Peters Road Bridge & Extension (Phase 3)

Contract No. 4400031920; State Project No. H.008069.5; Federal Aid Project No. H008069

Routes: LA 1261 & LA 3017 Jefferson and Plaquemines Parishes

Engineering & Related Services

Contract Number:
4400031920

March 25, 2025

Delivering a better world

AECOM Technical Services, Inc.
8555 United Plaza Boulevard, Suite 300
Baton Rouge, LA 70809
(225) 922-5700

Louisiana Department of Transportation and Development (DOTD)
Attn: Mr. Mark Chenevert, Consultant Contract Services Administrator
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802

March 25, 2025

RE: Contract for Peters Road Bridge & Extension (Phase 3); Contract No. 4400031920
State Project No. H.008069.5; Federal Aid Project No. H008069

Dear Mr. Chenevert and Members of the Project Evaluation Team:

DOTD has developed this project to determine the revised required vertical clearance for the proposed Peters Road Bridge and to develop preliminary plans reflecting the revised bridge clearance, a toll study, and a supplemental Environmental Assessment to gain federal approval to advance the design of the revised project. We also fully understand the requirements and the significance of this project to the DOTD, to the residents of Jefferson and Plaquemines Parishes, and to the staff at Naval Air Station Joint Reserve Base New Orleans.

The Peters Road Bridge & Extension Project has captured the attention of AECOM's executive circle. AECOM's leadership team understands how important this project is to the local communities and to the DOTD and has assured me, as project manager, that I will have all the resources to make this a success for you, the parishes, and the NAS JFB New Orleans. To do this, AECOM has committed our best talent to provide quality engineering services to DOTD. We will apply the same energy, enthusiasm, focus on details, and attention to the schedule and budget that we have provided to DOTD on our recently completed and ongoing projects.

The AECOM Team and I will be backed by our dedicated subconsultant partners, ensuring we meet the required scope of services. AECOM and our subconsultants have been working successfully together to complete and deliver bridge projects for the DOTD and other Louisiana clients. Project partners include:

- **Marrero, Couvillon, & Associates, LLC:** for bridge lighting
- **Vectura Consulting Services, LLC:** for traffic analysis and modeling
- **Eustis Engineering, LLC:** for geotechnical engineering
- **ELOS Environmental and Ecological Services:** for environment services
- **T. Baker Smith, LLC:** for topographic survey, SUE, and hydrographic survey

The AECOM Team has a strong history of delivering complex, multi-discipline projects for DOTD. We have delivered several transportation and structural projects, many of which have included the design of bridge structures crossing waterways in Louisiana, from small creeks to large navigable rivers and channels. AECOM has also delivered several NEPA approvals for DOTD highway projects.

Our qualified staff of professionals includes specialized structural, roadway and traffic engineers, geotechnical engineers, and environmental specialists who have dedicated their careers to providing quality services to state DOTs. In addition to our successful delivery of many DOTD projects, we have performed similar projects for clients throughout the U.S.

In reviewing our proposal, please consider these reasons why AECOM is ideally suited for this work:

The AECOM Advantage

- The #1 Team for bridges and overall transportation design, as ranked by the Engineering News Record, with more than 200 staff in Louisiana that have over a century of collective experience in DOTD projects.
- Proficiency using the Regional Travel Demand Model to estimate traffic, use those and other data to progress expeditiously through the DOTD TEPR process, and provide reliable findings for the development of tolling.
- Combined expertise in the 'nuts and bolts' of preliminary roadway and bridge design (needed to advance plans efficiently) and less-common expertise in regional transportation planning and P3 alternative project delivery (needed to manage issues associated with the introduction of a new GIWW crossing within five miles of the Belle Chasse bridge relevant to the toll study).
- Local NEPA expertise, well known by the DOTD, and focused on streamlined delivery. We recently completed a Supplemental EA for the Jimmie Davis bridge over a navigable section of the Red River, and for the US90/LA318 Interchange, we provided a Supplemental EA in only four months. We also recently completed a Supplemental EA for a highway project with the Arkansas DOT.
- Innovative staff, experienced in navigational studies, with two in-house transportation economists that have access to specialized data sets and models. Also needed for determining clearances, the AECOM aviation planning team has extensive experience working for both the DoD and FAA; at military, civil, and joint-use airports; and at many DoD bases.

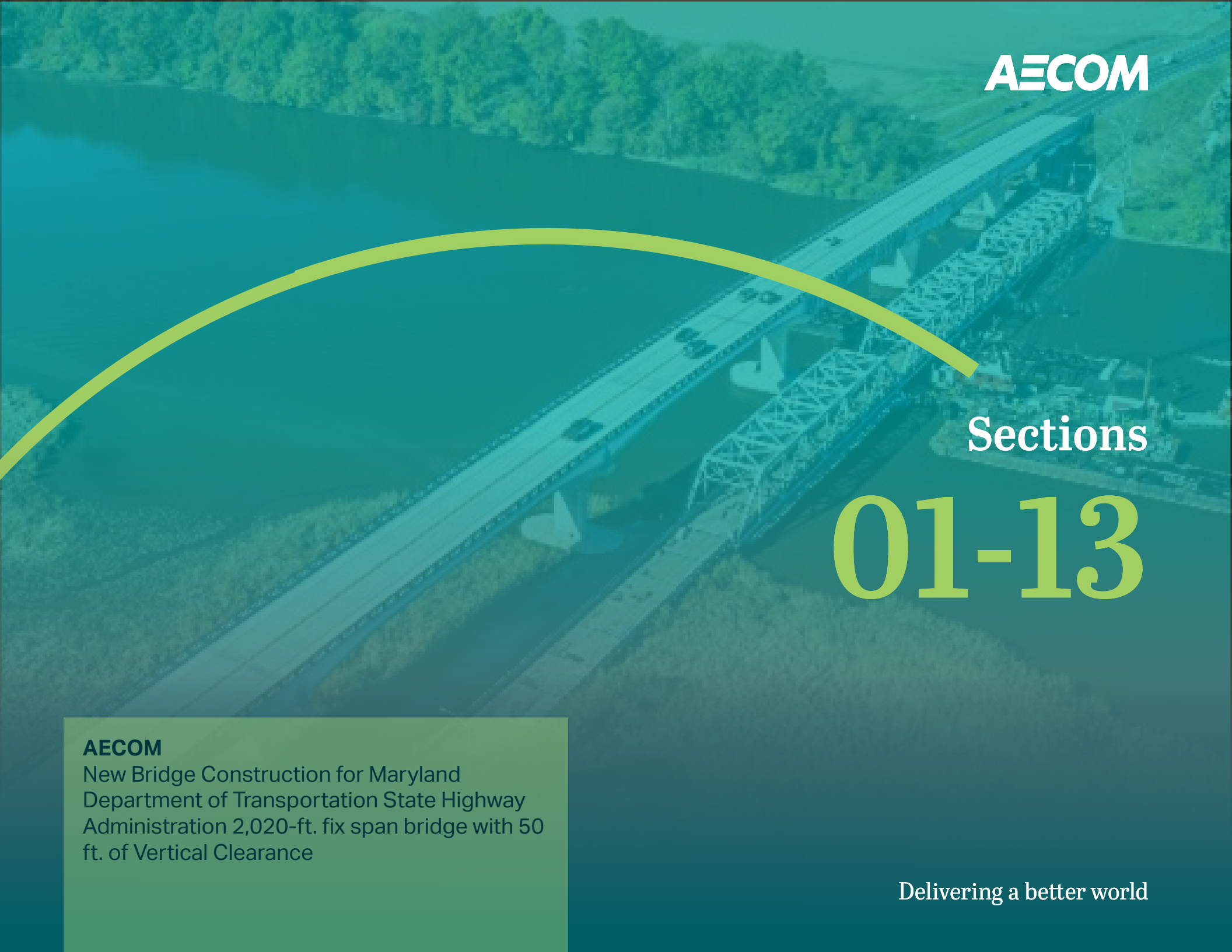
You will see in our proposal that I have a large bench of staff to support me and this project's needs. However, as the Project Manager, I will be the point of contact for this contract. I currently serve as AECOM's Louisiana Bridge Practice Leader and have nearly 20 years of structural engineering experience. This involves multiple projects involving the design and coordination of highway bridges in Louisiana, including currently serving as Deputy Project Manager on the DOTD Statewide Bridge Preservation IDIQ and the I-49 Connector Project in Lafayette, and served as a Structural Engineer on a similar waterway crossing for DOTD's US 71/165 Fort Buhlow Bridge in Alexandria. I pledge to work as a partner with DOTD, and specifically with your project manager, to deliver a successful project.

AECOM is committed to delivering a quality design for the Peters Road Bridge and Extension project to DOTD, while successfully meeting the contract challenges and the requirements of DOTD. If you have any questions, please do not hesitate to contact me via phone at 225.328.5076 or by email at *daniel.boyd1@aecom.com*.

Sincerely,

AECOM Technical Services, Inc.

Daniel Boyd, PE
Contract/Project Manager
Associate Vice-President



AECOM

Sections 01-13

AECOM
New Bridge Construction for Maryland Department of Transportation State Highway Administration 2,020-ft. fix span bridge with 50 ft. of Vertical Clearance

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(Revised December 12, 2024)

DOTD FORM: 24-102

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.

Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

1. Contract title as shown in the advertisement	Peters Road Bridge Extension (Phase 3)
2. Contract number(s) as shown in the advertisement	Contract No. 4400031920
3. State Project Number(s), if shown in the advertisement	H.008069.5
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)	AECOM Technical Services, 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)	AECOM Technical Services, Inc. (AECOM) LAPELS No. EF.0002331
6. Prime consultant mailing address	8555 United Plaza Blvd., Suite 300 Baton Rouge, LA 70809
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	8555 United Plaza Blvd., Suite 300 Baton Rouge, LA 70809
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Daniel Boyd, PE, Structures Lead/Louisiana Bridge Practice Leader/ Project Manager 225.328.5076 daniel.boyd1@aecom.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Jonathan McDowell, PE Vice President 225.922.5700 jonathan.mcdowell@aecom.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.	Signature (shall be the same person as #9):  _____ Date: March 25, 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.	N/A

12. Past Performance Evaluation Discipline Table:
As indicated in the advertisement, insert the completed table here. The percentages for the prime and subconsultants must total 100% for **each past performance evaluation discipline**, as well as the overall total percent of the contract.

Evaluation Discipline(s)	% of Overall Contract	AECOM TECHNICAL SERVICES, INC.	MARRERO, COUVILLON & ASSOCIATES, L.L.C.	VECTURA CONSULTING SERVICES, LLC	ELOS ENVIRONMENTAL, L.L.C.	EUSTIS ENGINEERING, L.L.C.	T. BAKER SMITH, LLC	Totals
Road	17.5%	100%	0%	0%	0%	0%	0%	100.0%
Bridge	45.0%	100%	0%	0%	0%	0%	0%	100.0%
Traffic	8.0%	20%	0%	80%	0%	0%	0%	100.0%
Geotech	6.0%	0%	0%	0%	0%	100%	0%	100.0%
Survey	5.0%	0%	0%	0%	0%	0%	100%	100.0%
Environmental	10.0%	30%	0%	0%	70%	0%	0%	100.0%
Other-Toll Study	4.5%	100%	0%	0%	0%	0%	0%	100.0%
Other-Lighting	2.0%	0%	100%	0%	0%	0%	0%	100.0%
Other Subsurface Utility Engineering	2.0%	0%	0%	0%	0%	0%	100%	100.0%
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.								
Total	100.0%	71.6%	2.0%	6.4%	7.0%	6.0%	7.0%	100.0%

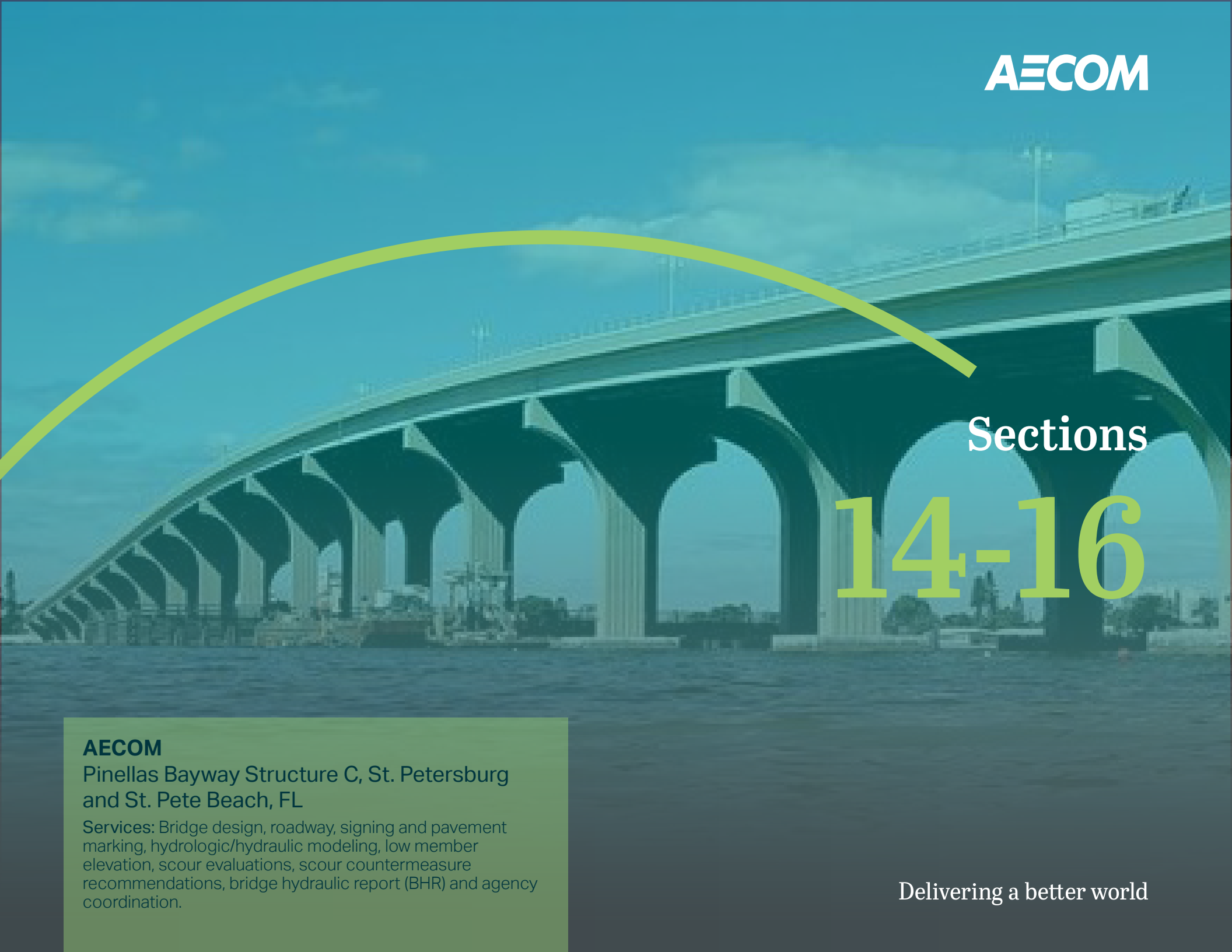
The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other.

13. Firm 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 (xxxx)" and include the classification title inside the parentheses. The DOTD Job Classification(s) to be used can be found at the following link:
http://wwwsp.dotd.la.gov/Inside_DOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
AECOM TECHNICAL SERVICES, INC.	Principal	2	3
	Supervisor-Eng.	8	10
	Supervisor-Other	6	8
	Engineer	9	16
	Engineer Intern	1	10
	Engineer-Other	4	12
	Environmental Manager	2	5
	Biologist/Wetlands	1	6
	Historian	2	5
	Administrative	2	5
	Senior Technician	3	10
MARRERO, COUVILLON & ASSOCIATES, L.L.C.	Supervisor Engineer	1	1
	Engineer	1	5
VECTURA CONSULTING SERVICES, LLC	Supervisor-Eng	2	2
	Engineer	3	3
	Engineer Intern	0	2
	Senior Technician	0	2
	Supervisor-Other	0	1
	Technician	0	1
	Clerical	0	1

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
ELOS ENVIRONMENTAL, L.L.C.	Principal	1	2
	GIS Analyst	2	2
	Environmental Pro	2	2
	Environmental Manager	2	2
	Biologist/Wetlands	3	5
	Archaeologist	1	2
	Geologist	1	1
	Inspector-Lead	1	4
	Clerical	2	2
	Historian	1	2
	Technician	2	5
EUSTIS ENGINEERING L.L.C.	Principal	2	3
	Supervisor-Eng	2	8
	Engineer	1	4
	Engineer Intern	1	5
	Engineering-Aide	2	8
	Accountant	1	4
	CADD Technician	1	1
	Clerical	3	13
	Driller	1	7
	Geologist	1	2
	Inspector	6	15
	Inspector-Certified	1	1
	Supervisor-Other	2	8
	Technician	6	10

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
T. BAKER SMITH, LLC	Principal	1	2
	Senior Technician	4	6
	Surveyor	2	4
	Party Chief	2	3



AECOM

Sections 14-16

AECOM

Pinellas Bayway Structure C, St. Petersburg and St. Pete Beach, FL

Services: Bridge design, roadway, signing and pavement marking, hydrologic/hydraulic modeling, low member elevation, scour evaluations, scour countermeasure recommendations, bridge hydraulic report (BHR) and agency coordination.

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14. Organizational Chart

Legend:

MCA= MARRERO, COUVILLON & ASSOCIATES, L.L.C.
VEC= VECTURA CONSULTING SERVICES, LLC
E L= ELOS ENVIRONMENTAL, L.L.C.
EUS= EUSTIS ENGINEERING L.L.C.
TBS= T. BAKER SMITH, LLC

QA/QC
Gary Maji, PE

SENIOR TECHNICAL ADVISOR
Ken Butler, PE

Project Manager
Daniel Boyd, PE

DEPUTY PROJECT MANAGER
Derek Chisholm, AICP, LEED

PROJECT PRINCIPAL
Jonathan McDowell, PE

ENVIRONMENTAL ASSESSMENT

Task Leader
Derek Chisholm, AICP, LEED

NEPA Documentation
Derek Chisholm, AICP, LEED
Lou Costa
Tom Hunter
Lucas Watkins **(EL)**

Archaeology & Historic Resources
Christopher Wilson **(EL)**
Shelly Hartsfield

Phase 1 ESA
Zoe Knesl

Wetlands, Floodplains, Water Resources
Basile Dardar **(EL)**
Brian Fortson **(EL)**
Cory Ricks **(EL)**

Threatened/Endangered Species
Bonnie Porter
Mike Hill **(EL)**

Air Quality
Fang Yang

Aviation Planning
Geoff Gindhart, IATA

Noise Analysis
Tom Herzog

Demographics & Land Use
Jeffery Leuenberger, AICP

Public Engagement
Derek Chisholm
Tom Hunter
Kelly Duggan

TRAFFIC ANALYSIS

Task Leader
Peter Bakhit, PE, PTOE, RSP1

Traffic Analysis
Brin Ferlito, PE, PTOE **(VEC)**
Laurence Lambert, PE, PTOE, PTP **(VEC)**

Traffic Modeling
Reece Rodrique, PE, PTOE, RSP1 **(VEC)**
Kristen Farrington PE, PTOE, RSP1 **(VEC)**

Traffic Safety
Kristen Farrington PE, PTOE, RSP1 **(VEC)**
Gregory Trahan, PE, RSP1

Grant Application Preparation
Toni Horst
Ann Watkins

TOLL ANALYSIS

David Weeks**
Jessica Buritica Cortes
Tom Hunter

BRIDGE DESIGN

Task Leader
Daniel Boyd, PE

Bridge Design
Daniel Boyd, PE
Sarah Elsawah, PE
Garry Chang, PE
Stephen McCullough**

Bridge Lighting
M. Kimball Schlafly, PE **(MCA)**

USCG Coordination
Meredith Allen

Navigation Study
Marty Peate, AICP
Joe Berlin

ROADWAY DESIGN

Task Leader
Jonathan McDowell, PE

Roadway Design
Jonathan McDowell, PE
Jonathan Giardina, PE

Maintenance of Traffic/TMP
Gregory Trahan, PE, RSP1
Laurence Lambert, PE, PTOE, PTP
Bridget Robicheaux, PE **(VEC)**

Hydrology/Hydraulics/ Scour Analysis
Sreeni Bollu, PE
Suresh Vinnakota, PE, PMP, CFM

Intersection/Signal Design
Laurence Lambert, PE, PTOE, PTP **(VEC)**
Gregory Trahan, PE, RSP1
Peter Bakhit, PE, PTOE, RSP1

GEOTECHNICAL

Gwendolyn P. Sanders, PE **(EUS)**
Travis R. Richards, PE **(EUS)**

SURVEY/SUE/HYDROGRAPHIC

Jean Reulet, III, PLS **(TBS)**
TJ Stokes, PLS, PMP **(TBS)**

** PE in state other than Louisiana

AECOM ADVANTAGE

Our team offices are strategically located in the gulf coast and Louisiana area to provide the support DOTD needs for the Peters Road Bridge Project. Our team has the presence, expertise, and drive to make this project a success for the citizens of Jefferson and Plaquemines parish and for the NAS JRB New Orleans.

WORKING AS A TEAM!

We have previously worked with or are currently working alongside of all our subconsultant partners and have the support of our AECOM offices in the Gulf Coast area. Of special note the AECOM Team has successful experience working with DOTD on bridge projects including load ratings, design and inspection for navigable.

★ AECOM offices
▲ Subconsultant offices
● Peters Road Bridge project

Here's what our clients are saying about the AECOM Team...

" They were committed to deliver all bridge related deliverables and respond to all bridge inquiries in a timely and professional manner."
- Jenny Fu, Former DOTD Bridge Design Engineer Administrator.

" AECOM performed well on this project. They were responsive and provided good work ."
- Noel Ardoin, DOTD Environmental Engineering Administrator

" The innovations that we have identified have accomplished many or our goals on the project and will add significant value to communities on both sides of the river. We look forward to continuing to work together to deliver this project."
- Tommy Arnold, Bi-State Project Manager

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/ certification & number	State of license	License/certification expiration date
1.	Jonathan McDowell, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE 30508	LA	3.31.2027
2.	Daniel Boyd, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE 36728	LA	3.31.2026
	Jonathan McDowell, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE 30508	LA	3.31.2027
3.	Jonathan McDowell, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE 30508	LA	3.31.2027
4.	Daniel Boyd, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE 36728	LA	3.31.2026
	Gary Maji, PE	**AECOM Technical Services, Inc.**	Civil Engineer PE.43044	LA	3.31.2027
5.	Derek Chisholm	**AECOM Technical Services, Inc.**	FHWA-NHI 142005	N/A	N/A
	Tom Hunter	**AECOM Technical Services, Inc.**	FHWA-NHI 142005	N/A	N/A
6.	David Weeks	**AECOM Technical Services, Inc.**	Level 1 "Sketch" Toll Analyses	N/A	N/A
	Jessica Buritica Cortes	**AECOM Technical Services, Inc.**	Level 1 "Sketch" Toll Analyses	N/A	N/A

16. Staff Experience

Firm	AECOM		
Name	**Jonathan McDowell, PE • MPR 1,2&3**	Years of Relevant Experience with this Employer	**22**
Title	Associate Vice President, Senior Project Manager	Years of Relevant Experience with Other Employer(s)	**6**

Degree(s)/Years/Specialization			BS/1996/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0030508/LA/3.31.27 Additional active licenses in MS, AR, TX
Year Registered	2003	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Project Principal/Roadway Design Task Leader **Brief Description:** Jonathan will play a lead role in roadway design, benefitting from over 25 years' experience as a Project Engineer and AECOM certified Project Manager for a wide variety of transportation and public infrastructure projects, including the development and review of horizontal and vertical geometry. His roles have included line and grade for feasibility studies, planning, NEPA Environmental studies, preliminary and final design. He also has experience with contract administration, and construction engineering and inspection for all modes of transportation projects involving interstate highways, urban and rural roadways, bridges, streetcars, railroads, drainage canals and culverts, port facilities, and airports. Through his experience, he understands the project delivery process required to bring a transportation project from an idea to a built reality. His computer skills include Civil3D, Microstation, Inroads, MS Office, MS Project, HEC-RAS, STAAD, ArcView, and various other design software platforms.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/13-07/15	**DOTD (H.001779), Red River Bridge at Jimmie Davis Highway (LA 511) Environmental Assessment, Bossier and Caddo Parishes, LA.** Lead roadway design engineer to design geometric layout alternatives to improve the capacity and accommodate pedestrian and bicycle access for the bridge crossing of the Red River along Jimmie Davis Highway. Tasks included the development of the purpose and need statement, the project design criteria, and the geometric alternatives of the bridge, interchange ramps on each side of the bridge, and roadway approaches. Developed a median U-turn concept for LA 511.

11/04-12/07	**DOTD (State Highway Project No. 700-92-0016), Florida Avenue Bridge over IHNC, New Orleans, LA.** Deputy Project Manager and Project Engineer responsible for the geometric design of a high-level bridge with 158 ft vertical clearance and associated interchange ramps and approach roadways. Coordinated with utility companies and railroad agency for proposed relocations of a 48" water main, a 54" sewer force main, a 72" sewer force main, an electrical duct bank, a temporary railroad relocation, and several other utilities that were affected by the construction of the bridge. Proposed modifications to the site layout and parking area for an operator house associated with the existing adjacent draw bridge and a drainage pump station located under the proposed bridge. Prepared cost estimates for the main span and approach bid packages. Assisted in PM duties.
10/20-Ongoing	**City of Baton Rouge/Parish of East Baton Rouge, College Drive Improvements (Perkins Road to Bawell), Baton Rouge, LA.** Project Manager and Task Manager for the Urban Road Design and Complete Streets improvements to College Drive. The project include a Design Study to develop a corridor and street network plan that includes potential connecting side road improvements, access management solutions, and other improvements along College Drive and the I-10 ramps to provide congestion relief and improve driver and pedestrian safety. Developed horizontal and vertical geometry for road relocations and extension, performed line and grade study for alternative to modify the interstate ramps. Supporting real estate acquisition and utility relocation processes.
09/17-12/23	**State Project No. BA-0153: Mid Barataria Sediment Diversion, Coastal Restoration and Protection Authority of the State of Louisiana, Plaquemines Parish, LA.** Task manager and lead engineer for the relocation of LA 23 and the NOGC Railroad tracks across the proposed sediment diversion. Developed horizontal and vertical geometry for the highway relocation and the rail crossing. Supported the drainage design and utilities relocations tasks. The railroad bridge crossing of the diversion channel which will feature a moveable span bridge, 10,000 feet of new railroad track, and a railyard to support construction. The highway improvements will include a 2,300-foot-long precast LG girder bridge that will carry two lanes in each direction with shoulders. Roadway improvements include converting the existing southbound lanes for access roads on each side of the diversion channel and a relocated alignment of the rural divided highway to provide for better horizontal geometry on the bridge structure.
07/23-Ongoing	**DOTD (H.001970), LA 561 Boeuf River Bridge near Hebert, Caldwell & Richland Parishes, LA.** Road design lead engineer for the replacement of a truss bridge with a new precast girder bridge along the same alignment. Designed vertical alignment for updated hydraulic design criteria and reduce right-of-way acquisition. Designed horizontal and vertical geometry for a gravel local road to serve adjacent residences. Assisted with drainage design and utilities coordination.
02/07-11/09	**City of Baton Rouge/Parish of East Baton Rouge, Siegen Lane Improvements (Highland Road to Perkins Road), Baton Rouge, LA.** Project Manager and Task Manager for the design of corridor improvements to Siegen Lane to upgrade the two lane suburban road to a four lane urban boulevard. Performed road geometrics, develop suggested sequence of construction plans, and reviewed the drainage plans and calculations. Managed and authored the design study which included an alignment analysis, preliminary drainage design, a Phase I Environmental Site Assessment, a wetland study, and a noise study.
05/13-07/15	**New Orleans Regional Transit Authority, Loyola/Rampart Streetcar Rail Expansion, New Orleans LA.** Project Manager and Infrastructure Task Leader to prepare two sets of contract plans and specifications on an accelerated schedule to reconfigure the streetscape to include streetcar tracks in a shared traffic lane. Designed the roadway typical section in accordance with the City of New Orleans Complete Streets Ordinance. Led utility coordination effort and test hole program to locate all underground utilities to resolve utility conflicts. Led the road design, MOT during construction. Performed construction support services.

Firm	AECOM		
Name	**Daniel Boyd, PE • MPR 2&4**	Years of Relevant Experience with this Employer	**5**
Title	Louisiana Bridge Practice Leader/Project Manager	Years of Relevant Experience with Other Employer(s)	**13**

Degree(s)/Years/Specialization			BS/2006/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0030508/LA/3.31.27 Additional active license in TX AECOM Certified PM
Year Registered	2011	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Project Manager/Bridge Design Task Leader **Brief Description:** Daniel is an **AECOM certified Project Manager** with nearly 20 years of structural engineering experience in the transportation industry. He most recently was a part of an DOTD Bridge Preservation IDIQ as a Deputy Project Manager, DOTD's I-49 Lafayette Connector, and multiple design build projects in Dallas and Austin, TX. His technical experience encompasses design of bridges crossing navigable waterways, steel girder design, precast/prestressed concrete girder design, structural steel design, structural concrete design, retaining walls, and drilled shaft and driven pile foundations design. Daniel is also an NHI certified bridge inspector. He has a thorough working knowledge of AASHTO and Louisiana DOTD Standards, and through his project experience, has an understanding of the project delivery process required to guide a transportation project from an idea to a constructed reality.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
02/23-Ongoing	**DOTD, Bridge Preventative Maintenance IDIQ, Statewide, LA.** Deputy Project Manager. Served a Deputy project manager and structural task manager for multiple Task Orders as part of the ongoing Bridge Preservation IDIQ contract. Responsible for final bridge design of a replacement bridge structure project (H.015603) for LA 10 Bridge over Bayou Carron, providing design and calculations, as well as oversight and discipline coordination, for the entirety of the structural scope of the project. For LA 561 Bridge over Boeuf River (H.001970), provided preliminary bridge and foundation design, discipline coordination, and coordination with DOTD. For LA 641 Bridge over I-10 (H.015603), performed bridge inspection services, load ratings, and bridge repair details and calculations to mitigate damage incurred by an equipment impact to this bridge.
10/06-08/11	**DOTD, US 71/165 Fort Buhlow Bridge/KCS Railroad Overpass, Alexandria, LA.** Bridge Design Engineer. For the navigable channel of the Red River, performed design and calculations for the main river spans consisting of two 3-span units (one each direction) with 300'-400'-300' steel plate girder spans, and multiple steel simple spans greater than 200' crossing the river levees. Designed all aspects and components of the steel plate girder bridge units, including diaphragms, bolted splices, bearings, stiffeners, etc. Also performed analysis and design of prestressed concrete girders, concrete bridge deck and columns, bents, and PPC piles, and performed peer review on other components of the project. Collaborated with steel fabricator to review/approve shop drawings and RFI's.

03/21-Ongoing	**DOTD, I-49 Connector, Lafayette, LA.** Structural design and review for the conceptual and preliminary design of this 7-mile reconstruction of I-49 through downtown Lafayette, LA. Performed reviews of I-49 mainline viaduct layouts for the three different structural options being presented to DOTD for selection. Performed reviews and updated structural quantities and costs to reflect current design layouts and current bid pricing to ensure consistency across the three structural options.
01/07-12/07	**City-Parish of East Baton Rouge, Highland Road (LA 42) Improvements (Perkins to Airline), Baton Rouge, LA.** Civil/Structural Design Engineer. Performed structural analysis and design on multiple aspects of project. Design responsibilities included concrete bridge deck design, guard rails, analysis and design of prestressed quad beam concrete girders, girder bearing design, and design of prestressed concrete piles and pile bents. Also performed calculation reviews on multiple aspects of project.
10/19-12/20	**CPRA, LA 23 Bridge, Plaquemines Parish, LA.** Bridge/Structural Engineer. The project consists of a new concrete precast girder bridge, approximately 2,200 feet in length, and the connecting roadway. Assisted with the design plans for the new bridge and roadway structure over the new sediment diversion. Provided QA/QC reviews of calculations and bridge plans.
01/20-Ongoing	**TxDOT, LBJ East Design Build Project, Dallas, TX.** Structural Task Leader and engineer of record for the design of Overhead Sign Structures, consisting of 137 custom Overhead Sign Bridge (OSB) Structures and Cantilever Overhead Sign Structures (COSS), as well as ITS and Tolling equipment structures. The structure inventory included a combination of both ground mounted and bridge mounted applications. Design included analysis of the steel trusses for the OSB and COSS structures, analysis and design of custom aesthetic concrete support columns for the truss structures, and deep drilled shaft foundations for each structure. Designed foundations for High-Mast Lighting and Mast-arm mounted traffic signals in accordance with AASHTO Structural Supports for Highway Signs, Luminaires, & Traffic Signals Specifications. Served as structural task leader during Design Services During Construction (DSDC) phase to answer RFI's, resolve field issues, review shop drawings, plan and schedule drawing and/or calculation revisions, etc.
03/21-06/24	**TxDOT, Oak Hill Parkway, Austin, TX.** Design Engineer. Design engineer for one bridge package, providing analysis and design for multiple substructures and drilled shaft foundations, Independent Design Check (IDC) engineer for the design of three prestressed bridge packages, and all IDC engineer for all Overhead Sign Structures and Toll Gantries for the project. IDC analyses were performed for entirety of each bridge structure, from geometry, superstructure design, substructure design, and foundation design to verify the validity of each design. Provided engineering support during Design Services During Construction (DSDC) phase to answer RFI's, resolve field issues, and review shop drawings. Provided layout, design, and calculations necessary for Retaining Walls and drilled shaft foundations that were modified during DSDC phase. Task leader and EOR for the final as-built Load Ratings for all new bridges on the project.
10/20-Ongoing	**TxDOT, IH 820 SE Connector Design-Build Project, Fort Worth, TX**. Structural Design and QA/QC. Performed preliminary structural design for multiple substructure and foundation arrangements, including inverted-tee bents, multi-column bents, hammer-head bents, and the foundations for each of these, as part of the preliminary design phase of a large design-build project. Also performed QA/QC on numerous bridge calculations, and detailed plan reviews on bridge plan drawings. Provided engineering support during Design Services During Construction (OSCO) phase to answer RFI's, resolve field issues, review shop drawings, and perform calculations necessary for changes made during construction. Task leader and EOR for the final as-built Load Ratings for all new bridges on the project.
04/20-11/20	**Port of Gulfport, Port of Gulfport Connector, Gulfport, MS**. Deputy Project Manager and Structures Discipline Leader. The project performed a preliminary layout and design for a new bridge structure to carry 30th Ave. across Hwy. 90 to provide direct trucking and heavy haul access to the Port of Gulfport. Performed geometric layout, preliminary structural design for prestressed concrete girders and steel plate girder superstructures, and preliminary substructure design for the new bridge.

Firm	AECOM		
Name	**Gary Maji, PE • MPR 4**	Years of Relevant Experience with this Employer	**25**
Title	QA/QC	Years of Relevant Experience with Other Employer(s)	**11**

Degree(s)/Years/Specialization			BS/1988/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0043044/LA/3.31.27 Additional active licenses in CO, UT
Year Registered	2011	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** QA/QC **Brief Description** Gary has been in responsible charge of the project/program management, design, rehabilitation, and reconstruction of urban streets, highway bridges and railroad bridges and box culverts built in accordance with AASHTO and AREMA specifications. He has led multi-disciplinary teams throughout the development of the conceptual, preliminary and final design phases and on-call engineering contracts for federal, state and local agencies. His experience includes right-of-way/surveying, environmental, and utility coordination throughout project development. His experience includes the design and preparation of steel and concrete girder bridge plans, project special provisions and project cost estimates formatted in accordance with capital project guidelines.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/18-Ongoing	**DOTD (H.004273), I-49 Connector, Lafayette, LA.** Structure task manager for the conceptual and preliminary design of this 7-mile reconstruction of I-49 through downtown Lafayette, LA. This project has a budget projected over $1 billion and includes approximately 20 bridges and numerous retaining walls. Bridges span over several interchanges, Vermilion River, short line railroads and a roadway grid network through the Lafayette Central Business District. Structure designs included the evaluation of a 2-mile viaduct structure and a signature span structure considering cast-in-place segmental, spliced concrete tub girders, arched-rib and cable-stayed structure types that integrated context sensitive solutions into the bridge and structure design.
01/25-Ongoing	**DOTD (H.015603), LA 641 Bridge over I-10, Gramercy, LA.** Project manager for the site assessment, superstructure inspection, and bridge load rating efforts required to prepare bridge girder repair plans, improve the bridge load rating and extend the bridge service life for this 1584-ft, multi-span, pretensioned concrete line girder structure. In April 2023, an over-height equipment trailer impacted a portion of the LA 641 Bridge spanning across the WB lanes of I-10 bridge. The emergency bridge inspection identified damage in Span #10, approximately 31 feet from Bent #11 over the outside WB travel lanes.
05/24-08/25	**DOTD (H.0011993), LA 10 Bridge over Bayou Carron, St. Landry Parish, LA.** Project manager for the final bridge design required for the replacement of an existing truss bridge over Bayou Carron. Gary and the AECOM Team worked integrally with DOTD project manager, geotechnical, roadway, and district staff to develop final design calculations, bridge quantity cost estimates, and construction documents for the advertisement of this 3-span replacement bridge using LG36 precast, pretensioned concrete girders.

02/23-10/24	**DOTD (H.001970), LA 561 Bridge over Boeuf River, Hebert, LA.** Project manager for the preliminary roadway and bridge design required for the replacement of an existing 3-span truss bridge over the Beouf River in Richland and Caldwell Parishes. Gary and the AECOM Team worked integrally with DOTD project manager, geotechnical, environmental, and district staff to confirm approach roadway, drainage, right-of-way, utility, and bridge requirements to replacement this structurally deficient bridge.
09/18-05/19	**DOTD (H.011670), I-10 at Loyola Avenue Interchange Design-Build Tender Offer, Kenner, LA.** Proposal Project Manager and Structural Design Manager for interchange improvements at the I-10 at Loyola Drive to provide new direct access ramps to handle traffic to and from the new passenger terminal at Louis Armstrong International Airport. Duties included coordination with the contractor and all design tasks to prepare the proposal along with review and evaluation of multiple alternative technical concepts. Led plan development and quantity calculations for contractor bid.
05/20-09/21	**El Paso County, South Academy Blvd. over BNSF Rehabilitation, El Paso County, CO.** Structure lead and in responsible charge for the bridge rehabilitation design for an 800-ft, 6-span, steel plate girder bridge over BNSF tracks in Colorado Springs. As part of the bridge preservation efforts, Gary's team conducted nondestructive testing to evaluate the existing deck condition, performed a fatigue assessment and load rating analysis to develop retrofits for fatigue prone details and identified expansion joint and bearing repair and replacement details to extend the bridge design life. Design efforts include railroad coordination per UPRR/BNSF RR Grade Separation Guidelines.
10/23-Ongoing	**Brent Spence Bridge Corridor Project, Bi-State Management Team, Cincinnati, OH.** Design Quality Manager for the design and construction of this $3 billion+ major infrastructure reconstruction project in Ohio River Valley of Cincinnati, OH and Covington, KY. As design quality lead, Gary is responsible for the development, training and implementation of a project-specific design quality management plan (DQMP) to deliver project reports, construction plans and specifications using a progressive design build project delivery method. The DQMP outlined roles and responsibilities, referenced project specific design criteria, and defined design quality protocols for quality checking and assurance activities for over 200+ engineering staff.
04/18-09/18	**CDOT, SH 59/I-70 Emergency Bridge Replacement (CDOT NPS Contract), Seibert, CO.** Quality Manager for the emergency bridge replacement project of the SH59 Bridge over I-70 in eastern Colorado. Gary developed project quality schedules, technical protocols and provided quality audits for this multi-disciplinary, blended-team project bridge and interchange reconstruction project. CMAR contracting enabled CDOT's project team to replace the bridge and bring the interchange geometry to current AASTHO standards re-opening the interchange 76-days after the initial closure.
03/13-05/21	**City of Fort Collins, Lemay Avenue over BNSF/Vine Improvements, Fort Collins, CO.** Structure manager for the planning and design development for a new bridge crossing over Vine Street and the BNSF Railway tracks in northeast Fort Collins. Using a CM/GC project delivery, Gary's structure team led the design of a single-span prestressed concrete girder bridge, (13) rockery retaining walls, and a pedestrian underpass structure that improves safety and provides multimodal connectivity to this area of the city. Design efforts included railroad coordination and design submittals developed in accordance with the UPRR/BNSF RR Grade Separation Guidelines.
02/96-05/97	**City of Virginia Beach, Route 60 (Pacific Ave) over Rudee Inlet, Virginia Beach, VA.** Bridge engineer for the 8-span, 690-ft prestressed concrete girder twin-viaduct. This bridge rehabilitation project required detailed planning and coordination to evaluate substructure deterioration concerns associated with vessel impact damage. Extensive utility and marine coordination was a necessity to expedite this project's completion. Substructure rehabilitation design components required the incorporation of AASHTO's seismic category B requirements and the design of a new bridge fendering system at two (2) pier locations.

Firm	AECOM		
Name	**Derek Chisholm, AICP, LEED • MPR 5**	Years of Relevant Experience with this Employer	**10**
Title	Deputy Project Manager/Environmental Assessment Task Leader/NEPA Documentation/Public Engagement	Years of Relevant Experience with Other Employer(s)	**23**

Degree(s)/Years/Specialization			BS/1993/Organizational Management MPA/1997/Environmental Planning Specialty
Active Registration Number/State/Expiration Date			FHWA-NHI-142005 NEPA and Transportation Decision-Making Nov 4-6, 2014 American Institute of Certified Planners #147159 2011 LEED Green Associate (#10148303) 2014 Envision Sustainable Professional Certified in Charrette Management by National Charrette Institute (2006)
Year Registered	2011	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Deputy Project Manager/Environmental Assessment Task Leader/NEPA Documentation/Public Engagement **Brief Description:** Derek is a senior-level transportation professional with three decades of experience in planning and delivery of bridge projects. He has lead the NEPA and permitting processes for many bridges, in several states, and is focused on streamlining processes and foreseeing impediments in the process. Derek was contributing writer for two books including ASCE's Engineering for Sustainable Communities.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/17-04/20	**DOTD State Project No. H.001779.2, Jimmie Davis Bridge Supplemental EA, Bossier and Caddo Parishes, LA.** Derek served as a Senior NEPA Advisor on this project, providing quality control review and assisting on complex issues related to bicycling connectivity, Section 4(f) and the final FHWA comments on the preliminary, draft Supplemental Environmental Assessment. (EA).
10/16-Ongoing	**DOTD, SPN H.004273.5, I-49, Lafayette Connector Project, Lafayette, LA**. Derek started work on the I-49 Connector as an environmental advisor and now leads the NEPA process that will publish a DSEIS this summer. He was also the Context Sensitive Design lead for this $2 billion project consisting of 5.5 miles of interstate and local roadway improvements, including over four miles of elevated structure.
03/19-Ongoing	**Gordie Howe International Bridge, Detroit, MI to Windsor Canada.** AECOM delivered the longest span bridge in North America, crossing between the United States and Canada. Derek was asked to assist the project based on his previous experience working on sustainable design and construction issues for similar projects pursuing both LEED and ISI Envision certification for the bridge and portals.
03/19-Ongoing	**I-11 Corridor Alternative Selection Report and Tier 1 Environmental Impact Statement (EIS), AZ.** The I-11 Corridor Study required conducting alternatives analysis and preparing a Tier 1 Environmental Impact Statement (EIS) to assess a new 280-mile high-capacity, access-controlled transportation corridor in Arizona. Derek served as a Advisor on 4(f), demographics analysis, and the Environmental Justice sections, and provided guidance and quality control

11/18-Ongoing	**FHWA Synthesis Report on Automated Vehicles and NEPA-Nationwide**. Derek was selected a the Project Manager for this national study of the manner in which automated vehicles are being incorporated in NEPA analysis. The report a literature review covering all relevant legislation and guidance as well as the findings from numerous modeling studies showing the benefits of platooning, connectivity and other advancements on highway system performance. The team interviewed various subject matter experts and DOT leaders who were working on Connected and Autonomous Vehicle deployment projects and NEPA studies, nationwide.
05/10-08/13	**Clackamas River-Springwater Road Bridge – Clackamas, OR.** This project developed and evaluated alternative river crossings in the core of Carver, Oregon. Derek led the public involvement discussions and aspects of the alternatives analysis. He also led the NEPA process.
03/06-02/13	**Columbia River Crossing – Portland, OR.** This project included multi-modal improvements between Portland Oregon and Vancouver Washington, including the extension of the Portland Light Rail Transit system. As the Consultant Environmental Team Manager, Derek worked with the design and construction teams to prepare an environmental documentation, plan amendments, and numerous impact analyses. He helped secure a Record of Decision and several permits. The environmental work won the: National Environmental Excellence Award for its Climate Change Evaluation and the Fish Hydroacoustics Impacts Study.
02/08-12/11	**Neighborhood Cohesion Calculator, EPA/ FHWA, Nationwide.** The Neighborhood Cohesion Calculator helps participating communities conduct an audit of the assets in neighborhoods. The calculator can be used to evaluate how major projects may impact neighborhoods. The Calculator and the methods behind it were the focus of a EPA Community Involvement Training and was showcased at the National Neighborhood USA Conference in 2009.
07/08-09/10	**Willamette River Bridge (Tilikum Crossing). Portland OR.** Derek supported the built environment analysis for this project, assisted with the design (elements related to complete streets and the approaches). HE also worked on a shared environmental impact report and mitigation that were caused by a combination of this and other projects requiring the construction of a new facility for the light rail vehicles. This project won numerous awards, mostly for design, and it was the first bridge built in the US exclusive to transit, bicycles, and pedestrians: National Honor Award, 2016 (ACEC), Best Highway/Bridge Project Award, 2016. Engineering News-Record (ENR), Northwest. Project of the Year, 2016. American Segmental Bridge Institute (ASBI)
03/07-11/10	**Highway 99/Alaska Way Viaduct Removal, Seattle, WA.** Derek led the socio-economic and environmental justice analyses, and authored the respective sections of the discipline reports. He also led the development of an analytical model and outreach program to determine potential high and disproportionate impacts related to tolling of the facility.
10/2005-04/2007	**Oregon DOT, Bridges Visual Performance Standards, Oregon Statewide.** Derek led a team of ODOT project management specialists, engineers, visual specialists, and others in preparing the visual performance standards (VPS) for the Oregon Transportation Investment Act (OTIA) III State Bridge Delivery Program. The VPS established context sensitive, performance-based and programmatic aesthetic guidelines and standards for bridge repair or replacement projects. Derek managed the field investigations of over 200 bridges, and prepared visual context data sheets from which each bridge's visual exposure and prominence in the visual environment was assessed for placement in one of four "Bridge Family" rankings (Gateway, high, moderate or low). The VPS also included a "How To Guide" for developing VPS's for other corridors within the OTIA III State Bridge Delivery Program, which included over 350 bridges statewide.

Firm	AECOM		
Name	**Tom Hunter • MPR 5**	Years of Relevant Experience with this Employer	**28**
Title	NEPA Documentation/Public Engagement/Toll Analyses	Years of Relevant Experience with Other Employer(s)	**12**

Degree(s)/Years/Specialization			BLA/1984/Landscape Architecture
Active Registration Number/State/Expiration Date			Certified AECOM Project Manager; NHI Course No. 142005, National Environmental Policy Act (NEPA) and Transportation Decision Making; Improving the Quality of Environmental Documentation Course (NEPA) 2014
Year Registered	1984	Discipline	Landscape Architecture
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** NEPA Documentation/Public Engagement/Toll Analyses **Brief Description:** Tom is a Principal Planner and AECOM Certified Project Manager for the Gulf Coast Region. He has over 40 years of experience leading and conducting multimodal transportation planning, **environmental assessment and NEPA documentation** for transportation projects including roadway and bridge, ports and marine, airports, rail and transit. His experience includes managing planning and **NEPA studies for bridges over navigable waterways and toll/traffic** and **revenue studies**. He has experience in project coordination with FHWA, USCG, LDOTD, RPC, River Pilot Associations, shallow draft interests, local municipalities including Jefferson Parish, Plaquemines Parish, and numerous federal and state resource agencies. In addition, he has extensive knowledge of the federal metropolitan transportation planning regulations, federal and state discretionary grant programs and has significant expertise in managing public and stakeholder involvement programs associated with transportation planning and environmental assessment initiatives

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/17–2023	**DOTD, State Project No. H.001779.5 Red River Bridge at Jimmie Davis Highway (LA 511) Supplemental EA, Bossier and Caddo Parishes, LA.** Project principal for an Environmental Assessment (EA) to improve the capacity of the LA 511 crossing of the Red River. Tom helped lead a **Supplemental EA** for replacement of the Jimmie Davis **Bridge over the Red River (a navigable waterway for shallow draft barge tows)** and approach roadway improvements. The project included a **traffic and toll analysis**, development of alignment and bridge alternatives, evaluation of alternatives, public and stakeholder coordination and NEPA documentation.
07/15–Ongoing	**DOTD, State Project No. H.004273.5 I-49 Lafayette Connector Supplemental EIS, Lafayette, LA.** Principal planner for preparation of the **Supplemental EIS** for the 5.5-mile segment of I-49 South through urban area of Lafayette, LA. To date work has involved developing alternatives, coordinating with the CSS and design team members in a concept refinement process, **evaluation of alternatives** and NEPA documentation. AECOM has led all **structural design** elements for this project. Tom's role has focused on review of alternatives, public engagement, and facilitation of breakout groups for **public and stakeholder engagement.**

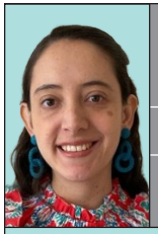
05/07-12/15	**DOTD, State Project No. H.005201 (H.008732), City of Baton Rouge, Baton Rouge Loop Implementation Plan and Tier 1 EIS Alternatives Evaluation and Travel Demand Modeling, Baton Rouge, LA.** Tom functioned as the principal transportation and environmental planner and managed the travel demand modeling and toll analysis for this project, which involved Stage 1 **NEPA services**. The project included development and **evaluation of new Mississippi River Bridge alternative alignments, navigation simulations, and coordination with the River Pilots and USCG**. He also participated in the public involvement and outreach, was a leader in alternatives development and evaluations, **led the management of the traffic modeling and a Level 1 Toll Study**, and participated in NEPA documentation and quality control/quality assurance of the project.
03/04-07/05	**Capitol Region Planning Commission (CPRC), Baton Rouge North Bypass Feasibility and Toll Road Study, Baton Rouge, LA**. Deputy project manager and principal transportation and environmental planner responsible for development of a feasibility study for a 40-mile Northern Bypass of Baton Rouge. The project included the use and potential rehabilitation of the **Huey P. Long Mississippi River Bridge in Baton Rouge**. Tom led the **alternatives development and evaluation**, coordinated regional travel demand modeling services and **traffic and revenue forecasts for the toll road alternatives**, and was instrumental in implementation plan development. Tom also maintained a **leadership role in the public involvement** component of the project.
07/1-11/15	**DOTD, State Project No. H.004932, Supplemental Environmental Assessment, US 90 at LA 318, St. Mary Parish, LA.** Project Manager. Completed the **Supplemental Environmental Assessment (SEA)** as part of the design-build process for the project that included review and revision of the previous EA to include the ATC developed by the DB Contractor. **Obtained a FONSI on a very aggressive schedule set by the DB contractor, FHWA, and DOTD (4 months)**. Led all aspects of project, including NEPA documentation, as the primary author.
02/08-08/09	**DOTD, State Project No. 700-48-0107 Globalplex Intermodal Terminal Connector Roadway Environmental Assessment, St. John the Baptist Parish, LA**. Project manager for the preparation of an **Environmental Assessment (EA)** associated with the 1.5-mile widening of LA 637 (West 10th St) between US Highway 61 and the Port of South Louisiana (PSLA) Globalplex Terminal. Led technical oversight of project deliverables, **NEPA documentation, stakeholder coordination** and public involvement. A FONSI was issued by FHWA in August 2009.
10/10-05/15	**DOTD, State Project No H.004424 Environmental Assessment – US 61 at LA 3125/Clearview Parkway, Jefferson Parish, LA.** Project manager for the **Environmental Assessment** associated with intersection improvements at US 61 and Clearview Parkway in Jefferson Parish, Louisiana. Tom led the development of the EA and NEPA documentation. The project is in a densely urban setting with numerous concerns related to effects on existing utilities, infrastructure, and the human environment. The intersection is located on a major east-west route that provides for hurricane evacuation as well as a bypass to Interstate 10. Clearview Parkway is the major north-south connector from the Huey Long Bridge to Interstate 10. The project was **critical for accommodating the increased traffic projected with completion of the Huey Long Bridge** widening.
01/03-04/12	**DOTD, State Project No. 736-99-1032, Interstate 69 – Section of Independent Utility No. 14 EIS, Junction I-20 near Haughton, LA to US 82 near El Dorado, AR, Bossier, Claiborne and Webster Parishes, LA, Columbia and Union Counties, AR.** Senior transportation and environmental planner responsible for assisting with the development of alternative corridors, and **Environmental Impact Statement for a 75-mile segment of Interstate 69** Corridor's section of independent utility number 14 which spans between Haughton, LA and El Dorado, AR. During development of the final EIS he undertook the role of Deputy PM, leading the NEPA documentation effort and moving the project toward issuance of the ROD.

Firm	AECOM		
Name	**David Weeks • MPR 6**	Years of Relevant Experience with this Employer	**39**
Title	Toll Analysis	Years of Relevant Experience with Other Employer(s)	**3**

Degree(s)/Years/Specialization			MBA/1994/Business Admin; BSc/1983/Civil Engineering
Active Registration Number/State/Expiration Date			101322/TX/03.31.2025
Year Registered	2008	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Toll Analysis **Brief Description:** David has exceptionally broad experience across the full project life cycle, using innovative contracts and management systems to deliver best value for clients. His project experience includes the planning, development, design, construction, operations and maintenance of highways and bridges, heavy & light rail and streetcar, as well as facilities and buildings. He has led Level 1 toll feasibility analyses for many projects, varying in size from $20 million to $2 billion, for State DOTs, Regional Toll Authorities, counties, cities and commercial clients. David has an excellent understanding of the benefits and risks of different delivery mechanisms and can provide analysis and advice to inform the project development.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/17–12/18	**Jimmie Davis Bridge, LADODT.** Task Leader. Led Level 1 toll feasibility analysis for crossing of Red River between Shreveport and Bossier City. The project included a new structure and continued use of the existing structure for a multi-use path, with improved local access. The analysis considered alternative bridge concepts and provided DBFOM financial models with a 50-year operational period. Sensitivity analyses demonstrated the robustness of the modeling.
03/15-10/15	**Baton Rouge Urban Mobility Plan, Unsolicited Proposal to Louisiana Transportation Authority.** Task Leader. Led refinement of PPP concept and Level 1 feasibility analysis for strategic improvement to I-10 relief corridor, including alternative delivery options, payment mechanism and procurement approach.
11/06-04/10	**Toll Feasibility Contract, TxDOT.** Task Leader later Project Manager, Preliminary Financial Analysis – Led team preparing specialist planning/traffic and revenue/engineering/ PPP development for the Level 1 feasibility financial models of over 60 toll road projects in Texas, including 20 managed lane projects. Feasibility Studies. Led Level 1 toll feasibility studies for IH-35 Corridor, and IH-10 and Loop 1604 Corridor, both in San Antonio, Texas. Developed innovative spreadsheet financial models to permit client to test alternate financing, procurement and engineering strategies. Led team assisting TxDOT with negotiation of TELA with NTTA for special system comprising SH 161 and SH 121. Specialist input on construction, maintenance and operations costs, revenue projections and risk analysis. Included deep-dive into NTTA maintenance and operations.

03/11-12/12	**LA-1 Toll Consultant Report, Louisiana Transportation Authority and LADODT,** Project Manager. Led study & toll consultant report to provide recommendations to improve the financial performance of LA-1 toll road, leading to Grand Isle and Port Fourchon.
03/22-08/22	**Confidential Project and Client.** Task Leader. Provided conceptual review of toll road feasibility for major urban development with a proposed population of 175,000. Identified options to reduce costs, improve mobility and increase value of the development.
11/17-02/18	**Vine/Lemay Intersection Improvements, City of Ft Collins, CO.** Task Leader. Led Level 1 toll feasibility analysis for grade separation of intersection in urban environment. Reviewed PPP legislation in Colorado and provided recommendations for project development.
01/16-04/16	**Houbolt Road, Commercial Client, IL.** Task Leader. Led team developing PPP concept for crossing of Des Plaines River, to relieve congestion/environmental impact of truck traffic to CenterPoint Multimodal Park. Procurement advisor for alternative delivery options and task leader for Level 1 toll feasibility analysis.
12/15-03/16	**Osceola County Expressway Authority, FL.** Task Leader/Program Manager for 2040 Plan system development. Led alternative delivery feasibility study, including Level 1 T&R analysis. Prioritized projects and identified actions to strengthen revenue streams and expedite delivery. Both DB and PPP concession options were evaluated.
11/11-07/12	**Jackson Airport Parkway, MDOT.** Task Leader. Led traffic analysis, conceptual traffic engineering and Level 1 toll feasibility analysis for crossing of Pearl River, and alternate connections to downtown Jackson.
06/11-08/12	**Procurement Engineering Contract, TxDOT.** Project Manager. Support to TxDOT for re-negotiation of Toll Equity Loan Agreement (TELA) with North Texas Tollway Authority (NTTA). Role included due diligence reviews of T&R studies, construction, maintenance and operation costs, including assessing the impact of legislation changes on toll collection processes and performance. Also led review of programmatic technical requirements for CDA contracts.
05-06-02/08	**Procurement Engineering Contract, TxDOT,** Project Manager, Led team preparing engineering input and coordinated Level 2 T&R for financial feasibility analyses of US281 and Loop 1604 CDA Concession Project. Refined project scope to increase revenues, reduce costs and achieve financial viability with limited public gap funding.



Firm	AECOM		
Name	**Jessica Buritica Cortes • MPR 6**	Years of Relevant Experience with this Employer	**1**
Title	Toll Analysis	Years of Relevant Experience with Other Employer(s)	**8**

Degree(s)/Years/Specialization			MS/2013/Electrical Engineering, BS/2010/Electrical Engineering
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Toll Analysis **Brief Description:** **Jessica has eight years of travel demand forecasting and data analytics experience in the transportation industry, toll studies, traffic and revenue studies.** Her technical experience includes traffic and revenue studies for toll facilities (highways, bridges, and tunnels), demand forecasting for highway and rail facilities, demand forecasting for long-term transportation planning projects. She has extensive knowledge of travel demand modelling to support decision-making, from traffic count data processing, to model calibration/validation, and building four-step models and has experience with different modelling software such as Cube, TransCAD, and Emme. Her experience in toll-road projects spans from level-one "sketch" toll analyses to investment-grade, toll optimization, sensitivity analysis and revenue projections and forecast.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/18-11/18	**TxDOT, T&R Forecast for LBJ, NTE Express Lanes, Dallas, TX.** Modelling team working in model calibration and validation, including data processing, matrix estimation and assignment module run, to produce invest-grade traffic and revenue projections.
01/22-06/22	**PRHTA, T&R Forecast for publicly owned toll-roads, Puerto Rico.** Led the modelling team to produce level-one and level-two traffic and revenue forecasts for multiple publicly owned toll-roads in Puerto Rico. This task included data collection, model calibration/validation, trip table estimation, assignment model development, post-processing, and analysis of pricing alternatives for the Puerto Rico Highway Transportation Authority (PRHTA).
01/18-01/20	**AMVA, Multimodal Long-Range Transportation Plan for Valle De Aburra, Medellin, Colombia.** Project manager and modelling task lead. This task included the development of the long-range transportation plan for Valle de Aburra region, in Antioquia Colombia, including all aspects of mobility: active transportation, transit, freight, safety, urban design, parking, environmental and GIS. Jessica led a multi-disciplinary team and carried all the coordination with the MPO (AMVA). Jessica also was the modelling task lead for scenario planning and master plan project prioritization, as well as developed QA/QC for an alternative tolled route to the toll tunnel to connect the City of Medellin with the Airport.
06/23-Ongoing	**TxDOT, Regional Parkway Bridge, Corpus Christi, TX.** Leading the modelling team to prepare traffic forecasts for the Regional Parkway bridge alternatives. This work includes data collection post-processing, model validation/calibration, travel patterns review, scenario development and demand forecasting.

10/23-Ongoing	**TxDOT, Brookshire-Katy REAL Implementation Plan, Houston, TX.** Led the planning scenario model scenario development using a modelling tool which included the H-GAC travel demand model, as well as a micro-simulation model, to produce 24-hr traffic demand forecasts. The task included updating the assignment scripts, traffic forecasting, and post-processing data analysis to support needs assessment and project prioritization for implementation plan.
10/23-02/25	**TxDOT, Gulf Freeway Planning and Environmental Linkages (PEL) Study, Houston, TX.** Led the modelling team to prepare a scenario-planning analysis that produces traffic forecasts for the I-45 Gulf Freeway selected alternative and the interaction with other five regional projects from TxDOT, all including managed-lanes facilities.
01/22-06/23	**MDOT, I-94 CAV Corridor, Ann Arbor-Detroit, MI.** Project Manager and modelling task lead for preparing level-one and level-two traffic and revenue forecasts for a Connected Autonomous Vehicle (CAV corridor between Ann Arbor and Detroit. This task included data collection, model calibration/validation, future trip table estimation, assignment model development, revenue estimation, and **toll sensitivity analysis.** As part of this project, she also interacted with traffic engineers to pass
01/25-Ongoing	**City of Fort Worth, Moving A Million Master Transportation Plan, Fort Worth, TX.** Leading the modelling team through various task assignments including traffic forecasts for scenario planning and project prioritization, model validation and calibration, trip table estimation for TOD scenarios.
03/17-03/18	**City of Pereira, Pereira Mobility Plan, Pereira, Colombia.** Developed the regional travel demand model, traffic and transit forecasts, evaluated project alternatives for the mobility plan, developed KPI and documented and trained officials for future use of the model.

Firm	AECOM Technical Services, Inc.		
Name	Ken Butler, PE	Years of Relevant Experience with this Employer	15
Title	Global Head of Complex Structures, AECOM Fellow	Years of Relevant Experience with Other Employer(s)	22

Degree(s)/Years/Specialization			BS/1984/Civil Engineering
Active Registration Number/State/Expiration Date			PE.31476/LA/3.31.27 Additional licenses in VA, FL, MD, PA, SC, NC, CA, D.C., DE, NY, NJ
Year Registered	1991	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Senior Technical Advisor **Brief Description:** Ken brings 40 years of experience and national recognition for his performance on high profile bridge projects. He has been involved with the management, design, and construction of 35 major and complex bridges worth more than $5 billion in construction cost. **He also has significant experience in Louisiana, leading the design of the Florida Avenue bridge in New Orleans, Louisiana and the I-49 Lafayette Connector Structural design**. He has played significant roles on nine (9) major alternate delivery projects including: the $4 billion Brent Spence Bridge project in Cincinnati, Ohio; the $463 million Harry W. Nice/Thomas "Mac" Middleton Bridge in Newburg, MD; $449 million Frederick Douglass Memorial Bridge Project in Washington D.C.; $227 million historic Arlington Memorial Bridge design build project in Washington D.C.; the $1.3 billion PPP I595/I95/I75/FLTP Corridor Improvements in Fort Lauderdale, Florida; the $250 million design build Carolina Bays Parkway in Myrtle Beach, South Carolina; the $1.5 billion design build Tren-Urbano mass transit project in San Juan, Puerto Rico; the $150 million design build Indian River Inlet cable stayed bridge replacement in Rehoboth Beach, Delaware; and the $1.3 billion PPP Edmonton LRT project (Tawatina extradosed cable stayed bridge) in Edmonton, Alberta, Canada. He has provided designs, project management, construction support and construction engineering inspection services to 14 state agencies, as well as several toll authorities.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/08-11/08	**Florida Avenue Bridge, DOTD (State Project No. 700-92-0016), New Orleans, LA.** Ken led the bridge design efforts as EOR for the main bridge over the Inner Harbor Navigational Channel (IHNC) which included a 1,500-feet long cast-in-place balanced cantilever segmental bridge with a 470-feet long main span. He directed the feasibility studies, bridge alternatives analyses, preliminary and final design phases for this section of bridge which includes a 156' vertical and 300' horizontal navigational clearances. Two alternates were developed during the final design for the main unit including steel plate girders and cast-in-place variable depth concrete box girders. The overall project consists of approximately 2 miles of elevated structure including high level approaches comprised of prestressed concrete bulb-T girders and curved steel girder interchange ramps.

08/17-/0822	**DDOT Frederick Douglass Memorial Bridge Project, Washington, DC.** Ken served as the Design Manager for this signature bridge project over the Anacostia River. Creation of a signature bridge and overall project aesthetics were key drivers behind the project to satisfy the Commission of Fine Arts and the National Capital Planning Commission. The 1,445-ft long bridge is comprised of three springing cable stayed arch spans at 452.5'-540'-452.5' supported by cable stays. The project includes traffic ovals; major Interstate reconstruction; complex MOT; utilities; new river bridge being built parallel to existing bridge; roadway transitions; H&HA scour; drainage and erosion and sediment control; environmental permitting; roadway lighting; bike/pedestrian facilities; landscape; etc. Duties included managing 130 designers for designs, plans, special provisions, shop drawings, and working plans for all design disciplines; implementing and overseeing the QA/QC program; integrating with contractor, designers and owner in project office; budget and schedule compliance; and constructability and VE reviews. He had full professional liability for all engineering decisions and the final work product. Load rating as well as an Owner & Inspection Manual were also part of the design scope. Ken began this project in 2016 during the pre-bid phase and was committed full time for two years through the design and construction. The design took 1.5 years and he continues to provide construction support to the Design Builder.
10/18-12/21	**NPS/FHWA-EFLHD Arlington Memorial Bridge, Washington, DC.** Ken served as the Designer of Record for this historic arch bridge rehabilitation project over the Potomac River. Primary components of the project included complete re-decking of the 2,162 feet long bridge with precast concrete deck panels using stainless steel reinforcing; complete replacement of interior arch supports; and total replacement of the central bascule span with 280-foot-long fixed steel girder spans. Ken's roles on Arlington Memorial Bridge and the Frederick Douglass Memorial Bridge Project were concurrent, and Ken had full professional liability for engineering decisions and final work product.
01/14-12/20	**City of Edmonton Tawatina Bridge on Valley Line SE, Edmonton LRT, Alberta, Canada**. Ken was a technical advisor responsible for reviewing the extradosed cable stayed bridge base design & performance specifications; supporting the owner during technical proposal reviews and bid selection; and providing technical input during construction to the owner. The concrete segmental extradosed cable stayed bridge is 1,248-ft long over the North Saskatchewan River and includes 290-ft of cable stay spans.
03/11-08/12	**TxDOT IH-35 Bridges over Brazos River, Waco, TX.** Ken served as the Technical Director for these twin extradosed cable-stayed bridges that serve as the gateway entrance for the city of Waco, TX. He was responsible for the technical development of the bridge design. His services included input and oversight of design methods & criteria, stay configuration, superstructure details, erection schemes, and analysis procedures. The bridge is a 3-span structure 185'-250'-185' (steel trapezoidal box superstructure). As Technical Director he was also responsible for assigning the design team as well as the quality control team.

Firm	AECOM Technical Services, Inc.		
Name	Lou Costa	Years of Relevant Experience with this Employer	21
Title	NEPA Documentation	Years of Relevant Experience with Other Employer(s)	31

Degree(s)/Years/Specialization			BA/1964/Political Science and History; MCP/1970/City Planning and Urban Design NHI Course 142005, "National Environmental Policy Act (NEPA) and Transportation Decision Making" Introduction to Federal Projects and Historic Preservation offered through the General Services Administration
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Environmental
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** NEPA Documentation **Brief Description:** Lou will assess built environment impacts using skills developed over 50 years in the environmental analysis of highway and transit facilities as well as the management of other transportation, and historic preservation projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/13-07/15	**DOTD, State Project No. H.001779.5 Red River Bridge at Jimmie Davis Highway (LA 511) EA, Bossier and Caddo Parishes, LA.** Project Manager for an Environmental Assessment (EA) to improve capacity of the LA 511 crossing of the Red River. Major concerns are community concern that the project is long overdue, commercial relocations, impacts to wetlands, and the inclusion of a shared use trail on the bridge to connect the existing trails on each side. A FONSI was issued by FHWA in 2015.
07/15-Ongoing	**DOTD State Project No. H.004273.5 I-49 Lafayette Connector Supplemental EIS**. Task Lead for preparation of the SEIS for the 5.5-mile segment of I-49 South through urban area of Lafayette, LA. This assignment includes management of the Section 106 process for the project-both the Standing Structures Inventory Update and the consultation process. To date work has involved preparing the Inventory Update and coordinating with the CSS and design team members in a Concept Refinement Process to identify alternatives to be studied in the SEIS.
02/03-01/08	**DOTD State Project No. 700-92-0011 I-49 South-Raceland to Westbank Expressway EIS, Lafourche, St. Charles, and Jefferson Parishes, LA.** Project Manager for the EIS for 38 miles of interstate highway in the US 90 corridor. Led a team providing line and grade, public outreach, traffic analysis, website development, cultural resource investigation, and preparation of supplemental environmental reports. Originally the project was intended to prepare two EISs for each of two sections of independent utility. Following the review of the DEIS for SIU 1 comments and in response to the 2005 hurricane season, a single EIS was undertaken. AECOM performed line and grade and public outreach services as well as program management. Louis was the lead author of the EIS document. A ROD was issued by FHWA in 2008. This project was one of the first DOTD projects to include a Project Management Plan mandated for mega-projects by SAFETEA-LU.

10/00-10/05	**DOTD State Project No. 799-99-0230 I-49 South Lafayette Regional Airport to LA 88 EIS, Iberia, Lafayette, and St. Martin Parishes, LA.** Deputy Project Manager for an EIS for 10.8 miles of new urban and suburban interstate highway in the US 90 alignment. Major issues included highly congested intersections at railroad grade crossings in industrial areas and community opposition. A ROD was issued by FHWA in 2005
11/00-12/06	**DOTD State Project No. 700-99-0230 I-49 South-Wax Lake Outlet to Berwick EIS, St. Mary Parish, LA.** Project Manager for an EIS for 9.3 miles of rural and suburban interstate highway in the US 90 alignment plus a 1-mile rural access road. Wetlands were largely avoided by the use of the existing alignment, but Louisiana Black Bear habitat and the proximity of a main line railroad paralleling US 90 were major concerns. The project included an extensive public participation program. Work involved standardizing travel lane widths, adding safety shoulders, and providing interchanges, frontage roads, and drainage improvements. A ROD was issued by FHWA in 2006.
01/12-03/14	**Maryland Transit Authority, Purple Line EIS, Suburban Washington, D.C.** Member of the EIS team for the preparation of this document. Primary areas of his responsibility were the construction impacts, visual assessment, indirect and cumulative sections, and the responses to comments. The project received the 2015 FTA Outstanding Achievement Award for Excellence in Environmental Document Preparation in the EIS category. A ROD was issued by FTA in 2014.
07/08–08/12	**Metropolitan Atlanta Rapid Transit Authority, Atlanta BeltLine Tier 1 EIS, Atlanta, GA.** Member of the EIS team for this major transit project to create a 23-mile light rail system and trails encircling the inner city of Atlanta in existing railroad corridors, including the creation of four major transfer facilities where the new rail line intersects with the existing MARTA heavy rail transit system. Lou prepared the transportation and land use sections and performed a quality control review of the other chapters. He also prepared the ROD that was issued by FTA in 2012.
1995-1997	**Regional Transit Authority, Canal Streetcar EIS, New Orleans, LA.** Agency Project Manager for the reintroduction of streetcar service on Canal Street. Work on the EIS began following a Major Investment Study. The scope included a new streetcar storage and maintenance facility, improvements to the existing streetcar manufacturing and maintenance facility, a transfer terminal at the outbound end of the line, and a connection to the Riverfront Line. Noise, utility conflicts, and historic preservation were major issues. A ROD was issued by FTA in 1997.
06/01-07/03	**DOTD, State Project No. 700-26-0254 Harvey Boulevard – Wall Boulevard to Engineers Road EA, Jefferson and Plaquemines Parishes, LA.** Project Manager for an EA for extending a suburban residential roadway on both an existing right-of-way and a new alignment to cross a canal to connect with Engineers Road (LA 3017). Major issues were noise, an adjacent seaplane facility, and community opposition based on expectation of truck traffic in a residential area. A FONSI was issued by FHWA in 2003.

Firm	Elos Environmental & Ecological Services		
Name	Lucas Watkins	Years of Relevant Experience with this Employer	18
Title	NEPA Documentation	Years of Relevant Experience with Other Employer(s)	4

Degree(s)/Years/Specialization			MS/2005/Biological Sciences; BS/2000/Forest Management
Active Registration Number/State/Expiration Date			National Highway Institute: NEPA & Transportation Decision-Making Process
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** NEPA Documentation **Brief Description:** Principal, Project Oversight, NEPA Clearance, Agency Coordination, Stakeholder Outreach, and Public Meetings

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/20-Ongoing	**DOTD Rural Bridges, Phases I & II; Statewide, LA.** ELOS has been contracted to provide environmental services for the DOTD Rural Bridge Replacement Initiative projects in six districts across the state. Lucas ensures that all phases of the project adhere to federal and state environmental regulations. He facilitates effective communication among DOTD officials, environmental organizations, and other stakeholders to address concerns and maintain transparency throughout the project.
09/22-Ongoing	**DOTD IIJA Off-System Bridges District 62**. This off-system bridge project involves the replacement of six bridges; ELOS is performing wetland delineations, completing permit applications, completing solicitation of views to document categorical exclusions for the work proposed, completing cultural resources research, tribal packets, and reports, and write navigability determination reports. Lucas has reviewed the findings reports prior to client submission.
10/23-Ongoing	**EBR Off System Bridge Program; East Baton Rouge Parish, LA.** ELOS is contracted to prepare and submit permit applications to the U.S. Army Corps of Engineers (USACE) to include completing permit application packet, documenting the rationale for the project, providing the summary of project and detailed verbal description of the project location. ELOS is also responsible for generating one site plan for each project and coordinating with USACE for a permit under Section 10/404 of the Clean Water Act. Lucas the permit application throughout the entire process to ensure success of the permit process.
08/22-08/24	**DOTD Rousseau Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to provide professional environmental for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Lucas directed the comprehensive assessment of potential environmental impacts related to transportation infrastructure projects. He ensured the accuracy, completeness, and integrity of environmental reports and documentation submitted to regulatory agencies for review and approval.
02/22-Ongoing	**STP Lock No. 3 Replacement; St. Tammany Parish, LA.** ELOS has been contracted to perform wetland delineation, submit joint permit applications, perform a State Historic Preservation Office (SHPO) Section 106 desktop review and Consultation, and perform a U.S. Fish and Wildlife (USFWS) Endangered Species Act (ESA) Biological assessment for the St. Tammany Parish Lock No. 3 Bridge Replacement project. Lucas ensures that all phases of each step of the project complies with all state and federal regulations.

03/24-Ongoing	**Brownswitch Road Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to collect data and prepare a report to support a Wetland Delineation and manage the permit process with the USACE. ELOS will facilitate compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 by completing a Section 106 Desktop Review. ELOS will conduct a biological survey to determine potential effects on species protected under the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA) and all other applicable law and regulations. Lucas has overseen every step of the process ensuring compliance with all regulations and transparency between all stakeholders in the project.
04/22-Ongoing	**Yellow Water Road Bridge Replacement; Tangipahoa Parish, LA.** ELOS has been contracted to prepare a Early Section 106 Tribal coordination packet and submit it to the DOTD Project Manager (ELOS will not directly communicate with the tribal governments). ELOS will conduct biological assessment and a review of previous Historic Reviews. Lucas will review the finding of all reviews and the permit packet prior to submission.
12/22-Ongoing	**Wildwood Dr. Bridge; Livingston Parish, LA**. ELOS was contracted to perform a Wetlands Delineation Assessment, a Biological Assessment, and a Cultural Resource Survey. Lucas directed the assessments and ensured the accuracy of the Cultural Resource Survey. He supervised the submission of all pertinent documentation to the appropriate agencies.
11/17-Ongoing	**Move Ascension, Phases I, II, & III; Ascension Parish, LA.** ELOS is contracted to plan projects, perform wetland delineations, conduct cultural resource surveys, and submit permit applications for 60 roadway projects, varying from roundabouts to constructing new lanes and connecting roadways, located throughout Ascension Parish. Lucas has reviewed delineation details, edited cultural resource reports, developed and analyzed alternatives, reviewed scheduled, assisted with wetland mitigation, and reviewed permit applications.

Firm	Elos Environmental & Ecological Services		
Name	Christopher Wilson	Years of Relevant Experience with this Employer	18
Title	Archaeology & Historic Preservation	Years of Relevant Experience with Other Employer(s)	4

Degree(s)/Years/Specialization			MS/2005/Biological Sciences; BS/2000/Forest Management
Active Registration Number/State/Expiration Date			National Highway Institute: NEPA & Transportation Decision-Making Process
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Archaeology & Historic Preservation **Brief Description:** Principal, Project Oversight, NEPA Clearance, Agency Coordination, Stakeholder Outreach, and Public Meetings

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/23-11/24	**DOTD Rural Bridge Replacement Phases I & II; Statewide, LA.** Christopher was responsible for providing CRM (Cultural Resource Management) services for a DOTD rural bridge replacement project. His duties included conducting research, preparing a Phase I report, and managing STP (Shovel Test Pit) data. He coordinated with agencies such as SHPO (State Historic Preservation Office), NRHP (National Register of Historic Places), and DOTD. Additional tasks include preparing transmittal letters, completing LHRI (Louisiana Historic Resource Inventory) forms, managing the Survey123 platform, overseeing field crew activities, and preparing and submitting the final report. Christopher ensured all documentation and processes meet regulatory requirements for cultural resource assessments.
12/23-09/24	**DOTD IIJA Off-System Bridges District 62.** Christopher was responsible for providing comprehensive CRM services for the DOTD Off-System Bridges District 62 project. His tasks included conducting background research, preparing desktop reports, and overseeing field crew activities. He utilized topographical maps and aerial investigations to gather critical data. Christopher also created and submitted tribal packet research, along with collecting CRM information necessary for Categorical Exclusion (CATEX) evaluations. Additionally, he coordinated with agencies such as LHRI, DOTD, and SHPO to ensure compliance with regulations. Christopher prepared a Section 106 desktop report, assessing potential impacts on historic properties and ensuring the project aligns with cultural resource preservation requirements.
10/24-Ongoing	**Brownswitch Road Bridge Replacement; St. Tammany Parish, LA**. For the St. Tammany bridge replacement project, Christopher provides CRM services, focusing on Section 106 compliance. His responsibilities include conducting a CRM Section 106 desktop review to assess the potential impacts of the bridge replacement on cultural resources. This involves reviewing SHPO databases for historic properties, conducting a cemetery review to identify any burial sites in the area, and assisting with the preparation of maps and aerial images to support the cultural resource assessment. He also compiles and creates a detailed Section 106 desktop review report, summarizing findings and ensuring compliance with historic preservation requirements, while addressing potential impacts to cultural resources in the project area.

11/23-11/23	**Tangi Off-System Bridge Prioritization: For the DOTD Off-System Bridge Prioritization Project,** Christopher provided a review of the project site to assess the potential effects of bridge replacements on cultural resources. He verified no cultural resources were needed, allowing the project to move forward in accordance with regulatory requirements.
07/24-08/24	**US 190 Roundabouts; St. Tammany Parish, LA.** Christopher was responsible for CRM services for the construction of three roundabouts along Highway 190 in St. Tammany in support of Section 106 compliance. His responsibilities included SHPO files to include all previously recorded cultural resource surveys, archaeological sites, and historic structures within a 1-mile radius. He also compiles reviews and reports to summarize findings and addresses any potential impacts on cultural resources, including cemetery reviews.
10/24-10/24	**Old Mill Settlement Road; Livingston Parish, LA.** Christopher was responsible for performing a Section 106 desktop review in support of Livingston Parish Government for their proposed road project. His responsibilities included but were not limited to working with all applicable state agencies and adhering to the regulations of 36 CFR Part 800. He verified that the site had experienced some disturbances due to road construction and that there was a high probability of possible Cultural resources due to the proximity of the Amite River and the previously recorded archaeological sites.
07/24-09/24	**Juban North Extension; Livingston Parish, LA.** Christopher provided a Section 190n desktop review for Livingston Parish Juban Road Extension. He researched and reviewed historical maps, aerial photographs, and the online database of archaeological and historic sites maintained by SHPO. He found that there had been 11 cultural resource investigations within 1-mile of the project area. He also reviewed historical topographical maps and aerials. Christopher found that because the site had not been heavily altered through construction previously a historic structure survey was recommended.
03/24-04/24	**5th Street Improvements (H.012885); Jefferson Parish, LA.** Christopher performed a Phase I Cultural Resource Survey of 0.5-mile radius of the projected improvement project. This included a pedestrian survey, taking systematic photos, recording addresses of all historic structures, and completing all Louisiana Historic Resource Inventory forms. The buildings were found to not be eligible but it was noted that they are in a district that is potentially eligible as a Postwar Commercial Strip. He developed a plan for any cultural material encountered would be labeled with provenance and temporarily curated by ELOS. In the end, he recommended the project proceed as planned after concluding no significant cultural resources would be impacted.
06/24-10/24	**Move Ascension, Phase III; Ascension Parish, LA.** Christopher was responsible for conducting a Section 106 Desktop Review of the Roddy Road area as part of the third phase of Move Ascension project. This review included identifying potential historic structures by using SHPO databases and files. He also reviewed historic aerial images for structures in the area. He was able to identify from the multiple sources that there were historical structures. He compiled his findings and met with GIS to report them.
10/23-02/24	**Tangipahoa USDOT BIP Services 2023; Tangipahoa Parish, LA.** Christopher performed a Cultural Resource Review of previous investigations. These investigations included surveys, cemeteries, and listings of historic structures. He coordinated with the project manager and SHPO while conducting and documenting the review.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Shelley Hartfield	Years of Relevant Experience with this Employer	18
	Title	Archaeology & Historic Resource	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			MA/2012/Anthropology; BS/2001/Anthropology
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Archaeology & Historic Resource **Brief Description:** Shelley a Principal Investigator for archaeology and Certified Project Manager for AECOM's Environmental Business Line, with over 18 years' experience in Cultural Resource Management, conducting all phases of archaeological projects in the field, laboratory, and office. During her career, she has conducted archaeological investigations for hundreds of miles of linear infrastructure and thousands of acres for renewable energy projects, which include transmission lines, pipelines, rail lines, roadways, solar farms, and wind farms, as well as processed tens of thousands of artifacts for curatorial facilities in Texas, Oklahoma, Louisiana, and Kansas.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/24-10/24	**United States Department of Agriculture, Climate Smart Program. Acadia, Avoyelles, Jefferson Davis, St. Landy, St. Martin, and Vermilion Parishes, LA.** Principal Investigator/Primary Contact. Shelley performed and oversaw the background research and recommendations for the Environmental Compliance Services for the Implementation of Pilot Projects Developed under the Partnership for Climate-Smart Commodities Program.
09/2-01/21	**College Drive Perkins Road to I-10, City-Parish Project No. 19-EN-HC-0033, Baton Rouge, East Baton Rouge Parish, LA.** Principal Investigator. Shelley conducted the background study and coordination with the Louisiana State Historic Preservation Office regarding archaeological and historic resources for the undertaking.
06/20-08/20	**Phase I Cultural Resources Investigation of the Proposed Jones Creek Road Extension, Jefferson Highway to Airline Highway, City Parish Project N. 12-CS-HC_0060, City of Baton Rouge, East Baton Rouge Parish, LA.** Principal Investigator. Shelley oversaw the archaeological field efforts and is the primary author of the Phase I investigation report.
06/13-08/23	**Phase I Cultural Resources Investigations of the Proposed Jones Creek Road Extension, Tiger Bend Road to Airline Highway, City Parish Project No. 12-CS-HC_0060, City of Baton Rouge, East Baton Rouge Parish, LA.** Principal Investigator. Shelley oversaw the archaeological field efforts and is the primary author of the Phase I investigation report.
11/20-02/21	**Phase I Cultural Resources Survey Report for the Port of South Louisiana Globalplex Multi-Modal Connections Project, Reserve, St. John the Baptist Parish, LA**. Principal Investigator. Shelley oversaw the archaeological field efforts and is the secondary author of the Phase I investigation report.

06/20-07/20	**Phase I Cultural Resources Investigation of the East Gate Relocation Project, Barksdale Air Force Base, Bossier Parish, LA.** Principal Investigator. Shelley oversaw the archaeological field effort, was the author of the Phase I investigation report, aided in the contribution for cultural resources to the Environmental Assessment, and conducted the preparation and submission of all records produced from the investigation, submitted to the curatorial facility at Barksdale Air Force Base.
10/15-07/20	**Dallas to Houston High Speed Rail Archaeological Resources Survey, Federal Railroad Administration, Dallas, Ellis, Navarro, Freestone, Limestone, Leon, Madison, Grimes, Waller, and Harris Counties, TX.** Project Archaeologist. Shelley coordinated the archaeological field effort, aided in the production of the Environmental Impact Statement contribution for cultural resources, produced the Programmatic Agreement for the project, and has coordinated with the lead federal agency and the Texas Historical Commission in support of compliance with Section 106 of the National Historic Preservation Act (NHPA), the Antiquities Code of Texas, and NEPA, as well as lead author and technical reviewer of the archaeological reports produced for this project.

Firm	AECOM Technical Services, Inc.		
Name	Zoe Knesl	Years of Relevant Experience with this Employer	16
Title	Phase 1 ESA	Years of Relevant Experience with Other Employer(s)	15

Degree(s)/Years/Specialization			Degree(s)/Years/Specialization MS/2002/Marine Science; BA/1994/Integrative Biology/ Ecology; BA/1994/Studio Art
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Phase 1 ESA **Brief Description:** Zoe has 31 years of experience conducting eld surveys, Phase I and Phase II Environmental Site Assessments (ESAs), and reporting, NEPA documentation and impact assessment, GPS data collection, wetlands delineation, and various laboratory procedures. She has conducted data collection, entry, and analysis on various ecological and environmental projects, including soil and water data and reporting. Zoe has authored sections on NEPA impacts for aquatic ecology, terrestrial ecology, wetlands, water resources, land use, and aesthetics/visual resources. She has organized sample collection and report generation. Her laboratory skills include stable isotope analysis; preserving organisms in formalin; identifying benthic invertebrates, plants, and marine and freshwater algae; and various procedures employed during forensic DNA analysis. She also has experience identifying plants and soil types

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/20-04/21	**City of Baton Rouge, Baton Rouge LA**. Environmental Scientist. Zoe conducted a Phase I ESA of the ROW of the College Drive Corridor in Baton Rouge, East Baton Rouge Parish, LA.
11/18-02/22	**Cotton Creek Capitol. Environmental Scientist.** Zoe conducted multiple Phase I ESAs on developed and undeveloped properties in Texas and Louisiana.
06/19-12/21	**City of Austin, TX.** Environmental Scientist. Zoe conducted multiple Phase I ESAs on a variety of properties in Austin, Texas.
10/08-03/19	**Siemens Water Technologies, Former Siemens Site, Long-Term Monitoring, New Orleans, LA.** Environmental Task Manager. Zoe conducted long-term monitoring of a facility, including field sampling, and generated quarterly and annual reports. She coordinated with the laboratory and facility and developed a proposal for additional investigation with a horizontal drill rig.
06/08-04/10	**US Army Corps of Engineers (USACE), Phase I Environmental Site Assessments. Environmental Scientist.** ▶ USACE Phase 1 ESA for Pump Stations, New Orleans, LA. Zoe conducted a Phase I ESA of 26 sites in Orleans Parish for potential storm-proofing activities in the pump stations and water plant. ▶ USACE Phase 1 ESA Stockpiles, New Orleans, LA. Zoe conducted a Phase I ESA of four large sites in Orleans Parish for possible stockpiling locations. ▶ USACE Phase 1 ESA, New Orleans, LA. Zoe conducted a Phase I ESA of five miles of levees in Orleans Parish. ▶ USACE, Phase II ESA, New Orleans, LA. Zoe participated in the analysis and preparation of a Phase II report investigating potential soil impacts adjacent to two floodwalls in Orleans Parish.

04/10-07/10	**Veterans Administration and Federal Emergency Management Agency, Phase I ESA for New Hospital Site, New Orleans, LA.** Environmental Scientist. Zoe conducted a Phase I ESA of 39.8-acre site for an alternative location for the hospital. She participated in a scoping meeting and provided support for document preparation.
05/10-10/16	**Dixie Brewery Phase II Investigation, New Orleans, LA.** Environmental Scientist. Zoe conducted several Phase II investigations with soil and water sampling. She assisted in taking over 100 soil samples and installing four temporary monitoring wells. She monitored asbestos and lead abatement activities and coordinated subcontractors for contaminated soil, underground storage tank, and hazardous waste removal. She coordinated with the VA, its contractors, and Louisiana Department of Environmental Quality regarding sampling, waste disposal, and RECAP requirements. She also performed data table organization, GPS coordinate logging, and regulatory research.
04/11-04/11	**05/10 – 10/16 US Department of Veterans Affairs (VA), Dixie Brewery Phase II Investigation, New Orleans, LA.** Environmental Scientist. Zoe conducted a Phase I ESA of 11 sites in preparation for potential rebuilds and upgrades.
07/13-07/13	**Entergy Services, Inc., Phase II Limited Site Investigation and Phase I ESA, Various Locations.** Environmental Scientist. Zoe conducted and reported on a Phase I ESA of a boiler facility and a cooling facility for a power company.
06/14-05/19	**LANXESS Corp./Arlanxeo Groundwater Monitoring and Report Preparation, Orange, TX.** Environmental Scientist. Zoe conducted groundwater monitoring sampling and generated a draft annual report, including data evaluation and text.
09/15-09/15	**Entergy Corporation, Liquefied Natural Gas Power Plant Phase I ESA, El Dorado, AR.** Environmental Scientist. Zoe participated in the Phase I ESA of a LNG power plant, including site visit, draft report, and historical and governmental research.
02/16-08/19	**SCT&E LNG Inc., Cameron, LA.** Environmental Scientist. Zoe completed a Phase I site assessment of an undeveloped island.
07/16-07/16	**Harris Corporation, Lafayette, LA.** Environmental Scientist. Zoe performed a Phase I ESA for an office/warehouse property.
09/17-09/17	**Pilgrim Energy Partners.** Environmental Scientist. Zoe performed a Phase I site assessment of three industrial/commercial properties in Scott, LA.
09/17-09/17	**The Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) and Federal Occupational Health (FOH).** Environmental Scientist. Zoe conducted a Phase I ESA and a limited Phase II site investigation for the future location of a dog kennel on Redstone Arsenal.
07/18-05/19	**Cotton Creek Capitol, Phase I ESAs**. Environmental Scientist. Zoe completed eight Phase I ESAs for properties in Louisiana and Texas.
09/18-09/18	**Port of New Orleans, LA.** Environmental Scientist. Zoe performed environmental site research and review for properties on the Industrial Canal.
10/18-05/22	**Dallas Water Utilities, City of Dallas, TX.** Environmental Scientist. Zoe completed multiple Phase I ESAs, File Review/Screening Reports, Phase II ESAs, and Waste Characterization Reports.
11/18-11/19	**CF Industries, Phase I ESA.** Environmental Scientist. Zoe completed an ASTM compliant Phase I ESA of a vacant property located on the Mississippi River in Louisiana.
11/18-11/19	**CF Industries, Phase I ESA.** Environmental Scientist. Zoe completed an ASTM compliant Phase I ESA of a vacant property located on the Mississippi River in Louisiana.
05/19-08/19	**City of San Antonio, TX.** Environmental Scientist. Zoe completed a Phase I ESA for a 12-block corridor on Broadway Street.
04/19-06/19	**City of Austin, TX.** Environmental Scientist. Zoe completed two Phase I ESA Reports for properties in Austin.
06/19-08/19	**Cargill, Phase I ESA.** Environmental Scientist. Zoe completed an ASTM compliant Phase I ESA of a vacant warehouse property located in Louisiana.

Firm	Elos Environmental & Ecological Services		
Name	Basile Dardar	Years of Relevant Experience with this Employer	18
Title	Wetlands/Floodplains/Water Resources	Years of Relevant Experience with Other Employer(s)	4

Degree(s)/Years/Specialization			BS/2014/Biology
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Wetlands/Floodplains/Water Resources **Brief Description:** Wetland Studies, Environmental Data Collection & Surveys, Endangered Species Survey including tri-colored bat, Environmental Permits, Impacts Evaluation, NEPA Clearance, and Stage 0 Checklists

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/23-Ongoing	**EBR Off System Bridge Program; East Baton Rouge Parish, LA.** Basile has coordinated with the field team to conduct wetland delineations, complete wetland findings reports, work with the USACE for jurisdictional determinations of wetlands, and assist with USACE permit applications and supporting documentation for 13 bridge replacements.
09/22-Ongoing	**DOTD IIJA Off-System Bridges District 62.** ELOS is contracted to provide comprehensive services to replace bridges throughout various parishes located in Southeast Louisiana in several phases until completion. Basile has coordinated with field teams to assess cultural and environmental impacts. Through ongoing efforts, Basile has maintained the required data and documentation and reviewed deliverables and reports applicable to SOVs, wetland delineations, and categorical exclusion of the construction activities. He has assisted with preparing applicable permits, maps, forms, and supplemental documentation.
04/22-Ongoing	**Tangi Off-System Bridge Prioritization; Tangipahoa Parish, LA.** ELOS is contracted to provide environmental services including wetland delineations, Solicitation of Views (SOVs), Categorical Exclusion (CE) documents, and permit applications and drawings for six bridges to be replaced in District 62. Basile has conducted wetland delineations, prepared and submitted permit applications, and led the team in completing the SOVs and CE documentation.
06/22-09/23	**DOTD Rousseau Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to provide environmental services for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Services included a wetland delineation, Scenic Rivers permit application, emergency authorization application to USACE, SOVs, and a final report. Basile has conducted a wetland delineation, submitted reports to USACE, coordinated with the field team regarding SOVs and information needed, and reviewed permit drawings.

11/21-Ongoing	**DOTD Rural Bridges Phases I & II; Statewide, LA.** ELOS has been contracted to provide professional environmental consulting services for replacing bridges in rural areas for two project phases. Phase I involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase 2 is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, and 58. Almost all the projects have included a wetland delineation, permit applications, a cultural resource survey, and a threatened and endangered species survey. Basile has coordinated field crews, performed wetland delineations, collected and inputted data, written and produced reports, developed timelines, coordinated with DOTD, worked on permit applications with state and federal agencies, and assisted with the surveys.
11/21-Ongoing	**Move Ascension-Phases II & III; Ascension Parish, LA.** ELOS has been contracted to plan projects, perform wetland delineations, conduct cultural resource surveys, and submit permit applications for 60 roadway projects, varying from roundabouts to constructing new lanes and connecting roadways, located throughout Ascension Parish. Basile has worked on the wetland findings report for the USACE jurisdictional determination of wetlands, reviewed delineation photographs and maps, and reviewed corresponding figures and data for the permit applications.
01/22-09/22	**Judge Dufresne Parkway Extension; St. Charles Parish, LA.** ELOS was contracted to conduct a Wetland Delineation, submit Permit Applications, perform a Phase I ESA, and provide a Section 106 Desktop Review for a 161.5-acre tract of land referred to as Judge Dufresne Parkway Extension located in St. Charles Parish, Louisiana. Basile performed the wetland delineation, completed the Phase I ESA and its report, and assisted with the USACE permit application and follow-up.
06/24-Ongoing	**US 190 Roundabouts (H.014375); St. Tammany Parish, LA.** ELOS has been contracted to perform a wetland delineation, prepare and submit joint permit applications, complete Section 106 reviews, and conduct threatened and endangered species surveys for a 28-acre area for the installation of roundabouts on US 190. Basile has assisted with writing and reviewing the threatened and endangered species report.
02/23-Ongoing	**DOTD Minnesota Park/Range Road Roundabout; Tangipahoa Parish, LA.** ELOS is contracted to complete a wetland delineation report to obtain a jurisdictional determination from the U.S. Army Corps of Engineers (USACE), submit a permit application, if necessary, as well as assist with a Categorical Exclusion (CATEX), Phase I Environmental Site Assessment (ESA), and the Solicitation of Views (SOVs) for a roundabout project (H.014340) covering 2.5 acres in Tangipahoa Parish. Basile has worked on the SOVs, reviewed the CATEX sections and documentation, written permit applications, and coordinated with DOTD.

	Firm	Elos Environmental & Ecological Services		
	Name	Brian Fortson	Years of Relevant Experience with this Employer	13
	Title	Wetlands/Floodplains/Water Resources	Years of Relevant Experience with Other Employer(s)	23

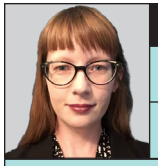
Degree(s)/Years/Specialization			JD/2006/Civil Law; BS/1995/Wetland Ecology
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Wetlands/Floodplains/Water Resources **Brief Description:** Project Management, NEPA Clearance, Feasibility Analysis, and Agency Coordination

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/23-Ongoing	**EBR Off System Bridge Program; East Baton Rouge Parish, LA.** Brian has coordinated with the environmental scientists to review the wetland delineation reports and assist with USACE permit applications for 13 bridge replacements.
09/20-Ongoing	**DOTD Rural Bridges Phases I & I, Statewide, LA.** ELOS has been contracted to provide professional environmental consulting services for the Department of Transportation and Development (DOTD) Rural Bridge Replacement Initiative for two project phases. Phase I involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase 2 is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, 58. Almost all the projects have included a wetland delineation, permit applications, cultural resource survey, and a T&E survey. Brian has reviewed wetland delineation reports and categorial exclusion documentation, discussed findings and reviewed data for final reports, and met with staff internally to develop threatened and endangered species surveys.
09/22-Ongoing	**DOTD IIJA Off-System Bridges District 62**.This off-system bridge project involves the replacement of six bridges; ELOS is performing wetland delineations, completing permit applications, completing solicitation of views to document categorical exclusions for the work proposed, completing cultural resources research, tribal packets, and reports, and write navigability determination reports. Brian has reviewed the findings reports prior to client submission.
10/22-09/23	**DOTD Rousseau Bridge Replacement, St. Tammany Parish, LA.** ELOS was contracted to provide environmental services for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Services included a wetland delineation, Scenic Rivers permit application, emergency authorization application to USACE, SOVs, and a final report. Brian assisted with the report drafts and permit applications.
05/21-05/22	**STP Chris Kennedy RD Bridge Replacement, St. Tammany Parish, LA.** ELOS was contracted to provide professional environmental engineering services to collect data to further prepare reports for wetland delineation, biological assessment and cultural impact in accordance with the removal and replacement plans. Brian coordinated with internal teams to review reports, correlative maps, and environmental data to complete the approved contract.

Firm	Elos Environmental & Ecological Services		
Name	Cory Ricks	Years of Relevant Experience with this Employer	8
Title	Wetlands/Floodplains/Water Resources	Years of Relevant Experience with Other Employer(s)	1

Degree(s)/Years/Specialization			BS/2015/Biology
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Wetlands/Floodplains/Water Resources **Brief Description:** Environmental Data Collection & Surveys, Impacts Evaluation, NEPA Clearance, and Stage 0 Checklists

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/20-Ongoing	**DOTD Rural Bridges Phases I & II; Statewide, LA.** ELOS has been contracted to provide professional environmental consulting services for the Department of Transportation and Development (DOTD) Rural Bridge Replacement Initiative for two project phases. Phase 1 involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase 2 is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, 58. Almost all the projects have included a wetland delineation, permit applications, cultural resource survey, and a threatened and endangered species survey. Mr. Ricks has coordinated field crews, performed wetland delineations, written and produced reports, developed timelines, coordinated with DOTD, and assisted with the surveys.
06/22-09/23	**DOTD Rousseau Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to provide environmental services for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Services included a wetland delineation, Scenic Rivers permit application, emergency authorization application to USACE, SOVs, and a final report. Mr. Ricks worked on the emergency authorization application since the bridge was the only way to access a neighborhood, assisted with the Scenic Rivers permit application, and provided project updates to St. Tammany Parish.
04/22-02/24	**Tangi Off-System Bridge Prioritization; Tangipahoa Parish, LA**. ELOS is contracted to provide environmental services including wetland delineations, Solicitation of Views (SOVs), Categorical Exclusion (CE) documents, and permit applications and drawings for six bridges to be replaced in District 62. Mr. Ricks conducted a gopher turtle survey, wrote the findings report, completed permit applications with supporting documentation, and assisted with agency coordination.
11/17-Ongoing	**Move Ascension - Phases I, II, & III; Ascension Parish, LA.** ELOS has been contracted to plan projects, perform wetland delineations, conduct cultural resource surveys, and submit permit applications for 60 roadway projects, varying from roundabouts to constructing new lanes and connecting roadways, located throughout Ascension Parish. Mr. Ricks leads a team of field members to perform the wetland delineations. He has also assisted with cultural resources field investigations and with permit applications to state and federal agencies (USACE, LEDNR, DOTD).
05/21-05/21	**Tammany Trace Bridge Replacement; St. Tammany Parish, LA.** Mr. Ricks performed the wetland delineation, entered the wetforms, revised transmittals, reviewed the photographs/logs, coordinated with the GIS team to update maps, and submitted the wetland findings report.



Firm	AECOM Technical Services, Inc.		
Name	Bonnie Porter	Years of Relevant Experience with this Employer	1
Title	Threatened/Endangered Species	Years of Relevant Experience with Other Employer(s)	9

Degree(s)/Years/Specialization			BS/2014/Renewable Natural Resources
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Certified Professional Wetland Scientist (PWS)
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Threatened/Endangered Species **Brief Description:** Bonnie is an ecologist with a decade of experience in environmental compliance, permitting, and ecological field surveys in both the public and private sectors. She has a strong background in NEPA, including developing NEPA documentation and providing technical guidance through the NEPA process. She has served as project manager, field coordinator, and team leader for environmental compliance projects and ecological studies. Key project areas include energy and oil and gas infrastructure, flood mitigation projects, and disaster recovery projects, with a focus on transportation and public works infrastructure.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/24-11/24	**DOTD, SPN H.004273.5, I-49, Lafayette Connector Project, Lafayette, LA**. Conducted bridge and culvert surveys for T&E bat species in support of the I-49 Connector Project SEIS for DOTD. Technical reporting and agency coordination.
08/24-Ongoing	**EDPR Site Characterization Studies – EDP Renewables, Pearl River, Holmes, and Newton Counties, MS.** Environmental Impact and Permitting Specialist. Researched and drafted three detailed site characterization studies and permit matrices for prospective solar farm locations in Mississippi. Conducted field visits to validate desktop findings.
08/24-11/24	**Exus Critical Issues Analyses, Exus North America, NM, MS, AK, and KY**. Environmental Impact and Permitting Specialist. Researched and drafted Critical Issues Analysis reports and permit matrices for prospective solar farm sites in New Mexico, Mississippi, Arkansas, and Kentucky.
02/21-05/21	**Oil Terminal Project, TX. T&E** specialist responsible for assessing proposed offshore oil terminal project's impacts on aquatic reptile and mammal species in support of Environmental Assessment.
10/17-06/20	**FEMA Hazard Mitigation Grant Program, Environmental Protection Specialist, LA.** Project manager and NEPA specialist at FEMA responsible for preparing environmental assessments (EAs) for infrastructure hazard mitigation projects. Coordinated cultural resources analyses from team members and consulted state and federal agencies for concurrence on proposed project impacts. Guided applicants throughout the NEPA process including state and federal permitting requirements.
11/16-06/20	**Public Works Disaster Recovery Projects, LA.** NEPA specialist at FEMA responsible for preparing NEPA documentation for thousands of Louisiana disaster recovery projects, including public buildings, roads, bridges, and labor projects. Provided project support and guidance with environmental regulations to applicants.

Firm	Elos Environmental & Ecological Services		
Name	Mike Hill	Years of Relevant Experience with this Employer	2
Title	Threatened/Endangered Species	Years of Relevant Experience with Other Employer(s)	2

Degree(s)/Years/Specialization			BS/2019/Environmental Science
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Threatened/Endangered Species **Brief Description:** Wetland Studies, Environmental Data Collection & Surveys, Endangered Species Survey including tri-colored bat, Environmental Permits, Impacts Evaluation, NEPA Clearance, and Stage 0 Checklists

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/22-Ongoing	**DOTD Rousseau Bridge Replacement; St. Tammany Parish, LA.** ELOS was contracted to provide environmental services for the Rousseau Bridge Replacement Project located on approximately 2.62 acres in St. Tammany Parish. Services included a wetland delineation, Scenic Rivers permit application, emergency authorization application to USACE, SOVs, and a final report. Mike prepared the solicitation of views packet and worked on the permit applications.
04/22-Ongoing	**Tangi Off-System Bridge Prioritization; Tangipahoa Parish, LA.** ELOS is contracted to provide environmental services including wetland delineations, Solicitation of Views (SOVs), Categorical Exclusion (CE) documents, and permit applications and drawings for six bridges to be replaced in District 62 for the DOTD Off-System Bridge Prioritization project. Mike coordinated with USACE and prepared the solicitation of views packet.
11/21-Ongoing	**DOTD Rural Bridges Phases I & II; Statewide, LA.** ELOS has been contracted to provide professional environmental consulting services for replacing bridges in rural areas for two project phases. Phase I involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase 2 is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, and 58. Almost all the projects have included a wetland delineation, permit applications, a cultural resource survey, and a threatened and endangered species survey. Mike has coordinated field crews to gather data from field including plot photos and worked on the permit submittal.
04/22-Ongoing	**N. Brickyard Rd. Bridge Replacement; Tangipahoa Parish, LA**. ELOS has been contracted to provide professional environmental consulting services for the replacement of North Brickyard Road Bridge. The project includes a categorical exclusion written in accordance with Federal Highway Administration (FHWA) guidance. A wetland study and delineation are also required. Mike performed the delineation in the field and also prepared the solicitation of views packets for the permit application.
02/22-Ongoing	**STP Lock No. 3 Replacement; St. Tammany Parish, LA.** ELOS has been contracted to perform wetland delineation, submit joint permit applications, perform a State Historic Preservation Office (SHPO) Section 106 desktop review and Consultation, and perform a U.S. Fish and Wildlife (USFWS) Endangered Species Act (ESA) Biological assessment for the St. Tammany Parish Lock No. 3 Bridge Replacement project. Mike performed the wetland delineation and also constructed the wetland report for the joint permit application.

Firm	AECOM Technical Services, Inc.		
Name	Fang Yang	Years of Relevant Experience with this Employer	30
Title	Air Quality	Years of Relevant Experience with Other Employer(s)	6

Degree(s)/Years/Specialization			MS/1988/Atmospheric Science; BS/1982/Physics
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	Lifecycle GHG Emissions Modeling
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Air Quality **Brief Description:** Serving bike and pedestrian Analysis and engagement tasks

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/22-Ongoing	**Louisiana DOTD I-49 Lafayette Connector SEIS.** Leading comprehensive air quality including GHG/climate change impact analyses using MOVES and regional transportation model network/database for three alternatives per FHWA NEPA guidance.
01/24-10/24	**Michigan DOT M-37 Improvement EA.** Led comprehensive cumulative lifespan GHG emissions/social cost of GHGs/climate change impact analyses using MOVES and ICE modeling tools for four alternatives per 2023 CEQ NEPA guidance.
01/21-02/24	**Equinor/New York City Economic Development Corporation/Bureau of Ocean Energy Management South Brooklyn Marine Terminal Supporting Empire Wind Farms 1 and 2 EA/EIS.** Led direct and indirect upstream GHG emissions modeling analysis and a subsequent comprehensive GHG and climate change impact analysis to meet both Federal and State most recent rigorous policy requirements.
05/20-06/23	**USPS Next Generation Delivery Vehicle (NGDV) FEIS/SFEIS.** Led lifecycle GHG emissions and social cost of GHG modeling using MOVES model, Lifecycle GREET model, and eGRID database to determine GHG and cumulative social cost benefit for various fleet upgrade options.
04/20-10/23	**GulfLink Deep Port EIS.** Led direct and indirect upstream and downstream GHG and social cost of GHG modeling analysis using EPA MOVES and Department of Energy Explore tool and database.
06/20-Ongoing	**New Jersey Turnpike Exit 1-4 Improvement EIS**. Leading air quality including GHG emissions/climate change impact modeling analysis for this 36-mile corridor regional significant transportation improvement project.

Firm	AECOM Technical Services, Inc.		
Name	Geoffrey M. Gindhart	Years of Relevant Experience with this Employer	18
Title	Aviation Planning	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			MS/2012/Project Management; BS/2007/Aviation Business Administration
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Aviation Planning **Brief Description:** **Geoff is proficient in airspace planning and obstruction analyses as it relates to CFR Part 77, FAA TERPS, ICAO Annex 14/PAN-OPS.** He is an aviation planner with over 20 years of airport and aircraft operations experience. His aviation background includes being an aerospace propulsion technician in the US Air Force, a licensed private pilot, and most recently the Aviation Planning Department Manager at AECOM. Geoff has a well-rounded background in planning various airport facilities, inclusive of landside, terminal, airside, and airspace areas. This comprehensive facility planning experience is derived largely from executing airport master plan studies and supporting on-call contracts at large hub airports, inclusive of civilian, military, and joint-use facilities. Mr. Gindhart has extensive knowledge and experience with airport design standards per FAA Advisory Circulars, ICAO Annexes, and US Department of Defense Unified Facilities Criteria.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/06-Ongoing	**FAA Form 7460 Submittals – Various Airports.** Submitted hundreds of FAA Forms 7460-1 and-2 to the FAA in support of various on-airport and off-airport projects. This includes submitting as the sponsor and the sponsor's representative. Supporting documentation included developing project site plans, Part 77 and TERPS airspace overlays and analyses, and 7.5 minute quadrangle maps.
01/17-11/18	**Sasol Limited, Airspace Analyses and FAA Form 7460 Submittals, West Lake, LA.** Airspace planner responsible for conducting airspace analyses associated with an industrial plant expansion project in West Lake, Louisiana. The project included proposing over 30 new tall obstacles within an existing industrial complex. Due to the proximity of existing public-use airports in the vicinity, multiple airspace obstruction analyses were conducted as it relates to Part 77 and TERPS airspace. All obstacles were vetted within the project team prior to submitting to the FAA, which provided the design team an opportunity to mitigate potential FAA objections well in advance of the FAA reviews. Ultimately, all proposed obstacles were approved as designed, and the project was constructed as planned.

11/21-06/24)	**Naval Facilities Engineering Command – Pacific (NAVFAC)/Marine Corps, Flight Line Optimization Study, Marine Corps Base HI.** AECOM was a subconsultant to HHF Planners to develop a comprehensive flight line optimization study for Marine Corps Base Hawaii at Kaneohe Bay. The project required coordination with multiple Marine Corps and Navy squadrons to determine the feasibility of the proposed aircraft loading alternatives and recommended course of action. The study analyzed the existing facilities and the projected aircraft loading to determine overall concept feasibility. Runway airspace obstruction analyses were performed to ensure all development did not negatively impact the airspace. Additionally, new facilities were proposed to support planned operations, such as: flightline aircraft parking layouts to support fixed-wing (C-130, C-40, P-8A), rotary-wing (MH-60), tilt-rotor (MV-22), VMU operations (MQ-9), hot refueling pits, support hangars, VMU support facilities, and an aircraft washrack. Once a site investigation was concluded, a three-day COA planning charrette was hosted by HHF (with support from AECOM) to brief the project stakeholders on the analysis to date, finalize the program requirements, present preliminary COAs, and select a preferred course of action. The charrette participants included personnel from the HQMC Aviation, MCBH, and NAVFAC Pacific. The output from the planning charrette was a preferred COA and COA phasing plan, as well as follow-on support for DD Form 1391 development.
04/15-0319	**Naval Facilities Engineering Command – Pacific (NAVFAC)/Marine Corps Forces – Pacific (MARFORPAC), Support Airport Master Plan, Tinian Island, Commonwealth of the Northern Mariana Islands (CNMI).** AECOM supported the development of a comprehensive airside facility master plan for a proposed marine corps air station in the Northern Mariana Islands for NAVFAC/ MARFORPAC operations. The project required reviewing previous planning studies, criteria, and assumptions developed by others; and developing new concepts and facilities based on updated program requirements. The proposed air station development alternatives were primarily planned at Tinian Island on the existing airport, but alternative concepts were also considered at Pagan Island. Proposed facility planning included: runway and taxiway geometric planning, airspace obstruction analyses for both Saipan and Tinian airports, runway high-speed exits, pavement grading plans, flightline aircraft parking layouts to support fixed-wing and rotary-wing (and tilt-rotor) operations, fuel storage areas, expeditionary refuel apron, support hangars, hazardous cargo apron, combat aircraft loading apron, munition storage areas, arm/de-arm pads, emergency landing pads, Precision Approach Radar (PAR) pads, field carrier landing practice pad, arresting gear pad, landing helicopter deck, air traffic control tower preliminary siting, and an aircraft washrack. Both FAA and UFC planning standards were used for this project as the existing airport at Tinian is owned and operated by the FAA; as such, FAA standards were used for the runway, taxiway, and airspace criteria.
09/20-09/21	**California Air National Guard, 144th Fighter Wing, Fresno Air National Guard Base, Fresno Yosemite International Airport (FAT)/Naval Air Station Lemoore (NLC), 2020 Mission Feasibility Study, Fresno, CA.** Subject Matter Expert/Airfield Planning Lead responsible for developing and evaluating long-term basing options for the FANGB 144th Fighter Wing. The 144th Fighter Wing is preparing for a new airframe, the F-15 EX or F-35 aircraft, and their current site cannot meet their long-term needs. The Study focused on two comprehensive flight line redevelopment site alternatives; a golf course site located approximately 3,000 feet north of the existing base, and a 13-acre site located at Naval Air Station Lemoore. In all, 11 COAs were developed using both FAA and UFC standards and a preferred COA selected by the stakeholders that provided the flexibility to accommodate either new airframe and meet the basing requirements for the next 20 years. Airspace obstruction analyses were critical to the study as all new development was in close proximity to the existing runways.

Firm	AECOM Technical Services, Inc.		
Name	Tom Herzog	Years of Relevant Experience with this Employer	20
Title	Noise Analysis	Years of Relevant Experience with Other Employer(s)	12

Degree(s)/Years/Specialization			MBA/1994/Finance; BA/1988/Physics
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Noise Analysis **Brief Description:** Tom specializes in determining transportation noise and vibration impacts, and designing cost-effective mitigation measures. He uses the latest prediction methodologies, including the FHWA's Traffic Noise Model (TNM) for highway and bus rapid transit noise, the FTA's Transit Noise and Vibration Modeling Assessment guidelines, as well as other acoustical algorithms and methodologies to predict and assess noise impacts from highway and transit sources (such as pure tone mitigation). He has also used the FHWA Roadway Construction Noise Model and the FTA construction guidelines to assess noise and vibration impacts from, and develop mitigation measure for, proposed construction activities.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/14-07/19	**DOTD, SPN H.001779.5, Red River Bridge at Jimmie Davis Highway (LA 511) EA, Bossier and Caddo Parishes, LA**. Noise Analysis. Tom conducted noise impact assessment and evaluated noise berms for this project to improve the capacity of the LA 511 crossing of the Red River.
03/16-Ongoing	**DOTD, SPN H.004273.5, I-49 Lafayette Connector Supplemental EIS, LA.** Noise Analysis. Tom is leading the effort to conduct roadway noise impact assessment and mitigation analysis for 9 noise barriers.
05/23-Ongoing	**PennDOT I-81 Reconstruction Project, Section D46, Preliminary Engineering Noise Report, PA.** Noise Analysis. Tom is leading the effort to conduct roadway noise impact assessment and mitigation analysis for 23 noise barriers.
05/21-11/24	**NJ Turnpike Interchange 1 to 4 Widening Program, Preliminary Engineering Noise Report, NJ.** Noise Analysis. Tom is leading the effort to conduct roadway noise impact assessment along 36 miles and mitigation analysis for 51 noise barriers.
07/15-09/15	**DOTD, SPN H.004932, Supplemental EA, US 90 at LA 318, St. Mary Parish, LA.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.
11/05-04/12	**NYSDOT Tappan Zee Bridge Replacement Project, Alternative Analysis and EIS Phases, NY.** Air Quality and Noise Analysis. Tom conducted an air quality and noise assessment and evaluated noise barriers.
06/17-06/19	**PennDOT I-78/SR-61 Interchange EA & Final Design, PA.** Air Quality and Noise Analysis. Tom conducted a noise impact assessment and designed noise barriers.
03/19-7/19	**NCDOT Independence Boulevard, NC.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.

11/14-05/19	**ConnDOT I-84 Hartford Project EIS, CT.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.
10/15-09/16	**NYSDOT Hutchinson River Parkway/I-95 Interchange, NY.** Air Quality and Noise Analysis. Tom conducted an air quality and noise assessment and evaluated barriers.
07/14-05/15	**MDDOT MD180/SR 351 Ballenger Creek Extension, MD.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.
05/14-2/15	**Pennsylvania Turnpike MP 298 to MP 302 Widening, PA.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.
04/09-04/13	**MassDOT Fore River Bridge Replacement Project.** Noise Analysis. Tom conducted a noise impact assessment and evaluated noise barriers.

	Firm	AECOM Technical Services, Inc.		
	Name	Jeffery Leuenberger, AICP	Years of Relevant Experience with this Employer	2
	Title	Demographics & Land Use	Years of Relevant Experience with Other Employer(s)	20

Degree(s)/Years/Specialization			MURP)/2008/Urban Planning; BURP/2005/Urban Planning
Active Registration Number/State/Expiration Date			Certified Planner, American Institute of Certified Planners/American Planning Association – Certification Number #023531
Year Registered	2009	Discipline	Planner
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Demographics & Land Use **Brief Description:** Jeffery is a transportation planning specialist reporting to the Baton Rouge office. His experience includes master planning for multi-use paths, implementation of complete street policies, and managing transportation enhancement projects from environmental review through design and letting. He also has experience in GIS enterprise deployment for emergency disaster response and developing best management practice handbooks for stormwater management.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/24-Ongoing	**DOTD, I-49 Lafayette Connector Environmental Impact Statement, Lafayette, LA.** Contributed to the I-49 Lafayette Connector project in Lafayette, Louisiana, by coordinating EIS comments and conducting land use and demographic analyses using GIS. Developed detailed maps showcasing project impacts and demographic distributions (population, gender, race). Assisted with federal permitting processes, including obtaining approvals from the U.S. Coast Guard and the U.S. Army Corps of Engineers.
01/14-03/16	**Lafourche Parish Government, Bayou Lafourche Multi-Use Path Master Plan and Feasibility Study, Thibodaux, LA.** Project manager who oversaw and managed the delivery of services for the Lafourche Parish Government's Multi-Use Path Plan and Feasibility Study for Bayou Lafourche. The plan included proposed creation and implementation of a multi-use path from Thibodaux, Louisiana to Fourchon Beach including branding, wayfinding, health and economic impacts, and implementation actions for funding and construction
09/22-06/24	**City of Baton Rouge, Parish of East Baton Rouge Government, Complete Street Ordinance, Baton Rouge, LA.** Project manager who oversaw the Baton Rouge Complete Streets Citizens' Advisory Committee (CSCAC), which implemented the Baton Rouge Complete Street Policy, adopted by the City-Parish Council in 2014. While an ordinance created the Advisory Committee, the CSCAC drafted and proposed a new ordinance that codified the policy. This was adopted in June 2024
04/19-12/20	**Lafourche Parish Government, Bayou Lafourche Scenic Overlook, Thibodaux, LA.** Senior planner who revised a stalled Transportation Enhancement Program Project for the Bayou Overlook project in Raceland, Louisiana, for Lafourche Parish Government. Led the project through in-house environmental review, design, engineering, and final project letting.

01/18-11/20	**Lafourche Parish Government, Government Trailhead, Thibodaux, LA.** Project manager who oversaw and managed the delivery of services for Lafourche Parish's Transportation Enhancement Program project for the Lafourche Parish Government Trailhead Project through in-house environmental review, design, and engineering. [1/2018-11/2020]
01/15-12/20	**Lafourche Parish Government, Force Drainage Mapping, Thibodaux, LA.** Senior project manager who used the Lafourche Parish Master Drainage Plan to map the levee and pumping stations and create an asset-based mapping system. This effort assisted in developing a base map of the Lafourche Parish force drainage system for future modeling, monitoring pump station maintenance, and tracking operations during hurricanes and other natural disasters.
06/14-09/21	**Lafourche Parish Government, Hurricane Response Dashboard Site Incident Operations Dashboard, Thibodaux, LA.** Senior planner who deployed a variety of ESRI applications for all tropical storms and hurricanes, including a story map and land page for emergency public outreach, incident reporting application for both the public and inhouse, deployed hurricane evacuation application, in-house hurricane response control center, and various other report tools and monitoring applications.
06/14-09/21	**Lafourche Parish Government, GIS Enterprise Deployment, Thibodaux, LA.** Senior project manager who created Lafourche Parish's GIS Enterprise System addressing application setup and deployment, centerline cleanup and attributing, forced drainage levee system mapping, cemetery documentation, emergency disaster response, Post-Disaster Damage Surveys Setup, and Deployment.
01/13-08/21	**City of Baton Rouge-Parish of East Baton Rouge Government, Stormwater Best Management Practice Handbook, Baton Rouge, LA.** Planner who coordinated a Louisiana Department of Environmental Quality grant, "Mitigating Nonpoint Source Pollution in Urban Watersheds with Spatial Modeling, Best Management Practices for Wetlands and Community Outreach," including a Best Management Practice handbook and public outreach
01/07-12/07	**Lafourche Parish Government, Coastal Wetlands Planning and Protection and Restoration Act Project mapping, Thibodaux, LA.** Senior planner who worked with the Lafourche Parish Coastal Zone to map four proposed marsh creation projects for a final grant submission. Resulted in four marsh restoration dredging and construction projects.

	Firm	AECOM Technical Services, Inc.		
	Name	Kelly Duggan, AICP	Years of Relevant Experience with this Employer	1
	Title	Public Engagement	Years of Relevant Experience with Other Employer(s)	15

Degree(s)/Years/Specialization			MS/2010Urban and Regional Planning/University of New Orleans; BA/2006/History/University of New Orleans
Active Registration Number/State/Expiration Date			Certified Planner, American Institute of Certified Planners/American Planning Association – Certification Number 30424
Year Registered	2017	Discipline	Planner
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Public Engagement **Brief Description:** Kelly is a Senior Urban Planner with over 15 years of experience in both the public and private sectors. She has worked in a diverse range of disciplines, including regulatory planning, parks and recreation design and construction, active transportation planning and implementation, and land use consulting. Her main areas of expertise include GIS, outreach & engagement, master planning, project management, bike/ped planning & facility design, and visual communication. She also has extensive experience creating geospatial datasets, producing interactive web-based maps, preparing maps for publication, and managing GIS databases.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/15-Ongoing	**I-49 Connector NEPA Process, Lafayette, LA.** Kelly was part of a multi-disciplinary team that produced the Draft Environmental Impact Statement for the project. Her primary responsibilities were the collection, analysis, interpretation, and visualization of geographic data utilizing ArcGIS, as well as graphic design. Additionally, Kelly played a key role in public engagement efforts, helping to communicate complex data and findings to stakeholders and the community to ensure their input was reflected in the project's development.
	Scotlandville Pkwy Wayfinding Plan, Baton Rouge, LA. Using ArcGIS and Adobe design software, Kelly produced a wayfinding plan and designed related signage, maps, and other assets for the Scotlandville Parkway Greenway. The project involved public engagement in the naming of greenway segments, partnership with Southern University to utilize historic photography in an "Art Walk" along the trail, as well as administration of an AARP grant that funded the project.
	East Baton Rouge Parish Pedestrian and Bicycle Master Plan Update, Baton Rouge, LA. Kelly was part of a multi-disciplinary team that worked with the City-Parish and DOTD to update the Bike/Ped Master Plan, which is an element of the City's Comprehensive Plan. The project involved updating crash and demographic data to re-assess need, enhancing maps for greater legibility and accessibility, and conducting community engagement. Geospatial data were cleaned, formatted, updated to ensure accuracy and accessibility, and published.
	Park and Recreation System Master Plan, Baton Rouge, LA. Kelly was a project manager for the 10-year system master plan, which serves as the guiding document for future development and redevelopment of BREC's system of parks and green spaces, conservation areas, recreation facilities, off-road greenway trails, recreation programs, services, and maintenance plans. This involved a facilities assessment using ArcGIS Survey 123 to collect and analyze georeferenced data that informed decision-making. Additionally, Kelly played a key role in public engagement, ensuring that community feedback was integrated into the planning process to align the master plan with public needs and priorities.

Firm	AECOM Technical Services, Inc.		
Name	Peter Bakhit, PE, PTOE, RSP1	Years of Relevant Experience with this Employer	3
Title	Traffic Analysis Task Leader/Intersection/Signal Design	Years of Relevant Experience with Other Employer(s)	6

Degree(s)/Years/Specialization			PhD/2018/Civil Engineering; MS/2015/Civil Engineering; BS/2012/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0049303/LA/Exp. 03/31/26; PTOE #5713/Exp. 7/9/2027; Additional active license in TX
Year Registered	2021	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Traffic Analysis Task Leader/Intersection/Signal Design **Brief Description:** Peter is a professional engineer with more than six years of experience focusing on the transportation industry. He has experience working on projects for DOTD pertaining to traffic and safety studies, feasibility studies, permanent signing design, signal design, and NEPA studies. His software skills include: Synchro, Vissim, VISTRO, ArcGIS, Freeval, MATLAB, R Studio, SPSS, MicroStation and HCS. Peter is also a member of ASCE and ITE organizations.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/19-01/22	**DOTD, Pete's Highway Interchange Alternatives & Environmental Assessment, Denham Springs, LA.** Traffic Engineer. Responsible for traffic analysis of proposed build alternatives using Vissim software.
04/18-05/19	**DOTD, Freeval Lane Closure Analysis: Major Metropolitan Areas, Baton Rouge, LA.** Freeval Modeling. Responsible for developing and calibrating the Freeval models for multiple freeway corridors in New Orleans, and Baton Rouge. This project aimed to provide a tool to analyze different lane closure scenarios for the interstate freeways in major metropolitan areas of Louisiana.
06/19-12/19	**DOTD, US 61 Corridor Study (Airline Hwy), Baton Rouge, LA**. Traffic Analyst. Responsible for the corridor safety analysis. The purpose of the study is to assess traffic operations and potential safety improvements for this urban, four-lane divided highway. Scope of services include existing traffic data collection and analyses, safety data analyses, future traffic projections considering corridor growth rates, assessment of access management improvements (implementing "Superstreet" concept), and evaluation of concept using HCM methodologies.
07/13-12/15	**DOTD, Development of an Optimal Ramp Metering Control Strategy For I-12, Baton Rouge, LA.** Traffic Vissim Modeling. Responsible for developing different traffic Vissim models with various ramp metering plans. The purpose of the study is to evaluate different ramp metering strategies to identify the optimal algorithm that can improve traffic operations on I-12.
04/18-02/20	**DOTD, I-10 (LA 73 to LA 429) Ascension Parish IMR & IJR Study, DOTD, Ascension Parish, Louisiana, Ascension Parish, LA.** Transportation Engineer. Providing technical support for various tasks including data collection, development of build alternatives through a tiered analysis, and conceptual drawings of critical roadway geometry. The purpose of the project is to evaluate improvements to an existing interchange and configuration of two new interchanges along I-10 in Ascension Parish.
11/20-Ongoing	**DOTD, I-10 CMAR, East Baton Rouge Parish, LA.** Traffic Engineer: Responsible for wide range of traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. The improvements also include the intersections nearby study area.

Firm	Vectura Consulting Services, LLC		
Name	Brin Ferlito, PE, PTOE	Years of Relevant Experience with this Employer	9
Title	Traffic Analysis	Years of Relevant Experience with Other Employer(s)	27

Degree(s)/Years/Specialization			BS/1988/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0025383/LA 9.30.25
Year Registered	1993	Discipline	Civil
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Traffic Analysis

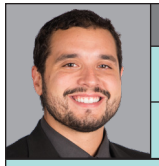
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19-Ongoing	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement PPP, Belle Chasse, LA.** Brin is the project manager for the temporary and permanent traffic signal plans for the intersections of LA 23 at Burmaster St and at Engineers Rd. She based her traffic signal plans on design year volumes that were developed using growth rates from the New Orleans Regional Planning Commission Travel Demand Model. This project is the first ever Public-Private-Partnership performed by DOTD.
09/20-12/21	**H.010960.5 LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA.** Brin is the project manager for the design of temporary traffic signal plans that will be implemented during the roundabout construction along LA 30 in Gonzales, LA. The project involves replacing three existing signalized intersections with multilane roundabouts along LA 30 at I-10 Interchange ramps and at Tanger Boulevard. Vectura also developed signal timing plans for each phase of the construction to maintain progression along LA 30.
09/13-04/14	**SP 700-99-0477 Jefferson Hwy. Signal Design, Baton Rouge, LA.** Brin designed traffic signal plans for 11 intersections along Jefferson Highway between College Drive and the I-12 On Ramp in Baton Rouge. Design included traffic data collection, traffic signal layout, fiber interconnect layout, fiber splicing diagrams, pedestrian crosswalk layout, and sign layout. Design also included traffic signal synchronization signal timing and pedestrian signal timing. She prepared estimated quantities, preliminary and final signal construction plans, and specifications.
04/14-12/14	**H.002301 Signal Design for N. Sherwood Forest Dr. Widening Project, Baton Rouge, LA.** As the project engineer, Brin was in responsible charge for data collection and design for three signalized intersections as part of a road widening project as per EBR DPW and DOTD requirements. Brin developed the traffic signal equipment, signal timing and communication construction plans, special provision specifications, quantities, and cost estimate. She also performed tasks to develop the striping plans and sequence of construction plans which included temporary signal equipment placement due to lane shifts during construction.
07/21-Ongoing	**H.007160-EBR Computerized Traffic Signal, Phase VB, Baton Rouge, LA.** Brin is the task leader for Vectura for the Construction Engineering and Inspection of 24 traffic signals. Brin oversaw the review of signal mast arm shop drawings to assist the City-Parish of Baton Rouge in accepting the manufactured poles. Brin and Reece, with the DOTD, City-Parish and the Contractor conducted field visits to confirm pole foundation locations.

	Firm	Vectura Consulting Services, LLC		
	Name	Laurence Lambert, PE, PTOE, PTP	Years of Relevant Experience with this Employer	9
	Title	Traffic Analysis/Maintenance of Traffic/TMP/ Intersection/Signal Design	Years of Relevant Experience with Other Employer(s)	18

Degree(s)/Years/Specialization			BS/1997/Civil Engineering MS/2006/Civil Engineering (Transportation focus) MBA/2010
Active Registration Number/State/Expiration Date			PE.0029901/ LA/3/31/2026
Year Registered	2002	Discipline	Civil
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Traffic Analysis/Maintenance of Traffic/TMP/Intersection/Signal Design

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/19-Onging	**MOVEBR New Capacity Projects Program Management, Baton Rouge, LA.** At the beginning of the program, Laurence worked with the Capital Region Planning Commission to produce measures of effectiveness from the travel demand model to prioritize the MOVEBR project list. Laurence and Pong Wu developed a list of vehicle miles traveled, V/C ratios and vehicles hours of delay. Laurence also provided peer review for the traffic studies for Ben Hur Road and Lee Drive.
07/23-11/23	**H.015504.5 CCC Decorative Lighting Level 4 TMP, New Orleans, LA.** Laurence was the project manager for a Level 4 Traffic Management Plan (TMP) for the Crescent City Connection (CCC). Laurence oversaw the lane closure analysis based on queuing. A safety analysis of the construction zone was also performed to identify any "hot spots". The results were summarized in a report that was reviewed by DOTD.
04/23-10/23	**H.014591.5 I-12: US 61 Bridges Girder Repairs, Baton Rouge, LA.** Laurence was the project manager for a Level 2 TMP for the interchange of I-12 at US 61. Laurence performed QA/QC for a lane closure analysis based on queuing. A safety analysis of the construction zone was also performed to identify any "hot spots" where Laurence also performed QA/PC. The results were summarized in a report that was reviewed by DOTD.
04/18-2/21	**H.010960.5 LA 30 Roundabouts at Tanger & I-10 Gonzales, Ascension, LA.** Laurence provided a Quality Control review of the temporary construction and sequence of construction plans. Vectura also provided Quality Control review of signing and striping plans at 30% and 60% plan sets to ensure the roundabouts conformed to the Pavement Markings Details Sheet PM-09 and the MUTCD details on roundabouts.
04/18-12/21	**H.011909.5-4 Roundabout: US 171 at Boone St., Vernon Parish, LA.** Laurence provided a Quality Control review of the temporary construction and sequence of construction plans. Vectura also provided Quality Control review of signing and striping plans at 30% and 60% plan sets to ensure the roundabouts conformed to the Pavement Markings Details Sheet PM-09 and the Manual on Uniform Traffic Control Devices (MUTCD) details on roundabouts.

02/20-09/21	**College Drive Corridor Enhancement from Perkins Road to I-10, Baton Rouge, LA.** Laurence was the project manager to develop Chapter 1 (Data Collection), Appendix A (Initial Data Collection), and Appendix B (Final Data Collection) for proposed improvements College Drive. Since the I-10 interchange was included in the study, approval from DOTD was required. Vectura collected, turning movement counts, 85% speed data, travel time runs, queue measurements, field observations, verification of Traffic Signal Inventories, and bicycle/pedestrian/transit observations.
01/23-02/24	**H.011504 Alexandria ITS Phase 2.** Laurence was the project manager for a System Engineering Analysis Report, Engineering Opinion of Probably Construction Cost and Level 2 Transportation Management Plan for the Alexandria area.
10/21-03/22	**H.013256.5 I-10 ITS Scott to Lake Charles.** Lead Traffic Engineer. Laurence was the lead traffic engineer for a Level 2 Traffic Management Plan (TMP) for the construction of ITS equipment along I-10. The plan included a safety strategy that included a CAT Scan, LOS determination utilizing Citrix data, lane closure recommendations based on a queue analysis and public information strategies.
09/18-02/19	**H.013261.1 I-110 ITS Deployment Systems Engineering Analysis.** Project Manager. As a subconsultant, Laurence was the task leader for the Constraints & Alternatives Analysis as well as the Projects & Procurement Strategy portion of the project. The goal of the project was to deploy Close Circuit Television (CCTV) cameras and one Dynamic Message Sign (DMS) along the I-110 corridor from US 190 to US 61. To communicate with the field devices from the Traffic Management Centers (TMCs), installing fiber optics along the I-110 corridor was recommended. The fiber optics also allow communication to the traffic signals at the interchange ramps along I-110 to the TMC.
06/12-12/12	**Ramp Metering Study of I-10 Segment, East Baton Rouge and Ascension Parishes, LA.** Project Manager. Laurence conducted a feasibility study to deploy ramp meters along the Interstate 10 (I-10) Corridor in Baton Rouge between Dalrymple Drive and LA 73. The study consisted of analyzing 17 on-ramps under differing design conditions, which include the following: 2010 Existing, 2012 Without Ramp Meter, 2012 Ramp Meter, and 2012 Ramp Meter with Recommendations. Laurence's role in this project as project manager was to oversee all QA/QC measures and interpret the results from the model. Laurence coordinated with the local agencies to obtain all current proposed projects in the area, which included DOTD I-10 Widening Project Phases 1 and 2, the Green Light Plan (GLP) Essen Lane Widening Project, and the GLP Highland Road Widening Project.
09/16-04/17	**H.004957.5 I-12 To Bush-LA 3241 (I-12 – LA 36) Corridor Study, St. Tammany Parish, LA.** Laurence was the lead traffic engineer for a DOTD traffic study for the new LA 3241 alignment with the purpose of obtaining both existing and projected future traffic variables in accordance with standard operating procedures typically performed in these types of analyses. Laurence worked closely with the NORPC and District 62 to develop design year volumes using data the TransCAD model. The traffic study examined concepts that improved the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management. Laurence, along with Brin, collected 7-day, 24-hour counts w/ classification on mainlines, turning movement counts for morning and evening peak periods and speed data for mainlines. Laurence also developed a VISSIM traffic simulation model of the preferred alternative.
07/16-01/17	**FHWA Intersection & Interchange Geometrics: Innovative Design Considerations for All Users, Norfolk, VA**. At the request of the FHWA division office for Virginia, Laurence was asked to peer review a set of design plans for a Displaced Left Turn (DLT) in Norfolk, VA. The plans were part of a design-build project that included widening a corridor, modifications to an interchange and the implementation of a DLT. Vectura specifically reviewed and commented on the intersection geometry, pavement markings and signage. The findings were summarized in a technical memorandum as well as "red line" comments were scanned and submitted to the FHWA Virginia Division office for their use.

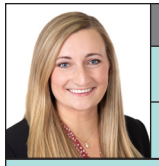


Firm	Vectura Consulting Services, LLC		
Name	Reece Rodrigue, PE, PTOE, RSP1	Years of Relevant Experience with this Employer	4
Title	Traffic Modeling	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			BS/2013/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0042074/ LA/3/31/2026
Year Registered	2017	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Traffic Modeling

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/20-Ongoing	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Belle Chasse, LA.** Reece is responsible for designing the temporary traffic signal for the intersection of LA 23 at Engineers Rd. for eight phases of construction per the anticipated sequence of construction. Temporary pole location and heights were recommended for placement for use for all construction phases. Vehicle clearance interval calculations were conducted for each phase in accordance with DOTD and ITE guidance. Reece is responsible for producing the traffic impact analysis portion of the Traffic Management Plan that was also used in planning for the permanent and temporary signal timing plans. Reece was also responsible for producing the permanent signal plans for the LA 23 intersections at Engineers Road and at Burmaster Street. He evaluated stop bar locations, calculated vehicle, and pedestrian clearance intervals, designed the railroad preemption sequence for both at-grade crossings, designed the wiring layout, and developed the interconnect plan. In addition, Reece was responsible for reviewing and approving shop drawings that were submitted by the contractor for use in construction.
04/21-Ongoing	**MOVEBR Direct Select for Traffic Signal Design, Baton Rouge, LA.** Reece is a project engineer for the design of traffic signal upgrades at 10 intersections. This projected included a traffic design report, preliminary and final plans for traffic signals that included traffic signal layout, fiber interconnect layout, fiber splicing diagrams, pedestrian crosswalk layout, and sign layout. The design also included traffic signal synchronization signal timing and pedestrian signal timing.
06/23-Ongoing	**H.012845.1 Connected & Autonomous Vehicles (C/AV) Team and Working Group Support.** Reece is a member of the team to develop new policies and legislation related to C/AV.
06/23-Ongoing	**H.011507.1 Monroe Phase 3 SEA**. Reece visited the project site to document the controller type and detection needs at each signalized intersection within the right-of-way.
07/21--Ongoing	**H.007160-EBR Computerized Traffic Signal, Phase V, Baton Rouge, LA.** Reece is part of the team responsible for Construction Engineering and Inspection. Reece has reviewed the signal mast arm shop drawings to assist the City-Parish of Baton Rouge in accepting the manufactured poles. Reece, with the DOTD, City-Parish and the Contractor conducted field visits to confirm pole foundation locations.
01/23-02/24	**H.011504 Alexandria ITS Phase 2.** Reece was the project engineer for a site visit, System Engineering Analysis Report, Engineering Opinion of Probably Construction Cost and Level 2 Transportation Management Plan.
06/22-02/23	**H.012381.5 ITS Fiber Management System Data Collection.** Reece performed the field observations for 40 sites to verify the ITS FMS and inventory services.

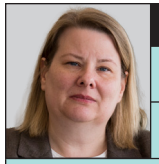
01/21-05/21	**H.013256-I-10 ITS Scott to Lake Charles, Lafayette, Acadia, and Jefferson Davis Parishes.** Reece was a member of the subconsultant team who was tasked with reviewing the ITS plans for 15 sites along I-10 where CCTV cameras were being installed. Reece was responsible for measuring anticipated construction quantities and producing a cost estimate for said quantities by using DOTD's Bid Tabulation and Cost Estimating Tool.
09/20-12/21	**H.011909.5-4 Roundabout, US 171 at Boone St., Vernon Parish.** Reece is an essential design engineer, who is assisting in the production of the temporary signal design associated with the sequence of construction for the roundabout at US 171 at Boone St. He conducted a thorough analysis of the US 171 corridor's existing allowable movements and identified the movements that would be restricted during the proposed construction process and how it would impact the typical traffic patterns.
09/20-12/21	**H.010960.5 LA 30 Roundabouts at Tanger I-10, Ascension Parish.** Reece is a design engineer, who is assisting in the production of the temporary signal design associated with the sequence of construction for the roundabouts on LA 30 in Gonzales, LA. This project consists of eight proposed construction phases. He assisted in calculating the temporary pole heights, determining the placement location for the temporary poles for each phase, measuring and calculating clearance intervals. Reece conducted a thorough analysis of the LA 30 corridor's existing allowable movements and identified the movements that would be restricted during the proposed construction process and how it would impact the typical traffic patterns.
11/21-12/21	**Emergency Street Light and Traffic Sign Assessment, New Orleans, LA.** In response to the damage caused by Hurricane Ida, Reece inspected streetlights and street signs to report damage using the City's ArcGIS Online Organization and ArcGIS Field Maps app. The assessment area was approximately 2.5 miles by 2 miles area in the City of New Orleans.
02/20-09/21	**College Drive Corridor Enhancement from Perkins Road to I-10, Baton Rouge, LA.** Reece was the task leader for organizing and formatting the data collection of the College Drive project limits. Tasks included in data collection were 7-day tube counts, intersection turning movement counts, approach tube counts, unmet demand observations, driveway counts, travel time runs, pedestrian/bicycle counts, and weaving counts.
07/19-12/19	**Burgess Avenue at Duff Road Traffic Signal Design, Walker, LA.** Reece was responsible for the design of a fully actuated signalized intersection in the city of Walker, LA. The traffic signal was determined to meet signal warrants upon completion of the Foxglove subdivision in Livingston Parish, LA. Plans included road widening, signal face indication schedule, signal sequence chart, sign schedule, detector schedule, controller timing, wiring diagram, and free operation phasing diagram. Reece met with city officials to discuss the feasibility of constructing a traffic signal as opposed to other alternative measures for improving the intersection.
02/16-12/16	**H.005733.5 US 190 Superstreet Task Order, St. Tammany Parish.** Reece was a team member responsible for the layouts for the US 190 Superstreet signal designs. He created the preliminary plans using CAD software program MicroStation V8i. He aided in the technical design of each intersection. He conducted field inspections to verify locations of existing equipment as well as observing the area for feasible proposed utility locations. He attended project team meetings to discuss the project details as well as the plan-in-hand walk-through.



Firm	Vectura Consulting Services, LLC		
Name	Kristen Farrington, PE, PTOE, RSP1	Years of Relevant Experience with this Employer	3
Title	Traffic Modeling/Traffic Safety	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			BS/2014/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0042785/LA/3/31/2025
Year Registered	2018	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Traffic Modeling/Traffic Safety

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/21-04/24	**CP No. 16 CI-US-0032 Bus Rapid Transit (BRT) Improvement Project (Baton Rouge, LA.** Kristen a project engineer for a traffic design study and traffic signal design of 19 signals along three corridors: Plank Road, 22nd Street and US 190 (Florida Street). Kristen assisted the prime consultant with the safety analysis as well.
07/23-01/24	**H.015504.5 CCC Decorative Lighting Level 4 TMP, New Orleans, LA.** Kristen was the lead traffic engineer for a Level 4 Traffic Management Plan (TMP) for the Crescent City Connection (CCC). Kristen performed a lane closure analysis based on queuing. A safety analysis of the construction zone was also performed to identify any "hot spots". The results were summarized in a report that was reviewed by DOTD.
04/23-10/23	**H.014591.5 I-12: US 61 Bridges Girder Repairs, Baton Rouge, LA.** Kristen was the lead traffic engineer for a Level 2 TMP for the interchange of I-12 at US 61. Kristen performed a lane closure analysis based on queuing. A safety analysis of the construction zone was also performed to identify any "hot spots". The results were summarized in a report that was reviewed by DOTD.
08/21-04/22	**H.013267 Downtown to Scotlandville Parkway Trail Safety Enhancement Study, Baton Rouge, LA.** Kristen was a project engineer for a design study to evaluate the recommended street crossing treatments of the trail at eight locations. The project consisted of collecting vehicular speed and volume data at the proposed trail crossings. Geometric field checks were also performed to determine if any hazards to pedestrians or cyclists existed. Once the field data was collected and analyzed, appropriate crossing treatments utilizing the FHWA STEP Guide for Improving Pedestrian Safety at Unsignalized Locations were developed that included Rectangular Rapid-Flashing Beacons (RRFB) and Pedestrian Hybrid Beacons (PHB's). Currently, Vectura is developing plans for the PHB's at four locations which will be the first implementation of PHB's in the Baton Rouge area.
02/20-09/21	**MOVEBR College Drive Enhancement Project, Baton Rouge, LA.** Kristen assisted with the data collection task of the College Drive project limits. Tasks included in data collection were 7-day tube counts, intersection turning movement counts, approach tube counts, unmet demand observations, driveway counts, travel time runs, pedestrian/bicycle counts, and weaving counts.
06/19-02/21	**H.013459 US 167 Improvements Stage 0 Elsie Street to Gilbert Street, St. Landry Parish, LA.** Kristen served as project manager for a Stage 0 study to evaluate the addition of a third lane to US 167 from Elsie Street south to a point past Gilbert Drive. Environmental impacts and cost estimates were prepared, as well as a benefit-cost analysis of all improvements considered. Civil Engineer responsible for safety analysis including crash rate number method, over-representation, CATScan quality assurance, HSM existing safety analysis, and No-Build Analysis. Designed high-level concept exhibits and comparison matrix to determine best preliminary alternatives moving forward to meet the purpose and need of the project. Compiled meeting agenda materials and minutes.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Toni Horst	Years of Relevant Experience with this Employer	23
	Title	Grant Application Preparation	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			PhD/1997/Regional Science; BA/1986/Economics and Government
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Grant Application Preparation **Brief Description:** Toni leads AECOM's National Transportation Economics Practice. She has more than 30 years of experience. A regional economist, her work focuses on analyzing how infrastructure investment changes local economies. Her work focuses on the application of quantitative information to support transportation decision making. She is an economist with significant experience assessing projects and developing defensible analyses of project feasibility, economic impact, return on investment and benefit cost assessments. She is a member of TRB Committee ADD10, Transportation and Economic Development.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/23-07/23	**Port of New Orleans, Grant Strategy Recommendations, New Orleans, LA.** Project Manager. Oversaw the development of a grant strategy to apply for a first-of-its-kind approach combining artificial intelligence, data analytics, and stakeholder engagement with our leading ESG and federal grants advisory services staff to identify the discretionary programs most suitable for Port of New Orleans's projects. Tasks involved utilizing Fund Navigator to holistically review Port of New Orleans's existing and planned projects' capital needs to assess the suitability of these projects for accessing specific IIJA funding programs. This also allowed for the development of a near-term grant funding implementation strategy, which included the identification of which specific discretionary program should be accessed by which specific Port Project, the date that application development should begin and when applications were due, and a checklist of actions to be undertaken prior to application development (such as advancement of planning, design, cost estimation, etc.) to boost the competitiveness of the application.
09/17-Ongoing	**Grant Application and Administration Support, International Bridge, Tunnel and Turnpike Association (IBTTA), Washington, DC**. Project Director. Contract to support IBTTA in identifying funding opportunities, applying for and administering a discretionary grant from FHWA. IBTTA was awarded a grant for research in the fall of 2016. Since that time, work entails preparing monthly, quarterly, and annual reports and certifications to FHWA, developing templates to collect required data to document compliance with the grant requirements, and coordination between the FHWA, the grant recipient and project partners.
02/14-05/14	**2014 Planning TIGER Application for Long Bridge EIS, Virginia and Washington, DC**. Project Manager. Economic benefit cost, economic impact analysis, and full application narrative for Virginia Railway Express and the District of Columbia's joint TIGER application. The grant will support planning work needed to replace this bridge over the Potomac River between the District and Virginia, creating additional rail capacity to accommodate freight and passenger service and remove a bottleneck preventing the expansion of commuter service and eventual implementation of high-speed rail. The project was selected to receive TIGER funding.

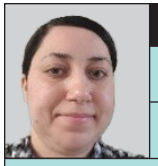
01/17-12/19	**North Carolina Department of Transportation, Roadway Planning & Design 2017-2020-2019 BUILD Grant Division 11 I-95, Raleigh, NC.** Advisor. Toni was an advisor to the BCA team who wrote the narrative for the I-95 Resiliency and Innovative Technology Improvements Project, 2019 BUILD Application.
07/22-03/23	**Northeast Ohio Areawide Coordinating Agency, NOACA Fund Navigator Analysis, Cleveland, OH.** Project Manager. Oversaw the development of a grant strategy to apply for a first-of-its-kind approach combining artificial intelligence, data analytics, and stakeholder engagement with our leading ESG and federal grants advisory services staff to identify the discretionary programs most suitable for Port of New Orleans's projects. Tasks involved utilizing Fund Navigator to holistically review Port of New Orleans's existing and planned projects' capital needs to assess the suitability of these projects for accessing specific IIJA funding programs. This also allowed for the development of a near-term grant funding implementation strategy, which included the identification of which specific discretionary program should be accessed by which specific Port Project, the date that application development should begin and when applications were due, and a checklist of actions to be undertaken prior to application development (such as advancement of planning, design, cost estimation, etc.) to boost the competitiveness of the application.
01/16-12/16 BCA 01/18-12/18 Economic Impact	**Economic Task Lead, The Gateway Program Economic Evaluation, Northeast Corridor, Amtrak, National.** Task Lead. Toni is supporting this study to estimate benefit cost of Gateway Program (tunnels under the Hudson River) under three scenarios. The team led multiple stakeholders through data collection and definition of scenarios and assumptions through a facilitated workshop. Analysis includes an economic evaluation of the importance of the New York region to the Northeast Corridor and to the U.S. national economy. The economic work entails a benefit cost analysis and economic impact analysis. The benefits estimated include, but are not limited to, the net travel time savings, net travel costs, net safety benefits, net emissions avoided, and the costs of a trip not taken.
01/17-5/17	**INFRA Grant Application for I-95/U.S. 70 Innovative Technology and Rural Mobility Corridor Improvements, North Carolina Department of Transportation, NC.** Technical Lead. Responsible for writing the narrative and leading the economic analysis included in BUILD application. Developed technical memos and worksheets detailing all assumptions and calculations for the reviewers' reference including calculation of benefit cost ratios for project. The project improved the quality of US 70 to interstate quality in the remaining unimproved sections, widen I-95 and raised several low interchange bridges, and added broadband to both corridors to manage the facilities in an integrated manner. The project was selected for funding; project received $147 million in discretionary funding.
02/10-5/10	**TIGER Grant and Funding Scan, Dallas County, TX.** Project Manager. Benefit cost analysis of road and drainage improvements. Study also entailed a scan of funding sources that could support capital investments in stormwater and water distribution systems. Each funding source evaluated for its applicability to Dallas County's needs. Those candidate sources that were most promising were researched in greater detail.

Firm	AECOM Technical Services, Inc.		
Name	Anne Watkins	Years of Relevant Experience with this Employer	16
Title	Grant Application Preparation	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			MBA/2012/Economics & Finance; BBA/2009/Economics & Finance
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Grant Application Preparation **Brief Description:** Anne will provide support on the economics team, utilizing her specialties in transportation economics, benefit cost analyses, and grant applications. Ms. Watkins is an economist with experience evaluating transportation, flood risk management, and other infrastructure projects. Ms. Watkins has prepared the benefit-cost analysis for numerous winning grant applications, helping to secure over $1.2 billion in federal funding for her clients. She has experience using spreadsheet, database, and statistical software to analyze and understand large data sets and prepare long term forecasts. She is skilled in writing clear, concise reports, decision documents, and grant applications to explain complicated concepts. She has determined trade patterns based upon data from both public and proprietary sources such as the U.S. Census, railcar waybill sample, the Navigation Data Center, and IHS Sea-Web, and has experience interviewing tenants, government officials, and other stakeholders. In addition, Ms. Watkins has experience creating and testing models for the US Army Corps of Engineers and has also used economic models developed by private industry, such as IMPLAN, and government agencies, such as the Federal Emergency Management Agency BCA Toolkit and Federal Highway Administration BCA.Net, to calculate benefits and economic impacts for various types of projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/23-09/23	**Louisiana International Terminal USDOT Grant, Port of New Orleans, LA.** Developed a BCA for a winning USDOT grant application for a new greenfield container terminal on the Lower Mississippi River. Benefits were based on reducing inland transportation costs for container imports and exports through the Gulf of Mexico. The Project was awarded $300 million from USDOT.
05/23-09/23	**Humboldt Bay Offshore Wind Port INFRA Grant, Crowley, CA.** Contributed to the BCA of a winning USDOT grant application for the retrofit of Humboldt Port to accommodate offshore wind turbine assembly and maintenance. Benefits were based on decreased transportation costs to the offshore wind areas and increased reliability of the power grid. The Project was awarded $426.7 million.
08/16-10/17	**NMDOT, New Mexico Rail Plan, NM.** Economist, Prepared IMPLAN analysis to demonstrate the contribution to New Mexico's economy provided by rail transportation throughout the state. Analysis included freight transportation, passenger transportation (Amtrak and commuter rail), and industries dependent upon rail access.

09/22-01/23	**Gold Hill Drinking Water Transmission Pipeline BRIC Grant, City of Greeley, CO**. Developed the BCA for a winning BRIC Grant for a new drinking water pipeline to connect the City of Greeley's two water treatment plants. The new pipeline will be able to deliver the full production of both plants to all four pressure zones in the service area, providing flexibility and redundancy in the case of wildfire, drought, or other hazards such as infrastructure failure, cyber-attacks, or contamination. The Project was awarded $13.8 million from FEMA.
05/23-09/23	**Eastern Pittsburgh Multimodal Corridor MEGA Grant, Southwestern Pennsylvania Commission, PA.** Developed a BCA for a winning USDOT grant application. The Project includes 8 individual actions, each of which had an independent BCA, that will make significant safety and time savings improvements for the 100,000 daily travelers on the I-376 "Parkway East" corridor and the MLK Jr Busway. The Project was awarded $142.3 million.
09/18-04/19	**Multimodal Transit Center Feasibility Study and Conceptual Plan, Laplace, LA.** Economist. St. John the Baptist parish. Used IMPLAN to determine the economic impacts of developing a multi-modal transit center. Calculated both short term construction impacts and on-going impacts of associated redevelopment.
02/22-05/22	**Newport Pell Bridge: Multi Modal Climate Resiliency and Safety Project Grant Application, Rhode Island Turnpike and Bridge Authority, RI.** Developed a BCA for the USDOT MPDG grant application; the Project will complete a partial depth deck replacement, install a main cable dehumidification system, and replace cable suspenders for an iconic suspension bridge over the Narragansett Bay. Benefits were based on reduced travel delays and detours and cost-savings of this innovative repair method compared to full cable replacement. The Project was awarded an $82.5 million INFRA grant.
02/19-04/19	**Market Demand Study and Business Case Analysis for Reduction of Emissions through Intermodal Opportunities and Incentives, Port Houston Authority, Houston, TX**. Economist, Developed benefit-cost analyses for five alternatives to help Port Houston reduce their emissions, including shifting to rail, container-on-barge, electric shuttle, electric or LNG trucks, and cleaner cargo handling equipment.
02/19-04/19	**Market Demand Study and Business Case Analysis for Reduction of Emissions through Intermodal Opportunities and Incentives, Port Houston Authority, Houston, TX.** Economist, Developed benefit-cost analyses for five alternatives to help Port Houston reduce their emissions, including shifting to rail, container-on-barge, electric shuttle, electric or LNG trucks, and cleaner cargo handling equipment.
07/19-12/20	**Port Houston Widening Analysis, Port Houston, TX.** Economist, Used the HarborSym model to calculate the NED benefits of widening the Houston Ship Channel. Evaluated past casualty incidents to determine NED safety benefits of a widened channel.
03/22-05/22	**Next Generation Zero-Emission Bus Operations, Maintenance, and Administration Facility, Yuba Sutter Transit Authority RAISE Application, CA.** Developed a BCA for a new transit facility and electric buses for submission to the USDOT RAISE program. Key benefits included reduced deadhead hours, reduced fuel costs, increased mobility and community connectivity, emissions savings, and maintenance cost savings. The Project was awarded $15 million.



Firm	AECOM Technical Services, Inc.		
Name	Sarah Elsawah, PE	Years of Relevant Experience with this Employer	2
Title	Bridge Design	Years of Relevant Experience with Other Employer(s)	7

Degree(s)/Years/Specialization			MASc/Civil Engineering/Syracuse University/2018; Beng/Bridge Engineering/Concordia University/2016
Active Registration Number/State/Expiration Date			PE.0046814/LA/9.30.26
Year Registered	2022	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Sarah has nine years of experience in bridge design, with a strong emphasis on bridge analysis, including but not limited to load rating and bridge testing. Her expertise spans load testing of both simple and complex structures, assessment of bridges in poor condition, and advanced analysis of continuous steel spans and movable bridges. She also has extensive experience in bridge design and rehabilitation projects, contributing to both design-bid and rehabilitation efforts.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/25-Ongoing	**DOTD, Bridge Preservation IDIQ 2022-2027-LA 641 Bridge Load Rating & Repair, St. James Parish, LA.** Engineer responsible for calculating the load rating for the entire bridge in its as-condition state and preparing a comprehensive load evaluation report. Additional responsibilities included determining the post-repair load rating and generating the as-designed load rating report. In 2023, a prestressed concrete bridge was damaged in an accident, resulting in concrete spalling and exposed, broken strands on three girders. These services were carried out within the framework of a multi-year task order contract
8/24-12/24	**DOTD, LA** 143 Bridge, Ouachita Parish, Louisiana. Project engineer who reviewed sheets prepared by young engineers and prepared sheets that included bridge geometry (foundation layout, framing plans, etc.) for a new precast prestressed concrete I-beam bridge. The 700-foot bridge superstructure and substructure were designed based on the AASHTO-LRFD and BDEM.
5/24-12/24	**DOTD, Load Rating of 89 Bridges, Statewide, LA.** Project engineer who assisted young engineers by reviewing load rating reports for bridges and prepared load rating reports of 89 on-system bridges in the state of Louisiana. The project consisted of complex and simple bridges, including railroad flat car, steel low truss swing span, suspended steel plate girder, slab spans and continuous deck slab spa
01/24-04/24	**DOTD, NDT of Load Testing, Evaluation and Load Rating Retainer Contact, statewide, LA.** Project engineer who led young engineers in determining the tested members of the 3,455-foot steel plate girder for testing the bridge's superstructure of four steel and concrete bridges, including concrete slab span, Continuous steel I-beam, and 3,455-foot steel plate girder. Responsibilities also involved preparing a finite element model for the test spans to validate the field data, analyzing the field data, submitting a modified BrR model to reflect the load test results, and preparing a detailed report with the load test results. The goal of the project was to eliminate the current posting of the bridges

11/23-3/24	**Dura Stress, Creep Issue, Tampa, FL**. Project engineer who analyzed previous data versus the design camber, investigated the cause of the problem and suggested an alternative procedure to avoid the issue in the future, and prepared a detailed report as part of the research investigating the reason a precast prestressed girder camber measured before erection was much less than that of design camber. The project aimed to provide the manufacturer with guidance and suggestions to improve the casting of the beam and eliminate construction issues.
03/23-06/23	**DOTD, US 190 over US 61 Repair, Baton Rouge, LA**. Quality assurance/quality control specialist who thoroughly reviewed the plans before the final submittal for the rehabilitation of a 200-foot-long reinforced concrete deck span. The repair included concrete patching and CFRP sheets to repair the superstructure and substructure.

Firm	AECOM Technical Services, Inc.		
Name	Garry Chang, PE	Years of Relevant Experience with this Employer	19
Title	Bridge Design	Years of Relevant Experience with Other Employer(s)	6

Degree(s)/Years/Specialization			MS/2005/Civil Engineering, Construction Engineering & Project Management; BS/2000/Civil Engineering
Active Registration Number/State/Expiration Date			PE.36974/LA/09.30.2026 Additional active license: TX
Year Registered	2012	Discipline	Civil Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Garry has more than 19 years of engineering experience in the transportation industry including roadway, NEPA, H&H, retaining walls, project design and construction scheduling, large/small sign structures, preparation of NEPA documents and has 14 years of structural engineering experience in the transportation industry. His technical experience includes precast/prestressed concrete girder design, structural concrete design, and deep foundation design. He has working knowledge of AASHTO and Louisiana DOTD Standards. He has experience in both new construction and design projects, as well as retrofit and/or expansion projects requiring modifications to existing structures, bridges, and foundations to meet current engineering codes.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
09/23-02/25	**TxDOT, I-35 Northeast Expansion South Design Build, San Antonio, TX**. Structural Task Lead and Engineer of Record with design oversight managing bridge teams for a 2-mile section of a 131-span Tx 70 prestressed concrete girder bridge. Performed review and approval of all aspects of bridge including superstructure and various substructure designs – inverted-tee bents, multi-column bents, hammer-head bents (including post tensioned), and the foundations (drilled shaft and footing cap on shafts).
09/20-12/21	**TxDOT, Oak Hill Parkway Design Build, Austin, TX.** Structural design engineer. Designed bridge over Williamson Creek consisting of two 2-span units (82'-83' and 89'-79' spans), and width of structure over 320'. Performed analysis and design of prestressed concrete girders, abutments, concrete bridge deck and conducted peer review on substructure design. Reviewed and approved superstructure phasing and girder shop drawings during construction.
02/15-06/16	**TxDOT, I-35 at Oltorf Street, Austin, TX.** Structural design engineer. Designed overhead sign structures and cantilever overhead sign supports; modeled and analyzed steel trusses, designed steel support columns for truss structures, and drilled shaft foundations.
09/14-02/15	**City of San Antonio, Seeling Channel Phase II, San Antonio, TX.** Structural design engineer. Designed 2-span prestressed concrete slab beam bridge over Seeling Channel. Performed analysis and design of superstructure, abutments, bents, columns and drilled shafts.

01/13-04/14	**New Orleans Regional Transit Authority, New Orleans, LA.** Structural design engineer. Structural engineer developing preliminary plans, specifications, and estimates for streetcar shelters with foundations, HSS columns, roof trusses, and connections. Designed pre-manufactured power stations along a 1.86-mile expansion of the New Orleans streetcar system from Canal Street along the 2-track route on N. Rampart Street and St. Claude Avenue to the uptown side of Elysian Fields Avenue designed hollow structural sections (HSS) for columns, beams, rafters, and connections with AISC 2011 13.1. Designed drill shaft foundations with ACI 318-11 and slab on grade reinforcing details with ACI 360R-10.
03/11-02/14	**TxDOT, US 59 Southwest Freeway Northbound, Houston, TX**. Structural design engineer. Designed a bridge widening for an existing 3-span (75', 97', 93') Type IV prestressed concrete beam bridge with an 88-foot roadway width at Chimney Rock overpass. Assisted throughout design of bridge widening of a 3-span (70', 82', 70') Type U54 prestressed concrete U-beam bridge with an 80-foot roadway width at Fournace overpass – bridge layouts, structural details and quantities.
07/05-12/12	**TxDOT & Others, I-35 High Priority Trans-Texas Corridor Plan, Austin, TX.** Scheduling engineer for the comprehensive development agreement between the state of Texas and a private developer. Created baseline schedules, integrated milestones, updated progress and status, tracked variances, and provided monthly reports and technical commentary regarding potential schedule impacts, decisions, critical path status, and one month look ahead for the client on monthly basis using Primavera scheduling software. Lead scheduler for multiple design and construction projects using Primavera, Microsoft Project, and SureTrack scheduling software. Generated design schedules for clients including Central Texas Regional Mobility Authority, Trans Texas Corridor (TTC-35) projects, I-69 facilities, North Tarrant Expressway, SH 130, and construction schedules for I-35/SH 16, US 190, Bexar County bridge rehabilitation, and Medina County bridge replacement.
11/11-05/12	**City of Austin, Urban Rail NEPA Study, Austin, TX.** Structural and transportation engineer for Preliminary Engineering Study. Prepared geometric design for urban rail line crossing Ladybird Lake and prepared preliminary rail track, wall and bridge layouts for Ladybird Lake crossing in an urban area with multiple constraints – grade tie-in, clearance, parking lots/driveways, platforms for pedestrian loading, and limited right of way.
01/13-04/14	**New Orleans Regional Transit Authority, New Orleans, LA.** Structural design engineer. Structural engineer developing preliminary plans, specifications, and estimates for streetcar shelters with foundations, HSS columns, roof trusses, and connections. Designed pre-manufactured power stations along a 1.86-mile expansion of the New Orleans streetcar system from Canal Street along the 2-track route on N. Rampart Street and St. Claude Avenue to the uptown side of Elysian Fields Avenue designed hollow structural sections (HSS) for columns, beams, rafters, and connections with AISC 2011 13.1. Designed drill shaft foundations with ACI 318-11 and slab on grade reinforcing details with ACI 360R-10.

Firm	AECOM Technical Services, Inc.		
Name	Stephen McCullough	Years of Relevant Experience with this Employer	15
Title	Associate Vice President/Business Line Senior Manager	Years of Relevant Experience with Other Employer(s)	3

Degree(s)/Years/Specialization			ME/2010/Structural Engineering; BS/2006/Civil Engineering
Active Registration Number/State/Expiration Date			108751/TX/03.31.2026; 23109/AR/12.31.2025
Year Registered	2011	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Design **Brief Description:** Stephen has more than 18 years of structural engineering experience in the transportation industry. His primary experience resides in structural bridge design. He has experience in structural discipline management in which he has directly managed multiple teams located in different offices across the State of Texas, the United States, Canada, and Europe; all working towards project completion and delivery of large transportation design projects. Stephen has extensive knowledge of AASHTO LRFD bridge design specifications as well as ACI and AISC. Stephen has served as discipline/task lead on several major bridge projects including Southeast Connector in Fort Worth, TX, LBJ East in Dallas, TX, US183 South Bergstrom in Austin, TX. Stephen has designed and led multi-level complex bridge design/direct connector design, complex underpass and braided ramp design. Stephen also has experience with staging and widening bridge design, as well varied retaining wall systems. Stephen has led bridge design projects over live water crossings. Stephen has design experience in post-tensioned straddle bent design, drop-in spliced girder layout/detailing, multilevel bent (ladder bent) layout/design, culvert design, and heavy highway construction inspection. Stephen has experience in schematic roadway design and preliminary drainage design. He has the ability to draw upon his experience in roadway and drainage design to augment his ability to successfully complete bridge projects, and aide in the interdisciplinary coordination required on large projects.

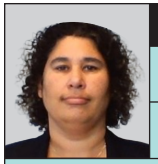
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
01/18-06/18	**DOTD, Red River Bridge at Jimmie Davis Highway, Bossier and Caddo Parishes, LA.** Structural Engineer. Stephen performed in depth structural evaluation of the proposed Jimmie Davis bridges superstructure components including the longitudinal stringers and transverse floor beams and bridge slab. This project included an evaluation of two alternative; (1) a traditional slab and stringer styler superstructure, and (2) a truss superstructure with floor beams supported this cast in place slab deck. In addition to the structural analysis for both these options, Stephen performed cost estimates to provide to DOTD for the structure crossing the Red River. The Red River Bridge transverse floor beams consisted of ASTM Grade 50W built-up steel plate girders spanning between built-up steel plate girders for the longitudinal stringers. The superstructure supported a cast-in-place reinforced concrete deck slab of 9-in and 10-in for the overhangs. The substructure and foundations comprised of Class S cast-in-place reinforced concrete bent caps, columns, and deep foundations. Stephen designed and evaluated these steel structures using STAAD Pro in combination with Excel and MathCAD developed design tools to verify the results of the evaluation.

12/21-Ongoing	**TxDOT, Southeast Connector Design Build Project, Fort Worth, TX.** Structural Discipline Lead and Engineer of Record. Stephen served the role of Structural Discipline Lead for the delivery phase of the Southeast Connector Design Build Project. Stephen led the structural coordination for plan and calculation development for all structures on the project. Stephen led the coordinated design effort of more than 120 structural engineering and structural CADD staff members. Stehen led the design and coordinated tasks of all the complex structures including post-tensioned straddle bents, highly skewed bents, wide underpass structures, live water creek crossings, widenings, and unique overpass/underpass geometry. Stephen led the design for all pre-stressed concrete and steel girder superstructures. Stephen led the design for all substructure and foundations on the project. Stephen led the interchanges comprised of 3 and 4 level stacks and several multi-lane direct connectors spanning 2,000 to 3,000 ft. each with some requiring complex shared straddle-bent and multi-column gore bents.Stephen organized weekly staff activities, led the technical development of the bridge design, schedule delivery, and served as liaison between the contractor, TxDOT, and the structural staff on a daily basis. Stehen led the coordination and design effort for all alternative design investigations throughout the lifecycle of the project. Stephen led the engineering services during construction tasks for the project during construction phase services.
12/19-Ongoing	**TxDOT, LBJ East Design Build Project, Dallas, TX.** Structural Discipline Lead and Engineer of Record. Stephen served the role as both office structural leader and structural discipline lead for the LBJ East Design Build Project in Dallas, TX. Stephen led the design effort for the proposal working closely with the joint venture contractor innovating and incorporating alternative technical concepts for every structural aspect of the project corridor. Stephen led the design effort for the I-30/I-635 interchange during the proposal and designed prestressed concrete girder, built-up steel plate girders, post-tensioned straddle bents, single column and multi column reinforced concrete substructure and foundations. Bridge types included creek crossing, 4 stack multi-level direct connectors, wide underpass structures, long viaducts, and direct connector widenings, and intersection stack flips. The interchange included 8 direct connectors, 5 underpass bridges, and 2 overpass bridges. The 2 underpass bridges were designed for future expansion of the I-20 mainlanes. Stepen worked closely with the traffic control group to effectively create a constructible design for the entire project. During design delivery Stephen served as discipline leading all structural design elements of the project. Stephen led a robust team comprising 18 teams spread across the United States, and Europe to deliver construction plans to the contractor for 61 bridges. Stephen's primary role was to lead all 18 structure teams, technically, through the project delivery process.
01/17-12/17	**MDOT, SR 57 Mississippi Red creek Bridge Replacement, Perkinston, MS**, Structural Designer. Stephen led the design for the substructure and foundation design for a 472.25' long spliced drop-in girder bridge over the Red Creek near Perkinston Mississippi. Stephen designed the foundation system which included cast-in-place bridge abutment caps and cast-in-place bent caps that supported the spliced girders. Stephen designed the foundation system which included straight and battered H-Pile abutment systems as well as cast-in-placed bored piles for the interior bents. Red Creek soil conditions provided a unique opportunity to overcome several foundation challenges. The Red Creek soil and creek scour conditions required 6' diameter, 135' long bored piles.
12/12-12/14	**TxDOT, The Horseshoe Design Build Project, Dallas, TX.** Structural task lead and Engineer of Record. Stephen led the procurement and delivery phase of The Horseshoe design build project. Stephen designed and led the delivery of 21 pre-stressed concrete bridges on the project including a 1,020-ft. spliced girder drop-in unit viaduct bridge spanning the Trinity River. This river crossing is a live river spanning 2 embankment levee system adjacent to downtown Dallas. Stephen served as office lead structural engineer and then structural task leader for the second phase of the project and for construction phase services. Stephen worked directly with both the engineering client, construction client, and the owner on a daily basis to deliver the design of the Horseshoe project.

	**Firm**	**Marrero, Couvillon & Associates, LLC**		
	Name	M. Kimball Schlafly, PE	Years of Relevant Experience with this Employer	5
	Title	Bridge Lighting	Years of Relevant Experience with Other Employer(s)	32

Degree(s)/Years/Specialization			BS/1988/Electrical Engineering
Active Registration Number/State/Expiration Date			PE/LA/27699/Exp. 09/30/2026
Year Registered	1998	Discipline	Electrical Engineering
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Bridge Lighting **Brief Description:** Kimball has over 35 years of engineering experience in electrical engineering, project engineering and project management. He has been responsible for various projects requiring design of 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.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/17-11/20	**I-10 and 73 Widening – Design Build. LA DOTD, LA.** Sr. Electrical Engineer. Provided electrical engineering and design for lighting on the I-10 Widening from Highland to LA 30 design-build project.
04/18-02/19	**Howard Avenue Extension (Loyola Avenue to LaSalle Street), DOTD, New Orleans, LA.** City of New Orleans. Sr. 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, Baton Rouge. City/Parish of East Baton Rouge, LA**. Sr. 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	**Widening, Wells to LA34 Electrical and Lighting Design, DOTD, Baton Rouge. LA.** Sr. 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	AECOM Technical Services, Inc.		
Name	Meredith Allen	Years of Relevant Experience with this Employer	6
Title	USCG Coordination	Years of Relevant Experience with Other Employer(s)	10

Degree(s)/Years/Specialization			JD/2008/Law; MA/2008/Marine Policy; BS/1999/Environmental Studies
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** USCG Coordination

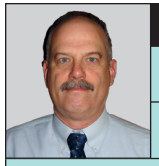
Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
04/24-Ongoing	**Kingsley Plantation Seawall Replacement, National Park Service (NPS), Timucuan Ecological and Historic Preserve, Jacksonville, FL.** Permit project lead managing environmental permits process including identification of potential jurisdictions, agencies, and environmental permits required in association with the architecture and design of the Kingsley Plantation Seawall replacement and expansion on the Fort George River.
09/24-Ongoing	**Bayport Terminal, NEPA Gap Analysis and Preliminary Permit Planning, Port of Houston Authority, TX**. Reviewed and summarized 20+ years of USACE agency NEPA actions for Bayport Terminal. Categorized public interest factor reviews, changes to permit conditions, and overall cumulative impacts. Supporting development of new project permitting plan including interagency coordination with USACE, USCG, and River Pilots.
11/24-02/25	**Norfolk Naval Shipyard Improvements, United States Navy, Norfolk, VA.** SME supporting completion of high-level overview and write up of potential environmental permitting /consultation requirements for proposed improvements associated with a navigable waterway under the Navy's Shipyard Infrastructure Optimization Program.
11/24-02/25	**USACE Detroit District Integrated Feasibility Report and Environmental Assessment for Menominee Harbor Navigation Improvement Study, Marinette, WI./Menominee, MI.** Environmental lead for non-federal project sponsor supporting USACE Detroit District's Planning Division in the evaluation of the potential deepening of the Menominee River. Responsible for project evaluation of water quality, aquatic habitat, fisheries, social/environmental justice, cumulative effects as well as performance of the alternatives analysis, agency coordination, and 404(b)(1) analysis for dredge material placement areas.
12/20-04/21	**Port of Houston Authority, Houston Ship Channel ECIP Project 11 Design Elements, Houston, TX.** Environmental subject matter expert working with an interdisciplinary team to update the Houston Ship Channel (HSC) Expansion Channel Improvement Project (ECIP)'s Final Integrated Feasibility Report and Environmental Impact Statement (FIFR-EIS) to reflect final project design changes to the recommended plan with particular focus on endangered species, marine mammals, and environmental law and regulation compliance.
11/20-08/22	**Georgia Bridge Program, Georgia Department of Environmental Transportation (GDOT), GA**. Senior reviewer for GDOT bridge program's Environmental Permitting Risk Register (Ecology, Waters, NEPA, History & Archaeology). Provided support services for project procurement planning and served as an environmental technical lead for maintenance and program database.
02/20-09/20	**Port of Corpus Christi, Corpus Christi Ship Channel Deepening, Corpus Christi, TX.** Regulatory subject matter expert provided guidance and direction on a complex regulatory review of a high-profile port project. Clarified permit application requirements, identified potential information gaps in existing submittals, and generated supplemental content to drive the regulatory review forward.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Marty Peate, AICP	Years of Relevant Experience with this Employer	28
	Title	Navigation Study	Years of Relevant Experience with Other Employer(s)	4

Degree(s)/Years/Specialization			MS/Environmental Planning and Resource Management/1993
Active Registration Number/State/Expiration Date			012421/AICP/07/1996
Year Registered	1996	Discipline	Environmental and Transportation Planning
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Navigation Study **Brief Description: Marty has specific experience in USCG Bridge Questionnaires and associated Vessel Survey requirements and well as Future Fleet analysis to determine vertical and horizontal clearances for both bascule and fixed bridges of the ICWW and active shipping channels.** Marty has 32 years of local, national and international experience in the transportation planning, as well as the private clients. He is integrally involved in the environmental, planning and related activities associated with AECOM's transportation planning and design projects. Marty's typical responsibilities include project management; preparation, oversight, and evaluation of NEPA documents (FHWA, FTA, FRA, USCG, USACE, FWS and NASA).

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
10/06-08/11	**SR 29 LaBelle PD&E/NEPA Study-Environmental Assessment (EA), FDOT District One, LaBelle, FL.** Project Manager for the replacement of a twin-leaf bascule bridge over the Okeechobee Water (ICWW). This highly traveled waterway experiences high volumes of high-masted sailing pleasure craft moving from the NE to FL in the winter and returning prior to hurricane season. The USCG Miami District required a **Vessel Survey** to support the Bridge Questionnaire and future Bridge Permit approval,
08/22-Ongoing	**Florida Spaceport System Maritime Intermodal Transportation Study ("Wharf Study").** Project Manager for this comprehensive effort to forecast both near-term (5 year) and long-term (20 year) demand and requirements for maritime-related infrastructure improvements needed to support Florida's Spaceport System for water retrieval of commercial boosters. This included coordination with NASA, DoD and Port Canaveral to ensure all operations at this location could be maintained with the proposed improvements included bridge options.
06/16-0 9/17	**NASA Parkway (SR 405) Bridge Area of Influence Review, FDOT Central Office – Aviation and Spaceports Office, Kennedy Space Center (KSC), FL**. Project Manager for review and evaluation of the existing NASA Parkway (SR 405) bridge over the Indian River portion of the Atlantic ICWW in Brevard County, FL. This critical connection between the mainland and KSC is functionally obsolete and is approaching load rate failure. Vehicular connection between the mainland and KSC is critical to NASA's Mission of Mars Program and numerous private commercial space delivery operations (e.g. SpaceX, Blue Origin). Evaluations included new alignments and profiles (low-and mid-level bascule and mid-and high-level fixed, typical sections (supported by **Vessel Survey** analysis), construction methodologies, environmental impacts and cost estimates.

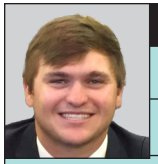
06/10-09/14	**Fort Hamer Bridge/NEPA Study-Environmental Impact Statement (EIS), Manatee County, FL.** Project Manager for the analysis, evaluation and documentation of a new bridge crossing of the Manatee River, which was developed simultaneously with permitting and final design. As the lead agency, the United States Coast Guard (USCG) required a **Vessel Survey** to issue a Bridge Permit at the conclusion of the EIS. Construction was completed and the bridge opened to traffic in fall of 2017.
04/02-09/03	**Harbor Bridge, Ship Fleet Survey, TxDOT Corpus Christi District, Corpus Christi, TX**. Project Manager in the development of an inventory of both the current and projected (2050) fleet of cargo and cruise ships that service the Gulf and Caribbean. This inventory will include overall fleet size, maximum horizontal and vertical dimensions, and ports-of-call. Information gained in this survey assisted in the development of the replacement concepts of the Harbor Bridge in Corpus Christi and incorporated in the **USCG Bridge Permi**t.
09/98-10/00	**SH 87 Feasibility Study, Ship Fleet Survey, Galveston, TX.** Project Manager for the preparation of preliminary bridge layouts for two bridge overpasses and two creek crossings in a dense urban area with limited right of way. Preliminary design using TxDOT concrete girder standards and MicroStation and GEOPAK software. Performed QA/QC review for multiple bridges and crossings to ensure adequate vertical clearances were met. This study was intended to evaluate the feasibility of replacing the Galveston Ferry.

	**Firm**	**AECOM Technical Services, Inc.**		
	Name	Joe Berlin	Years of Relevant Experience with this Employer	12
	Title	Navigation Study	Years of Relevant Experience with Other Employer(s)	30

Degree(s)/Years/Specialization			MA/1993/Economics; BS/1979/Accounting
Active Registration Number/State/Expiration Date			N/A
Year Registered	N/A	Discipline	N/A
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Navigation Study **Brief Description:** Joe is a Principal Economist specializing in cost-benefit analyses of environmental restoration projects, water projects, and transportation projects. He has developed models for estimating the benefits of harbor improvement projects and has experience with the economic models used for estimating the benefits of water projects, transportation projects, and environmental restoration projects. He has experience in writing policies, procedures, research and white papers and/or other public presentations for technical and/or public audiences. Mr. Berlin holds an MA in Economics from the University of New Mexico and a BS in Business Administration from Louisiana State University.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/19–06/19	**Port of South Louisiana, Grant Application Port Infrastructure Development Program Grant Application, Reserve, LA.** Prepared the successful $13 million grant application to the U.S. Maritime Administration for improvements to the Port of South Louisiana's Globalplex Facility in Reserve, La. The grant application was based upon improving the efficiency of intermodal cargo transfers between truck, rail and ship.
12/16–12/19	**Greater Lafourche Port Commission Section 203 Channel Deepening Feasibility Study.** Estimated the National Economic Development (NED) benefits of deepening channels within Port Fourchon. NED benefits are based upon supplying offshore petroleum exploration rigs, maintaining the rigs at new facilities within Port Fourchon, and exporting Liquified Natural Gas (LNG). The Feasibility Study was approved by the Assistant Secretary of the Army.
06/16–06/18	**Port of South Louisiana, Container Feasibility Study, LaPlace, LA.** Managed a feasibility study for a new multi-purpose dock. The dock is a long term goal of the Port of South Louisiana to foster economic development by facilitating new industries within the POSL jurisdiction and will have container loading capability. The feasibility study evaluated the potential to ship containers by barge throughout the inland navigation system from the Port's ideal location for transferring containers between ships and barges. The Study also evaluated rail connectivity and the cost of shipping containers by rail.
02/2024-10/24	**MLK Bridge and Veterans Bridge Impact on the Sabine Neches Waterway, TxDOT, Austin, TX.** Estimated the economic costs of air draft restrictions on the Sabine Neches Waterway. The cost benefit analysis determined the viability of replacing two major bridges. The limited air draft prevents the use of larger, more efficient vessels for transporting cargo, particularly the LPG tanker fleet. Petroleum companies are making major investments in LPG facilities and the efficient loading and operation of the tanker fleet is important for minimizing transportation cost. The petroleum industry is a mainstay of the local economy and providing efficient maritime transportation for exports is important to the region.

10/23-06/24	**Brazos River Floodgates Economic Analysis, TxDOT, Austin, TX.** Estimated the navigation impact and economic cost of transit delays at the Gulf Intracoastal Waterway (GIWW)-Brazos River Floodgates. The estimate was based upon outreach to stakeholders, and analysis of USACE data. The analysis determined that the cost to shippers and operators during four years of delays and accidents at the floodgates exceeds cost of floodgate replacement. Petroleum products and chemicals are the primary commodities shipped on the GIWW. The economic impact was estimated using RIMS II multipliers.
06/16-08/16	**Mississippi Department of Transportation, Preparation of Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Benefit-Cost Analysis for US-49 in Harrison County.** Prepared the benefit cost analysis for highway improvements on US-49 using the Federal Highway Administration BCA.net Model.
02/13-05/13	**Mississippi Department of Transportation, Preparation of Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Benefit-Cost Analysis for the I-20 at Vicksburg Bridge over the Mississippi River, Ridgeland, MS.** Prepared the benefit cost analysis for a proposed project to increase the reliability of a Mississippi River bridge. The analysis was based upon transportation benefits, safety benefits, and environmental benefits.
02/13-10/13	**Mississippi Department of Transportation, Jackson Airport Parkway Benefit Cost Analysis, Jackson, MS.** Prepared the Benefit Cost Analysis Report for a new highway that would provide access to downtown Jackson. The benefits were estimated using the Federal Highway Administration BCA.Net Network Model and were based upon diversions of traffic from several highways.
06/23-10/23	**Maritime Freight Forecast, TxDOT, Austin, TX.** Reviewed the methodology and sources used to forecast maritime tonnage and value in the 2023 Texas Freight Plan and adjusted that forecast. The revised Maritime Freight Forecast in the Freight Plan was based upon surveys of Texas port authorities, analysis of green energy initiatives, and major petroleum related export facilities recently completed and under construction.
06/12-12/13	**Feasibility Report for Federal Assumption of Maintenance of Cameron Loop, Cameron, LA**. Developed portions of a port master plan for Cameron Port to better serve the offshore petroleum industry and to promote regional economic development. Estimated the NED benefits of maintaining a 24-foot deep channel connected to the Calcasieu Ship Channel.
12/19-08/20	**Economic Analysis of Widening the Houston Ship Channel, Port Houston, TX.** Prepared an update of the Feasibility Study Economics Appendix. Estimated the National Economic Development (NED) benefits of widening the Houston Ship Channel using current vessel traffic data by using the HarborSym Model. Estimated the net NED benefits of widening the Houston Ship Channel throughout Galveston Bay. The benefits of each channel segment were annualized along with the construction cost and maintenance cost to estimate the net NED benefits.
03/18-06/19	**Economic Analysis for Channel Deepening, Port of Corpus Christi, TX.** Prepared the Economics Appendix Feasibility Study for the Section 204f Feasibility Study for deepening the entrance channel to Corpus Christi Harbor to allow the full loading of Very Large Crude Carriers (VLCCs). Estimated the NED benefits of the project by using HarborSym. Estimated the net NED benefits based upon annualized benefits and costs.



Firm	AECOM Technical Services, Inc.		
Name	Jonathan Giardina, PE	Years of Relevant Experience with this Employer	6
Title	Roadway Design	Years of Relevant Experience with Other Employer(s)	1

Degree(s)/Years/Specialization			BS/2019/Civil Engineering
Active Registration Number/State/Expiration Date			PE.49081/LA/09.30.2026
Year Registered	2024	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Roadway Design **Brief Description:** Jonathan has experience in technical development for transportation engineering projects. Tasks and project experience include roadway design, waterline design, drainage layout and design, drafting and 3D modeling, construction submittal reviews, design plan development, construction cost estimating, document control, and plan checking.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/18-12/23	**Coastal Protection and Restoration Authority (CPRA) of Louisiana, Mid-Barataria Sediment Diversion, Plaquemines Parish, LA**. Roadway Designer. The project provides planning, engineering, and design services ($1.5 billion CMAR project) for the creation of the Mid-Barataria Sediment Diversion Channel to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Jonathan worked on plan development, cost estimation, traffic report, roadway design calculations, guardrail design, plan checking, temporary traffic control planning and design, typical sections, and geometric details.
01/21-Ongoing	**City of Baton Rouge, College Drive Enhancements Perkins Rd. to I-10, Phase 1 Concord Extension and Bennington Connector, Baton Rouge, LA.** Roadway Designer. The overall project consists of planning and design of pedestrian and vehicular mobility enhancements for a 1.0-mile segment of College Drive which aims to provide a proposed road network connectivity and access management improvements that will reduce congestion, specifically in the northbound direction between Perkins Road and I-10. Jonathan worked on the 30% preliminary plans by performing roadway design calculations, corridor modeling, and plan production.
03/23-Ongoing	**Louisiana Department of Transportation, LA 561 Boeuf River Bridge Replacement Near Hebert, Caldwell and Richland Parishes, LA.** Roadway Designer. The project consists of the replacement of a 700 ft through truss bridge with a new prestressed concrete girder bridge and development of the horizontal and vertical geometry for the bridge replacement on the existing alignment while updating the typical section of the road to current standards and modifications to the adjacent gravel local road, Womack Road, that serves four residences along the Boeuf River. Jonathan worked on the Preliminary design phases by performing roadway design calculations, roadway and drainage layout, modeling, and plan production.
11/19-02/23	**City of New Orleans Department of Public Works, Broadmoor Neighborhood Reconstruction, New Orleans, LA.** Roadway Designer. The project includes a complete reconstruction of 22 neighborhood blocks within the Broadmoor neighborhood in New Orleans. Reconstruction includes the roadway, concrete sidewalks, concrete curbs and/or gutters, driveway aprons, water lines, and stormwater system and corresponding infrastructure. Jonathan assisted in preliminary design, roadway design, water line design, quantity and cost estimating, design plan development, and client meetings.

01/19-01/24	**City of New Orleans Department of Public Works, Milan Group A, New Orleans, LA.** Roadway Designer. The project consisted of reconstruction/restoration of roadways in the Milan neighborhood, which is bounded by Napoleon Avenue, Claiborne Avenue, Louisiana Avenue, and St. Charles Avenue. The project includes milling and overlaying with full depth patching of selected streets, incidental patching, sidewalk repairs, and repairs to drainage structures, and the installation of handicap ramps. Jonathan worked on the plan development, tabulation of quantities, and development of cost estimates.
09/20-01/23	**East Baton Rouge Parish, MOVEBR Program, College Drive Stage 0 /TEPR Study, Baton Rouge, LA.** The project aims to provide access management, signalization and capacity improvements along College Dr. RFP includes a flyover exit ramp from I-10 westbound Ramp to College Dr. Jonathan assisted with estimating costs of high-level design concepts utilizing the DOTD Bid Tab spreadsheet, road design, and plan development.
03/21-06/23	**East Baton Rouge Parish, MOVEBR Program, Airline Highway/Jones Creek Road TEPR Study, Baton Rouge, LA.** The project is providing traffic engineering for the proposed extension that will connect Tiger Bend Road and Airline Highway. Jonathan assisted with existing intersection analysis, queue, and unmet demand traffic counts along the corridor, and a traffic study report.
09/18-05/19	**Jefferson Parish Department of Public Works, Mounes St. Drainage Improvements, Jefferson Parish, LA**. Roadway Designer. The project consists of the design of traffic control plans and technical specifications for drainage improvements along Mounes Street. Jonathan worked on temporary traffic control design, quantity tabulation, and plan drafting.
11/22-06/23	**Mississippi Department of Transportation, Directional Medians for US 49 from Orange Grove Boulevard to St. Charles Street, Harrison County, MS.** The project consists of highway improvements and directional medians on US 49 from Orange Grove Boulevard to St. Charles Street. Jonathan performed J-turn analysis and design, roadway design, and plan development for conceptual plans.

Firm	AECOM Technical Services, Inc.		
Name	Gregory Trahan, PE, RSP1	Years of Relevant Experience with this Employer	19
Title	Traffic Safety/Maintenance of Traffic/TMP	Years of Relevant Experience with Other Employer(s)	1

Degree(s)/Years/Specialization			BS/2005/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0036041/LA/03.31.25
Year Registered	2011	Discipline	Civil Engineer
Other Training			**Contract Role:** Traffic Safety/Maintenance of Traffic/TMP **Brief Description:** ATSSA Traffic Control Supervisor Refresher – LA State Specific (2027) / ATSSA Flagger Course RSP1 No. 883/ 2028 LA DOTD Process and Report Parts 1, 2, and 3 (2018)
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Maintenance of Traffic/TMP/Traffic Engineering **Brief Description:** Greg will assist in the design of the Maintenance of Traffic (MOT)/TMP plans and traffic engineering analysis. Gregory has almost 20 years of experience in various roadway and traffic projects. He has both assisted and managed roadway plans from the preliminary stage to Final Plans. He has also both assisted and performed traffic studies for corridor development and intersection design. His experience with these projects have allowed him to perform the design and coordination of many different types of disciplines; including roadway, drainage, maintenance of traffic, and signal design.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
05/13-Ongoing	**DOTD, State Project No. H.001779.5 Red River Bridge at Jimmie Davis Highway (LA 511) EA, Bossier and Caddo Parishes, LA.** Assisted in preparing a feasibility study to widen the existing crossing of the Red River along Jimmie Davis Bridge and to connect shared use bicycle and pedestrian paths on each side of the river. Task included geometrics study of highway and interchange ramps to produce three feasibility alternatives.
11/04-12/07	**DOTD State Project No. 700-92-0016, Florida Avenue Bridge over IHNC, New Orleans, LA**. Assisted in the geometric design of two interchange ramps connecting to Florida Ave. Bridge and two relocated parking areas for two major public installations in the project area. He assisted in the design of girder splices for the steel main span alternative. He also assisted in the preparation of quantity calculations and cost estimates for the steel main span alternative.

09/17-Ongoing	**Coastal Protection and Restoration Authority, LA 23 Over Mid-Barataria Sediment Diversion, Plaquemines Parish, LA.** Project Engineer that assisted in the Design Plans for the new bridge and roadway structure over the new sediment diversion. The project consists of a new concrete precast girder bridge, approximately 2,200 feet in length, and the connecting asphalt roadway. Design Plans include Plan and Profile sheets, Drainage Plan and Profile sheets, Sequence of Construction Plans. There will be multiple construction activities being conducted at one time, the sequence of Construction is a critical element of design in order to manage traffic and maintain roadway operations even if evacuation routes would be required.
07/14-12/14	**DOTD, Krotz Springs Bridge and Business US 90 Bridge In-Depth Bridge Inspection, LA.** Project Engineer that assisted in the Maintenance of Traffic Plans for the inspection of the Krotz Springs Bridge and the Business US 90 Bridge. These plans included provisions to detour traffic from the closed portions of the bridge or entrance ramps.
02/07-06/10	**Baton Rouge Dept. of Public Works, Siegen Lane Improvements, Highland Rd. to 650' south of Perkins Rd., Baton Rouge, LA.** Project Engineer that assisted in the design and plan development to widen 1.18-mile segment of Siegen Lane to a four lane boulevard. Tasks include the geometric design of the roadway, subsurface drainage, and the development of the sequence of construction. The drainage area encompassed approximately 225 acres. A study was conducted on the multiple detention ponds, using a pond modeling program to determine if the box culvert system would need to be upgraded. A HEC-RAS model was conducted on an existing drainage ditch crossing Siegen Lane to ensure that the proposed drainage would not exceed the existing tail water elevation. The sizing and spacing of culverts and inlets was determined using the DOTD HYDRWIN hydraulics program. Prepared quantities and cost estimates for the project.
05/14-Ongoing	**DOTD, Earhart Expressway Extension to US 61, Jefferson Parish, LA.** Project Engineer for the traffic study involving the new extension of the Earhart Expressway a six lane urban freeway, to Airline Drive, a four-lane highway, for a total of ten lanes. The study will include analyzing existing and future conditions along the US 61 (Airline Highway) and LA 3154 (Dickory Avenue). As part of this project Greg is analyzing design alternatives, traffic data collection (speed and vehicular classification) along the corridor, and crash data.
12/01-04/17	**DOTD, Safety Studies Retainer Contract, Low Cost Safety Improvements, Statewide, LA.** Project Engineer for the preparation of Safety Improvement Plans (SIP) for 282 systemic curves located throughout the state of Louisiana. The tasks associated with this project include; site visits to the curves, plan preparation of safety countermeasures for each curve, cost estimates for the plan set, and a pre-construction meeting with each DOTD district. Each site visit includes; a ball bank test, photo and an existing conditions documentation of each curve. The plan preparation includes deriving safety countermeasures at each curve location, preparing a letter size plan set of the safety countermeasures, including the Crash Modification Factors (CMFs) within the plan sheet, and preparing cost estimates for the safety countermeasures. After the completing each letter size plan sets, a meeting was held with each District to discuss countermeasures.
05/10-09/12	**DOTD State Project No. H.005171.1, I-49 Study to Identify Interim Improvements for Safety & Efficiency, St. Mary Parish, LA**. Aided in identifying roadway projects that would provide increased capacity or improved safety along the US 90 corridor. Some of the improvements may upgrade portions of US 90 to interstate standards.
05/10-09/12	**DOTD, LA 935 Feasibility Study, Safety Retainer Contract, Ascension Parish, LA.** Project Engineer performed a Stage 0 on a segment of LA 935 from LA 431 to LA 22. Developed a conceptual alternative for the realignment of LA 935, including the typical section, design criteria, plan, and cost estimate. The road paralleling Black Bayou was realigned approximately 20' off the original alignment. This realignment allowed for the road to be widening to 12' lanes and add shoulders to provide a recovery area for drivers. AECOM also performed a cost analysis to ensure the feasibility of a build/no-build condition, minimize required Right-of-Way and/or acquisition of properties.

Firm	AECOM Technical Services, Inc.		
Name	Sreeni Bollu, PE	Years of Relevant Experience with this Employer	3.8
Title	Hydrology/Hydraulics/Scour Analysis	Years of Relevant Experience with Other Employer(s)	18

Degree(s)/Years/Specialization			MS/2003/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0034330/LA/03.31.27 Additional active licenses in TX, FL
Year Registered	2009	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Hydrology/Hydraulics/Scour Analysis **Brief Description:** Sreeni is a civil engineer with over 18 years of experience in all phases of project development from conceptual design to construction management. He is in charge of project management and the civil engineering personnel, including schedules, staff, budgets, technical review and account management. He has provided professional consulting services to numerous public and private clients, serving as Project Manager or Project Engineer on roadway improvements, drainage studies, hydraulic models and designs, drainage improvements, levees, flood control projects, site developments, commercial & residential subdivisions, and construction management.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
06/21-Ongoing	**Broadmoor Groups D & E, New Orleans Department of Public Works, New Orleans, LA.** Project Manager for the development of construction plan sets for reconstruction of multiple roadways in the Broadmoor neighborhood of New Orleans. The project will consist of full reconstruction of the roadways, replacement of all drainage and water lines, sidewalk replacement/repairs, and the installation of ADA ramps at all intersections. The project is currently in final design and will advance through Construction Administration.
06/21-Ongoing	**Milan Group A, New Orleans Department of Public Works, New Orleans, LA.** Project Manager for the development of construction plan sets for reconstruction/restoration of multiple roadways in the Milan neighborhood of New Orleans, which is bounded by Napoleon Avenue, Claiborne Avenue, Louisiana Avenue and St. Charles Avenue. The project will consist of milling and overlaying with full depth patching of selected streets, incidental patching of other streets, sidewalk repairs, incidental repairs to drainage structures, and the installation of handicap ramps. The project is currently in Final design and will advance through Construction Administration and Resident Inspection..

Firm	AECOM Technical Services, Inc.		
Name	Suresh Vinnakota, PE, PMP, CFM	Years of Relevant Experience with this Employer	14
Title	Hydrology/Hydraulics/Scour Analysis	Years of Relevant Experience with Other Employer(s)	21

Degree(s)/Years/Specialization			BS/1981/Civil Engineering; MS/2019/Structural Engineering
Active Registration Number/State/Expiration Date			0029609/LA/09.30.2025 Additonal active license in TX
Year Registered	2001	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Hydrology/Hydraulics/Scour Analysis **Brief Description:** Suresh's design and management experience spans over 35 years and includes transportation engineering and Drainage H&H experience, major Design Build Projects in Dallas Forth worth metro plex, Austin areas. Experience with Plans, Specifications and Estimate (PS&E) with a similar project of this complexity and various alternate delivery platforms. Suresh is a civil engineer with more than 35 years of transportation engineering experience. He has been involved in the management and design of highway projects from schematics to plans, specifications, and estimates. His specific experience includes streets, roads, highways, tollways, major drainage structures, railroad crossings, guideways, and layout of bridges and interchanges. Projects have included roadways, hydraulic structures, retaining walls, traffic control plans, and environmental projects. Mr. Vinnakota has demonstrated technical expertise in various aspects of design and implementation of large civil engineering projects. His experience includes extensive use of computer modelling to perform roadway, drainage, traffic, and quantity takeoffs with GEOPAK design, hydraulic analyses, design and studies, scheduling, and progress monitoring. Mr. Vinnakota is proficient in GEOPAK Roadway, GEOPAK Drainage, InRoads, InRail, HEC-RAS, HEC HMS, THYSYS, PSWMM, SignCAD, Primavera P6, AutoTURN, PondPack, and Microsoft Project.\

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
12/19-Ongoing	**TxDOT, Dallas, TexasIH365 LBJ East Design-Build, Dallas, TX.** The project involved construction of 11 miles with new managed lanes and reconstruction of all existing roadways along I 635 and I 30 with complex Hydrology and Hydraulic Structures. Drainage Discipline Lead for the entire watersheds during the pursuit and execution phases of the Design-Build Project. The drainage design included 56 miles of storm sewer systems, 2886 inlets, 20 major culverts with 4 major water sheds studies. Historic drainage patterns are maintained through the design and construction of a drainage system within the ROW to accommodate all storm water that originates on or reaches the ROW from easements and adjacent properties, and from other contributing drainage areas. Major contributing drainage areas include watersheds of Jackson& Audelia, Dixon, and Long Branch and South Mesquite areas. Existing Drainage culverts are proposed to be replaced with the proposed culverts in the same alignment for facilitating construction and disposition of all existing drainage with the proposed culverts. Suresh also involved in engineering services during construction tasks for the project during construction phase services.

03/21-03/22	**TxDOT, Oak Hill Parkway Design-Build, Austin, TX.** The project involved construction of new managed lanes and reconstruction of all existing roadways and included: 4 Segments, along SH 290 and SH 71 areas including grade separation interchanges, multiple major creek crossings, pedestrian and bicycle facilities There are multiple Water Quality Ponds and DAM along SH 71 area , Williamson Creek spanning along SH 71 and crossing SH 290 area. Drainage Discipline Lead Responsible for efficient drainage design for permanent and temporary drainage during construction, discipline communications with the Team and client, plan submittals, coordination with subconsultants and construction efforts Drainage Discipline Lead for the entire watersheds during execution phases of the Design-Build Project. Leading the drainage design effort, coordinated with subconsultants and other disciplines to arrive at an efficient design for the client
05/14-07/17	**TxDOT, SH 360 Design Build, Fort Worth, TX.** The SH 360 Project consist of 11 miles construction with new main lanes as well as connecting roadway ramps from existing frontage roads. Drainage Discipline Lead Drainage discipline lead engineer for TxDOT's design-build work with Lane and Abrams. The drainage design included 5 miles of storm sewer systems, 300 inlets, major ditches, 9 major culverts, with 4 major water shed studies. This project involved study of Walnut Creek, Lynn Creek, Bowman Branch, Lowe Branch outfalls to Joe Pool Lake. The critical crossing is Walnut creek crossing at SH 360. We evaluated the hydraulic performance of the proposed bridges at the new main lanes and their effects on the existing frontage road bridges at the Walnut Creek and SH 360 crossing proved no rise or increased erosive velocities to the satisfaction of all the stake holders and met FEMA requirements.
12/12-12/14	**TxDOT, Horseshoe Project Design Build, Dallas, TX.** The project consists of 6 miles of reconstruction of segments of IH 35 E and IH 30 over Trinity River crossing and direct connectors to relieve congestion of traffic in downtown Dallas and execution phases. Drainage discipline lead engineer for TxDOT's design-build work with Pegasus Link Constructors (PLC-JV Fluor and Balfour Beatty) during proposal. The drainage design included 26 miles of storm sewer systems, 1380 inlets, 5 major culverts, Trinity River crossings, Charlie, Coombs Creek, Able sumps, equalizer culverts. This project involved study of hydraulic and structural efficiency of Arch pipe outfall to Able Ponds. The design of volume of ponds are accommodated with 100-year elevation of 392.50 as per Horseshoe project requirements to facilitate pumping into Trinity River watershed.
04/09-03/11	**TxDOT, Dallas/Fort Worth Connector Design-Build, Dallas-Fort Worth, TX.** The project consists of 6 miles of reconstruction of segments of SH 114 and SH 121. Drainage Discipline Lead Supervising engineer and drainage discipline lead on the joint venture team for the design-build connector. The drainage design included 32 miles of storm sewer systems, 1700 inlets, 13 major culverts with 5 major water shed studies. This project involved study of Jones Branch, Farris Branch, Cottonwood, Big bear watershed, Grapevine creek water study. The complexities included was one of the existing culverts 9-8' x 6'-280 ft at SH 114 crossing in Grapevine creek had downstream impacts. We upsized the culvert with 9-10' x 10' – 395 ft culvert by adding a detention pond in the interchange 114 and 121. Another complexity was culvert 4-10 x 5 box culvert crosses 114 and connects to downstream end with the existing culvert which outfalls to cottonwood branch. The downstream end of the culverts near the dealership area at Minters chapel road. To control the downstream end of culvert effects, relief line with 10' x 5' culvert was added under managed line to control the flow and to mitigate downstream impacts.

Firm	Vectura Consulting Services, LLC		
Name	Bridget Robicheaux, PE	Years of Relevant Experience with this Employer	7
Title	Maintenance of Traffic/TMP	Years of Relevant Experience with Other Employer(s)	9

Degree(s)/Years/Specialization			B.S./2007/Civil Engineering MS/2014/Civil Engineering (Transportation focus)
Active Registration Number/State/Expiration Date			PE.0041272/LA/3/31/27
Year Registered	2016	Discipline	Civil
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Maintenance of Traffic/TMP

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/21-Ongoing	**H.007160 EBR Computerized Traffic Signal, Phase VB, Baton Rouge). Bridget, LA.** has reviewed the signal mast arm shop drawings to assist the City-Parish of Baton Rouge in accepting the manufactured poles. Bridget also reviewed the traffic signal supports and documented all of her comments in a quality control tracker spreadsheet.
06/21-06/21	**CP No. 16 CI-US-0032 Bus Rapid Transit (BRT) Improvement Project, Baton Rouge, LA**. Bridget assisted with the traffic signal design of 13 signals along three corridors: Plank Road, 22nd Street and US 190 (Florida Street).
03/21-07/22	**H.007160-EBR Computerized Traffic Signal, Phase VB, Baton Rouge, LA**. Bridget is part of the team responsible for Construction Engineering and Inspection. Bridget has reviewed the signal mast arm shop drawings (checking pole quantities and markups) to assist the City-Parish of Baton Rouge in accepting the manufactured poles.
04/20-07/20	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Belle Chasse, LA.** Bridget assisted the project engineer who designed the temporary traffic signal for the intersection of LA 23 at Engineers Rd by pulling crash data along LA 23, reviewing and summarizing crash reports, and performing CATScan analysis.
04/19-01/20	**Traffic Studies for Broussard Middle School and Billeaud Elementary School, Lafayette Parish, LA.** Bridget was the project engineer for developing a Traffic Study for two school entrances in Broussard, LA. Her project tasks
07/19-Ongoing	**MOVEBR New Capacity Projects Program Management, Baton Rouge, LA.** Bridget assists Brin on a daily basis for the entire New Capacity Projects program management team. Bridget has performed multiple reviews of traffic studies and traffic signal designs. This includes reviewing raw data, unmet demand, volume maps, existing and build analyses, and safety analyses for accuracy and consistency throughout the report. She provides comments in a spreadsheet known as the Comment Tracker. All comments are posted in the Comment Tracker so that all parties are aware. Many of these projects are located on state routes and require approval by the Traffic Engineering staff of DOTD and EBR Traffic Engineering Department. She understands the current requirements for all aspects of traffic engineering projects. Using methods outlined in NCHRP 765, Bridget helped to develop design year volumes for the Jones Creek (Airline to Jefferson) MOVEBR project. She has developed Turn Lane tech memos for the MOVEBR Old Hammond Highway Segments 1A and two projects and for the MOVEBR Highland at Siegen project.

Firm	Eustis Engineering, LLC		
Name	Gwendolyn B. Sanders, PE	Years of Relevant Experience with this Employer	32
Title	Geotechnical	Years of Relevant Experience with Other Employer(s)	0

Degree(s)/Years/Specialization			MS/1991/Civil Engineering; BS/1990/Civil Engineering
Active Registration Number/State/Expiration Date			PE.0027104/LA/9.30.2025
Year Registered	2009	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Geotechnical **Brief Description:** As President, Gwendolyn will be responsible for the overall services provided by Eustis Engineering and provide senior level review. She can provide QC/QA review of preliminary concepts to revise the existing design to meet current AASHTO/DOTD standards. Given her prior involvement with this project she can also speak to permitting requirements associated with the potential redesign. She has over 10 years of roadway and bridge design experience

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
08/07-09/16	**State of Louisiana, Peters Road, Phases I through III, Bridge over Gulf Intracoastal Waterway and Bayou Barataria, Jefferson and Plaquemines Parishes, LA. (19922, 20604, 21750.00-.02, 21827.00, .01.** Gwendolyn participated in the development of the geotechnical exploration scopes for these projects. She performed or reviewed engineering analyses including recommendations regarding bearing values, settlement, and construction considerations for arch pipes and box culverts; settlement of the roadway; preload operations; lateral earth pressures; excavations, dewatering and pressure relief, pavement recommendations; and estimates of pile capacities. She also attended meetings with the USACE and participated in the supplemental analyses to address fill placement near existing T-walls and potential seepage due to pile driving.
03/20-Ongoing	**DOTD, I-10 and I-12 College Drive Flyover Ramp Design-Build Project, East Baton Rouge Parish, LA. (B0646).** Services for this project included undisturbed borings, auger borings, and cone penetration tests and associated laboratory testing. As Principal, Gwendolyn has put in over 300 hours on this project to perform senior level QC/QA review associated with the design and construction services. She participates in weekly progress meetings both with the design team and with the owner representatives.
01/21-Ongoing	**DOTD, Bayou Barataria Bridge Replacement, Jefferson Parish, LA. (24515.00-.03).** The goal of this project is a full replacement of the Bayou Barataria Bridge. Eustis Engineering obtained relevant permits and drilled 24 borings over water, marsh, and land. Geotechnical analyses followed AASHTO LRFD and DOTD design requirements and include vertical and lateral pile analyses, pile scour capacity, lateral load analyses, pile group settlement, ground settlement, settlement surcharge/remediation, retaining wall recommendations, slope stability, and pavement design. Gwendolyn assisted in the project scope development for the design services. She is also providing independent reviews for selected contractor submittals as part of the QC/QA requirements.

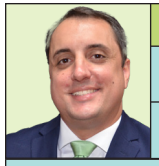
03/11-08/16	**State of Louisiana-Wisner Boulevard Overpass, New Orleans, LA. (21349, 21966, 22637, 22972).** Eustis Engineering was involved with several phases of the Wisner Boulevard Overpass project. Initial involvement began in 2011 with the performance of twelve soil borings (each 100 feet in depth) for the proposed widening of the existing bridge under State Project No. H.004732.5. These design parameters were used to estimate ultimate compressive pile load capacities being computed for alternate pile sizes using an allowable stress design to match the design approach for the existing structure. A thirteenth boring was added to the project in 2012 to address DOTD comments. In 2014, Eustis Engineering performed additional geotechnical engineering services for the Wisner Boulevard Overpass, this time under S.P. No. H.006196 for a new bridge. The design report for the bridge replacement was updated to follow AASHTO LRFD requirements, not ASD. As the geotechnical design engineer of record, we also provided support during construction. Our services included the performance of dynamic pile tests (DPTs) on the indicator piles and test piles. Eustis Engineering witnessed the static load tests performed by others. We issued a comprehensive test pile program report to provide interpretations of the static and dynamic testing and recommendations for job pile installations. Once job pile installation began, we reviewed production pile driving records and provided changes in the driving criteria when appropriate. Gwendolyn served as the project manager for several phases of the project and authored the design reports.
02/05-2/14	**DOTD-Huey P. Long Bridge Widening, West Bank and East Bank Approaches and Main Bridge Decking Widening (18771, 19483, 20262).** In 2005. Eustis Engineering performed the geotechnical engineering analyses with Modjeski & Masters, Inc. associated with the design of the bridge approaches, Phase I of the bridge widening project. The basis of these analyses was soil borings conducted earlier by Eustis Engineering through an IDIQ with DOTD. In 2006 and 2007, Eustis Engineering provided support to Modjeski & Masters and Louisiana TIMED Managers during railroad modifications completed as Phase II of the project. Using the results of static and dynamic load tests in addition to the results of our previous investigations, Eustis Engineering provided recommended pile order lengths for piles on the east and west banks to be installed for Phase II. Beginning in June 2008, Eustis Engineering began providing support services during Phase IV of the widening project. Additional design services included the evaluation of drilled shafts to support the bridge end bents. Eustis Engineering participated in progress meetings and partnering meetings, periodic site visits, and other requested services during construction of the final project phase. In addition to her role as project manager during the design phase and publishing reports and letters of our teams' findings and recommendations, Gwendolyn was also embedded within the construction phase services. She reviewed contractor submittals including soil borings performed at each pile bent to verify design assumptions. She also witnessed the drilled shaft excavations and performed the base inspection and acceptance for these features. Gwendolyn also reviewed the pile installation records and addressed the U.S. Army Corps of Engineers concerns of seepage within pile cap excavations during high river events.

Firm	Eustis Engineering, LLC		
Name	Travis R. Richards, PE	Years of Relevant Experience with this Employer	1
Title	Geotechnical	Years of Relevant Experience with Other Employer(s)	18

Degree(s)/Years/Specialization			Graduate Certificate/2018/Coastal Engineering; MS/2017/Engineering; MS/2015/Engineering Management; BS/1998/Civil Engineering
Active Registration Number/State/Expiration Date			License No. 30992/LA /03.31.2025
Year Registered	2004	Discipline	Civil Engineer
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Geotechnical **Brief Description:** Travis is responsible for the quality oversite of technical functions/performance of the soil mechanics' laboratory testing for both its geotechnical and construction materials testing functions. Eustis Engineering's Quality Control Manager reports to Travis. Additionally, he provides oversight for Eustis Engineering's instrumentation services (installation, monitoring and remote sensing) as well as QA/QC review of cone penetrometer testing and reporting.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
03/20-03/2025 (Estimated)	**DOTD, I-10 and I-12 College Drive Flyover Ramp Design-Build Project (B0646).** Major features of this project include a flyover ramp exit to College Drive, a modified exit from I-12 West, and a parallel, separated at-grade ramp along I-10 West to the existing College Drive Interchange. Services for this project included undisturbed borings, auger borings, and cone penetration tests. Eustis Engineering also provided laboratory testing including Atterberg limits tests, hydrometer analyses, and one-dimensional consolidation tests. Design services are being provided for seven different major project features. Geotechnical design project features include driven pile and drilled shaft foundation design, slope stability analyses, embankment evaluations, roadway pavement design, and developing load test programs. Eustis Engineering witnessed the bi-directional static load test on the test/job shaft to confirm job shaft embedments. We also performed dynamic pile testing (DPT) with our pile driving analyzer (PDA) and performed signal matching on these data to confirm driven pile embedments on piles installed during Phases 1 and 2. Travis provided quality review of the laboratory testing services and the CPT results.
01/21-Ongoing	**DOTD, Bayou Barataria Bridge Replacement, Jefferson Parish, Louisiana (24515.00-.03).** The goal of this project is a full replacement of the Bayou Barataria Bridge. Eustis Engineering obtained relevant permits and land access, and drilled 24 borings over water, marsh, and pavement. Geotechnical analyses include vertical and lateral pile analyses, pile group settlement, ground settlement, settlement surcharge/remediation, retaining wall recommendations, slope stability, and pavement design. Travis oversaw the laboratory testing services and reporting. He adjusted the gINT® database/library to allow for DOTD requested formatting and report generation to complete the data report. He has also been involved with quality control oversight of the construction phase service testing and reporting.

08/18 – 11/18	**DOTD, Girder Span Bridge Repairs, Earhart Expressway and Clearview Parkway Interchange, Metairie, LA. (23954).**This project included quality control inspections and testing of concrete and grout, as well as a special inspector for high strength grout. Travis was Project Manager for this work.
3/19-10-19	**Jefferson Parish, Instrumentation Installation and Monitoring, Lapalco Boulevard Overpass Over Bayou Segnette Westwego, LA. (23937).** Eustis Engineering developed and implemented a plan for instrumentation and monitoring of relative movements of the Lapalco Boulevard Overpass bridge structures at Bayou Segnette in Westwego, Louisiana. We installed and monitored six crackmeters, three tiltmeters, and three temperature sensors on Bents 4, 24, and 34. The crackmeters were used to monitor displacement in the direction of and perpendicular to traffic. The tiltmeters were used to assess inclination in the traverse and longitudinal directions. The temperature sensors were utilized to isolate temperature-related movements of the bridge components. Instrumentation data showed that movements with respect to time were very slight over the six-month monitoring period. The movements also appeared to be strongly correlated with fluctuations in temperature rather than by prior movements associated with subsidence. Travis developed this instrumentation plan, including the locations and types of instruments, and reviewed and evaluated the monitoring results.

	**Firm**	**T. Baker Smith, LLC**		
	Name	Jean Reulet, III PLS	Years of Relevant Experience with this Employer	3
	Title	Survey/SUE/Hydrographic	Years of Relevant Experience with Other Employer(s)	13

Degree(s)/Years/Specialization			BS/2011/Geomatics
Active Registration Number/State/Expiration Date			5145/LA/3.31.26
Year Registered	2015	Discipline	Survey
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Survey/SUE/Hydrographic **Brief Description:** Jean serves as TBS' Surveying Lead Professional of Transportation. His field experience for **DOTD projects began in 2011 where he has been involved in dozens of survey projects of various sizes across the State of Louisiana.** He has participated in all stages of Topographic Survey and Right of Way Map preparation from field data collection to final deliverables according to the DOTD's Location and Survey Manual. This experience has enabled Jean to develop a very thorough QA/QC process which has been used to train a highly skilled project team. Jean is experienced in the use of cutting-edge technology such as terrestrial and mobile LIDAR methods for collecting topographic and structural data in an efficient and safe manner.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/21-Ongoing	**Contract 44-21973 IDIQ for Professional Surveying Services, DOTD; Statewide, LA.** Project Manager/Surveyor of Record. Jean serves as the project manager and surveyor of record for this Surveying Services IDIQ. He is responsible for manhour estimate preparation and contract negotiations. Jean coordinates with private landowners, railroads, and other entities to obtain right-of-entry prior to survey commencement. He oversees the topographic data collection and processing, utility research, and drainage map development. He also provides QAQC and ensures delivery according to project schedule. To date, Jean has successfully completed five task orders (H.009892, H.014414, H.015587, H.016324, H.016326) with four more currently active (H.009892, H.016322, H.016323, H.016333).
06/23-Ongoing	**Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; DOTD, District 08, LA.** Sr. Project Manager/Surveyor of Record. Oversaw the completion of topographic surveys, property surveys, and right of way maps for the replacement of 12 bridges. Responsible for field crew coordination, project QA/QC, title research, and deliverables preparation. Surveys were performed to DOTD Location and Survey standards.
09/21-01/23	**Contract 44-17598, Rural Bridge Replacement Initiative, Ph I (47 bridge structures); DOTD, Districts 04, 05, 08, 58, LA.** Survey Project Manager. Coordinated field crews, processed data daily, and provided QA/QC of deliverables. TBS performed control, topographic, and right of way surveys for the replacement of 47 bridge structures in northern Louisiana. Data was captured to detail the existing bridges themselves, roadways on either side, and surrounding terrain to ensure proper tie into to existing surfaces. Cross sections of the channels they cross were also surveyed to provide information for hydraulic modeling. Data is then processed and QA/QC performed and coordinated with in-house engineers designing the replacement bridges. Property surveys of affected tracts of land were also surveyed for any takings or servitudes, and these lines portrayed on right of way maps.

07/21-02/24	**Contract 44-19336, Rural Bridge Replacement Initiative, Ph II (40 bridge structures); DOTD; Districts 04, 05, LA**. Survey Project Manager. Coordinated field crews, processed data daily, and provided QA/QC of deliverables. TBS performed control, topographic, and right of way surveys for the replacement of 40 bridge structures in northern Louisiana. Data was captured to detail the existing bridges themselves, roadways on either side, and surrounding terrain to ensure proper tie into to existing surfaces. Cross sections of the channels they cross were also surveyed to provide information for hydraulic modeling. Data is then processed and QA/QC performed and coordinated with in-house engineers designing the replacement bridges. Property surveys of affected tracts of land were also surveyed for any takings or servitudes, and these lines portrayed on right of way maps.
04/21-06/21*	**H.014322, Centurion over Drainage Bayou, Topographic Survey; DOTD; Baton Rouge, LA.** Survey Manager. Managed field crews, performed title research, data processing, QAQC and prepared topographic survey deliverables for the design and construction of a bridge in Baton Rouge, LA.
04/21-06/21*	**H.014255, Beeson Road Over Flagon Bayou Tributary, Topographic Survey; DOTD; Ball, LA.** Survey Manager. Managed field crews, performed title research, data processing, QAQC and prepared topographic survey deliverables for the design and construction of a bridge in Ball, LA.
12/21-02/22	**Lock No. 3 Road Bridge, Topographic Survey; St. Tammany Parish; St. Tammany Parish, LA.** Project Manager. Managed field crews, performed title research, data processing, QAQC and prepared topographic survey deliverables according to DOTD Off System Bridge guidelines for the design and construction of a bridge in Sun, LA.
001/23-06/23	**Country Estates Dr. Over St. Louis Bayou; Terrebonne Parish Consolidated Government; Terrebonne Parish, LA.** Project Manager. Performed Title Research and Prepared Right of Way maps for the Replacement of a bridge on Country Estates Drive in Terrebonne Parish, LA.
09/22-08/23	**SP No. H.014414, LA 22: Bedico Creek–Pine Creek; DOTD; St. Tammany Parish, LA.** Sr. Project Manager. Performed field crew coordination, data processing, project QA/QC and management for Topographic Survey and Existing Drainage Map. Project involves the widening of LA 22 and improvements to the intersection of LA 22 and Perrilloux Road.
08/22-08/24	**MA-20-01: Move Ascension, Bluff Road, LA 73 Connector, Ascension Parish Government, Ascension Parish, LA.** Project Manager. Provided Topographic surveying and Right-of-Way mapping for the Bluff Road – La 73 Connector Project as part of the Move Ascension Program. The survey was approximately 7,000 feet long and as wide as 300 feet for the design of a roadway to connect LA 73 and Bluff Road.
11/23-06/24 (survey complete)	**SP No. H.015576, LA 447 & LA 1025: Roundabout; DOTD; Livingston Parish, LA.** Sr. Project Manager. Responsible for field crew oversight, data processing and review, and deliverables preparation. Performed Topographic survey for the design and construction of a roundabout at the intersection LA 447 and LA 1025 near Walker, Louisiana.
07/21-01/22	**SP No. H.013116, LA 20 Widening: LA 307 to S. Vacherie, DOTD, St. James & Lafourche Parishes, LA.** Project Surveyor. Performed quality control for the Final R/W Maps for the asymmetrical widening of a 2.7 mile stretch of LA 20 near Vacherie, LA.
09/22-06/23	**SP No. H.015405, Keller Street Bridge Replacement; St. Tammany Parish Government; St. Tammany Parish, LA.** Sr. Project Manager. Performed field crew coordination, data processing, project QA/QC and management for Topographic Survey for this bridge replacement project.

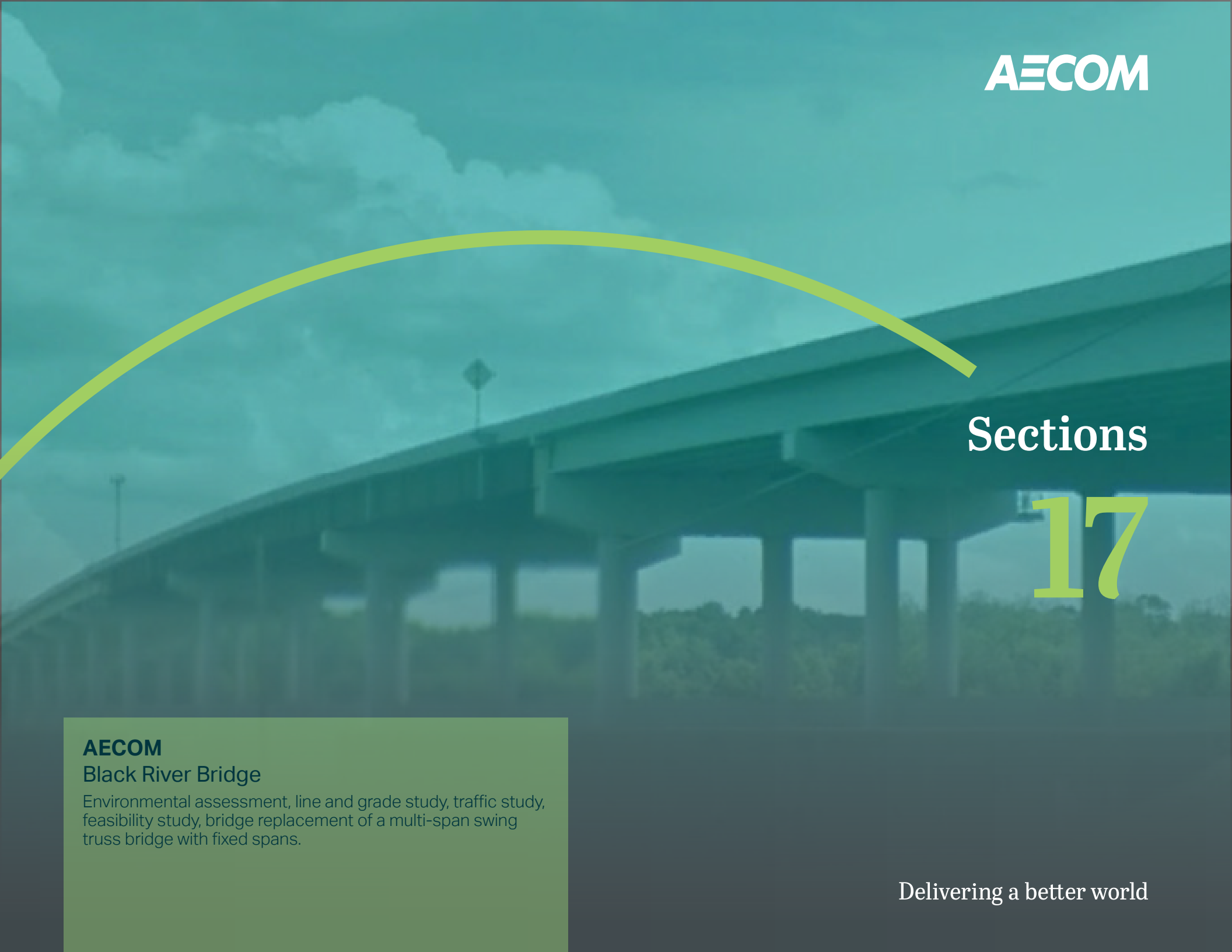
* Prior to T. Baker Smith, LLC

	**Firm**	**T. Baker Smith, LLC**		
	Name	TJ Stokes, PE	Years of Relevant Experience with this Employer	4
	Title	Survey/SUE/Hydrographic	Years of Relevant Experience with Other Employer(s)	12

Degree(s)/Years/Specialization			BS/2009/Industrial Engineering
Active Registration Number/State/Expiration Date			PE.40079/LA/03.31.2026
Year Registered	2015	Discipline	Industrial
Contract Role(s)/Brief Description of Responsibilities			**Contract Role:** Survey/SUE/Hydrographic **Brief Description:** TJ leverages 16 years of experience providing engineering services in the transportation industry. As practice leader, he composes and manages integrated project teams to ensure transportation clients' needs are met and exceeded. **TJ gained his knowledge of DOTD procedures during his tenure in the Road Design Section** and utilizes this information to help coordinate and communicate between the multiple disciplines required to produce the highest quality of deliverable. TJ employs his first hand experience with SUE, surveying, and engineering design to ensure proper coordination of staff and resources. He also has extensive experience managing and overseeing utility coordination and design projects.

Experience Dates (mm/yy-mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
12/23-Ongoing	**SP No. H.015555, LA 1077 & Brewster Rd Roundabout; DOTD/St. Tammany Parish; Madisonville, LA.** Principal/Practice Leader. Responsible for ensuring multi-disciplinary quality management plans and overall quality of work for DOTD and St. Tammany Parish for the roundabout located at the intersection of LA 1077 and Brewster Road. TJ leads communication efforts with St. Tammany Parish and DOTD and coordinates with the engineering and survey discipline leaders to ensure project delivery.
11/23-Ongoing	**SP No. H.015576, LA 447 & LA 1025: Roundabout; DOTD; Livingston Parish, LA.** Principal/Practice Leader. TJ coordinates between engineering design and surveying leaders and is responsible for the management of task order execution for this Urban Roundabout project located in Livingston Parish. Project scope includes the surveying and engineering design of a single-lane roundabout at the existing stop-controlled intersection.
09/24-Ongoing	**SP No. H.015721, LA 30: Roundabout @ St Elizabeth/S Penn; DOTD; Ascension Parish, LA.** Principal/Practice Leader. TJ is responsible for the management of task order execution for this Urban Roundabout project located in Ascension Parish. Project scope includes engineering design of a multi-lane roundabout at the existing signal-controlled intersection.
05/23-Ongoing	**Contract 44-17598, Contract 44-19336, Rural Bridge Replacement Initiative, Ph I and Ph II (87 bridge structures); DOTD. LA.** Districts 04, 05, 08, 58-Principal/Practice Leader. The scope for phases I and II included the replacement of 87 bridges throughout fourteen Parishes in Northern Louisiana. The bridge lengths ranged from 20' to 340'. TJ leads the coordination effort with the engineering, environmental, and survey discipline leaders to ensure effective project delivery.

05/23-Ongoing	**Contract 44-25027, Infrastructure Investment and Jobs Act (IIJA) Off System Bridge Program District 08; DOTD; District 08, LA.** Principal/Practice Leader. This contract includes the replacement of 12 Off System Bridges and their adjacent roadways throughout central Louisiana. The existing bridge lengths range from 40' to 135' and the sites include cross drains, box culverts, and RC slab span bridges. TJ coordinates with the engineering, environmental, and survey discipline leaders to ensure effective project delivery.
05/24-Ongoing	**23-EN-HC-0029, Highland Road at Pecue Lane; City of Baton Rouge and Parish of East Baton Rouge; East Baton Rouge Parish, LA.** Principal/Practice Leader. Responsible for ensuring quality management plans, and quality of work across engineering design, surveying, and environmental disciplines for this multi-discipline project. Project scope includes the analysis of the existing 2-way stop condition intersection and construction plan development for intersection improvements. TJ is accountable for the development of Project Management Plan and Work Plan submitted to the client.
05/23-09/23	**SP No. H.010557, Lajaunie Rd./Lateral I Bayou St. Clair; DOTD; Lafayette Parish, LA.** Practice Leader. TJ led the coordination effort between the engineering team and DOTD to ensure successful delivery of Final Tracings submittal following Parish-specific requests for this Off-System Bridge project. TJ also oversaw the coordination between Parish and TBS surveying to ensure right-of-way staking was completed to Parish's requirements.
05/21-03/24	**SP No. H.003931.5, Calcasieu River Bridge (HBI); DOTD; Calcasieu Parish, LA**. Project Manager/Engineer of Record. Responsible for all Subsurface Utility Engineering and Utility Coordination. Oversaw all Quality Level B and Quality Level A SUE services and performed QA/QC on the topographic survey submitted to DOTD to ensure compliance with ASCE 38-02. Reviewed all utility coordination procedures including conflict matrix and conflict plan creation. (Location: DOTD District 07)
11/21-02/22	**SP No. H.014670.5, LA 1270: LA 77 to End of Control Section; DOTD; Iberville Parish, LA.** Contract administrator/Engineer of Record. Responsible for all Subsurface Utility Engineering Quality Level B services and performed QA/QC on the topographic survey performed by DOTD to ensure compliance with ASCE 38-02. DOTD Location and Survey field staff performed the topographic survey and we ensured a smooth working environment for data collection.
03/21-01/22	**Move Ascension, LA 44 & Parker Roundabout, Subsurface Utility Engineering; Ascension Parish Government; Ascension Parish, LA.** Lead Professional. Provided Subsurface Utility Engineering for the LA 44 & Parker Roundabout as part of the Move Ascension Program. Quality Level B services were provided throughout the project limits to determine the horizontal location of utilities to assist with the roadway design. Quality Level A test holes were also provided to provide vertical information where utilities would conflict with roadway or drainage design.
02/22-05/22	**Move Ascension Parker Road and LA 929 Widening; Ascension Parish Government; Ascension Parish, LA** . Lead Professional. Provided Subsurface Utility Engineering for the Parker Road and LA 929 Widening project as part of the Move Ascension Program. Quality Level B services were provided throughout the project limits to determine the horizontal location of utilities to assist with the roadway design. Quality Level A test holes were also provided to provide vertical information where utilities would conflict with roadway or drainage design.



AECOM

Sections

17

AECOM

Black River Bridge

Environmental assessment, line and grade study, traffic study, feasibility study, bridge replacement of a multi-span swing truss bridge with fixed spans.

Delivering a better world

17. Firm Experience

Firm Name	AECOM Technical Services, Inc.	Past Performance Evaluation Discipline(s)*	Road, Bridge, Traffic, Planning
Project Name	Red River Bridge at Jimmie Davis Highway, Environmental Assessment (EA), Supplemental EA, Line & Grade, and Toll Study	Firm responsibility (prime or sub?)	Prime
Project Number	H.008068, H.008069, H.008244	Owner's name	Louisiana DOTD
Project Location	Bossier and Caddo Parishes, LA	Owner's Project Manager	Ken Dugas
Owner's Address, Phone, Email	PO Box 94246, Baton Rouge, LA 70804; 225.379.1071/225.242.4516/225.379.1652; ryan.reviere@la.gov /ezekiel.onyegbunam@la.gov/catherine.mastin@la.gov		
Services Commenced by This Firm (mm/yy)	12/08	Total Consultant Contract Cost ($1,000's)	**Stage 0**: $291 **EA**: $915 **SEA**: $513
Services Completed by This Firm (mm/yy)	03/23	Cost of Consultant Services Provided by This Firm ($1,000's)	**Stage 0**: $225 **EA**: $588 **SEA**: $489

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Major Bridge of Navigable Waterway
- ✓ Prepared EA & Supplemental EA
- ✓ Performed Toll Study
- ✓ Line & Grade for Road & Bridge
- ✓ Bridge Alternatives Analysis
- ✓ Hydrology & Hydraulics
- ✓ Traffic Analysis & Modeling

AECOM Team: Jonathan McDowell, Gary Maji, Stephen McCullough, Derek Chisholm, Gregory Trahan, Lou Costa, Tom Hunter

The Red River Bridge at Jimmie Davis Highway is a major river crossing over a navigable section of the Red River. Tasks included bridge alternatives type and size analysis, toll study, environmental data collection, purpose and need statement, development of design criteria, traffic analysis, noise analysis, and preparation of NEPA documents as well as roadway and bridge design.

Initially, AECOM prepared an Environmental Assessment (EA) that obtained a Finding of No Significant Impact (FONSI) from the FHWA. In 2017, the DOTD initiated a **Supplemental Environmental Assessment** (SEA) to identify a new preferred alternative that will satisfy the purpose and need of the project

The project includes providing a full interchange of the Arthur Ray Teague Parkway that parallels the Red River in Bossier City with LA 511, improvements to Jimmie Davis Highway and other roadways in the immediate area, and a bicycle/pedestrian trail across the Red River to connect the existing trails on each side of the river.

Tasks included bridge alternatives type and size analysis, toll study, environmental data collection, purpose and need statement, development of design criteria, traffic analysis, noise analysis, and preparation of NEPA documents as well as roadway and bridge design. Designs and cost estimates of all concrete and steel bridge alternatives included in the Public Outreach efforts.

Since the existing 2-lane Jimmie Davis Bridge is eligible for the National register of Historic Places and it is not beyond repair, it cannot be demolished. Although its use as the alignment of the trail has been studied, that would require that a third party take responsibility for its maintenance, and no third party has been identified. Therefore, the 2015 Selected Alternative and the 2019 Preferred Alternative both provide a new westbound bridge with 2 vehicular travel lanes and the trail. The eastbound traffic would continue to use the existing bridge, which is scheduled to be rehabilitated under another contract.

I-49 ML Typical Section

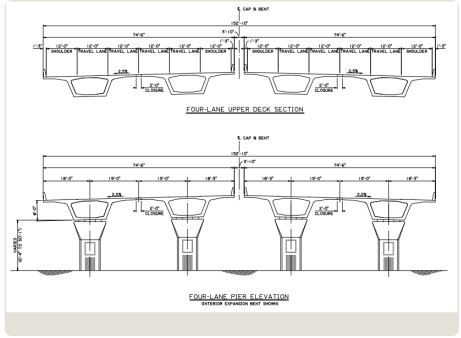
Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Environmental, Planning, Bridge
Project Name	I-49 Lafayette Connector Supplemental EIS, CSS, Bridge/Structural Design			Firm responsibility (prime or sub?)	Sub
Project Number	H.004273	Owner's name	DOTD		
Project Location	Lafayette, LA	Owner's Project Manager	Tim Nickel, PE		
Owner's Address, Phone, Email	PO Box 94245, Baton Rouge, LA 70804-9245 Phone: 225.379.1110 Email: timothy.nickel@la.gov				
Services Commenced by This Firm (mm/yy)	2015	Total Consultant Contract Cost ($1,000's)	$32,000		
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$11,300 AECOM Fee		

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Alternatives Evaluation
- ✓ Complex NEPA and Permitting
- ✓ Wetland Delineation
- ✓ Cultural Resources Investigation
- ✓ Public Involvement
- ✓ Led Bridge Design for Viaduct and Bridge over Vermilion River
- ✓ Led Supplemental EIS

AECOM staff has led all structural design work. To evaluate the three **mainline viaduct and bridge over Vermilion River alternatives**, AECOM developed a bridge evaluation scoring matrix that investigated total costs, maintenance of traffic impacts and bridge aesthetics criteria for each alternative. Numerical criteria scoring and weighing factors were assigned as part of a quantitative approach for each alternative to identifying a preferred structure. Total costs developed considered both initial construction and long-term maintenance costs. The I-49 connector project will transform the urban environment of this community for many years to come. Signature feature bridge options have been developed for this project in order to highlight the importance of the downtown area to travelers along mainline I-49.

The 5.5-mile I-49 Lafayette Connector project is one of the largest undertaken by the DOTD with an estimated construction cost of $2.2 billion. The project consists of upgrading US 90/US 167 corridor with a controlled access facility from I-10 to the Lafayette Regional Airport with improvements to the surface roads and the Evangeline Thruway. The project includes extensive traffic analysis, roadway and structural design, associated survey and SUE investigation, Context Sensitive Solutions (CSS), extensive public information and outreach, and the preparation of a Supplemental Environmental Impact Statement (SEIS).



With one of the most complex NEPA processes in the State, AECOM was selected to **prepare a supplemental EIS** and obtain approvals and permits and to cultivate agreement and support on the preferred alternative. AECOM has drafted the draft SEIS and has nearly completed the cultural resources, including a Section 106 consultation process, noise and air analysis, wetlands, T&E, other natural resource impact analyses, environmental justice, visual analysis, relocation planning, and railroad coordination.

As the design and draft SEIS have both advanced considerably, DOTD is considering how to advance parts of the project now. In support, AECOM and Stantec have helped develop design packages, NEPA re-evaluations, and plans to advance two different interchanges, one of which may be delivered by a design-build team.

AECOM Team: Derek Chisholm, Lou Costa, Tom Hunter, Jonathan McDowell, Ken Butler, Gary Maji, Daniel Boyd, Gregory Trahan, Jonathan Vavassuer, Shelley Hartsfield

Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Road, Bridge
Project Name	Florida Avenue Bridge			Firm responsibility (prime or sub?)	Prime
Project Number	700-92-0016	Owner's name	DOTD		
Project Location	Lafayette, LA	Owner's Project Manager	Paul Fossier		
Owner's Address, Phone, Email	PO Box 94245, Baton Rouge, LA 70804-9245 Phone: 225.379.1232 Email: dotdcs@la.gov				
Services Commenced by This Firm (mm/yy)	10/04	Total Consultant Contract Cost ($1,000's)	$4,000		
Services Completed by This Firm (mm/yy)	10/07	Cost of Consultant Services Provided by This Firm ($1,000's)	$2,200		

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Bridge Design
- ✓ Contract Documentation
- ✓ Roadway Design
- ✓ Design of Major Bridge over Navigable Waterway
- ✓ Bridge Type
- ✓ Coordination with USACE, USCG, and Port of New Orleans

The $220 million Florida Avenue Bridge project was designed to provide reliable access between St. Bernard and Orleans parishes over the **Inner Harbor Navigational Canal (IHNC)**. The project included a four-lane, 78-foot wide, high level bridge over the IHNC. The five-span main unit over the IHNC is 1,516 feet long and includes a 470 feet center span.

The center span provides 300 feet of horizontal and 156 feet of vertical navigational clearances.

AECOM performed **bridge type studies** to determine the most viable, constructible and economical structure type. Based on these studies AECOM designed two alternates through final design: cast-in-place variable depth concrete box girders and constant depth steel plate girders. The twin cell concrete box girder was 26 feet deep at the piers and 12 feet deep at mid-span. The concrete box girder was designed considering form travelers using the balanced cantilever method of construction.

The superstructure was supported by voided box columns and steel HP piles. The foundations sustains impact loading from vessels up to 1800 kips. The constant depth steel plate girders were designed with 155" webs and were considering innovative erection techniques in the design.

The mainline approaches and four elevated ramps comprised an additional 8,400 feet of elevated viaduct. The approach structures included prestressed concrete bulb-t girders and curved steel plate girders.

The Florida Avenue Bridge project is part of the TIMED (Transportation Infrastructure for Economic Development) program. The $4 billion improvement program was designed to enhance economic development through an investment in transportation projects. The Florida Avenue Bridge project was one of three major bridge components of the TIMED Program. The entire program was on an accelerated path scheduled and completed in December 10, 2010.

AECOM Team: Ken Butler, Jonathan McDowell, Gregory Trahan, Daniel Boyd

The following Subconsultants in this proposal also provided services on this project: Eustis Engineering, LLC; Marrero, Couvillon & Associates, LLC

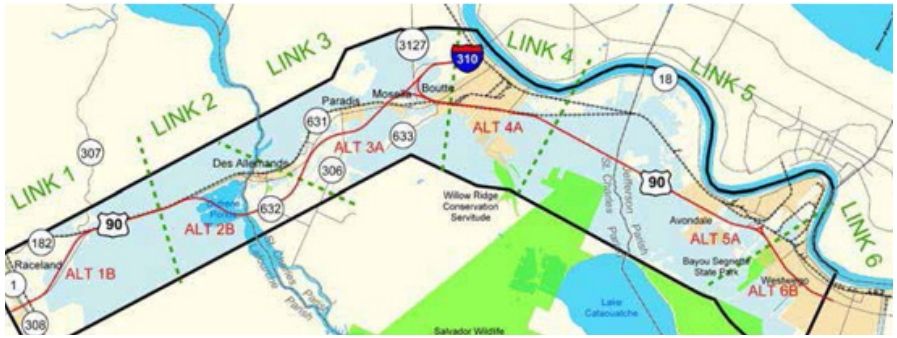
Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Environmental, Planning
Project Name	I-49 Environmental Impact Statement (EIS) Raceland to Westbank Expressway			Firm responsibility (prime or sub?)	Prime
Project Number	700-92-0011	Owner's name	DOTD		
Project Location	Iberaa, Jefferson, Lafource and St. Charles Parishes, LA	Owner's Project Manager	Mike Aghayan, PE (ret.); Kent Israel, PE (ret.)		
Owner's Address, Phone, Email	PO Box 94246, Baton Rouge, LA 70804				
Services Commenced by This Firm (mm/yy)	2003	Total Consultant Contract Cost ($1,000's)	$7,000		
Services Completed by This Firm (mm/yy)	2008	Cost of Consultant Services Provided by This Firm ($1,000's)	$4,500		

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Traffic Analysis
- ✓ Alternatives Evaluation
- ✓ Roadway and Bridge Design over
- ✓ Railroad Coordination
- ✓ Community Engagement
- ✓ NEPA Environmental Impact Statement
- ✓ Natural Environment
- ✓ Wetlands
- ✓ Cultural Resources

AECOM was chosen by the Louisiana Department of Transportation and Development to provide engineering and environmental services necessary to **perform an alternatives analysis, conduct a Line & Grade Study, perform traffic analysis, and prepare an Environmental Impact Statement (EIS) to ultimately achieve a Record of Decision (ROD**) to convert existing US 90 to a full control of access highway that met interstate standards.

This project extends from Bayou Lafourche in Lafourche Parish to the completed portion of the Westbank Expressway (US 90 Business) near Ames Boulevard in Jefferson Parish. This project includes an interchange with I-310 interchange in St. Charles Parish and with the US 90/US 90 Business interchange leading to the Huey P. Long Bridge crossing of the Mississippi River on US 90. The selected alternative, after numerous public meetings, includes 38.6 miles of interstate highway and an elevated crossing of Bayou Des Allemands. This project also is the first in Louisiana, not related to emergency recovery, to include the new SAFETEA-LU requirement for a Project Management Plan. The EIS and Record of Decision (ROD) were issued in 2008.



AECOM Team: Lou Costa, Jonathan McDowell, Gregory Trahan

Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Bridge, Road, Traffic, Environmental
Project Name	DOTD Bridge Preventative Maintenance IDIQ			Firm responsibility (prime or sub?)	Prime
Project Number	H.001970, H.011993, H.015603	Owner's name	DOTD		
Project Location	Statewide	Owner's Project Manager	Brian Allen		
Owner's Address, Phone, Email	1201 Capitol Access Road, Baton Rouge, LA, 70802, 225.379.1840, brian.allen@la.gov				
Services Commenced by This Firm (mm/yy)	06/23	Total Consultant Contract Cost ($1,000's)	$662		
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$632		

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Bridge Design over Navigable Waterways
- ✓ Retaining/Noise Wall Design
- ✓ Roadway & Traffic Design
- ✓ Bridge Inspection
- ✓ Environmental Permitting
- ✓ Maintenance of Traffic

The AECOM Team currently holds a DOTD Bridge Preventative Maintenance IDIQ contract to provided "as-needed" support to DOTD Bridge Division for the development of transportation bridge replacement, bridge evaluation, bridge maintenance & repair, and emergency design services. This work also included roadway, traffic and environmental design services as necessary to support the bridge design. The following projects highlight our team's diverse and relevant bridge design experience:

- **DOTD (H.001970), LA 561 Bridge Replacement over Boeuf River, Hebert, LA.** AECOM performed preliminary roadway and bridge design for the **replacement of an existing 3-span truss bridge over the Beouf Rive**r in Richland and Caldwell Parishes. The AECOM Team worked integrally with DOTD project manager, geotechnical, environmental, and district staff to confirm approach roadway, drainage, right-of-way, utility, and bridge requirements to replacement this structurally deficient bridge. AECOM is currently scoping final design services with the DOTD/PM, Dana Feng and is expecting to get NTP later this summer (see photo IMG_4127)
- **DOTD (H.011993), LA 10 Bridge over Bayou Carron, St. Landry Parish, LA.** AECOM performed final bridge design services for the **replacement of an existing truss bridge over Bayou Carron**. The AECOM Team worked integrally with the DOTD/PM, Dana Feng, geotechnical, roadway, and district staff to develop final design calculations, bridge quantity cost estimates, and construction documents for the advertisement of this 3-span replacement bridge using LG36 precast, pretensioned concrete girders.
- **DOTD (H.015603), LA 641 Bridge over I-10, Gramercy, LA.** After an over-height equipment trailer impacted a portion of the LA 641 Bridge spanning across the WB lanes of I-10 bridge, DOTD Maintenance Division performed an emergency bridge inspection to confirm structure damage and load posting requirements. After this initial assessment, the DOTD/PM, Phillip Grasso, contacted AECOM to perform a detailed superstructure inspection and bridge load rating to identify structure mitigations to repair this bridge. AECOM is currently developing final bridge girder repair plans, special provisions and construction cost estimates to improve the bridge load rating and extend the bridge service life for this 1584-ft, multi-span, pretensioned concrete line girder structure.

LA 561 Bridge

- **DOTD (H.013832), LA 6 Red River Bridge, Grand Ecore, LA.** AECOM is currently scoping Stage 0/1 design services to develop and evaluate potential deck rehabilitation alternatives to arrest bridge deterioration and extend the bridge service life for this 1879-ft, multi-span, steel plate girder structure that includes a 975-ft long, two-girder 3-span main unit. The 2009 bridge deck replacement is starting to exhibit deterioration and now requires periodic maintenance in the main unit to minimize deck delaminations and spalling on the travelled deck surface.

AECOM Team: Daniel Boyd, Jonathan McDowell, Gregory Trahan, Sarah Elsawah, Jonathan Giardina, Gary Maji

The following Subconsultants in this proposal also provided services on this project: Marrero, Couvillon & Associates, LLC; Vectura Consulting Services, LLC, T. Baker Smith, LLC

Firm Name	Marrero, Couvillon & Associates, L.L.C.		Past Performance Evaluation Discipline(s)*	Bridge
Project Name	US 11 Lake Pontchartrain Bridge Rehab		Firm responsibility (prime or sub?)	Sub
Project Number	4400002538 Task order H.010016	Owner's name	Modjeski and Masters, Inc.	
Project Location	Orleans and St. Tammany Parishes	Owner's Project Manager	Justin Guilbeau	
Owner's Address, Phone, Email	1055 St. Charles Ave., Suite 400, New Orleans, LA 70130; 504.524.4344; amday@modjeski.com			
Services Commenced by This Firm (mm/yy)	11/13	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	2021	Cost of Consultant Services Provided by This Firm ($1,000's)	$151	

RELEVANCE TO PETERS ROAD BRIDGE

- ✓ Movable Bridges-Mechanical
- ✓ Movable Bridges-Architectural
- ✓ Bridge Inspection

The US. 11 bridge crossing the east end of Lake Pontchartrain in Orleans and St. Tammany Parishes, near the City of Slidell, was constructed in 1938. The bridge structure has two double-leaf movable bascule spans known as "North Draw" and "South Draw." The purpose of the project was to comprehensively rehabilitate the structure.

MCA was engaged to evaluate the condition of the Operator's House for both architectural and mechanical systems, make recommendations for repair/replacement, and to undertake the design for this work. Design must be sensitive to the historic nature of the bridge and operator's houses.

The scope of services includes:

- Site inspection to identify all architectural and mechanical systems to be rehabilitated, including modifications needed to meet codes and regulations, or to improve functionality and reliability.
- Prepare a scope of work document with associated costs
- Preliminary plans
- Final plans and specifications
  Construction cost estimate
- Construction related engineering support

Firm Name	Vectura Consultint, LLC			Past Performance Evaluation Discipline(s)*	Traffic
Project Name	I-10 ITS Scott to Lake Charles			Firm responsibility (prime or sub?)	Sub
Project Number	H.013256.5	Owner's name	DOTD		
Project Location	I-10 (District 07)		Owner's Project Manager	Roy Esteven, PE	
Owner's Address, Phone, Email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-2527, Roy.Esteven@LA.gov				
Services Commenced by This Firm (mm/yy)	01/21		Total Consultant Contract Cost ($1,000's)		unknown
Services Completed by This Firm (mm/yy)	03/21		Cost of Consultant Services Provided by This Firm ($1,000's)		$20,162

Vectura performed a Level 2 Traffic Management Plan (TMP) for the construction of ITS equipment along I-10. The plan included the following activities:

- safety strategy that included a CAT Scan
- LOS determination utilizing Citrix data
- lane closure recommendations based on a queue analysis
- cost estimate
- public information strategies.

Applicable for this project {Required (✓)}	Level 2 TMP Components		Stage 0	Stage 1	Stage 3		Workflow Notes
					Preliminary 60% Submittal	Final 90% Submittal	
	Analysis		**Percent Complete**				
	•	Detour Analysis	100%				①
	•	Queue Analysis according to EDSM VI.1.1.4	100%				①
	Documentation		**Percent Complete**				
✓	•	TTC Details			50%	100%	⑦
	•	TTC Plan (based on type and location of construction)			50%	100%	⑦
	•	Mitigation (if the current roadway is LOS F)	60%	100%			④
	•	Mitigation (if the roadway is on the Abnormal Crash Location list)	60%	100%			④
	•	Evacuation Strategy (if used as an evacuation route)	100%				④
	•	Work Restrictions	20%	50%	70%	100%	④
✓	•	Basic Public Information release at the District level			60%	100%	⑧

Vectura Team: Laurence Lambert, Brin Ferlito, Reece Rodrigue, Kristen Farrington

Firm Name	Elos Environmental, L.L.C.		Past Performance Evaluation Discipline(s)*	Environmental
Project Name	DOTD Rural Bridges: Phases I & II		Firm responsibility (prime or sub?)	Sub
Project Number	Multiple H No.	Owner's name	DOTD	
Project Location	Statewide, LA (Districts 3, 5, 7, 8, 58, 61, and 62)	Owner's Project Manager	Brian Allen	
Owner's Address, Phone, Email	1201 Capitol Access Road, Baton Rouge, LA, 225-379-1840, brian.allen@la.gov			
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$541.8	

ELOS has been contracted by BKI to provide professional environmental consulting services for the Louisiana Department of Transportation and Development (LADOTD) Rural Bridge Replacement Initiative for two project phases. Phase I involved bridge replacements under 16 state project numbers and supplemental task orders, impacting 33 structures in Districts 03, 07, 61, and 62. Phase II is ongoing and involves bridge replacements under 9 state project numbers and supplemental task orders, impacting multiple structures in Districts 05, 08, and 58. Almost all the projects have included wetland delineations, permit applications, cultural resource surveys, and threatened and endangered species surveys. ELOS has also assisted in the early planning stages of some of these projects to identify any possible adverse economic, social, or environmental effects or concerns.

Project Numbers: H.013952, H.013955, H.013956, H.013957, H.013958, H.013959, H.013963, H.013966, H.013968, H.013970, H.013976, H.013982, H.013984, H.013989, H.013996, H.013997 (Phase 1) and H.014242, H.014243, H.014245, H.014246, H.014247, H.014248, H.014249, H.014250, H.014268, H.015685 (Phase II)

ELOS has performed all environmental services according to the standards of the Federal Highway Administration (FHWA). Permits have been coordinated through several federal and state agencies including joint applications to the USACE and the Louisiana Department of Energy and Natural Resources (LDENR) / Office of Coastal Management, Scenic Rivers permits through the Louisiana Department of Wildlife & Fisheries, and cultural resource surveys in coordination with the Louisiana State Historic Preservation Office. ELOS also has personnel recently trained in the tricolored bat identification and surveys, which have been used for some of these bridge replacement projects.

AECOM Team: Lucas Watkins, Brian Fortson, Cory Ricks, Basile Dardar, Christopher Wilson, Mike Hill

Firm Name	Eustis Engineering, L.L.C.		Past Performance Evaluation Discipline(s)*	Geotech
Project Name	I-10 and I-12 College Drive Flyover Ramp Design-Build Project		Firm responsibility (prime or sub?)	Sub
Project Number	B0646	Owner's name	DOTD	
Project Location	East Baton Rouge Parish, Louisiana	Owner's Project Manager	DOTD Through Boh-G.E.C., Inc. Design-Build Team	
Owner's Address, Phone, Email	1201 Capitol Access Road, Baton Rouge, LA, 70802, 225.379.1840, brian.allen@la.gov			
Services Commenced by This Firm (mm/yy)	03/20	Total Consultant Contract Cost ($1,000's)	Unknown	
Services Completed by This Firm (mm/yy)	05/25 (estimated)	Cost of Consultant Services Provided by This Firm ($1,000's)	$635 (to date)	

This nearly completed project includes a variety of interchange improvements to I-10 West and College Drive including a flyover ramp exit to College Drive in advance of the I-10 and I-12 West merge; a modified exit from I-12 West to College Drive; and a parallel, separated at-grade ramp along I-10 West to the existing College Drive Interchange. Eustis Engineering L.L.C. completed an exploration of the site to supplement available data comprising ten undisturbed borings, eight cone penetration tests, and fourteen auger or direct push borings in conjunction with soil mechanics laboratory tests performed on collected samples. These data were published in a GEOT-01 Geotechnical Exploration Data Report that was reviewed by the State of Louisiana, Department of Transportation and Development (LaDOTD) to confirm compliance with their design requirements as well as Quality Control (QC) and Quality Assurance (QA) requirements.

The design services included developing separate geotechnical design reports for each of seven major project features, specifically a sound barrier/noise-wall; the roadway (mainline and exit ramps); the Ward Creek Bridge widening; the I-10 Westbound Bridge over I-12, including driven piles and drilled shafts; retaining and/or Mechanically Stabilized Earth (MSE) walls at modified bridge abutments; box culverts or flumes for site drainage; high mast lighting, Intelligent Transportation Systems (ITS); and other miscellaneous features. Analyses to complete these geotechnical design reports were performed in accordance with the project design and performance specifications and AASHTO LRFD Design Specifications. All these reports were subjected to the quality review process with the design team and all comments from the owner's review team were also addressed prior to finalizing these reports for project documentation. We are also participating in weekly progress meetings with the project design team and with the project stakeholders. Design review meetings are conducted as part of the quality review process. Eustis Engineering has provided construction support including the performance of dynamic pile tests and witnessing a static load test. We reviewed pile driving logs, drilled shaft installation logs, thermal integrity profiling and cross-hole sonic logging operations to develop bent approval letters as the geotechnical engineer of record for the project. We also provided an ongoing review of embankment settlement monitoring to confirm observed rates are consistent with our design assumptions and calculations.

Eustis Team: Gwendolyn Sanders

Firm Name	T. Baker Smith			Past Performance Evaluation Discipline(s)*	Other-Subsurface Utility Engineering
Project Name	Calcasieu River Bridge			Firm responsibility (prime or sub?)	Prime
Project Number	H.003931	Owner's name	DOTD		
Project Location	Calcasieu Parish, Louisiana	Owner's Project Manager	Peggy Paine, PE		
Owner's Address, Phone, Email	1201 Capitol Access Road, Room 501-I Baton Rouge LA 70802; 225.379.1065; peggy.paine@la.gov				
Services Commenced by This Firm (mm/yy)	03/21	Total Consultant Contract Cost ($1,000's)	$1,830		
Services Completed by This Firm (mm/yy)	03/24	Cost of Consultant Services Provided by This Firm ($1,000's)	$1,830		

TBS provided Quality Level B and Quality Level A SUE services as well as Utility Coordination during Design for this project along I-10 in Lake Charles, Louisiana. The purpose of the project is to replace the existing I-10 bridge crossing Lake Charles. This is one of the largest SUE projects in the history of DOTD. There are numerous pipelines throughout the corridor due to the abundance of chemical plants in the area, so determining the location of these pipelines was crucial to the design of the project. Our team had to coordinate continuously with the pipeline owners to perform test holes on these facilities which slowed down the production rate of the field staff.

The City of Westlake utilities such as water, sewer, and gas proved to be difficult to locate and the records were outdated and unclear. A combination of designating, test holes, and ingenuity was used to properly map out these utilities. Utility coordination was used to inform the utility companies of the impact the project would have on their facilities. The difficult part of the process was the fact that there wasn't a finished design to determine conflicts. A new process and precedent was set to accomplish the goals posed by DOTD.

TBS Team: TJ Stokes

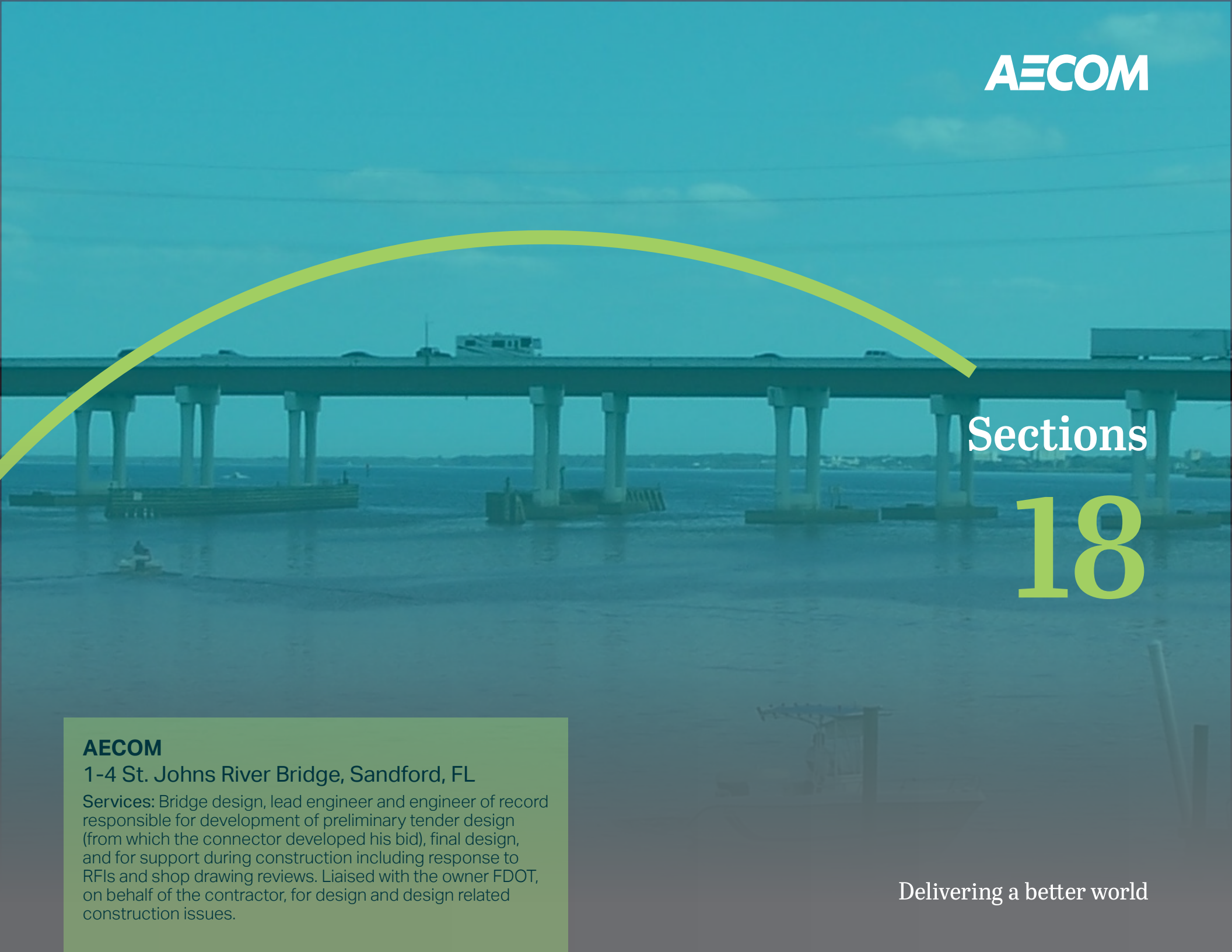
Firm Name	T. Baker Smith			Past Performance Evaluation Discipline(s)*	Bridge, Road, Survey, Environmental
Project Name	Rural Bridge Replacement Initiative, Phase I & II			Firm responsibility (prime or sub?)	Prime
Project Number	Multiple #s	Owner's name	DOTD		
Project Location	Statewide, LA	Owner's Project Manager	Valerie M. Tourres, PE		
Owner's Address, Phone, Email	1201 Capitol Access Rd., Baton Rouge, LA 70802, 225.379.1894, valerie.tourres@la.gov				
Services Commenced by This Firm (mm/yy)	08/20	Total Consultant Contract Cost ($1,000's)	$14,235		
Services Completed by This Firm (mm/yy)	Ongoing	Cost of Consultant Services Provided by This Firm ($1,000's)	$9,055		

As part of an overall effort by LADOTD to reduce the amount of structurally deficient bridges throughout the state as part of meeting FHWA metrics, LADOTD contracted TBS for the Rural Bridge Replacement Initiative, Phase I and Phase II project which replaced 87 bridge structures, primarily in North Louisiana, within 14 parishes including Claiborne, Webster, and Red River Parish.

The consultant contract was complete turnkey project involving inspection, surveying, ROW, geotechnical, preliminary and final bridge plans, preliminary and final roadway plans, construction services, scour analysis, hydraulic analysis, load rating and permanent signing. TBS was the prime consultant for this contract and is responsible for nearly all contract services including inspection, surveying, ROW, Preliminary and final bridge plans, preliminary and final roadway plans, construction services, scour analysis, hydraulic analysis, load rating and permanent signing for all 87 structures. TBS is coordinating geotechnical investigation and design using sub-consultants. The replacement structures include box culverts, RC Slab spans, and Louisiana Girder (LG) 25 girder span bridges on PPC piles having clear widths ranging from 24' wide to 40' wide.

TBS is also managing and delivering this extensive project through the issuance of fifteen individual and concurrent State Project Numbers/Plan sets. Phase I, which includes 47 bridge structures, is being completed short of a typical 3 to 4 year timeline for this extensive scope of work and LADOTD is scheduled to let all bridge structures during Federal FY 22-23. Therefore, replacement plans for all 47 bridge sites were due within 21 months, including surveying, geotechnical, design and plan development. The project met this extremely aggressive schedule, and TBS met its initial commitment and delivered Final Plans on 15 out of 15 of the state projects by June 2022. Phase II, which includes 40 bridge structures, is ongoing with all Final Plans to be delivered by September of 2023.

TBS Team: TJ Stokes, Jean Reulet



AECOM

Sections 18

AECOM

1-4 St. Johns River Bridge, Sandford, FL

Services: Bridge design, lead engineer and engineer of record responsible for development of preliminary tender design (from which the connector developed his bid), final design, and for support during construction including response to RFIs and shop drawing reviews. Liaised with the owner FDOT, on behalf of the contractor, for design and design related construction issues.

Delivering a better world

AECOM brings years experience with the Department of Transportation and Development (DOTD) and has assembled a highly skilled team proficient in executing design projects in accordance with the DOTD Project Delivery Manual, Roadway Design Manual, and Bridge Design and Evaluation Manual. Our team members are well-versed in the preferences and expectations of the DOTD, ensuring that our approach aligns with these standards in every aspect of our work. Additionally, AECOM is attuned to the specific challenges and concerns of the residents of Jefferson and Plaquemines Parishes, as well as the leadership at the Naval Air Station Joint Reserve Base New Orleans. This awareness enables us to address and meet the needs of the project effectively.

AECOM ADVANTAGE

AECOM has extensive experience in developing plans for numerous intercoastal and navigable waterway crossings. We leverage both lessons learned and design/ construction best practices to efficiently expedite the planning process saving both time and money.

Subconsultant	Peters Road Bridge Project Role
Marrero, Couvillion & Associates, LLC	Bridge Lighting
Vectura Consulting Services, LLC	Traffic Analysis & Modeling
ELOS Environmental & Ecological Services	Environmental & Ecological Assessment
Eustis Engineering, LLC	Geotechnical Engineering
T. Baker Smith, LLC	Topographical Survey/SUE/Hydrographic Survey

Contract Scoping Meeting

After selection, AECOM will request a scoping meeting with the DOTD Project Manager (PM) and other required DOTD Staff to confirm the project scope to ensure all parties involved have a full understanding of the project objectives and goals. This process will help to confirm and craft all elements to be delivered to DOTD and ensure all deliverables and content is accounted for. Specifically, AECOM will coordinate with DOTD to confirm the content and level of advancement of the preliminary plans so that the EA will be complete. This will enable the project to run smoothly for the final plans and associated activities. AECOM will develop a project specific Project Management Plan that marches in step with the DOTD's processes and protocols. This plan will be used to guide the AECOM Team, including our subconsultants, throughout all phases of the process and will ensure successful completion of deliverables on time and on budget.

AECOM ADVANTAGE

AECOM was assigned the development of a Supplemental Environmental Assessment (EA) for the US-190/LA-38 Interchange on an expedited timeline. Despite the tight schedule, AECOM successfully completed the project within the four-month window.

AECOM offers innovative solutions to the complex challenges of bridge design and construction. From optimizing bridge approach lengths to addressing pavement settlement and airspace conflicts, our expert team will deliver a project that enhances infrastructure while minimizing environmental and business impacts.

PETERS ROAD BRIDGE PROJECT CHALLENGES

Item	Challenge	Solution
1	Length of Bridge Approaches	To mitigate the length of the overall bridge structure, AECOM will complete a bridge cost comparative study which will investigate different combinations of approach and departure grades, structure depths, and approach retaining wall considerations. This will set the length of the overall bridge and determine the impact to the business north of the intracoastal water canal.
2	Settlement of Pavement at Bridge Approaches	Settlement due to poor soil properties can be a challenge for the project's service life. AECOM will perform subsurface soil investigations and will a settlement analysis. This analysis will drive the selection of pavement structure depth and guide construction and design recommendations to implement during preliminary and final plan development.
3	Ensuring No Conflicts or Delays Associated With Impacts to the NAS/JRB Airspace	Led by a Senior Level Aviation Specialist who also serves in the USAF Reserve, AECOM will assess the Clear Zone, Accident Potential Zones, and all runway safety critical criteria as well as land use requirements. In coordination with the DOTD and JRB, the team will design-out any potential conflicts to not adversely affect base operations or delay obtaining a FONSI. AECOM will submit the FAA Form 7460-1 at the end of 15% design phase to trigger early FAA and DoD reviews.
4	Bridge Structure Selection	Using the results of the navigation study AECOM will determine, early in the project design schedule, an optimized structure depth and type for the main canal crossing. Interior pier placement along with the results of this structure optimization will service to promote economy for the project and expedite ease of construction.
5	Navigation Study / Vertical Clearance	Determine that a fixed bridge with 73 ft. vertical clearance in the designated location and alignment will not impact the NAS soon after NTP. If it does impact the NAS, a lower vertical clearance may be possible because of navigation alternatives, but the Navigation Study should address the navigation interests that are impacted.
6	Calibration of Traffic Diversion Model	Belle Chasse Bridge just recently opened as a toll facility, and travel patterns are still adjusting. The team will review not only existing patterns, traffic studies for both the Belle Chasse Bridge as well as the 60% Phase 3 Plan, as well as regional overall traffic patterns at road crossings and historic trends.
7	Bridge Capacity Assumptions	The 2-lane capacity assumption of the 60% Phase 3 Plan followed a traffic forecast based on 2014 forecasted traffic data. Since then, many demographic, transportation disruptors and general economic assumptions have significantly change in this region. The team will evaluate the need to increase the capacity of the Peters Rod Bridge, as well as suggestions to updates to Phase 2A and 2B, and impacts on Phase 1 extension, based on level-of-service results from the updated traffic forecasts.

Kickoff Meeting for Contract

After execution of the contract and Notice to Proceed is issued, the AECOM PM will request a kickoff meeting with the DOTD PM to get the following data:

- Existing topographic survey files and SUE files (if available)
- Existing environmental and traffic data
- Existing soil boring information and geotechnical reports
- Copies of current plan details
- Standard plans and special details

The project kickoff meeting will be used to: (1) establish project design criteria; (2) determine the frequency for project coordination meetings; (3) schedule an on-site meeting with DOTD; (4) review questions that the project team may have after reviewing existing documents; and (5) coordinate optimizations and solutions to challenges identified from the previous Final Plan development.

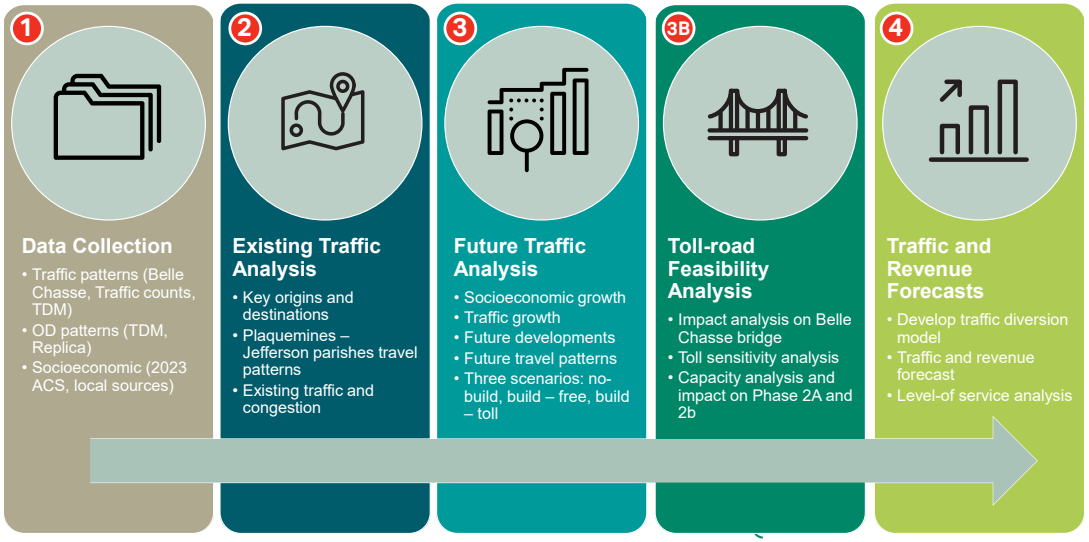
Traffic

The AECOM Team anticipates following the LA DOTD Traffic Engineering Analysis Report (TEPR) process to complete the traffic component of the Supplemental EA. Traffic will be completed to determine the number of lanes required for the proposed bridge and the geometric configuration of its terminus. The AECOM Team will work with the Regional Planning Commission to retrieve data from the TransCad model to develop traffic forecasted traffic volumes that will be used for the Toll Analysis. The AECOM Team will collect existing traffic counts including 7 day and 48 hour counts along the corridor along with turning movement counts at expected termini points. These counts will be used to develop peak hours and to verify TransCad volumes received. Following the TEPR process, The AECOM Team will develop Chapters 1 and 2 along with the Existing Safety Analysis. The Tier 1 that will be documented in Chapter 2 will allow for a determination of the typical section for the bridge. The AECOM Team will be able to start the initial preliminary design of the bridge and approaches while completing the remaining portions of the TEPR report.

Level 1 Sketch Toll Study & Feasibility Analysis

AECOM is proposing a comprehensive level one toll study approach to produce traffic forecasts for the Peters Road Bridge (as shown in the figure below). In steps 1-2 the study team will focus on characterizing the existing conditions, focusing on the Plaquemines to Jefferson Parish travel patterns, specifically reviewing existing traffic conditions in the newly opened Belle Chasse toll bridge. In step 3, the focus will be to estimate future growth, considering future developments such the expansion of industrial facilities in mid and low Plaquemines Parish, for which Peters Road bridge might be of added value. In step 4, the traffic and revenue projections will be produced using a traffic diversion model for three scenarios: no-build, build no-toll, and build toll. Finally, the feasibility of the Peters Road bridge to operate as a toll facility will consider forecasted revenue, planning-level costs, and potential sources of additional costs/uncertainties such as (1) Compensation Events raised by impacts on Belle Chasse bridge; and (2) capacity restrictions or capacity changes needed to Peters Road bridge and Phases 2A and 2B.

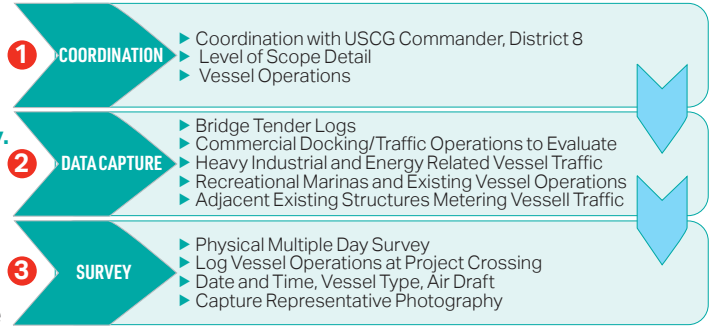
STEPS: Toll Study & Feasibility Analysis



Determine Required Vertical Clearance for Proposed Peters Road Bridge

Per the steps outlined in the following graphic, AECOM will conduct a navigation study to determine the required vertical clearance and confirm the proposed 73-ft precedent set by the newly constructed Belle Chasse Bridge. The navigation study will also confirm that recreational and commercial vessel operations are not impeded with the vertical clearance results. In addition to the vertical clearance determination, this study will also finalize the horizontal clearance envelope for the bridge's navigable channel between pier protection systems.

AECOM will perform the steps at right to complete the Navigation Study.



Aviation Planning

It is anticipated that some degree of aviation coordination and approval will be required for the project, given the proposed roadway and bridge alignment relative to the existing Naval Air Station Joint Reserve Base New Orleans. The Naval Air Station has multiple vertical development and land-use control constraints as it relates to CFR Part 77 approach and departure airspace surfaces, US Standard for Terminal Instrument Procedures (TERPS) airspace surfaces, Clear Zones (CZ), and Accident Potential Zones (APZ). All of which may have some purview over the proposed project site. Impacting or encroaching on these constraints does not necessary indicate a fatal flaw, but doing so will require coordination, review, and approval from the FAA and DoD as they are the regulatory agencies that govern these parameters.

Our AECOM aviation planning team has extensive experience working for both the DoD and FAA; at military, civil, and joint-use airports; and at many DoD bases located in the US and abroad. We will develop the existing airspace and land-use controls surfaces that are applicable to the Naval Air Station and evaluate the proposed road and bridge alignment and elevation, and identify if there are any potential impacts and make recommendations for mitigating actions as required. The workflow and intent of our aviation planning task is to identify potential design risks prior to submitting any documentation to the FAA and DoD. The primary objective being that we've already vetted the design and have confidence that it will meet minimal resistance from either agency because we've completed our due diligence early in the design, and are not relying on feedback from the FAA or DoD's analyses.

Since the project is located adjacent to the Naval Air Station, the FAA will require that a Form 7460-1 be submitted and approved for both the permanent obstacles and the temporary construction equipment. The 7460 submittal triggers an interdepartmental review within the FAA and it also includes the DoD. Their reviews evaluate the proposal relative to airspace, land-use, navigational aids, surveillance equipment, etc. to ensure that the project does not create a hazard to air navigation. It is not uncommon for there to be some back-and-forth coordination with the FAA/DoD if the proposal is located within a sensitive area, and they could ask for mitigating actions if they believe there may be some risk to their assets. Therefore, we recommend submitting the 7460-1 application early in the design process, approximately 15% design level, to ensure there is sufficient time captured within the project schedule for the potential coordination.

TASK 1 PRELIMINARY PLAN

30% Preliminary Plans

During Preliminary Design, AECOM will begin developing 30% Preliminary Plans to accommodate the revised vertical bridge clearance, including proposed geometric alignments and vertical profiles. At this stage, we will begin to determine viable bridge structure types and construction sequencing to consider during project development. It is understood that the current 60% final plans were developed to reflect traffic data that was captured in both the 2004 and 2009 environmental assessments and this data could be outdated. It is also understood that the NAS JRB New Orleans will use the Peters Road Bridge Extension facility for cargo access in and out of the base. AECOM will evaluate, using newly captured traffic data and this understanding, to evaluate either a 2-lane or 4-lane structure alternative for DOTD to consider. This will allow AECOM to coordinate with DOTD to select an acceptable roadway width to reflect the traffic analysis conclusions, and facilitate the development of the plans for completion of the supplemental environmental assessment.

For the Peters Road Extension Project bridge structure, we propose that the approach span structures leading to the main crossing will be comprised of LG PPC Girders supported by reinforced concrete columns on PPC piling supported footings. Once the vertical profile and horizontal alignments are finalized, AECOM will optimize foundation placements, span arrangements, and determine superstructure depths to economize the design and construction of the bridge.

AECOM ADVANTAGE
COMPUTATIONAL DESIGN AND SOFTWARE

AECOM has developed a proprietary structural design platform that interfaces with various industry standard software to facilitate quick and expedited evaluations of different structure alternative.

As part of the 30% plan development AECOM will perform a cost comparative analysis for the main span, considering the newly established results of the project's navigation study. **AECOM has developed and will implement proprietary 3D COMPUTATIONAL DESIGN SOFTWARE to quickly and efficiently evaluate various superstructure and substructure design alternatives.** These evaluations will be presented to the DOTD PM for evaluation and feedback. Part of this comparative

analysis will determine if piers can be placed such that utilizing precast prestressed concrete girders for the main span crossing is a viable option to promote economy and speed of construction, as well as decreased overall project lifecycle maintenance costs. Considering the main span configuration of the newly constructed Belle Chasse Bridge (horizontal clearance envelope of 150'), it is anticipated that the span lengths for the Peters Road Bridge project will allow a successful investigation of a concrete superstructure alternative. Additionally, AECOM will investigate the feasibility and construction cost of the previously developed 3-span continuous steel plate girder structure from the 60% final plans, with modifications to enhance the economy of the superstructure by reducing the overall length of the steel unit. For a steel structure alternative, it is anticipated that the bridge's main span crossing will comprise a total unit length of approximately 500-ft to 600-ft.

The superstructure will be supported by reinforced concrete piers supported on PPC pilings and designed to absorb vessel collision forces.

To effectively coordinate progress with DOTD and have impactful discussions with 3rd party stakeholders, AECOM will create a 3D model of the corridor for phase 3 and the Peter Road Bridge itself. This 3D model will help facilitate project meetings as well as public engagement and will ensure transparency of the project development.

60% Preliminary Plans

For the 60% Preliminary Plan submittal, AECOM will begin development of general bridge plans showing the horizontal configuration of the bridges, along with vertical profiles featuring the top of water and required vertical clearances. We will coordinate horizontal and vertical alignments through both DOTD and USCG for their approval to ensure project design criteria are met. AECOM will engage a US Army Corps Engineer specialist to ensure that any future levee enlargement will be considered and implemented into plan development. A preliminary hydraulics design report will also be included as a part of the 60% Preliminary Plans delivery.

90% and 100% Preliminary Plans

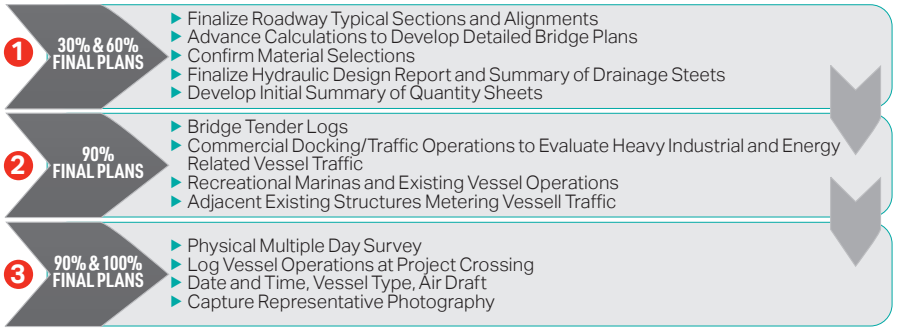
AECOM will participate in a Plan-In-Hand meeting with the PM, Bridge Design Section, and District for review, comments, etc., before finalizing and submitting the 100% Preliminary Plans to DOTD for approval. As part of this submittal, we will prepare a scope of work and man-hour estimate to develop Final Plans.

TASK 2 FINAL PLANS

Final Plan Development

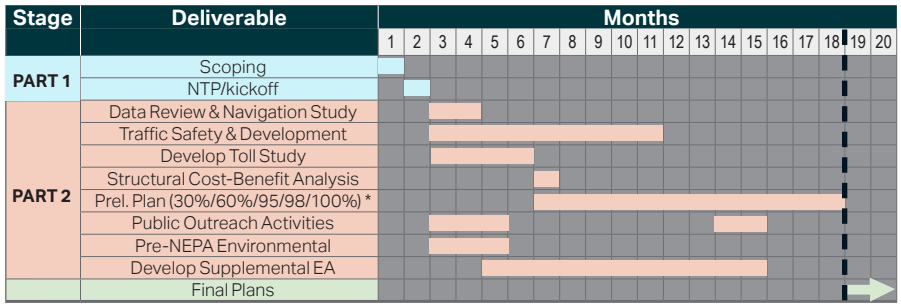
Upon approval of the SEA, AECOM will meet with the DOTD to confirm the project scope for progressing the newly completed preliminary plans. Because the Final Plan development is anticipated through a supplemental contract, the AECOM PM will meet with the DOTD PM to evaluate any impactful changes to the DOTD Bridge Design and Evaluation Manual or AASHTO LRFD Design Specifications and how those changes will impact the development of the final plans. Furthermore, the AECOM PM will coordinate with the DOTD PM to discuss and evaluate structural enhancements, optimizations, and innovations that the DOTD and AECOM have developed post preliminary plan submittal. The Final Plans stages are broken into 5 separate submittals: 30%, 60%, 90%, 98%, and 100%.

To accomplish the Final Plans AECOM will perform the following:



Project Schedule

To accomplish the Peters Road Bridge Extension Phase 3 Project within the anticipated 18-month schedule, AECOM proposes that the following schedule of activities occur as seen below.



* Preliminary plans to progress to a point satisfactory to complete the supplemental EA and conclude the FONSI. Estimated time to complete Peters Road Bridge Extension Phase 3 is 18 months. Evaluation of a compressed delivery schedule will be discussed with the DOTD PM as design progresses.

Quality Assurance/Quality Control

A QA/QC program is essential for a successful project and we are committed to this DOTD policy. Please refer to AECOM's QA/QC program for the Peters Road Bridge Extension project that is fully detailed and attached in this proposal.

AECOM

Sections

19-23

AECOM

The Horseshoe Design-Build Project, Dallas, TX

Bridge replacement over Trinity River and Levee System.

Three (of four) completed spliced girder horseshow bridges carrying both directions of IH-35E over the Trinity River.

Services: detailed bridge design.

Delivering a better world

19. Workload

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
AECOM TECHNNICAL SERVICES, INC.	Bridge	H.015603.5	LA 641 Bridge Load Rating Services	$95,340
	Bridge	H.009859.5	TO#1 Bridge Load Rating Services	1,009,026
		H.004273.5	I-49 Connector	See below
	Planning		Tasks 1, 5, 6, 12	514,486
	Traffic		Task 2	34,207
	Road		Task 4	14,923
	Bridge		Task 8	5,335
	Environmental		Task 10	N/A
	Bridge		Task 301	N/A
	Bridge		Task 302	95,000
	Bridge		Task 408	122,179
MARRERO, COUVILLON & ASSOCIATES, L.L. C.	Road	H.015052	I-20 Widening Overlay	$320,028

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
VECTURA CONSULTING SERVICES, LLC	Traffic	4400017293 H.010616	I-20: LA 544 Overpass Replacement	$10,746
	Traffic	4400005484 H.005168.2	New Orleans Rail Gateway Avondale EA	360,988
	CE&I/OV	4400020018 H.007160	EBR Computerized Traffic Signal, Ph VB	57,042
	Traffic	H.004791	Belle Chasse Bridge & Tunnel Replacement PPP	10,746
	Traffic	4400021519 H.012030.5	KCS RR Overpasses HBI	360,988
	Traffic	4400023075 H.013522	S. Lewis Street Widening	57,042
	ITS	4400016364 H.015136.1	Lake Charles Regional ITS Architecture Update	10,746
	ITS	4400017922 H.012845.1	C/AV Team and Working Group Support	360,988
	ITS	4400017922 H.014515.5	SEA ATMS and 511 System	57,042
	ITS	44000020058 H.011507.1	Monroe Phase 3 SEA	10,746
	Traffic	4400018271 H.014746.5	LA 383 Stage 0 Corridor Study	360,988
	ITS	4400016364 H.015136.1	Shreveport-Bossier Regional ITS Architecture Update	57,042
	ITS	4400016364 H.014511.1	Houma Regional ITS Architecture Update	10,746
	Traffic	4400025299 H.013421.5	Dist. 02H Flashing Yellow Arrow Part 2	360,988
	Traffic	4400025299 H.01564.5	LA 47 Hayne Blvd Safety Improvements	57,042

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
ELOS ENVIRONMENTAL, L.L.C.	Environmental	44-0019337/ H.014242	LA-124 Big Branch, Sandy, Godfrey, Beech Bridges	N/A
	Environmental	44-0019337/ H.014243	LA-472 Indian and Big Bear Creek	N/A
	Environmental	44-0019337/ H.014245	LA-119 Bayou Pierre and Creek Bridges	15
	Environmental	44-0019337/ H.014246	LA-1199 Creeks & Spring Creek	19
	Environmental	44-0019337/ H.014247	LA-399 Creeks, Little 6 Mile Creek, Flat Branch	45
	Environmental	44-0019337/ H.014247.5	LA-399 Bridges – Supplemental Task Order	N/A
	Environmental	44-0019337/ H.014248	LA-124 Creeks, Broke Leg Bayou, Boggy Bayou	14
	Environmental	44-0019337/ H.014248.5	LA-124 On site Detours-Supplemental Task Order	308
	Environmental	44-0019337/ H.014249	LA-126 Creek	849
	Environmental	44-0019337/ H.014242.5	LA-124 Bridges/Detours – Supplemental Task Order	21,473
	Environmental	44-0019337/ H.014250	LA-577 Bull Bayou and Creek Bridges	38
	Environmental	44-0019337/ H.014268	LA-4 Creeks, Bear, Squirrel, Sugar, Bill's and Lost Creek Relief	30
	Environmental	44-0019337/ H.014268.5	LA-4 Creeks, Bear, Squirrel, Sugar, Bill's and Lost Creek Relief – Additional Tasks	398
	Environmental	44-0019337/ H.014245.5	LA-119 Bayou Pierre and Creek Bridges – Additional Tasks	N/A
	Environmental	44-0027734/ H.014362	Lake Road in St. Tammany Parish	22,877
	Environmental	44-0024593/ H.015009	OSBR West Metairie Ave Bridge, South Suburban Canal	N/A
	Environmental	44-0025041/ H.015429	Carroll Ave, Middle Colyell Creek-IIJA Off-System Bridges District 62	61
	Environmental	44-0025041/ H.015430	Hood Rd, Middle Colyell Creek-IIJA Off-System Bridges District 62	51
	Environmental	44-0025041/ H.015431	Sawmill Rd, Unnamed Creek-IIJA Off-System Bridges District 62	53
	Environmental	44-0025041/ H.015432	M. Williams Rd, Spring Creek-IIJA Off-System Bridges District 62	53
	Environmental	44-0025041/ H.015433	George Jenkins Rd, Berrys Creek-IIJA Off-System Bridges District 62	64
	Environmental	44-0025041/ H.015434	Mitch Rd, Peters Creek-IIJA Off-System Bridges District 62	49
	Environmental	44-0021326/ H010074.1	DOTD Stage 0 IDIQ-LA 3089 Serve Rd/LA 70 Up	2,760

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
EUSTIS ENGINEERING, L.L.C.	Geotechnical	DOTD S.P./ Task Order No. H.015028.6. Boh Bros. Subcontract No. 23210-009. Boh Bros. Project No. 2321034. Work Order No. 23210-017	Louisiana, State of-Department of Transportation and Development, LA 302: Bayou Barataria Bridge Replacement, Phase 1, Jefferson Parish, Louisiana, Eustis Engineering Project No. 24515.02	$3,440
	Geotechnical	S.P. No. H.013897. F.A.P. No. H013897. Boh Portion 20274-026	Louisiana, State of-Department of Transportation and Development, I-10 and I-12 College Flyover Ramp Design-Build Project, East Baton Rouge Parish, Louisiana, Project No. B0646	10,090
	Geotechnical	DOTD Contract No. 4400021740. S.P. No. H.004100.6. F.A.P. No. H004100. 11265001.000 I-10 CMAR	Louisiana, State of-Department of Transportation and Development, I-10: LA Highway 415 to Essen Lane on I-10 and I-12, Phase I: West of Washington Street to Essen Lane, Phase I, Segment 01: West of Washington Street to Acadian Thruway, Route I-10, West and East Baton Rouge Parish, Louisiana, Eustis Engineering Project No. B0771	38,500

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
T. BAKER SMITH, LLC	Bridge	4400013407/ H.013199	Country Estates Dr. Over St. Louis Bayou	$799
		4400019336/ Multiple S.P. No's	Rural Bridge Replacement Initiative Phase II	115,339
		4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	134,534
	CE&I/OV	4400025760/ H.011137	I-12: LA 1077 to LA 21 (CE&I)	828,582
	Environmental	4400019336/ Multiple S.P. No's	Rural Bridge Replacement Initiative Phase II	34,658
		4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	40,849
	Other (Construction Support)	4400013203/ H.001344	US 190: LA 437 to US 190 Bus (Ph 1)	89,364
		4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	102,092
	Other (Contract Management)	4400019336/ Multiple S.P. No's	Rural Bridge Replacement Initiative Phase II	19,749
		4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	71,090
	Other (Hydraulics)	4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	3,788

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
T. BAKER SMITH, LLC	Road	4400013407/ H.013199	Country Estates Dr. Over St. Louis Bayou	$750
		4400019336/ Multiple S.P. No's	Rural Bridge Replacement Initiative Phase II	116,092
		4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	231,806
		4400024928/ H.015721 (Task Order #2)	LA 30: Roundabout @ St. Elizabeth/ S Penn	288,028
		4400024928/ H.015587 (Task Order #3)	LA 3211 @ Yokley Road Roundabout	328,282
	Survey	4400025027/ Multiple S.P. No's	IIJA Off-System Bridge Program	106,384
		4400025027/ Multiple S.P. No's	US 90 FR: Extension to LA 329	73,365
		4400021973/ H.014308	Pope Lane IC RR Xing	159,701
		4400021973/ H.016322	LA 81: W/-11 Lateral & Bayou Black Brs	84,880
		4400021973/ H.016323	LA 37: Glass Branch Bridge	42,492
		4400021973/ H.016324	LA 1047: Drain Bridge	42,623
		4400021973/ H.016326	LA 36: Drain Bridge	42,057
		4400021973/ H.016333	LA 95: Over Bayou Bridge	50,138
	SUE	4400025511/ H.012449	KCS Xings Betwn Gayosa St. & Louise (BTR)	138,308

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

ATSSA Certification

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Laurence Lambert
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/29/2022 to 4/29/2026
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.

American Traffic Safety Services Association ATSSA.com

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Gregory Trahan
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

5/19/2023 to 5/19/2027
Training Valid Through

Vice President of Education and Technical Services

New Orleans, LA
Location

President, CEO

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

American Traffic Safety Services Association ATSSA.com

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Jonathan G McDowell
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

5/19/2023 to 5/19/2027
Training Valid Through

Vice President of Education and Technical Services

New Orleans, LA
Location

President, CEO

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

American Traffic Safety Services Association ATSSA.com

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Peter Bakhit
has attended
Traffic Control Technician-LA State Specific
Training Course

9/7/2021 to 9/7/2025
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

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

American Traffic Safety Services Association ATSSA.com

Flagger, Jonathan McDowell

ATSSA

Beginning Jan. 1, 2022, all flagger cards shall include a serial number. Cards issued without a serial number will not be accepted.

**National flagger certification cards shown below. Utah cards have a slightly different appearance. All serial numbers are exactly 11 characters (1 letter + 10 numbers).*

Flagger Verification Search

By Flagger Number Beginning with "A":
A1000126301

By Flagger Number Beginning with "V":

Last Name
McDowell

SEARCH

Vectura, ATSSA Certification

SAFER ROADS SAVE LIVES

Dear Certified Flagger:

Enclosed, please find your card signifying you as an ATSSA Certified Flagger. This card should be carried and presented to employers while performing work on our nation's roadways. Please be aware that the card is not valid without a Photo I.D.

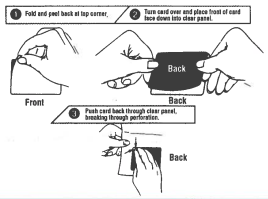
We commend you on your decision to become an ATSSA Certified Flagger. This distinction reflects that you have been trained by the leader in roadway safety and also entitles you to be listed on our National Flagger Database. Please review your state requirements for expiration of your flagger card. Also, please inform us of any errors or changes in your name or address so we may keep our records up to date.

Once again, ATSSA thanks you for your dedication to ensuring that our work zones are safe and that lives will be saved with proper training. Please visit our website at www.atssa.com for additional training courses and work zone safety products.

Sincerely,

Director of Training

Laminating the front of your card with Dual Laminate:



American Traffic Safety Services Association

This is to affirm that

Bridget Robicheaux

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER ATSSA

Issue Date 5/6/2022

Exp. Date 5/5/2026

State Issued LA

A1000060707

Instructor Signature

Verify at Flagger.com

American Traffic Safety Services Association
15 Riverside Parkway, Suite 100 • Fredericksburg, VA 22406-1077
Office: 540-368-1701 • Toll-Free: 800-272-8772 • Fax: 540-368-1717
www.atssa.com

SAFER ROADS SAVE LIVES

Dear Certified Flagger:

Enclosed, please find your card signifying you as an ATSSA Certified Flagger. This card should be carried and presented to employers while performing work on our nation's roadways. Please be aware that the card is not valid without a Photo I.D.

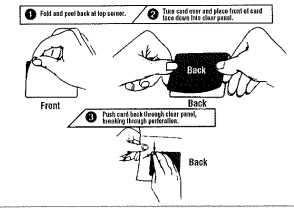
We commend you on your decision to become an ATSSA Certified Flagger. This distinction reflects that you have been trained by the leader in roadway safety and also entitles you to be listed on our National Flagger Database. Please review your state requirements for expiration of your flagger card. Also, please inform us of any errors or changes in your name or address so we may keep our records up to date.

Once again, ATSSA thanks you for your dedication to ensuring that our work zones are safe and that lives will be saved with proper training. Please visit our website at www.atssa.com for additional training courses and work zone safety products.

Sincerely,

VP of Education and Technical Services

Laminating the front of your card with Dual Laminate:



American Traffic Safety Services Association

This is to affirm that

Laurence Lambert

has satisfied the requirements to be designated as a

CERTIFIED FLAGGER ATSSA

Issue Date 5/9/2023

Exp. Date 5/8/2027

State Issued LA

A1000126196

Instructor Name

Instructor Signature

Verify at Flagger.com

American Traffic Safety Services Association
15 Riverside Parkway, Suite 100 • Fredericksburg, VA 22406-1077
Office: 540-368-1701 • Toll-Free: 800-272-8772 • Fax: 540-368-1717
www.atssa.com

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Vectura, ATSSA Certification

ATSSA
SAFER ROADS SAVE LIVES

Dear Certified Flagger:

Enclosed, please find your card signifying you as an ATSSA Certified Flagger. This card should be carried and presented to employers while performing work on our nation's roadways. Please be aware that the card is not valid without a Photo I.D.

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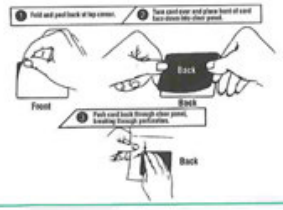
Once again, ATSSA thanks you for your dedication to ensuring that our work zones are safe and that lives will be saved with proper training. Please visit our website at www.atssa.com for additional training courses and work zone safety products.

Sincerely,

Donna M. Clark

VP of Education and Technical Services

Laminating the front of your card with Dual Laminate:



American Traffic Safety Services Association
15 Riverside Parkway, Suite 100 • Fredericksburg, VA 22406-1077
Office: 540-368-1701 • Toll-Free: 800-272-8772 • Fax: 540-368-1717
www.atssa.com

ATSSA
SAFER ROADS SAVE LIVES

Dear Certified Flagger:

Enclosed, please find your card signifying you as an ATSSA Certified Flagger. This card should be carried and presented to employers while performing work on our nation's roadways. Please be aware that the card is not valid without a Photo I.D.

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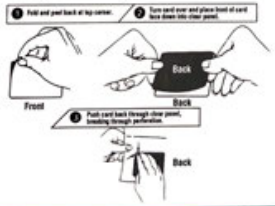
Once again, ATSSA thanks you for your dedication to ensuring that our work zones are safe and that lives will be saved with proper training. Please visit our website at www.atssa.com for additional training courses and work zone safety products.

Sincerely,

Director of Training

Laminating the front of your card with Dual Laminate:



American Traffic Safety Services Association
15 Riverside Parkway, Suite 100 • Fredericksburg, VA 22406-1077
Office: 540-368-1701 • Toll-Free: 800-272-8772 • Fax: 540-368-1717
www.atssa.com

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Vectura, ATSSA Certification

TRAFFIC DOC, L.L.C.
Thomas L. Ervin
269 Evangeline Drive
Mandeville, LA 70471
985.373.0534 Mobile

May 4, 2022

To Whom It May Concern,

This is to certify that the below listed employees of Vector Consulting Services, LLC have successfully completed traffic control training courses presented by the American Traffic Safety Services Association (ATSSA) and in accordance with the requirements of the Louisiana Department of Transportation & Development (DOTD).

LA Specific Traffic Control Supervisor Refresher (TCS REFRESHER) – Baton Rouge, LA – 04-27/28-22 – Sheelagh "Brin" Ferlito & Laurance Lambert

This letter will serve as temporary proof of training until the above listed employees receive their official course completion certificates from the American Traffic Safety Services Association (ATSSA). This letter will expire 90 days from the date of issue. Should there be any questions concerning this matter, please contact the undersigned at the above captioned address.

Yours in safety,

Thomas L. Ervin, ATSSA Master Instructor

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Vectura, ATSSA Certification

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Vectura, ATSSA Certification

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Bridget Robicheaux

has attended

Traffic Control Technician-LA State Specific

Training Course

6/21/2022 to 6/21/2026
Training Valid Through

Director of Training

Baton Rouge, LA
Location

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

Vectura, ATSSA Certification

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Brin Ferlito
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/29/2022 to 4/29/2026
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

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Reece Rodrigue
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

3/10/2023 to 3/10/2027
Training Valid Through

Vice President of Education and Technical Services

New Orleans, LA
Location

President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Laurence Lambert
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/29/2022 to 4/29/2026
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

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Kristen Farrington
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/5/2021 to 4/5/2025
Training Valid Through

Director of Training

Baton Rouge, LA
Location

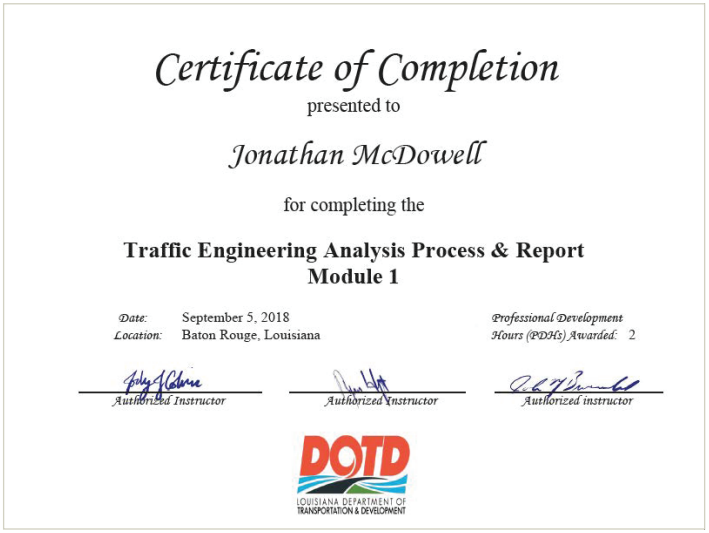
President, CEO

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

ATSSA American Traffic Safety Services Association ATSSA.com

LTRC Certification

AECOM, Jonathan McDowell



Certificate of Completion

presented to

Jonathan McDowell

for completing the

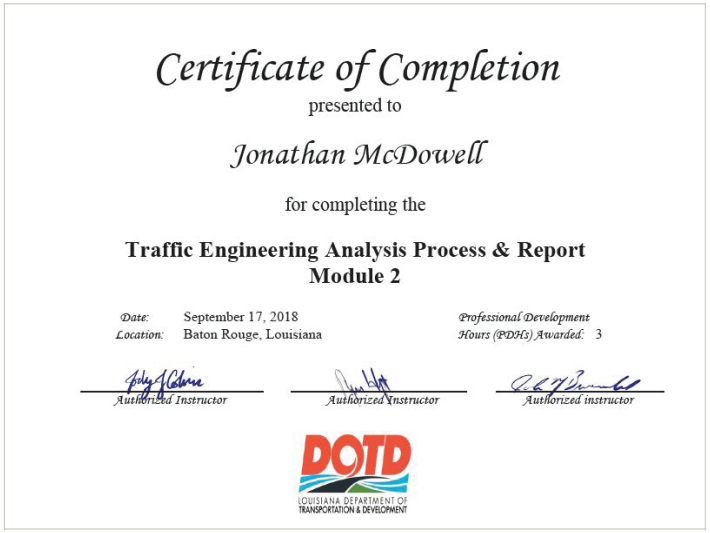
Traffic Engineering Analysis Process & Report
Module 1

Date: September 5, 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

Jonathan McDowell

for completing the

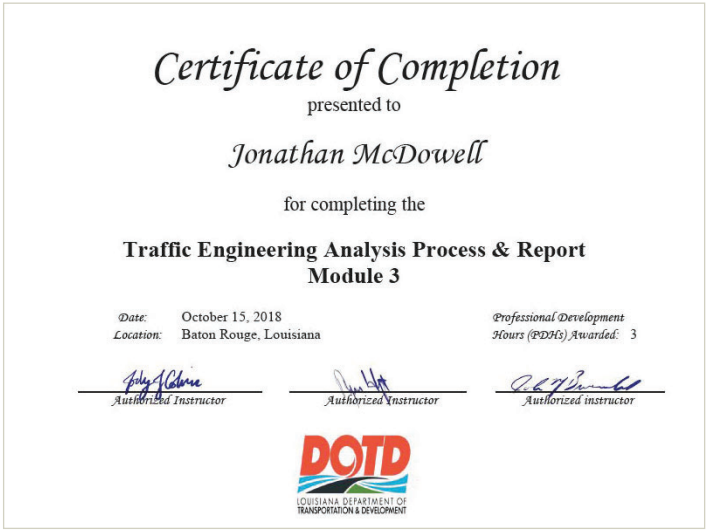
Traffic Engineering Analysis Process & Report
Module 2

Date: September 17, 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

Jonathan McDowell

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

AECOM, Gregory Trahan

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana
Professional Development Hours (PDH) Awarded: 2

DOTD

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 2

Date: July 25, 2018
Location: Baton Rouge, Louisiana
Professional Development Hours (PDH) Awarded: 3

DOTD

Certificate of Completion

presented to

Gregory Trahan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 29, 2018
Location: Baton Rouge, Louisiana
Professional Development Hours (PDH) Awarded: 3

DOTD

Certificate of Training

this certifies that

Gregory Trahan

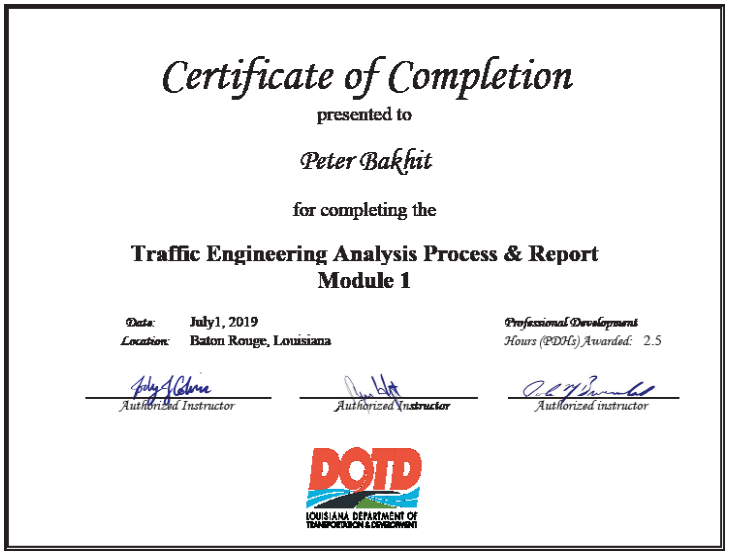
has successfully completed the training program requirements for

National Flagger Certification Training Course

Awarded on this **11th** *day of* **May 2023**

This certificate is valid for 30 days from the date awarded.

AECOM, Peter Bakhit



Certificate of Completion

presented to

Peter Bakhit

for completing the

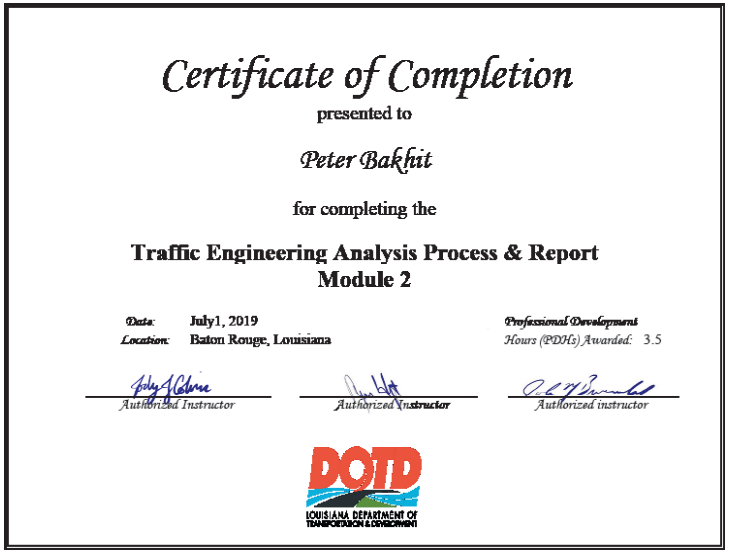
Traffic Engineering Analysis Process & Report
Module 1

Date: July1, 2019
Location: Baton Rouge, Louisiana

Professional Development
Hours (PDHs) Awarded: 2.5

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Peter Bakhit

for completing the

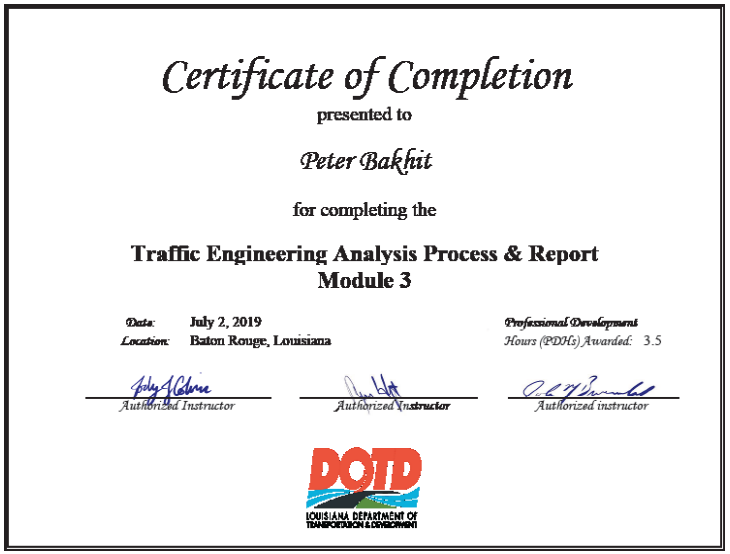
Traffic Engineering Analysis Process & Report
Module 2

Date: July1, 2019
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

Peter Bakhit

for completing the

Traffic Engineering Analysis Process & Report
Module 3

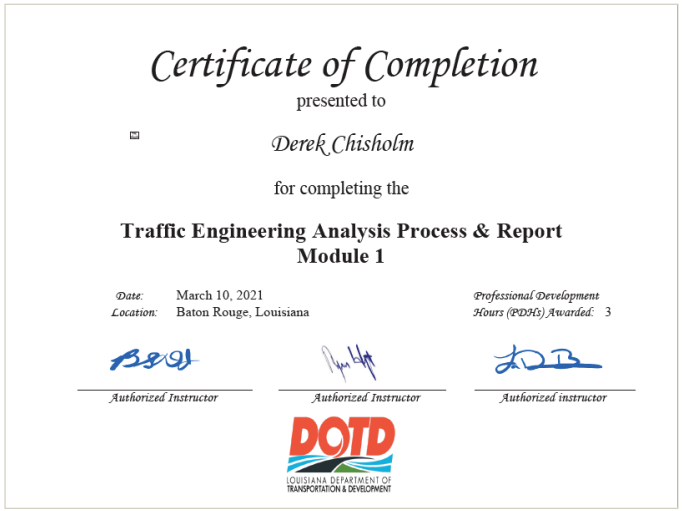
Date: July 2, 2019
Location: Baton Rouge, Louisiana

Professional Development
Hours (PDHs) Awarded: 3.5

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

AECOM, Derek Chisholm



Certificate of Completion

presented to

Derek Chisholm

for completing the

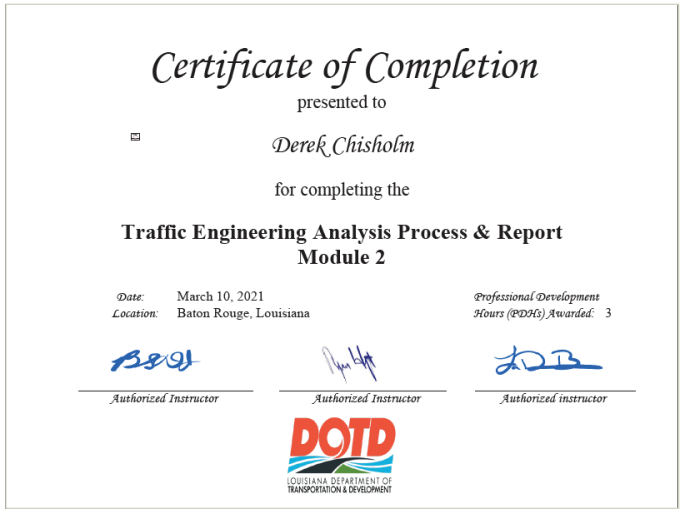
Traffic Engineering Analysis Process & Report
Module 1

Date: March 10, 2021
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

Derek Chisholm

for completing the

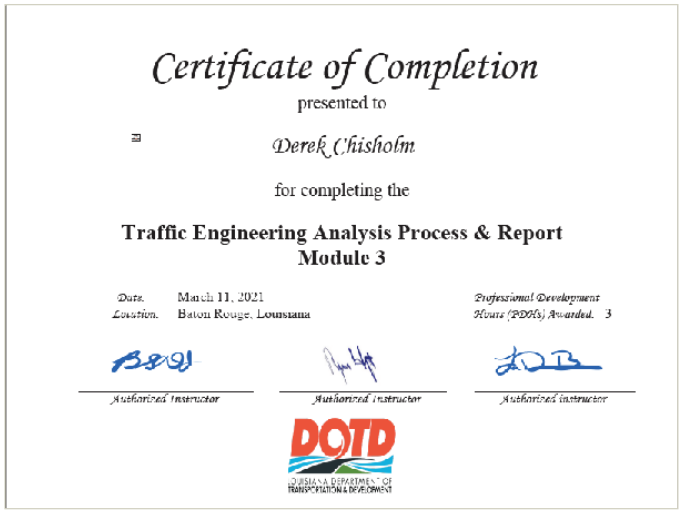
Traffic Engineering Analysis Process & Report
Module 2

Date: March 10, 2021
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

Derek Chisholm

for completing the

Traffic Engineering Analysis Process & Report
Module 3

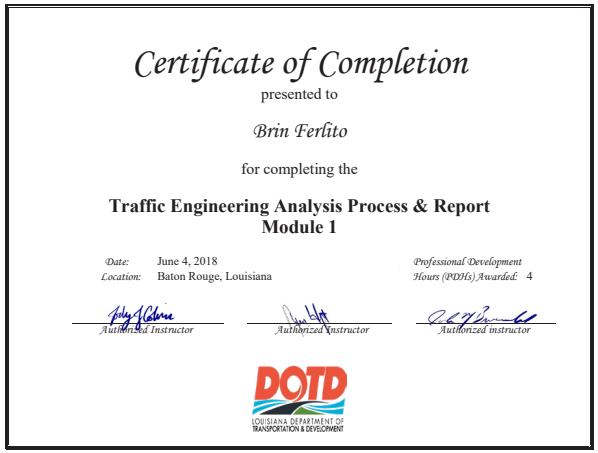
Date: March 11, 2021
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Vectura, Brin Ferlito



Certificate of Completion

presented to

Brin Ferlito

for completing the

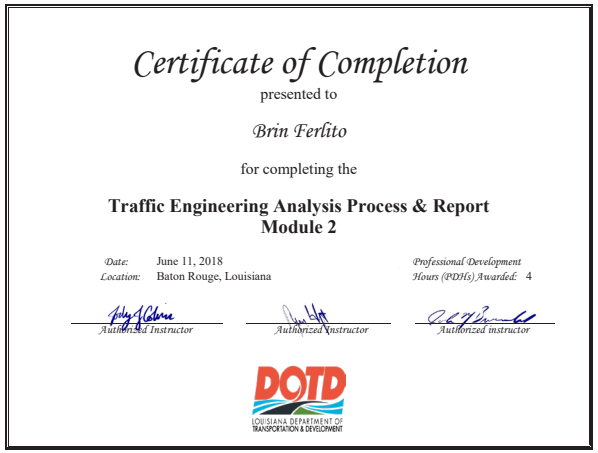
Traffic Engineering Analysis Process & Report
Module 1

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

Brin Ferlito

for completing the

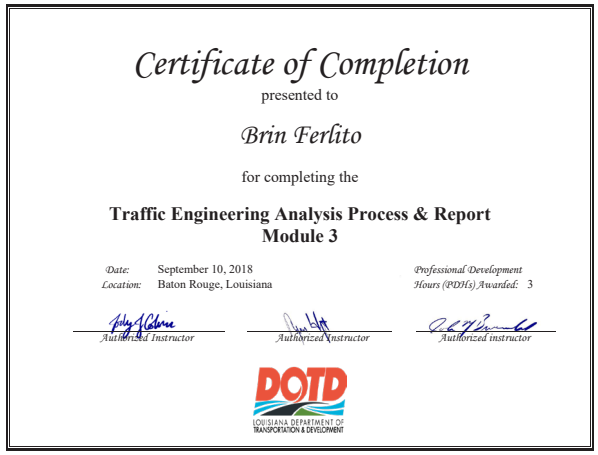
Traffic Engineering Analysis Process & Report
Module 2

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

Brin Ferlito

for completing the

Traffic Engineering Analysis Process & Report
Module 3

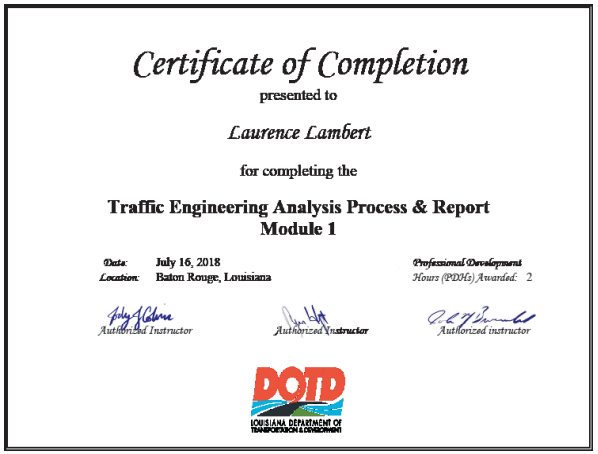
Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD Louisiana Department of Transportation & Development

Vectura, Laurence Lambert



Certificate of Completion

presented to

Laurence Lambert

for completing the

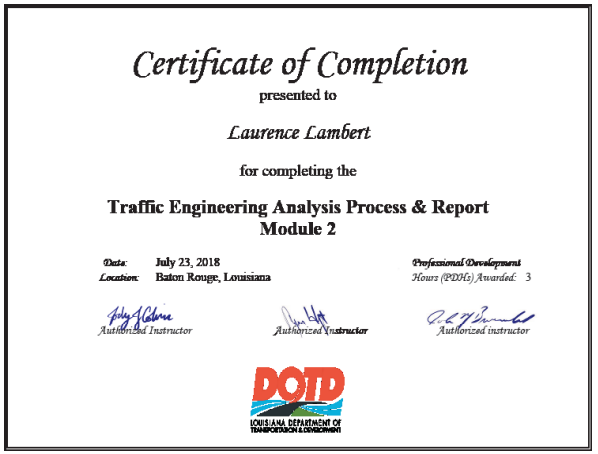
Traffic Engineering Analysis Process & Report
Module 1

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

Laurence Lambert

for completing the

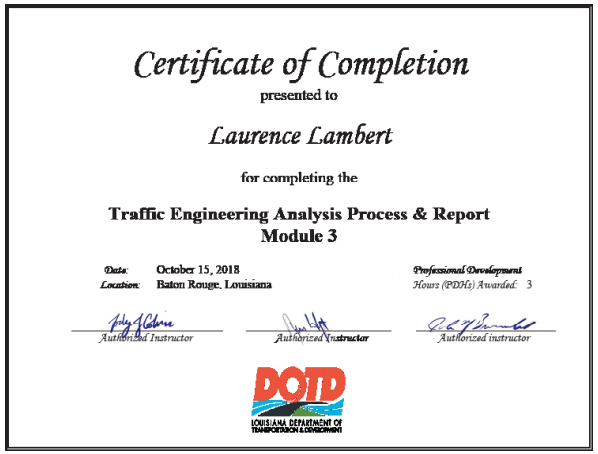
Traffic Engineering Analysis Process & Report
Module 2

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

Laurence Lambert

for completing the

Traffic Engineering Analysis Process & Report
Module 3

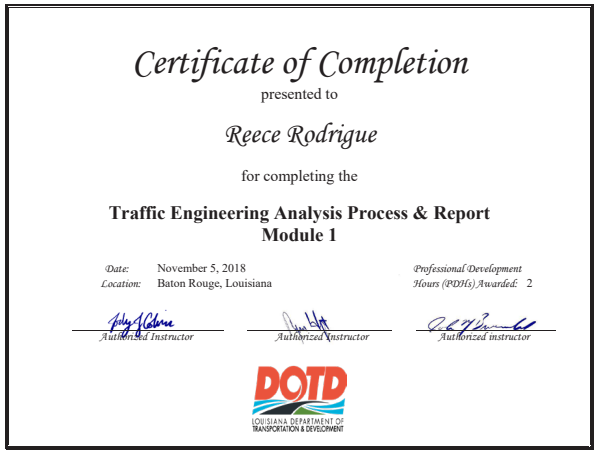
Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD Louisiana Department of Transportation & Development

Vectura, Reece Rodrique



Certificate of Completion

presented to

Reece Rodrigue

for completing the

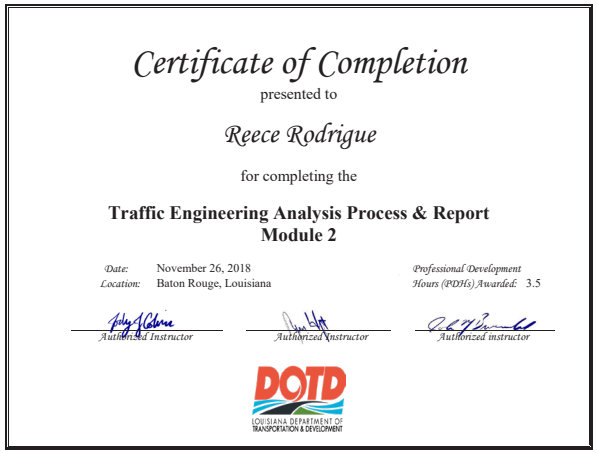
Traffic Engineering Analysis Process & Report
Module 1

Date: November 5, 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

Reece Rodrigue

for completing the

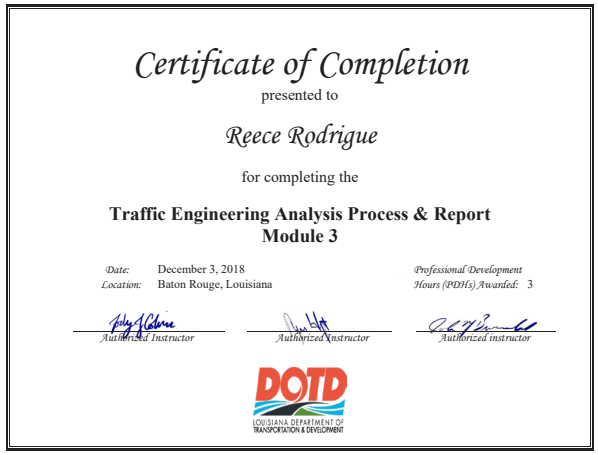
Traffic Engineering Analysis Process & Report
Module 2

Date: November 26, 2018
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

Reece Rodrigue

for completing the

Traffic Engineering Analysis Process & Report
Module 3

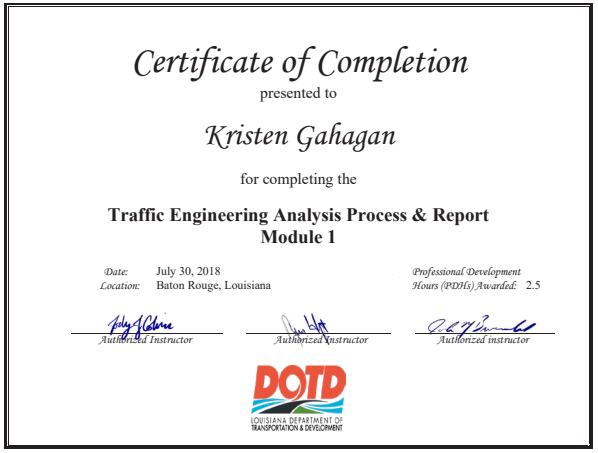
Date: December 3, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Vectura, Kristen Gahagan Farrington



Certificate of Completion

presented to

Kristen Gahagan

for completing the

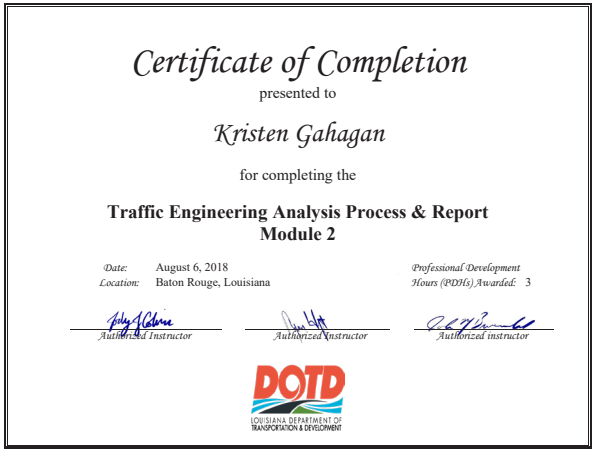
Traffic Engineering Analysis Process & Report
Module 1

Date: July 30, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kristen Gahagan

for completing the

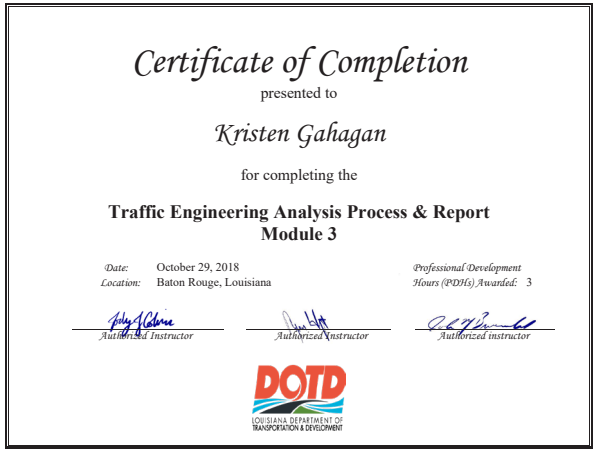
Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 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

Kristen Gahagan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

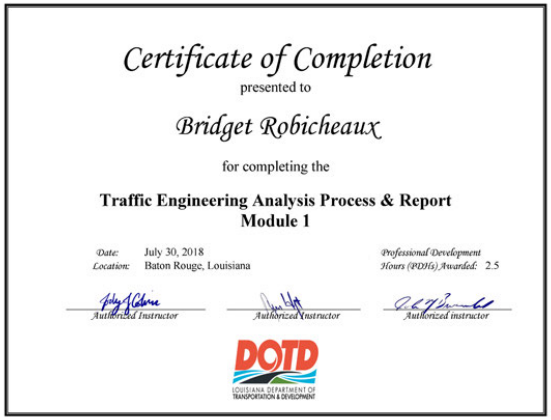
Date: October 29, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Vectura, Bridget Robicheaux



Certificate of Completion

presented to

Bridget Robicheaux

for completing the

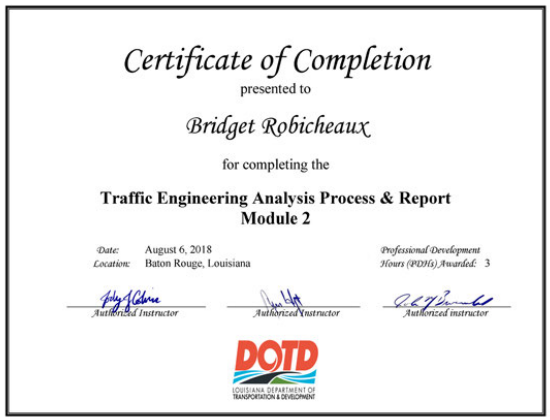
Traffic Engineering Analysis Process & Report
Module 1

Date: July 30, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Bridget Robicheaux

for completing the

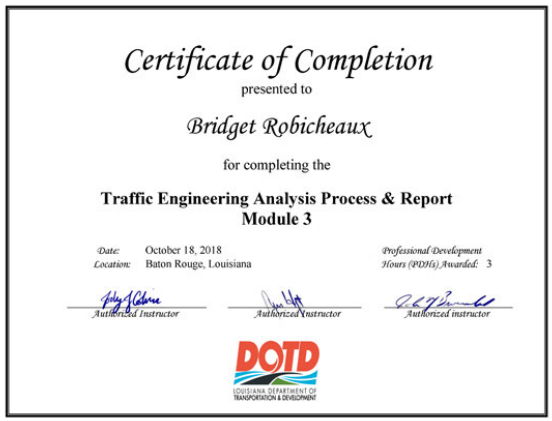
Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 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

Bridget Robicheaux

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 18, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

The Transportation Professional Certification Board

Certifies that

Dr. Peter Bakhit, P.E., PTOE

successfully renewed the Professional Traffic Operations Engineer® certification

Original Certification Date: 7/9/2024

Certification Valid Through: 7/9/2027

Jeffrey F. Paniati,
Executive Director and CEO

Joseph C. Balskus, P.E., PTOE, RSP1
TPCB Chair

Certification Number: 5713

PTOE, Vectura, Brin Ferlito

Transportation Professional Certification Board Inc.
1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Ms. Sheelagh B. Ferlito, P.E., PTOE
Vectura Consulting Services, LLC
P.O. Box 14269
Baton Rouge, LA 70898
USA

Dear Ms. Ferlito,

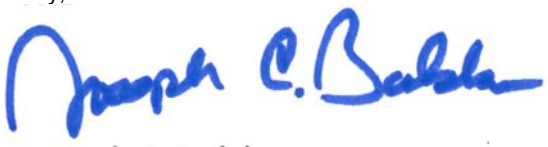
Thank you for renewing your certification as a Professional Traffic Operations Engineer® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 9/9/2027.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,



Joseph C. Balskus, P.E., PTOE, RSP1
Chair, Transportation Professional Certification Board Inc.

PTOE, Vectura, Kristen Gahagan Farrington

Transportation Professional Certification Board Inc.
1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Mrs. Kristen Gahagan Farrington, P.E., PTOE, RSP1
4004 Hastings Street
Metairie, LA 70002
USA

Dear Mrs. Farrington,

Thank you for renewing your certification as a Professional Traffic Operations Engineer® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 3/26/2026.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,

Joseph C. Balskus, P.E., PTOE, RSP1
Chair, Transportation Professional Certification Board Inc.

PTOE, Vectura, Reece Rodrique

Reece Rodrigue, PE, PTOE
Vectura Consulting Services, LLC
m. 504.421.2782

From: info@ite.org <info@ite.org>
Sent: Friday, May 6, 2022 8:20 AM
To: Reece Rodrigue <rrodrigue@vecturacs.com>
Subject: TPCB Renewal Approval Notice

Transportation Professional Certificatic

1627 Eye Street, NW • Suite 600 • Washington, DC 20006 USA • Tel: 202-785-0060 • F

Mr. Reece J. Rodrigue, P.E., PTOE
Vectura Consulting Services, LLC

Thank you for renewing your certification as a Professional Traffic Operations Engineer®® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 7/17/2025.

You will not be receiving a new certificate as the one sent to you does not indicate an expiration date and can be displayed as long as you are a certified PTOE. Note that your certificate shows your original certification date.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements described in the enclosed attachment.

Prior to the expiration of your PTOE, you will be notified of your renewal deadline. Additional examinations are not required if you renew within three-months of your expiration date 7/17/2025. Failure to renew within the 3-month grace period will result in a certified inactive letter and penalty fees for renewal. Visit our website for more information. http://www.tpcb.org/PTOE/feeschedule.asp

TPCB seeks to maintain the highest level of quality for its certification programs. Since its inception, the TPCB has required its certificants to maintain records with regard fulfillment of continuing education requirements. Please be advised that as of January 1, 2018, TPCB is phasing in a policy in which 20% of certificant renewals will be randomly

PTOE, Vectura, Laurence Lambert

The Transportation Professional Certification Board

Certifies that

Mr. Laurence L. Lambert, II, P.E., PTOE, PTP

successfully holds the Professional Traffic Operations Engineer® certification

Original Certification Date: 2/3/2004

Certification Valid Through: 2/3/2028

Steve Kuciemba,
Executive Director and CEO

Joseph C. Balskus, P.E., PTOE, RSP1
TPCB Chair

Certification Number: 1303

Vectura, PTOE

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 600 • Washington, DC 20006 USA • Tel: 202-785-0060 • Fax: 202-785-0609 • www.tpcb.org

Ms. Sheelagh B. Ferlito, P.E., PTOE
Vectura Consulting Services, LLC

Thank you for renewing your certification as a Professional Traffic Operations Engineer®® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 9/9/2024.

You will not be receiving a new certificate as the one sent to you does not indicate an expiration date and can be displayed as long as you are a certified PTOE. Note that your certificate shows your original certification date.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements described in the enclosed attachment.

Prior to the expiration of your PTOE, you will be notified of your renewal deadline. Additional examinations are not required if you renew within three-months of your expiration date 9/9/2024. Failure to renew within the 3-month grace period will result in a certified inactive letter and penalty fees for renewal. Visit our website for more information. http://www.tpcb.org/PTOE/feeschedule.asp

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The TPCB continues its efforts to grow and enhance the value of the PTOE and its other certifications. In 2019 the TPCB web site was redesigned and a new certification – the Road Safety Professional – was launched. Going forward the TPCB is committed to expanding the awareness of its certification programs, encouraging jurisdictions to give preference to certificants and growing the number of certified professionals.

The TPCB distributes a quarterly newsletter and highlights the value of the its certification programs through the tpcb.org website. If you would like to contribute to the newsletter or website, please send any items of interest to: certification@tpcb.org.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,

Deborah L. Snyder, P.E., PTOE
Chair, Transportation Professional Certification Board Inc.

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 500 • Washington, DC 20006 USA • Tel: 202-785-0060 • Fax: 202-785-0609 • www.tpcb.org

Mr. Laurence L. Lambert, II, P.E., PTOE, PTP
Vectura Consulting Services, LLC
PO Box 14269
Baton Rouge, LA 70898-4269 USA

Thank you for renewing your certification as a Professional Traffic Operations Engineer® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 2/3/2025.

You will not be receiving a new certificate as the one sent to you does not indicate an expiration date and can be displayed as long as you are a certified PTOE. Note that your certificate shows your original certification date.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements described in the enclosed attachment.

Prior to the expiration of your PTOE, you will be notified of your renewal deadline. Additional examinations are not required if you renew within **three-months** of your expiration date 2/3/2025. Failure to renew within the 3-month grace period will result in a certified inactive letter and penalty fees for renewal. Visit our website for more information. http://www.tpcb.org/PTOE/feeschedule.asp

TPCB seeks to maintain the highest level of quality for its certification programs. Since its inception, the TPCB has required its certificants to maintain records with regard fulfillment of continuing education requirements. Please be advised that as of January 1, 2018, TPCB is phasing in a policy in which 20% of certificant renewals will be randomly selected for audit and the certificant will be required to provide documentation (certificates of completion, course syllabus, meeting agenda/registration, etc.) to demonstration fulfillment of continuing education requirements. The professional record-keeping system available from ITE, provides a resource to record the dates of completion of continuing education and maintain the necessary supporting documentation.

The TPCB continues its efforts to grow and enhance the value of the PTOE and its other certifications. In 2019 the TPCB web site was redesigned and a new certification – the Road Safety Professional – was launched. Going forward the TPCB is committed to expanding the awareness of its certification programs, encouraging jurisdictions to give preference to certificants and growing the number of certified professionals.

The TPCB distributes a quarterly newsletter and highlights the value of the its certification programs through the tpcb.org website. If you would like to contribute to the newsletter or website, please send any items of interest to: certification@tpcb.org.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,

Deborah L. Snyder, P.E., PTOE
Chair, Transportation Professional Certification Board Inc.

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Mrs. Bridget S. Robicheaux, P.E., PTOE
6410 Louis XIV Street
New Orleans, LA 70124
USA

Dear Mrs. Robicheaux,

Thank you for renewing your certification as a Professional Traffic Operations Engineer® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 3/26/2026.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,

Joseph C. Balskus, P.E., PTOE, RSP1
Chair, Transportation Professional Certification Board Inc.

Vectura, PTOE

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Mr. Reece J. Rodrigue, P.E., PTOE

Congratulations! It is my pleasure to inform you that you have passed the written examination and are now certified as a Road Safety Professional® (Level 1)® As a RSP1 you will be recognized as one of a specialized group of professionals with the set of skills and expertise needed to successfully solve problems, create solutions, and better communities.

Important Notes

You will receive a letter with your specific exam details within the next few weeks.

Your certificate will be mailed to you within 10 weeks, but while you are waiting, you should note that your certificate number is **1,013.**Should you wish your name to appear on your certificate any differently from how it appears below, please reach out to me immediately at certification@tpcb.org

Mr. Reece J. Rodrigue, P.E., PTOE

One final requirement before using the (recipient description) and/or the initials RSP1 in the conduct of your professional practice is that there be no balance on your account. You can view this by pulling up your TPCB profile. If you have a balance, please contact certification@tpcb.org to make final payment.

Renewal of Your Certification

Your initial certification fee covers a three-year period and will expire 3/20/2026. At the end of the three-year period, your certification may be renewed without examination if you demonstrate that you have met the continuing education requirements and have the proper number of professional development hours (PDHs) or certification maintenance credits (CMs). The specific components of the required continuing education will be included in the letter with your exam details as well as information about how to keep track of your PDHs/CMs so that when it comes time to renew, it is a relatively simple process. A link to PDH/CM requirements is provided here .

There are two ways you can track your PDHs/CMs:

ITE Record Keeping System: If you are a member of ITE, you have access to the free record-keeping system which can be found here. Certificants who are not members of ITE can choose to subscribe to the ITE Record Keeping System for a $75 3-year subscription fee. Professional Development Record Keeping System - Institute of Transportation Engineers (ite.org)

Transportation Professional Certification Board Inc.

1627 Eye Street, NW • Suite 550 • Washington, DC 20006 USA • Tel: 202-785-0060 • www.tpcb.org

Mrs. Kristen Gahagan Farrington, P.E., PTOE, RSP1
4004 Hastings Street
Metairie, LA 70002
USA

Dear Mrs. Farrington,

Thank you for renewing your certification as a Professional Traffic Operations Engineer® (PTOE). The Transportation Professional Certification Board (TPCB) congrats you for your continued commitment to your profession. As a PTOE you will be recognized as one of a specialized group of professional Traffic Operations Engineers with the set of skills and expertise needed to build better communities.

Your certification is renewed through 3/26/2026.

At the end of the three-year period, your certification will be renewed without examination provided you have met the continuing education requirements.

Thank you for your continued PTOE certification and best wishes in the coming years.

Sincerely,

Joseph C. Balskus, P.E., PTOE, RSP1
Chair, Transportation Professional Certification Board Inc.

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NATIONAL HIGHWAY INSTITUTE

Derek Chisholm

has participated in

FHWA-NHI-142005 NEPA and Transportation Decision-Making

hosted by

Tennessee Department of Transportation

Date: November 4-6, 2014

Hours of Instruction: 18 hours

Location: TDOT Region 1, Knoxville

Instructor

Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

U.S. Department
Of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Certificate of Training

Jonathan McDowell

has participated in

NHI Course No. 142005 –
NEPA and Transportation Decision Making

hosted by

LA DOTD/LTRC

Date: **January 10-12, 2012**

Hours of Instruction: **18**

Location: **Baton Rouge, LA**

Instructor

Instructor

Local Coordinator

Richard Barnaby, Director
National Highway Institute

NEPA NHI Course, Vecture

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

Certificate of Training

BRIN FERLITO

has participated in

FHWA-NHI-142005 NEPA and the Transportation Decisionmaking Process

hosted by

LA DOTD/LTRC

Date: *August 10-12, 2022* *Hours of Instruction:* 18

Location: *Baton Rouge, LA*

Instructor

Instructor

Allison H. Landry
Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

nhi national highway institute

Certificate of Training

KRISTEN FARRINGTON

has participated in

FHWA-NHI-142005 NEPA and the Transportation Decisionmaking Process

hosted by

LA DOTD/LTRC

Date: *August 10-12, 2022* *Hours of Instruction:* 18

Location: *Baton Rouge, LA*

Instructor

Instructor

Allison H. Landry
Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

The Transportation Professional Certification Board

Certifies that

Gregory Dale Trahan, P.E., RSP1

successfully holds the Road Safety Professional® (Level 1) certification

Original Certification Date: 3/14/2022

Certification Valid Through: 3/14/2028

Steve Kuciemba,
Executive Director and CEO

Joseph C. Balskus, P.E., PTOE, RSP1
TPCB Chair

Certification Number: 833

RSP, Vectura

Transportation Professional Certification Board, Inc.

certifies that

Reece J. Rodrigue

has met all of the requirements established by the Certification Board
to use the title of

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 1018 issued in Washington, DC, USA

3/20/23

Joseph C. Baldwin
Chair

ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

Kristen Gahagan Farrington

has met all of the requirements established by the Certification Board
to use the title of

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 916 issued in Washington, DC, USA

11/23/2022

Deborah Snyder
Chair

ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

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
AECOM TECHNICAL SERVICES, INC.	Business Corporation (Non-Louisiana)	LOS ANGELES	Active

Previous Names

EARTH TECH, INC. (OF CALIFORNIA) (Changed: 12/8/2008)

Business: AECOM TECHNICAL SERVICES, INC.
Charter Number: 34545989F
Registration Date: 12/20/1996
Domicile Address
515 S. FLOWER ST.
SUITE 1050
LOS ANGELES, CA 90071
Mailing Address
300 SOUTH GRAND AVENUE, 9TH FLOOR
LOS ANGELES, CA 90071
Principal Business Office
300 SOUTH GRAND AVENUE, 9TH FLOOR
LOS ANGELES, CA 90071
Registered Office in Louisiana
3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816
Principal Business Establishment in Louisiana
5615 CORPORATE BLVD., STE. 400B
BATON ROUGE, LA 70808

Status

Status: **Active**
Annual Report Status: **In Good Standing**
Qualified: 12/20/1996
Last Report Filed: 11/21/2024
Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent: C T CORPORATION SYSTEM
Address 1: 3867 PLAZA TOWER DR.
City, State, Zip: BATON ROUGE, LA 70816

Appointment Date: 12/20/1996

Officer(s)

Additional Officers: No

Officer: MATTHEW CRANE
Title: President, Director
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: ARMOND TATEVOSSIAN
Title: Director, Secretary
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: ALLISON HALL
Title: Treasurer, Director, Officer
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: KARL JENSEN
Title: Director
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: ANDREW CEITLIN
Title: Officer
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: KENNETH V. BUTLER
Title: Officer
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Officer: JOHN J. CARDONI
Title: Officer
Address 1: 300 SOUTH GRAND AVENUE, 9TH FLOOR
City, State, Zip: LOS ANGELES, CA 90071

Amendments on File (5)

Description	Date
Stmt of Chg or Chg Prin Bus Off	1/29/2008
Name Change	12/8/2008
Stmt of Chg or Chg Prin Bus Off	10/18/2015
Disclosure of Ownership	7/25/2016
Appointing, Change, or Resign of Officer	5/3/2021

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Fax Numbers
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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)

Description	Date
Amendment	1/16/2001
Domestic LLC Agent/Domicile Change	1/16/2001
Amendment	9/19/2001
Domestic LLC Agent/Domicile Change	6/11/2010
Domestic LLC Agent/Domicile Change	7/16/2013
Domestic LLC Agent/Domicile Change	10/4/2013
Amendment	4/14/2016
Amendment	12/1/2017
Domestic LLC Agent/Domicile Change	8/4/2023

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

Name	Type	City	Status
VECTURA CONSULTING SERVICES, LLC	Limited Liability Company	BATON ROUGE	Active

Previous Names

Business: VECTURA CONSULTING SERVICES, LLC
Charter Number: 41994609K
Registration Date: 8/24/2015
Domicile Address
4467 BLUEBONNET BLVD.
SUITE A
BATON ROUGE, LA 708099639
Mailing Address
PO BOX 14269
BATON ROUGE, LA 70898

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 8/24/2015
Last Report Filed: 7/26/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: SHEELAGH BRIN FERLITO
Address 1: 4467 BLUEBONNET BLVD
Address 2: SUITE A
City, State, Zip: BATON ROUGE, LA 708099639
Appointment Date: 8/15/2018

Officer(s)

Additional Officers: No

Officer: SHEELAGH BRIN FERLITO
Title: Manager
Address 1: 4467 BLUEBONNET BLVD
Address 2: SUITE A
City, State, Zip: BATON ROUGE, LA 708099639

Officer: LAURENCE LAMBERT
Title: Member
Address 1: 4467 BLUEBONNET BLVD
Address 2: SUITE A
City, State, Zip: BATON ROUGE, LA 708099639

Amendments on File (1)

Description	Date
Domestic LLC Agent/Domicile Change	6/8/2023

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Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
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Name	Type	City	Status
ELOS ENVIRONMENTAL, L.L.C.	Limited Liability Company	HAMMOND	Inactive

Previous Names

KREBS LASALLE ENVIRONMENTAL, L.L.C. (Changed: 12/16/2011)

Business: ELOS ENVIRONMENTAL, L.L.C.
Charter Number: 36335970K
Registration Date: 12/15/2006
Domicile Address
607 WEST MORRIS AVE
HAMMOND, LA 70403
Mailing Address
C/O LUCAS WATKINS
607 WEST MORRIS AVE
HAMMOND, LA 70403

Status

Status: **Inactive**
Inactive Reason:
File Date: 12/15/2006
Last Report Filed: 11/21/2022
Type: Limited Liability Company

Registered Agent(s)

Agent: JENNIFER LEE
Address 1: 111 NORTH OAK STREET
Address 2: SUITE 200
City, State, Zip: HAMMOND, LA 70401
Appointment Date: 1/24/2019

Officer(s)

Additional Officers: No

Officer: JAMES M. PRATHER, III
Title: Manager
Address 1: 607 WEST MORRIS AVE
City, State, Zip: HAMMOND, LA 70403

Officer: LUCAS WATKINS
Title: Manager
Address 1: 607 WEST MORRIS AVE
City, State, Zip: HAMMOND, LA 70403

Mergers (1)

Filed Date	Effective Date:	Type	Charter#	Chater Name	Role
10/11/2023	10/12/2023	MERGE	36335970K	ELOS ENVIRONMENTAL, L.L.C.	NON-SURVIVOR

Amendments on File (4)

Description	Date
Name Change	12/16/2011
Appointing, Change, or Resign of Officer	12/19/2011
Domestic LLC Agent/Domicile Change	9/25/2020
Merger	10/11/2023

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225.932.5317 (Admin. Services)
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Name	Type	City	Status
EUSTIS ENGINEERING L.L.C.	Limited Liability Company	METAIRIE	Active

Previous Names

EUSTIS ENGINEERING SERVICES, L.L.C. (Changed: 3/31/2016)

Business: EUSTIS ENGINEERING L.L.C.
Charter Number: 36251453K
Registration Date: 8/17/2006
Domicile Address
3011 28TH STREET
METAIRIE, LA 700026019
Mailing Address
C/O GWENDOLYN P. SANDERS
3011 28TH ST.
METAIRIE, LA 700026019

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 8/17/2006
Last Report Filed: 7/22/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: GWENDOLYN SANDERS
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 700026019
Appointment Date: 3/16/2020

Officer(s)

Additional Officers: No

Officer: GWENDOLYN P. SANDERS
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: KATHY D. LEROUGE
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: JAMES HANCE
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: CHAD HELD
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: TRAVIS RICHARDS
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002

Officer: LAWRENCE W. ROME
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 70002-6019

Officer: SEAN WALSH
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 700026019

Officer: BENJAMIN CODY
Title: Manager
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 700026019

Officer: MATTHEW MORALES
Title: Member
Address 1: 3011 28TH STREET
City, State, Zip: METAIRIE, LA 700026019

Amendments on File (7)

Description	Date
Disclosure of Ownership	9/15/2006
Domestic LLC Agent/Domicile Change	5/28/2014
Domestic LLC Agent/Domicile Change	3/31/2016
Appointing, Change, or Resign of Officer	3/31/2016
Name Change	3/31/2016
Domestic LLC Agent/Domicile Change	3/16/2020
Appointing, Change, or Resign of Officer	3/8/2021

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Secretary of State

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

Name	Type	City	Status
T. BAKER SMITH, LLC	Limited Liability Company	HOUMA	Active

Previous Names

T. BAKER SMITH, L.L.C. (Changed: 3/23/2011)
T. BAKER SMITH, INC. (Changed: 12/13/2010)
T. BAKER SMITH & SON, INC. (Changed: 4/20/2005)

Business: T. BAKER SMITH, LLC
Charter Number: 26901340K
Registration Date: 1/7/1965
Domicile Address
412 SOUTH VAN AVENUE
HOUMA, LA 70363
Mailing Address
P.O. BOX 2266
HOUMA, LA 70361

Status

Status: **Active**
Annual Report Status: **In Good Standing**
File Date: 1/7/1965
Last Report Filed: 12/9/2024
Type: Limited Liability Company

Registered Agent(s)

Agent: KENNETH W. SMITH
Address 1: 412 SOUTH VAN AVENUE
City, State, Zip: HOUMA, LA 70363
Appointment Date: 10/29/2001

Officer(s)

Additional Officers: No

Officer: KENNETH W. SMITH
Title: Manager
Address 1: 412 SOUTH VAN AVENUE
City, State, Zip: HOUMA, LA 70363

Amendments on File (11)

Description	Date
Domicile, Agent Change or Resign of Agent	10/9/1974
Disclosure of Ownership	2/12/1992
Disclosure of Ownership	9/9/1997
Domicile, Agent Change or Resign of Agent	10/29/2001
Disclosure of Ownership	1/30/2004
Name Change	4/20/2005
Disclosure of Ownership	11/21/2005
Disclosure of Ownership	10/11/2007
Name Change	12/13/2010
Conversion	12/13/2010
Name Change	3/23/2011

Print

21. QA/QC Plan and/or Work Plan: If the advertisement requires submission of a QA/QC plan or Work plan, include them here. Otherwise, leave this section blank.

QA/QC Section attached at end of this propoal.

22. Subconsultant information

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and Email Address	Phone Number
MARRERO, COUVILLON & ASSOCIATES, L.L.C.	3525 Hessmer Ave., Suite 304, Metairie, Louisiana 70002	M. Kimball Schlafly, PE kschlaffly@mca-llc.com	504.834.3448
VECTURA CONSULTING SERVICES, LLC	4467 Bluebonnet Blvd., Suite A, Baton Rouge, LA 70809	Brin Ferlito bferlitó@vecturacs.com	225.223.6685
ELOS ENVIRONMENTAL, LLC	607 W Morris Ave., Hammond, LA 70403	Lucas Watson lwatson@elosenv.com	985.622.5501
EUSTIS ENGINEERING, L.L.C.	3011 28th St., Metairie, Louisiana 70002	Gwendolyn P. Sanders, PE gsanders@eustiseng.com	504.834.0157
T. BAKER SMITH, LLC	6660 Riverside Dr., Suite 101, Metairie, LA 70003	Kenny Belou, PE kenny.belou@tbsmith.com	504.608.2612

23. Location:

If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. Otherwise, leave this section blank.

Section left intentionally blank.

PETERS ROAD BRIDGE & EXTENSION (PHASE 3)

QC/QA PLAN

Contract No. 4400031920

State Project Nos. H.008069.5

Louisiana Department of Transportation and Development

March 25, 2025

TABLE OF CONTENTS

1.0 INTRODUCTION TO THE PETERS ROAD BRIDGE & EXTENSION (PHASE 3) PROJECT QC/QA PLAN

A QC/QA program is an essential component of a successful project. The process, when executed properly by a committed design team, will eliminate critical errors and conflicts in the design and improve plan completeness and accuracy. Most importantly, the process promotes confidence in the owner and engineer that the design and construction documents reduce liability and risk to them. The QC/QA plan for the Peters Road Bridge and Extension project, will meet or exceed the LADOTD's QC/QA policy described in the LADOTD Bridge Design and Evaluation Manual (BDEM). The LADOTD has detailed a Bridge QC/QA policy which sets forth the Department's requirements for this process for all bridge designs performed on LADOTD projects. The LADOTD Bridge QC/QA policy was developed based on the joint FHWA/AASHTO publication *"Guidance on QC/QA in Bridge Design in Response to NTSB Recommendation"* in August of 2011. This QC/QA Plan has been developed in coordination with both the LADOTD and AECOM policies specifically for the Peters Road Bridge and Extension project.

1.1 Alignment of LADOTD and AECOM QC/QA Policies

The LADOTD policy is well aligned with AECOM's QA/QC program, internally named Quality Management System (QMS). AECOM's QMS is BS EN ISO 9001:2015 International Standard certified; AECOM's QMS policy specifics, as described in the paragraphs below, meet or exceed the directives provided in the LADOTD's Bridge QC/QA policy. A copy of our current certification can be provided upon request. One key difference in the two policies is that the LADOTD Bridge QC/QA policy is specific to the design of bridges exclusively, while the AECOM QMS is applicable to all disciplines associated with a specific project.

AECOM is fully committed to the quality management principles underlying the ISO 9001:2015 standard and to AECOM's QMS. These principles emphasize the need to understand our clients' needs and preferences, and to strive to meet or exceed their requirements and expectations. To accomplish this goal, AECOM's Executive Management provides leadership that engages all AECOM employees in the quality processes. By identifying, understanding, and managing interrelated processes as a system, AECOM increases its efficiency and effectiveness in meeting its organizational objectives as well as the objectives of our clients. This approach includes continuous reassessment and improvement of the underlying processes and promotes decision-making based on factual information and data. Through consistent application of this QMS, AECOM's opportunity to create mutually beneficial values is enhanced, which in turn enhances our clients' ability to create value for their end users.

1.2 Responsibility for QC/QA and the LADOTD's Oversight Role

From review of the LADOTD's Bridge QC/QA policy, it is apparent that the primary expectation is that consulting engineers contracting with the LADOTD take full responsibility for their submittals at all stages of the bridge design process. By the assignment of this responsibility, the LADOTD's design staff expects to provide oversight on the design process but does not expect to be responsible for the checking of designs and plan documents. The role of the LADOTD's design staff is primarily to oversee the design process. Specifically, the LADOTD's Task Manager will be responsible for the following project tasks, as described in the LADOTD's Bridge QC/QA policy:

- Develop the scope of work, man-hour estimate, design team minimum personnel requirements, selection evaluation criteria, and to obtain the approval of the Task Manager's direct supervisor for these items. In addition, the Task Manager will coordinate directly with the LADOTD's project manager on all bridge design requirements for preparation of the project kickoff.
- Initiate a kickoff meeting, covering items such as the staffing plan, QC/QA plan, project schedule and budget, share expectations and consultant rating criteria, bridge design criteria, and other project management agenda items per the LADOTD checklist.
- Review and approve the Design Criteria and TS&L submittals. Coordinate revisions in the Design Criteria with the design team for the project duration.
- Monitor the Design Team's implementation of their QC/QA plan.
- Maintain a Project Log sheet recording all major project activities (Project Meetings, Submittals, LADOTD Review Comments, Major Decisions, etc.).
- Review all Design Team submittals, intended to be a cursory review for constructability, consistency, and clarity. These reviews are not intended to be a secondary QC of the Design Team's work.
- Monitor project schedule and milestone deliverables.
- Monitor Design Team effort with respect to scope and budget; process supplemental agreements; monitor claims avoidance.
- Review and approve invoices; verify Design Team staff is consistent with the scope and fee; Review and approve qualifications of replacement staff proposed by the Design Team, if necessary.
- Perform a consultant rating for each formal submittal by the Design Team; share ratings and provide feedback to Design Team.
- Archive final design files.

1.3 Definitions of QC and QA

An understanding of the definition of quality control (QC) and quality assurance (QA), as well as the responsibilities contained in these processes, is an important component of AECOM's QMS and the LADOTD's Bridge QC/QA policy. These key definitions are summarized below:

- **Quality Control (QC):** This process involves the procedure of checking the accuracy and consistency of calculations and drawings, detecting conflicts, design errors and omissions, and the procedure for resolution of internal comments, correcting and verification of revisions. Also, specific to this bridge replacement project, the process verifies that all bridge components are adequately designed for the specified limit states in the AASHTO LRFD Bridge Design Specifications and the LADOTD BDEM and Technical Memoranda, as applicable.

- **Quality Assurance (QA):** This process involves the review of the QC documents to verify that the quality control (QC) procedure has been completed in accordance with AECOM's QMS and the LADOTD Bridge QC/QA policy. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and ensuring consistency.

1.4 Evidence/Verification of QC and QA Activities

AECOM's QMS fully documents the QC and QA processes for all intermediate and final submittals, providing evidence to the LADOTD that our design team has executed the QC/QA procedures in accordance with this system.

2.0 ROLES AND RESPONSIBILITIES

Meeting the provisions of the LADOTD Bridge QC/QA policy, the AECOM QMS requires that the quality control processes be completed for all design disciplines for all submittals. For the Peters Road Bridge & Extension (Phase 3) Project, as it pertains to QC/QA, the roles and responsibilities of the design team are described below.

2.1 Quality Assurance Manager

QA Manager (Gary Maji, PE) will be responsible for verifying that the QC process has been completed, documented, and properly filed in project records. The QA Manager will oversee the communication and training of the QC procedures to the project team, including subconsultants. The QA Manager is responsible for certifying that a submittal deliverable has met the requirements of the AECOM QMS and the LADOTD Bridge QC/QA policy, can be released to the client, and is made available for future auditing purposes.

2.2 Original Designers and CADD Design Personnel

The original designers are responsible for original design calculations and plan drawings in accordance with the direction provided by the Project Plan and associated pre-planning references and design tools (i.e. – Design Criteria, Technical Task Protocols, Design Tools, Validated Software, etc.). In the QC/QA process, the original designers are responsible for the timely, complete, and effective preparation of the calculations and plans, incorporating weekly design coordination directives during the design development. Original designers will perform a self-check of their work before indicating the work product is ready for QC Review. The original designers may be professional engineers or engineering interns.

The original designers are responsible for actively resolving comments received at each level of QC (Discipline, Independent Peer, and Inter-Discipline) and for making the necessary corrections in advance of the next level of QC or QA reviews. All design personnel (Engineering and CADD designers) will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

CADD design personnel are responsible for effective preparation of project plans, as supervised by the original designers. Original designers shall work collaboratively with CADD personnel to have project plans match their design. CADD personnel will perform a self-check of their work before the work product is submitted for QC review.

2.3 Discipline QC Reviewers

This level of review will be completed by experienced engineers who are responsible for the detailed checking of all calculations, specifications, special provisions, and plan documents. For the Peters Road Bridge & Extension (Phase 3) Project, we anticipate this level of review will be completed by AECOM staff. The specialized work performed by subconsultants will be reviewed by the appropriate AECOM Task Leader, as indicated by the organizational chart. For the Peters Road Bridge & Extension (Phase 3) Project, the original design calculations for critical components will be prepared by a professional

engineer, and the Discipline QC reviewer may be another professional engineer or an engineer in training (EIT). This approach is agreement LADOTD's bridge design policy.

The Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer, and for progressing the QC documents (calculations, plans, and QC forms) to completion prior to forwarding to the Independent Peer QC and Inter-Discipline QC reviewers. The Discipline QC reviewers will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

2.4 Independent Peer Bridge QC Reviewers

If deemed necessary, an Independent Peer Bridge QC review will proceed after the Discipline QC review has been completed and may take place in parallel sequence with the Inter-Discipline QC review. The Independent Peer Bridge QC team is responsible for documentation of comments, pursuing resolution with the original designer or detailer (with LADOTD representative oversight and documented concurrence). The purpose of this participation is to provide independent oversight of the design development and is intended to identify potential critical conflicts or critical issues in the design that will result in keeping the design team progressing the work on the most effective and desirable path. The Independent Bridge QC reviewers will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course, etc.) will be filed in the project directory, available for audit.

2.5 Inter-Discipline QC Reviewers

This level of review will be completed by Discipline Task Leaders (i.e. – Bridge, Roadway, MOT, CADD, etc.) who are responsible for an oversight review of the plans intended to identify conflicts between the disciplines and to identify plan consistency issues not identified in the more detailed Discipline QC review. For the Peters Road Bridge & Extension (Phase 3) Project, we anticipate this level of review will be completed by the Discipline Leads, comprising of AECOM and our subconsultant partners as indicated in the organization chart. This level of review is required by AECOM's QMS policy.

The Inter-Discipline QC reviewer will be responsible for documenting all comments, pursuing resolution with the original designer or detailer, and for progressing the QC documents (plans and QC forms, etc.) to completion prior to forwarding to the Quality Assurance Manager for his QA review. All design personnel, including each Inter-Discipline QC reviewer will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory and available for audit.

2.6 Engineer of Record

The Engineer(s) of Record (EOR) for the Peters Road Bridge & Extension (Phase 3) Project will be assigned by the supervisor or discipline lead on the project team. The EOR is responsible for the supervision of the calculations, plans, and special provisions preparation, and is responsible for participation in or oversight of the QC and QA review processes. The EOR must be licensed to practice engineering in the State of Louisiana and must have demonstrated experience in the design of similar structures. In addition to overseeing the calculations and plan submittal through the QC/QA process,

the EOR is responsible for obtaining the seal and signature of any and all co-signed sheets in the plans. The EOR is also responsible for assembling the complete final calculation documents in the format prescribed by the LADOTD, assuring that all plan sheets include the designer's, design checker's, detailer's, and detail checker's initials and for sealing and ensuring special provisions are accurately shown on the construction proposal.

The Engineer of Record will be trained in the QC/QA procedures by the Quality Assurance Manager. Evidence of the training (sign in sheets, copy of training course) will be filed in the project directory, available for audit.

3.0 PRE-PLANNING ACTIVITIES

Both the LADOTD's and AECOM's QC/QA policies contain careful project execution planning, document control procedures, communication protocols and specific QC and QA procedures.

3.1 Development of the Project Plan and Design Criteria

The AECOM team will prepare a Project Plan for distribution to the design team. The plan will contain:

- A project background description and scope summary
- A design criteria document prepared in compliance with the LADOTD's checklist. The design criteria document will be submitted to the LADOTD for review and concurrence
- Identification of the project team members, organization chart, contact information, and guidance on internal and external communication
- Identification of all deliverables
- Project design schedule and task budgets
- Description of the project directory structure, filing of external communication, and file naming conventions, etc.
- Organization of calculations documents, in compliance with the LADOTD's QC/QA policy
- QC and QA procedures, responsibilities, and documentation of QC/QA training
- Specific technical task protocols, design tool templates, and design tool validation documentation
- Templates of all project forms (Letter, Memorandum, Meeting Minutes, Reports, Cost Estimates), Design tool validation forms, Drawing and Calculation QC forms (LADOTD and AECOM), and Quality Assurance forms (LADOTD and AECOM) to use on the project
- Description of internal project quality auditing, continual improvement, and client feedback processes

The project plan is a living document, and will be revised as the design criteria, scope, or other internal procedure is revised. As stated in the LADOTD's QC/QA policy, revisions in the design criteria will be forwarded to the LADOTD for review and concurrence.

3.2 Project Directory Structure and Bridge Calculation Document Organization

The AECOM QMS policy has established a standardized project directory structure for the documentation of all projects delivered by AECOM. However, this structure may be modified to meet specific requirements of the client, as is the case with the LADOTD, who has provided the preferred project directory structure in Appendix F of their Bridge QC/QA policy. The structural calculations will be organized as directed in Appendix F of the LADOTD Bridge QC/QA policy.

3.3 Development of Technical Task Protocols, Design Tools, and Validation of Software

The design team will prepare technical task protocols for the purpose of documenting and providing detailed direction on specific design tasks. The protocols will provide direction on the specific use of design tools and validated software involved in the completion of the task. The documents will be controlled; revisions to the protocols will be noted by revision number and updated in the Project Plan.

All revisions to task protocols will be communicated to design staff. Design Tools (i.e. – Spreadsheets, MathCAD sheets, etc.) will be developed and utilized for specific design calculation functions. All design tools that are prepared will be validated as required by the AECOM QMS, documented, filed, and available for audit.

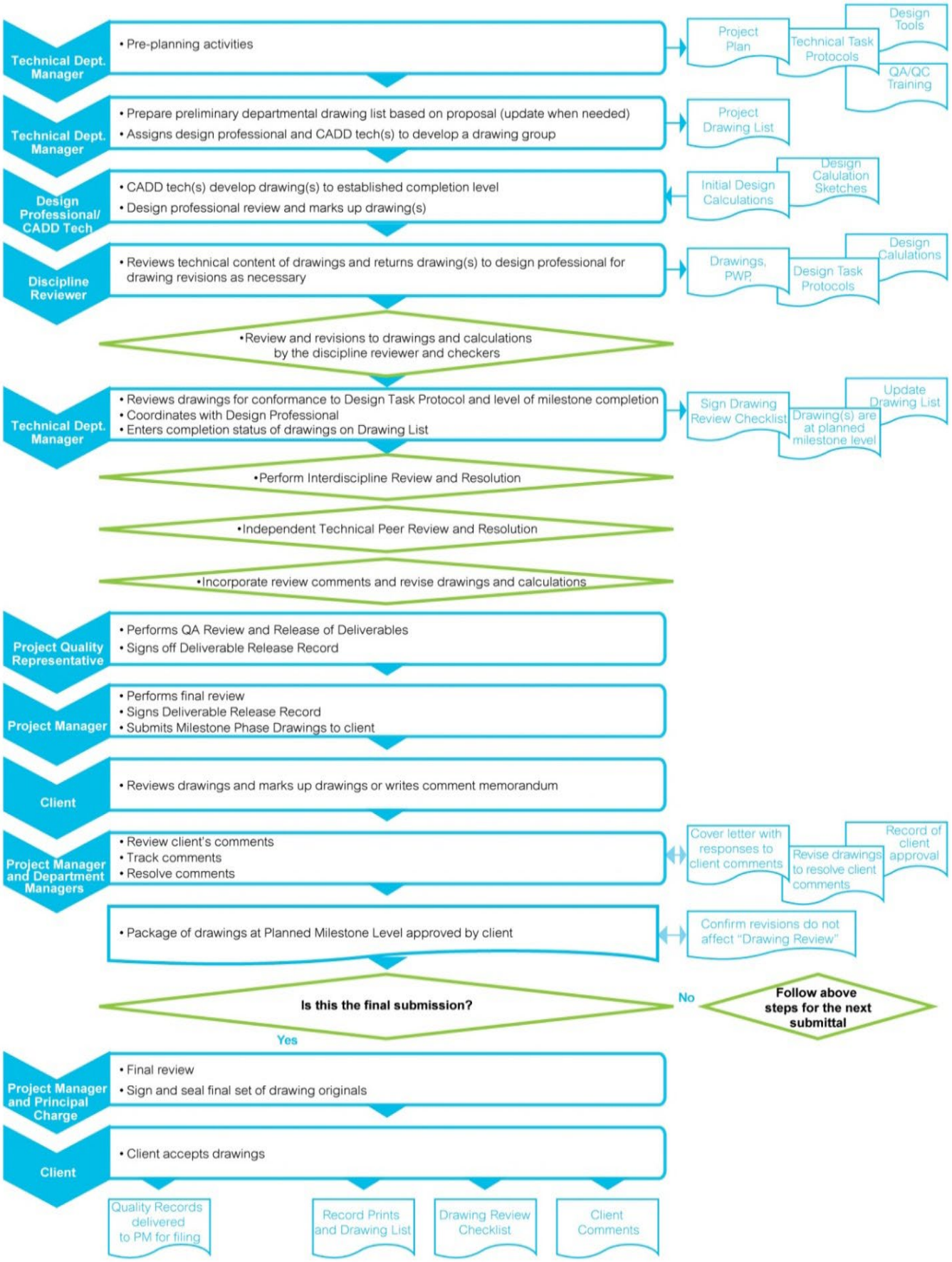
To the extent possible, the design team will select from the pre-approved list of software posted on the LADOTD Bridge Design website. Before using the pre-approved software, the program will be validated as directed in the AECOM QMS prior to use. For special applications where software not included in the pre-approved list must be used, a synopsis of the software will be provided to the LADOTD Bridge Design Engineer for approval prior to use. Similar to the pre-approved software, all specialty software will be validated as directed in the AECOM QMS prior to use.

4.0 QUALITY CONTROL AND QUALITY ASSURANCE REVIEWS

4.1 Design Deliverable Activities

As indicated by the Scope of Services, formal submittals for review by LADOTD staff are expected to include Navigation Study, Design Criteria, Design Report Form, Preliminary Plans with Engineers Estimate, Draft Design Waivers or Design Exceptions, Toll study, Supplemental EA and Related Documentation, and Decision Log identifying key decisions for the Project. Final plans development will be advanced under a different supplement. The preliminary plan review meeting will be performed based on the preliminary plan submittal. In addition, an independent review of the preliminary submittals will be performed by the LADOTD. Comments from these reviews will be resolved prior to finalizing the preliminary plans milestone.

Prior to each of the formal submittals, a 3-tiered quality control (QC) design review will be performed as well as a quality assurance (QA) review. A flowchart describing the QC/QA process for deliverables on the Peters Road Bridge & Extension project and our approach to implementation of these procedures is described below.


Technical Dept. Manager
• Pre-planning activities
Project Plan
Technical Task Protocols
Design Tools
QA/QC Training
Technical Dept. Manager
• Prepare preliminary departmental drawing list based on proposal (update when needed)
• Assigns design professional and CADD tech(s) to develop a drawing group
Project Drawing List
Design Professional/ CADD Tech
• CADD tech(s) develop drawing(s) to established completion level
• Design professional review and marks up drawing(s)
Initial Design Calculations
Design Calulation Sketches
Discipline Reviewer
• Reviews technical content of drawings and returns drawing(s) to design professional for drawing revisions as necessary
Drawings, PWP,
Design Task Protocols
Design Calulations
•Review and revisions to drawings and calculations by the discipline reviewer and checkers
Technical Dept. Manager
• Reviews drawings for conformance to Design Task Protocol and level of milestone completion
• Coordinates with Design Professional
• Enters completion status of drawings on Drawing List
Sign Drawing Review Checklist
Drawing(s) are at planned milestone level
Update Drawing List
•Perform Interdiscipline Review and Resolution
•Independent Technical Peer Review and Resolution
•Incorporate review comments and revise drawings and calculations
Project Quality Representative
• Performs QA Review and Release of Deliverables
• Signs off Deliverable Release Record
Project Manager
• Performs final review
• Signs Deliverable Release Record
• Submits Milestone Phase Drawings to client
Client
• Reviews drawings and marks up drawings or writes comment memorandum
Project Manager and Department Managers
• Review client's comments
• Track comments
• Resolve comments
Cover letter with responses to client comments
Revise drawings to resolve client comments
Record of client approval
• Package of drawings at Planned Milestone Level approved by client
Confirm revisions do not affect "Drawing Review"
Is this the final submission?
No
Follow above steps for the next submittal
Yes
Project Manager and Principal Charge
• Final review
• Sign and seal final set of drawing originals
Client
• Client accepts drawings
Quality Records delivered to PM for filing
Record Prints and Drawing List
Drawing Review Checklist
Client Comments

4.2 Discipline Level QC Review of Navigation Study

In this first tier of QC review, a detailed review of each deliverable will be performed. A detailed QC review will also be performed on design calculations (if applicable) used to develop any drawings for formal submittals and public meetings. Preceding the review, design development for the submittal deliverable is completed. Design activity is in a "pencils down" mode and review sets are produced. In the Discipline QC, all report findings and documents, design calculations, and drawings are thoroughly checked for accuracy, completeness, and for compliance with the project's scope. The reviewer is designated as an engineer within the Quality Control Team. The review is documented in the reports, calculations, and drawings using a check print stamp and a color-coded mark as indicated below:

- Yellow – Confirmed
- Black – General comment or suggestion
- Red – Correction to be made
- Green checkmark or text – Backcheck and concurrence with comment or other resolution
- Blue circle – Indicates correction was made
- Pink circle – verification by the reviewer that the comment was addressed

Once the Discipline QC review of the reports, calculations, and drawings is completed, verified, and documented using AECOM-based and LADOTD-based checklists, the reports, drawings, and calculations are designated as ready for an independent peer review for LADOTD in parallel with an Inter-Discipline QC Review (for preliminary plan development milestones and the final plan development milestones advanced with a future supplement). Issues that cannot be resolved between the Discipline QC reviewer and the original designer will be elevated to the design team leader or deputy project manager for resolution. These processes are described below.

4.3 Independent Peer QC Review of Calculations and Drawings (Final Plan Delivery Advanced Through Supplemental Contract)

In the next tier of QC review (for items deemed necessary), an independent peer review is performed by an independent design team. AECOM will coordinate any independent reviews deemed necessary. The peer review of critical structural design drawings and calculations will be completed using the independent design check method. Preceding the Independent Peer review, the Discipline QC review will be completed, and design activity is in a "pencils down" mode. If structural replacement is deemed necessary, drawing and calculation sets are produced for review and comparison with the independent design, as described in the paragraphs below.

Using the drawing review set, the independent peer review team will perform analysis and design calculations by independent means and design tools. The independent review will confirm the adequacy of the design and resolve any design discrepancies between the designer and reviewer. Once resolved, if necessary, the original calculations will be further revised to reduce or eliminate the difference in design results. This process is documented in forms, with participants, including LADOTD staff, signing off on resolved issues. The independent calculations will be documented in a separate volume of the calculation set. In addition, the post-Discipline review drawing set will be reviewed by the peer review team. Comments will be documented in the forms noted above and resolved in a similar fashion.

In addition to formal review periods, the peer reviewer may participate in "over the shoulder" review meetings during the design process. The purpose of these reviews is to identify potential pitfalls with the direction the design team is taking and to assist in developing corrective action in a timely manner to avoid significant rework in later stages of the design completion.

4.4 Inter-Discipline QC Review of Drawings

The Inter Discipline Review is a discipline leader and project manager review of the documents and is intended to be an overall design coordination review to identify potential conflicts in the plans between disciplines (i.e. – Roadway and Geometry, Structures, Geotechnical, Traffic Engineering, etc.). Preceding the Inter-Discipline review, the Discipline QC review will be completed, design activity is in a "pencils down" mode and a drawing set is produced for review. Similar to the Discipline Review process, comments are provided in black or red, concurrence or other resolution in green (checkmark), corrections in blue (circle), and verification by the reviewers in pink (circle). Issues that cannot be resolved between the Inter-Discipline QC reviewer and the original designer will be elevated to the design team leader for resolution. This review is documented in the Drawing QC checklist form previously discussed.

4.5 Quality Assurance Review of Calculations and Drawings

Once the reports, drawings, and calculations have completed the tiered, Discipline QC, Independent Peer QC (for items deemed necessary), and Inter-Discipline QC review processes, the submittal is ready for a Quality Assurance review. This review is performed by AECOM by a specifically trained senior engineer designated to be the QA Manager for the project. For the Peters Road Bridge & Extension (Phase 3) Project, Gary Maji, PE will fill the role of QA Manager. The QA reviewer will examine all documented review materials, including plans, calculations, and QC forms for compliance with the AECOM and LADOTD policies and for completeness. In addition, the QA process verifies that the QC process was effective in preventing design and plan errors and in assuring consistency. Any comments provided by the QA reviewer on the QC process or documentation must be resolved and addressed prior to the QA reviewer approving the design package (plans and calculations) may be submitted. Comments that are systemic in nature (e.g., repeated multiple times) will require a repeat of the quality training or a protocol will be added to ensure systemic issues are corrected and not repeated.

4.6 Post QA Review Revisions

If for any reason (e.g., late inputs or other issue not anticipated) revisions are necessary during or after completion of the QA review, all revisions will be documented in drawing or calculation check prints and forwarded with revised drawings or calculations to the QA reviewer for a secondary review, prior to submittal. If the changes are substantial, LADOTD Design Lead and AECOM QA Manager will evaluate and determine if the QC/QA process needs to start over.

4.7 Submittal and Filing

Once the QA reviewer has verified that the QC process was completed satisfactorily, he will complete and sign the Document Release Record, allowing the submittal to be released to the client. All calculation, drawing, and QC/QA documents will be filed and archived in the project folder, organized, and filed by submittal.

5.0 DOCUMENTATION OF COMMENTS/RESPONSES

5.1 Documentation of Internal Comments and Responses

The documentation of all internal comments and resolution will be contained within Discipline QC drawing check prints and forms, calculation review check prints and forms, and in Independent Peer Bridge QC calculation review forms and drawing check prints. Similarly, the documentation of the Inter-Discipline QC comments and resolution will be contained within the drawing check prints and forms. All QC documents will be stored electronically in the project folder and be available for audit.

5.2 Documentation of Client Comments and Responses

At formal submittal client reviews, a comment log will be used to document all comments, by page number. A plan markup may also be provided by the client. The design team will promptly review all comments received and schedule a comment resolution meeting to resolve the comments and set forth an action list to be completed prior to the next formal submittal. Revisions required by the action list will be documented in drawing and calculation Discipline QC review check prints for the next formal submittal. The QA Manager is responsible for tracking the resolution of comments.

5.3 Quality Assurance Records

Finally, the documentation of the QA review will be contained within the Document Release Record form at the completion and verification of all QC and QA review activities. All QA documents will be stored electronically in the project folder and be available for audit.

6.0 CONTROL OF SUBCONSULTANT QC PROCESS

AECOM's approach to project management and delivery is to fully incorporate subconsultants into an integrated project team, as opposed to an approach where subconsultants operate independently, with their deliverables "plugged into" the overall formal submittal. Subconsultants are integrated into the project communication process through weekly project coordination meetings. Individual subconsultant resources are expected to work as an extension of, and inclusive with, AECOM's staff resources. As such, subconsultants are expected to be fully trained in the AECOM QMS policy and to participate the Discipline QC and Inter-Discipline QC reviews.

As described previously, all project personnel (including subconsultants) will be trained in both the LADOTD's Bridge QC/QA policy and AECOM's QMS policy. The training will be done by the Quality Assurance Manager, or designated Project Manager or Deputy Project Manager familiar with and experienced in the LADOTD's Bridge QC/QA policy or AECOM's QMS policy.

7.0 CLIENT FEEDBACK AND QUALITY AUDITS

7.1 Administrative Oversight and Continuous Improvement

A desired outcome of the AECOM QMS policy is continuous improvement. The process identifies issues where the design team (collectively and individually) can improve design processes and skills. Most importantly, feedback from the client is solicited and incorporated into our process of continuous improvement, for each formal submittal. All project performance issues are discussed internally with the design team in weekly design coordination meetings throughout the project.

7.2 Internal and External Quality Audits

AECOM performs independent internal audits of projects to ensure that the QC/QA program is being implemented correctly. As all quality records are maintained for each formal submittal in the project directory, all QC and QA documents are available for LADOTD quality auditors at their request.

8.0 APPENDICES

APPENDIX A – PROJECT PRE-PLANNING GUIDANCE & FORMS

- *LADOTD Design Criteria Checklist*
- *LADOTD Project Activity Log Sheet*
- *LADOTD Bridge Design Section Records Retention Policy*
- *LADOTD Consultant Project Kick-Off Meeting Agenda Checklist*
- *AECOM QMS Project Plan Procedure and Example Form*
- *AECOM QMS Project File Index*
- *AECOM QMS Technical Task Protocol Procedure and Example Template*
- *AECOM QMS Software Validation Procedure and Example Form*
- *Sample QC/QA Training Module – Technical Quality Review Job Aid*

APPENDIX A—DESIGN CRITERIA CHECKLIST

Design criteria for each project shall include, but not limited to, the following sections:

__ **Cover sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- Revision date
- The Supervisor or Team Leader's signature and date

__ **Governing Design and Construction Specifications and Other References**

A list of governing design and construction specifications and other references used for the project shall be included in this section. The edition number, interim revisions, and/or publication date must be specified for each reference.

__ **Design Assumptions and Design Exceptions**

All design assumptions and design exceptions received must be included in this section along with supporting documents.

__ **General Information**

The general information as listed below should be included in this section:

- Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
- Road information (roadway classifications, design speed, traffic data, etc.)
- Vertical datum
- Vertical and horizontal clearances
- Other relevant information

__ **Hydraulic Design Criteria**

All hydraulic design criteria (design year, design water elevations, scour depth and scour elevation, etc.) shall be included in this section and the information shall be provided by the Hydraulic Engineer.

__ **Design Factors**

The ductility factor η_D, redundancy factor η_R, and operational importance factor η_I shall be listed in this section.

__ **Design Loads**

All design loads (dead load, live load, wind load, thermal loads, vessel collision loads, seismic load, wave loads, etc.) used for the project shall be included in this section.

__ **Limit States**

All applicable limit states for this project shall be listed in this section.

__ **Bridge Barrier Railing**

The design criteria, types, and test levels for bridge barrier railings shall be listed in this section. Standard Plans should be listed if they are utilized.

__ **Guardrail**

The design criteria, types, and test levels for guardrails shall be listed in this section. Standard Plans should be listed if they are utilized.

__ **Approach Slab**

Design criteria for approach slab shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Deck and Deck Drainage**

All design criteria for deck and deck drainage design shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Bearing**

All bearing types and design criteria for each bearing type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Joint**

All joint types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Superstructure**

All superstructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Substructure**

All substructure types and design criteria for each type shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Piles and Drilled Shafts**

All pile types, sizes, and structural design criteria shall be included in this section. Standard Plans should be listed if they are utilized.

__ **Geotechnical Design**

All geotechnical design criteria shall be included in this section and the information shall be provided by the Geotechnical Engineer. Standard Plans should be listed if they are utilized.

__ **Mechanical Design**

All mechanical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

__ **Electrical/Lighting Design**

All electrical design criteria shall be included in this section if applicable. Standard Plans should be listed if they are utilized.

__ **As-Designed Bridge Rating Criteria**

All as-designed bridge rating criteria shall be included in this section.

__ **Software**

All software used for design and check shall be included in this section.

APPENDIX J—PROJECT ACTIVITY LOG SHEET

Project No.:

Project Name:

Bridge Task Manager:

Date	Project Activity	Comments

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
001	Design Manuals/Guidance and Bridge Design Technical Memoranda	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Documents_Reference Materials\Bridge Design Section Archive\Design Manuals-Guidance	Assistant Bridge Design Administrator responsible for design manuals
002	Bridge Design Standard Plans	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Documents_Standard Drawings	Bridge Design Standards Manager
003	Final Plans, Revisions, and Change Orders (CAD files)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Project folder\Bridge-Facilities\Discipline\Plans *(Subfolders for each revision and change order should be created under Plans)*	Bridge Task Managers
004	Final Plans, Revisions, and Change Orders (Original signed hard copies)	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Transmit to General Files and archive electronically in DOTD Network Plan Room by General Files	Bridge Task Managers
005	Final Plans, Revisions, and Change Orders (Digital signed copies in pdf format, to be implemented)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Project folder_Published Submittals\Project Drawings_Final Plans	Bridge Task Managers
006	Shop Drawings , Erection Drawings, RFIs, and Other Construction Submittals (Final Distribution Copy in pdf format)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Project folder_Published Submittals\Project Drawings\Construction Submittals\Shop Drawings or Erection Drawings or RFIs or Other Construction Submittals *(See BDTM.49 for instructions)*	Bridge Task Managers

*ACT = End of activity or final project acceptance date for project related items

**CY = Calendar Year

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY (CONTINUED)

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
007	Shop Drawings (Final distribution hard copies and pdf files)	ACT* + 1 CY**	Life of the Agency	Transmit to General Files and archive electronically in DOTD Network Plan Room by General Files (See BDTM.49 for instructions)	Bridge Task Managers
008	Final Design Calculation Files for In-House and Consultant Projects (Stamped calculation book in pdf format, stamped final reports, and final electronic design models)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Project-wise under Project Folder\ _Published Submittals\Project Documents\Final Design Calculations & Reports	Bridge Task Managers
009	Bridge Rating Reports	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under Load Rating.	Bridge Rating Engineer
010	Truck Permits Calculations	ACT* + 1 CY**	Life of the Agency	Archive electronically in a designated folder on the Bridge Design server.	Bridge Rating Engineer
011	Chief Engineer Orders (Bridge Posting)	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under Chief Engineer Orders.	Bridge Rating Engineer
012	Project Related Correspondences (Original Hard Copies)	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Content Manager under Design Projects. At the end of in office retention period, the hard copies shall be boxed, marked with project number and record item No. with description, and then transmitted to General Files for their handling.	Project Managers/Bridge Task Managers

*ACT = End of activity or final project acceptance date for project related items.

**CY = Calendar Year

APPENDIX F—BRIDGE DESIGN SECTION RECORDS RETENTION POLICY (CONTINUED)

Item No.	Record Title	In Office Retention Period (by Bridge Design Section)	DOTD Total Retention (by General Files)	Archiving Instruction	Responsible Party
013	Project Related Correspondences (Emails) *(Note: If the email is considered as important project correspondence and needs to be kept for the life of agency, then the email should be printed and treated as item 012.)*	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Project-wise under Project Folder\ _Published Submittals\Project Documents\Project Correspondence Emails	Project Managers/Bridge Task Managers
014	Administrative or Other Types of Correspondences	ACT* + 1 CY**	Life of the Agency	Archive electronically in Content Manager under Bridge Design Subject Files	Everyone

*ACT = End of activity or final project acceptance date for project related items

**CY = Calendar Year

APPENDIX H—CONSULTANT PROJECT BRIDGE DESIGN KICK-OFF MEETING AGENDA CHECKLIST

A kick-off meeting with the Consultant's bridge design team shall be initiated by the LADOTD Bridge Design Task Manager once the project is awarded. The meeting agenda shall include, but not be limited to, the following items:

__ Introduce LADOTD Bridge Task Manager and the Consultant's Key Team Members (The Supervisor or Team Leader and Key Designers/Design Checkers/Reviewers)

__ Discuss Consultant's Staffing Plan and Implementation of QC/QA Plan Document
(The staffing plan should include names and responsibilities of the designers, detailers, checkers, reviewers, and the EOR.)

__ Determine Schedules for Project Submittals
(Design Criteria, TS & L, 30%, 60%, 90%, 100% of Preliminary Plans and Final Plans, Final Calculations, etc.)

__ Share Expectations and Consultant Rating Criteria
(Consultant rating will be performed for all project submittals shown on the project submittal schedule.)

__ Discuss Design Criteria

__ Discuss Budget, Supplemental Requests, Invoices, and Importance of Avoiding Claims (Staff shown on invoices will be reviewed in accordance with the staffing plan.)

Project Plan Procedure

Q2[DCS]-221-PR1

Proposal/ Prelim Plan (Pre-Award)

Executable Project Plan (Post-Award)

Review and Approval of Project Plan

Project Plan Management

WHO[1]	WHAT	WHEN
Project Manager (PM), Bid Manager (BM), or Capture Manager (CM)	• Complete CRM opportunity record in CRM system, as applicable. • Include research found in Crisis24 Horizon for any location threat risks.	**Go/No Go Gate 1**
PM or BM/CM and Technical Lead (TL)	• For C-3, C-2, C-1, and C-0 projects, draft a preliminary Project Plan. • Develop a preliminary technical approach to include in the proposal per the Technical Approach - Planning & Review Procedure - DCS. Include any and all recommendations made by the Technical Quality and Review Board (TQRB), as applicable. • For Enterprise Critical Pursuits (ECPs) or Tier 2 Pursuits, obtain the completed Pursuit Commitment – ECPs and Tier 2 Pursuits – DCS from Client Account Manager (CAM) and include in preliminary Project Plan.	**Proposal Gate 2**
PM, Profit & Loss Manager (P&LM) or Project Approver	• Prepare proposal in accordance with Go/No Go Procedure – DCS and Proposal Preparation and Review – DCS.	
PM and TLs	• Following award, complete the Project Plan (using the appropriate template/App for all C-categories). • Ensure it captures/reflects any changes made between proposal submission, award, and contract review, any exceptions to the AECOM Quality Management System (QMS), and any context or changes as discussed with the client. • Use the Project Plan as input in the Healthy Start (HS) meeting, when required, update per HS discussion. • When worksharing with other offices and/or Enterprise Capabilities (EC) (Partners) - request they draft an addendum to the Project Plan for their scope of work (SOW) or include their SOW in the Lead Office Project Plan.	**Execution Gate 3**
PM	• Submit the Project Plan for review and approval per regional requirements – Refer Section 2	**Execution**
P&LM or Project Approver	• Review and approve the Project Plan – confirm at a minimum an appropriate risk register, document control instructions and the Project Plan is appropriately baselined in accordance with the negotiated, agreed client proposal.	
PM	• Communicate and distribute to the project team, including any partner office, prior to work commencing. • Review Project Plan regularly. Update with changes throughout lifecycle of the project, including actions from HS and Project Reviews, where appropriate. Save in the project UFI or as a tab in project MS Teams site. • Identify significant changes in the Project Plan clearly and communicate to all team members. • Use Microsoft 365 versioning controls and the 1st section of the project plan for awareness of most current version by team members. • Consider any client-required controls in the management and distribution of the Project Plan.	**Execution**

1. All roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined.

Related PPI

- Project Review Procedure – AECOM Global R1-200-PR1
- Project Healthy Start/Restart Review Procedure – DCS R2[DCS]-200-PR1
- Go/No Go Procedure – DCS Q2[DCS]-121-PR1
- Proposal Preparation and Review – DCS Q2[DCS]-151-PR1
- Project Quality Management and Plans – DCS Q2[DCS]-221-PR2
- Project Document and Records Control (Information Management) – DCS Q2[DCS]-222-PR1
- Project Meeting & Communications – DCS Q2[DCS]-251-PR1
- Project Risk Management Procedure – DCS Q2[DCS]-231-PR1
- Graded Risk Approach: Project Delivery Requirements – DCS Q2[DCS]-231-WI1
- Project Type - Graded Approach - DCS – EC Q3[DCS](EC)-231-WI1
- Technical Approach – Planning & Review – DCS Q2[DCS]-321-PR1
- Technical Quality Review – DCS Q2[DCS]-351-PR1
- SH&E Management System Manual – AECOM Global S2-001-SM1
- Subs Management Procedure – DCS Q2[DCS]-141-PR1

References

- AECOM Approval Matrix Dashboard + AECOM Approval Matrix & Process
- Collaborative Working (ISO 44001)
- Project Plan App

Terms & Definitions

- AECOM Glossary

Change Log

1. Purpose and Scope

a. The document defines the minimum requirements of the Project Plan and the methodology for preparing and updating the Project Plan through the life of the project. It has been demonstrated through AECOM trends and metrics and external client benchmarking that poor project planning leads to delivery performance issues including lost margin, late delivery, inconsistent quality of deliverables, and client and AECOM team dissatisfaction.

b. All projects shall have a Project Plan of sufficient detail to manage the risks of the project. Where appropriate, the Project Plan should link to reference documents either attached or hyperlinked. Citation of these in the relevant Project Plan section constitutes conformance to this required process.

c. The Project Plan will at a minimum:

   i. describe how the scope of services as specified in the contract (or as subsequently agreed to with the client) will be accomplished to meet the expectations and objectives of both the client and AECOM team and to achieve the expected business results and client outcomes.

   ii. identify project and business risks with a plan to manage these through exclusions and contingency.

   iii. describe the agreed communication plan with the client (method, timing and approach to project changes with client and project team).

   iv. is the overarching control document. Any Sub-Plans or Project Plan elements (e.g., master schedule, risk register, registers, project quality plan, project execution plan etc.) must be controlled as per the Project Plan.

   v. is used as a planning and management tool and means to share project information and expectations with the Project Team.

   vi. shall address joint venture relationships and work- sharing between AECOM Partner Offices and regions, where applicable.

   vii. must be developed using the Project Plan Template (Long or Short, or C-3A Project Plan), Project Plan App or Project Plan document required by the Client if equivalent to the Project Plan Template.

   viii. Is sufficiently detailed and appropriate for the risk and complexity of the project.

Note: For projects involving multiple AECOM partner offices or regions, it is the Lead Office's responsibility to develop the overall Project Plan and communicate it with its global stakeholders. Of special note is the need to clearly define how checking and verification is to be accomplished, coordinated, and documented.

2. Graded Approach

The graded risk approach applies to this procedure. The project's risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup. Use the below matrix for the required rigor of this procedure based on the risk category of the project.

Regions	C-3A	C-3	C-2	C-1	C-0
DCSA EUR&I MEA ANZ	C3A Project Plan or equivalent document content approved by PM and Project Approver	Short Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.	Long Form – Project Plan or equivalent document content approved by PM and Project Approver.
Asia	Not Applicable	Project Plan– Asia or equivalent or Project Plan – Short Form – Asia (if the C3 project meets all the criteria listed on the form) document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.	Project Plan– Asia or equivalent document content approved by Project Approver and Local Quality Manager.
Workshare Office and/or EC	Completion of the Project Plan – Addendum – DCS and hyperlinked in the Lead Offices' Project Plan				

Exceptions and modification to the requirement for a Project Plan are as follows:

a. Master Services Agreements (MSA's) or (Indefinite Delivery/Indefinite Quality (IDIQ) programs may have a Program Project Plan and then use either the Project Plan - C3A – DCS or the Project Plan – Addendum – DCS to the Program Project Plan instead of creating a stand-alone project plan for each task.

b. Projects with continuing services where Finance requires a new project number is initiated year-over-year, should review, and confirm the current Project Plan remains applicable. If it does, the existing Project Plan can be used for the new project number (prepare 1-page addendum noting the new project number or note in plan revision the old/new project numbers).

c. AECOM seconded employee projects to a client do not require an AECOM Project Plan.

d. The client or certain project circumstances may require exception to AECOM standard operational procedures. These variations (e.g., document and records control for confidential projects) shall be described in the Project Plan and reviewed/approved by Project Approver.

3. Implementation

a. The Project Plan shall contain a level of detail commensurate with the complexity of the project and knowledge of special concerns and issues at the time using the Project Plan template options above as per the project risk category.

Action By	Action
Project Manager (PM) and/or Deputy PM (DPM)	1. Develop Project Plan using the template or Project Plan App (including SOW for all offices and EC) according to the project risk category and issue to the project team at the Kick-Off Meeting. Where the DCS template has not been used, the PM MUST ensure the document used includes all items included in the DCS template. 2. Update Project Plan throughout the lifecycle of the project for reference by the project team to the most up-to-date scope, standards, budget, schedule and client communication requirements, including actions from Healthy Start Reviews and Project Reviews where appropriate.

Action By	Action
	3. Clearly define the quality assurance/control requirements within the Project Plan or where required in a separate Project Quality Plan to be referenced and linked in the Project Plan.

b. The content of the Project Plan is driven by the Project Plan template options according to the project risk category If, another Project Plan is developed, the contents of the Project Plan **must be equivalent** to the templates.

c. Other project-related plans may be required by the client as a part of our scope of services (e.g., Quality Assurance Plan, Design Quality Management Plan or Project Quality Management Plan) or internal AECOM policy (e.g., Health and Safety Plan, Operational Security Plan). These stand-alone plans should be developed in accordance with the Project Plan and referenced, attached, or hyperlinked to the Project Plan where appropriate generic templates for these plans are available for use in the regions on the Project Delivery System (PDS) or the functional area home page on the AECOM intranet. Projects implementing ISO44001 will also be required to develop project Collaborative Relationship Management Plans, and these should be referenced in the Project Plan.

d. When AECOM is the primary or majority joint venture partner, PM will prepare an overall project plan in conformance with this procedure and/or any client requirements (topics and approvals) and direct the joint venture partners conform to the requirements of the Project Plan, when included as part of our contract agreement.

e. When AECOM is a secondary or minority joint venture, PM will prepare a project plan for those portions of the work being performed by AECOM in conformance with this procedure.

4. Terms and Definitions

a.	**ECP**	Enterprise Critical Pursuit – refer to the AECOM Pursuit Process Definitions
b.	**Lead Region/Office/ Project Team (Lead Team)**	The team who “owns” the contract with the Client and is leading the work in line with the contract.
c.	**Partners**	Offices providing internal work to another office, region, business line.
d.	**Tier 2 Pursuits**	Refer to the AECOM Pursuit Process Definitions
e.	**Workshare**	Shared work across offices, regions, business lines, Enterprise Capabilities (EC). There would be a Lead Region and Partner(s) (supplies resources and/or services to the Lead Region).

5. Records

a. AECOM Risk Assessment – Workbench

b. Approved Project Plan and Referenced Documents

c. Pursuit Commitment – ECPs and Tier 2 Pursuits – DCS Q2[DCS]-151-FM3

d. Project Plan App

e. Project Plan – Long Form – DCS Q2[DCS]-221-FM1

f. Project Plan – Short Form – DCS Q2[DCS]-221-FM2

g. Project Plan – C3A – DCS Q2[DCS]-221-FM3

h. Project Plan – Addendum Q2[DCS]-221-FM4

i. Project Plan – Asia Q3AS-221-FM1

j. Project Plan – Short Form – Asia Q3AS-221-FM2

k. Project Execution Plan – DCS – EC Q3[DCS](EC)-221-FM1

6. Appendices

a. N/A

7. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	11-May-2011	Initial Release as Q2-221-PR1	
1	01-Oct-2012	2012 Review – minor editorial changes	All
2	10-Oct-2014	2014 Review – minor editorial changes and issued as I2-221-PR1	All
3	21-Mar-2016	2016 Review – updated to new IMS Template and implemented ePM elements.	All
4	07-May-2018	2017 Review – put into new IMS Template, changed to 2 column layout, updated cross-references and issued as Q2[DCS]-221-PR1.	All
5	20-Jan-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach; removal of Appendices 1 and 2 – Flow Diagram and Project Plan Content Descriptions.	All
6	04-Aug-2020	Minor edits; new exception of Asia using own Project Plan Template; introduced the Project Plan – Addendum option	Section 2, 4
7	11-Sep-2020	Addition of Asia requirement on the use of the Project Plan – Short Form – APAC – Asia Q3AS-221-FM2.	Section 2, 4
8	31-Mar-2022	2022 Review; put into new Template; added link to revised Project Healthy Start/Restart Procedure; minor edits to clarify need for a prelim project plan for C-3 projects and highlighting a plan is needed for all categories, including C-3A at Post-Award.	Page 1, Related PPI, Section 2, 3.1 (1), 4.
9	06-May-2024	2024 Interim Review; update to highlight the use of project plans to support Healthy Start and Project Reviews; replaced “geography/ies” with “region/s”; introducing Collaborative Working elements in Project Plans and use of the Project Plan App as alternative to the Project Plan – Short Form template for C-3 /C-3A projects.	Page 1, References, Section 1 (c) (ii), (vi), (vii), (viii) Section 2, 2 (c) Section 3 (a) (1) and (2), (c), Section 4 (d).
10	14-Oct-2024	• 2024 Review. • Updated AECOM’s travel security provider and link. • Clarified all roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined. • Promoting “Workshare” and “Partner Offices” to enhance working practices across extended project teams. • Added reference to the new Project Quality Management and Plans – DCS Q2[DCS]-221-PR2 replacing ECs GEP 250 Project Quality Management Procedure – DCS – EC. • Added Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1 to the “Related PP” list. • Updated “Graded Approach” section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Emphasized the need for Partner Offices (including EC) to document and submit their scope of work for direct inclusion in the Project Plan or via the Addendum option and attach. • Added Terms and Definitions section to promote new terms of “Lead Region/Office/ Project Team (Lead Team)”, “Partners” and “Workshare”. • Minor edits and updated links.	Page 1 Related PPI Section 2 Section 4 Section 5

Rev #	Change Date	Description of Change	Location of Change
11	07-Feb-2025	• Page 1 – “Who/What/When” table > Proposal/Prelim Plan > new bullet asking the PM/BM/CM and TL to obtain a copy of the completed Pursuits Commitment for ECPs and Tier 2s – DCS. • T&Ds – added ECP and Tier 2 Pursuits linking readers to the AECOM Pursuit Process Definitions. • Records – added reference to new form and hyperlinked.	Page 1 Section 4 Section 5

Unified File Index

Legend

C0-C3A	Level 1 = for Risk Categories C0, C1, C2, C3, C3A - cannot be deleted
C0-C2	Level 2 = for Risk Categories C0, C1, C2
C0-C1	Level 3 = C0, C1 - at the discretion of the Project's Requirements
RN	= Renameable Folder, folder's name can be changed to suit project needs
Note	1: Refrain from using illegal characters in the folder naming convention: # % & " * / : < > ? \ | + , . ; = [ ] { } 2: Where necessary, use an 'underscore'.

Lvl 1	Lvl 2	Lvl 3 (C0-C1)	Guidance	Folder Permissions: Cannot Delete	Restrict Deletion BUT May Add To	RN = Renameable
(Project Number and Name)				**C0 - C3A**	**C0-C2**	**RN**
Client Name and Project Name (if project name is not above)				**Optional**		**RN**
000_PreContract [BID]			**This folder is intended as a repository for records of activities leading up to the client's notice-to-proceed on a project. Some of this information may need to be obtained from marketing/business development group.**	**C0 - C3A**		
	010_Go_NoGo [GNG]		In lieu of copy saved here, can be held in approved system.			
	020_RFP_RFQ [RFP]		The document, as received from the eventual client, that requests or invites the submittal of a proposal for the project.			
	030_Pricing [PRICE]		Records of pricing strategies, calculations, projections, etc. used to submit a cost quotation, either prior to, or after, selection.			
	040_Proposal [PROP]		The actual signed version of the final proposal submitted, and any relevant records leading up to it.			
	050_Presentation [PRES]		When applicable, a copy of the PowerPoint or other media used in a presentation to elaborate on our qualifications for the project.			
	060_Legal_Review [LEGAL]		Records of legal review of contract and terms and conditions; copy of Contract Review form if online tool not used.			
	070_Negotiations [NEG]		Records of negotiations regarding scope, schedule and pricing between AECOM and client.			
	080_Superseded [SS]		Superseded version of documents in the Pre-Contract folder.			
100_Contract [CONT]			**This folder is intended to hold all legal agreements, contracts, POs, insurance certificates or other documents that bind AECOM in a business relationship with another entity.**	**C0 - C3A**		
	110_Client_Contract [CL_CONT]		General records related to contracting process and signed version of the primary contract between AECOM and the Client; establish Level 3 folders as needed for Changes.			
	120_TO_PO [PO]		Signed and executed task orders, purchase orders and notice to proceed as required by the client's contract. Must include corresponding scope of work, cost estimate and schedule.			
	130_Approval_Matrix [APPVL_MTX]		Records of Approval Matrix approvals during the pre-contract and contract review process.			
	140_Risk_Committee [RSK_COM]		Store correspondence for RA/RFA/RFPAs, especially when required to submit quarterly Risk Committee approval update forms.			
	150_Subcontracts [SUBS]		Signed versions of contracts with technical/professional subs; establish Level 3 folders as needed for Subs Invoices, QA/QC, Insurance Certificates.			RN
	160_Vendors_Suppliers [VENDOR]		Signed versions of contracts/POs with materials, equipment, supply providers; establish Level 3 folders as needed.			RN
	170_Superseded [SS]		Superseded versions of documents in the Contract folder.			
200_Project_Control [PROJ_CONT]			**This folder is intended to contain records related to the overall project management and business administration of the project.**	**C0 - C3A**		
	210_Project_Plan_Risk [PLAN]		Save project plan and updates throughout project execution.			
	220_Risk_Assessment_Register [RISK_REG]		Save here for risk assessment (if online Risk Assessment Tool not used) and risk register (if not a part of the project plan) or electronic tool. Update throughout project.			
	230_WBS_Schedule [WBS_SCH]		Work breakdown structure and schedules. Include schedule bar charts, MS Project output/file, critical path analyses, other supporting documentation. Staffing worksheets, projections, assignment memos, etc.			
	240_Budget [BUDG]		Main budget is in APIC; here include supporting budget worksheets, projections, summaries for project team, etc.			
	250_Client_Invoices [INV]		Invoices submitted to the client. Level 3 folders, as needed, for things like Progress Reports.			
	260_Healthy_Start_Reviews [HS]		Healthy start reports, action items, follow-up documentation for evidence of closure .			
	270_Project_Reviews [PROJ_REV]		Review schedules, agenda, discussion summaries, action item lists. This is for overall status reviews; EACs, monthly/quarterly project status reviews, etc. QC reviews go in 420.			
	280_Closeout [CLOSE]		Records related to the pending or actual closure of the project.			
	290_Superseded [SS]		Superseded versions of documents in the Project Control folder.			
300_Communications [COMM]			**This folder is intended to house correspondence, records of calls, emails (<u>depending on local IT requirements</u>), meeting minutes and other forms of communication between AECOM and outside entities as well as internally within the AECOM team.** *** Meeting minutes can linked to meeting minutes in this folder.** *** It is anticipated Level 3 subfolders would be used appropriately according to the complexity of the project's organizational structure and as-needed to facilitate quick and easy retrieval.** *** As email is a primary form of communication, a separate email folder should not be necessary as the different file types (.pst, .pdf, etc.) of emails can be stored in the same folders with hard-copy scans of .doc, .ppt, .xls or other file types. Alternatively, a PM may elect to set up Level 3 subfolders within each of the four Level 2 folders as separate folders for emails, or for "incoming" and "outgoing" communications.** *** When documents that carry signatures are stored, these should either be electronically signed versions, or scans of wet-signed documents.** **Note: Must defer to local IT requirements/practice for storing email (e.g. '.msg' and '.pst').**	**C0 - C3A**		
	310_Client [CLIENT]		Emails, meeting minutes, communications to and from client. Can add a Level 3 to differentiate between different types of communications.			
	320_Subs [SUBS]		General communication outside contract negotiations. Can add a Level 3 set of folders to differentiate between multiple Subs.			
	330_External [EXT]		Outside/Third Party/Regulatory entities other than those AECOM has a contractual relationship with (agencies, authorities, commissions, etc.)			
	340_Internal [INT]		File notes, records of conversations.			
	350_Feedback [FEEDBK]		Include informal and/or formal client feedback, evaluations, ratings, etc.			
	360_Superseded [SS]		Superseded versions of documents in the Communications folder.			
400_Technical [TECH]			**Store data, input, standards, guidelines, manuals, calculations, software information and validation and other similar materials that support the development of the technical aspects of the work.** *** Examples of Level 2 folders: Reports, Calculations, Data, Information, etc. Includes all non-CAD, non-GIS working documents.** *** Replace "431_TechnicalArea_X" with appropriate naming convention.**	**C0 - C3A**		
	410_Technical_Approach_Review [TAR]		Record of Technical Approach Review and follow-up; resolution of TAR comments.			
	420_Technical_Quality_Reviews [TQR]		Supporting evidence of quality review activity (markups, check sets, comments log, TQRRs, etc.). May include optional QC Review checklists or other discipline-specific checklists.			
	425_Calculation_Review [CALC]		Record of Calculation Review and follow-up and resolutions.			
	430_Technical Working Documents					
	431_TechnicalArea_X					RN
	432_TechnicalArea_X					RN
	433_TechnicalArea_X					RN
	434_TechnicalArea_X					RN
	440_Field_and_laboratory_data [DATA]		Intended as a location for field forms, field data, boring logs, laboratory data and analyses, research data, permits, etc. Used to develop deliverables.			RN
	450_Photos [PHOTO]		Project photos, field photos and corresponding photo logs.			RN
	460_Superseded [SS]		Superseded versions of documents in the Technical folder.			
500_Deliverables [DELIV]			**File the record set (.pdf/locked version) of issued deliverables submitted to the client / outside entities (e.g. funding agencies, permitting agencies, etc.):** *** Replace "50X_Deliverable_X" with the appropriate naming convention matching the deliverable naming convention.** *** It is a requirement that these deliverables will be reviewed in accordance with the Technical Quality Review Procedure - DCS. Records of this review (TQRR) are stored in the respective deliverable folder (501, 502, etc.), or storage in folder 420 as determined by the PM.** *** Include client's interview review comments and transmittals associated to deliverables.**	**C0 - C3A**		
	501_Deliverable_X					RN
	502_Deliverable_X					RN
	503_Deliverable_X					RN
	504_Deliverable_X					RN
	580_Other		Where superseded drawings exist as a deliverable, include in this folder for a record of the entire issued set.			RN
	590_Superseded [SS]					
600_Construction Support [CSUP]			**This folder is intended to house records of AECOM's interaction with third-party contractors that are building the work designed by AECOM. Projects where construction management or administration is the primary service may be required to follow a different file organization structure by contract.**			**RN**
	610_Addenda [ADDENDA]		Copy of issued contract addenda, as well as other supporting documents leading up to the addenda release.			
	620_Communications [COMMS]		Use Level 3 subfolders as desired to separate among various entities and/or types of communications (emails, meeting minutes, claim documents, etc.).			
	630_RFIs [RFI]		Requests for Information submitted by contractors and our replies.			
	640_Shop_Dwg_Submittals [SHP_DWG_REV		Review of shop drawings and other submittals received from contractors.			
	650_Pay_Applications [PAY_APPL]		Pay requests from the contractor, including AECOM's review and response.			
	660_Change_Orders [CHG_ORD]		Use Level 3 subfolders as needed to contain information related to each change order including permit approvals.			
	670_Site_Visits_Inspections [SITE_INSP]		Records and notes resulting from AECOM inspections of the work performed.			
	680_Punch_List_Closeout [PUNCH]		Documentation and progress records of contractor efforts to complete the work. Add Level 3 folders for items such as Maintenance Manuals, etc.			
	690_Superseded [SS]		Superseded versions of documents from Construction Support folder.			
700_Quality_Env_Sust [QES]			**The electronic tools (iQT, AECOM U) serves as the primary repository for some of these documents. When desired, or when electronic tools are not accessible to a project, this folder is used to house these records.**	**C0 - C3A**		
	710_Plans [Q_E_PLAN]		Project-specific quality, environmental management and sustainability plans requested by clients above and beyond the sections in the project plan. If a deliverable, can be the work product in this folder with the final deliverable in a deliverable folder above.			
	720_Audits_and_CARs [AUDIT_CAR]		Project safety, quality, EMS audit findings, nonconformities and corrective action documentation (If documentation not retained in iQT).			
	730_Training [TRAIN]		Evidence of EMS, QMS, etc. training performed for the project.			
	740_Reserved_for_PMs_option					RN
	750_Superseded [SS]		Superseded versions of documents in the QES folder.			
800_Safety [SAFETY]			**This folder would be used on projects that involve field work or other-than-ordinary office-based physical activities that present a safety hazard.**	**C0 - C3A**		
	810_Safety_Plan [SFTY_PLN]		Project-specific safe work plan, safety and health plan, Task Hazard Analyses (THAs), and hazard checklists as applicable.			
	820_Training [TRAIN]		Include records of project-specific S&H training.			
	830_Meetings [MTGS]		Include attendance/agenda of on-site tool box meetings, attendance at contractor mtgs, etc.			
	840_Incidents [INCID]		Investigation of safety incidents. Coordinate with SH&E and Legal regarding records to keep in project files.			
	850_Safety_in_Design [SiD]		Include records and reports.			
	860_Superseded [SS]		Superseded versions of documents in the QES folder.			
900_CAD_GIS			**Intended as a location for CAD/BIM files, GIS graphics, works-in-progress and collaborative working documents. Finished deliverables are stored in Section 500. If clients require alternate file structure, that requirement takes precedence over the below structure.**	**C0 - C3A**		
	910_CAD		Intended as folder structure for design working documents that use CAD technologies, processes, and procedures to create, compose, and deliver project deliverable content. For example, AutoCAD (and design apps), Micro Station (and design apps), and Revit (design apps.) are examples of CAD/BIM technologies that will use this folder structure to manage and deliver project content. Other design technologies such as water modeling, traffic simulation, or structural analysis applications may choose to use these folders to integrate data more efficiently with CAD/BIM technologies.			RN
	911_Discipline_X					
	911_1_WIP					
	911_2_Shared					
	911_3_Published					
	911_4_Archived					
	912_Discipline_X					
	912_1_WIP					
	912_2_Shared					
	912_3_Published					
	912_4_Archived					
	920_929_(GIS_Graphics)		Customizable based on scope of services and GIS and/or Graphics needs.			RN
	930_BIM		Intended as folder structure for design working documents that use BIM technologies, processes, and procedures to create, compose, and deliver project deliverable content. For example, BIM (and design apps) or REVIT will use this folder structure to manage and deliver project content. Other design technologies such as water modeling, traffic simulation, or structural analysis applications may choose to use these folders to integrate data more efficiently with BIM technologies.			RN
	940_999_Reserved_for_PMs_option					RN

Unified File Index

Rev	Rev Date	Details
1	15-Jul-16	Initial Release as Q2[DCS]-222-WI1
2	15-Jul-16	Minor edits.
3	23-Oct-16	1. Level 2 folder abbreviations added in [ ]. 2. If abbreviations are not used, do not add the brackets or information inside of the bracket in the folder set up.
4		1. Instruction not to use illegal characters in folder naming convention - use 'underscore' instead.
5	07-Dec-16	1. Updates to CAD_GIS folder per Global CAD/BIM teams request
6	01-Feb-17	1. Updated 130_DOA [DOA] to 130_Approval matrix [APPVL_MTX] 2. Updated CAD Discipline and CAD_GIS folder to correct sub-folder structures. 3. Removed further illegal characters i.e. dashes and forward slash. 4. Amended '400' + '500' renamable and put in their numbers.
7	02-Mar-17	1. Updated 270_Project_Reviews_APIC [PROJ_REV] to 270_Project Reviews [PROJ_REV] 2. Corrected number sequence for 700_. 740_Training is now 730_, 750_Reserved_for_PMs_options is now 740. 3. Removed references to Q-Dash and VPO
8	27-Jan-20	1. Updated to address Graded Approach and transition from ePM to APIC. 2. G18, replaced Salesforce for CRM System. 3. G52, removed statement 'May be in electronic tool (ePM, ePMP) as meeting minutes. 4. G81, removed 'Healthy Start audit review.
9	21-Oct-20	1. Moved 'Change Log' detail from main page to its own Tab called 'Change Log'. 2. I8 – Replaced 'Cannot Delete' with 'Restrict Deletion……' 3. G12 – Replaced '……CRM System.' with '…… approved system.' 4. G29 – Deleted '….. and Risk Register……' 5. G38 – Reworded to highlight local IT requirements/practices are deferred to when storing email (e.g. .msg and .pst). 6. G45 – Reworded to better explain content to be stored in this location. 7. Row 48 - Added '425_Calculation_Review [CALC]' 8. G57 – Reworded to better explain content to be stored in this location. 9. G62 – Replaced '……. CD Set.' with '……. Issued set.' 10. G81 – added 'hazard checklists' as an another example of content type for this area. 11. Row 85 - Renamed '850_Superseded [SS] ' to '850_Safety_in_Design [SiD] 12. Row 86 - Added '860_Superseded [SS]'

Technical Task Protocol (TTP)

Q2[DCS]-321-PR2

1. Purpose and Scope

a. This procedure supplements and is read in conjunction with the procedure, Technical Approach – Planning and Review - DCS.

b. The purpose of this procedure is to outline a process for using a Technical Task Protocol (TTP) to help guide the performance of specific technical work tasks in accordance with established requirements and full knowledge of input sources and guidance documents.

2. Procedure

a. The intent of a Technical Task Protocol (TTP) is to provide those preparing technical documents with the input, references, criteria, direction, and background information necessary to carry out the task in a complete and efficient manner. TTPs are mainly useful for calculations, and may be used as input to specifications, drawings, and technical reports and studies. Exceptions are cases where the tasks are simple or for information only, or where the input information is readily available or developed in another manner for the project (e.g., Design Criteria Document). Depending on the scope and complexity of a task, TTPs may be developed for individual tasks or a series of tasks. In addition, standard TTPs may be developed by offices or other business units to address work that is performed for a given client on an ongoing or repetitive basis. Typically, **discipline leads** determine the value, necessity, and scope of TTPs on the projects their discipline is working on, or for their departments in general.

b. **Discipline leads** shall assign competent individuals the task of preparing calculations. Refer to the Calculation Preparation Instructions – DCS for guidance on the preparation of calculations.

c. Technical Task Protocol preparation – **Discipline leads**, or **designee**, prepare TTPs prior to the performance of technical tasks. TTPs generally include the information as described in the Technical Task Protocol Outline – DCS. Content is also based on the complexity of the task, size of project, project team familiarity with design requirements, new design requirements, etc.

d. Technical Task Protocol format – TTPs are to be formatted in a manner that provides a clear understanding of the task and the conveyance of the required information.

e. Control of Technical Task Protocols – TTPs are to be kept up to date throughout the development of **t**echnical documents and assigned revision numbers as appropriate. TTPs that have been supe**r**seded or cancelled are to be so noted. Revisions to TTPs should be given the same review and approval as the original.

f. Review and Approval of Technical Task Protocols – TTPs shall be reviewed and approved by a **competent individual other than the preparer** to ensure the information is identified and presented correctly. The date and signatures of the preparer and reviewer appear on the cover sheet or first page of the TTP, signifying their review and approval for use.

g. Approved Technical Task Protocols should be referenced as a design input in the related design document.

3. Terms and Definitions

a.	Technical Task Protocol (TTP)	A document that provides instructions on how to set up, plan and conduct a specific technical work activity.
b.	Discipline Lead	The manager or supervisory level person that is responsible overall for the project's technical work in a specific discipline.

4. References

a. Technical Approach – Planning and Review – DCS Q2[DCS]-321-PR1

b. Calculation Preparation Instructions – DCS Q2[DCS]-351-WI5

5. Records

a. Technical Task Protocol (TTP) Outline – DCS Q2[DCS]-321-FM2

b. Approved Technical Task Protocol

6. Appendices

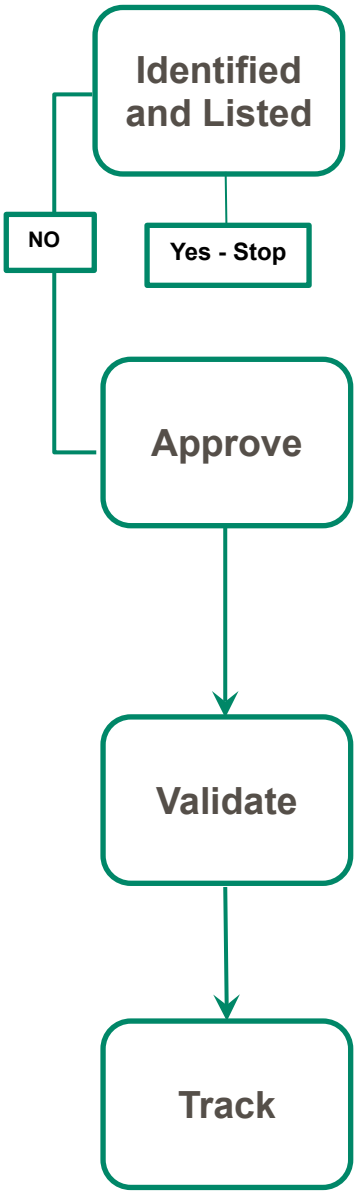
a. N/A

7. Change Log

Rev #	Change Date	Description of Change	Location of Change
1	26-July-2012	Initial release as Q4NA-321-PR1	
2	15-Sept-2016	Re-released as Q4NA-321-GL1	
3	15-Aug-2022	Re-released as Q3[DCS]AM-321-PR1	
4	14-Oct-2024	2024 Review; elevated from DCS Americas to DCS level procedure; re-released as Q2[DCS]-321-PR2.	

Validation of Software and Data Management Tools

Q2[DCS]-311-PR1



WHO	WHAT/HOW	PDS Phase
Technical Lead and Technical Team	• Identify technical software in Project Plan. • Confirm it is listed on the geography/region/office specific validated software listing. If **yes, Stop,** requirement is met. • If **no**, continue. Assign Validator and Approver to perform validation. Specify the method to be used for validation. • If software is developed by AECOM, implement Section 3.3 verification and validation.	Execution
Software Approver	• Review the information and, if found acceptable, approve the software for use. • Take the necessary steps to have the technical software added to the Geography/Business Line/Location validated software register.	Execution
Validator / Discipline Lead	1. Perform validation using one of the following: a. Run the software using input from a known solution and verify that the program output matches the known solution. All significant design options/methodologies offered by the program shall be verified. b. Perform a manual calculation to verify the results obtained using the software. c. Obtain manufacturer documentation of production of software under a recognized quality standard. 2. Provide results and documentation of the validation process to assigned Approver.	Execution
Geography Quality	• Develop and maintain a register accessible to all staff listing technical software that has been validated for use in above step. • The register shall include, at a minimum, the vendor name, software name/description, version number and AECOM's Discipline Manager/ Approver and contact person for the software.	Execution

Related PPI

- IMS Manual - DCS Q2[DCS]-001-PR1
- Improvement Procedure – DCS Q2[DCS]-003-PR2
- Technical Quality Planning and Review - DCS Q2[DCS]-351-PR1

References

- Project Plan Template – DCS Q2[DCS]-221-FM1
- Project Plan – Short Form – DCS Q2[DCS]-221-FM2
- Project Plan – C3A – DCS Q2[DCS]-221-FM3
- Software Validation Form - DCS Q2[DCS]-311-FM1(Fillable PDF)
- Software Validation Form - DCS Q2[DCS]-311-FM1 (MS Word)
- DCSA Validated Software List
- Geo/Regional Validation Software Registers
- Technical Practice Groups (TPGs)

Terms & Definitions

- AECOM Glossary

Help & Training

- None

Change Log

1. Purpose and Scope

This procedure describes minimum requirements to ensure software, including data management tools, used on AECOM DCS projects has been adequately selected and validated before use. Project Managers shall validate data management tools and software used to collect, store and process data used to develop project related deliverables, to ensure they meet the technical discipline and client requirements.

2. Procedure

When software is used to create inputs to work products or advice to clients, the validity of the software and its outputs, and its ability to satisfy the intended application, must be established. Software must be validated prior to initial use, and reconfirmed as necessary.

During the proposal stage, the Technical Leader should include in the Technical Approach development a list of appropriate technical software that will be used on the project, along with if the software has been/or needs to be validated. This list should be provided to the Project Manager to include as a link in the project plan and resources appropriately budgeted for where validation is needed.

If the software (and current version) is not already included on the geography/region software registers, the technical team member utilizing the software shall perform a validation that would be logged on the appropriate register for use by other technical team members.

The validation must be documented using Software Validation Form – DCS or equivalent and the documentation must be readily available (e.g., in the project central file or central register of validated software). Technical team members are required to confirm validation has occurred or are responsible for software validation for their technical software. Control of the software (including licenses, loading onto computer and addressing software errors and maintenance) is the responsibility of the IT Department.

This document focuses on the software validation, output review and testing and applies to “technical software” which is used for any of the following:

a. Performing calculations;

b. Developing input for use in calculations;

c. Creating designs or drawings using embedded calculations;

d. Generating output provided directly to clients;

e. Generating output included in deliverables to clients; or

f. Developing software for delivery to a client as a contractual obligation.

2.1 Technical Software Includes

a. Advanced or complex programs developed within standard office-type platforms such as MS Excel and MS Access which are not amenable to standard checking/verification.

b. Mathematical, formulaic, and logic-based programming developed within standard office-type platforms such as MS Excel and MS Access that cannot be validated as simple calculations.

c. Industry Standard and non-standard software performing technical calculations to confirm/develop designs (e.g. STAAD, GT STRUDL, etc.).

d. AECOM Data Management Tool (e.g. MS Excel macros, software developed to analyze data for a deliverable, etc.).

2.2 Technical Software Excludes

a. Software that does not conform to the definitions provided in the list above;

b. Used to produce output that is checked and verified manually;

c. Inherent to equipment for measuring and testing, which is periodically verified and calibrated in accordance with the manufacturer's specifications; or

d. Designed to enable the operation and maintenance of a computer system and its associated programs (systems software).

e. Simple MS Excel and MS Access formulas or logic that can be validated as calculations in accordance with the Technical Quality Planning and Review Procedure - DCS.

The project technical lead and/or lead verifier are to confirm the appropriate technical software is being validated and implemented.

Geographies/Business Lines may develop supplemental procedures to include additional details or specifics. These may include the establishment of higher-level management control or coordination of the validation process.

3. Software and Data Management Tool Development Considerations

Prior to selecting or developing software, including data management tools, the PM and developers must agree on a few key elements of design as follows:

- Functionality
- Capability
- Scalability
- Desired Output
- Speed
- Compatibility
- Method of validation
- Stability

"Non-standard" software (e.g. written in programmable third-party software such as C++, Visual Basic, MathCAD, MS Excel models, and extensions or revisions of verified software such as MS Excel macros or advanced formulas or logic based programming) or procured and employed by AECOM (STAAD, Roof View, etc.) shall be adequately documented, including authorship, revision history, description, applicability, testing and references. Such software shall be validated taking into account the applicable range of intended use, and software options and parameters consistent with the intended range of applications.

Where software not developed by AECOM is to be used to conduct AECOM business, that software must be currently licensed for use by AECOM.

- All software to be used on the AECOM network must be licensed and approved by the Information Technology (IT) group before it can be utilized.
- AECOM staff may not use software that they privately own in the conduct of AECOM business.

3.1 Purchased Technical Software Validation

Follow the flow diagram on Page 1 of this document (and itemized below) to add technical software to the validated software listing/register:

a. Identify software to be used in the Project Plan;

b. Determine whether validation is required;

c. If validation is required, determine if validated, if not, assign technical team member to validate;

d. Discipline lead review validation process and confirm accurate results are being output by the software;

e. Transmit the validation documentation to the Software Approver (defined on Geo/Region/Location register);

f. Software Approver request the software to be added to the register; and

g. Perform a verification after use of the software to confirm the software provided reasonable results (could be in the Technical Quality Review process).

3.2 Client Specified Software

Follow the flow diagram on Page 1 of this document (and itemized below) to add technical software to the validated software listing/register:

a. Identify software and confirm the software is fit for purpose and included in the Project Plan;

b. Assign technical team member to prepare the validation form with links to the client/regulatory internet site with the clients/regulatory software verification and validation process or request documentation of verification and validation and attach to the Software Validation Form – DCS;

c. Discipline lead review validation package and confirm accurate results are being output by the software;

d. Transmit the validation documentation to the Software Approver; and

e. Perform a verification after use of the software to confirm the software provided reasonable results (could be in the Technical Quality Review process).

3.3 AECOM Software/Data Management Tool Verification and Validation

Software developed by AECOM starts at the proposal stage and is included in the project schedule and budget, the table below identifies specific assignments for originators, reviewers and lead verifiers for the verification and validation process.

Proposal & Planning

- Project Manager and Technical Lead identify technical quality reviews applicability based on the project's data management and software validation needs and review software and tool development considerations.
- Categorize software as Legacy, Industry Standard, or Non-standard per Section 4.0, Terms and Definitions.
- For each non-standard software, confirm validation has occurred or assign Validator, Verifier and Approver to perform validation, and if appropriate, specify the method to be used for validation.

Check

- Originator should conduct self-check and test prior to release to reviewer.
- Reviewer should select test data and perform validation following the specified validation method and address applicable Technical Quality Review needs.
- Reviewer will conduct validation tests to ensure that results are consitent with technical practice and expected outcome, provide results, comments and documentation.
- Reviewer does the initial testing of end user interface such as forms, filters, commands, reports, etc. to ensure proper functionality and error handling.
- The originator addresses the comments, either making corrections or stating why the comment is not accepted. Disagreements are taken to the lead verifier; if the lead verifier cannot resolve the disagreement, the Department Lead/Manager makes the final decision.

Verify

- The Lead Verifier confirms that all comments have been addressed appropriately and that the software includes all required elements.
- The Lead Verifier conducts a discipline specific technical review of the deliverables or deliverable elements generated using the data and\or software.
- Verify that any comments or errors during testing of final user interface elements such as forms, filters, commands, reports, etc. have been resolved and confirm proper functionality and error handling.
- If the Lead Verifier has additional comments or disagrees with something in the software, the originator addresses the comments or states why the comment should not be incorporated. Disagreements are resolved by the Department Lead/Manager.
- The Lead Verifier completes and submits validation form to Software Validation Approver once all comments have been resolved.
- Provide results and documentation of the validation process to the assigned Approver. Changes that may affect previous output shall be noted and communicated to Approver and Department Lead/Manager.

Approve

- The Department Lead/Manager approves the software and requests the software be added to the validated software register.
- The PM approves deliverables or deliverable elements created with the software.

3.4 Validation of Software Revisions

New versions of previously validated software shall be validated again in accordance with the original process. Consideration shall be given to whether only the latest version of the software is to be maintained, keeping in mind that the use of older versions may still be required by clients or for continuity with earlier output.

3.5 Software Error and Errata Data

Errors identified by software vendors or by project team members during the use of the software must be reported to the Discipline Manager and the contact person identified on the relevant software register. The Discipline Manager shall:

a. Notify the software developer/vendor and AECOM IT.

b. Identify projects that have used or are using the software. Assess the impact of the error on both completed and ongoing projects.

c. Notify the affected project managers.

d. Notify the affected client if necessary.

e. Develop a corrective action plan for all affected work products and deliverables.

f. Revise the validation documentation, including the software register, as necessary.

3.6 Documentation

Validated Software records such as those listed below must be maintained in the local 'approved' Geography/ Business Line/Location validated software register:

- Completed the Software Validation Form - DCS (or equivalent) and supporting records, calculation check, comment sheets and software revision/version history maintained by the geography and business line Software Approver.
- Whenever possible developer should include the corresponding "About" Section and summarize licensing, copyright, and version information.

4. Terms and Definitions

a.	**Data Management Tool**	Any software, programming, template, spreadsheet or platform used to store, evaluate, format or manipulate data in any way from an Excel table to advanced software.
b.	**Discipline Manager/ Approver**	Leader that supervises and is responsible for the work performed in a specific discipline, market sector or practice area. Responsible for reviewing validation records from technical team members under his/her direction and providing to the Business Line Approver.
c.	**Industry Standard Software**	Commercially available technical software that is widely used and accepted in a discipline, market sector or practice area, and that does not require significant adaptation for use by AECOM (i.e. Primavera, ArcGIS, REVIT, etc.)
d.	**Legacy Software**	Technical software validated and regularly used in the current version at an AECOM legacy or newly acquired company for at least three years and for which no problems have been reported, or for which problems have been reported and corrected.
e.	**Non-standard Software**	Technical software that is not widely used and accepted in the industry.
f.	**Software Approver**	The individual, independent of the validator, who reviews the validation output and accepts the software for use by AECOM.
g.	**Software Register**	An up-to-date listing of validated technical software maintained by each Geography/Business Line/Location and posted in a location accessible to all staff.
h.	**TL**	Technical Lead; An individual competent in a technical discipline accountable to the PM for technical excellence on the project and for delivery of the technical tasks or technical packages of work within the scope, budget and schedule.
i.	**Validation**	The process of accepting technical software for use by AECOM. Validation may include verification of conformance with requirements.

j. **Verification** The process, normally performed by the software vendor, demonstrating that the software will perform its intended function prior to distributing to users of the software (AECOM).

k. **Validator** The individual who performs the validation – technical team member.

5. Appendices

a. N/A

6. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	05-11-2011	Initial Release as Q2-311-PR	All
1	04-18-2016	2015 Annual Review and released as Q2[DCS]-311-PR1	Minor edits throughout.
2	05-07-2018	2017 Review, in new IMS Template, major changes including title change from ‘Software Validation Procedure – DCS’.	Read as new document.
3	20-Jan-2020	2020 Review; removal of all ePM references.	Page 1; S3.1
4	12-Oct-2021	2021 Review; put into new AECOM branded template; swapped order of “Approve” and “Track” in flow diagram; removed reference to the AECOM Software Catalog; new section for Client Specified Software; general edits.	Page 1, References, Section 2, 2.2, 3.2, 3.6,

AECOM

DCS

Software Validation Form

Q2[DCS]-311-FM1

Instructions:

1. Refer to the Validation of Software and Data Management Tools – DCS Q2[DCS]-311-PR1 for information on this process.
2. Completed and approved forms are to be maintained in the local 'approved' Geography/Business Line/Location validated software registers.

1. Software Information			
Software Name		**Version**	
AECOM Contact Person		**Date**	
Source	☐ Internal* ☐ External	**Business Line**	
Vendor/Developer			
Software Classification	☐ Legacy	☐ Industry Standard	☐ Non-Standard

* Validation of software developed by AECOM may not be performed by the software developer.

2. Software Validation		
Validation Type	☐ Initial	☐ Revision
Purpose & Description		
Validation Method		
Legacy	☐	Documented evidence of previous satisfactory use.
Industry Standard	☐ ☐	Signed Statement / Certification of QC validation by vendor / developer. Sample data run for proper functioning on AECOM computers / system.
Non-Standard	☐ ☐	Software run w/input having a known solution / output matches solution. Manual calculation verification.
Other (specify method)	☐	

Validation Performed by		
Name	**Signature**	**Date**

3. Validation Approved by		
Discipline Approver:		
Name	**Signature**	**Date**
Software Approver:		
Name	**Signature**	**Date**

4. Notes/Comments

5. Documentation			
Attached (check)	☐	Previous internal use documentation.	☐ Known solution input data & output.
	☐	Vendor / Developer Statement or Certification.	☐ Manual calculation verification.
	☐	Other:	

Technical Quality Review - Job Aid

Technical Quality Review Scope

Purpose:

1) Clarify the nature of technical quality review (TQR) by outlining the various technical review types and related scope. This complements existing procedures which provide more detailed guidance for implementation.
2) Provide guidance on TQR roles and responsibilities, realizing the Project Manager has the ultimate accountability to ensure the quality of the project and deliverables in accordance with scope, budget and schedule.
3) Refer to the Technical Quality Review (TQR) Procedure - DCS Q2[DCS]-351-PR1 for additional information: Click here
4) In the spirit of continuous improvement, we welcome comments and suggestions to keep this document relevant and useful. You can find the current version in the: Project Delivery System

Roles & Responsibilities

R - Responsible (completes the task)
A - Accountable (approves the task)
C - Consulted (has information or capability to help complete the task)
I - Informed (needs to be notified of task result)

Recommended scope when TQR Type is conducted
Determine need based on project scope

Technical Quality Review Type	Appropriate Budget, Schedule and Resources	Conformance with Standards & Regulatory Requirements	Review of Client, Sub & Third-Party Information	Compliance with Scope	Basis & Validity of Conclusion / Recommendation	Soundness of Approach / Design	Adequacy of Statements of Limitations	Technical Risk & Mitigation	Verification of Technical Solution	Validation of Assumptions	Software Verification & Validation	Check of Calculations	Check of Drawings & Graphics	Client Input Review	Organization, Clarity & Completeness	Edit for Elements such as Grammar, Punctuation, Formatting & Graphics	Notes	Project Manager	Technical Lead	Originator	Lead Verifier	Reviewer	Interdisciplinary Reviewer	Independent Reviewer	Project Quality Manager
Technical Approach Review (TAR) A review of the Technical Approach **(including the technical solution)** conducted to confirm that a project's creative, technical and client objectives are being addressed during the initial stages of the project to minimize risks resulting from an inadequate technical approach.	■	■		■	■	■	■	■	■	■	■			■			Performed at or before the project reaches 15% complete or as described in the Project Plan. Document on TQRR, TAR checklist or meeting notes from TAR meeting, or equivalent.	C	C	C	R/A				I
Calculation Check Performed to validate the accuracy and completeness of discipline specific calculations prior to deliverable hand-off to other task owners, disciplines, sub-contractors or the client.		■	■	■	■	■	■	■	■	■	■	■			■	■	Project or client needs may also require an Independent Reviewer on calculations. Document calculation check on the calculation checklist.	C	A	C		R			I
Discipline Review/Check A detailed examination performed within a single discipline to verify the correctness, completeness and technical adequacy of work, conformance with referenced standards, compliance with input requirements, acceptance criteria, relevant laws and regulations, anticipate safety standards (Safety in Design), basis and validity of assumptions, opinions, conclusions, recommendations, appropriate standard of care and potential for errors or omissions.		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C	R			I
Interdisciplinary Review Conducted to align critical design elements and eliminate possible conflicts and gaps between elements developed and reviewed in different disciplines, office locations, and/or companies, including sub consultants.		■	■	■	■	■	■		■	■			■	■	■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C		R		I
Specification Package Review A review that references to standards and codes are correct and the relevant specification sections are included. Usually coordinated with drawings and applicable conditions.		■		■			■						■		■	■	Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	C	A	C	C	R			I
Bidability / Contract Documents Review A comprehensive review of pre-final (90%) or final (100%) contract documents to determine if the documents are ready to bid in an effort to reduce the risk of RFIs, change orders, disputes and claims resulting from the quality of the contract documents.		■	■	■		■	■	■		■			■	■	■	■	A bidability review team, which may be different than the TQR Team members, may need to be engaged.	A	C		C	R			I
Constructability Review Intended to identify issues in designs and contract documents that could adversely impact the construction process, such as standards, compatibility, existing facilities/utilities, interface with existing operations, access and egress, availability of building materials and, long lead procurement and labor resources. This enables rational bidding, reduces uncertainties and minimizes potential changes during construction. An independent review of design documents to ensure work requirements are clear, documents are coordinated, and that they assist the contractor in bidding, construction and project administration to result in reduced adverse impacts to the project. To minimise delays and costs associated with the need to revise design after commencement of construction.		■	■	■		■	■	■		■			■	■	■		A constructability review team, which may be different than the TQR Team members, may need to be engaged.	A	C		C	R			I
Independent Peer Review (C0 projects) A critical evaluation of work products, deliverables, material or data to verify or validate assumptions, plans, results, opinions, analysis, recommendations or conclusions at key milestones and prior to delivery to the client or other non-company entity.		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	The Independent Reviewer is completely independent from the team. This review is required on C0 projects or as required by the client, Geo-specific graded approach or other requirements. The review is documented on the TQRR or approved equivalent.	A	C	C				R	I
Sub Consultant, Client, or Third-party Info Review A review of materials for completeness and verification that appropriate quality assurance and control checks have been completed by the sub consultant, client or third party.	■	■	■			■				■	■	■		■			Perform mark-ups and document on a TQRR as applicable to Graded Approach and Geography.	A	R			I			I

Technical Quality Review - Job Aid

Technical Quality Reviews - Overall

In addition to the Review Types on the Technical Quality Review Record - DCS Q2[DCS]-351-FM1 (TQRR), the below reviews take place in the overall process of the deliverable review, verification and approval process.

Type	Who	Responsibility	Record
Self-Check	**The Originator**	Check that the work product (deliverable) is complete and appropriate to the deliverable phase before sending to other reviewers or checkers.	No specific record required.
Reviews & Checking	**Refer to the RACI* Page 1**	Refer to the RACI Proofread content to review spelling, grammar and punctuation.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.
Verification & Validation	**Lead Verifier**	Confirm the deliverable satisfies the technical approach/solution/methodology developed at the start of the project through a high-level review of the overall submittal. Confirm that the required quality checks and reviews have been performed. Achieve correction as needed by resolution with Originator and technical lead.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.
Deliverable Approval and Issue	**Project Manager**	Final review of deliverable and authorization to issue.	Signed and dated Technical Quality Review Record (TQRR) or equivalent documentation in the form of mark-ups with stamps/signatures, spreadsheets, etc.

Rev	Change Date	Description of Change	Location of Change
0	02-February-2017	Initial Release as Q2[DCS]-351-WI2	All
1	20-July-2018	Minor editorial changes to accommodate ePM updates and referencing	A5, S5, A57-Q87
2	27-January-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach. Incorporate equivalent information from the Technical Quality Review Summary - DCS Q2[DCS]-351-WI1 and Technical Quality Review Types - DCS Q2[DCS]-351-WI3 and retired both these 2 Instruction documents.	All
3	09-April-2020	Revised 'TQR Review Types' tab: 1. Removed the word 'holistic' from Point (1) of 'Purpose'. 2. Reworded the 'Specification Package Review' section. 3. Reword the 'Independent Reviewer' wording. Revised 'TQR Reviews' tab: 1. Changed 'Checks' to 'Check' 2. Provided explanation for 'RACI' acronym 3. Corrected capitalization of 'technical' in the title of the TQRR. 4. Added 'if not performed by a Project Quality Manager' at the end of the sentence: *Confirm that the required quality checks and reviews have been performed,.....* 5. Added 'transmittals' and clarified 'submittals' by adding 'shop drawing' - Exception to TQQR Requirements section.	All A3 A26 R38 C4 A9 D5 C6 B13
4	28-June-2021	Updated to new AECOM colors and logo. **TQR Review Types** tab: 1. Added box to against TAR x Verification of Technical Solution. 2. Added '.... or equivalent' to the end of the Notes for TAR. 3. Changed 'R' to 'C' against Technical Lead for TAR. 4. Added 'C' to Lead Verifier against Discipline Review/Check, Interdisciplinary Review, Specification package Review, Bidability / Contract Documents Review. 5. Added a new sentence to the end of the 'Constructability Review' description. 6. Added '.... or other requirements.' to the 2nd last sentence of the 'Notes' for Independent Peer Review. 7. Changed 'C' to 'A' against PM for 'Sub Consultant, Client, or Third-party Info Review'. 8. Changed 'A' to 'R' against Technical Lead for 'Sub Consultant, Client, or Third-party Info Review'. 9. Changed 'R' to nothing against Originator for Sub Consultant, Client, or Third-party Info Review'. **TQR Reviews** tab**:** 1. Deleted '.... if not performed by a Project Quality Manager.' from the end of 2nd last sentence of the 'Verification and Validation' responsibility wording.	 J9 R9 T9 V18, V22, V26, V30 A34 R38 S42 T42 U42 C6
5	14-October-2024	**TQR Review Types** tab**:** 1. Deleted "Suggestions/Changes + 'Click Here' link to email address" **TQR Reviews** tab: 1. Added statement on proofreading to allow for the removal of repetitive information on Self-Check, Checking, Verification and Inter-Disciplinary Review in the new Technical Quality Review Plan - Partner Office - DCS.	 S2 C5

APPENDIX B – DISCIPLINE & INTER-DISCIPLINE QC FORMS

- *LADOTD Final Calculation Book Index Checklist*
- *AECOM QMS Technical Quality Review Procedure*
- *AECOM QMS Guidelines for the Preparation of Calculations*
- *AECOM QMS Calculation Cover Page Forms*
- *AECOM QMS Calculation Log Form*
- *AECOM QMS Calculation Discipline QC Review Checklist Form*
- *AECOM QMS Drawing Discipline and Inter-Discipline QC Review Checklist Form*
- *AECOM QMS Specification Discipline QC Review Checklist Form*
- *AECOM QMS Study/Report Discipline QC Review Checklist Form*
- *AECOM QMS Document Review Comment Sheet*

APPENDIX B—FINAL CALCULATION BOOK CHECKLIST

The final calculation book for each project shall include, but not limited to, the following sections:

__ **Cover Sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date

__ **Final Calculation Book Check List**

__ **QC/QA Certifications**

__ **Peer Review Resolution Agreement (if peer review is performed)**

__ **Design Criteria**

__ **Final Hydraulic Analysis Report from Hydraulic Engineer**

__ **Final Geotechnical Analysis Report from Geotechnical Engineer**

__ **Superstructure Design Calculations**

__ **Substructure Design Calculations**

__ **Quantity Calculations**

__ **Special Provisions/NS-Items**

__ **Construction Cost Estimate**

__ **As-Designed Rating Report**

__ **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**

Consultants shall submit the final calculation book to LADOTD bridge task managers; the submittal shall be on a CD or Flash Drive or placed to a designated ProjectWise folder including the following information:

__ **A PDF File of the Calculation Book (Including the As-Designed Rating Report)**

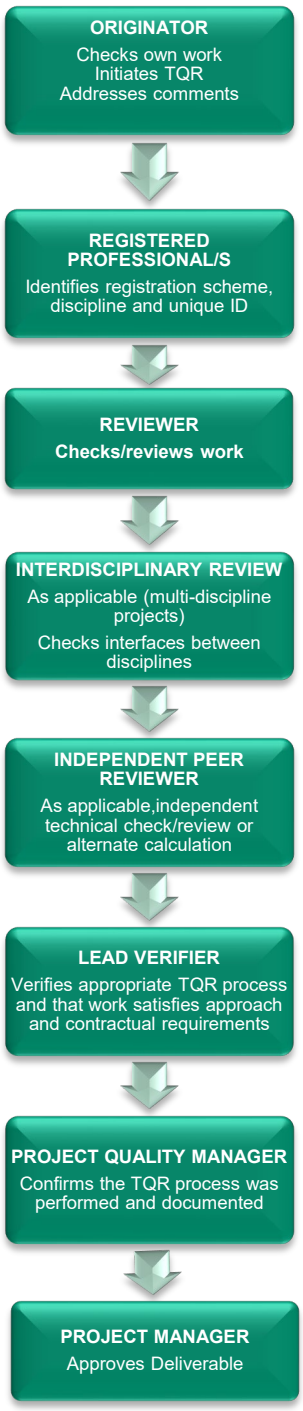
__ **All Electronic Design Files**

__ **A PDF File of the As-Designed Rating Report Only**

The final calculation book for in-house projects shall include the same files listed above for consultant projects. The final calculation book and other final design documents for all projects including in-house and consultant projects shall be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

Technical Quality Review Procedure

Q2[DCS]-351-PR1



Who[1]	What/How	When (before a deliverable is submitted to 3rd party)
Originator	• Is the "responsible" person responsible for work product. • Checks the work for accuracy and completeness before submitting the work for review or check. • Initiates the TQR. • After a review or check, addresses all comments, either by accepting the revision or discussing the comment with the reviewer. • After the review and/or check is complete, submits the deliverable to the PM for approval.	Execution Gate 3
Registered Professional/s	When required, the registered professional/s responsible for the work product (who could also be the Originator) shall identify the registration scheme (e.g., Registered Professional Engineer), the discipline, and provide their unique identification per the scheme requirements.	Execution Gate 3
Disciplinary Reviewer	• Checks (reviews) the work for accuracy etc., in line with the review scope section of the Technical Quality Review Record - DCS. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Inter-Disciplinary Reviewer(s)	• Confirms compatibility among portions of deliverables that were developed, checked and reviewed by different disciplines, offices and/or companies. Document and review comments with Originators and confirms that comments are addressed. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Independent Peer Reviewer (IPR)	• When required by the project scope, client, or AECOM risk committee the IPR will provide an independent technical review, possibly including alternative calculations, confirming the work product is accurate and complete. • Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Lead Verifier(s)[2] (LV)	• Verifies the solution (deliverable) meets contractual requirements and professional standards of care. • Verifies that the reviews have been completed and the comments have been addressed appropriately. • If the project does not have an assigned Project Quality Manager, the Lead Verifier verifies that the TQR process has been followed. Signs the TQRR and/or TQR stamp, or equivalent.	Execution Gate 3
Project Quality Manager	For projects that have identified a Project Quality Manager (PQM), the PQM verifies that the TQR process has been followed – otherwise the Lead Verifier or Project Manager performs this responsibility.	Execution Gate 3
Project Manager/ delegate	Approves the deliverable.	Execution Gate 3

1. All roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined.
2. Assign Senior LV for C-0/C-1 projects with multiple LVs.

Related PPI

- IMS Manual - DCS Q2[DCS]-001-PR1
- Improvement Procedure - DCS Q2[DCS]-003-PR2
- Subs Management - DCS Q2[DCS]-141-PR1
- Project Plan Procedure - DCS Q2[DCS]-221-PR1
- Project Document and Records Control (Information Management) - DCS Q2[DCS]-222-PR1
- Project Risk Management - DCS Q2[DCS]-231-PR1
- Graded Risk Approach: Project Delivery Requirements - DCS Q2[DCS]-231-WI1
- Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1
- Validation of Software and Data Management Tools - DCS Q2[DCS]-311-PR1
- Technical Approach – Planning & Review – DCS Q2[DCS]-321-PR1
- Technical Quality Review Job Aid - DCS Q2[DCS]-351-WI2
- Calculation Preparation Instructions – DCS Q2[DCS]-351-WI5
- Records Management & Retention Procedure – AECOM Global Q1-004-PR1
- Bluebeam Instructions

Records & Checklists

- Section 6

Terms & Definitions

- Glossary + Section 5

Help & Training

- Continual Improvement Library
- Multiple Hats How to

Change Log

1. Purpose and Scope

a. This procedure establishes the process, roles, responsibilities and requirements for conducting a Technical Quality Review (TQR) of an AECOM Design Consulting Services (DCS) deliverable. It is mandatory for any project deliverable to a 3rd party. This includes deliverables developed in “Workshare” either by the Lead or Partner offices.

b. Implementing this procedure supports a right first-time approach and promotes successful project outcomes, reducing the possibility of errors and omissions which can lead to rework and poor team morale, or even lead to legal claims effecting affect AECOM’s reputation and ability to win work.

c. Refer to Appendix 1 for an understanding of what is expected as part of a project’s Technical Quality Review plan. Partner offices may use the Technical Quality Review Plan – Partner Office – DCS, to define the details for the TQR process if not included in the Lead Office Project and/or Quality Plan documents.

2. Graded Approach

a. The graded risk approach applies to this procedure. The project’s risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup.

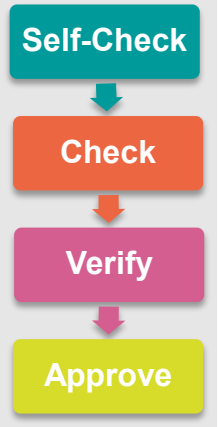
b. The matrix below defines the graded requirements of this procedure according to the risk category of the project. Partners (including Enterprise Capabilities – EC) will follow the Lead Office C-Category for the TQR process. The Lead Office Technical Lead, Project Management and Lead Verifier(s) provide guidance to the Partner Office for performing and documenting the TQR on their portion of the project work.

Table 1. Technical Quality Review Graded Approach

C-3A	C-3	C-2	C-1	C-0
	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality.	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality.	• LV approval that deliverable meets approach and client requirements. • Software validation - Calculation Checklist to document fit for use and functionality. • Functionality checked prior to use through alternative calculation or problem with known solution.	• LV approval that deliverable meets approach and client requirements. • IPR as appropriate to project scope. • Software validation - Calculation Checklist to document fit for use and functionality. • Functionality checked prior to use through alternative calculation or problem with known solution. • Software validation plan in project plan.
Calculation Checklist*				
C3A Category:	Retain evidence of internal deliverable review using TQRR or equivalent documented content in the Lead Office project UFI. Retain client comments and dispositions (resolutions) in Lead Office project UFI. Retain evidence of calculation review and software validation using the Calculation Checklist. C-3, C-2, C-1, C-0 require a TQRR as evidence of deliverable review along with mark-ups in Americas Regions.			

* = is optional in ANZ, Asia, EUR&I and MEA

3. Procedure



The basic process for a TQR is illustrated at the right. Specific requirements are included in the Process Flow.

This process is required for all deliverables, although its application should vary based on the Project Risk Category described in Section 2, Graded Approach. Each project and deliverable are different; the review requirements are subject to the type and complexity of the deliverable, the requirements of the client or regulatory agency, and the character of the personnel actively involved with the work.

Recognizing these differences, the Project Manager, Technical Lead and project team must determine what level of effort will be necessary to routinely meet the requirements of this procedure. The process shall then be described and documented within the Technical Approach, Project Plan and Project Quality Plans and communicated to all technical team members within the Lead Office and Partner office(s).

Identification and centralization of the TQR review comments to prevent loss and rework between offices is critical. It is recommended using a digital process, such as Bluebeam, Revizto, BIM360, Autodesk Construction Cloud (ACC) etc. to document work product comments and collaborate within the digital deliverable document until resolution of all comments are clearly documented.

a. This process applies to:

   i. All types of deliverables, including reports, documents, plans, drawings, digital models, data tables, specifications, fact sheets, figures, logs, presentations etc. For projects involving more than one discipline with deliverables interfacing with other disciplines, an ***interdisciplinary review*** is required to be conducted (after the discipline review during the "Check & Review" phase) and the requirements and participants should be defined in the Project Plan/Project Quality Plan.

   ii. Deliverables provided by Partners (including Enterprise Capabilities).

   iii. Deliverables provided by our subcontractors, even though we may not conduct a thorough review of their work ourselves. See Section 4 for more detail on reviewing subcontractor work.

b. All drafts, versions, and iterations of deliverables shall be reviewed prior to delivery.

Notes:

1. When deliverables must be signed and sealed, follow applicable statutory registration requirements and document on the Technical Quality Review Record – DCS or equivalent, making sure to have at least one person, other than the Originator or registered party, a part of the review process.
2. Where stand-alone calculations are prepared, the Calculation Checklist - DCS and Technical Quality Review Record – DCS should both be completed, unless the calculation is simple arithmetic included in a report where the calculation will be checked as a part of the report review and documented on a TQRR or equivalent.
3. **Check with the applicable regional statement of limitations/disclaimers for applicability to deliverable documents.**

4. TQR Process

a. Each deliverable is planned and scheduled in the Project Plan and/or a list of deliverables with a TQR set up in a timely manner to notify the project team and reviewers of the upcoming required review.

b. TQRs may be conducted at various phases of a deliverable, depending on the type of deliverable and its complexity. There may also be several *types* of TQRs but regardless of type, the process is the same as shown on Page 1.

c. TQR Types consist of Disciplinary, Interdisciplinary (when multiple disciplines are involved), Independent (when required by contract or when the project is a C-0 Project Risk Category). See definitions for definition details on these reviews.

d. Information about TQR Types, Review Scope, and Roles and Responsibilities for personnel involved in the Technical Quality Review process is found in Appendix 1 for Category-C-3A and Category-C-3 projects and the Technical Quality Review Job Aid - DCS for all project risk category projects.

4.1 Documentation of TQRs

a. Should client and or Joint Venture projects require adjustments to the TQR documentation process, this is to be specified in the Project Plan or Digital Plan/Digital Delivery Plan or Project Quality Plan hyperlinked into the Project Plan.

b. TQR evidence must be retrievable for long term evidence that AECOM used qualified personnel to prepare, review, verify and approve its deliverable for issuance. TQRs are documented by using the Technical Quality Review Record (TQRR) form or Project Deliverable Manager (TQR App) or equivalent, which must be maintained in the project file or through stamps and markups directly on the document.

c. Refer to the geography specific documentation requirements below:

Table 2. Technical Quality Review Documentation Requirements by Geography

Geography	C-3A	C-3	C-2	C-1	C-0
DCSA	TQRR or Equivalent Evidence	TQRR	TQRR	TQRR	TQRR
EUR&I	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
MEA	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
Asia	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence
ANZ	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence	TQRR or Equivalent Evidence

Exception: A TQRR is **not required** if a deliverable is general correspondence e.g., emails, letters, monthly reports (without technical content). RFIs and Contractor Submittals such as Material Submittals, Method Statements, Shop Drawings etc. should go through the technical review process but a TQRR record is not required.

d. When a client asks for a preliminary copy of the deliverable, prior to the internal TQR, a disclaimer – “Draft - has not gone through internal review” must be applied.

e. Evidence of the review, such as written comments made during a TQR must be maintained in the project file, as follows:

i. Maintain markups, check sets, comment sheets, etc., in the project file until:

1. At minimum, after the next submittal is accepted.

2. Unless otherwise directed by the client or PM. Markups/check sets may be disposed after the submittal unless a TQRR was not used to document the review process.

3. Project closeout. Discard all markups unless a TQRR was not used to document the review process, upon project closeout.

ii. For additional information on maintaining project records, see the Project Document and Records Control (Information Management) - DCS.

4.1.1 Hardcopy TQR Process

The Technical Lead and Project Manager are responsible for defining and documenting with the Project Quality Manager (where a PQM applies), how and when the TQR process shall be performed in the Technical Approach, Project Plan and if required, Project Quality Plan. At a minimum, the following is documented:

a. Schedule for deliverable reviews

b. Resources to perform these reviews

c. Definition of roles and responsibilities for each resource, e.g. Checker/Reviewer(s), Verifier (s) and Approver to be included.

d. How to document the reviews along with the color-coding process – refer to Appendix 2 and Appendix 3 for version control of the check “prints” (documents) and where check “prints” are retained within the project UFI. To present as ‘One AECOM’ the arrangements or color-coding must be determined and consistently applied across the project (all disciplines and Partner offices being consistent).

Note: Understanding that schedules change – create an online document with a hyperlink within the Project Plan – this allows the schedule to be easily updated and the most current version to be available to the project team at all times.

4.1.2 Digital Tools for Technical Quality Review

a. AECOM DCS encourages the use of digital review software tools like Bluebeam, Revizto, BIM360, ProjectWise Deliverables Management (PWDM), ProjectWise PDF markup, Autodesk Construction Cloud (ACC), etc.

b. In such cases the Lead Office PM deliverable Technical Quality Review process shall be followed, and evidence of the process identified in Section 4.1.1 provided within the tool, as applicable. Any deviation of the process shall be explained in the Project Plan, Technical Approach or Digital Plan/Digital Delivery Plan (as applicable) and approved by the Project Manager or Project Approver (and PQM where required) through approval/release of the Project Plan or Project Plan revision.

c. The Lead Office PM is responsible for collaborating with their Region Digital Lead to select the appropriate digital tool for the Technical Quality Review process. The tool and process will be identified in the Project Plan and could be detailed in a Technical Approach or Digital Plan/Digital Delivery Plan hyperlinked into the Project Plan. The Lead Office and all Partner offices will follow the process defined.

4.2 Client or Stakeholder Review Comments

a. All comments received from a client or regulatory agency must be reviewed and included as agreed with the client or regulatory agency by the authorized project team member.

b. Documentation of the reviews and agreement shall be maintained in the Lead Office project UFI.

c. When deliverables are revised based on the Client or Stakeholder comments, the Comment Response Sheet (CRS) – DCS or equivalent, shall be included as part of the revised deliverables to assist efficient review/approval process. Where practical the CRS should identify the comment, how and where (drawing/document number and title) it was addressed. Where comments are not addressed, justification for not addressing the comments should be provided under the “Response” column. Discipline Review should be performed on the CRS as part of the deliverable internal review process to ensure all the comments are adequately addressed in the revised documents.

d. The external drafts containing the client or regulatory agency comments must be retained in the project file in alignment with the Records Management & Retention Procedure – AECOM Global, the client contract or regulatory requirements.

e. Changes to the work product or deliverable resulting from these reviews are subject to the same verification, review, and documentation requirements as the original work product, except when the changes are editorial or minor in content and do not change the risk content of the document. For these changes, a review process shall be performed but evidence of review is directly on the work product, in an email or another documented form.

4.3 Project Input from External Stakeholders

a. The PM or Technical Lead is responsible to take steps to confirm the Sub's deliverable or other project input (client or others) is suitable to be included in the project deliverable. The confirmation can be performed by:

   i. Requesting evidence input was checked and reviewed by the provider, equivalent to this procedure; or

   ii. Confirm the inputs meet the requirements of the project by including in the internal review process.

b. Where the Sub is using measuring, monitoring, inspection and testing equipment that may impact the deliverable, check the deliverable e.g., report to ascertain whether the equipment used is identified in the deliverable to confirm traceability. Documentation to confirm validity e.g., calibration certificate, should also be submitted as part of the deliverable.

5. Terms and Definitions

The following definitions supplement those found in the AECOM Glossary.

a.	**Deliverable**	Work product that is intended for delivery to a 3rd party to meet final, interim, or milestone submittal obligations as defined in the contract or regulatory requirements. Deliverables subject to the TQR process are understood to mean those work products that fulfil the contract obligations (should be listed in the Project Plan). Deliverables can include reports, plans, drawings, data tables, specifications, calculations, models, conclusions and recommendations, fact sheets, white papers, letter reports, responses to comments, or any other project related document. Deliverables are not general correspondence (including emails, letters, monthly status reports (without technical content), etc.)
b.	**Deliverable Component**	A specific piece or part of a deliverable, such as calculations, drawings, specifications, studies and reports. One or more components may be packaged to comprise the overall deliverable. Calculations, even when not submitted to the client, are considered a deliverable component and shall follow the TQR process to the same rigor as the deliverable components. Calculations developed from MSExcel, MathCAD and similar tools shall have internal logic statements, embedded equations and macros checked. The Lead Verifier(s) is (are) responsible for confirming the tool is acceptable for the proposed application and meets these requirements.
c.	**Lead Region/Office/ Project Team (Lead Team)**	The team who "owns" the contract with the Client and is leading the work in line with the contract.
d.	**Lead Verifier**	Reviews the technical approach and each deliverable for overall compliance with SOW, approach, requirements and regulations. Not involved in developing the work. Must be on the AECOM Approved Lead Verifiers list (Lead Verifier Information). A project may have more than one Lead Verifier to help address all discipline elements.
e.	**Originator**	The individual or team of people who create a deliverable or work product. In the case of a team, the Originator includes the responsible person directing the work and having final decision authority over the work product. For example, a CAD designer may prepare a design under the supervision and direction of a lead engineer. Both the CAD designer and the lead engineer would be considered Originators of the work.
f.	**Partner**	Offices providing internal work to another office, region, business line.
g.	**Registered Professional**	In "Jurisdictions" where this is required, the responsible professional who either created the work product as the originator or who directly supervised the creation of the work product.
h.	**Technical Lead**	An individual competent in a technical discipline accountable to the PM for technical excellence on the project and for delivery of the technical tasks or technical packages of work within the scope, budget and schedule.

i.	**Third (3Rd) Party**	Job applicants, contractors, sub-contractors, joint ventures, partnerships, client and vendor staff, and members of the general public.
j.	**Work Product**	Reports, drawings, specifications, data sheets, virtual deliverables, calculations or other output that may serve as input to subsequent project stages or be delivered to the client, regulatory agency or other stakeholder. Work product goes through stages of development internally and becomes a deliverable when handed over to the client.
k.	**Workshare**	Shared work across offices, regions, business lines, Enterprise Capabilities (EC). There would be a Lead Region and Partner(s) (supplies resources and/or services to the Lead Region)

6. Records

a. Technical Quality Review Record – DCS Q2[DCS]-351-FM1 (Word / Fillable PDF)

b. Calculation Checklist - DCS Q2[DCS]-351-FM3 (Word / Fillable PDF)

c. Technical Quality Review Plan – Partner Office – DCS Q2[DCS]-351-FM6

d. Comment Response Sheet (CRS) – DCS Q2[DCS]-351-FM7

7. Appendices

a. Appendix 1 – Matrix of Acceptability – C-3A/C-3 Project Roles and Responsibilities.

b. Appendix 2 – Check Prints

c. Appendix 3 – Examples – Color Coding and Quality Control stamps for Hardcopy/Printed Copies

d. Appendix 4 - Examples – Quality Control Color Codes for Bluebeam Technical Review Process

8. Change Log

Rev #	Change Date	Description of Change	Location of Change
1	01-Oct-2012	Initial Release as Annual Review.	Sections 1, 2, and 4
2	01-Oct-2014	2014 Review – Updated with SHE comments and DEKRA Americas Observations in reference to monitoring and measurement.	Sections 3 and 4
3	18-Apr-2016	Released as Technical Quality Planning and Review Procedure Q2[DCS]-351-PR1.	All
4	----	-----	----
5	22-Jun-2016	Updated to better define actions for non-complex/low risk projects and team members performing multiple roles.	
6	21-Dec-2016	Minor updates to adjust role responsibilities and updates in ePM.	Sections 4, 5 and 6
7	20-Jul-2018	2017 Review; put into new IMS Procedure template and restructured to 2 column format; update references and removal of appendices prepared as independent documents.	All
8	01-Aug-2018	Added instruction around signing/sealing; amended the ‘Originator’ definition; and updated the responsibility matrix + redefined the ‘key quality principles’.	Sections 2, 5 and Appendix 1
9	25-Jan-2019	Qualified that the TQRR form is not required to be used for review of minor-editorial changes to the work product.	Section 4.2

Rev #	Change Date	Description of Change	Location of Change
10	08-Aug-2019	Remove link to IMS Policy with its retirement; Updated retired linked location for Lead Verifiers to new location on Ecosystem; Amend 'Interdisciplinary Review' and Project Quality Manager actions in Flow Diagram on Page 1; Bold and underline Section 2, Point 4; Amend Section 4.2 Para 1 around client comments; Amended PQM line in Appendix 1 around who is responsible if a separate PQM is assigned.	Related PPI Section 2 Point 4 Section 4.2 Para 1 Section 5 (c) Appendix 1 – PQM
11	29-Jan-2020	2020 Review – minor edits; removal of references to ePM; introduced Graded Approach.	All
12	15-Jul-2020	Minor edits; added Project Manager as alternative Lead Verifier if project does not have an assigned Project Quality Manager; exemption clarifications on the use of the Technical Quality Review Record – DCS and amendment to 'Deliverable' definition.	Page 1, Sections 2, 3, 4.1, 5 and App 1 - PQM
13	14-Dec-2021	2021 Review; put into new Template; revised Page 1's "What/ How"; general edits; added optional use of Calculation Review Checklist for regions until review of Graded Approach; updated T&Ds; updated Appendix 1 to clarify roles and exceptions to overlapping.	ALL
14	15-Aug-2022	2022 Review; introducing the recognition of "Registered Professional/s" in jurisdictions where this is required; clarifying the need for "Interdisciplinary Review" for projects with more than one discipline jointly collaborating on deliverables; added definition for "Registered Professional"; minor edits.	Page 1, Section 3(a), 4.1, 5 and App 1.
15	18-Oct-2023	Minor edits; updated Graded Approach table to align with "Graded Risk Approach: Project Delivery Requirements – DCS; updated the Matrix of Acceptability for C-3A/C-3 projects to identify PQMs as Reviewer/Checker with a "Proceed with caution" icon.	Section 2 Appendix 1
16	14-Oct-2024	• 2024 Review. • Clarified all roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined. • Promoting "Workshare" and "Partner Offices" to enhance working practices across extended project teams. • Promoting "Digital" as an integral part of project planning and execution. • Updated "What/How" adding "Signs the TQRR and/or TQR stamp, or equivalent" for reviews. • Added reference to needing a Senior LV for C-0/C-1s with multiple LVs. • Added Graded Risk Approach: Project Delivery Requirements – DCS Q2[DCS]-231-WI1 and Project Type - Graded Approach - DCS - EC Q3[DCS](EC)-231-WI1 to the "Related PP" list. • Added links to the "Continual Improvement Library" and "Multiple Hats How to" to Help & Training. • Introducing information from EC to retire GEP 251 Checking and Verification – DCS – EC. • Elevated EC's Bluebeam set of instruction documents to DCS level. • Elevated MEA's Comment Response Sheet – MEA to DCS level. • Elevated EC's GEP 250-1 Quality Plan (C&V) – DCS – EC to DCS level – now Technical Quality Review Plan - Partner Office – DCS. • Updated "Graded Approach" section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Updated Graded Approach area to emphasize EC follows the Project Risk Category of the Lead Office project for the TQR process and minor edit to C-0 streamline wording against Software Validation.	Page 1 Related PPIs Help & Training Section 1 Section 2 Section 3 Section 4 – all Section 5 Section 6 Section 7 Appendix 1, 2, 3, 4

Rev #	Change Date	Description of Change	Location of Change
		• Update main process wording emphasizing documenting, communicating and centralizing comments to prevent loss and rework across Partner Offices, including the use of the appropriate tools to do it in. • Modified Table 2 splitting out EURIMEA to make EUR&I and MEA rows. • New sections covering documenting of hardcopy TQR process; check prints; digital tools for TQR. • Added “Lead Region/Office/Project Team (Lead Team)”, “Partner” and “Workshare” definitions and updated LV with a project may have more than one LV to address all disciplines. • Updated Appendix 1 with a new training video link “Multiple Hats How to” and amended the role of the PQM to against “Reviewer/Checker” to proceed with caution. • New appendices – 2, 3 and 4. • Minor edits and updated links.	

Appendix 1 Matrix of Acceptability –C-3A/C-3 Project Roles and Responsibilities

The expectation inherent in the TQR process is the PM will coordinate with the Technical Leads to think through the project requirements and risks to verify:

- Technical Quality Review arrangements are appropriate and fit for purpose; and
- The completed deliverable is thorough, correct, accurate, professionally appropriate and meets contractual obligations.

In some instances, it may be necessary for one person to fulfil multiple roles on a project. Duplication of roles should be the *exception* (only C-3A and C-3 projects), not the rule. This matrix illustrates which roles may or may not overlap.

Note: For C-0, C-1, and C-2 **no roles should overlap,** and this matrix cannot be used. Only in exceptional circumstances, the Project Manager and Lead Verifier may agree to overlapping roles and shall be explained in the Project Plan and/or Technical Approach – refer to the "Multiple Hats How to" outlining the different roles and responsibilities.

	Project Manager	Lead Verifier	Technical Lead	Originator	Reviewer/Checker	PQM
Project Manager		△	△	△	✓	△
Lead Verifier	△		✖	✖	✓	✓
Technical Lead	△	✖		✓	△	△
Originator	△	✖	✓		✖	✖
Reviewer/ Checker	✓	✓	△	✖		△
PQM	△	✓	△	✖	△	
Legend	✓ = acceptable	△ = Proceed with caution	✖ = not allowed			

The **key quality principle** behind this distribution of roles is:

1. The Originator ***cannot be the*** Reviewer (checker) of their own work but is expected to self-check their work before submitting it for TQR.
2. Where the PM and Technical Lead are the same person, **they cannot be the Lead Verifier.**
3. Where the PM and Technical Lead are not the same person, the PM could act as the Lead Verifier **only if they are an approved Lead Verifier.**

Note:

PM	May be the Technical Lead and/or Originator; however, use caution to avoid compromising technical quality delivery due to schedule or budget constraints.
Technical Lead	Focuses solely on project technical quality, its planning and resources.
Originator	Performs the work and self-checks; could also be the PM and Technical Lead but cannot serve in a review/check or verify role. See the **Key Quality Principle** above.
Reviewer/Checker	Reviews (checks) work prepared by others. See the **Key Quality Principle** above. May also verify the work.
Lead Verifier	Reviews the technical approach and each deliverable for overall compliance with approach, requirements and regulations. Lead Verifier – not involved in developing the work – brings an independent viewpoint to the review process, an industry best practice. Also see PQM role below.
PQM	Confirms completeness of the TQR process per procedure. If separate PQM has not been assigned, LV or PM takes on this responsibility and their signature signifies that they are performing these responsibilities. On C-3A projects, the PM must take on the responsibility and their signature on the mark-up, email, TQRR or other equivalent document signifies they are performing these responsibilities.

Appendix 2 Check Prints

Digital Check Prints and mark-up process is defined by the tool to be used. Request your regional Digital Lead to provide guidance on which tool will be appropriate for your project. If using Bluebeam, refer to the Work Instructions listed below and linked in the Project Delivery System (PDS) for guidance.

For each cycle of Self-Check, Review, and Update (refer to Appendix 3 and Appendix 4 for check print stamps or digital tool steps options), the Project Plan shall identify one color-code mark-up process for all disciplines and Partners on the project. If there is not already a requirement from the Client for a specific process identified by the office/region, the color-code scheme in the Appendix shall be used.

a. Check Prints:

   i. Produce the check print with the applicable stamps identified in the Project Plan.

   ii. If errors are found during the first check, create a second check print with updates and provide both the version with errors and the clean second set to the Reviewer/Checker to back check that their comments were properly incorporated. If they are not incorporated a discussion is held that determines no change needed – document agreement of no change on the second check print.

   iii. Reviewer/Checker mark each update one at a time to confirm all comments were incorporated. If the comments were not incorporated – document why they were not, and agreement with not incorporating them.

   iv. During back-check review, the reviewer/checker can add new comments.

   v. Repeat until the deliverable is technically accurate.

   vi. The final check print will only have check marks placed by the Checker/Reviewer.

b. Technical Quality Hardcopy Mark-up Record:

   i. All check prints for a deliverable's revision form the quality record.

   ii. For hard copy check prints, staple them together.

c. Projects Across Offices/Regions:

   i. Lead Teams may perform additional checks and should append their mark-ups to the Partner office set using the same mark-up process as above.

   ii. It is recommended for retention to scan the TQR set and retain in the project UFI defined by the Lead Office PM in the project plan.

d. TQRRs (if required by region):

The Lead Office PM will discuss this during the Kick-Off Meeting and document in the project plan whether the TQR Record (TQRR) with the mark-ups or just the mark-ups with stamps equivalent to the TQRR is the process for the final TQR Record (TQRR).

e. Bluebeam Workflow and Review Instructions

   i. Bluebeam Studio Account Setup – DCS Q2[DCS]-351-WI6

   ii. Bluebeam Studio Workflow – DCS Q2[DCS]-351-WI7

   iii. Bluebeam Workflow Process – DCS Q2[DCS]-351-WI8

   iv. Bluebeam Review Instruction - Originator (Small Projects) – DCS Q2[DCS]-351-WI9

   v. Bluebeam Review Instruction - Originator/Lead Project Office - DCS Q2[DCS]-351-WI10

   vi. Bluebeam Review Instruction - Studio Administrator – DCS Q2[DCS]-351-WI11

   vii. Bluebeam Review Instruction - Technical Reviewer – DCS Q2[DCS]-351-WI12

Appendix 3 Examples – Color Coding and Quality Control Stamps for Hardcopy/Printed Copies

a. Sample Color-Coding - Color and Markups on Printed Copies

i. If a client, project or office color-coding process is not already identified, the project shall identify a standard for the project. Below is a recommended set of colors that can be used when marking up check/verification prints, when a required alternative is not defined. As a minimum, the final color to indicate that the changes are correct must be green.

ii. Where the client or project requires alternative colors, those shall be documented in the Project Plan or Project Quality Plan.

iii. The Partner Office shall be directed by the Lead Office on the color-coding process for the project and all disciplines will implement the same color-coding process to eliminate any misunderstanding during Inter-disciplinary Review or when the final product from all Partner offices is pulled together.

iv. Collaboration is greater when the entire project team is using the same color-coding process and the same digital tool when hard copies are not used.

HIGHLIGHTER	Item has been reviewed and found to be correct
PEN	RED shall be used by the Reviewer for any errors, changes or additions that are required.
PEN	Black Pen/Pencil shall be used by the Reviewer(s) for any comments, queries or any other items that need to be brought to the attention to the Originator but not incorporated in the Master document.
PEN	GREEN PEN for Originator, check marks if an agreement with the comments of the Reviewer, discusses to come to agreement with any comments the Originator does not agree with.
PEN	BLUE PEN shall be used by the Originator circling the RED mark-ups, after the relevant changes have been made on the Master document.
HIGHLIGHTER	The Reviewer may use GREEN to document the review, indicating that any errors, changes or additions have been incorporated with a green tick/check mark over the blue pen circle.

Note: For the Lead Verifier or Independent Reviewer comment process, the above process is to be performed on a separate version of the deliverable documents.

b. Sample Stamp for Single Discipline Checking

The explanatory notes provided herein are not intended to be included on stamps. These stamps may be applied physically to a hard copy print using ink and traditional hard stamps, or they may be applied electronically in a digitally enabled work process.

Discipline Review			
Seq. No.:		IDR required ☐	
	Name	**Signature**	**Date**
Self-Check (Originator)			
CAD/BIM Check			
Review/Tech. Check (Reviewer)			

Note: The sequence number block is optional for cases where it is desired to track the individual cycling of check prints; place an incremental number for each check print used in the checking process. DO NOT use revision or version number here, since those terms are used for document control of individual deliverables.

c. Sample Stamp for Inter-Disciplinary Review (IDR)

Inter-Discipline Review				
Owning Discipline:				
Disciplines		**Name**	**Signature**	**Date**
Originator:				
Discipline Reviewer(s)				

d. Sample Stamp for Verification (LV performed by Partner)

* * * * * Verified * * * * *			
	Name	**Signature**	**Date**
Worksharing Office Lead Verifier			
Lead Team Verifier			

Note: When the IDR is fully or partially performed by the Partner, the Partner verification step is performed after the IDR (where applicable) is completed. This sample stamp can be applied to leave space for the Lead Team to record their verification after the Partner completes verification since the two steps are sequential.

e. Sample Stamp for Verification (LV performed by Lead Team)

* * * * * Verified * * * * *			
	Name	**Signature**	**Date**
Lead Team Verifier			

Note: When the IDR is fully performed by the Lead Team, the Partner verification step is performed prior to the deliverable(s) being released to the Lead Team to perform the IDR. After the Lead Team performs the IDR, they would then apply their own Verification Stamp.

Appendix 4 Examples – Quality Control Color Codes for Bluebeam Technical Quality Review Process

This Appendix will provide example for color-coding and stamps that can be used to document the TQR process in the absence of guidance from the client or region/office/business line for **Bluebeam digital checking and verification**.

Note: Other Digital Tools are available, but guidance is currently not complete. Contact your Region/Business Line lead when using other digital tools for guidance.

When the client or Lead office does not have required mark-up colors, the below is a standard AECOM profile in Bluebeam that should be used when marking up check/verification prints. As a minimum, the final color to indicate the changes are correct must be “Green”.

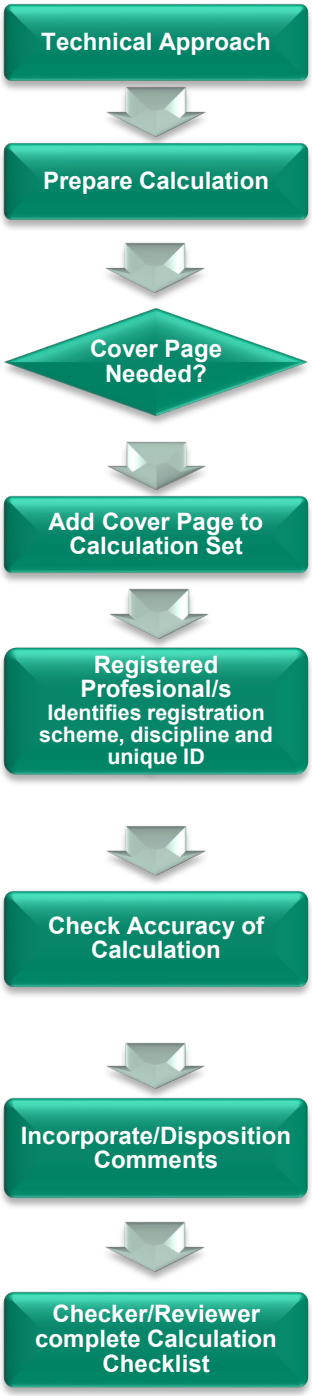
When using other digital tools for Technical Quality Review, like Revizto, a common color-coding mark-up process shall be set-up using similar guidance within the Project Plan or, where applicable, Digital Plan/Digital Delivery Plan.

Table 3. AECOM TQR – Internal and External (Client)

TQR Comment	TQR Comment Color
Original "Revision" Comment Added by Reviewer	**Red Comment**
Status Change (from DB or TQR Reviewer)	**Comment Color (Change)**
****RESPONSE to Reviewer / Lead Verifier Comment**	
AGREE / ACCEPT	**Dark Orange Comment**
DISCUSS (see Reply) - Requires Reviewer Response	**Red Comment**
ANSWER PROVIDED to Question Asked (see Reply)	**Dark Orange Comment**
****ACTION to be Taken by Originator**	
Markup HAS BEEN INCORPORATED	**Dark Blue Comment**
Markup WILL BE INCORPORATED into Next Submittal (see Reply)	**Dark Orange Comment**
Will NOT be INCORPORATED (see Reply)	**Magenta Comment**
Markup will be DEFERRED to a Later Submittal (see Reply)	**Red Comment**
ESCALATE Issue to PM (see Reply)	**Red Comment**
CLIENT RESPONSE Needed: Out of Scope (see Reply)	**Red Comment**
CLIENT RESPONSE Needed: Needs Client's Input (see Reply)	**Red Comment**
****Comment RESOLUTION by Reviewer / Lead Verifier**	
CLOSED by REVIEWER - Comment Addressed	**Green Comment**
OPEN - Comment NOT Addressed or Resolved. Returned to Originator	**Red Comment**
CLOSED by PM / Designee - Comment Addressed	**Green Comment**
COMMENT FORWARDED to Next Phase	(No Color Change)
VERIFIED: CLOSED - Set by Verifier	**Green Comment**
VERIFIED: OPEN - Set by Verifier	**Red Comment**
Checked / Correct (Yellow Highlighter)	**(same as closed)**
Client Comment	**Client Comment Color**
Original "Revision" Comment Added by Reviewer	**Red Comment**

Status Change (from TQR)	Comment Color (Change)
**Response to CLIENT Comment by Consultants	
Accepted	Dark Yellow Comment
Clarification Needed	Red Comment
Deferred	Purple Comment
Rejected	Red Comment
Out of Scope	Red Comment
Needs Client Response	Red Comment
Minor Editorial Major Technical Change	(Types of comments)

Calculation Preparation Instructions



Who[1]	How	Stage
PM and Technical Lead	Determine appropriate technical team, approach and technical solution.	Planning/ Execution
Originator	Based on technical approach and project requirements, prepare/perform calculations in a legible manner. Include a cover page – refer to the Calculation Cover Page Template – DCS. Self-check calculations using the Calculation Review Checklist - DCS	Execution
Registered Professional/s	In "Jurisdictions" where this is required, the registered professional/s responsible for the calculation (who could also be the Originator) shall identify the registration scheme (e.g., Registered Professional Engineer), the discipline and provides their unique identification per the scheme requirements.	Execution Gate 3
Checker/Reviewer	Perform checks on the calculations including verifying the results/recommendations from the evaluation/analysis/design has addressed the problem to be solved for the client. Prepare tracking log to identify comments and actions.	Execution
Originator	Review comments with Reviewers and incorporate and/or disposition comments.	Execution
Checker/Reviewer	Complete calculation checklist and save in project file with calculation or design package that relies on the calculations. When identified by TL, pass calculation to Independent Peer Reviewer for review, comment disposition and checklist signing.	Execution

1. All roles mentioned throughout refer to "Lead Region/Office/Project Team" unless otherwise defined.

Related PPI

- Project Plan Procedure - DCS Q2[DCS]-221-PR1
- Project Document and Records Control (Information Management) - DCS Q2[DCS]-222-PR1
- Technical Quality Review Procedure - DCS Q2[DCS]-351-PR1
- Validation of Software and Data Management Procedure - DCS Q2[DCS]-311-PR1
- Project Closure Procedure - DCS Q2[DCS]-401-PR1
- Unified File Index - DCS Q2[DCS]-222-WI1
- Records Management & Retention Procedure - AECOM Global Q1-004-PR1

References

N/A

Terms & Definitions

- AECOM Glossary

Help & Training

- Quality Insights - Calculation Preparation & Review

Change Log

1. Purpose and Scope

The purpose of this document is to assist technical staff in the preparation of models and/or calculations and outlines the mandatory step of checking all calculations as part of the overall preparation and review of a project's deliverables – refer to the Technical Quality Review Procedure – DCS. Checking of calculations occurs throughout the Execution Phase and is to be completed prior to deliverables being approved for use/issue.

The key participants involved are as follows and their role in the process, is outlined in Appendix 1.

2. Graded Approach

The graded risk approach applies to this document. The project's risk category (C-category) is determined by the AECOM Risk Assessment (ARA) completed as part of the Workbench project setup. Use the below matrix for the required rigor of this procedure based on the Risk Category of project.

C-3A	C-3	C-2	C-1	C-0
Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*	Calculation Review Checklist*

* = is optional in ANZ, Asia and EUR&I and MEA.

3. Instructions

a. For specific projects or programs, the Project Manager, Project Approver and/or Profit & Loss Manager or Business Line technical management group shall indicate in the Project Plan if exceptions to this instruction should occur. The same level of quality is required for the preparation of calculations regardless of the level of complexity of the project.

b. Checking of calculations is required on all projects, but the rigor and documentation of the check depends on the complexity of the calculation. A calculation review checklist is required for all calculations unless:

   i. Simple math is included in a technical report and checked as a part of the report review process (documented on the TQRR); or

   ii. if there is equivalent evidence of checks i.e., stamps/initials on each page; or

   iii. there is a client equivalent calculation checklist required.

c. In "Jurisdictions" where this is required, a registered professional must either conduct the calculation or directly supervise the work undertaken. This professional must identify the registration scheme (e.g., Registered Professional Engineer), the discipline and provide their unique identification per the scheme requirements on the calculation review record.

3.1 Calculation Preparation

a. The following information should be provided in the calculation, or on a cover or summary page:

i.	Objective	A statement of the problem or question to be solved (if not obvious from the title).
ii.	Method	Identify the methods to be used, including software.
iii.	Assumptions	Clearly state any assumptions applied.
iv.	References and Inputs	Identify the inputs to the calculation and the references for inputs, equations, methods, etc. Design inputs used as the basis for calculations shall be verified by the Originator as obtained from a reliable source. Design equations, tables, field data etc., shall be referenced to the specific section of the applicable design code or manual. Any information not readily available to a reviewer should be attached as an appendix to the calculation.
v.	Conclusions	Clearly state the conclusions of the calculations including any limitations, conditions and/or exceptions

b. Confirmations – Critical assumptions, as defined in the AECOM Glossary, need to be tracked and confirmed by the Originator as soon as valid and current data becomes available. The impact of any variances between assumptions and confirmed information must be evaluated, and any necessary revisions to calculations made.

c. In assembling larger sets of calculations, or where providing summary information will be useful, the use of a calculation cover page may be helpful – refer to the Calculation Cover Page Template - DCS.

d. Prior to the results of a calculation being utilized for subsequent work, relevant calculations shall be reviewed and verified in accordance with the Technical Quality Review Procedure - DCS and documented on the Calculation Review Checklist – DCS. As stated in Appendix 1, C-0 projects with technical calculations require an Independent Peer Review, if assigned by the Technical Lead, in addition to the technical review/check.

e. Computer calculations shall include or reference documentation clearly explaining the program's function, nomenclature, and sign conventions utilized. All technical software must be validated in accordance with the Validation of Software and Data Management Tools Procedure - DCS.

f. Calculations utilizing computer programs to perform analyses or design shall include the following:

   i. Name of the program including version or revision level.

   ii. Identification and/or location of associated electronic files.

g. Spreadsheet calculations shall be documented and organized so formulae used in the spreadsheet can be checked for accuracy of incorporation into the spreadsheet, using a calculator or other method. After validation of the spreadsheet calculations, the spreadsheet shall be protected to prevent inadvertent modification of the embedded formulae.

h. Calculations are to be neat, legible, and suitable for reproduction, including a header with space for identifying the calculation title, page numbers, project name and number, and the Originator's and Reviewer's names, initials, and dates.

i. Calculations must be organized and logically presented, and are to include sufficient notes, explanations, and sketches to make the calculation easily followed. The intent is to make calculations understandable by an individual competent in the subject matter without going back to the Originator.

3.2 Revisions to Calculations

Revisions (or cancellations) may be required after an initial set of calculations has been reviewed. These revisions may be a result of client comments, scope changes, or errors found during checking. Revisions to the calculations do not necessarily warrant a second review of the entire set of calculations. Only the revised portion of the calculations may need to be reviewed. Required revisions shall, therefore, be completed as follows to appropriately document the revisions made:

a. Revisions shall be reviewed and approved in the same manner as the original. The Originator and Reviewer of the calculations shall be responsible for the revision. The revision to the calculation shall be clearly identified and dated or shall be replaced by a new calculation.

b. Revisions shall be prepared in a manner that provides a clear record of the content of the calculation, both prior to and after the revision. The reason for the revision should be identified.

c. Revisions to calculations that impact other disciplines shall be immediately reported to the Project Manager and the affected disciplines.

3.3 Control of Calculations

a. All calculations shall be organized and adequately indexed to facilitate retrieval of results and verification of completeness. A calculation index may be useful as a tool to help plan and organize the work, or may be developed upon completion of the calculations for record and archival purposes – refer to the Calculation Index Template - DCS.

b. The calculation review process shall be documented using the Calculation Review Checklist – DCS unless one of the three exceptions noted in Section 3b exist.

c. Upon completion of the calculation review process, original calculations, including calculation cover pages, checklists, index pages and other associated documents shall be filed in the project's Unified File Index (UFI) with revision numbers and/or version dates for control in accordance with Project Document and Records Control Procedure - DCS.

4. Records

a. Technical Quality Review Record – DCS Q2[DCS]-351-FM1 (Word / Fillable PDF)

b. Calculation Checklist - DCS Q2[DCS]-351-FM3 (Word / Fillable PDF)

a. Calculation Index Template – DCS Q2[DCS]-351-FM4

b. Calculation Cover Page Template – DCS Q2[DCS]-351-FM5

5. Appendices

a. Appendix 1 – Calculation Preparation RACI

6. Change Log

Rev #	Change Date	Description of Change	Location of Change
0	05-31-2011	Previously Issued as NA Guidelines for the Preparation of Calculations (Q4NA-331-GL1).	Retired
0	05-16-2018	Elevated to a DCS Level 2 instruction and released as Q2[DCS]-351-WI1.	All
1	23-Mar-2020	2020 Review; introduced the Graded Risk Approach; minor edits.	All
2	15-Aug-2022	2022 Review; introducing the recognition of "Registered Professional/s" in jurisdictions where this is required; added optional use of Calculation Review Checklist for regions until review of Graded Approach; added Professional Registration line into App 1 RACI; minor edits.	Page 1, Section 2, 3(c), App 1.

Rev #	Change Date	Description of Change	Location of Change
3	14-Oct-2024	• 2024 Review. • Clarified all roles mentioned throughout refer to “Lead Region/Office/Project Team” unless otherwise defined. • Updated “Graded Approach” section to identify the AECOM Risk Assessment (ARA) is now part of project setup in Workbench. • Merged Sections 3.1 and 3.2 and reordered the steps. • Removed “Manual” from Section 3.1 title. • Minor edits and updated links.	Page 1 Section 2 Section 3.1

Appendix 1 Calculation Preparation RACI

R Responsible (completes the task) A Accountable (approves the task) C Consulted (has information or capability to help complete the task) I Informed (needs to be notified of task result)	Project Manager	Technical Lead	Originator	Reviewer	Independent Peer Reviewer*	Reference/Notes: Procedures (P) Template (T) Forms (F)	
Prepare Calculation (Work Product/Project Work)							
1. Assign originator(s).	A	C					
2. Confirm Professional Registration	A	C	R				
3. Confirm design basis in technical approach.		A	R	C			
4. Develop the calculation cover page, optional.		A	R	C		Calculation Cover Page Template Q2[DCS]-351-FM5.	T
5. Perform the calculation.		I	R	C			
6. Assure completeness and accuracy relative to design basis and technical approach.		I	R	C			
7. Complete conclusion portion of calculation cover page, optional.		I	R	C		Calculation Cover Page Template Q2[DCS]-351-FM5.	T
8. Perform checks on the calculations including verifying the results/recommendations from the evaluation/analysis/design has addressed the problem to be solved for the client.	I	I	C	R	R*	*C-0 technical calculations assigned by Technical Lead.	
9. Reconcile and incorporate Reviewers comments into Calculation.	I	A	R	C	C		
10. Sign Calculation Review Checklist.	I	C	R	A	R*	*C-0 technical calculations assigned by Technical Lead. Calculation Review Checklist – DCS Q2[DCS]-351-FM3	F

* Independent Peer Reviewer is required for C-0 project risk category projects when assigned by Technical Lead.

Calculation

EP 3.3-2F

Instructions:

1. Refer to EP 3.3 Engineering Calculations for information on this process.
2. Completed forms are to be kept in the project UFI Folder.
3. Delete highlighted instructions before submittal.

Calculation Number *(####-#CAL-###)*:	**Calculation Title:**	**Revision:**	**Page:** 1 of 3
Project Number:	**Project Title:**		**Date:**

Calculation Type:	**Design Verification Required?**	**Superseded by Calculation No.:**
☐ Scoping ☐ Preliminary ☐ Final ☐ Voided	*(Select Yes if calculation is part of a design package required to be independently verified or the calculation is for items that have been classified as "Important to Nuclear Safety")* ☐ Yes ☐ No	**Supersedes Calculation No.:**

Was Software used: ☐ Yes ☐ No	**AECOM Computer Number:**
☐ Non-safety software ☐ Safety Software	**Software Name and Version:** **V&V package number:** *(V&V cover sheet must be an attachment to safety-related calculations using software).*

Original and Revised Calculation / Analysis Approval (Sign and Date)

- *The signatures below shall denote that the checker has reviewed the text and attachment portion of the calculation.*
- *For Final Calculations (AECOM considers the calculation to be 100%, Revision 0 = Issue for Construction, etc.)*
- *Scoping and Preliminary Calculations require Originator and Checker Signatures (Revision A, etc.)*
- *Final Calculations (Revision 0, etc.) require Originator, Checker, and Engineering Manager Approval signatures*
- *Other signature is used for AECOM's acceptance of a subcontractor calculation performed per AECOM procedure*

		Revision	**Revision**	**Revision**
Originated By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Checked By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Approved By:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			
Other:	**Name:**	Click or tap to enter a date.	Click or tap to enter a date.	Click or tap to enter a date.
	Signature:			

Record of Revision

Enter the Revision Number and Reason for Revision of the calculation. The list may start with Revision 0 for the initial issue or Revision 1 with reason for the revision. The reason shall include a description of the change(s) (i.e., added Sheet 3a, revised Sheet 6 to address correspondence XYZ).

Revision No.	**Reason for Revision**

Attachments

When available, enter each Attachment Number (A, B, etc.), Title, and total number of pages for each Attachment. Add a cover page for each attachment and include in the total page count. Include the Calculation Number, Revision No. and Page numbers to every page of the attachments (including cover).

Attachment No.	Title	Total Pages
	Total Calculation Page Count	

1.0 Introduction

This section shall state the reason for originating the calculation and may describe alternatives examined. Limits of applicability shall be included (i.e., 1.1 Purpose, 1.2 Scope)

1.1 Purpose

1.2 Scope

2.0 Basis

This section shall state supporting information used to develop the calculation. References and sources shall be cited for basis values (see Section 3.0, "References," for citation requirements). Subsections should cover Section 2.1, "Design Inputs," Section 2.2, "Criteria," and Section 2.3, "Assumptions." Additional subsections should be provided as appropriate. Sources for basis values shall be identified.

2.1 Design Inputs

This paragraph shall include published or validated data with referenceable sources.

2.2 Criteria

This paragraph shall provide the criteria that apply specifically to the calculation.

2.3 Assumptions

This subsection shall list suppositions necessary to perform the calculation, identifying those that must be verified as the design proceeds. If it becomes necessary to release the calculation before assumptions can be verified, the assumptions shall be discussed in Section 5.0, "Results and Conclusions." Explicitly state or reference assumptions used in the calculation along with supporting data. Clearly state assumptions resulting from engineering judgment with the basis for that engineering judgment.

3.0 References

This section should provide page numbers, sections, and paragraphs or table numbers, and revision and date of issue for the cited reference in text.

4.0 Methods

Non-safety related calculations shall describe the basic approach taken in the analysis. Safety-related calculations shall describe the basic approach taken in the analysis.

5.0 Results and Conclusions

This section shall briefly state the results of the calculation and condition under which they apply. This section should be reconciled with the calculation Section 1.1, "Purpose" and Section 1.2, "Scope."

6.0 Calculations and Analyses

This section can be presented as additional pages (i.e., MathCAD, handwritten notes) or scanned images into the Word document.

DCS - Americas

Calculation Log

EP 3.3-1F

Instructions:

1. Refer to EP 3.3 Engineering Calculations for information on this process.
2. Completed logs are to be kept in the project UFI Folder.
3. Add rows as required.

Project Number:	
Project Manager:	
Project Title:	
Discipline:	

Calculation Number	Revision Number	Calculation Title	Originated By	Checked By	Design Verification Required (Yes/No)	Date of Release

AECOM

DCS

Calculation Review Checklist

Q2[DCS]-351-FM3

Instructions:
1. **Review of calculations can be guided by the questions listed below but not limited to. Add additional requirements where necessary.**
2. **Independent Peer Review, where required, concurrences as recorded on the Technical Quality Review Record Q2[DCS]-351-FM1.**
3. **File completed form on the front of the calculation.**

Details			
Project Name		**Date**	
Project No.		**Discipline**	
Client		**Subject**	
Calculation No.		**Rev No.**	
Software Name (if used)		**Software Version** (if used)	
Originator			
Electronic File Name (if applicable)			
File Location of Versions Checked			

Review	**Yes**	**No**	**N/A**
1. Is the calculation in accordance with a standard approach to preparing the design?	☐	☐	☐
2. Have input data and information been verified and accepted?	☐	☐	☐
3. Do the calculations adopt the latest/necessary data? Tick “No” if calculations need to be updated when additional data becomes available and/or when assumptions have been confirmed?	☐	☐	☐
4. Have assumptions requiring follow-up been reviewed and confirmed?	☐	☐	☐
5. Have calculations prepared using technical software or excel spreadsheets (with macros or equations) been confirmed through a secondary method (i.e., manual, alternate software)?	☐	☐	☐
6. Are results and conclusions consistent and reasonable considering the inputs and approach?	☐	☐	☐
7. Have the Originator and the Checker/Reviewer signed and dated the calculation?	☐	☐	☐
8. Are the calculations associated with a “professional service” requiring the Originator (or individual who provided direct supervision for these deliverables) to be a “Registered Professional”? *(For Regions where it is required)*. If “Yes” complete “Professional Registration” section in Approvals.	☐	☐	☐
9. Have all previous internal review comments been addressed and closed out with the originator?	☐	☐	☐
10. Have all previous client review comments been addressed and closed out?	☐	☐	☐
11. Are there any other considerations which require listing as additional scope to this review? – List if ‘Yes’	☐	☐	☐
12. Is software used validated in accordance with AECOM procedure?	☐	☐	☐
13. Has an independent review and check of calculation been completed (if required)?	☐	☐	☐
14. Calculation/model version is archived in the relevant project folder structure?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Reviewer Name	**Signature**	**Date**

☐ **Professional Registration (where required)**

By completing the below, I confirm I am the Originator or have provided direct supervision for this deliverable.

Registration Scheme	Discipline / Area of Practice	Name of Registered Professional	Signature	Registration No.	Date

☐ **Independent Calculations (C-0 Projects ONLY)**

A separate, independent set of calculations has been prepared, validating the original calculations.

Independent Calculation Preparer	**Signature**	**Date**

AECOM

DCS - Americas

Drawing Review Checklist

Q3[DCS]AM-351-FM3

Instructions:
1. **This form is optional to assist the review of drawings, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name				**Date**	Click or tap to enter a date.
Project No.				**Discipline**	
Client				**Rev No.**	
Drawing Nos.					
Review Level	☐ Final Submission	☐ Pre-Final Submission	☐ Other:		% Submission
Originator			**Reviewer**		
Lead Verifier			Project Manager		
Electronic File Name (if applicable)					
File Location of Versions Checked					

Discipline Review	**Yes**	**No**	**N/A**
1. Is the set of drawings consistent with the design intent and the calculation output?	☐	☐	☐
2. Do the drawings meet the percent (%) completion for this submission level?	☐	☐	☐
3. Is there consistent presentation within the discipline?	☐	☐	☐
4. Have drawings been initialled/signed?	☐	☐	☐
5. Are the materials properly coordinated with the specifications at this submission level?	☐	☐	☐
6. Are the items constructible as shown?	☐	☐	☐
7. Have the appropriate CADD/BIM standards been followed?	☐	☐	☐
8. Have duplications and redundancy of information, data and dimensions been eliminated?	☐	☐	☐
9. Are drawing titles and numbers consistent and do they agree with the cover sheet index of drawings?	☐	☐	☐
10. Have sheet cross references been verified?	☐	☐	☐
11. Have all previous internal review comments been addressed and closed out?	☐	☐	☐
12. Have all previous client review comments been addressed and closed out?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

		Click or tap to enter a date.
Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using a complete set of drawings by the following reviewers.

	Discipline (please specify)	Signature	Date	OK	Comments Made	Comments Resolved
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐
☐			Click or tap to enter a date.	☐	☐	☐

For any 'No' responses, please explain:

AECOM

DCS - Americas

Specification Review Checklist

Q3[DCS]AM-351-FM4

Instructions:
1. **This form is optional to assist the review of specifications, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name		**Date**	
Project No.		**Discipline**	
Client		**Rev No.**	
Specification Sections			
Review Level	☐ Final Submission ☐ Pre-Final Submission ☐ Other:		% Submission
Originator		**Specification Coordinator**	
Discipline Reviewer		**Lead Verifier**	
Electronic File Name (if applicable)			
File Location of Versions Checked			

Discipline Review		**Yes**	**No**	**N/A**
1.	Has the correct specification format been used?	☐	☐	☐
2.	Is the specification section coordinated with applicable general and special provisions?	☐	☐	☐
3.	Have duplications or variances between drawings and specifications been eliminated?	☐	☐	☐
4.	Are nomenclature and item numbering used in specifications exactly as used on drawings and other contract documents?	☐	☐	☐
5.	Are requirements for shop drawings specified, both as to content and timely submission?	☐	☐	☐
6.	Have cited products and equipment been checked for updates and availability?	☐	☐	☐
7.	Have all previous internal review comments been addressed and closed out?	☐	☐	☐
8.	Have all of the client's review comments to previous drafts been closed out?	☐	☐	☐
	Additional questions for non-standard specifications (only those which have not been created and maintained as a company or client standard):			
9.	Are material / equipment identification requirements properly identified?	☐	☐	☐
10.	Are appropriate codes, standards, processes etc referenced and dated?	☐	☐	☐
11.	Are measurement units and basis of payment properly specified?	☐	☐	☐
12.	Are shipping, cleaning, storage and handling requirements properly specified?	☐	☐	☐
13.	Are provisions made for the qualification and approval of special construction processes?	☐	☐	☐
14.	Are the acceptance criteria tests (tolerances, etc) specified and are they adequate, realistic and in line with industry practice?	☐	☐	☐
15.	Is test and inspection documentation properly specified?	☐	☐	☐
16.	Have client's sole-source requirements been followed?	☐	☐	☐

Discipline Review	Yes	No	N/A
17. Are manufacturers' installation requirements referenced?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Discipline Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using the specification(s) and supporting data by the following reviewers.

	Discipline (please specify)	Signature	Date	OK	Comments Made	Comments Resolved
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐

For any 'No' responses, please explain:

Specifications Coordinator or Project Manager Review (to be completed on Lead Discipline Checklist ONLY)	**Yes**	**No**	**N/A**
1. Are the specification format, type, nomenclature, item numbering, and level of detail consistent for all specification sections?	☐	☐	☐
2. Have required discipline reviews been completed and documented for all specification sections?	☐	☐	☐
3. Have all specification sections been reviewed for inter-discipline conflicts?	☐	☐	☐
4. Have methods and measurements of payment been checked for consistency and conflicts?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Specifications or Project Manager Coordinator	**Signature**	**Date**

AECOM

DCS - Americas

Study/Report Review Checklist

Q3[DCS]AM-351-FM5

Instructions:
1. **This form is optional to assist the review of study/reports, which can be guided by the questions listed below but is not limited to them.**
2. **It should be attached to the Technical Quality Review Record – DCS Q2[DCS]-351-FM1 to support this process.**
3. **Attach/add additional information when necessary.**
4. **File completed form with deliverable.**

Details

Project Name			**Date**	
Project No.			**Discipline**	
Client			**Rev No.**	
Study/Report Title/Chapter				
Review Level	☐ Final Submission	☐ Pre-Final Submission	☐ Other:	% Submission
Originator			**Project Manager**	
Discipline Reviewer			**Lead Verifier**	
Electronic File Name (if applicable)				
File Location of Versions Checked				

Discipline Review

		Yes	No	N/A
1.	Has the discipline portion of the study/report meet or support the stated objectives of the project?	☐	☐	☐
2.	Are assumptions, criteria, or basis for evaluation of alternatives clearly described?	☐	☐	☐
3.	Is supporting material identified appropriate and accessible?	☐	☐	☐
4.	Have backup calculations been checked, reviewed and documented?	☐	☐	☐
5.	Have embedded drawings, sketches, figures, and other graphics been checked and reviewed?	☐	☐	☐
6.	Are results logical and reasonable and are they stated accurately?	☐	☐	☐
7.	Have embedded tables been checked and reviewed?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Discipline Reviewer	**Signature**	**Date**

Inter- discipline Review

Compatibility, interfaces, and potential interferences/conflicts between the designated discipline and all other disciplines have been reviewed using the study/report(s) and supporting data by the following reviewers.

	Discipline (please specify)	Signature	Date	OK	Comments Made	Comments Resolved
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐
☐				☐	☐	☐

For any 'No' responses, please explain:

Project Manager (to be completed on Lead Discipline Checklist ONLY)	Yes	No	N/A
1. Is the study or report format consistent with the client's requirements?	☐	☐	☐
2. Are all conclusions and recommendations fully supported and explained in the text?	☐	☐	☐
3. Has the report been completed in accordance with the scope of work?	☐	☐	☐
4. Is the index or table of contents complete and accurate?	☐	☐	☐
5. Is tense consistent and has the text been spell/grammar checked?	☐	☐	☐
6. Has the report been properly titled and dated?	☐	☐	☐
7. Have all contractually specified alternatives been addressed?	☐	☐	☐
8. Have all previous internal review comments been addressed and closed out?	☐	☐	☐
9. Have all previous client review comments been addressed and closed out?	☐	☐	☐

For any 'No' responses, please explain:

Approvals

Project Manager	**Signature**	**Date**

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DCS - Americas

Document Review Comment Sheet

Q3[DCS]AM-351-FM1

Instruction:

1. Use Action Code "D" only with concurrence of Reviewer.
2. Responder: Indicate action in right hand column. Discuss exceptions with Reviewer.
3. File completed Document Review Comment Sheet with deliverables.

Document Review Comments

Project Name		**Date**	Click or tap to enter a date.
Project No.		**Project Manager**	
Originator		**Reviewer**	
Responder		**Discipline**	
Status	☐ Criteria ☐ 100% ☐ 90% ☐ 60% ☐ 30% ☐		
Review Purpose	☐ Independent Peer Review	☐ Discipline	☐ Project Approach Review
	☐ Inter-discipline	☐ Other	

Disposition & Reviewer Action Codes (response/agreement required)	**A:** Agree, will comply	**B:** Best Practice – Share with other projects.	**C:** Critical – Must address.	**D:** Delete comment	**E:** Exception taken	**F:** Future incorporation next project.	**S:** Suggested – Recommended/Not Critical

Comment No.	Drawing, Spec, or Page No.	Comment	Reviewer Action Code	Disposition Action/ Response

APPENDIX C – INDEPENDENT PEER REVIEW BRIDGE QC FORMS

- *LADOTD Peer Review Resolution Agreement Form*
- *AECOM QMS Independent Peer Review Bridge QC Form – Technical Quality Review Record*

APPENDIX E—PEER REVIEW RESOLUTION AGREEMENT

Project No.:

Project Name:

We, the undersigned Peer Reviewer, Supervisor or Team Leader of the design team, and LADOTD Representative for this project, have reviewed and accepted the attached peer review resolutions. We certify that the peer review has been performed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	Signature
Peer Reviewer		
Supervisor or Team Leader		
LADOTD Representative		

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DCS

Technical Quality Review Record

Q2[DCS]-351-FM1

Instructions

For further information on the Technical Review process, refer to the Technical Quality Review Procedure – DCS Q2[DCS]-351-PR1 and the Technical Quality Review Job Aid – DCS Q2[DCS]-351-WI2.

Project Details		**TQRR No. (Optional)**	
Project No.		**Delivery Date**	
Project Name		**PM Name**	
C- Category	Select....	**Comments Due By**	
Client/Client POC		**Technical Lead**	
Title of Work Product		**TQR Team Assigned**	

Type

- ☐ Calculation Check (complete Calculation Review Checklist - DCS - required).
- ☐ Independent Peer Review (IPR).
- ☐ Biddability / Contract Documents Review.
- ☐ Subconsultant, Client, or Third-Party Information Review.
- ☐ Constructability Review.
- ☐ Interdisciplinary Review.
- ☐ Discipline Review.
- ☐ Technical Approach and solution review.
- ☐ Specification Package Review.
- ☐ Contract Document Review.
- ☐ Other: (e.g. Construction Services documentation)

Specify

Review Scope

- ☐ Appropriate budget, schedule and resources.
- ☐ Soundness of approach/design.
- ☐ Technical risk and mitigation.
- ☐ Validation of assumptions.
- ☐ Conformance with standards and regulatory requirements.
- ☐ Check of calculations.
- ☐ Client input review.
- ☐ Review of client, sub and third-party information.
- ☐ Edit for elements such as grammar, punctuation, formatting and graphics.
- ☐ Adequacy of Statements of Limitations.
- ☐ Verify technical solution.
- ☐ Basis and validity of conclusion / recommendation.
- ☐ Check of drawings and graphics.
- ☐ Compliance with scope.
- ☐ Organization, clarity and completeness.
- ☐ Specification Review.
- ☐ Contract Document Review.
- ☐ Other: Specify.

Checking (Required for All Projects)

For **"Format"** columns, type N (None), HC (Hard Copy), EF (Electronic File – add network link), or RCF (Review Comment Form).

Discipline	Description (Calc/Rpt/Dwg/Specs)	Format / Network Link	Originator Initials	Reviewer/Checker Signature	Date

Reviewer/Checker signature above indicates verification of the accuracy and completeness of the work product and Reviewer/ Checker comments have been incorporated, including subsequent or new comments; further, Reviewer is not an Originator of the work product.

*For additional disciplines/reviewers/deliverables attach a table to this TQRR with the above content.

Verification (Required for C-3, C-2, C-1 and C-0 Projects)

Lead Verifier signature indicates confirmation the work product is complete and in accordance with the technical approach/ solution.

Lead Verifier Select One:

☐ Lead Verifier has verified that review(s) have been adequately completed and documented. There are no outstanding issues.

or

☐ Lead Verifier has verified that review(s) have been adequately completed and documented, except for unresolved items (items not impacting adequacy of submittal). Any unresolved items have been submitted to the Project Manager or Designee for final resolution.

Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**
Lead Verifier Name	**Lead Verifier Signature**	**Date**

Professional Registration (Where Necessary)

By completing the below, I confirm I am the Originator or have provided direct supervision for this deliverable.

Registration Scheme	Discipline / Area of Practice	Name of Registered Professional	Signature	Registration No.	Date

Approval (Required for All Projects)

☐ Confirmation the deliverable has been reviewed for overall completeness, compatibility and conformance with scope and other contract requirements; all applicable reviews have been completed and deliverable is ready for submission to the client.

Project Manager Signature		**Date**
Project Quality Manager Name (If not performed by LV or PM)	**Project Quality Manager Signature (If not performed by LV or PM)**	**Date**

Independent Peer Review (C-0 Projects)

Comments have been provided on:

☐ Directly on work product (electronic or on hard copy) ☐ Comment and Disposition Form

☐ Other (paste link to network file):

Independent Peer Reviewer Name (as applicable)	**Independent Peer Reviewer Signature (as applicable)**	**Date**

DISTRIBUTION	Project Central File – Quality File Folder	Other – Specify:	

APPENDIX D – QUALITY ASSURANCE & DELIVERABLE RELEASE RECORD FORMS

- *LADOTD QA Information Package Checklist*
- *LADOTD QC/QA Certification*
- *LADOTD Consultant Submittal QC/QA Certification*
- *AECOM QMS Document Transmittal*

APPENDIX C—QA INFORMATION PACKAGE CHECKLIST

Project No.:
Project Description:

_____ Calculation Book

_____ Plans

_____ Special Provisions

_____ Cost Estimate

_____ Other Documents _____

APPENDIX D—QC/QA CERTIFICATION

Project No.:

Project Name:

We, the undersigned designers, detailers, checkers and reviewers for this project, have reviewed and accepted the calculations, plans, quantities, special provisions, and cost estimate prepared for the project. We certify that the work for which we are responsible has been completed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	PE Registration No.	Responsible Plan Sheets	Responsible Special Provisions	Construction Cost Estimate	Signature
Designers						
Design Checkers						
Detailers						
Detail Checkers						
Reviewers						
Peer Reviewer						
Geotechnical Engineer						
Hydraulic Engineer						
EOR						

APPENDIX I—CONSULTANT SUBMITTAL QC/QA CERTIFICATION

Project No.:

Project Name:

I, the undersigned Supervisor or Team Leader for this project, certify that the information included in this submittal has been prepared in accordance with the QC/QA plan documents and LADOTD Bridge Design Section policy on QC/QA and the information presented is accurate and meets the requirements of this submittal. All CAD drawings meet LADOTD CAD standards.

_____

Submittal Description

_____	_____	_____
Supervisor or Team Leader Name	Signature	Date

AECOM

Document Transmittal

Note: Sign and return this page via Fax (509- 375-5331) or e-mail.	1. Date:	2. Technical Document ID No.: #####-TTC-###
3. To:	4. cc: Name, Company	5. Return Responses To: 6. Return By:
7. Project:	8. No. of Copies:	
9. Description:		

10. Client Action Items:

- ☐ For Approval
- ☐ For Review
- ☐ For Reference
- ☐ QA Original Records
- ☐ Change Request
- ☐ Document Control Submittal for Records Filing
- ☐ Other:

11. AECOM Action Items:

- ☐ Not Applicable
- ☐ UCNI Controlled Document
- ☒ Records Index No.: 370.1
  - ☒ Non-Permanent ☐ Lifetime
- ☐ Scanned
- ☐ CD to Client Dual Storage CD Made? ☐ Yes ☐ No
- ☐ For QA Files
- ☐ Other:

12. Instructions/Remarks:

13. Action: (A=Approval; R=Review; I=Information; and N/A=Not Applicable)

Action	Disciple	Printed Name	Signature	Date	Action	Disciple	Printed Name	Signature	Date
	Project Mgr:					ES&H Mgr:			
	Engineering Mgr/Technical Lead:					Contract/Project Supt Mgr:			
	Business Line Lead					Process Technology Mgr:			
	Quality Assurance:					Other:			
	Program Director:					Other:			

Client Receipt:
(Sign and return)

Printed Name _____ Signature _____ Date _____

AECOM QA Record Receipt/Authentication:

☐ **Authentication documented in DoCS**

Printed Name _____ Signature _____ Date _____

14. Documents Transmitted:

Number	Revision	Title	No. of Pages	Dated

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About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public-and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of $13.3 billion in fiscal year 2021. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.

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