and added turn lanes. Developed ***construction cost estimates*** for proposed improvements to assess ***feasibility*** of proposed alternatives.
11/14 – 10/15	**LA 44 and Loosemore Road Roundabout, LADOTD, Ascension Parish, LA.** *Deputy Project Manager and Lead Roadway Engineer.* ***Geometric and roadway design, preliminary subsurface utility investigation,*** and ***cost estimates*** for the

	replacement of an existing two-way stop-controlled intersection with either a single-lane roundabout or two single-lane roundabouts and right-in/right-out control at the existing intersection.
02/15 – 08/17	**US 71 Corridor Phase II, LADOTD, Rapides Parish, LA.** *Roadway Engineer*. Provided technical oversight for ***conceptual design*** drawing development as part of the preparation of a ***Stage 0 feasibility study*** for the purpose of enhancing mobility and safety on US 71 in Alexandria, LA. Completed ***Stage 0 documentation*** including ***Preliminary Scope and Budget and Environmental Checklists***.
09/09 – 03/12	**I-20 Garrett Road Connector Interchange Improvements, LADOTD, Ouachita Parish, LA.** *Lead Engineer.* ***Geometry and roadway design*** of the new KCS Railroad overpass and connector between Kansas Lane and Garrett Road, including interstate interchange modifications to include two-lane roundabouts at ramp intersections, and three two-lane roundabouts along the corridor outside of the interchange. ***Improvements to the pedestrian and bicycle facilities*** were included in accordance with the ***LADOTD Complete Streets Policy***.
01/14 – Ongoing	**Pete's Highway Interchange Alternative and Environmental Assessment, LADOTD, Livingston Parish, LA.** *Lead Roadway / Bridge Geometrics and Cost Engineer.* High-priority project completing an environmental assessment and traffic engineering services related to improving congestion and operations along Range Avenue in the vicinity of the I-12 interchange. Design alternatives included two split diamond interchange options with roundabout, partial clover leaves, and collector-distributor road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16) and a diverging diamond interchange alternative at Range Avenue. Developed ***roadway geometry, line and grade***, construction sequencing strategies, and ***construction cost estimate***.
08/11 – 09/13	**Chef Menteur Bridge and Approaches Replacement EA and Line and Grade Study, LADOTD, Orleans Parish, LA.** *Lead Roadway/Bridge Geometrics and Cost Engineer.* Responsible for preparing the proposed ***geometric configurations of a bridge replacement at Chef Menteur Pass.*** Investigated four alignments as well as both low-level moveable and high-level fixed span bridge configurations. Performed detailed ***geometric layouts*** of the mainline highway, bridge, and adjacent roadways to ***mitigate impacts to environmentally sensitive resources*** and local residential, commercial, and historical interests.
06/00 – 12/00	**Hesper and Helios Avenue Street Rehabilitation, Jefferson Parish Engineering Department, Harvey, LA.** *Roadway Engineer.* Completed inspections and rehabilitation recommendations for eight blocks of local streets. Rehabilitation required demolition and replacement of concrete road panels, milling and overlay of asphalt surfaces, and installation of drainage inlets and subsurface drainage, as well as replacement of damaged and under-performing subsurface drainage. Performed inspections, ***collaborated with Parish representatives and utility companies***, identified appropriate rehabilitation measures, and ***produced plans*** illustrating the rehabilitation recommendations.
02/09 – 4/10	**US 90 – WBV 73 Western Tie-In Crossing Lake Cataouatche Area, United States Army Corps of Engineers (USACE) – New Orleans District, Jefferson Parish & St. Charles Parish, LA.** *Deputy Project Manager and Lead Roadway / Drainage Engineer.* Development of ***preliminary and final design*** P&S for a 2,540-foot PPC girder / column bent bridge, highway approaches, and frontage roadways.

Firm employed by: ARCADIS

Name	**Gabriel Arias, PE**	Years of relevant experience with this employer	4
Title	Transportation Engineer	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization		BS / 2013 / Civil Engineering, Auburn University	
Active registration number / state / expiration date		PE.0042599 / LA / Exp. 09/2027	
Year registered	2018	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Roadway Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Arias has more than 12 years' experience performing complex geometric design on roadway including horizontal and vertical (H&V) alignment, hydraulic design cross drain pipes (CDP's) and open ditches, turn lane design, striping/signage, structural design analysis and QC, traffic management plans, and roadway plan production. As a roadway design engineer, Gabriel has direct experience utilizing DOTD's Roadway Design Procedures and Details Manual.
06/16 – 02/17	**LA 435 to LA 40/LA 41, LADOTD, St. Tammany Parish, LA.** *Project Engineer*. The project calls for the construction of a new four-lane highway connecting I-12 to Bush, Louisiana, in St. Tammany Parish. The new roadway is approximately 19.8 miles in length and begins at LA 434, north of the existing LA 434 interchange with I-12, and traverses in a northeasterly direction until encountering an abandoned rail corridor. It then follows the rail corridor terminating at the LA 21/LA 41 intersections near Bush, Louisiana. Assisted with roadway geometric design including H&V alignment, hydraulic design for storm drains, CDP's and open ditches, structural design analysis and QC, Traffic management plans and ***roadway plan production*** for the new 5.5 mile 4-lane RA-3 roadway from LA 435 to Bush, LA.
07/13 – 06/16	**Bayou Mercier Road/Berard Canal Bayou, LADOTD, St. Martin Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a quad-beam concrete structure.
07/13 – 02/17	**Derrick Road Bridge, LADOTD, Iberville Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, ***hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure*** with a slab span, concrete structure.
07/13 – 02/17	**Jude & Placide Road Bridges, LADOTD, Vermilion Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridges timber structures with slab span, concrete structures.
06/18 – 10/19	**Mid-Barataria Diversion Design, Plaquemines Parish, LA.** *Project Engineer*. Planning, engineering and design services for the creation of the Mid-Barataria sediment diversion basin to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Assisted with ***detour roadway alignment creation/selection***, TTC planning, and plan preparation.
07/13 – 10/16	**City of Thibodaux Overlay Projects, LADOTD, Lafourche Parish, LA.** *Project Engineer*. Project required chip sealing, joint & crack sealing, resurfacing and complete pavement replacement for four separate locations in the city of Thibodaux, LA. The

	goal was to prolong the life of the existing pavements by preventing future deterioration and/or rehabilitating the existing pavements. Assisted with ***roadway geometric design*** including horizontal alignments, selection of treatment type for pavements, hydraulic design for storm drains, CDP's and open ditches and roadway plan production.
09/13 – 02/17	**Pecan Island Road Bridge Over The Chenal, LADOTD, Pointe Coupee Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a customized slab span, concrete structure.
07/13 – 02/17	**Gracie Lane Bridge, LADOTD, Iberville Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and ***roadway design*** for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
04/14 – 02/17	**Lajaunie Rd/Lateral 1 Bayou St. LADOTD, Clair, Lafayette Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and ***roadway design for the replacement*** of the existing off-system bridge timber structure with a slab span, concrete structure.
11/15 – 02/17	**Babin Rd./Bayou Narcisse, LADOTD, Ascension Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
09/13 – 02/17	**West 15th Avenue/Mile Branch, City of Covington, St. Tammany Parish, LA.** *Project Engineer*. Performed topographic field surveying and assisted with bridge design, hydraulic analysis, and roadway design for the replacement of the existing bridge timber structure with a customized slab span, concrete structure. Included an integral pedestrian/bicycle path and custom barrier to separate pedestrians and vehicles.
02/18 – 04/18	**US 377 Cresson Relief Route, TXDOT, TX.** *Project Engineer*. TXDOT will construct a three-mile relief route west of the city of Cresson. The relief route will be a new ***four-lane divided highway on US 377*** beginning one mile south of the intersection of US 377 and SH 171 and ending one mile north of the same intersection. Assisted with plan creation including H&V alignment review, TTC plans, construction quantity estimation and roadway plan production for the realigned roadway.
06/17 –10/17	**Hwy 270 Widening Connecting Arkansas Program (CAP), CA0607, Garland County, AR.** *Project Engineer*. Contracted by AHTD, as part of their Connecting Arkansas Program (CAP), ***to assist with the design of widening approximately three miles of Hwy 270 in Garland County***. The proposed roadway is 4 lanes with a painted median from Hwy 270 to Black Snake Road, then 5 lanes curb & gutter from Black Snake Road to Hwy 227. Responsibilities include the drainage design and plan production, wetland delineation and maintenance of traffic plans. Tasks include preliminary site visits, developing hydraulic and hydrologic models for the pipes, submittal of Hydraulic Report, drainage ditch design, ***maintenance of traffic*** plan submittals and wetlands report.

Firm employed by: ARCADIS			
Name	**Garret Keller, PE**	Years of relevant experience with this employer	11
Title	Design Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		MS / 2011 / Transportation Engineering, Louisiana State University BS / 2003 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date		PE.0040977 / LA / Exp. 03/2027	
Year registered	2012	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Roadway Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Keller is a civil design engineer who has spent his entire tenured career at Arcadis. He has been involved with several Louisiana Department of Transportation and Development (LADOTD) projects and has **direct experience utilizing DOTD's Roadway Design Procedures and Details Manual.** His responsibilities have included roadway and structural detailing and design, civil design, geometrics, and cost estimating. He also oversees implementation of CAD **systems and standards for Louisiana** including MicroStation, InRoads, and CAD conform for LADOTD work.
09/12 – 04/14	**US 165 Connector and Ouachita River Bridge EIS, LADOTD, Ouachita Parish, LA.** *Roadway Designer:* Responsible for roadway design support on a project that provides needed transportation system linkage in the north Monroe region.
07/15 – 06/17	**US 190B at Jefferson Avenue Roundabout Design, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer*: Responsible for geometric and roadway design for replacing an existing ***four-lane signalized intersection*** with a single-lane roundabout. The project also included a Context Sensitive Solutions study to optimize benefit to the adjacent real estate and community needs.
02/19 – Ongoing	**NDRC Ohio Creek Watershed Project, City of Norfolk, VA.** *Lead Civil Engineer:* Project consists of earthen berms, reinforced concrete floodwalls, and internal stormwater pump stations, as well as, upgraded existing transportation infrastructure to provide better mobility and safety for pedestrians and bicyclists. These features include elevated roadways, new shared use paths, upgraded culverts with stormwater closure structures, and various green infrastructure treatments.
11/12 – 04/13	**LA 594 (Millhaven Rd.) Alternatives, I-20 Economic Development Corporation, Ouachita Parish, LA.** *Primary Designer:* Roadway intersection and roundabout improvement alternatives for a ***LADOTD Stage 0 study***. Two roundabouts were evaluated in compliance with LADOTD EDSM V.1.1.5 (Analysis) and EDSM V.1.1.6 (Design).
08/11 – 09/13	**Chef Menteur Bridge and Approaches EA, LADOTD, Orleans Parish, LA.** *Roadway Designer:* Responsible for geometry and ***roadway design for a high-priority bridge replacement.*** Key issues included minimizing impacts to Bayou Sauvage National Wildlife Refuge, Fort McComb, the existing bridge that is eligible for the NRHP, and compliance with Complete Streets Policy.
02/09 – 02/13	**US 90 WBV 73- Western Tie-In Crossing Lake Cataouatche Area (Bridge/Roadway Approach/T-walls), USACE - New Orleans District, Jefferson & St. Charles Parishes, LA.** ***Project Designer:*** Preparation of Plans and Specifications for new floodwall and highway bridge in St. Charles Parish. Design of floodwalls, four-lane highway bridge, and detour roads to maintain traffic traveling on US Highway 90. The project involved ***improvement layout*** and quantity calculations in support of cost estimates.

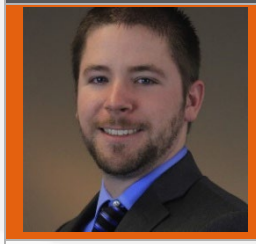
Firm employed by: ARCADIS

Name	**Craig Raymond, PE**	Years of relevant experience with this employer	12
Title	Roadway Design Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2013 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date		PE.0042715 / LA / Exp. 03/2026	
Year registered	2018	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Roadway Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Raymond's experience encompasses permitting application including sketches/drawings, geometric design of levees, highways, streets, roundabouts, and aprons. He was worked on a wide range of roadway and civil design projects including geometric design, line and grade, and typical sections to support LADOTD Stage 0 Feasibility Studies. Responsibilities have included preparing engineering designs, plans, and specifications. preparing cost estimates. coordinating with permitting agencies. and project oversight.
04/13 – 07/14	**US 11 Environmental Assessment, Bridge Replacement, and Roadway Improvements, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer*. ***Environmental Assessment for replacement of the US-11 Bridge***, which includes widening of US-11 from two lanes to four lanes from US-190 north to 1-12. Responsibilities include providing alternative development, geometric and roadway design, line and grade, and plan preparation for two alternatives.
12/13 – 06/15	**LA 3235 Stage 0 Safety Feasibility Study, LADOTD, Lafourche Parish, LA.** *Roadway Engineer*. Responsible for collection of ***roadway information and road design*** to preserve and enhance safety/mobility of the corridor. The project includes improvement considerations such as median opening channelization, turn lane storage, median closure, among others.
05/14 – 05/15	**Stage 0 Feasibility Study - Joe Sevario / Roddy Road Roundabouts, LADOTD, Ascension Parish, LA.** *Roadway Engineer*. ***Geometric and roadway design*** and cost estimates for the replacement of ten existing stop-controlled intersections with single-lane roundabouts.
11/14 – 11/15	**LA-44 and Loosemore Road Roundabout Feasibility Study, LADOTD, Ascension Parish, LA.** *Roadway Engineer*. Responsible for roadway design for the improvement of existing roadway infrastructure at the intersection of LA-44 and Loosemoore Road. The project includes design for incorporating modern roundabouts to the interchanges ***to enhance mobility and safety***, collection of data from all existing utilities and cost estimate.
01/14 – 12/14	**Pete's Highway Interchange Alternative and Environmental Assessment, LADOTD, Livingston Parish, LA.** *Roadway Engineer*for the I-12/South Range Avenue interchange improvements. Provided alternative development, typical sections, line and grade, and ***plans detailing right-of-way*** and utilities.
11/16 – 08/19	**LA 88 Roundabouts Prelim Plans, LADOTD, Iberia Parish, LA.** ***Roadway Engineer*** developing plans for two single-lane roundabouts at US 90/LA 88 ramp terminals, including service road modifications to J-Turns and new U-Turn locations.
07/15 – 06/17	**US 190B at Jefferson Avenue Roundabout Design, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer.* Responsible for ***completing preliminary roadway design plans*** based on comments from the client. This involved the development of MicroStation files such typical pavement section and details, plan and profile sheets, and construction sequencing sheets.

Firm employed by: ARCADIS

Name	**Colin C. Sarratt, PE**	Years of relevant experience with this employer	10
Title	Senior Hydraulics Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 2015 / Civil Engineering	
Active registration number / state / expiration date		PE.0046542 / LA / Exp. 09/2026	
Year registered	2022	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Drainage Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Sarratt has 10 years of experience on transportation projects with a focus on stormwater hydrology and hydraulics and roadway engineering. His expertise includes hydraulic analysis and hydrologic feasibility studies, **open and closed conveyance system design**, culvert and cross-drain design, post-construction stormwater and water quality best management practices (BMP) design, and 2D bridge hydraulic bridge analysis. He has been responsible for leading hydrology and hydraulics design for schematics, design build, and complete plans, specifications, and estimate (PS&E) plan sets. He is proficient in Microstation, GEOPAK Subsurface utilities, Inroads ,OpenRoads, StormCAD, SMS, and SRH2D.
09/21 – 04/25	**Calton Road Overpass (Webb County, TX).** *Project Manager* and *Drainage Lead* for the Calton Road Overpass project located in the City of Laredo Texas to ***construct a railroad overpass over Santa Maria Avenue, the Union Pacific Railroad*** mainline, and turnaround tracks. The project also includes widening of Calton Rd to maintain access to Santa Maria Avenu due to the proposed overpass. ***As project manager, Colin kept close coordination between multiple design disciplines and stakeholders*** including the City of Laredo, TxDOT, and UPRR. The project also included the design of a closed drainage system with additional storage capacity in order to mitigate impacts to the existing drainage system downstream of the project site and still meet hydraulic grade line requirements.
10/22 – Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Replacement (OSBR) Program, LADOTD, District 01, LA.** *Senior Drainage Engineer.* Arcadis prepared ***preliminary and final plans of six proposed bridges,*** which included plan and profile sheets, typical roadway sections and quantities, a general bridge plan, traffic detour and road closure details, and relevant signing plans, as well as channel cross-sections. As senior drainage lead for this program, ***oversaw and prepared all Hydraulic analysis and design.***
08/25—Ongoing	**LADOTD IDIQ Contract for Hydraulics Section Support, Statewide, LA.** *Project Manager.* Arcadis' task under this IDIQ contract includes Hydraulics Section manuals updating, HEC-RAS 1D and 2D watershed modeling, performance and technical review of NFIP no-rise applications, ***CLOMR and LOMR applications for highway and bridge projects***, ***2D bridge hydraulic modeling*** and scour analysis utilizing Aquaveo's SMS software, and general hydrologic and hydraulic analysis.
06/17 – 03/22	**Ogeechee River Bridge Replacement (Effingham County, GA).** *Drainage Lead* for the roadway realignment and bridge replacement for 2 bridges at the SR 119 and Ogeechee River bridge crossing (1 main channel and 1 of 2 overflow bridges) in Effingham County, GA. The project involved the creation of a ***2D hydraulic model utilizing SMS and SRH-2D*** in order to design the proposed multiple bridge configuration along SR 119 in order to determine proposed bridge lengths and elevations in order to meet both GDOT bridge design standards and ***GDOT hydraulic design studies requirements*** for the proposed configuration.
02/22 – 04/25	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** Drainage Lead Segment 1 of the I-10 Calcasieu Bridge Replacement P3 project to replace the existing I-10 bridge over the Calcasieu River with a new bridge north of I-10. The project also includes the construction of several new bridge structures within the project limits, both inside and outside widening of I-10, improvements

	and modifications to existing interchanges, and improvements to other associated roadways within the project limits. Project involves the design of both ***open and closed conveyance systems for Segment 1 between Prater Rd and PPG drive, culvert and cross-drain analysis and design, and outfall analysis utilizing LADOTD HYDR design software.***
12/15 – 04/25	**GDOT MS4 Permit Compliance (State-wide, GA).** *Drainage Lead* for an ongoing contract to provide program assistance and help GDOT provide public education and outreach on stormwater impacts, public involvement/participation, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, pollution prevention/good housekeeping for municipal-type operations, and water quality monitoring and total maximum daily load. Responsibilities include the ***research and development of GDOTs post-construction stormwater BMP details and example plan sheets for state-wide, creation and development of MS4 related standards and specifications, assisting with the development of GDOT MS4 policy, and MS4 related GDOT Drainage Report revisions.***
11/16 – 04/18	**FY-17 Bridge Bundles (Polk County, GA).** *Drainage Lead* for replacement at Mountain Loop Road over Little Cedar Creek in Polk County, GA as part of the GDOT FY-17 Bridge bundles project. The project involved the creation of a ***2D hydraulic model utilizing SM and SRH-2D*** in order to design the proposed bridge crossing due to the sever skew of the creek under the existing bridge. Responsibilities included the design of the proposed bridge lendths and elevations in order to to meet GDOT Bridge design standards and ***GDOT hydraulic design study requirements*** for the proposed configuration, ***H&H report creation, and a bridge deck drainage analysis.***
02/23 – 05/23	**Shelby Avenue Off-System Bridge Replacement (Hunt County, TX).** *Drainage Lead* for the Shelby Avenue Bridge Replacement Project located in Hunt County Texas to replace the existing bridge over Faber Creek as part of the Paris District Off-System bridge PS&E replacement project. Responsibilities included leading the ***H&H analysis*** for the bridge crossing for both the existing and proposed conditions, determined and verified peak flows at the existing crossing, performed an impact assessment due to changes in water surface elevations, ***developed HEC-HMS and HEC- RAS models***, and prepared a comprehensive drainage report to document findings.
06/21 – 12/22	**TDOT I-65 Widening (Sumner & Robertson Counties, TN).** *Drainage Engineer* for Segment 2 of the I-65 widening project located in Sumner and Robertson Counties to widen I-65 to three lanes from Highway 31w to south of New Hall Rd that included both inside and outside widening. Project involved the design of numerous ***closed drainage systems in OpenRoads*** due to proposed inside widening, determining pre-developend and post-developed peak flows for project outfalls, ***open conveyance system design, and the design and analysis of multiple culvert and cross-drains crossings throughout the project.***
03/22 – 04/24	**FM 1209 at FM 969 Intersection Improvements (Bastrop County, TX).** *Project Manager* and *Drainage Lead* for the FM 1209 at FM 969 Intersection Improvements Project located in Bastrop TX to reconstruct the existing Y-intersection into a T-intersection, provide full depth reconstruction for both roadways within the project limits, construction of a right-hand turn lane along FM 1209 EB with additional widening for a future left-hand turn lane, and the construction of a flashing beacon with the anticipation of a future signalized intersection and through lane. Project involved the multiple planning considerations due to future developments adjacent to and within close proximity to the project site including SpaceX and The Boring Company. ***The drainage design primarily included both cross-drain and open channel design.***
07/22 – 04/25	**Grant Rd Widening – Segment 4 (Harris County, TX).** *Project Manager* for the study phase to widen Grant Rd from 2 to 4 lanes with a raised median and south-side sidewalk (Cypress Rose Hill Rd to Telge Rd). Led coordination with Harris County and stakeholders on shared outfall design, stormwater channel expansion, and permitting. Managed subconsultants, traffic studies, and study phase reporting.

Firm employed by. ARCADIS

Name	**Amanda Check, PE**	Years of relevant experience with this employer	10.5
Title	Senior Transportation Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		BS / 2008 / Civil Engineering	
Active registration number / state / expiration date		PE.0045736 / LA / Exp. 09/2027; GA Level II Certified Design Professional ES&PC / Exp. 03/2026	
Year registered	2012	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Drainage Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Check has experience in drainage and hydraulic design, Municipal Separate Storm Sewer Systems (MS4), erosion control, roadway design, and geographic information systems (GIS). She has **completed hydrologic and hydraulic modeling and studies on culverts, bottomless culverts, and bridges, including adhering to FEMA requirements on FEMA studied waterways.** She has designed horizontal and vertical alignments, roadway drainage, MS4, and erosion control on projects ranging from rural roadways to interstates. Her knowledge and experience with GIS provide a valuable supplement to her design capabilities. Ms. Check has knowledge in **multiple software programs including MicroStation, StormCAD, InRoads, OpenRoads, HEC-RAS, HEC-2, SRH-2D, HY-8, Hydraflow, FlowMaster, PondPack, SWMM, WinTR-55, WMS, and ArcGIS.** She has completed the **NHI SRH-2D training course (135095 Two-Dimensional Hydraulic Modeling of Rivers at Highway Encroachments) and 1D/2D Modeling with HEC-RAS training course.** Ms. Check is a member of the American Society of Highway Engineers and the American Council of Engineering Companies.
07/18 – 01/21	**I-40 Bridge Replacement over the Buffalo River Tennessee Department of Transportation (TDOT), Humphreys County, TN.** *Hydraulic Engineer*. The project replaced the existing eastbound and westbound bridges of I-40 over the Buffalo River with a new bridge constructed on the same horizontal alignment. Each existing bridge was 1,765 feet long, comprised of 42 spans and the proposed bridge is 1,775 feet long, comprised of 11 spans. ***Federal Emergency Management Agency (FEMA)*** has not established a regulatory floodplain or floodway for the project site, designated on the FIRM as Zone A. Responsible for the ***hydrologic calculations, Hydrologic Engineering Center - River Analysis System (HEC-RAS) hydraulic modeling, scour calculations, abutment riprap calculations, deck drainage calculations, and report preparation.***
08/25 – Ongoing	**LADOTD IDIQ Contract for Hydraulics Section Support, Statewide, LA.** *Project Manager.* Arcadis' task under this IDIQ contract includes Hydraulics Section manuals updating, HEC-RAS 1D and 2D watershed modeling, performance and technical review of NFIP no-rise applications, ***CLOMR and LOMR applications for highway and bridge projects***, ***2D bridge hydraulic modeling*** and scour analysis utilizing Aquaveo's SMS software, and general hydrologic and hydraulic analysis.
12/15 – 03/23	**FY 2016 - FY 2022 Bridge Design-Build Program Georgia Department of Transportation (GDOT), Various Counties, GA.** *Hydraulic Engineer*. Program included costing plans for over fifty low impact, low volume, off system bridge replacements across Georgia where existing bridges were structurally deficient. Provided senior Quality Assurance and Quality Control (QA/QC) review of the ***hydrologic calculations, HEC-RAS hydraulic modeling, scour calculations, abutment riprap calculations, deck drainage calculations, and report preparation.***

01/21 – 03/23	**CR-122/Humpback Road over Little Satilla River GDOT, Brantley County, GA.** *Hydraulic Engineer*. The project replaced the existing 132 feet long 11 span bridge with a 180 feet long 4 span proposed bridge constructed on the same horizontal alignment. ***FEMA*** has not established a regulatory floodplain or floodway for the project site, designated on the FIRM as Zone A. The floodplain is very wide (approximately 8,000 feet) and the site and roadway are flooded during typical/non-extreme rain events throughout the year. Responsible for the ***hydrologic calculations, HEC-RAS hydraulic modeling, scour calculations, abutment riprap calculations, deck drainage calculations, and report preparation.***
01/18 – 02/21	**SR-38 over Little McMillan Creek Bridge Replacement GDOT, Wayne County, GA.** *Hydraulic Engineer*. The project replaced the existing SR-38 twin bridges over Little McMillan Creek with new bridges constructed on the same horizontal alignment. The existing bridges are 200 and 208 feet long (eight spans each bridge) and the proposed bridges are 255 and 265 feet long (six spans each bridge). The hydraulic model also includes a downstream existing CSX railroad bridge (136 feet long, 14 spans). The project site is ***located in FEMA Zone AE without a designated floodway, and the FEMA effective model*** was in Water Surface Profiles (WSPRO). Directly upstream/at the westbound bridge, Millikin Bay and Coleman Branch converge to create Little McMillan Creek. A minimal rise resulted but was within FEMA and GDOT allowable rise of one foot. Responsible for the ***hydrologic calculations, FEMA and GDOT hydraulic modeling in HEC-RAS, scour calculations, abutment riprap calculations, deck drainage calculations, report preparation, and community coordination.***
03/20 – 03/21	**I-285 Westbound Ramp Extension GDOT, DeKalb County, GA.** *Hydraulic Engineer*. The project extended an I-285 westbound off-ramp, with the widening occurring over existing box culverts at North Fork Nancy Creek and North Fork Nancy Creek Unnamed Tributary 2. The project site is located in ***FEMA Zone AE and has a designated floodway.*** The extensions of the two box culverts resulted in a minimal rise in Base Flood Elevations (BFEs). Responsible for the ***hydraulic analysis and associated Conditional Letter of Map Revision (CLOMR) application package, FEMA coordination***, and community coordination. After the initial ***CLOMR submittal to FEMA the HEC-RAS modeling*** and extension design was revised to obtain a no-rise by lining one of the culvert barrels.
02/21 – Ongoing	**I-285 at I-20 East Interchange Reconstruction GDOT, DeKalb County, GA.** *Hydraulic/Drainage Engineer*. The Design-Build project reconfigured the I-285/I-20 eastern interchange, widened and reconstructed approximately 6 miles of I-20, and reconstructed and improved approximately 2 miles of side roads. Responsible for the ***drainage and MS4 design*** and respective reports preparation, in addition to the erosion and sedimentation control design, calculations, and plans. One of the project's bridge replacements was a hydraulic crossing (I-20 over Snapfinger Creek) and is designated as ***FEMA Zone AE with a designated floodway.*** Responsible for the ***hydrologic calculations, HEC-RAS hydraulic modeling, scour calculations, abutment riprap calculations, deck drainage calculations, and report preparation.*** The bridge replacement resulted in no increase in BFEs, however, the floodway width was revised at one published cross section. Responsible for the associated ***CLOMR and LOMR application packages, FEMA coordination,*** and community coordination with DeKalb County and the City of Stonecrest.

Firm employed by. ARCADIS			
Name	**Cailyn Youmans, PE**	Years of relevant experience with this employer	4
Title	Staff Transportation Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		BS / 2014 / Civil Engineering	
Active registration number / state / expiration date		PE.0048536 / LA / Exp 06/2026, # 51439 / GA / Exp 12/2025, #150758 / TX / Exp 09/2027	
Year registered	2023	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Drainage Design**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Youmans is a Civil Engineer with over nine years of experience specializing in water resources and hydraulics engineering. Her extensive background includes hydrologic and hydraulic modeling, open and closed site development drainage design for roadway, modeling of FEMA and non-FEMA regulated waterways, and stormwater water quality. She has continually demonstrated competent design for a multitude of projects for private and state clients.
09/23 – 06/24	**Caddy Drive & Sauvage Ave over Ames Canal No.1, LADOTD, Jefferson Parish, LA.** *H&H Design Engineer.* Two bridge replacements over a canal in Zone AE are prepared for DOTD. Project classified as an Off-System Bridge Replacement. The replacement included widening of the bridges as well as widening of creek adjacent to the bridge to meet requirements. Waivers were necessary due to geometric constraints. Responsible for drainage calculations, bridge modeling, and hydraulic report. ***Calculations done using LADOTD's HYDR2009. Modeling included HEC-RAS. Received files processed using EPA SWMM.***
02/22 – 04/25	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** *Hydraulics Engineer* Segment 1 of the I-10 Calcasieu Bridge Replacement P3 project to replace the existing I-10 bridge over the Calcasie River with a new bridge north of I-10. Project involves the design of ***both open and closed conveyance systems for Segment 1 between Prater Rd and PPG drive, culvert and cross-drain analysis and design, and outfall analysis utilizing LADOTD HYDR design software.***
11/21 – 05/24	**Blounts Creek Study, Cumberland County, NC.** *H&H Design Engineer*. Study aimed to create various solutions and improvements to Blounts Creek and the secondary system to reduce amount of flood impacted areas. Design elements included open channel, culvert, bridge, closed drainage, and detention. Responsible for primary system hydraulic and hydrologic modeling/design of bridges improvements, channel improvements, detention improvements, and reports of the influences of each proposed improvement. ***Modeling included Hydrologic Engineering Center - River Analysis System (HEC-RAS) and Hydrologic Engineering Center - Hydrologic Modeling System (HEC-HMS).***
09/24 – Ongoing	**Russell – Person Blounts Bridge & Stream Restoration, Cumberland County, NC.** *H&H Design Engineer.* Two bridge replacements and stream grading/restoration were approved from the various Blounts Creek proposals and funded through multiple federal and state grants. The designing includes grading of 4000 linear feet of Blounts Creek. One of the

	bridges is a CSX railroad bridge. The project required a ***2D model to analyze the complex storage that occurs throughout the project limits. Modeling includes HEC-RAS, HEC-HMS, and RAS2D.***
10/21 – 04/22	**FY22 Bridge Bundle, GDOT, Various Counties, GA.** *H&H Design Engineer*. Six bridge replacement costing plans. Design elements included ***hydraulic study and subsequent bridge hydraulic reports. Responsible for hydraulic modeling,*** determining recommended bridge length, chord, span, and placings, scour and deck drainage calculations and writing the report. ***Modeling included HEC-RAS.***
10/23 – Ongoing	**SR-20, Cherokee County, GA.** *H&H Design Engineer.* 17-mile-long road improvement. Design elements culvert design, bridge design, and ***open and closed drainage design.*** Responsible for the ***bridge modeling and culvert modeling of the project as well as the H&H report.*** Bridge located in a ***FEMA Zone AE with floodway with abnormal stages*** located where the Etowah River enters Lake Allatoona. ***Modeling includes HEC-RAS.***
01/19 – 08/19	**Newport Business Park, Mansfield, Tarrant County, TX.** *Pond and Hydraulic Engineer.* Office development site design along a regulatory ***floodway Zone AE creek***. Design elements included water quality ponds, site design, and flood study with grading. Responsible for the water quality ponds and the flood study with grading which included adding two frontage roads missing in the effective model along with our site grading changes which ***required a Letter of Map Revision based on Fill (LOMR-F) report with the flood study for Federal Emergency Management Agency (FEMA). Modeling included HEC-RAS for hydraulics and AutoCAD for grading.***
02/20 – 09/20	**Villas at Long Branch, Rowlett, Dallas County, TX.** *Hydraulic Engineer***.** Neighborhood development site design along a regulatory ***floodway Zone AE creek.*** Design included residential site design and ***flood study with a Conditional Letter of Map Revision (CLOMR)***. Responsible for modeling the proposed site design and updating the adjacent bridge, providing corrected effective, and revised plan along with ***preparing the report and then as built CLOMR for FEMA. Modeling included HEC-RAS.***

Firm employed by. ARCADIS

Name	**Justin Corbitt, PE**	Years of relevant experience with this employer	2
Title	Hydraulics Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization	BS / 2017 / Civil Engineering / Tennessee State University MS / 2020 / Civil Engineering / University of Tennessee Knoxville		
Active registration number / state / expiration date	PE. 0049018 / LA / Exp. 09/2026; PE. 125113 / TN / Exp. 04/2026 (Also licensed as a PE in AL, AR, GA, MS) TN EPSC Level 2 Design Certified Professional Cert. # 150190-D2		
Year registered	2024	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	**Drainage Design**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Corbitt has over 8 years of experience in hydrology and hydraulics, roadway drainage design, and erosion prevention and sediment control design. Justin has multi state licensure and provides design & training services to numerous DOT clients throughout the southeast for linear transportation projects. He is experienced with multiple **design softwares including, HEC-RAS 1D, HEC-HMS, HY-8, SMS / SRH-2D, Hydraulic Toolbox, MicroStation, Geopak Drainage, OpenRoads Designer, StormCAD and ArcGIS Pro**. He also has a TDEC Level 2 EPSC Certification and SMS SRH-2D Training (Aquaveo & FHWA).
08/24 – Ongoing	**I-55 From South of Mississippi River to North of Mississippi River – CMCG, Shelby County, TN.** *Hydraulic Design Lead* - Owner Representative for the replacement of the I-55 bridge over the Mississippi River in Shelby County. Justin is leading the preparation ***two-dimensional H&H analysis in SMS SRH2D and HEC-RAS2D and provides preliminary scour analysis to FHWA*** to assist in developing scour analysis through new and updated methodologies. This ***bridge is in FEMA AE zone, Coast Guard jurisdiction, and Army Corps jurisdiction.*** Arcadis is also in charge of obtaining a no-rise solution and assist TDOT with Coast Guard application. The project is a reconstruction and widening of I-55 for 1.65. The bridge length is 1.01 miles and the model includes approximately 6.5 miles of channel modeled, with the model domain covering 10,000 acres for the SMS SRH-2D model, and the 1% AEP flood event exceeding 1.96 million CFS.
07/24 - Ongoing	**TDOT Region 2 ORD Drainage Design Training, Hamilton County, TN.** *Drainage Design Lead* – Responsible for working with TDOT Region 2 staff and ***train them on new design procedures and model parameters in ORD***. Providing design guidance and support on project in dense urban area that involves widening of the roadway, and reconstruction of many existing drainage systems to the new roadway curb and gutter sections. Providing ***training, design recommendations, design review, and design services & guidance for detention pond design*** within the project limits to limit the increase in surface water discharges from the pre and post conditions. Also assisting with ***plans production in various phases of design and guidance on generating quantities from the model utilizing the tools available within the software.*** Responsible for troubleshooting technical issues with the software and recommending workflows to improve modeling efficiency.

03/24 - Ongoing	**SR-30 (Old Washington HWY) from Near SR-29 (US-27) to West of New Union Rd./ White Oak Rd., Rhea County, TN.** *Hydraulic Design Lead* - Responsible for ***creating hydrologic & hydraulic design models*** for proposed roadway realignment and replacing bridge over Little Richland Creek. The project is in ***FEMA zone AE and TVA reservoir. H&H study was completed for the no-structure, existing and proposed bridges***. The bridge span arrangement was set to provide vertical and horizontal clearances for TVA in addition to an arrangement to obtain a no-rise solution. Also worked with TVA and roadway design consultant to mitigate net roadway fill within the TVA reservoir and identified areas to create an offset basin plan.
09/21 – 03/23	**Old Lebanon Dirt Road, Wilson County, TN.** *Hydraulic Design & Drainage Lead*. This project was a roadway widening and alignment project with complex flooding issues throughout the corridor. The client asked to develop multiple alternatives to alleviate flooding and overtop the mainline roadway. Developed a ***Surface-water Modeling System (SMS) Sediment and River Hydraulics - Two Dimensional (SMS SRH-2D)*** to show the client different design options that would eliminate flooding and overtopping the roadway as well as reduce flooding to several residential properties. The preferred designed included approximately 1300 feet of new channel design with seven total structures, all designed in SMS SRH-2D. The new channel rerouted floodwaters into a ZONE AE, which it had previously reached by way of residential property flooding. With the SRH-2D model we were able to ***demonstrate a no-rise in the design and create a 2D informed 1D Hydrologic Engineering Center - River Analysis System (HEC-RAS) model for regulatory compliance.***
09/21 – 03/23	**TDOT ORD Design Training Manuals and Drainage Manual, Statewide, TN.** *H&H Technical SME*. Part of the technical services team responsible for creating ORD training manuals and guidance for statewide use by TDOT and their consultants. Created numerous trainings and workflows for design processes in ORD for both roadway design elements and drainage design elements, including updated ***training guidance for creating HEC-RAS components in ORD that could be exported and used as a base 1D georeferenced model in HEC-RAS.*** Helped ***develop updated survey guidelines and checklists*** for use by project surveyors to make sure the correct information was being captured and represented for streamlined H&H models. Also worked with TDOT technical staff to review and update portions of the ***TDOT drainage manual*** pertaining to design of hydrology, culverts, stormwater drainage, stormwater storage, roadside ditches, and plans production guidance to include applicable updated federal guidance as well as inclusion of new approaches to modeling with updated design software.
07/20 – 09/21	**I-40 & Donelson Pike Interchange Reconstruction, Davidson County, TN.** *Hydraulic Design Engineer*. This project consisted of a completed redesign and reconstruction of the I-40 and Donelson Pike Interchange in Nashville TN, which is a key interchange for the Nashville International Airport. Due to the new design of the intersection, it was determined that the project would need a conditional letter of ***map revision (CLOMR)*** due to a backwater increase in the ***FEMA floodway*** at the project location. I took the proposed model design and began preparing the CLOMR package starting with the required hydraulic model scenarios (per FEMA; an effective, duplicate effective, corrected effective, existing, and proposed model would be required). After completing the necessary hydraulic modeling scenarios for the CLOMR package, filled out all of the necessary paperwork (MS-1, MS-2, finance charge, etc.) and put the paperwork together for review by FEMA, TDOT leadership, TDOT finance, and Metro Nashville. Completed all of the updated floodplain mapping using GIS software, which will be developed for use the flood insurance rate maps (FIRM) and flood insurance studies (FIS).

16 STAFF EXPERIENCE:

Traffic Engineers

Firm employed by. ARCADIS				Meets MPR No. 4
Name	**Ari Deitch, PE, PTOE, PTP, RSP1**		Years of relevant experience with this employer	11
Title	Senior Transportation Engineer		Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		BS / 2012 / Biological Engineering, Louisiana State University		
Active registration number / state / expiration date		PE.0041842 / LA / Exp. 03/2026; PTOE #4346 / USA / Exp. 11/2026 PTP #690 / USA / Exp. 07/2028; RSP #37 / USA / Exp. 12/2027		
Year registered	2018	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities		**Traffic Engineering (Signal Design), Bike/Ped Improvements**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Deitch is a **Senior Traffic Engineer** specializing in **traffic engineering and design**, safety, transportation management, and conceptual roadway design. Mr. Deitch has experience managing and working on projects for LADOTD and the City of Baton Rouge, as well as other DOTs across the country, pertaining to NEPA studies, interchange modification / justification reports, Stage 0 feasibility studies, transportation management plans, traffic, and safety studies **pedestrian and bicycle improvements**, **access management**, **signal design**, and **signing and marking design**. He has experience and proficiency in IHSDM, SYNCHRO, VISTRO, VISSIM, SIDRA, GuidSIGN, HCS and MicroStation software. Mr. Deitch has completed LADOTD Traffic Engineering Process and Report Training. **Mr. Deitch meets Minimum Personnel Requirement Number 4.**
09/15 – 06/18	**US 165 Corridor Improvements, Ouachita Parish, LA.** *Traffic Engineer.* Responsible for performing traffic engineering tasks for the Stage 0 Feasibility Study to develop ***superstreet, access management, and safety improvements for the US 165 corridor***. The project was divided into 3 distinct segments for analysis purposes, as different software tools were needed to effectively analyze operational conditions for existing and future years. Arcadis prepared all materials and conducted a public meeting to present concepts to the public and local stakeholders.
02/22 – Ongoing	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** *Traffic Engineering Design Manager* for the I-10 Calcasieu Bridge Replacement P3 project to replace the existing I-10 bridge over the Calcasieu River with a new bridge north of I-10. The project also includes the construction of several new bridge structures within the project limits, both inside and outside widening of I-10, improvements and modifications to existing interchanges, and improvements to other associated roadways within the project limits. Responsibilities include overseeing the delivery of traffic engineering design and deliverables including Interchange Modification Report, Transportation Management Plan, ***traffic signal design***, ***signing and marking design***, and ***ITS design***.
04/19 – 12/19	**East Baton Rouge Signal Upgrades and Design, LADOTD, East Baton Rouge Parish, LA**. *Traffic Engineer.* Technical lead of project tasks involving ***traffic signal inventory and development of updated signal design plans and quantities***. Project includes 39 intersections in East Baton Rouge Parish to be upgraded from video detection to magnetometer detection.
12/19 – Ongoing	**MoveBR Bluebonnet Blvd (Perkins Road to Picardy Avenue), City of Baton Rouge, East Baton Rouge Parish, LA.** *Senior Traffic Engineer.* The purpose of the project is to widen Bluebonnet Blvd from 4 lanes to 6 lanes between Perkins Road and Picardy Avenue. Responsible for the development of a traffic design study to develop proposed improvements and project design to maximize operational and safety benefits. Responsible for development of ***signal design plans and timings***, including ***fiber interconnect plans for signal communications***.

01/21 – Ongoing	**MoveBR Lee Drive (Highland Road to Perkins Road), City of Baton Rouge, East Baton Rouge Parish, LA.** *Senior Traffic Engineer.* The purpose of the project is to provide ***capacity improvements and ped/bike accommodations*** along Lee Drive. Responsible for developing a traffic design study to evaluate and identify the preferred alternative, development of ***signal design plans and timings***, development of ***fiber interconnect plans for signal communications***.
01/24 – Ongoing	**Scenic Highway Corridor Improvements (Harding to Swan), City of Baton Rouge, East Baton Rouge Parish, LA.** *Senior Traffic Engineer.* The purpose of the project is to provide ***corridor enhancements including ped/bike accommodations*** along Scenic Highway. Responsible for the development of ***signal design plans and timings*** for the 3 locations, including a ***HAWK signal***.
11/20 – Ongoing	**I-10 CMAR, LADOTD East Baton Rouge Parish, LA.** *Traffic Engineer*. Projet includes improvements on Interstate 10 through widening and reconstruction of the mainline from 3 to 4 lanes in each direction, including bridge replacement and rehabilitation, interchange and ramp modification, shoulder widening, and auxiliary lane(s) from LA 415 to Essen Lane on I-10 and I-12. Providing a ***technical advisory role*** for a wide range of traffic engineering tasks including development of permanent signing plans, ***signal design plans***, Interchange Modification Reports, and ***Transportation Management Plans*** for the widening of I-10 from LA 415 to Essen Lane and improvements to interchanges along this segment.
01/19 – 05/20	**US 90 Ramps at LA 88 Roundabouts, Iberia Parish, Louisiana.** *Transportation Engineer.* Assisted with ***permanent signing and striping*** components of ***roadway safety design plans*** for proposed roundabouts.
02/23 – 05/24	**District 04 Pedestrian Safety Improvements, LADOTD, Caddo and Bossier Parish, LA.** *Project Manager*. Responsible for contract management and technical advisory for this Stage 0 Feasibility study to ***develop and evaluate safety countermeasures to address pedestrian safety needs*** on 7 corridors within Caddo and Bossier Parish. The study methodology was similar to that of a Road Safety Assessment, and included historical crash analysis and on-site field reviews to identify pedestrian safety needs. Countermeasures were developed in close coordination with project stakeholders including City of Bossier, City of Shreveport, NLCOG, Downtown Development Distriction, and District 04. Stakeholders also participated in virtual and on-site field reviews.
04/16 – 09/18	**New Orleans Pedestrian Safety Improvements, LADOTD, Orleans Parish, LA.** *Project Manager.* Responsible for assessing existing and future safety deficiencies related to ***pedestrian and bicycle*** modes and selecting safety countermeasures for 20 high-risk locations. Developed ***design drawings*** for proposed short-term and long-term improvement phases and conducted ***benefit-cost analysis*** to inform project prioritization. Conducted safety analysis using Highway Safety Manual predictive methods. Organized and lead project stakeholder meetings to review alternatives, obtain feedback, and develop context sensitive solutions.
02/17 – 02/18	**I-49 Interchange Safety Improvements, LADOTD, Lafayette Parish, LA.** *Traffic Engineer.* Responsible for data collection and analysis, traffic analysis, and conceptual design drawings. Purpose was to identify feasible improvement alternatives to address safety issues along the I-49 corridor at 3 interchanges. Participated in meetings with LADOTD HQ and District 03 team members to understand project needs and develop context sensitive solutions.
08/14 – 06/15	**LA 3235 Corridor Improvements, LADOTD, Lafourche Parish, LA.** *Traffic Engineer***.** Responsible for review of existing crash data and ***traffic operations analysis***, development of ***safety countermeasures***, conceptual drawings, and Stage 0 documentation. Purpose of the project was to develop ***access management strategies*** and roadway improvements that will maintain and improve mobility, improve safety, support existing and future development along the corridor. Safety performance of alternatives were estimated using Highways Safety Manual predictive methods.

Firm employed by. ARCADIS				Meets MPR No. 4
Name	**Kester Hollier, PE, PTOE**		Years of relevant experience with this employer	4
Title	Senior Transportation Engineer		Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization		BS / 2004 / Civil Engineering, Louisiana Tech University		
Active registration number / state / expiration date		PE.0034304 / LA / Exp. 03/2027; PTOE #3928 / USA / Exp. 11/2027		
Year registered	2009	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities		**Technical Advisor (Traffic)**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Hollier has **20 years of experience in the field of transportation engineering** including **traffic engineering**, **signal timing and design**, roadway design, **complete street improvement projects**, roadway safety analysis and design, and **construction management** and inspection. Working on a wide variety of projects from the planning and conceptual phases to the design and construction phases, has given him the experience to help identify the needs and requirements for projects. This experience allows him to understand stakeholders ranging from local public agencies to state DOTs and helps provide expertise in achieving successful solutions for a variety of projects. He has experience and proficiency in traffic engineering and safety analysis software including IHSDM, SYNCHRO, VISTRO, VISSIM, SIDRA, GuidSIGN, HCS and MicroStation software. **Mr. Hollier meets Minimum Personnel Requirement Number 4.**
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Project Manager*. Responsible for ***traffic engineering tasks*** including development of permanent signing plans, ***traffic signal design plans***, interchange modification reports, and transportation management plans for the widening of I-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. Extensive historical crash and safety analysis is being performed in support of the IMR and TMP. One critical component of the project is maintaining traffic during the construction of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to ***determine the impacts during construction and mitigations that will be necessary to minimize delay***.
11/17 – 07/20	**LA 466 (5th Street) Improvements Traffic Study, City of Gretna, Jefferson Parish, LA.** *Project Manager / Traffic Engineer*. Responsible for the traffic study and impacts for the proposed complete streets improvements along the LA 466 corridor between LA 23 and Richard St. in Gretna, Louisiana. Tasks included data collection along the corridor and at designated intersections, safety and crash analysis along the corridor, trip generation/land use and performing existing traffic analysis and future traffic analysis for proposed final alternative. The traffic study was prepared to follow the Louisiana Department of Transportation and Development's ***Traffic Engineering Process and Report Guidelines***. The project also included a stand alone pedestrian study along the corridor at designated intersection and the ***design of accessible pedestrian signals at signalized intersections***.
05/14 – 08/20	**Causeway Blvd. at Earhart Expwy. Interchange, LADOTD, Jefferson Parish, LA.** *Traffic/Civil Engineer*. Responsible for the design of ***traffic control and construction sequencing***, ***pavement marking layout***, quantity analysis, cost estimates, and quality control for a new interchange at LA 3139 (Earhart Expwy.) and LA 3046 (Causeway Blvd.) in Jefferson Parish, LA. Provided review for the interchange traffic sign and ***traffic signal timings and design.*** Identified all necessary design waivers

	and design exceptions required for LADOTD approval. Provided geometric layout design, typical section design and review, and joint layout design for several interchange ramps and underpasses.
05/09 – 07/13	**LA 23 Widening (Lapalco Blvd. – Engineers Rd.), LADOTD, Jefferson and Plaquemines Parishes, LA.** *Traffic/Civil Engineer*. Responsible for the roadway design and geometrics for the widening of LA 23 in Jefferson and Plaquemines Parishes between Lapalco Blvd. (LA 428) and Engineers Rd. (LA 3017). Developed traffic analysis for the ***traffic signal timing and design plans*** and ***required turn bay lengths*** at intersections. Developed ***traffic signing plans***, pavement marking layouts and temporary traffic control plans.
09/12 – 02/16	**Stage 1 EA for Replacing Belle Chasse Tunnel and Bridge, LADOTD, Plaquemines Parish, LA.** *Traffic Engineer.* Responsible for the feasibility study and traffic analysis along LA 23 (Belle Chasse Highway) between LA 428 (Behrman Highway) and LA 406 (Woodland Highway) for ***multiple 6-lane bridge alternatives proposed to replace the existing Belle Chasse Tunnel and lift bridge over the Intercoastal Waterway***. These alternatives included 3%, 4%, and 5% bridge grades that modified roadway geometry and intersection location. Responsible for the review of roadway design and costs for the ***Line and Grade Study*** along with the review of the construction sequencing and traffic maintenance of the constructability review.
12/17 – 11/19	**Causeway Boulevard Widening, Jefferson Parish, LA.** *Project Manager / Traffic Engineer*. Responsible for the ***traffic and safety study*** for the proposed widening of Causeway Boulevard between Metairie Rd. and West Esplanade Blvd. in Jefferson Parish, LA. Tasks included data collection, traffic volume redistribution, left-turn placement and ***turn bay storage length***, and existing traffic analysis and future traffic analysis of a preferred alternative.
07/21 – 07/22	**US 61: Cardinal Drive to Bert Street Safety Improvements, LADOTD, St. John the Baptist Parish, LA.** *Traffic Engineer*. Assisted with the development of a Stage 0 Feasibility and Safety Study for the US 61 Corridor in LaPlace, LA. Responsible for ***traffic and safety analysis*** tasks for existing, no-build, and build conditions. Analyis was performed using HCS. Purpose of the study was the ***develop and evaluate feasible alternatives*** that would address operational and safety needs along the corridor.
06/13 – 04/14	**US 190 Roundabout and Ped Improvements, LADOTD, St. Tammany, LA.** *Traffic Engineer*. Responsible for roundabout ***geometric design*** and ***pedestrian and bike path design*** along the US 190 corridor in the City of Slidell and St. Tammany Parish to improve safety for motorized and non-motorized roadway users.
10/18 – 01/19	**LA 22 Traffic Circulation and Corridor Analysis, NORPC, St. Tammany Parish, LA.** *Traffic Engineer*. Responsible for the ***development of three future alternatives*** along Northshore Boulevard between I-12 and US 190 in Slidell, LA. Managed the data collection process and peak period observations to determine existing traffic patterns as well as the safety analysis along the corridor. Developed three alternatives that used a combination of traffic signal retiming, J-turns, and roundabouts to provide better ***access management*** along Northshore Boulevard as well as improve traffic flow in the corridor for current and proposed future conditions with consideration given to proposed future developments using trip generation and land use analysis.
10/10 – 7/15	**Barriere Road Feasibility Study/Traffic Study, US Department of Defense, Plaquemines Parish, LA.** *Civil/Traffic Engineer.* Responsible for the geometric layout and design of the realignment alternatives of Barriere Rd. between LA 23 to the US Naval Air Station. Developed and reviewed ***traffic analysis*** for arrival and departure patterns for the South US Naval Air Station entrance gates.

Firm employed by. ARCADIS

Name	**Max Aguirre, PhD, PE, PTOE, RSP2I**	Years of relevant experience with this employer	6
Title	Transportation Engineer	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization	PhD / 2018 / Engineering Science, LSU MS / 2015 / Construction Management, LSU BS / 2013 / Civil Engineering, LSU		
Active registration number / state / expiration date	PE. 47579 / LA / 09/30/ 2027; PTOE #5291 / USA / Exp. 7/2028; RSP2I #182 / USA / Exp. 7/2027		
Year registered	2023	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	**Traffic Engineering (Signal Design), Bike/Ped Improvements**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Dr. Aguirre is a Professional Engineer specializing in **traffic engineering studies and design**. Dr. Aguirre has experience working on projects for Louisiana Department of Transportation and Development (LADOTD) pertaining to traffic and safety studies, Stage 0 feasibility studies, **pedestrian and bicycle improvements**, **permanent signing design**, **signal design**, and NEPA studies. He is also familiar with the Highway Capacity Manual, Highway Safety Manual, MUTCD, and AASHTO "Green Book". Dr. Aguirre is also knowledgeable in the application of several software programs including Interactive Highway Safety Design Model, SYNCHRO, Highway Safety Software (HSS), GuidSIGN, HCS and MicroStation software.
02/23 – Ongoing	**Cross Bayou Bridge Replacement, LADOTD, Caddo Parish, LA.** *Traffic Engineer.* Conducted feasibility study to ***develop and evaluate alternatives for the replacement of two existing bridges over Cross Bayou.*** Developed Stage 0 Documentation including Preliminary Scope and Budget and Environmental Checklists. The next phase of the project will be conducted under the same contract and will include the development of construction plans.
12/19 – Ongoing	**MoveBR Bluebonnet Blvd (Perkins Road to Picardy Avenue), City of Baton Rouge, East Baton Rouge Parish, LA.** *Traffic Engineer.* The purpose of the project is to widen Bluebonnet Blvd from 4 lanes to 6 lanes between Perkins Road and Picardy Avenue. Responsible for assisting with the ***development of a traffic design study to develop proposed improvements and project design*** to maximize operational and safety benefits. Responsible for assisting with the ***development of signal design and timing plans*** at 7 intersections within the project limits.
01/21 – Ongoing	**MoveBR Lee Drive (Highland Road to Perkins Road), City of Baton Rouge, East Baton Rouge Parish, LA.** *Traffic Engineer.* The purpose of the project is to provide ***capacity improvements and ped/bike accommodations*** along Lee Drive. Responsible for assisting with ***developing a traffic design study*** to ***evaluate and identify the preferred alternative***, and ***developing signal design*** at the intersections of Highland Road, Boone Drive, and Hyacinth Avenue.
01/24 – Ongoing	**Scenic Highway Corridor Improvements (Harding to Swan), City of Baton Rouge, East Baton Rouge Parish, LA.** *Traffic Engineer.* The purpose of the project is to provide ***corridor enhancements including ped/bike accommodations*** along Scenic Highway. Responsible for the development of ***signal design plans and timings*** for the 3 locations, including a ***HAWK signal***.

09/19 – 12/19	**East Baton Rouge Signal Upgrades and Design, LADOTD, East Baton Rouge Parish, LA**. *Traffic Engineer.* Assisting in ***traffic engineering*** tasks involving ***traffic signal inventory and development of updated signal design plans and quantities***. Project includes 39 intersections in East Baton Rouge Parish to be upgraded from video detection to magnetometer detection.
02/23 – 05/24	**District 04 Pedestrian Safety Improvements, LADOTD, Caddo and Bossier Parish, LA.** *Traffic Engineer*. Responsible for conducting all traffic and safety tasks needed for this Stage 0 Feasibility study to develop and evaluate safety countermeasures to address ***pedestrian safety needs*** on 7 corridors within Caddo and Bossier Parish. The study methodology was similar to that of a Road Safety Assessment, and included historical crash analysis and on-site field reviews to identify pedestrian safety needs. Countermeasures were developed in close coordination with project stakeholders including City of Bossier, City of Shreveport, NLCOG, Downtown Development Distriction, and District 04. Stakeholders also participated in virtual and on-site field reviews. Study data, methods, and results were documnted in a ***Stage 0 Feasibility Reports*** were completed for all 7 study corridors with ***Preliminary Scope and Budget Checklist*** and ***Environmental Checklist.*** Performed ***benefit-cost analysis*** to aid in prioritizing the implementation of countermeasures.
09/19 – 06/21	**Baton Rouge Pedestrian and Bicycle Safety Action Plan and Road Safety Assessments, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer*. Assisted with the ***assessment of existing and future safety deficiencies*** related to pedestrian and bicycle modes at identified high-risk intersections and segments in East Baton Rouge Parish. Assisted with the development of ***screening criteria*** to identify high priority locations with a history of pedestrian and/or bicycle crashes. Assisted in the development of ***Road Safety Assessments (RSAs)*** at 10 priority locations to identify and evaluate safety deficiencies and develop safety countermeasures to improve safety for pedestrians and bicyclists. Evaluated alternatives to ***determine and document the feasibility of proposed countermeasures***. Developed ***benefit-cost analysis*** to prioritize implementation of proposed improvements.
10/18 – 03/21	**LA 3040 Corridor Improvements, LADOTD, Houma, LA.** *Traffic Engineer.* Study to identify safety and/or operational issues along 2.5 miles of Martin Luther King Boulevard (LA 3040) in Houma, LA to ***evaluate reasonable alternatives to address safety and operational needs***. Responsible for performing traffic analysis using Highway Capacity Software in accordance with LADOTD TEPR Requirement.
08/19 – 02/20	**US 61 Access Management and Corridor Improvements (Airline Hwy), LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer*. Project purpose was to evaluate the effectiveness of proposed ***access management improvements*** along US 61 and identify feasible alternatives to ***maximize operational and safety benefits***. Evaluated the need for pedestrian and bicycle accommodations based on historical crash data and adjacent land use. Assisted in conducting ***traffic analysis*** and the development of ***benefit-cost analysis*** to compare the effectiveness of the proposed alternatives.
09/19 – Ongoing	**I-49 (Ricohoc to Berwick) Supplemental Environmental Impact Assessment, LADOTD, St. Mary Parish, LA.** *Traffic Engineer*. Assist in project tasks involving planning and evaluation of different ***interchange alternatives*** and their ***geometric design, socio-economic impacts, mobility impacts, and environmental impacts***.
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer*. Assisting in ***traffic engineering*** tasks including development of ***permanent signing plans***, Interchange Modification Reports, and Transportation Management Plans for the widening of I-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. Assisted in the development of existing condition safety analysis including tasks such as crash data analysis, collision diagrams, and crash report documentation.

16 STAFF EXPERIENCE:

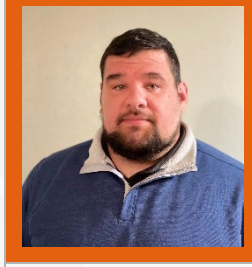
ITS Design Engineers / Technicians

Firm employed by. ARCADIS				Meets MPR No. 5
Name	**Paul Hsu, PE**		Years of relevant experience with this employer	8
Title	Principal ITS Engineer		Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		BS / 2002 / Electrical & Computer Engineering, Louisiana State University (LSU)		
Active registration number / state / expiration date		PE.0035983 / LA / Exp. 03/2027		
Year registered	2011	Discipline	Electrical Engineer	
Contract role(s) / brief description of responsibilities		**Traffic Engineering (ITS)**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Hsu is a **Principal ITS Engineer and Project Manager with over 20 years of experience** working in both the public and the private sector. He has managed and led ITS design teams for a variety of ITS projects by LADOTD, ALDOT, MDOT, TxDOT, FDOT, and GDOT. His areas of **expertise in ITS include design and analysis of field devices, communication systems, video systems, electrical systems**, traffic management centers, CAV, **Systems Engineering Analyses (SEA)**, and **ITS Architectures** for several DOTs including DOTD. He has a wealth of design experience in developing plans, specifications, special provisions, construction estimates, project schedules, traffic management plans, FAA evaluations, and LADOTD Constructability/Biddability reviews. In addition, his experience also includes providing **construction engineering support services** such as reviewing shop drawings, as-built drawings, and request for information (RFIs). **Mr. Hsu meets Minimum Personnal Requirement Number 5.**
11/20 – Ongoing	**I-10 Widening CMAR – ITS and Traffic Design, LADOTD, Baton Rouge, LA.** *Senior ITS & Electrical Design Lead***.** Led and delivered 100% Signed and Sealed PS&E package for two ***ITS designs*** simultaneously: Smart Work Zone (SWZ) system for Stage 1 of the I-10 construction and Permanent ITS deployment to upgrade existing ITS equipment. An ***ITS Systems Engineering Analysis*** was conducted and reuslts documented in an SEA report to LADOTD. SWZ system included 41 Portable PCMS, 26 queue detection sensors and 10 portable CCTV trailers. The permanent ITS involved relocating the existing electrical and communication system by deploying a joint utility carrier duct-bank for multiple users including LADOTD and AT&T.
06/18 – 10/19	**I-10 Queue Warning Systems Engineering Analysis (SEA), LADOTD, Baton Rouge, LA.** *Project Manager / Senior ITS & Electrical Engineer:* Led a comprehensive team of ITS, Traffic, Data, and Safety engineers specialized in their respective areas to complete a ***highly complex and first of its kind ITS Systems Engineering Analysis involving the evaluation and design of a Queue Warning system*** for a frequently congested corridor on I-10 eastbound from LA-77 to I-110. The analysis developed short, medium, and long-term options to provide a comprehensive approach in enhancing the traveler's safety within the project area. In addition to ***developing the operational concept,*** physical architectures, and ***alternative analysis*** configuration, the Arcadis team also provided ***preliminary 30% design plans*** that included Queue warning design alternative analysis, communication system integration, electrical system design recommendations, ***opinions of probable costs, and design drawings.***
08/15 – 02/16	**I-10 Twin Span ITS, LADOTD, Orleans and St. Tammany Parishes, LA.** *Project Manager / Senior ITS & Electrical Engineer:* ***Designed an electrical system to power the new and proposed ITS field devices*** within the project limits. Upgraded the existing electrical and communication systems to accommodate and meet the new ITS deployment's requirements. A single-phase electrical distribution system was designed. Major responsibilities included performing the electrical analysis for each ITS device and designing the system to ensure that field site meets the electrical code while providing sufficient capacity for

	current and future demand. Other tasks of the project also include conducting the overall ***communication system design,*** developing a level 2 Traffic Management Plan (TMP), ***preparing quantities and cost estimates***, as well as ***preparing plans and specifications.***
05/12 – 06/13	**Monroe Phase 1 ITS Design, LADOTD, Monroe, LA.** *ITS & Electrical Engineer:* This ITS project involved working with a wide ***range of communication configurations as well as a variety of ITS devices*** because an existing deployment was required to be integrated into an upgraded system as requested by LADOTD. A mixture of different types of communication system had to be deployed because of limited resources as well as budget constraints. One of Paul's major responsibilities on this project included performing the ***electrical analysis and design*** for the implementation of each ITS device and designing the system to ensure that each and every location meets the electrical code while providing sufficient capacity for current and future demand. Other tasks also include conducting overall ***communication system design, preparing quantities and cost estimates, as well as preparing plans and specifications.***
06/13 – 12/13	**Sunshine Bridge ITS Design, LADOTD, St. James Parish, LA.** *ITS & Electrical Engineer:* This ITS project involves working with a wide range of communication configurations as well as ***designing a bridge conduit system*** that can accommodate the ***fiber optic communications*** to reach ITS devices across the Sunshine Bridge on LA 70. In addition to the challenges of selecting suitable conduit system for the bridge application, a mixture of different types of communication system had to be deployed because of limited resources as well as budget constraints.
12/13 – 02/16	**ITS Design and Specs IDIQ, MDOT, Statewide, Mississippi.** *ITS & Electrical Engineer:* Managed MDOT ***design plan development of ITS projects*** including Desoto County ITS (CMAQ 2013), Jackson County ITS, and Lakeland Drive ITS deployments. Paul also assisted with the development of various ***Systems Engineering Analyses*** as requested by MDOT for ITS projects including Desoto County ITS (CMAQ 2013), Jackson County ITS, Hattiesburg ITS, Gluckstadt ITS, I-55 Widening ITS, and the SR 601 Incident Management ITS Deployments. The ITS design services included evaluation and recommendations for ITS ***field device designs, conceptual design and cost estimates***, QA/QC, preparation of notice-to-bidder and special provision documents for other ITS designs, ***engineering support during construction***, submittal review, and design management. The MDOT ITS design manual and technical specifications were prepared as part of this task.
10/17 – 01/22	**Wekiva Parkway Section 6 ITS Design Build Florida Department of Transportation, Lake and Seminole County, FL.** *Senior ITS & Electrical Engineer:* This design-build project involves the ***design, construction, installation, and integration of a new ITS deployment and electrical power distribution system*** within the FDOT right of way to power the proposed ITS field devices within the project. A short circuit and protection coordination study was conducted for the designed power system and a power system design report was subsequently developed and submitted to FDOT. The design of electrical power system include disconnects, transformers, power meters, UPS, power distribution units, conduits, conductors and cables, pull boxes, surge protection devices, grounding systems, and lightning protection system. Paul performed electrical analysis for the implementation of each ITS devices and designing the system to ensure that every field site meets the electrical code while providing sufficient capacity for current and future demands. Other tasks of the project also include conducting voltage drop calculations, coordinating with multiple electrical utility companies, ***developing PS&E***.

Firm employed by. ARCADIS			
Name	**Cody Lemoine**	Years of relevant experience with this employer	6
Title	Certified Project Manager	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		N/A	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities		**Traffic Engineering (ITS)**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Lemoine has eleven years of experience including **field inspection and investigation**, design, **integration**, and maintainance of information systems in the transportation industry. He has experience with complex ITS networks that include wireless MESH, fiber optics, and copper. He has a thorough knowledge of WIFI, Cell Networks and Dedicated Short Range Communication (DSRC) systems and standards. Mr. Lemoine is well versed in all aspects of **network communications** and has completed several trainings on cyber security. He is certified through **Fiber Optics** of America as a Fiber Optic Technician and Fiber Optic Design. He has certified technical trainings on ITS assets and systems such as COHU, Axis, Daktronics, ISS RTMS Traffic Detector, Trafficware/Naztec, Econolite Autoscope and others.
08/21 – Ongoing	**CE&I for I-10 US 61 to Laplace ITS Deployment, Ascension, St. James, St. John the Baptist Parishes, LA.** *Senior Inspector.* ***Provide field inspection and investigation services to LADOTD on ITS expansion project*** that includes the installation of approximately 23 miles of fiber optic communications cable and conduit and the installation of 10 CCTV cameras including 4 that will be solar powered. Overseeing all aspects of CE&I including providing support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD, including Daily Work Reports, materials testing submittals, daily temporary traffic control, and daily pay items.
10/19 – 08/21	**CE&I for Alexandria ITS Deployment Phase 3, LADOTD, Rapides Parish, LA.** *Lead Inspector.* Provided construction management services to LADOTD on ITS expansion project in the Alexandria metropolitan area that ***included installation of fiber optic communications cable, DMSs and CCTV cameras on US 71, US 165, and LA 28.*** Responsibilities include overseeing all aspects of CE&I including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
06/24 – Ongoing	**ITS Management, Operations, and Maintenance Engineering & Inspection (ME&I) IDIQ Contract – Program Management (PM) and Maintenance Management System (MMS) Task Orders, LADOTD, Statewide.** *Field Manager / Project Manager.* ***Responsible for program and project management, scheduling, and invoice document*** preparation for the DOTD ITS maintenance program. Responsible for managing the routine maintenance of CCTV camera, Dynamic Message Sign (DMS), vehicle detector (VD) and Ramp Meter (RM) sites, and responsive/emergency maintenance of CCTV camera and DMS sites located throughout the state of Louisiana. ***Developed Traffic Control Plans (TCP)*** and worked with the LADOTD project manager to determine safety class and critical level assignments for all ITS sites. Performed training for and installation of the maintenance management system (MMS). Worked on the ***development of performance measures reports*****,** ITS Maintenance Plan, Program Management Plan (PMP) and Health and Safety Plan (HASP) for the project. Developed procedures and checklists for the performance of maintenance activities at ITS sites. ***Performed data collection*** for all

	existing and newly deployed ITS devices and assets. Performed site inspections, validation and quality control checks for maintenance activities performed under the contract.
06/24 – Ongoing	**ITS Management, Operations, and Maintenance Engineering & Inspection (ME&I) IDIQ Contract - Routine Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD, Statewide, LA.** *Field Manager / Project Manager.* Responsible for providing routine maintenance of statewide ITS sites including, CCTV cameras, DMS, VD, and Ramp Meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also include development of detailed checklist by device type; integration of checklist with MMS software; ***standardized reporting;*** development of routine maintenance scheduler; and coordination with statewide traffic management center (TMC), regional TMCs, and DOTD districts before, during, and after all routine maintenance activities. This project includes the troubleshooting and repair of malfunctioning ITS and network communications devices. Diagnostics and repair to utility power services, backup generator power sources, and solar power systems.
06/24-Ongoing	**ITS Maintenance Retainer Responsive Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD, Statewide, LA.** *Field Manager / Project Manager.* ***Responsible for providing responsive maintenance of statewide ITS sites including, CCTV camera and DMS.*** Responsible for responsive and emergency maintenance of ITS sites in Louisiana. Responsive maintenance involves the repair or replacement of any reported failed or malfunctioning equipment. Emergency maintenance is responsive maintenance that requires immediate repair, such as sites requiring traveler information, or incidents and events.
08/16 – 06/24	**ITS Maintenance, Engineering, and Inspection (ME&I) Retainer Contract - Program Management (PM) and Maintenance Management System (MMS), LADOTD, Statewide.** *Senior ITS Technician/Deputy Project Manager.* Responsible for program and project management, maintenance and related services for the LADOTD ITS maintenance program. Manages the routine maintenance of CCTV camera, DMS, VDS and Ramp Meter sites, and responsive/emergency maintenance of CCTV camera and DMS sites located throughout the state of Louisiana. ***Developed traffic control plans*** and worked with the LADOTD project manager to determine safety class and critical level assignments for all ITS sites. Performed training for and installation of the MMS. Worked on the ***development of performance measures reports,*** ITS Maintenance Plan, Program Management Plan and Health and Safety Plan for the project. Developed procedures and checklists for the performance of maintenance activities at ITS sites. Performed site inspections, validation and quality control checks for maintenance activities performed under the contract.
08/16 – 06/24	**ITS Maintenance, Engineering, and Inspection (ME&I) - Retainer Routine Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD, Statewide, LA.** *Senior ITS Technician/Deputy Project Manager.* Responsible for providing routine maintenance of statewide ITS sites including, CCTV cameras, DMS, VD, and Ramp Meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also include development of detailed checklist by device type; integration of checklist with MMS software; ***standardized reporting; development of routine maintenance scheduler;*** and coordination with TMCs, and DOTD districts before, during, and after all routine maintenance. This project included the troubleshooting and repair of malfunctioning ITS and network communications devices as well as ***diagnostics and repair to utility power services, backup generator power sources, and solar power systems.***

16 STAFF EXPERIENCE:

Bike/Ped Facility Design Engineers

Firm employed by. ARCADIS

Name	**Matt McDow, PE**	Years of relevant experience with this employer	26
Title	Senior Roadway Engineer	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		BS / 1998 / Civil Engineering, Georgia Institute of Technology-Main Campus	
Active registration number / state / expiration date		PE028726 / GA / Exp. 12/2025	
Year registered	2003	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Bike/Ped Improvements**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. McDow is a hands-on Project Manager with over 26 years of experience delivering transportation projects. He specializes in managing and designing roadway, streetscape, and pedestrian projects, engaging directly with clients, stakeholders, and subconsultants. Known for attentive client service, clear communication, accurate scoping, and on-time, on-budget delivery, he brings strong technical expertise and effective team leadership to every project.
05/12 – 06/15	**High-priority Bicycle Projects, Arcadis/BPA, a Joint Venture, Atlanta, GA**. *Project Manager* on five projects ***add bicycle facilities to exiting roadways*** in Atlanta, GA. The locations include: C Allen Dr / Parkway/Jackson St, DeKalb Ave at Rocky Ford Road, Hilliard St / Grant St, JP Brawley Dr, and Mangum St / Walker St. The project is designed using the ***NACTO standards*** and include two-way cycle tracks, bike lanes, enhanced sharrows, neighborhood traffic circles, bicycle boulevard treatments, and off -road multi-use trail.
01/14 – 07/16	**Whitlock Ave. Streetscape and Pedestrian Improvements, City of Marietta, Marietta, GA.** *Project Manager*. Led 1.5-mile streetscape and pedestrian upgrades from Oakmont Drive to Polk Street Extension, including ***new sidewalks, planted medians, stamped asphalt curb lanes, resurfacing, intersection and pedestrian improvements, lighting, mast arm signals***, retaining walls, and landscaping. Oversaw surveying, design, environmental and historic studies, public meetings, ROW and easement documentation, permitting, utility coordination, and bid support, all per GDOT PDP standards.
07/14 – 10/20	**MLK Jr. Drive Multi-Modal Improvements, City of Atlanta, Atlanta, GA.** *Project Manager* for development of ***multi-modal and streetscape improvement plan***, concepts, and design along 7.4 miles of MLK Jr. Drive corridor. Arcadis provided significant assistance to the City in writing grant applications to obtain $10 million in TIGER 8 funding to implement recommended improvements along the corridor. The master plan was accepted by City Council and Arcadis completed the design on short-term improvements for project construction in spring 2016.
07/07 – 10/15	**Concord Road Improvements, City of Smyrna, Smyrna, GA.** *Project Manager.* Managed 1.3 miles of roadway widening with a ***landscaped median, turn lane enhancements, multi-use trail, decorative lighting and signals***, brick paver crosswalks, detention pond, retaining walls, and new alignment with McLinden Avenue. Oversaw survey, full design, permitting, utility coordination, and public involvement, including four public meetings. Project recently awarded for construction.
03/10 – 03/16	**Franklin Road Improvements, City of Marietta, Marietta, GA.** *Project Manager.* Managed the 1.75-mile, four-lane widening of Franklin Road from SR 280 to SR 120 Alt. The project featured an 18-foot landscaped median, a 10-foot multi-use trail on the east side, new street and pedestrian lighting, and enhanced landscaping. Led preparation of environmental documents and coordinated public outreach with the local Hispanic community. Project followed GDOT PDP guidelines.

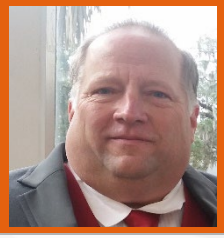
16 STAFF EXPERIENCE:

Lighting / Electrical Design Engineers

Firm employed by: Marrero, Couvillon & Associates, LLC.				Meets MPR No. 6
Name	**M. Kimball Schlafly, PE**		Years of relevant experience with this employer	5
Title	Senior Electrical Engineer		Years of relevant experience with other employer(s)	32
Degree(s) / Years / Specialization			BS / 1988 / Electrical Engineering	
Active registration number / state / expiration date			PE.0027699 / LA / Exp. 09/2026	
Year registered	1998	Discipline	Electrical Engineering	
Contract role(s) / brief description of responsibilities			**Lighting/Electrical**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Schlafly has over 37 years of engineering experience in electrical engineering, project engineering and project management. He has been responsible for various projects requiring design of roadway lighting, low and medium voltage power distribution, standby and emergency power systems, telecommunications, fire alarm, access control, video surveillance, and theatrical audio/visual and lighting systems. **Mr. Schlafly meets Minimum Personnel Requirement Number 6.**
07/17 –11/20	**I-10 and 73 Widening, Design Build, LADOTD, East Baton Rouge and Ascension Parishes, LA.** *Senior Electrical Engineer.* Provided electrical engineering and design for lighting on the I-10 Widening from Highland to LA 30 design-build projects.
04/18 – 02/19	**Howard Avenue Extension (Loyola Avenue to LaSalle Street), City of New Orleans, New Orleans, LA.** *Senior Electrical Engineer*. Marrero, Couvillon & Associates is responsible for the Electrical Services for the Howard Avenue Extension. Work includes revising ***roadway lighting*** from high pressure sodium lights to LED lights per new City of New Orleans Standards. Revisions include changing light fixtures, downsizing electrical conductors and revising drawings including bill of materials. Performing lighting calculations and following illumination guidelines per the latest IES roadway lighting recommended practices issued in 2014.
01/20 – 06/20	**Bluebonnet Blvd. (Picardy to Highland) Roadway Lighting, East Baton Rouge Parish, Baton Rouge, LA.** *Senior Electrical Engineer*. The scope of work includes additional lane capacity in each direction. Bluebonnet Blvd is two lanes in each direction currently. Pedestrian facilities are interspersed throughout the corridor and there is commercial development abutting the corridor. The project is to add an additional travel lane in each direction and provide for connected pedestrian facilities throughout the corridor. MCA is responsible for all activities necessary to complete a ***lighting plan and a photometric analysis*** report that contains illumination analysis of all roadways and/or interchanges within the project limits and conform to illumination criteria specified in the design guidelines are included in this scope.
09/23 – Ongoing	**I-20 Widening, Wells to LA34 Electrical and Lighting Design, LADOTD, Baton Rouge, LA.** *Senior Electrical Engineer*. The scope of work is to provide additional traffic capacity in each direction. This was accomplished primarily by increasing the entrance/exit ramps. MCA provided design services to analyze the existing conditions of the roadway lighting, which consisted of high pressure sodium fixtures on low mast poles, and provide modifications to the existing lighting systems as necessary to accommodate the changes in roadway geometry. This includes upgrading the existing fixtures to LED, re-position select poles, and upgrading the secondary controllers to current standards.

Firm employed by: Marrero, Couvillon & Associates, LLC.				Meets MPR No. 6
Name	**Christian Schade, PE**		Years of relevant experience with this employer	8
Title	Senior Electrical Engineer		Years of relevant experience with other employer(s)	24
Degree(s) / Years / Specialization			BS / 1993/ Electrical Engineering	
Active registration number / state / expiration date			PE.0032483 / LA / Exp. 09/2026	
Year registered	2006	Discipline	Electrical Engineering & Computer Engineering	
Contract role(s) / brief description of responsibilities			**Lighting/Electrical**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Schade's areas of expertise include electrical engineering for roadway lighting, power distribution, power generation, lighting, specification writing and contract administration. His experience includes Power system analysis, consisting of load flow, fault, arc flash and coordination studies using SKM Power Tools for Windows and ETAP. Proficient with incident energy level method of Arc Flash calculations per NFPA 70E, 2015 version. Electrical design support for small to medium size projects in industrial facilities, including installation of new pumps, agitators, metering equipment, lighting, and power distribution centers. **Mr. Schade meets Minimum Personnel Requirement Number 6.**
07/17 – 11/20	**I-10 and 73 Widening, Design Build, LADOTD, East Baton Rouge and Ascension Parishes, LA.** *Senior Electrical Engineer.* Provided electrical engineering and design for lighting on the I-10 Widening from Highland to LA 30 design-build projects.
04/18 – 02/20	**France Road – North, Roadway and Drainage Improvements, Port of New Orleans, New Orleans, LA.** *Senior Electrical Engineer.* MCA provided electrical and mechanical engineering services for roadways, lighting, and drainage improvements.
11/16 – 6/17	**Louis Armstrong New Orleans Airport International Airport Pavement Remediation at Eastern Side of Runway 11-29, City of New Orleans, Kenner, LA.** *Senior Electrical Engineer.* Electrical design services for Pavement Remediation of sag in existing runway pavement on the eastern side of Runway 11-29 near Taxiway Alpha at the airport.
04/18 – 02/19	**Howard Avenue Extension (Loyola Avenue to LaSalle Street), City of New Orleans , New Orleans, LA.** *Senior Electrical Engineer.* Oversaw electrical services for the Howard Avenue Extension, upgrading roadway lighting from high-pressure sodium to LED per City standards. Responsibilities included fixture replacement, conductor downsizing, plan revisions, ***lighting calculations***, and compliance with 2014 IES roadway lighting guidelines.
01/20 – 06/20	**Bluebonnet Blvd. (Picardy to Highland) Roadway Lighting, East Baton Rouge Parish, LA.** *Senior Electrical Engineer.* Project adds an extra travel lane in each direction and connects pedestrian facilities along this busy commercial corridor. Responsible for complete roadway ***lighting design and photometric analysis*** to ensure all illumination meets project guidelines.
09/23-On-going	**I-20 Widening, Wells to LA34 Electrical and Lighting Design, LADOTD, Baton Rouge, LA.** *Senior Electrical Engineer.* The scope of work is to provide additional traffic capacity in each direction. This was accomplished primarily by increasing the entrance/exit ramps. MCA provided design services to analyze the existing conditions of the roadway lighting, which consisted of high-pressure sodium fixtures on low mast poles, and provide modifications to the existing lighting systems as necessary to accommodate the changes in roadway geometry. This includes upgrading the existing fixtures to LED, re-position select poles and upgrading the secondary controllers to current standards.

16 STAFF EXPERIENCE:

Structural Engineers

Firm employed by. ARCADIS				Meets MPR No.7
Name	**Victor Sanchez, PE, MSc**		Years of relevant experience with this employer	2.5
Title	Principal Bridge Engineer		Years of relevant experience with other employer(s)	25
Degree(s) / Years / Specialization			MS / 2017 / Civil Engineering-Structures BS / 1991 / Civil Engineering with a major in Structures	
Active registration number / state / expiration date			PE.0033976 / LA / Exp. 09/30/2026	
Year registered	2008	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities			**Structural Support**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Sanchez is the **Lead Bridge and Structural Engineer** for Arcadis' Louisiana Operations. Victor is highly skilled with the design and detailing of structures using AASHTO-LRFD, the Louisiana Department of Transportation Bridge Design Manual, and software applications such as OpenBridge for the modeling and planning of bridges. Project applications include **Stage 0 Feasibility Studies** and design projects. He applies sound structural knowledge to perform hand calculations for bridge structural design and possesses strong management skills and a willingness to work collaboratively with different groups inside the organizational team, including clients, other disciplines' engineers, and project managers within the project organization. His exceptional leadership skills, combined with his knowledge of the LADOTD policies, standards, and manuals, make him an ideal team builder to perform at its highest level of potential. **Mr. Sanchez meets Minimum Personnel Requirement Number 7.**
02/22 – Ongoing	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** *Bridge Lead Engineer.* The I-10 Calcasieu is one of the first Public-Private-Partnership projects in Louisiana and entails the replacement of several bridges, including the main structure crossing over the Calcasieu River. The project is divided into three segments. Arcadis is leading the design of segment 1. Segment 1 includes the replacement of an access ramp; the WB I-210 Ramp over the I-10. The bridge is a ***six-span bridge*** that consists of two units, each unit is a three-span continuous curved steel plate girder bridge, and the substructure consists of concrete hammer-head piers on concrete spread footing on precast concrete piles. Role as ***Bridge Lead Engineer and EOR*** is to guide a team of engineers and drafters to prepare plans, calculations, and quantity takeoff for the replacement of the WB I-210 Ramp over the I-10, and work along with other partners in coordination meetings with the owner and the contractor for this project.
10/22 – Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Replacement (OSBR) Program, LADOTD, District 01, LA.** *Bridge Lead Engineer.* Arcadis prepared ***preliminary and final plans of six proposed bridges,*** which included plan and profile sheets, typical roadway sections and quantities, a general bridge plan, traffic detour and road closure details, and relevant signing plans, as well as channel cross-sections.
04/23 – 01/25	**Stage 0 Studies IDIQ – LA 22 Tchefuncte River Bridge, LADOTD, St. Tammany Parish, LA.** *Lead Bridge Design Engineer.* Responsible bridge design for the Stage 0 Feasibility Study to develop and evaluate feasible alternatives for the replacement of the LA 22 Tchefuncte River Bridge in Madisonville, LA. The bridge has a high frequency of opening due to marine traffic and low elevation above the river. Arcadis developed several bridge alternatives, including fixed and movable bridge options. Alternatives were evaluated with respect to construction cost, ROW, traffic and safety, and environmental. All study methods and results were documented in a ***Stage 0 Feasibility Report*** with ***Preliminary Scope and Budget Checklist*** and an ***Environmental Checklist***.

06/14 – 07/15	**I-10 Over Julia Street, Girder Rehabilitation Project, LADOTD, New Orleans, LA.** *Bridge Design Engineer / Engineer of Record*. Led bridge design to address partial failure of connecting plates attaching girders to ***straddle bents*** on an I-10 exit ramp. Scope included replacing a steel cap beam at straddle bent 25w, all connecting plate elements at cap 26w, and ***analysis/rehabilitation*** of the affected three-span continuous structure (74'-132'-132'). Coordinated contract documents, plans, calculations, estimates, and provided QC/QA. Supported construction by reviewing and ***approving contractor shop drawings and calculations.***
05/16 – 05/17	**UP Railroad Overpass Near Tioga, LADOTD, Rapides Parish, LA.** *Lead Bridge Design Engineer / Engineer of Record*. The total bridge length is 950' and consists of a main span using steel plate girders as superstructure elements over three continuous spans (210'-275'-210'); the bridge approaches to the main spans consist of two 85' AASHTO type III prestressed concrete continuous spans at the north side and one 85' AASHTO type III prestressed concrete span at the south side. The bridge substructure consists of concrete piers and caps supported on columns, which are supported on drilled shafts and spread footings on drilled shafts. Conducted bridge design as the ***Lead Engineer and Engineer of Record (EOR)***, responsible for the contract document preparation, including ***cost estimating***, specifications, ***final plans preparation***, structural calculations, load rating, and coordination for project delivery per Louisiana Department of Transportation policies.
04/16 – 12/16	**Indian Bayou Bridge and Approaches, LADOTD, Calcasieu Parish, LA.** *Lead Engineer and Engineer of Record*. The total bridge length is 675' and consists of 3 continuous span units with a length of 225', with each unit using precast prestressed concrete girders as superstructure elements over three continuous spans (75'-75'-75'). The bridge substructure consists of concrete piers and caps supported on precast prestressed concrete piles. Served as Lead Engineer and Engineer of Record (EOR), responsible for the contract document preparation, including ***cost estimating***, specifications, ***final plans preparation***, structural calculations, load rating, and coordination of project delivery per Louisiana Department of Transportation policies.
04/15 – 03/16	**UP Railroad Bridge at Sicard, LADOTD, Ouachita Parish, LA.** *Lead Engineer*. This bridge consists of a main span using steel plate girders as main superstructure elements over three continuous spans (102'-175'-102'); the bridge approaches consist of three 84' continuous spans at the north side and to the south side, three 84ft continuous spans for a total structure length of 883' located in a straight alignment and skew of 68 degrees concerning a line normal to the center line of the bridge. The main superstructure elements of the approaches are prestressed concrete AASHTO Type IV girders, and the bridge substructure consisted of multi-column bents on concrete footing supported on prestressed concrete piles. ***Completed plan quality reviews***, prepared the ***bridge load rating*** report, and assisted the environmental section of the LADOTD in completing the ***environmental clearance*** for the project. In addition, provided load rating and construction support, reviewing the shop drawings submitted by the general contractor.
05/18 – 11/19	**I-485 from I-77 to US 74; I-485/Weddington Rd Interchange; and I-485 /East John St. - Old Monroe Rd. Interchange (design-and-build), Mecklenburg County, NC.** *Led Structural Design and Project Management for the replacement of two bridges in the project*. STR#1 over Westinghouse Blvd. and widening of STR#12 over CSX railroads. STR#1 involves replacing the existing structure over I-485 with two prestressed concrete bridges of lengths 125ft and 132 ft, utilizing the 63" Florida-I Beam and integral end bents on steel piles. STR#12, over CSX railway, is a twin bridge on I-485 with a three-span continuous structure and a total length of 165ft. The substructure includes stub abutments on steel piles and multi-column bents on spread footings. Managed ***structural design***, ***coordination***, and local staff to ensure ***budget control*** and ***timely delivery*** to NCDOT.

Firm employed by. ARCADIS				Meets MPR No. 7
Name	**Osama Shahawy, PE**		Years of relevant experience with this employer	4
Title	Principal Bridge Engineer		Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization			MS / 1991 / Civil (Structures), Florida State University BS / 1983 / Civil Engineering	
Active registration number / state / expiration date			PE.0035652 / LA / Exp. 09/2027	
Year registered	2001	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities			**Structural Support**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Shahawy has more than **34 years of structural bridge engineering experience** working on variety of different projects throughout Louisiana and the Southeast includes **Stage 0 Feasibility Studies**, NEPA studies, and design. He served as PM or TL on 100+ projects with extensive bridge plan, specification and estimate, rehabilitation and bridge replacement. His experience includes coordinating teams of engineers and other technical personnel on the preparation of bridge PS&E design/ management including on/off-system bridges in rural/urban areas with heavy utilities & complex TCP. Mr. Shahawy has a design background that includes strong construction capabilities–a benefit that ensures constructible technical solutions and more complete construction documents. Leveraging his decades of experience, he will check accuracy, verify compliance to review comments, and will ensure that agency and stakeholder comments and concerns are addressed. **Mr. Shahawy meets Minimum Personnel Requirement Number 7.**
10/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Lead Bridge Engineer, Engineer of Record*. Responsible for Construction Management at Risk (CMAR) to improve Interstate 10 through widening and reconstruction of the mainline from 3 to 4 lanes in each direction, including ***bridge replacement and rehabilitation***, interchange and ramp modification, shoulder widening, and auxiliary lane(s) from LA 415 to Essen Lane on I-10 and I-12. Responsibilities include replacing Nairn Dr. bridge over I-10 with a signature type bridge and preparing conceptual bridge plans required for the Right-of-Way Corridor. Responsibility includes ***design and detail of the Nairn Dr. Bridge*** according to design criteria and LADOTD BDEM. Participate in meetings and work with the CMAR Contractor and LADOTD to develop preferred bridge concepts at completion.
10/22 – Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Replacement (OSBR) Program, LADOTD, District 01, LA.** *Lead Bridge Design Engineer.* Arcadis prepared preliminary and final plans of six proposed bridges, which included plan and profile sheets, typical roadway sections and quantities, a general bridge plan, traffic detour and road closure details, and relevant signing plans, as well as channel cross-sections.
09/21 – 04/25	**Calton Road Overpass, Webb County, TX.** *Lead Bridge Designer.* Led final design of the Calton Road Overpass in Laredo, TX, spanning 866 feet over Santa Maria Avenue and Union Pacific Railroad tracks. Developed bridge and roadway plans, including a detailed cost estimate. The design features a 248-foot, two-span continuous steel I-girder unit on column bents, and includes Calton Road widening to maintain access.
02/23 - Ongoing	**Cross Bayou Bridge Replacement, LADOTD, Caddo Parish, LA.** *Bridge Design Engineer and Project Manager.* Conducted ***Stage 0 Feasibility study*** to develop and evaluate alternatives for the replacement of two existing bridges over Cross Bayou. Developed ***Stage 0 Documentation*** including ***Preliminary Scope and Budget*** and ***Environmental Checklists***.The next phase of the project will be conducted under the same contract and will include the development of construction plans.

02/22 – 04/25	**I-10 Calcasieu River Bridge P3, LADOTD, Calcasieu Parish, LA.** *Bridge Project Manager* for the I-10 Calcasieu Bridge Replacement P3 project to ***replace the existing I-10 bridge over the Calcasie River with a new bridge north of I-10.*** The project also includes the construction of ***several new bridge structures*** within the project limits, both inside and outside widening of I-10, improvements and modifications to existing interchanges, and improvements to other associated roadways within the project limits.
04/12 – 05/13	**LA 1 over I-19 Bridge Rehabilitation, Rapides Parish, LA.** *Project Manager, Engineer of Record.* Provided professional inspection, rehabilitation design, and construction engineering services. The bridge is a 4 spans steel plate girder structure that has uneven settlement and rotation at the abutments which required rehabilitation to stabilize the movement and raise the bridge back to its original as built elevation. Responsibilities included directing team and over all task involves the ***preparation of geometric layout plan development***; ***bridge design and final plans***, specifications and estimates for LA 1 Bridge over I-49 according to LADOTD BDEM. Performed QA/QC, ***prepared construction cost estimate***, reviewed/revised plans based on LADOTD comments.
07/11 – 05/13	**MacArthur Drive Bridge Interchange, LADODT, Rapides Parish, LA.** *Bridge Design Engineer, Engineer of Record*. Led Phase 1 redesign and widening of the interchange, focusing on design changes for Ramps 7 and 8. Designed deck slabs for 18 spans with Trapezoidal and Bulb-T girders, bearing pads, Inverted-T caps, and special pier columns. Oversaw geometric and span layout modifications, and reviewed all plans for compliance with LADOTD standards and quality requirements.
08/20 – 07/21	**I-10 New Orleans to Slidell Hard Shoulder Design, LADOTD, New Orleans, LA.** *Bridge Design Engineer.* Conducting ***bridge design evaluation*** for the use of Active Transportation and Demand Management (ATDM) strategies on 1-10 in Orleans and St. Tammany Parishes. The project is to determine improvements of implementing shoulder lanes on Interstate 10 in New Orleans East area. Responsibilities include ***preliminary bridge design to determine construction cost*** for structure widening of EB & WB I-10 based on 4 scenarios utilizing existing shoulders on 1-10, as one of the scenarios. Developed ***Stage 0 Documentation*** including ***Preliminary Scope and Budget*** and ***Environmental Checklists***.
08/20 – 11/20	**Alphonse Forbes Bridge at Sandy Bayou Replacement, City of Baton Rouge, East Baton Rouge Parish, LA / 18-Br-Pt-0017.** *Bridge Design Engineer*. Responsible for the replacement of the Alphonse Forbes Road Bridge over Sandy Creek located in Central, Louisiana, in East Baton Rouge Parish. ***Reviewed final plan and calculations QC design analysis and final bridge structure plans*** for a 5 concrete slab span bridge. Provided review comments for final plans and estimated quantities according to LADOTD guidelines.
07/11 – 05/13	**Mississippi River Bridge at Vicksburg, Mississippi, LA.** *Project Manager, Engineer of Record*. Responsible for the four-lane continuous main steel-truss through-deck bridge covers a total length of 1,716 ft. and a width of 60 ft. The main truss consists of two symmetrical 640.5 ft. cantilever spans and one 435 ft. drop span. The approach spans consist of 101 prestressed concrete spans and reinforced concrete pier caps. Responsible for ***review of as-built plans and all rehab projects plans***; indexed and developed inspection forms; ***supervised and reviewed results from the 3D computer model***; model calibration; performed QA/QC according to LADOTD BDEM and assisted in developing the final report.
07/11 – 06/12	**I-10 over Calcasieu River - Lake Charles Bridge, LADOTD, Lake Charles, LA.** *Project Manager, Engineer of Record*. Responsible for bridge inspection that include four steel deck trusses as well as a cantilever steel through-truss for the main span portion of the bridge, covering a total length of 6,617 ft. with a width of 62.67 ft. Responsible for ***review of the as-built and rehab project plans*** and indexing; developed inspection forms; ***supervised and reviewed the results from the 3D computer model***.

16 STAFF EXPERIENCE:

Geotechnical Engineers

Firm employed by: APS Engineering and Testing			
Name	**Sergio Aviles, PE, M. ASCE**	Years of relevant experience with this employer	14
Title	President/Geotechnical Manager	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		BS / 2001 / Civil Engineering, Geotechnical	
Active registration number / state / expiration date		PE.0033571/ LA / Exp. 03/2026, ATSSA Work Zone Traffic Control Technician, Flagger, Water Well Contractor's License	
Year registered	2007	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Geotechnical**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Sergio Aviles is the President and Geotechnical Manager of A P S Engineering and Testing, LLC. He has extensive expertise in slope stability analysis, embankment settlement calculations, mechanically stabilized earthen (MSE) wall design, pile design, sheet pile design, pile integrity testing, and Pile Dynamic Analyzer (PDA). Since founding A P S fourteen years ago, Mr. Aviles has led geotechnical engineering, laboratory testing and materials testing projects statewide for both government agencies and private clients. His professional portfolio includes the design and construction supervision of complex infrastructure projects throughout Louisiana, ensuring technical accuracy, adherence to DOTD specifications, and the highest standards of quality control.
09/19 – Ongoing	**I-10 LA 415 to Essen Lane on I-10 and I-12, LADOTD, Baton Rouge, LA.** *Geotechnical Manager* providing technical oversight across all phases—from ***field exploration and lab testing to analysis and reporting***. Ensured conformance with DOTD specifications, QA/QC protocols, and schedule adherence. The Geotechnical Investigation comprised the advancement of 77 deep borings along the project alignment, spanning from the Washington Street Exit to the LSU Lakes. Performed 16 over-water borings utilizing barge-mounted drilling platforms and 61 land-based borings using truck-mounted rigs. Subsurface characterization included Shelby tube sampling, Standard Penetration Testing (SPT), and split-spoon recovery to obtain representative soil profiles. Laboratory testing included approximately 1,000 tests, including Unconsolidated Undrained (UU) Triaxial Compression tests for shear strength evaluation and Atterberg Limits for plasticity classification, in accordance with ASTM standards. Pile foundation performance was assessed through dynamic testing services, including Pile Driving Analyzer (PDA) instrumentation and signal matching via CAPWAP analysis. These tests provided real-time data on pile capacity, drivability, and soil-pile interaction, supporting axial load design and installation recommendations. Serve as
06/20 – 04/23	**Rural Bridge Replacement Initiative Phase I**, **LADOTD, LA**. *Geotechnical Manager* for the Geotechnical Investigations and Design Team, overseeing every phase of the project with hands-on leadership to ensure technical excellence and on-time delivery. The scope included geotechnical investigation and design for the replacement of 60 bridge structures along the LA state highway system. Geotechnical Investigation consisted of drilling, laboratory testing, soil classification, and site characterization. Engineering analysis included slope stability analysis (when applicable) and pile capacity analysis for foundations to support the new bridge structures.

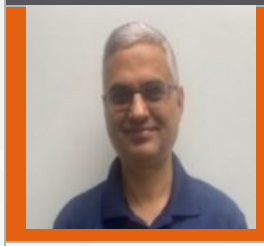
03/19 – 05/25	**LA 437 to US 190 BUS, LADOTD, St. Tammany Parish, LA.** *Geotechnical Manager* for the investigation and design team. Provided direct oversight of field operations, laboratory analysis, and engineering deliverables, ensuring technical accuracy, and timely completion across all phases of the project. overseeing every phase of the project with hands-on leadership to ensure technical excellence and on-time delivery. Selected as part of the winning team for the Geotechnical Investigation and Design of the proposed new bridge. The scope of work included the drilling and testing of 19 deep borings to support bridge foundation design recommendations. In addition to deep foundation investigations, performed site-specific testing of subsurface soils, base materials, and concrete placement zones to evaluate compliance with structural and geotechnical performance criteria. Laboratory testing supported classification, strength, and constructability assessments for proposed bridge elements. Provided PDA instrumentation, testing, and CAPWAP analysis.
01/22 – 05/24	**Comite River Diversion Bridge at LA 67, LA 19, and LA 19 RR Bridge, LADOTD, East Baton Rouge, LA.** *Geotechnical Manager* for the Geotechnical Investigations and Design Team, overseeing all phases of exploration, analysis, and reporting. Selected as part of the winning team for the Design of the Diversion CMAR project. Performed the ***Geotechnical Investigation*** and Design for the project. The scope also included testing of subsurface soils, base materials, and concrete placement areas to evaluate compliance with design standards for the proposed roadway and bridge structures. Performed four Pile Driving Analyzer (PDA) tests during construction monitoring to assess pile performance and verify installation criteria.
09/21 – 05/24	**Port Hudson-Pride Road (LA-964 – LA-19), MOVEBR, East Baton Rouge, LA.** *Geotechnical Manager* for the investigation and Design Team, overseeing every phase of the project with hands-on leadership to ensure technical excellence and on-time delivery. The scope included ***Geotechnical Investigation*** to enable an evaluation of an acceptable foundation for the proposed pavement rehabilitation and new bridge. A total of 26 borings were drilled and tested for Geotechnical recommendations for the City of Baton Rouge.
11/19 – 12/23	**US 90 Railroad Overpass SE of LA 85, LADOTD, Iberia Parish, LA.** *Geotechnical Manager* for the Geotechnical Investigations and Design Team, overseeing every phase of the project with hands-on leadership to ensure technical excellence and on-time delivery. Selected as part of the winning team for the ***Geotechnical Investigation*** and Design for the proposed new overpass. A total of 12 deep borings were drilled and tested for Geotechnical recommendations.
03/21 – 11/22	**Nicholson Drive Segment 2 (Bluebonnet Blvd-Ben Hur Rd.), MOVEBR, East Baton Rouge, LA.** *Geotechnical Manager* for the ***Geotechnical Investigations*** and Design Team, providing hands-on leadership and technical oversight throughout all phases of the project to ensure accuracy, quality, and timely delivery. The scope included a comprehensive geotechnical investigation to support foundation recommendations for proposed pavement rehabilitation and new bridge construction. A total of 32 borings were drilled and tested to characterize subsurface conditions and develop geotechnical design parameters for the City of Baton Rouge.
03/15 – 04/15	**Holly Drive Bridge Replacement, LADOTD, St. Tammany Parish, LA.** *Geotechnical Manager* for the Geotechnical Investigations and Design Team, overseeing every phase of the project with hands-on leadership to ensure technical excellence and on-time delivery. The scope included Geotechnical Investigation for the replacement of a bridge structure in Covington, Louisiana. Performed piles vertical resistance analyses for square PPC piles with sizes ranging 16-inch, 18-inch and 24-inches, roadway design, and culvert design.

Firm employed by: APS Engineering and Testing			
Name	**Sairam Eddanapudi, PE, ME**	Years of relevant experience with this employer	14
Title	Chief Geotechnical Engineer	Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization		MS / 2002 / Civil Engineering, BS / 1999 /Civil Engineering	
Active registration number / state / expiration date		PE.0035129/ LA / Exp. 03/2026 ATSSA Work Zone Traffic Control Technician	
Year registered	2009	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Geotechnical**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Eddanapudi serves as Chief Engineer at A P S Engineering and Testing, LLC. He brings 23 years of experience in geotechnical and civil engineering, with specialized expertise in advanced geotechnical laboratory testing, quality control, and personnel training. His professional design experience includes roadways, bridges, levees, and T-walls, as well as both shallow and deep foundations. His field expertise covers quality control inspections for auger cast piles, drilled shafts, soil, and concrete. Mr. Eddanapudi is proficient in a wide range of engineering software, including Slope/W (2004, 2007, and 2024 versions) for slope stability analysis, Seep/W for seepage analysis, DRIVEN 1.4 for driven pile analysis, MicroStation V8, CWALSHT and FS004 for Slope stability, Swell Potential analysis for expansive soils, drilled shaft design software, auger cast pile analysis, AASHTO pavement design, slope analysis, and differential settlement evaluation.
09/19 – Ongoing	**I-10 LA 415 to Essen Lane on I-10 and I-12, LADOTD, Baton Rouge, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. Ensured conformance with DOT specifications, QA/QC protocols, and schedule adherence. The Geotechnical Investigation comprised the advancement of 77 deep borings along the project alignment, spanning from the Washington Street Exit to the LSU Lakes. Performed 16 over-water borings utilizing barge-mounted drilling platforms and 61 land-based borings using truck-mounted rigs. Subsurface characterization included Shelby tube sampling, Standard Penetration Testing (SPT), and split-spoon recovery to obtain representative soil profiles. Laboratory testing included approximately 1,000 tests, including Unconsolidated Undrained (UU) Triaxial Compression tests for shear strength evaluation and Atterberg Limits for plasticity classification, in accordance with ASTM standards. Pile foundation performance was assessed through dynamic testing services, including Pile Driving Analyzer (PDA) instrumentation and signal matching via CAPWAP analysis. These tests provided real-time data on pile capacity, drivability, and soil-pile interaction, supporting axial load design and installation recommendations.
06/20 – 04/23	**Rural Bridge Replacement Initiative Phase I, LADOTD, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. The scope included geotechnical investigation and design for the replacement of 60 bridge structures along the LA state highway system. ***Geotechnical Investigation*** consisted of drilling, laboratory testing, soil classification, and site characterization. Engineering analysis included slope stability analysis (when applicable) and pile capacity analysis for foundations to support the new bridge structures.

03/19 – 05/25	**Project No. H.001344 US 190: LA 437 to US 190 BUS, Saint Tammany Parish, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. Selected with the winning team for the Geotechnical Investigation and Design of the proposed new bridge. A total of 19 deep borings were drilled and tested for foundation recommendations. The scope also includes conducting testing on the subsurface, base and concrete placement at the site to enable an evaluation of an acceptable standard for the proposed structures.
01/22 – 05/24	**Comite River Diversion Bridge at LA 67, LA 19, and LA 19 RR Bridge, LADOTD, East Baton Rouge, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. Selected as part of the winning team for the Design of the Diversion CMAR project. Performed the ***Geotechnical Investigation*** and Design for the project. The scope also included testing of subsurface soils, base materials, and concrete placement areas to evaluate compliance with design standards for the proposed roadway and bridge structures. Performed four Pile Driving Analyzer (PDA) tests during construction monitoring to assess pile performance and verify installation criteria.
09/21–05/24	**Port Hudson-Pride Road (LA-964 – LA-19), East Baton Rouge, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. The scope included ***Geotechnical Investigation*** to enable an evaluation of an acceptable foundation for the proposed pavement rehabilitation and new bridge. A total of 26 borings were drilled and tested for Geotechnical recommendations for the City of Baton Rouge.
11/19 – 12/23	**US 90 Railroad Overpass SE of LA 85, LADOTD, Iberia Parish, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. Selected with the winning team for the ***Geotechnical Investigation*** and Design for the proposed new overpass. A total of 12 deep borings were drilled and tested for Geotechnical recommendations.
03/15 – 04/15	**Holly Drive Bridge Replacement, LADOTD, St. Tammany Parish, LA.** *Chief Engineer* for the Project Design Team, providing technical Design leadership and managing quality assurance for all laboratory testing to ensure accuracy, compliance, and reliability of geotechnical data. The scope included Geotechnical Investigation for the replacement of a bridge structure in Covington, Louisiana. Performed piles vertical resistance analyses for square PPC piles with sizes ranging 16-inch, 18-inch and 24-inches, roadway design, and culvert design.

Firm employed by: APS Engineering and Testing			
Name	**Surendra Pathak, PE**	Years of relevant experience with this employer	11
Title	Senior Supervisor Engineer	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		MS / 2013 / Civil Engineering, BS / 1998 / Civil Engineering	
Active registration number / state / expiration date		PE.0043487 / LA / Exp. 09/2027 ACI Certified Technician, Pile Dynamic Analyzer Proficient Rank. ATSSA Work Zone Traffic Control Supervisor, Flagger,	
Year registered	2019	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Geotechnical Engineer**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Pathak serves as Senior Supervisor Engineer at A P S Engineering and Testing, LLC. Mr. Pathak brings 21 years of experience in geotechnical engineering, with specialized expertise in Pile Driving Analyzer (PDA) testing and field quality control. His technical experience spans the geotechnical design of roadways, bridges, levees, and T-walls, as well as the design and analysis of shallow and deep foundation systems. In the field, Mr. Pathak has directed and performed quality control inspections for auger cast piles, drilled shafts, soil, and concrete testing, and Pile Driving Analyzer (PDA) testing operations for driven pile testing, including data collection, real-time analysis, and coordination with project engineers to establish pile driving criteria.
09/19 – Ongoing	**I-10 LA415 to Essen Lane on I-10 and I-12, LADOTD, Baton Rouge, LA.** *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise, and acted as Team Leader for Pile Dynamic Analyzer (PDA) testing and analysis. The Geotechnical Investigation comprised the advancement of 77 deep borings along the project alignment, spanning from the Washington Street Exit to the LSU Lakes. Performed 16 over-water borings utilizing barge-mounted drilling platforms and 61 land-based borings using truck-mounted rigs. Subsurface characterization included Standard Penetration Testing (SPT), Shelby tube sampling, and split-spoon recovery to obtain representative soil profiles. Laboratory testing included approximately 1,000 tests, including Unconsolidated Undrained (UU) Triaxial Compression tests for shear strength evaluation and Atterberg Limits for plasticity classification, in accordance with ASTM standards. Pile foundation performance was assessed through dynamic testing services, including Pile Driving Analyzer (PDA) instrumentation and signal matching via CAPWAP analysis. These tests provided real-time data on pile capacity, drivability, and soil-pile interaction, supporting axial load design and installation recommendations.
06/20 – 04/23	**Rural Bridge Replacement Initiative Phase I, LADOTD, LA**. *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise. The scope included geotechnical investigation and design for the replacement of 60 bridge structures along the LA state highway system. ***Geotechnical Investigation*** consisted of drilling, laboratory testing, soil classification, and site characterization. Engineering analysis included slope stability analysis (when applicable) and pile capacity analysis for foundations to support the new bridge structures.
03/19 – 05/25	**LA 437 to US 190 BUS, LADOTD, Saint Tammany Parish, LA**. *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise, and acted as Team Leader for Pile Dynamic Analyzer (PDA) testing and analysis. Selected as part of the winning team for the Geotechnical Investigation and Design of the proposed new bridge. The scope of work included the drilling and testing of 19 deep borings to support bridge foundation design recommendations. In addition

	to deep foundation investigations, performed site-specific testing of subsurface soils, base materials, and concrete placement zones to evaluate compliance with structural and geotechnical performance criteria. Laboratory testing supported classification, strength, and constructability assessments for proposed bridge elements. Provided PDA instrumentation, testing, and CAPWAP analysis.
01/22 – 05/24	**Comite River Diversion Bridge at LA 67, LA 19, and LA 19 RR Bridge, LADOTD, East Baton Rouge, LA.** *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise, and acted as Team Leader for Pile Dynamic Analyzer (PDA) testing and analysis. Selected as part of the winning team for the Design of the Diversion CMAR project. Performed the ***Geotechnical Investigation*** and Design for the project. The scope also included testing of subsurface soils, base materials, and concrete placement areas to evaluate compliance with design standards for the proposed roadway and bridge structures. Performed four Pile Driving Analyzer (PDA) tests during construction monitoring to assess pile performance and verify installation criteria.
09/21 – 05/24	**Port Hudson-Pride Road (LA-964 – LA-19), MOVEBR, East Baton Rouge, LA.** *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise, and acted as Team Leader for Pile Dynamic Analyzer (PDA) testing and analysis. The scope included ***Geotechnical Investigation*** to enable an evaluation of an acceptable foundation for the proposed pavement rehabilitation and new bridge. A total of 26 borings were drilled and tested for Geotechnical recommendations for the City of Baton Rouge.
11/19 – 12/23	**US 90 Railroad Overpass SE of LA 85, LADOTD, Iberia Parish, LA.** *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise. Selected as part of the winning team for the ***Geotechnical Investigation*** and Design for the proposed new overpass. A total of 12 deep borings were drilled and tested for Geotechnical recommendations.
03/15 – 04/15	**Holly Drive Bridge Replacement, LADOTD, St. Tammany Parish, LA.** *Senior Supervisor Engineer* on the Project Design Team, providing foundation design expertise, and acted as Team Leader for Pile Dynamic Analyzer (PDA) testing and analysis. The scope included Geotechnical Investigation for the replacement of a bridge structure in Covington, Louisiana. Performed piles vertical resistance analyses for square PPC piles with sizes ranging 16-inch, 18-inch and 24-inches, roadway design, and culvert design.

16 STAFF EXPERIENCE:

Constructability Reviewers

Firm employed by: ARCADIS			
Name	**Thomas Landry, PE**	Years of relevant experience with this employer	1
Title	Senior Transportation Engineer	Years of relevant experience with other employer(s)	33
Degree(s) / Years / Specialization		BS / 1985 / Civil Engineering / LSU Baton Rouge	
Active registration number / state / expiration date		PE.0023842 / LA / Exp. 09/2026	
Year registered	1990	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Value Added (Constructability)**	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Landry has 13 years of experience as a Project Engineer with LADOTD District 61, six years of experience as the District Construction Engineer for LADOTD District 61, and 12 years of experience as an Area Engineer with LADOTD District 62. In these roles, he gained a strong understanding of a number of LADOTD standards and contract documents, including the **latest 2016 Louisiana Standard Specifications for Road and Bridges (LSSRB) "Purple Book" Manual.** He has experience with contract administration on asphaltic concrete overlay projects, concrete pavement reconstruction projects, interstate widening projects, and bride replacement projects.
10/15 – 12/18	**LA 447 / I-12 Interchange LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide ***construction management services*** for LADOTD on interchange improvement project that includes the construction of two roundabouts and ramp modifications. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
01/17 – 07/18	**LA 10 Beaver Creek Bridge, LADOTD, St. Helena Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD on bridge replacement project. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
7/17 – 04/18	**LA 447, LA 1029 – Westcoll Road Turn Lanes, LADOTD, Livingston Parish, LA**. *Area Engineer*. Provide construction management services for LADOTD on project to add a left turn lane to LA 447 for Westcoll Road. As construction manager, responsibilities include overseeing ***all aspects of construction and inspection*** including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
7/14 – 12/17	**LA 16 @ LA 22, Install Roundabout, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements and roundabout construction. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
06/16 – 07/17	**US 190, E. Baton Rouge Parish Line – W. Jct. LA 16, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including ***drainage improvements***, full depth patching and asphaltic concrete overlay. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.

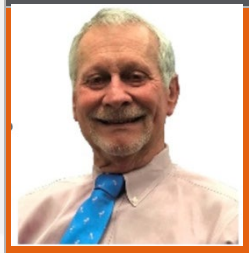
07/15 – 06/17	**LA 3002, LA 1034 – US 190, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements, cold planning, asphaltic concrete overlay, and concrete patching. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
11/15 – 08/16	**LA 1027, E. End W. Colyell Bridge – LA 447, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements, cold planning, and asphaltic concrete overlay. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
11/13 – 01/16	**I-12, Walker to 0.5 West of Satsuma, LADOTD, Livingston Parish, LA.** *Area Engineer* providing construction management for drainage improvements, ramp modifications, ***roadway and bridge widening***, and median barrier installation. Oversaw construction, directed field inspectors, supported contractors, and maintained LADOTD documentation.
06/14 – 06/15	**LA 444, Gum Swamp Road – LA 22, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements, base stabilization, and asphaltic concrete overlay. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
04/13 – 12/14	**US 190, W. Jct LA 63 – Tangipahoa Line, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements, full depth patching, and asphaltic concrete overlay. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
10/11 – 02/14	**I-12, LA 1026 – LA 447, LADOTD, Livingston Parish, LA.** *Area Engineer*. Provide construction management services for LADOTD project including drainage improvements, ramp modifications, interstate roadway & bridge widening, and median barrier. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
08/10 – 02/14	**Amite River Bridge @ Magnolia, Route LA 64, LADOTD, East Baton Rouge and Livingston Parishes, LA.** *Area Engineer*, Provide construction management services for LADOTD bridge replacement project. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
06/12 – 01/14	**LA 63, I-12 – US 190, LADOTD, Livingston Parish, LA.** *Area Engineer.* Provide construction management services for LADOTD project including drainage improvements, full depth patching, base stabilization, and asphaltic concrete overlay. As construction manager, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.

16 STAFF EXPERIENCE:

Technical Advisors / QAQC

Firm employed by. ARCADIS

Name	**Lloyd "Buddy" Porta, Jr., PE**	Years of relevant experience with this employer	15
Title	Principal Engineer	Years of relevant experience with other employer(s)	37
Degree(s) / Years / Specialization		BS / 1973 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date		PE.0016425 / LA / Exp. 09/2027	
Year registered	1977	Discipline	Civil Engineer, Environmental Engineer
Contract role(s) / brief description of responsibilities		**Technical Advisor (Road Design)**	

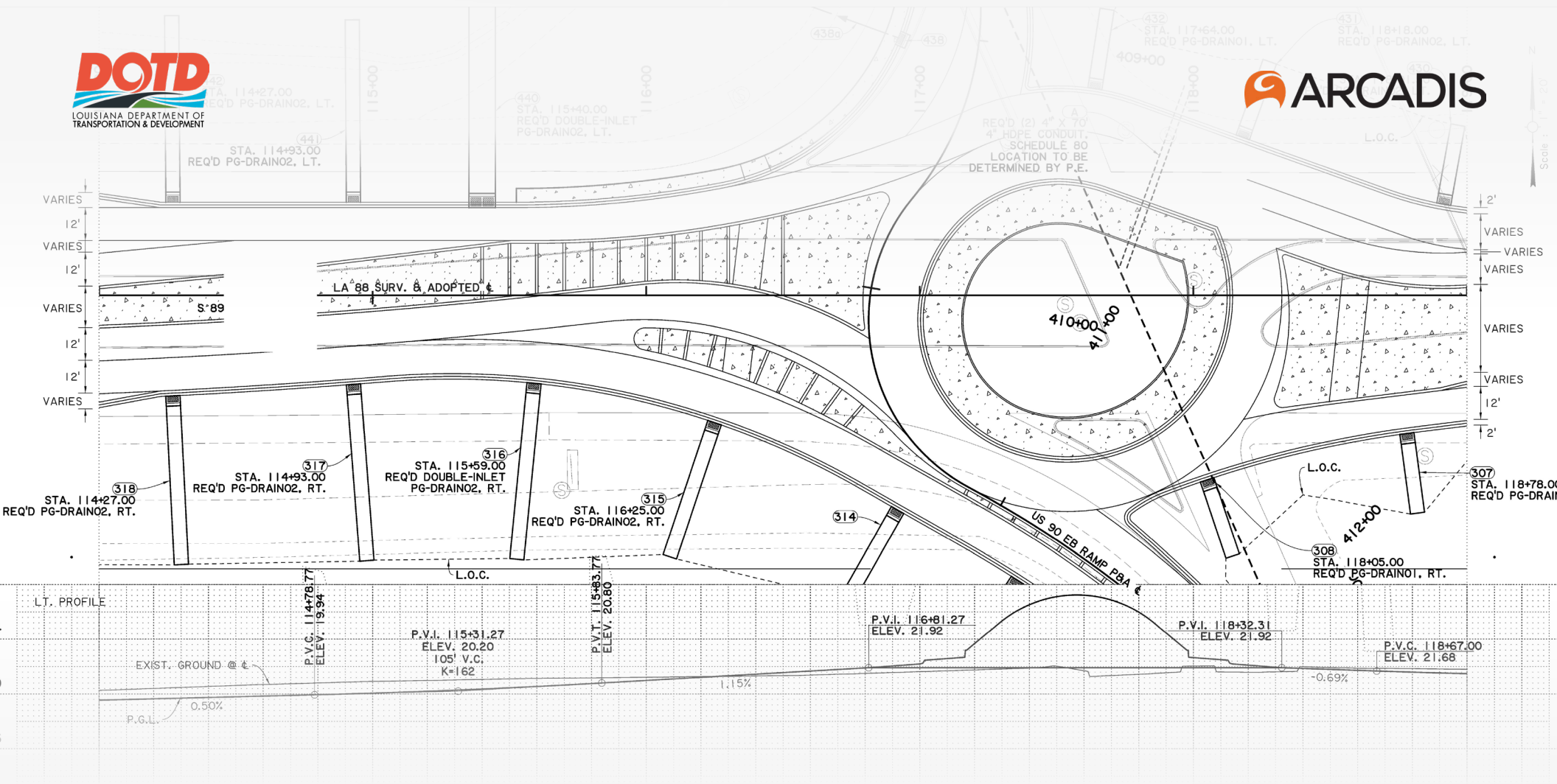
Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Porta brings more than **52 years of experience in the transportation field**. During his 37-year career at LADOTD, he practiced highway design for 11 years with 8 of those years in responsible charge of a design squad. He spent the next 21 years of his career in project/program management. He managed the Off-System Bridge Replacement Program and the Urban System Program. Both programs replaced or constructed new bridges on parish and state routes. In 2001 he was tasked with being the LADOTD TIMED Program Manager. This $5 billion program was developed to multi-lane over 500 miles of state highways as well as construct 3 new bridges, 2 of these bridges across the Mississippi River. He spent the last five years of his career at LADOTD as the **State Road Design Engineer Administrator.**
04/12 – 01/14	**US 11 Norfolk Southern Railroad Overpass Replacement Environmental Assessment and Line and Grade Study, LADOTD, Slidell, LA.** Responsible for ***LADOTD design guideline compliance***. Replacement and widening of the US 11 roadway overpass of the Norfolk Southern Railroad. The project included evaluating partial and full-access intersection options and bridge alignment and type alternatives for the heavily skewed and long steel span bridge in this urban area of Slidell, Louisiana. Key issues included the bridge's imminent historic status, commercial parking impacts and adapting to the Norfolk Southern right-of-way and travel pattern changes following the construction.
06/84 – 07/10	**LADOTD, Off-System Bridge Program, Statewide, LA.** *Program Manager*. DOTD's First Program Manager for OSBRP. Replaced/rehabilitated existing bridges located on nonfederal routes in the cities and/or parishes in Louisiana. Provided the project and program management. Responsible for the selection of the qualifying sites, the distribution of the federal funds to the participating parishes, the selection of the design consultant, the coordination with the parishes and the consultants, the development of the scope of services and fee for each project, the technical review of the topographic surveys and construction plans and providing comments to the consultants and parishes, and the approval of all invoices.
10/16 – 02/18	**LADOTD Off-System Highway Bridge Replacement Program, North Bayou Black Drive Bridge, Terrebonne Parish, LA.** *QA / QC Reviewer.* Reviewed plans for the ***replacement of an off-system highway bridge***. Detailed design effort included field surveying, right of way adjustments, crash barrier selection, hydraulic analysis, preliminary and final plan preparation, and quantity estimation.
10/16 – 02/18	**North Bayou Black Drive Bridge Off-System Highway Bridge Replacement Program, LADOTD, Terrebonne Parish, Louisiana.** Reviewed plans for the replacement of an off-system highway bridge. Detailed designed effort included field surveying, right of way adjustments, crash barrier selection, hydraulic analysis, ***preliminary and final plan preparation*** and cost estimates.
09/12 – 12/15	**US 165 Connector and Ouachita River Bridge - Environmental Impact Statement, Line and Grade and Toll Study, LADOTD, Monroe, LA.** Responsible for ***QAQC of roadway plans, line and grade, and LADOTD design guideline compliance***. Three

	alternatives were developed and evaluated along with various tolling scenarios. All alternatives traverse substantial tracts of wooded wetlands associated with Chauvin Swamp near the Russell Sage Wildlife Management Area.
12/13 – 06/15	**LA 3235 Corridor Safety Improvements, LADOTD, Lafourche Parish, LA.** *Technical Advisor.* Provided design oversight and technical advisory role for the ***geometric layout*** of safety improvements including ***access management, restrictive intersections***, and added turn lanes. Reviewed ***construction cost estimates*** for proposed improvements to assess ***feasibility*** of proposed alternatives.
07/15 – 05/19	**US 190B at Jefferson Ave. Roundabouts, LADOTD, Covington, LA.** *QA / QC Reviewer.* Supported the construction of a new roundabout in Covington as a ***quality assurance/quality control reviewer for roadway plans***. Plans reviewed included the ***construction of sidewalk for use by pedestrians***.
09/09 – 03/12	**I-20 Garrett Road Connector Interchange Improvements, LADOTD, Ouachita Parish, LA.** *Technical Advisor.* Provided design oversight and technical advisory role for the ***Geometry and roadway design*** of the new KCS Railroad overpass and connector between Kansas Lane and Garrett Road, including interstate interchange modifications to include two-lane roundabouts at ramp intersections, and three two-lane roundabouts outside of the interchange. ***Improvements to the pedestrian and bicycle facilities*** were included in accordance with the ***LADOTD Complete Streets Policy***.
11/14 – 10/15	**LA 44 and Loosemore Road Roundabout, LADOTD, Ascension Parish, LA.** *Technical Advisor.* Provided design oversight and technical advisory role for the ***Geometric and roadway design, preliminary subsurface utility investigation,*** and ***cost estimates*** for the replacement of an existing two-way stop-controlled intersection with either a single-lane roundabout or two single-lane roundabouts and right-in/right-out control at the existing intersection.
01/14 – Ongoing	**Pete's Highway EA and Alternatives, LADOTD, Livingston Parish, LA.** Responsible for ***QAQC of roadway plans, line and grade, and LADOTD design guideline compliance***. High-priority project completing an EA and traffic engineering services related to improving congestion and operations along Range Avenue in the vicinity of the I-12. Alternatives included two split diamond interchange options with roundabout, partial clover leafs, and c-d road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16); and a diverging diamond interchange alternative at Range Avenue.
09/01 – 05/06	**Transportation Infrastructure Model for Economic Development (TIMED) Program, LADOTD, Statewide, LA.** LA*DOTD TIMED Program Manager.* Worked and coordinated on a daily basis with the TIMED Program Manager (LTM) to develop training, procedures, policies, and guidelines for the program. This $5 billion program was developed to ***multilane over 500 miles of state highways as well as construct three new bridges;*** two of these bridges across the Mississippi River. The program manager was required to monitor the progress of the program and had full invoice approval of the consultant's monthly invoice. This position was a member of the TIMED Program Executive Committee and reported to the Secretary of the LADOTD. There were 16 projects that were recognized throughout the state. Bonds were sold to finance and, therefore, accelerate the program. Over 500 miles of state roadways were multilaned and three new bridge projects were designed.
05/06 – 07/10	**Road Design Engineer Administrator, LADOTD, Statewide, LA.** Responsible for transitioning the focus of his section from project management back to ***roadway design*** as desired by the Chief Engineer. To support this mandate, brought in training from the FHWA Resource Center in Atlanta, GA to assist the development of a young group. Coordinated the training and provided through the Louisiana Transportation Training Education Center. Developed a Legal Seminar to address the lack of experience in Road Design and other LADOTD sections in depositions and representing the Department in court with the assistance of the Attorney General's Office. Responsible for the ***development of design criteria for Offset Left Turn Lanes and design guidelines for the replacement of bridges on state routes.***

Firm employed by: ARCADIS			
Name	**Mark Dennis, PE**	Years of relevant experience with this employer	23
Title	Principal Hydraulics Engineer	Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization	JD / 2003 / Law Degree BS / 1998 / Civil Engineering		
Active registration number / state / expiration date	PE.0069260 / OH / Exp. 12/2025		
Year registered	2004	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities	**QA/QC**		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Dennis brings over 26 years of experience in civil engineering and transportation, specializing in infrastructure design and hydraulics management. His expertise includes drainage analysis, sewer systems, watershed studies, and stormwater infrastructure improvements. He has designed culverts, storm sewers, detention basins, energy dissipaters, and roadway drainage systems incorporating post-construction BMPs, with a thorough knowledge of OEPA stormwater requirements. Mark has conducted complex drainage studies, developed stormwater management plans for multiple communities, and provided support for NPDES MS4 Phase II programs. Mark is very familiar with FEMA floodplain requirements and has prepared numerous LOMRs and CLOMRs for several northeast Ohio communities. He is proficient in stormwater modeling software such as HEC-HMS, HEC-RAS (steady-state and unsteady-state), SWMM, HY-8, CDSS, and USGS National Streamflow Statistics. He has also presented on hydraulics topics at the Ohio Floodplain Management Conference, Ohio Stormwater Conference, and OTEC.
04/21 – 04/23	**Bull Creek Bridge Replacement, Columbiana County, OH.** *Drainage Lead.* The project consisted of the replacement of an existing 221-foot long, four span concrete box beam bridge over Bull Creek. A Structure Type Study was performed to determine the preferred structure type evaluating construction cost, maintenance cost, constructability, phased construction, hydraulics and scour. An important component of the study was the bridge hydraulic analysis which evaluated the skew of the existing bridge piers. While the proposed bridge was shorter than existing and had one fewer spans, the HEC-RAS analysis demonstrated no increase in upstream flood elevations adjacent to a house in the floodplain. Arcadis recommended and designed a 3-span reinforced concrete deck and prestressed concrete I-beam superstructure on wall type abutments and piers, on spread footings
04/21 – Ongoing	**MOVEBR Lee Drive (Highland Road to Perkins) Final Design Study Report, MOVEBR Baton Rouge, LA.** *Project Manager* for Study Phase up to Design Phase. Responsible for coordinating and developing concept drawings to evaluate the ***geometric feasibility of different roadway alternatives***, proposed improvements, and anticipated right-of-way needs. Assisted in the implementation of Complete Street principles for the corridor. During the alternative's selection process, participated in stakeholder and public involvement to evaluate and select the preferred alternative.
03/08 – 02/10	**Maca Ditch watershed in Tallmadge, OH.** Hydraulic Engineer for a hydrologic and hydraulic analysis for approximately 2 miles of the Maca Ditch watershed in Tallmadge, OH. The watershed has a history of flooding yards, buildings and Roads. During the May 2004 100-year storm event, Eastwood Avenue had flooding up to car windows, Washburn Road was

	overtopped, and Beechwood Drive was overtopped. The project included creating a hydrologic model of the existing watershed using HEC-HMS and creating an existing hydraulic model using HEC-RAS. The existing hydraulic model includes unsteady flow calculations to model the effects of in-line regional detention basins, lateral detention structures, and storage in the Maca Ditch floodplain. Based on the results of the existing analysis and observed flooding along Maca Ditch, proposed alternates were developed using the HEC-HMS and HEC-RAS models to alleviate the flooding were possible. A detailed narrative and a preliminary opinion of probable cost for the feasible alternates were submitted as part of the final report.
03/06 – 03/08	**City of Hudson, Ohio FEMA Map Revision.** Project manager for hydraulic study and Letter of Map Revision to re-map the FEMA floodplains in downtown Hudson. During severe storm events in 2003 and 2004, the City's downtown experienced significant flooding, which the City has tried to mitigate through two new regional detention basins and modifications to two additional stormwater ponds. The City hired Arcadis to evaluate the aggregate benefits of the detention improvements and to determine whether the 100-year flow rates in the Brandywine Creek Tributary should be reduced resulting in lower Base Flood Elevations. A SWMM model was created for the hydrologic analysis to provide peak flows that were input into the HEC-RAS model of the stream. Arcadis prepared LOMRs for both the Tributary and its Overflow, which significanlty reduced FEMA flood zone limits along this small headwater stream.
09/10 – 12/10	**Cleveland Avenue/6th Street Hydraulic Study, Canton, OH.** *Project Manager* for this SWMM study of a small urban watershed, which has experienced persistent flooding in two locations for many years. The SWMM model developed for this study included the sewer network as well as overland flow paths and above ground storage areas. Our analysis identified deficient storm sewer capacity in certain pipes and offered three alternative improvements to address the flooding. The City has selected one of the alternates and intends to move forward with final design.
12/19 – 06/22	**AES Towpath Trail Hydraulic Study, Akron, OH.** *Project manager* responsible for overall project execution, coordination with City of Akron, and securing approval from ODNR. The proposed AES Towpath Trail was a segment of the Ohio and Erie Canal trail, which required filling in a portion of the Canal to construct the adjacent trail due to its tight urban setting. For previous City of Akron projects, Arcadis had created a HEC-RAS model of the Ohio and Erie Canal from Summit Lake to the Little Cuyahoga River 15,000 feet downstream. This model was utilized and updated to determine the hydraulic impacts from the AES Trail project and identify and evaluate mitigative efforts to offset a rise in the 100-year flood elevation.
03/08 – 02/10	**Hike/Bike Trail Culvert Replacement, Stow, OH.** *Project Engineer* for a culvert replacement of an existing bridge structure on an abandoned rail line that was converted to a hike/bike trail within the City of Stow. The existing bridge carries the hike/bike trail over a major tributary to Powers Brook and was failing. The bridge was replaced with a 12' x 8' 4-sided box culvert. The size of the structure was determined as part of the recommendations from a watershed study of Powers Brook performed by Arcadis.
07/07 – 03/18	**East Maple Street Enhancements at Walsh University, North Canton, OH.** *Project Manager.* Hired by the City to study and enhance East Maple Street, collaborating with city officials and Walsh University to address corridor needs and future plans. Walsh University's vision for a vibrant, pedestrian-friendly University District shaped the project's streetscaping, including decorative crosswalks and lighting. Arcadis helped secure federal Transportation Alternatives funding for the final phase. Key improvements included a new traffic signal, upgraded pedestrian signals, three decorative brick intersections, two mid-block crosswalks with rapid-flash beacons, and a one-mile shared-use path with decorative lighting connecting to the Hoover Trail.



US 90 Ramps at LA 88 Roundabouts

Arcadis developed preliminary and final design plans for roadway improvements including roundabouts superstreet concepts, and access management.

"Arcadis is very knowledgeable about DOTD policy and procedures regarding design and submittals. Every submittal has been thorough and timely, with proper documentation."

- Robert Isemann, DOTD, Project Manager

Section 17

17 FIRM EXPERIENCE:

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Traffic, Road, Planning
Project name	US 165 Corridor Improvements (US 165B to LA 2)	Firm responsibility (prime or sub?)	Prime
Project number	H.011688	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	Ouachita Parish, LA	Owner's Project Manager	Ty Hampton
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 / T: 225 242 4636 / E: ty.hampton@la.gov		
Services commenced by this firm (mm/yy)	09/2015	Total consultant contract cost ($1,000's)	$607
Services completed by this firm (mm/yy)	06/2018	Cost of consultant services provided by this firm ($1,000's)	$607

Firms Role: Arcadis developed *roadway improvements* to address operational and safety needs of the *US 165 corridor* from its intersection with US 165 Business to its intersection with LA 2. Arcadis provided a range of services including traffic engineering, preliminary roadway design, cost estimates, feasibility studies, and public involvement.

Firm Members Involved: **Akhil Chauhan, David Fulks, Buddy Porta, Ari Deitch**

Relevant Services

- Roadway Geometric Design
- Construction Cost Estimates
- Access Management
- Superstreet Concept Development
- Traffic Engineering
- Data Collection
- Signal Timing Plans
- Agency / Stakeholder Coordination

Preliminary Roadway Design Plans and Construction Cost Estimate

Arcadis developed preliminary *roadway design plans* for proposed alternatives, incorporating *superstreet concepts* and restricted intersection types including R-CUTS, Median U-turns, and formalized u-turns. Improvements also included *access management* through the removal and relcoation of full access median openings along the corridor. Overall, proposed alternatives significantly reduce conflict points along the corridor, thereby reducing the likelyhood for crashes to occur. For all proposed alternatives, Aradis developed *construction cost estimates* and conducted benefit-cost analysis to aid in selecting a preferred alternative.

Traffic Engineering Services

Arcadis performed *traffic engineering* studies for 3 distinct segments of the corridor. The studies evaluated existing and future year operational and safety conditions, and accounted for several large proposed developments on the north end of the US 165 corridor. Analysis results showed a need for safety and access management improvements, as well as capacity improvements at various locations along the corridor. The adjacent service roads running parallel to US 165 in some segments create a high density of conflict points in the immediate vicinty of major intersections, which increases the risk for crashes to occur. The Alternative development project focused on addressing these issues as well as *facilitating projected increases in traffic generated from planned developments*. Results were documented in a *Stage 0 Report*.

Public / Stakeholder Engagement

Arcadis conducted public and stakeholder meetings in Monroe to present improvement alternatives and solicit feedback. Arcadis staff *engaged with local residents and business owners* to discuss proposed changes to access and explain the benefits of access management with respect to safety and overal operational performance of the corridor.

Preliminary Design Concept of Roadway and Access Management Improvements on US 165 between Deloach St and White St

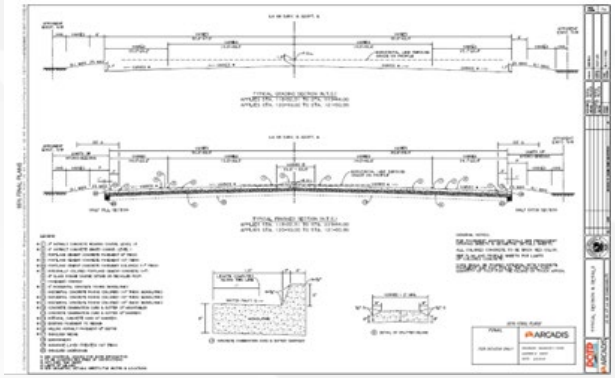
Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Road, Traffic
Project name	US 90 Ramps at LA 88 Roundabouts	Firm responsibility (prime or sub?)	Sub
Project number	4400004401 (H.011495)	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	Iberia Parish, LA	Owner's Project Manager	Brent Domingue
Owner's address, phone, email	428 Hugh Wallis Rd, Lafayette, LA 70508 / T: 337 262 6210 / E: christopher.domingue@la.gov		
Services commenced by this firm (mm/yy)	11/16	Total consultant contract cost ($1,000's)	$549
Services completed by this firm (mm/yy)	05/20	Cost of consultant services provided by this firm ($1,000's)	$505

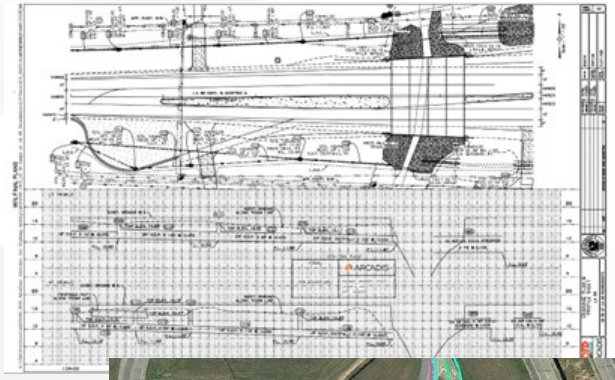
Firms Role: Roundabout Geometric Design & Modeling; Pavement Marking and Signing; Preliminary and Final Plan Development; Drainage Design; Construction Sequencing and Signing; Construction Cost Estimate; Access Management Improvements, Engineer in Responsible Charge.

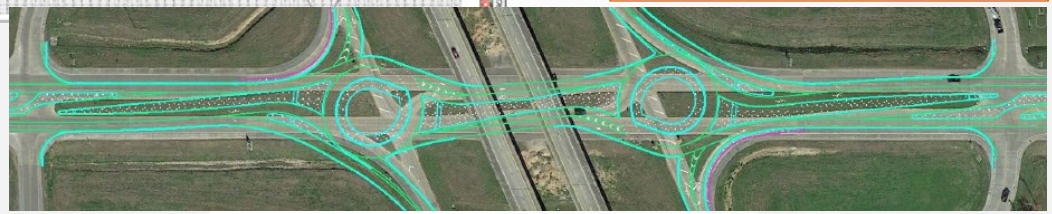
Firm Members Involved: David Fulks, Buddy Porta, Akhil Chauhan, Garret Keller, Craig Raymond, Ari Deitch

The LADOTD contracted Aucoin & Associates and its sub-consultant, Arcadis, to prepare *preliminary and final roadway plans* to install two single lane roundabouts at the US 90 ramp intersection with LA 88 in Iberia Parish. The project also includes modifying the LA 88 /Service Road intersections to *J-turn intersections*. The installation of the roundabouts is aimed at *promoting mobility and safety along the corridor*.

Arcadis performed all engineering services for this task order to develop a full set of construction plans, including InRoads modeling of the roundabouts, as a pass-through from Aucoin & Associates under their safety design retainer contract. The The design was prepared in accordance with the LADOTD Design Guidelines, Roadway Design Procedures and







Details Manual and all applicable DOTD EDSMs, AASHTO and FHWA guidelines. The roundabouts were designed to accommodate the WB-67 design vehicle. As a best practice, the project team held several design review meetings throughout preliminary plan and final plan development to more closely coordinate with LADOTD District 03 and headquarters personnel prior to proceeding into subsequent design phases. The goal of this team coordination was to *ensure all project team members agreed with proposed geometry prior to spending significant time proceeding into the subsequent phases*.

Relevant Services

- Roadway Geometric Design
- Typical Sections
- Drainage Design, Open channel and Sub-surface.
- Construction Signing and Sequencing
- Access Management
- Roadway Signing and Striping
- LADOTD Design Report (2017 Guidelines)
- LADOTD Plan Development and Review
- LADOTD Design Guidelines, EDSMs, and Roadway Design Manual.
- LADOTD Detailed Pay Item Construction Cost Estimate and Quantity Calculations.
- Coordination with LADOTD

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Road, Traffic
Project name	US 190B at Jefferson Avenue Roundabout Design	Firm responsibility (prime or sub?)	Sub
Project number	4400004401 (H.011260.5)	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	St. Tammany Parish, LA	Owner's Project Manager	Jennifer Branton
Owner's address, phone, email	685 N Morrison Blvd, Hammond, LA 70401/ T: 985 375 0165 / E: jennifer.branton@la.gov		
Services commenced by this firm (mm/yy)	06/15	Total consultant contract cost ($1,000's)	$486
Services completed by this firm (mm/yy)	07/18	Cost of consultant services provided by this firm ($1,000's)	$392

Firms Role: Roundabout Geometric Design; Urban Drainage Design; Pavement Marking and Signing; Construction Sequencing and Signing; Preliminary Plans Development; Construction Cost Estimate; Engineer in Responsible Charge; Independent Technical & Quality Reviews.

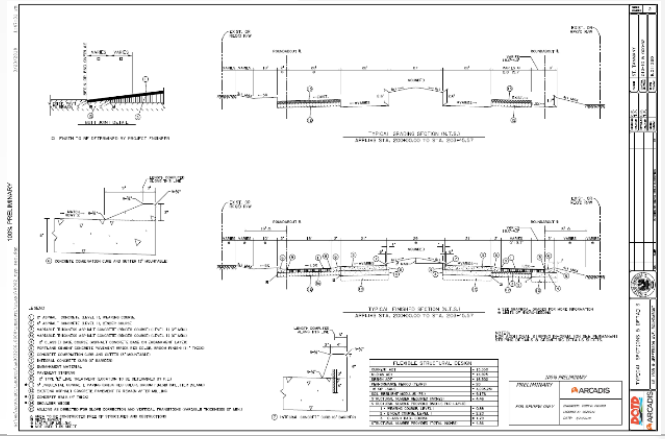
Firm Members Involved: David Fulks, Garret Keller, Craig Raymond, Buddy Porta

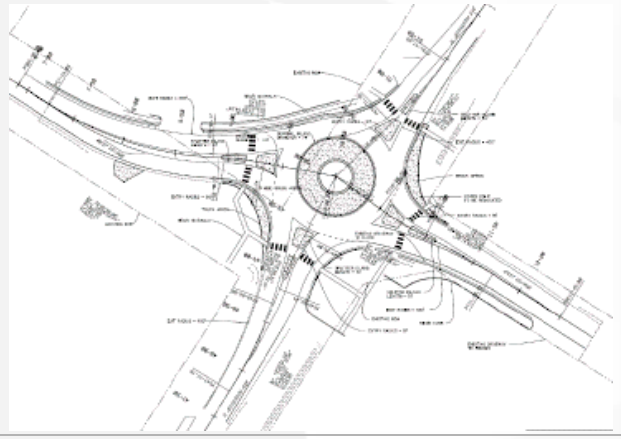
The LADOTD contracted Aucoin & Associates and its sub consultant, Arcadis, to prepare *roadway construction plans* for a single-lane roundabout to replace the existing traffic light at the intersection of US 190B and Jefferson Avenue located in the business district of Covington. The existing intersection includes an east-west urban two-lane highway (US 190B, locally named 21st Ave.) and a north-south local street (Jefferson Ave.). US 190B features a "dog-leg" at its intersection with Jefferson Ave. The installation of this roundabout is aimed at *promoting mobility and safety along the corridor*.

Arcadis performed all engineering services for this task order, including *InRoads modeling* of the roundabout, as a pass-through from Aucoin & Associates under their safety retainer contract.

The design was prepared in accordance with the LADOTD Design Guidelines and the Roadway Design Procedures and Details Manual. Although the route is signed to restrict through truck traffic, the roundabout was designed to accommodate the WB-67 design vehicle to allow for local deliveries. Also, the *LADOTD Complete Streets policy* was followed by including *ADA-compliant ramps and crosswalks* to incorporate the existing sidewalks and accommodate pedestrian traffic around the roundabout.

To arrive at the best Alternative, Arcadis performed a *context sensitive solutions* review of several different design layouts including both circular and oval shaped options for the roundabout. This exercised was aimed at carefully balancing right-of way and utility impacts to help the LADOTD determine the best suited layout for the project site. Arcadis completed 100% Preliminary Plans and 60% Final Plans. The project did not progress past the 60% Final Plan milestone, since LADOTD halted the project due to concerns over right-of-way.

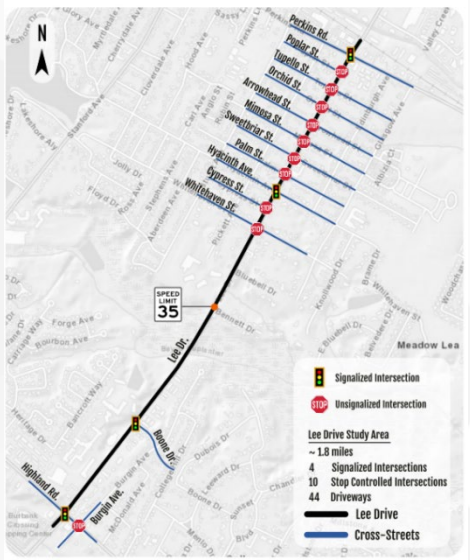




Relevant Services

- Roadway Geometric Design
- Typical Sections
- Urban Drainage Design
- Construction Signing and Sequencing
- Limits of Construction and Required ROW
- Roadway Signing and Striping
- LADOTD Design Report (2017 Guidelines)
- LADOTD Plan Development and Review
- LADOTD Design Guidelines, EDSMs, and Roadway Design Manual.
- LADOTD Detailed Pay Item Construction Cost Estimate and Quantity Calculations.
- Coordination with LADOTD Design and Construction Staff.
- Pedestrian Accommodations.
- Signal Design for Temporary Signalization of Intersection

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Road, Traffic, Bridge
Project name	Lee Drive (Highland Road-Perkins Road)	Firm responsibility (prime or sub?)	Prime
Project number	City-Parish Project No. 20-CP-HC-0044	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	East Baton Rouge Parish, Louisiana	Owner's Project Manager	Justin Schexnayder
Owner's address, phone, email	8555 United Plaza Blvd., Baton Rouge, LA 70809, (225) 761-3628, justin.schexnayder@csrsinc.com		
Services commenced by this firm (mm/yy)	02/21	Total consultant contract cost ($1,000's)	$2,568
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$1,536



Firms Role: The purpose of this project is to widen Lee Drive from a 2-lane to a 3-lane section between Highland Road and Perkins Road. Arcadis is responsible for the design study and design servies, which include traffic study and report, topographic survey, *hydraulic and drainage analysis*, *preliminary and final plans preparation*, *signal design*, bridge design, construction cost estimate, and right-of-way maps.

Firm Members Involved: Jose L. Rodriguez, Ari Deitch, Gabriel Arias, Mark Dennis, Akhil Chauhan, Max Aguirre

Relevant Services

- Preliminary and Final Plans
- Roadway and Drainage Design
- Traffic Signal Design
- Intersection Improvements
- Access Management
- Sidewalk and ADA Ramp Design
- Construction Cost Estimates

Design Study Report and Preliminary Design

Arcadis provided *traffic engineering studies and preliminary roadway and drainage design* and evaluated alignment alternatives. The work was prepared in coordination with the City of Baton Rouge and the MOVEBR Program. A preferred alternative was presented to the City of Baton Rouge based on findings from the traffic study, impacts to existing right-of-way, and a detailed construction cost analysis. Arcadis also assisted the City of Baton Rouge in obtaining public input by participating in public meetings and preparing exhibits for public display.

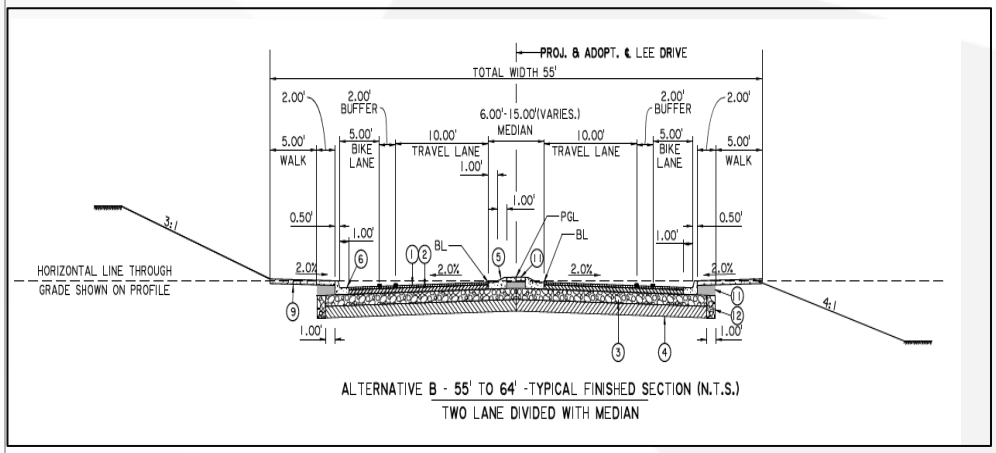


Figure: Proposed Typical Section Alternative on Lee Drive

Final Design Plans and Cost Estimate

For the Final Design Phase, Arcadis is tasked with preparing *construction roadway plans*, *right-of-way maps*, and *construction cost estimates*. The Lee Drive project involves the complete reconstruction of Lee Drive from Highland Road to Perkins Road. The proposed typical section extends approximately 1.7 miles and is a three-lane urban section with a left-turn center lane. The project goal was to improve vehicular traffic capacity and connectivity to all corridor users by delivering safe and efficient *pedestrian/bicycle facilities* while maintaining neighbourhood integrity. Improvements also include *sidewalks and bike lanes*, *traffic signal upgrades*, intersection capacity and safety improvements, and *access management*.

The design team gave special considerations to traffic and access maintenance, constructability, utility coordination and right-of- way requirements. Ensuring proper drainage during construction and overall drainage improvements was another major factor considered for the project.

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Road, Traffic, ITS, Bridge, Environmental
Project name	I-10 Calcasieu River Bridge	Firm responsibility (prime or sub?)	Prime
Project number	H.003931	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	Calcasieu Parish, LA	Owner's Project Manager	Paul Vaught
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 / T: 225 370 1816 / E: paul.vaughtiii@la.gov		
Services commenced by this firm (mm/yy)	06/2022	Total consultant contract cost ($1,000's)	12,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	12,000

Firms Role: As a member of the design joint venture, Arcadis is providing a range of engineering services for the public private partnership to replace the Calcasieu River Bridge in Lake Charles, Louisiana. Improvements also include *roadway and interchange upgrades* on the west and east sides of the new Calcasieu River bridge. Services being provided by Arcadis include roadway and drainage design, traffic design (signals, signing, pavement markings), ITS design, environmental permitting, and bridge design.

Firm Members Involved: Akhil Chauhan, Jose Rodriguez, Gabriel Arias, Colin Sarratt Ari Deitch, Max Aguirre, Kester Hollier, Paul Hsu

Relevant Services

- Roadway Design
- Drainage Design
- Construction Quantities
- Signal Design
- ITS Design and Communications
- Pavement Marking Design
- Traffic Engineering
- Maintenance of Traffic
- Signal Timing Plans

Roadway and Drainage Design

Arcadis is providing *roadway and drainage design* services for the west segment of the project between I-210 and PPG Drive. I-10 is being widened to 3-lanes in each direction in this segment. Additionally, improvements to the interchange at PPG Drive and C-D roads between PPG Drive and Sampson Street are included in Arcadis' segment. Arcadis is performing all roadway design and drainage design for these roadways and is responsible for *developing final plans for construction*.

Concept Rednering of new I-10 Calcasieu River Bridge in Lake Charles, LA

Traffic and ITS Design

Arcadis is responsible for traffic and ITS design for the entire project limits. This includes *signal design and timing plans* for new and existing signalized intersections, *ITS design* for upgraded CCTV cameras and *communications infrastrucutre*, and *pavement marking design* for all roadways impacted by the project. The ITS design scope includes the design of a common duct bank where all permitted and DOTD-owned fiber will be housed.

Bridge Design

Arcadis is responsible for the design of a new flyover bridge at the I-10 and I-210 interchange.

Environmental

Arcadis is responsible for securing environmental permits for the project including Section 10 RHA/Section 404 CWA, USACE Section 408, LDEQ Section 401 CWA and USCG Section 9 RHA. Arcadis is also responsible for performing the necessary assessments of key environmental disciplines including mitigation, floodplain, archaeology, migratory birds, essential fish habitats, and protected species.

Firm name	APS Engineering and Testing	Past Performance Evaluation Discipline(s)*	Geotech
Project name	I-10 Widening LA 415 to Essen LN	Firm responsibility (prime or sub?)	Prime
Project number	H.004100	Owner's name	LADOTD
Project location	Baton Rouge, LA	Owner's Project Manager	Kristy Smith, PE
Owner's address, phone, email	1201 Capital Access Rd., Baton Rouge, LA 70802-4438/ 225-379-1016/ kristy.smith2@ls.gov		
Services commenced by this firm (mm/yy)	09/19	Total consultant contract cost ($1,000's)	$600K
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$600K

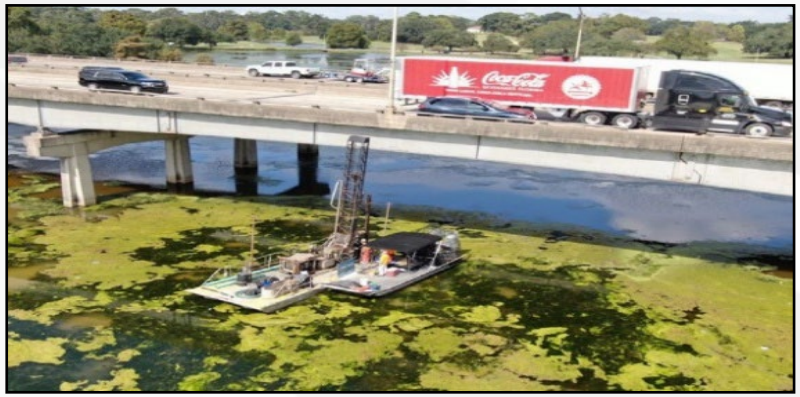
Firm Members Involved: Sergio Aviles, Sai Eddanapudi, Surendra Pathak

Relevant Services

- Geotechnical Explorations (GE)
- Geotechnical Design (GD)
- Geotechnical Construction (GC)
- CMAR
- Constructability
- Contract Management (CM)

Firms Role: A P S Engineering and Testing, LLC performed a *comprehensive geotechnical investigation* to provide the client with all necessary subsurface information for the planning and design of the I-10 widening project between the Washington Street Exit and LSU Lakes.

Project Scope: The scope included the drilling and sampling of 77 deep borings, consisting of 16 over-water borings and 61 land borings, strategically located to address anticipated deep foundation and MSE Walls design needs. Our field operations incorporated *multiple drilling techniques to address varying site conditions*, and all sampling was conducted in accordance with ASTM and DOTD standards. The project required complex over-water operations with specialized equipment mobilization and safety compliance procedures. Laboratory testing was performed exclusively in our AASHTO-Accredited Geotechnical Laboratory, including:



- Soil Classification – ASTM D2487 (Unified) / ASTM D3282 (AASHTO)
- Natural Moisture Content – ASTM D2216
- Liquid limit, plastic limit, and plasticity index (ASTM D4318)
- Grain Size Analyses – ASTM D422
- Minus No. 200 Wash Sieve Analysis – ASTM D1140
- Unconsolidated Undrained (UU) Triaxial Tests – ASTM D2850
- One-Dimensional Consolidation Testing – ASTM D2435
- Specific Gravity – ASTM D854

All results were subjected to *QA/QC review by senior geotechnical engineers*, ensuring that the design team received reliable engineering parameters for design. As a result, a geotechnical report was prepared with site-specific design recommendations for deep foundations, embankment stability, and MSE wall structures, enabling the client to move forward with confidence in the design phase.

Firm name	APS Engineering and Testing	Past Performance Evaluation Discipline(s)*	Geotech
Project name	Comite River Diversion Bridge at LA-67, LA-19 and LA-19 Railroad Bridge	Firm responsibility (prime or sub?)	Sub
Project number	H.004100	Owner's name	Huval & Associates, Inc.
Project location	East Baton Rouge, LA	Owner's Project Manager	Thomas M. Gattles III, P.E.
Owner's address, phone, email	922 West Don't des Mouton Rd,. Lafayette, LA 70507 / 337-264-3798/ tgattle@huvalassoc.com		
Services commenced by this firm (mm/yy)	11/19	Total consultant contract cost ($1,000's)	150K
Services completed by this firm (mm/yy)	06/22	Cost of consultant services provided by this firm ($1,000's)	150K

Firm Members Involved: **Sergio Aviles, Sai Eddanapudi, Surendra Pathak**

Relevant Services

- Geotechnical Explorations (GE)
- Geotechnical Design (GD)
- Geotechnical Construction (GC)
- CMAR
- Constructability
- Contract Management (CM)

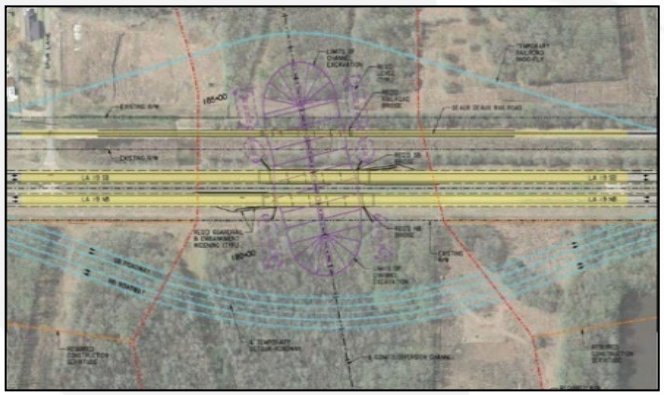
Firms Role: A P S Engineering and Testing, LLC provided *complete geotechnical services* to support the planning, design, and construction of multiple structures along the LA-19 corridor. Structures included the LA-19 bridge (slope stability/embankment), LA-19 railroad bridge (embankment/MSE wall settlement/retaining wall), LA-19 twin bridges, and the LA-67 bridge (prestressed concrete piles).

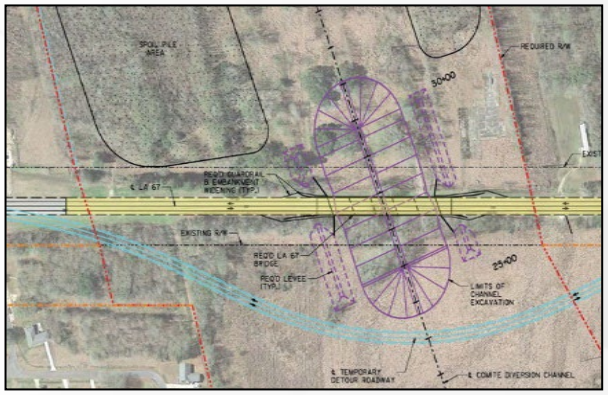
Comprehensive Geotechnical Investigation: The investigation included drilling and sampling of 19 deep borings ranging from 50 ft to 120 ft, followed by an extensive laboratory testing program in our *AASHTO-accredited laboratory* including:

- Moisture content (ASTM D2216)
- Liquid limit, plastic limit, and plasticity index (ASTM D4318)
- Unconsolidated-Undrained triaxial compression (ASTM D2850)
- One-Dimensional Consolidation (ASTM D2435)

Geotechnical Data Analysis: All data was analyzed to develop the *geotechnical design parameters* for Slope Stability, Settlement, MSE wall, and Deep Foundations design. As the project advanced into construction, A P S was also retained by DOTD to provided full geotechnical engineering services during construction, services included:

- PDA instrumentation and CAPWAP analysis for driven piles
- Field inspection and verification of test piles
- Construction Materials Testing (CMT) for soils, concrete, and aggregates





Firm name	APS Engineering and Testing	Past Performance Evaluation Discipline(s)*	Geotech
Project name	US-90 Railroad Overpass (S. East of LA-85)	Firm responsibility (prime or sub?)	Sub
Project number	H.010155	Owner's name	Shread-Kurykendall & Associates, Inc
Project location	Iberia Parish, Louisiana	Owner's Project Manager	Nicci D. Gill
Owner's address, phone, email	13016 Justice Ave., Baton Rouge, LA 70816/ 225-296-1335/ ngill@skanger.com		
Services commenced by this firm (mm/yy)	11/19	Total consultant contract cost ($1,000's)	$105K
Services completed by this firm (mm/yy)	12/23	Cost of consultant services provided by this firm ($1,000's)	$105K

Firm Members Involved: Sergio Aviles, Sai Eddanapudi, Surendra Pathak

Firms Role: A P S Engineering and Testing, LLC performed full-service geotechnical investigation and engineering analysis to support the planning and design of a 2,400-foot bridge.

Comprehensive Geotechnical Investigation: The scope work included drilling twelve (12) borings to depths of 120 ft, with continuous undisturbed sampling from the ground surface to 20 ft and at 5-ft intervals thereafter to *ensure high-quality data for design purposes*.

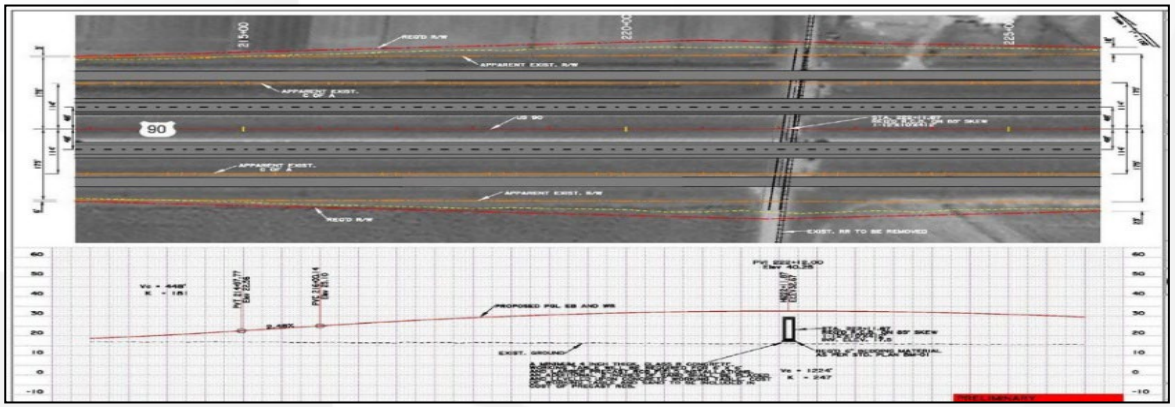
All laboratory testing was performed in our AASHTO-accredited laboratory following ASTM standards, including:

- Visual description and classification of soils (ASTM D2488)
- Moisture content (ASTM D2216)
- Minus No. 200 Wash Sieve Analysis – ASTM D1140
- Liquid limit, Plastic limit, and Plasticity index (ASTM D4318)
- Unconsolidated-Undrained triaxial Compression (ASTM D2850)
- One-Dimensional Consolidation (ASTM D2435)

Geotechnical Data Analysis: The engineering analysis included Slope Stability, Settlement analysis, MSE wall design, and deep Pile foundations design recommendations, ensuring a *complete geotechnical design report*. Recommendations were also provided for *constructability and long-term performance* of the bridge foundations.

Relevant Services

- Geotechnical Explorations (GE)
- Geotechnical Design (GD)
- Geotechnical Construction (GC)
- CMAR
- Constructability
- Contract Management (CM)



Firm name	Marrero, Couvillon & Associates, LLC.	Past Performance Evaluation Discipline(s)*	Other (Lighting)
Project name	Bluebonnet Blvd. Roadway Lighting	Firm responsibility (prime or sub?)	Sub
Project number	19-CP-HC-0034	Owner's name	East Baton Rouge Parish/City of Baton Rouge
Project location	Baton Rouge, LA	Owner's Project Manager	Kate Brady Prejean, PE
Owner's address, phone, email	10000 Perkins Rowe, Suite 640, Baton Rouge, LA 70810; 225.368.2818; kbprejean@hntb.com		
Services commenced by this firm (mm/yy)	07/20	Total consultant contract cost ($1,000's)	$59
Services completed by this firm (mm/yy)	12/20	Cost of consultant services provided by this firm ($1,000's)	$59

Firm Members Involved: Kimball Schlafly, Chris Schade

Relevant Services

- Roadway Lighting Design
- Electrical Design
- Construction Documents
- Photometric calculations performed
- Veiling luminance using Agi-32 lighting software.

Firms Role: Roadway lighting design, photometric analysis and calculations.

Project Scope: The scope of work includes additional lane capacity in each direction. Bluebonnet Boulevard is two lanes in each direction currently. Pedestrian facilities are interspersed throughout the corridor and there is commercial development abutting the entire corridor. The project will add an additional travel lane in each direction and provide for connected pedestrian facilities throughout the corridor.

Roadway Lighting Design: *Lighting and electrical design* is ongoing, and provides new low-mast lighting utilizing LED fixtures on aluminum poles with breakaway bases, and will cover the entire stretch of roadway from Perkins Road to Picardy Ave. All *photometric analysis* was performed using Agi32 and approved by MoveBR. The lighting level criteria were determined from the traffic analysis, and meet the recommended levels of IES, RP-8, and MoveBR guidelines. Combination pedestrian/bicycle pathways are being added to support increased pedestrian and bicycle traffic anticipated. Extensive photometric calculations have been performed to ensure proper illumination of the pedestrians and bicyclists. This included vertical illuminance calculations in the directions of oncoming traffic.

Firm name	Marrero, Couvillon & Associates, LLC.	Past Performance Evaluation Discipline(s)*	Other (Lighting)
Project name	I-10 and Pecue Lane - Lighting	Firm responsibility (prime or sub?)	Sub
Project number	09-CS-US-0041	Owner's name	East Baton Rouge Parish/City of Baton Rouge
Project location	Baton Rouge, LA	Owner's Project Manager	Gary McClure (Shread-Kuyrkendall)
Owner's address, phone, email	10000 Perkins Rowe, Suite 640, Baton Rouge, LA 70810; 225.368.2818; kbprejean@hntb.com		
Services commenced by this firm (mm/yy)	07/17	Total consultant contract cost ($1,000's)	$3,600
Services completed by this firm (mm/yy)	02/21	Cost of consultant services provided by this firm ($1,000's)	$131

Firm Members Involved: **Kimball Schlafly, Chris Schade**

Firms Role: Roadway lighting design, photometric analysis and calculations, *eletrical design*, *utility coordination*.

Project Scope: Purpose of the project is to construct a new interchange at I-10 and Pecue Lane. The interchange is a Diverging Diamond Interchange type, and includes upgrades to Pecue Lane, a new overpass, and auxiliary lanes along I-10.

Roadway Lighting Design: New *LED lighting design* included low-mast poles along Pecue Lane and the new on/off ramps to I-10, *high mast poles* at the new diamond interchanges along Pecue Lane, bridge-mounted fixtures at the underpass, and new median-mounted *low mast poles* along I-10 throughout the entire reach of the new interchange. Lighting design also required the establishment of *new electrical services* from Entergy, and secondary controllers for all of the new lighting. The construction administration has required additional *coordination work with Entergy* to accommodate new overehad transmission and distribution lines in conflict with the road right-of-ways, requiring relocation of light poles.

Relevant Services

- Roadway Lighting Design
- Electrical Design
- Construction Documents
- Photometric calculations performed
- Veiling luminance using Agi-32 lighting software.
- High-mast and low-mast lighting
- Traffic signals

Firm name	Marrero, Couvillon & Associates, LLC.	Past Performance Evaluation Discipline(s)*	Other (Lighting)
Project name	I-10 Widening, LA73 to LA30	Firm responsibility (prime or sub?)	Sub
Project number	H.009266	Owner's name	Louisiana Department of Transportation and Development (LADOTD)
Project location	Baton Rouge, LA	Owner's Project Manager	Kurt Brauner, PE
Owner's address, phone, email	P.O. Box 94245, Baton Rouge, LA, 70804, 225 379 1933, Kurt.Brauner@la.gov		
Services commenced by this firm (mm/yy)	09/22	Total consultant contract cost ($1,000's)	$186
Services completed by this firm (mm/yy)	01/24	Cost of consultant services provided by this firm ($1,000's)	$186

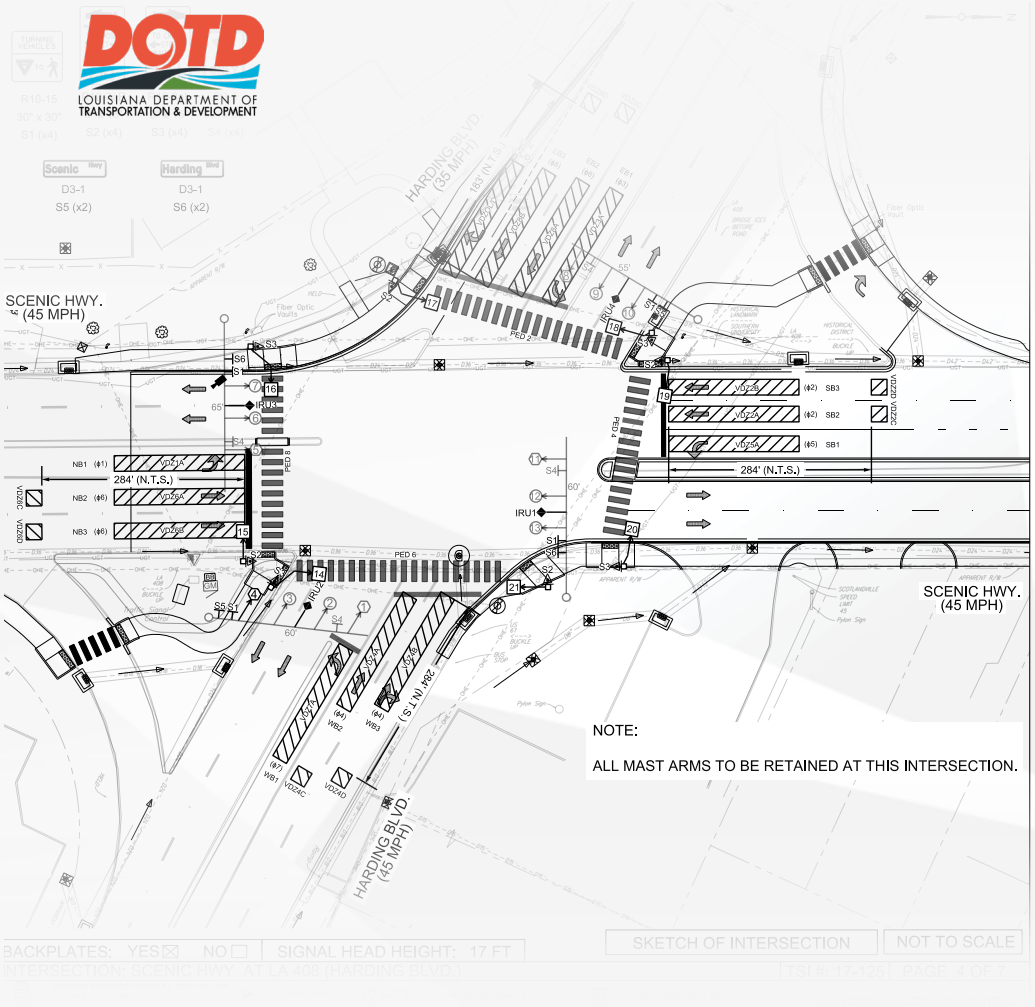
Firm Members Involved: **Kimball Schlafly, Chris Schade**

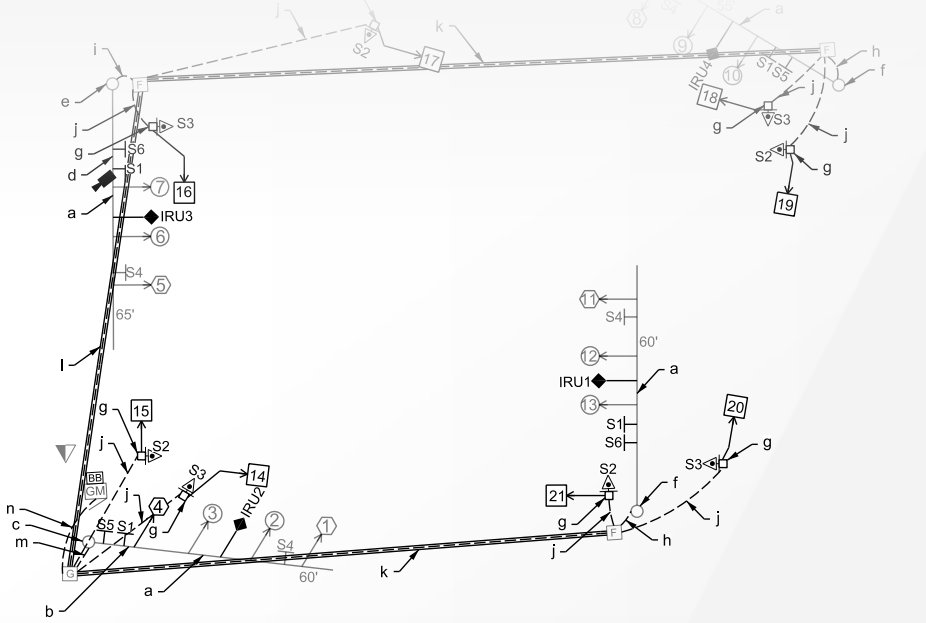
Firms Role: Roadway *lighting design*, photometric analysis and calculations, *electrical design*.

Roadway Lighting Design: The MCA scope of services is to modify the existing high mast lighting at LA73 interchange, as needed to accommodate the widening of I-10. This required a *photometric analysis* to be performed on the existing conditions, and again on the proposed *relocation for the high mast poles to accommodate the added travel lanes* and new bridge construction over LA73. The high mast poles shall be re-used, with new LED light fixtures and lowering devices provided.

Relevant Services

- Roadway Lighting Design
- Construction Documents
- Photometric calculations performed
- Veiling luminance using Agi-32 lighting software
- High-mast lighting
- LED upgrade





Scenic Highway (Swan Ave to Harding Blvd) Corridor Enhancements

Arcadis developed signal design and timings for the project, which incorporated upgraded signal equipment, accessible pedestrian signals, and a HAWK signal for a mid-block pedestrian crossing.

Sections 18-23

18 APPROACH AND METHODOLOGY:

The Arcadis Team

As the author of the US 165 Stage 0 Feasibility Study, Arcadis has a firm grasp on the operational and physical characteristics of the US 165 corridor. Arcadis developed the initial improvement concepts on US 165 that served as the basis for the final project configuration. As such, our approach leverages experience gained through the delivery of the feasibility study and engagement with local stakeholders to provide feasible, context sensitive solutions. Our multi-disciplinary team, led by Jose Rodriguez, is prepared to provide all engineering services required for this contract, including dedicated specialists from **Marrero, Couvillon & Associates, LLC (MCA)** for all lighting and electrical services and **APS Engineering and Testing, LLC (APS)** for geotechnical services that may be needed for non-standard light pole and/or signal pole foundations.

Project Scoping

With the requirement to submit a fee estimate within 30 days of selection notice, the Arcadis project manager will immediately work to schedule a workshop with LADOTD to finalize all scope elements and ensure a mutual understanding of the level of effort required for project tasks. Prior to the workshop, Arcadis will perform a thorough review of available engineering data and proposed improvements and develop an agenda to clarify scope elements and present recommendations that may optimize project delivery. Concurrently, Arcadis will initiate fee development to **minimize turnaround time between finalizing the scope and submitting the fee estimate**.

Project Management

A formal kick-off meeting will be conducted by Arcadis within five business days of notice to proceed, establishing clear protocols for review cycles, invoicing, and communication. We will maintain continuous coordination through periodic meetings to **proactively address concerns and ensure all tasks remain on schedule**. Arcadis will provide the LADOTD Project Manager with a detailed monthly progress package, including a schedule, a written status report, and an invoice.

Roadway Design

The roadway design will be executed through a structured, multi-phase process to ensure quality and facilitate LADOTD review. We will begin with a thorough analysis of all data provided, including the topographic survey, as-built plans, and the draft exhibit of the proposed project configuration. The design will progress through sequential 30%, 60%, 90%, and 100% preliminary plan submittals, each accompanied by a cost estimate in AASHTOWare. Arcadis will prepare and provide all necessary layouts, exhibits and permit sketches for LADOTD's use in obtaining environmental clearance and permits as well as for display in project meetings. Upon receiving notice of environmental clearance, Arcadis will promptly advance the design into final plan preparation, incorporating any conditions mandated by the environmental approval. This process will deliver full plans, profiles, cross-sections, and details for the specified improvements, including J-turns, extended turn lanes, pedestrian facilities, and high-friction surface treatments. All supporting documents, including a utility conflict matrix, hydraulic report, Stormwater Pollution Prevention Plan, and Temporary Traffic Control plans, will be developed concurrently and included with the relevant submittals. **Roadway designers will incorporate traffic engineering recommendations to achieve a cohesive final product.** By using the LADOTD's 2017 Minimum Design Guidelines, the American Association of State Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices (MUTCD) recommendations and applicable traffic data, our team will develop optimized roadway geometry. The signal work will be carefully coordinated with the new pedestrian crosswalks to ensure a comprehensive multi-modal solution.

It is anticipated that a **Level 2 Transportation Management Plan** will be required. Per the feasibility study completed by Arcadis, several locations along US 165 are on the high potential for safety improvement (PSI) list. Additionally, US 165 at Louberta Street experiences severe congestion during peak periods. This may require **strategies to minimize adverse impacts to operations and safety during construction.**

Key Design Constraints and Challenges Identified by the Arcadis Team

Following a detailed review of the concept drawings provided with the Request for Proposals (RFP), the Arcadis Team has identified several key constraints and challenges that must be addressed during the preliminary design phase:

Bulb-Outs

Several proposed bulb-outs are located directly above existing drainage structures. For example, the northbound U-turn bulb-out north of Hadley Street is situated above an existing drainage structure (see left image below). Similarly, a southbound U-turn is situated above an existing box culvert north of Deloach Street (see right image below). To minimize impacts on the existing drainage infrastructure, the locations of U-turns and associated bulb-outs may need to be adjusted. In areas where bulb-outs encroach into open-ditch drainage, culverts will likely be required to **maintain proper drainage**.

Figure – Existing drainage structures impacted by proposed bulb-outs

Turn Lane Extensions

Extensions of turn lanes will require careful assessment to accommodate the expanded roadway segments. These modifications may impact existing open-ditch drainage systems. The use of culverts and modifications to drainage slopes and open channels may be required to **ensure continued drainage functionality**.

Sidewalks on Service Roads

The concept drawings indicate new sidewalks along existing frontage roads within the project limits, where roadside conditions include both closed and open drainage systems. In areas with closed drainage, sidewalk installation is expected to be relatively straightforward. However, in areas with open-ditch drainage, sidewalk installation will be more complex and could require converting open ditches to closed drainage systems.

Sidewalks Over Existing Bridges

Sidewalks are also proposed over existing bridges on the service road just north of East Street. **Arcadis will assess the structure capacity of bridges to determine if they can support the addition of raised curbs and sidewalks**. Additionally, it will be necessary to shift lane lanes to provide the required lane, shoulder, and sidewalk widths across the bridges. The figure below shows on of the existing bridges, with a proposed typical section that meets **LADOTD minimum design requirements**.

Figure – Proposed typical section for Service Road Bridge with Sidewalk

The Arcadis Team is committed to proactively identifying and addressing these constraints early in the design process. We will coordinate closely with stakeholders to develop practical, cost-effective solutions that maintain the integrity of both the drainage and transportation systems.

Drainage Design

Working in close conjunction with the roadway engineers, our drainage design approach will be fully integrated with geometric improvements. We will use the provided topographic survey to conduct a **detailed hydrologic and hydraulic (H&H) analysis of the existing**

conditions, identifying all drainage basins, outfall points, and potential flood impacts. We will ensure compliance with LADOTD drainage standards and applicable environmental regulations. The drainage design will be developed concurrently with the roadway plans and will be incorporated in the appropriate plan submittals. A drainage report will document all calculations, water surface elevations and mitigation measures. Drainage improvements may include open or closed system designs to accommodate roadway improvements.

Traffic Design Services

The project includes several new signal installations for existing and proposed intersections along US 165, as well as the removal of the signal at Hadley Street. Additional services may also include an inspection of existing fiber communications infrastructure to ensure that it can support the upgraded signal equipment.

Signal Timing Plans – Arcadis will gather traffic data and models from previous studies and review results and recommendations. Any identified concerns or gaps in data and/or analysis will be brought to LADOTD's attention and addressed prior to beginning signal timing plan and design development. Using the available data for motorized and non-motorized modes, Arcadis will develop timing plans for all signalized intersections within the project limits using Sycnhro Software. Arcadis will also review the limits of the **coordinated signal system** and determine if any signals outside of the project limits should be included in the models for timing plan development. Arcadis will submit the preliminary timing plans and model files, along with recommendations on pedestrian phasing and actuation configurations, to LADOTD for initial review and approval. Model files will also be provided with each submittal stage of the signal design plans.

Signal Design – Signal design plans will be **developed in accordance with the LADOTD Traffic Signal Manual, MUTCD,** and **LADOTD Traffic Signal Details**.

Arcadis will perform a field visit to verify the TSIs, signal timings, and fiber communications infrastructure. **If determined necessary as an additional service, our team is prepared to provide a detailed inspection and inventory of existing fiber communications in and around the project limits. Arcadis can also perform ITS Systems Engineering Analysis that, as needed, to ensure that the existing fiber network can support upgraded signal equipment.**

Extra emphasis will be placed on **strategically locating signal poles to avoid the need for special foundations and minimize the number of pole foundations**. For signals that accommodate pedestrian phases, accessible pedestrian signals and push buttons will be designed in accordance with the latest MUTCD requirements. The need to provide luminaires on signal poles at locations where pedestrian crossings are being implemented will be determined in coordination with LADOTD. Arcadis will also provide design plans for any temporary signals that may be needed to support the construction phasing for the project.

Traffic Signal Inventory (TSI) – After signal design plans are finalized, Arcadis will provide updated TSI sheets for each new and modified signal within the project limits.

Lighting and Electrical Design

Lighting and electrical design will begin with obtaining as-built drawings for any existing lighting systems and point of connections to the utilities, on-site surveys to **verify the accuracy of the as-built documents**, and review and verification of the topographic and SUE surveys. We will then develop the **photometric analysis** of the existing lighting for review by LADOTD, and follow with the photometric analysis of the proposed new lighting systems. The new photometric analysis will cover the roadways, but also all of the sidewalks, crosswalks and bike paths.

Upon approval of the photometric analysis from LADOTD, plans and specifications will be developed for submission at the 60%, 95%, 98% and 100% levels of completion, until no exceptions are taken. The plans and technical special provisions will all be performed in accordance with the standards and requirements of LADOTD, and in conformance with the recommendations of the **IES RP-8, Recommended Practice: Lighting Roadway and Parking Facilities** as applicable.

Construction Related Engineering Services

The Arcadis Team will provide bid and construction-phase services for the electrical components of this project. These services include but are not limited to attending construction meetings, reviewing shop drawings and equipment submittals, responding to Requests for Information (RFIs), and performing field inspections. **Our team will ensure that adequate resources are assigned to provide timely reviews and response times for shop drawing submittals and RFIs.**

During construction, we will update the fault-current, coordination, and voltage drop calculations initially performed during the design phase. These updates will incorporate contractor-provided equipment submittals, utility-supplied transformer data, and field-measured conductor lengths as needed. This information will be used to determine any necessary circuit breaker trip adjustments and to establish arc-flash hazard labeling for all electrical equipment.

We will utilize ETAP software to model the power distribution system and to perform voltage-drop, fault-current, and arc-flash hazard analyses. ETAP will generate PDF versions of the arc-flash warning labels, which will be provided to the contractor for procurement and installation. The Arcadis Team will attend all construction meetings and perform site visits as required. We will monitor the progress of the documentation of the as-built plans of the contractor to ensure accuracy and completeness, and observe the conductor insulation and system performance testing. Pre-final and final inspections will occur with punch lists prepared, submitted, and corrections/completions verified.

QA/QC

A rigorous, multi-tiered QA/QC process will be implemented to ensure all deliverables meet LADOTD's highest standards before each submittal. **Each milestone deliverable will undergo a thorough internal review by a Senior Engineer not directly involved in the production work.** This process will verify geometric accuracy, specification compliance, quantity accuracy, and overall constructability. We will provide a written disposition of comments for every LADOTD review, addressing all feedback comprehensively with each subsequent submittal to minimize delays and ensure an efficient review process.

SCHEDULE

		Preliminary and Final Phases																													Construction Phase
																															Extends to End of Contract
Scope Category	**Task**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	
Applies to all	Notice to Proceed	★																													
	Kick-off	★																													
Preliminary Design Phase	30% Design Development With Design Report						★																								
	LADOTD 30% Plan Review																														
	60% Design Development											★																			
	LADOTD 60% Plan Review																														
	90% Design Development																★														
	LADOTD 90% Plan Review																														
	100% Preliminary Plan Submittal																				★										
	LADOTD 100% Plan Review																														
	Environmental Clearance																				★										
Final Design	60% Final Plans																				★				★						
	LADOTD 60% Plan Review																														
	95% (ACP) Final Plans																												★		
	Sealed Final Plans																													★	
Construction Phase	Bid Period, Opening, & Evaluation																														★
	Contract Award & NTP to Contractor																														
	Shop Drawing and RFI Reviews																														Ongoing till expiration of contract ★
	Electrical Work Oversight (Periodic Field Inspections)																														Ongoing till expiration of contract ★
	As-Built Plans Review																														Ongoing till expiration of contract ★
	Operation and Maintenance Manuals																														Ongoing till expiration of contract ★
★	**Meeting or a milestone**																														
	Review by LADOTD																														

19 WORKLOAD:

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Discipline	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance
ARCADIS	Traffic	4400029193 / H.004100.5 and H.004100.6	I-10: LA 415 to Essen Lane on I-10 and I-12 ***(50% of remaining work is complete and invoiced but awaitng payment)***	$880,338
		4400019379 / H.013797	LA 30: EBR PL – I-10	$232,048
		4400024307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	$19,422
		4400021325 / H.012837.5	I-10 New Orleans Master Plan	$58,758
		4400023690 / H.015590.5	LA 494: LA 6 To Blanchard Rd	$176,132
		4400025625 / H.014622.2	St. Nazaire Road Ext: LA 96 – Corne Road	$159,563
		4400024084 / H.009300.5	CMAR Contract for Hooper Road Widening (LA 3034 – LA 37)	$13,510
		H.003931	I-10 Calcasieu River Bridge P3 Project ***(Majority of remaining work to be completed within 9 months)***	$1,260,000
		4400025047 / H.011358.2	US 190 (Vine Street) Reconstruction	$102,564
	Road	4400024307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	$12,261
		4400019010 / H.010116.5	LA 1088: Soult and Trinity Roundabouts	$96,233
		4400025022 / Multiple State Project Nos	IJJA Off System Bridge Program – Road Task Orders	$26,082
		H.003931	I-10 Calcasieu River Bridge P3 Project ***(Majority of remaining work to be completed within 9 months)***	$1,680,000
		4400025921 / H.015938.1	Transportation Systems Management and Operations (TSMO) Program	$80,680
	ITS	4400029193 / H.004100.5 and H.004100.6	I-10: LA 415 to Essen Lane on I-10 and I-12 ***(50% of remaining work is complete and invoiced but awaitng payment)***	$207,138
		4400026457 / H.013868.5	ITS MGMT, OPERATIONS, & MAINT	$183,227
		4400026457 / H.013868.6 (A)	ITS MGMT, OPERATIONS, & MAINT	$42,031
		4400026457 / H.013868.6 (B)	ITS MGMT, OPERATIONS, & MAINT	$100,462
		4400026457 / H.013868.5 (2025 Renewal)	ITS MGMT, OPERATIONS, & MAINT	$861,255

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Discipline	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance
ARCADIS		4400026457 / H.013868.6 (A) (2025 Renewal)	ITS MGMT, OPERATIONS, & MAINT	$943,804
		4400026457 / H.013868.6 (B) (2025 Renewal)	ITS MGMT, OPERATIONS, & MAINT	$228,024
		H.003931	I-10 Calcasieu River Bridge P3 Project *(Majority of remaining work to be completed within 9 months)*	$294,000
	Environmental	4400019338 / Multiple State Project Nos	Rural Bridge Replacement Initiative Phase II	$52,764
		4400009281 / H.009932	US 80 Widening: Vancil Road to Well Road EA	$5,343
		4400025022 / H.015498.5 Recall 102225	Park Road Over Lagoon	$35,000
		4400025022 / Multiple State Project Nos	IJJA Off System Bridge Program – Env. Task Orders	$183,549
		4400025625 / H.014622.2	St. Nazaire Road Ext: LA 96 – Corne Road	$56,062
		H.003931	I-10 Calcasieu River Bridge P3 Project *(Majority of remaining work to be completed within 9 months)*	$336,000
		4400025047 / H.011358.2	US 190 (Vine Street) Reconstruction	$8,509
		4400029193 /H.004100.5 and H.004100.6	I-10: LA 415 to Essen Lane on I-10 and I-12 *(50% of remaining work is complete and invoiced but awaitng payment)*	$431,538
	Bridge	4400025022 / Multiple State Project Nos	IJJA Off System Bridge Program – Bridge Task Orders	$20,498
		H.003931	I-10 Calcasieu River Bridge P3 Project *(Majority of remaining work to be completed within 9 months)*	$630,000
		4400029193 / H.004100.5 and H.004100.6	I-10: LA 415 to Essen Lane on I-10 and I-12	$207,138
	CE&I/OV	4400027361 / H.011220.6, H.012901.6, H.010634.6	US 90 Engineering Support	$256,767
		4400016923 / H.012901.6, H.010634.6	US 90Z (Bodenger Blvd. – Stumpf Blvd.)	$192,319
		4400025046 / H.013710.6	I-10: US 61 to LaPlace ITS Deployment (CE&I)	$35,297
		4400025665 / H.013482.6	I-10 WBR Queue Warning System	186,918
		4400021325 / H.012837.5	I-10 New Orleans Master Plan	$3,751
	Data Collection	4400023812 / H.015377.5	Weigh Station Assessment	$358,375

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
MCA Engineering & Construction	Road	H.015052	I-20 Widening Overlay	$168,167

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
APS Engineering and Testing	CE&I/ OV	4400024653 / H.014560.6	LA-94 Vermillion River Bridge	$33,507
		4400024653 / H.01254.6	Wiggins Bayou Bridge	$37,790
	Geotech	4400019337 / H.014247	LA 399 Bridges Near Fullerton	$24,307
		4400019337 / H.014245	LA 119; Bayou Pierre & Creek Bridges	$23,654
		4400024653 / H.014982.5	Marathon Rd over Dry Creek	$25,056
		4400019011 / H.012068.5	LA 1026 Creek Bridge	$12,900
		4400024653 / H.014978.5	Bellard Loop over Untamed Drainage Ditch	$28,545
		4400024653 / H.016323.5	LA 37 Glass Branch Bridge	$6,431
		4400024653 / H.016326.5	LA 36 Drain Bridge Pearl	$11,451
		4400024653 / H.016322.5	LA 81: W-11 Lateral & Bayou Black Bridges	$15,804
		4400024653 / H.016312.5	LA 3116 Creek Bridges	$20,014
		4400024653 / H.004005.5	I-10 LA415 to Essen Lane on I-10 and I-12	$55,900
		4400024653 / H. 016321.5	LA 970 Creek Bridge	$5,123
		4400024653 / H.016311.5	LA 1123 Box Culvert Creek Bridge	$22,194
		4400024653 / H.016324.5	LA 1047 Drain Bridge	$6,946

20 CERTIFICATIONS/LICENCES

STAFF CERTIFICATION CHART SUMMARY

Names	Firm	Relevant Certification
Akhil Chauhan, PE, PTOE, PTP, PMP *Meet MPR Nos. 1 & 2*	ARCADIS	Traffic Engineering Analysis Process & Report Module 1, 2, & 3
Jose L. Rodriguez, PE *Meets MPR No. 3*		ATSSA Traffic Control Supervisor
Ari Deitch, PE, PTOE, PTP, RSP1 *Meets MPR No. 4*		Traffic Engineering Analysis Process & Report Modules 1, 2, & 3 ATSSA Traffic Control Supervisor FHWA-NHI-133121 Traffic Signal Design and Operation
Kester Hollier, PE, PTOE *Meets MPR No. 4*		Traffic Engineering Analysis Process & Report Modules 1, 2, & 3 ATSSA Traffic Control Supervisor
Max Aguirre, PhD, PE, PTOE, RSP2I		Traffic Engineering Analysis Process & Report Modules 1, 2, & 3 ATSSA Traffic Control Supervisor
Cody Lemoine		ATSSA Traffic Control Supervisor FOA Certified Fiber Optic Technician ISSI RTMS Traffic Detector Technical Training Course Axis Boot Camp Daktronics Vanguard Maintenance and Software Training
Sergio Aviles, PE	APS Engineering and Testing	ATSSA Traffic Control Technician ATSSA Certified Flagger
Sairam Eddanapudi, PE		ATSSA Traffic Control Technician ATSSA Flagger
Surendra Pathak, PE		ATSSA Traffic Control Supervisor ATSSA Certified Flagger

20 CERTIFICATIONS/LICENCES

Names	Firm	Relevant Certification
APS Engineering and Testing		AASHTO Certificate of Accreditation
		LA Unified Certification Program (DBE/SBE)
		LELAP Accreditation
		LA SOS
MCA Engineering & Construction		DBE Certification / SEDBE – Socially and Economically Disadvantaged Business Enterprise
		LA Unified Certification Program (DBE/SBE)
		LA SOS

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: June 4, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: June 11, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA
Safer Roads Save Lives

Jose Rodriguez

has attended
Louisiana Traffic Control Supervisor Refresher

Completed: 29-MAR-2024

CEU (If Applicable): 0.75

ATSSA provides training and certification but neither constitutes employment by ATSSA.

This certificate provides proof of training, not certification.

American Traffic Safety Services Association
ATSSA.com

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA
Safer Roads Save Lives

Ari Deitch

has attended
Louisiana Traffic Control Supervisor

Completed: 22-FEB-2024

CEU (If Applicable): 1.5

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA CERTIFIED

American Traffic Safety Services Association
ATSSA.com

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NHI
NATIONAL HIGHWAY INSTITUTE

Certificate of Training

ARI DEITCH

has participated in

FHWA-NHI-133121 Traffic Signal Design and Operation

hosted by

LA DOTD/LTRC

Date: *August 16-17, 2017*
Location: *Baton Rouge, LA*

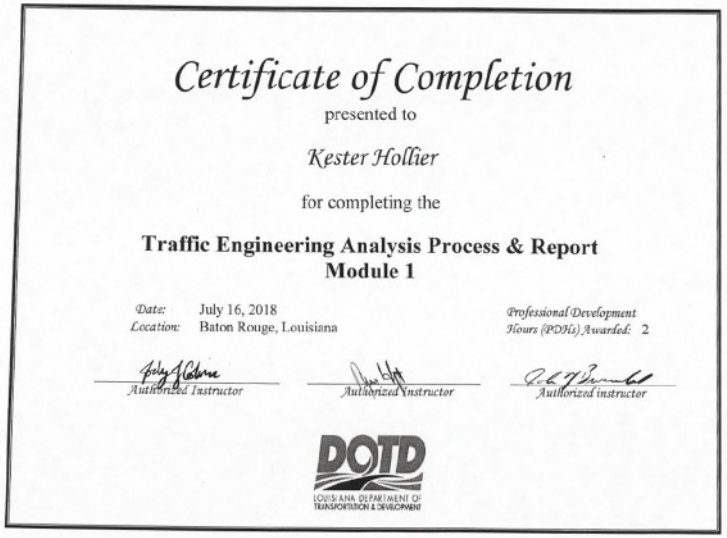
Hours of Instruction: 11

Instructor

Instructor

Allison H. Landry
Local Coordinator

Valerie Briggs
Valerie Briggs, Director
National Highway Institute



Certificate of Completion

presented to

Kester Hollier

for completing the

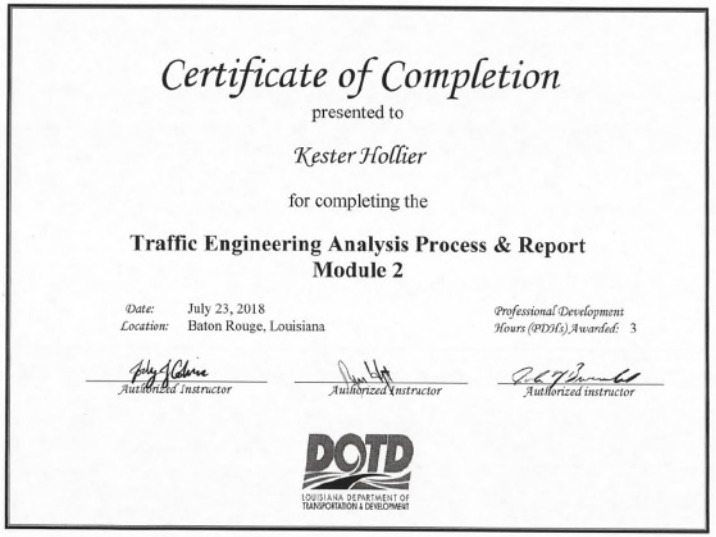
Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kester Hollier

for completing the

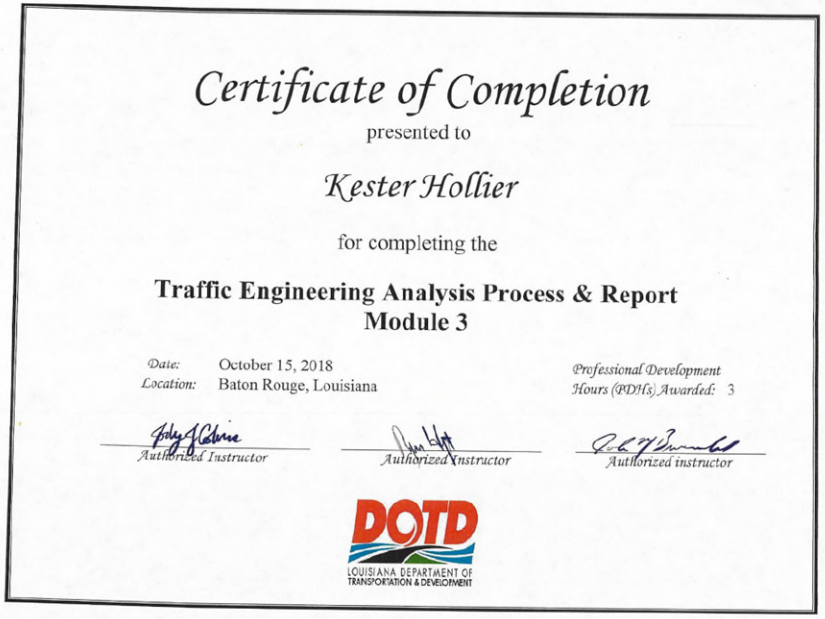
Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kester Hollier

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ATSSA
Safer Roads Save Lives

Kester Hollier

has attended
Louisiana Traffic Control Supervisor Refresher

Completed: 29-JUL-2023

CEU (If Applicable):

ATSSA provides training and certification but neither constitutes employment by ATSSA.

This certificate provides proof of training, not certification.

American Traffic Safety Services Association
ATSSA.com

Certificate of Completion

presented to

Max Aguirre

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: January 29, 2020
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

[redacted]

Certificate of Completion

presented to

Max Aguirre

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: January 29, 2020
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Max Aguirre

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: January 30, 2020
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Aguirre, Max

From: judyb@lagc.org
Sent: Wednesday, September 3, 2025 9:28 AM
To: Aguirre, Max
Subject: Registration confirmation for September Traffic Control Training - Baton Rouge

Follow Up Flag: Follow up
Flag Status: Flagged

Louisiana Associated General Contractors

Thank you for registering for September Traffic Control Training - Baton Rouge

9/15/2025 08:00 AM - 9/17/2025 05:00 PM CST
LAGC Office
666 North St
Baton Rouge, Louisiana, 70802
Add to Outlook calendar
Add to Google calendar

Thank you for registering for the Traffic Control Class. Please be reminded that if you are attending the TCS Refresher Course you will need to attend on Tuesday.

Please let us know if you have any questions & we look forward to seeing you here!

Thanks,

Judy Brousseau
Louisiana Associated General Contractors
666 North Street
Baton Rouge, LA 70802
p: 225-344-0432

www.lagc.org

Below are the details of your registration.

Sign Up Date: 9/3/2025

Sign Up Information: Max Aguirre
Arcadis, US Inc.
8860 Southlawn Dr
Baton Rouge, LA 70810
2252500629
max.aguirre@arcadis.com

Invoice Number: 27888

EVENT ITEM	CONFIRMATION #	QUANTITY	PRICE
Traffic Control Supervisor Refresher (includes 1 attendee)	26237	1	$370.00
Credit Card Processing Fee		1	$11.10
Subtotal:			$381.10
Tax amount:			$0.00
Total:			**$381.10**
Amount Paid:			$381.10

Amount Due:	$0.00

ATTENDEES	EVENT ITEMS
Max Aguirre max.aguirre@arcadis.com	Traffic Control Supervisor Refresher

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Cody Lemoine
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

1/25/2022 to 1/25/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

CERTIFICATE

FOA — The Fiber Optic Association, Inc. — Certified Fiber Optic Technician

Scan to validate

FOA Certified Fiber Optic Technician

Is awarded to

Cody Lemoine

by

The Fiber Optic Association

Issue Date	Expiration Date	Verify Badge here
June 15, 2023	**June 15, 2026**	**https://bcert.me/sufgziwkt**

CERTIFICATE OF ACHIEVEMENT

is hereby granted to

MR. CODY LEMOINE

To certify satisfactory completion of the RTMS Traffic Detector Technical Training course as presented by

IMAGE SENSING SYSTEMS, INC.

Andrew Thoms
Sales Engineer Manager

19-Jan-16
Date

ImageSensing systems
Precision decisions.

This diploma confirms that

Cody Lemoine

with

Detel Wireless

has successfully completed the

Axis Communications' Academy
Axis Boot Camp

on this 27th day of February, 2015

Randy Salminen
Educational Services Manager
Axis Communication, USA

AXIS COMMUNICATIONS

DAKTRONICS

Daktronics

VANGUARD

CERTIFICATE OF PARTICIPATION

CODY LEMOINE

ATTENDED

VANGUARD MAINTENANCE AND SOFTWARE TRAINING

ON: DECEMBER 27, 2018

BRIAN MCGUIRE
TECHNICAL SERVICES
TRANSPORTATION BUSINESS UNIT
DAKTRONICS, INC.

DATE

Issuance of this certificate does not constitute expressed or implied endorsement, qualification, or certification by Daktronics.

This diploma confirms that

Cody Lemoine

with

Detel Wireless

has successfully completed the

Axis Communications' Academy
Axis Boot Camp

on this 27th day of February, 2015

Randy Salminen
Educational Services Manager
Axis Communication, USA

AXIS COMMUNICATIONS

AASHTO ACCREDITED

CERTIFICATE OF ACCREDITATION

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AASHTO

APS Engineering and Testing, LLC.

in

Baton Rouge, Louisiana, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).

John Tymon,
AASHTO Executive Director

Matt Linneman,
AASHTO COMP Chair

MTC
MATERIALS TESTING CENTER

USACE CERTIFICATE OF LABORATORY VALIDATION

APS
1645 Nicholson Drive
Baton Rouge, LA,
Sergio Aviles
(225) 456-5714

has demonstrated, by abbreviated audit of its AASHTO accreditation, or by inspection of required records, equipment, procedures, facilities, and/or final reports, its proficiency to perform testing of construction materials, as established by the quality standards of AASHTO R 18 guidance and the requirements of the applicable ASTM standards.

THIS USACE CERTIFICATE OF LABORATORY VALIDATION IS ACCURATE AS OF ITS DATE AND TIME OF GENERATION:
09 MAY 2022 AT 15:40 HOURS

ALL METHODS LISTED ON THIS CERTIFICATE OF VALIDATION WILL EXPIRE ON 12/01/2023

PLEASE CONFIRM THE CURRENT VALIDATION STATUS OF THIS LABORATORY USING THE SEARCH FEATURE ON OUR PUBLIC WEBSITE: https://mtc.erdc.dren.mil

Chad A. Gartrell, PE, Director
USACE Materials Testing Center
Vicksburg, Mississippi, USA

DEQ LOUISIANA

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Louisiana Environmental Lab Accreditation Program — LELAP

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

APS Engineering and Testing LLC
1645 Nicholson Dr
Baton Rouge, Louisiana 70802

Agency Interest No. 182994
Activity No. ACC20250001

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Tonya Landry
Administrator
Public Participation and Permit Support Division

Issued Date: 5/14/2025
Effective Date: July 1, 2025
Expiration Date: June 30, 2026
Certificate Number: 05100

RTA

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

LOUISIANA UNIFIED CERTIFICATION PROGRAM

Disadvantaged Business Enterprise Program (DBE)

Small Business Element (SBE)

This is to certify that under Title 49, Part 26 of the Code of Federal Regulations & under the State of Louisiana United Certification Program (LAUCP)

APS Engineering and Testing, LLC

Is a Certified Disadvantaged Business Enterprise (DBE) & Small Business Element (SBE) in the following specialties:

NC221310, NC221320, NC541330, NC541370, NC541380, NC541620, NC541690

NOTE: There may be other approved NAICS Codes. The online DBE Directory includes a complete list of approved codes.

Certificate Eligibility: October 2024 to October 2025

This certificate is valid through the above date provided. This firm meets the on-going programmatic standard and fulfills the annual update requirement to remain in good standing as a DBE. This certification is subject to annual verification and suspension or revocation based upon reasonable cause to believe that the firm is ineligible.

Rhonda Wallace, DBE/SBE Programs Manager
Louisiana Department of Transportation & Development

Name	Type	City	Status
APS ENGINEERING AND TESTING, LLC	Limited Liability Company	BATON ROUGE	Active

Previous Names

Business:	APS ENGINEERING AND TESTING, LLC
Charter Number:	40911984K
Registration Date:	8/9/2012

Domicile Address

1645 NICHOLSON DR
BATON ROUGE, LA 70802

Mailing Address

5261 HIGHLAND RD. #320
BATON ROUGE, LA 70808

Status

Status:	**Active**
Annual Report Status:	**In Good Standing**
File Date:	8/9/2012
Last Report Filed:	7/15/2025
Type:	Limited Liability Company

Registered Agent(s)

Agent:	SERGIO AVILES
Address 1:	5261 HIGHLAND RD. #320
City, State, Zip:	BATON ROUGE, LA 70808
Appointment Date:	6/25/2018

Officer(s) — **Additional Officers: No**

Officer:	SERGIO AVILES
Title:	Member
Address 1:	5261 HIGHLAND RD. #320
City, State, Zip:	BATON ROUGE, LA 70808

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Sergio Aviles

has attended

Traffic Control Technician Virtual Training

Training Course

1/24/2023 to 1/24/2027
Training Valid Through

CEU: 0.75

Director of Training

,
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

This certificate provides proof of training, not certification

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA SAFER ROADS SAVE LIVES

American Traffic Safety Services Association

This is to affirm that

Sergio Aviles

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER

Issue Date 12/7/2022

Exp. Date 12/6/2026

State Issued Louisiana

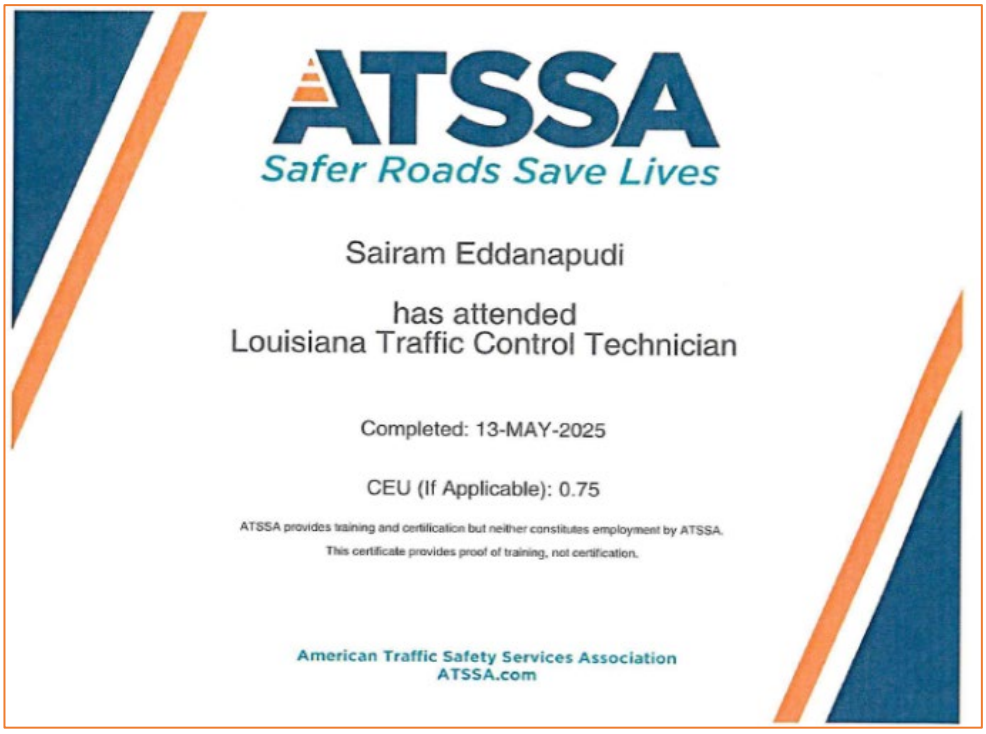
A1000114797

ATSSA

Instructor Name

Instructor Signature

Verify at Flagger.com



ATSSA

Safer Roads Save Lives

Sairam Eddanapudi

has attended
Louisiana Traffic Control Technician

Completed: 13-MAY-2025

CEU (If Applicable): 0.75

ATSSA provides training and certification but neither constitutes employment by ATSSA.
This certificate provides proof of training, not certification.

American Traffic Safety Services Association
ATSSA.com

ATSSA CERTIFIED

PROOF OF CERTIFICATION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Surendra Pathak

has demonstrated a thorough knowledge of the standards, guidelines and practices of traffic control in highway construction and maintenance work areas; has completed all the requirements of the American Traffic Safety Services Association Certification Program to the satisfaction of the Certification Board; and is hereby awarded the designation of:

Traffic Control Supervisor

This certified Individual is fully entitled to all the rights and privileges associated with this designation. This certificate will remain in effect until the expiration date noted herein unless otherwise revoked by action of the Certification Board.

Issue Date: 12/29/2022
Expiration Date: 12/28/2026
Certification #: 440578

Vice President of Education and Technical Services

ATSSA American Traffic Safety Services Association
ATSSA.com

ATSSA American Traffic Safety Services Association
Safer Roads Save Lives

This is to affirm that

Surendra Pathak

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER

Issue Date: 1/29/2025
Exp. Date: 1/28/2029
State Issued: Louisiana

ATSSA
Instructor Name

Instructor Signature

A1000282129

Verify at Flagger.com

LOUISIANA UNIFIED CERTIFICATION PROGRAM

Disadvantaged Business Enterprise (DBE) Program

Small Business Element (SBE)

This is to certify that under Title 49, Part 26, of the Code of Federal Regulations & under the State of Louisiana United Certification Program (LAUCP)

Marrero, Couvillon & Associates, L.L.C.

Is a Certified Disadvantaged Business Enterprise (DBE) in the following specialties:

C02, C07, 541330, 541310, C88 , C03, C04, C05, C08, C43

NOTE: There may be other approved NAICS codes. The online DBE Directory includes a complete list of approved codes.

Certificate Eligibility: December 4, 2024 to December 4, 2025

This certificate is valid through the above dates provided. This firm meets the on-going programmatic standard and fulfills the annual update requirement to remain in good standing as a DBE. This certification is subject to annual verification and suspension or revocation based upon reasonable cause to believe that the firm is ineligible.

Philistine Ferrand

Philistine Ferrand, DBE Liaison Officer (DBELO)

Louis Armstrong New Orleans International Airport

CITY OF BATON ROUGE

PARISH OF EAST BATON ROUGE

MARRERO COUVILLON & ASSOCIATES, LLC.

has successfully completed the requirements approved by the City of Baton Rouge, Parish of East Baton Rouge and is therefore awarded this

CERTIFICATE OF SEDBE CERTIFICATION

JUNE 27, 2023

Certified Profile

CLOSE WINDOW

Print

Business & Contact Information

BUSINESS NAME	**Marrero Couvillon & Associates, LLC**
OWNER	**Mr. Carlos Giron**
ADDRESS	**2644 S Sherwood Forest Blvd Suite 200 Baton Rouge, LA 70816 [map]**
PHONE	**225-408-8249**
FAX	**225-408-8244**
EMAIL	**cgiron@mca-llc.com**

Certification Information

CERTIFYING AGENCY	**City of Baton Rouge**
CERTIFICATION TYPE	**SEDBE - Socially and Economically Disadvantaged Business Enterprise**
CERTIFIED BUSINESS DESCRIPTION	**NAICS 541430: Graphic Design Services; NAICS 541490: Other Specialized Design Services; NAICS 541511: Custom Computer Programming Services; NAICS 541512: Computer Systems Design Services; NAICS 541519: Other Computer Related Services**

Commodity Codes

Code	Description
NAICS 541430	Graphic Design Services
NAICS 541490	Other Specialized Design Services
NAICS 541511	Custom Computer Programming Services
NAICS 541512	Computer Systems Design Services
NAICS 541519	Other Computer Related Services

This profile was generated on 9/9/2025

State of Louisiana Secretary of State

COMMERCIAL DIVISION
225.925.4704

Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
MARRERO, COUVILLON & ASSOCIATES, L.L.C.	Limited Liability Company	BATON ROUGE	Active

Previous Names

Business: MARRERO, COUVILLON & ASSOCIATES, L.L.C.
Charter Number: 34604188K
Registration Date: 12/31/1997
Domicile Address
2644 SOUTH SHERWOOD FOREST BLVD; SUITE 200
BATON ROUGE, LA 70816
Mailing Address
2644 SOUTH SHERWOOD FOREST BLVD
SUITE 200
BATON ROUGE, LA 70816

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 12/31/1997
Last Report Filed: 12/3/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: ALLEN DARDEN
Address 1: 17904 PRESTWICK AVE.
City, State, Zip: BATON ROUGE, LA 70810
Appointment Date: 7/16/2013

Officer(s)

Additional Officers: No

Officer: CARLOS GIRON
Title: Member
Address 1: 2644 S. SHERWOOD FOREST BLVD
Address 2: SUITE 200
City, State, Zip: BATON ROUGE, LA 70816

Amendments on File (9)

21 QA/QC PLAN:

Not Applicable.

22 SUB-CONSULTANT INFORMATION:

Firm Name (Name must match exactly as registered with Louisiana's Secretary of State (SOS): including punctuation, include screenshot(s) from SOS at the end of Section 20)	Address	Point of Contact and email address	Phone Number
Marrero, Couvillon & Associates, LLC	3525 Hessmer Ave, Suite 304 Metairie, Louisiana 70002	M. Kimball Schlafly, PE kschlafly@mca-llc.com	504 834 3448
APS Engineering and Testing, LLC	5261 Highland Road, PMB 320 Baton Rouge, LA 70808	Sergio Aviles, PE sergio@aps-testing.com	225 281 1917

23 LOCATION:

Not Applicable.

Arcadis
6100 Corporate Blvd., Suite 325
Baton Rouge, LA 70808
T. 225 292 1004

www.arcadis.com

www.arcadis.com
Arcadis North America
Arcadis
@ARCADIS_US