

CADDO PARISH

US 71: ICG Railroad Overpass Rehab (HBI), US 71: Market St. Bridge Over ICG RRR (HBI), Route: US 71

Contract No. 4400034051; State Project No. H.012008.5 and
H.012009.5; Federal Aid Project No. H012008 and H012009

March 18, 2026



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Louisiana Department of Transportation and Development (DOTD)
Attn: Hamed Babaizadeh, PhD, PE, DOTD Contract Manager (CM)
1201 Capitol Access Road, Room 604-R
Baton Rouge, LA 70802

RE: Contract No. 400034051; US71: ICG Railroad Overpass Rehab (HBI), US71: Market Street Bridge Over ICG RR (HBI), Route 71

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

The Market and Spring Street Bridges in Shreveport have been accommodating US71 traffic through the downtown area for over 80 years. These bridges provide grade separation over several Kansas City Southern (now known as Canadian Pacific/Kansas City Southern, CPKC) railroad tracks and allow direct access to I-20 on/off ramps immediately south of the project. Both bridges are listed in poor condition, are load posted, and require bridge rehabilitation and/or replacement.

The Spring Street bridge will require bridge rehabilitation efforts in accordance with DOTD's 2017 Historic Bridge Management Plan while the Market Street bridges will be reconstructed. Both structures will be designed in accordance with DOTD's BDEM requirements. Both bridges cross over CPKC's Vicksburg Subdivision, Line 026, which sees about nine (9) trains/day of traffic. Currently, these structures provide substandard vertical clearance per CPKC requirements yet double-stack railcars pass beneath these bridges. Back in 2017, the Spring Street bridge substructure was hit by one of the railcars and the bridge was immediately closed until emergency repairs could be implemented. Maintaining traffic through this emergency repair operation was challenging and DOTD had to redirect I-20 traffic with partial I-20 ramp closures, and I-20 eastbound and westbound detours via Traffic Street in Bossier and Fairfield Avenue (Exit 18A); respectively.

Through our initial reconnaissance and discussions with local and state stakeholders, AECOM Technical Services, Inc. (AECOM) has developed a thorough understanding of the project constraints and has formulated a project approach that echoes DOTD's project goals including:

- Identifying cost-effective, bridge rehabilitation (Spring Street) and replacement (Market Street) solutions that remove the structural deficiencies, load postings, and poor condition assessments
- Formulating a construction phasing plan, based upon a detailed traffic study that minimizes traffic and local business access throughout construction
- Managing CPKC railroad expectations by developing preliminary designs that meet the railroad grade separation guideline requirements where feasible while working in DOTD's best interest, and
- Supporting DOTD's environmental investigative efforts including the historic preservation efforts at Spring Street, to help facilitate the overall preliminary design schedule

We also offer the following additional benefits:

Relevant Project Experience	We will leverage our US190 Bridges over UPRR & I-76 Bridges over BNSF replacements and Linwood Avenue Bridge & Phoenix Bridge historic preservation project experience to identify cost-effective solutions for DOTD
Freight Rail Experts	We have assembled our national rail practice leads with our local bridge design and railroad coordination experience to provide support for DOTD's project needs. Our rail coordination lead, Audra Rodgers, brings direct design and coordination experience with the Canadian Pacific/Kansas City South (CPKC) Railroad.
Responsive/ Proven Capacity	We have integrated our Louisiana and key regional staff from other successful DOTD projects have partnered with Forte & Tablata, Neel-Schaffer, Ardaman & Associates, and NTB & Associates to build a responsive and proven team. Several of our subconsultant partners have offices within the Shreveport area and can quickly respond to any DOTD project site requests and/or local meetings

AECOM has been successfully operating in Louisiana for nearly a half century and has a long-standing relation with DOTD providing Transportation and Bridge Design services. Our current major bridge projects with DOTD include the **US190 Bridges over UPRR tracks, near Opelousas, LA; the LA 561 Bridge over Bouef River, the I-49 Lafayette Connector, and the LA 6 Grand Ecore Bridge over the Red River** to name a few. AECOM has nearly 200 employees in Louisiana between our Baton Rouge and New Orleans offices including Roadway, Bridge and Traffic Engineers as well as Planning and Environmental Professionals. Over the past 25 years, our team has also been supporting DOTD's Bridge Division providing bridge design, rehabilitation and conditional assessment services and are currently supporting DOTD's Bridge Preventative Maintenance IDIQ contract.



We have confirmed all subconsultant partners from our current LADOTD Bridge Preservation IDIQ will be assisting in meeting the expanded scope of services and delivering this project to DOTD. Our consultant partners include:

	brings leading 3D Laser Scanning and Surveying expertise, relevant historic bridge rehabilitation experience, and local office presence within a few blocks of the project site.
	has extensive mesoscopic traffic modeling experience for LADOTD has performed extensive traffic analysis within the Shreveport metro area.
	will provide geotechnical design services. They are located within the Shreveport metro area and have project specific knowledge of the subsurface region.
	has been providing SUE services from its Shreveport offices for numerous years and is very familiar with the local utility providers.

As Project Manager, Gary Maji will be the point of contact for this contract. He currently serves as AECOM's Consultant Program Manager for one of DOTD's Bridge Preventative Maintenance IDIQ Contracts. Gary has more than 30 years of bridge design and rehabilitation experience, and is looking forward to the opportunity of supporting DOTD on this important bridge rehabilitation and replacement project.

The AECOM Team is committed to delivering a quality design to DOTD for the US 71 Bridges over ICG RR Contract, while successfully meeting the contract challenges and exceeding the requirements of DOTD.

If you have any questions, please contact 303-941-4962, or via email, gary.maji@aecom.com.

Sincerely,

AECOM Technical Services, Inc.



Gary Maji, PE
Project Manager
Vice President



Jonathan McDowell, PE
Associate Vice President



South Loop 375 over Union Pacific Railroad

Relevance to US 71 Bridges: Bridge Design, Maintenance of Traffic, Railroad Coordination

Sections

1-13

DOTD FORM: 24-102

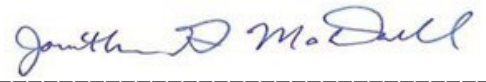
PROPOSAL TO PROVIDE CONSULTANT SERVICES

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	US 71: ICG RAILROAD OVERPASS REHAB (HBI), US 71: MARKET ST BRIDGE OVER ICG RR (HBI), ROUTE: US 71, CADDIS PARISH
2. Contract number(s) as shown in the advertisement	CONTRACT NO. 4400034051
3. State Project Number(s), if shown in the advertisement	STATE PROJECT NOS. H.012008.5 AND H.012009.5 FEDERAL AID PROJECT NOS. H012008 AND H012009
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.002331
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	Jonathan McDowell, PE Associate Vice President 225.922.5700 jonathan.mcdowell@aecom.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Jonathan McDowell, PE Associate 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 18, 2026
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.	<u>N/A</u>

12. 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.	Forte & Tablada	Neel-Schaffer	NTB & Associates	Ardaman & Associates	Totals
Bridge	38.0%	70%	30%	0%	0%	0%	100%
Geotech	8.0%	5%	0%	0%	0%	95%	100%
Other (Railroad Coordination)	3.0%	100%	0%	0%	0%	0%	100%
Right-of-Way	3.0%	10%	90%	0%	0%	0%	100%
Road	18.0%	80%	20%	0%	0%	0%	100%
Survey	7.0%	0%	100%	0%	0%	0%	100%
Other (SUE) ¹	1.0%	0%	0%	0%	100%	0%	100%
Traffic	22.0%	20%	0%	80%	0%	0%	100%
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.							
Total	100%	49.10%	24.70%	17.60%	1.00%	7.60%	100%
The only disciplines to be used are listed in the drop down in each row (Appraiser, Bridge, CE&I/OV, CPM, Data Collection, Environmental, Geotech, ITS, Other (must specify), Planning, Right-of-Way, Road, Survey, and Traffic).							

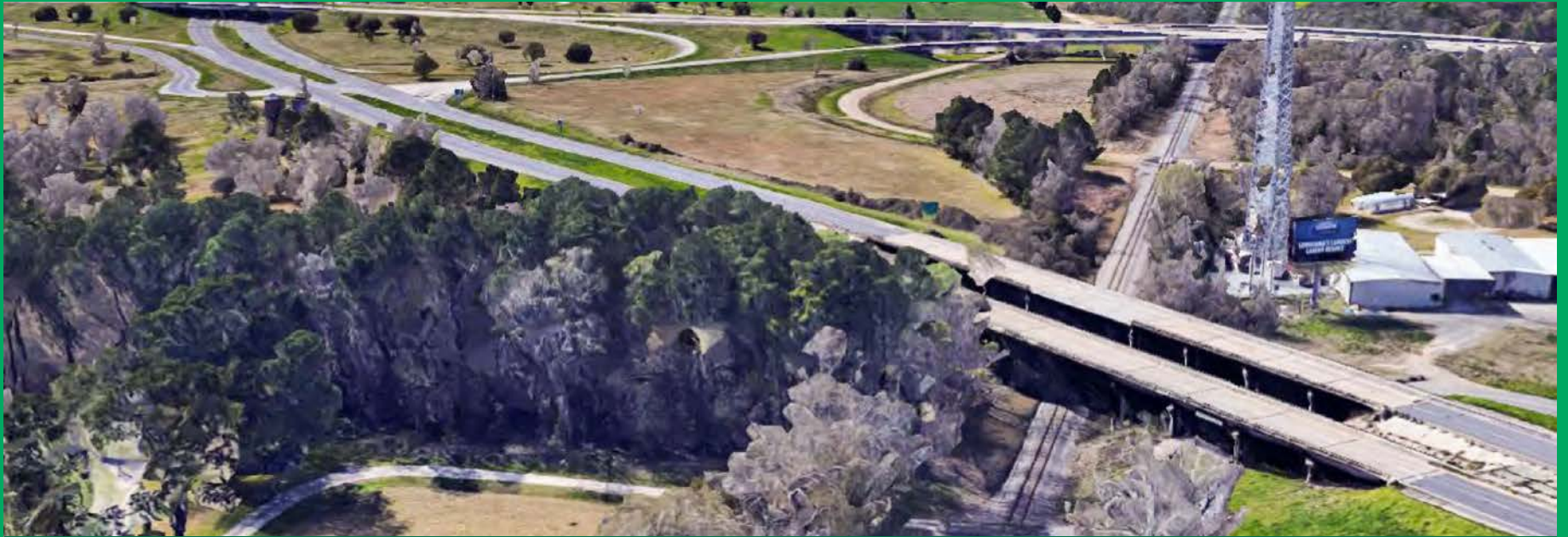
1. While Discipline is not directly stated in the scope, it is possible that this discipline may be needed in this urban environment.

13. Team Size:

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

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
AECOM	Principal	1	2
	Supervisor Engineer	3	5
	Engineer	7	8
	Engineer - Intern	3	10
	Engineer Other	2	4
	Administrative	2	4
	CADD Technician	3	8
Ardaman & Associates, Inc	Administrative	1	1
	CADD Technician	2	2
	Clerical	1	2
	Engineer	1	6
	Engineer Intern	3	6
	Principal	1	3
	Senior Technician	8	9
	Supervisor - Eng	3	3
	Supervisor - Other	3	4
	Technician	11	15

Firm Name	DOTD Job Classification	Number of Personnel Committed to this Contract	Total number of personnel available in this DOTD Job Classification (if needed)
Forte & Tablada	Principal	1	2
	Supervisor - Eng	1	3
	Engineer	1	3
	Surveyor	3	5
	Senior Technician	2	3
	Party Chief	1	3
	Instrument Man	1	2
	Rodman	1	3
Neel-Schaffer	Supervisor - Engineer	2	4
	Engineer	3	5
	Engineer - Intern	0	3
	Administrative	0	1
	Senior Technician	0	1
NTB Associates, Inc.	Principal	1	1
	Engineer	1	1
	Engineer Intern	1	1
	Surveyor	1	7
	Supervisor - Other	1	4
	Senior Technician	0	1
	CADD Technician	1	7
	Technician	1	2
	CADD Drafter	1	5
	Party Chief	4	18
	Instrument Man	4	9
	Rodman	4	11

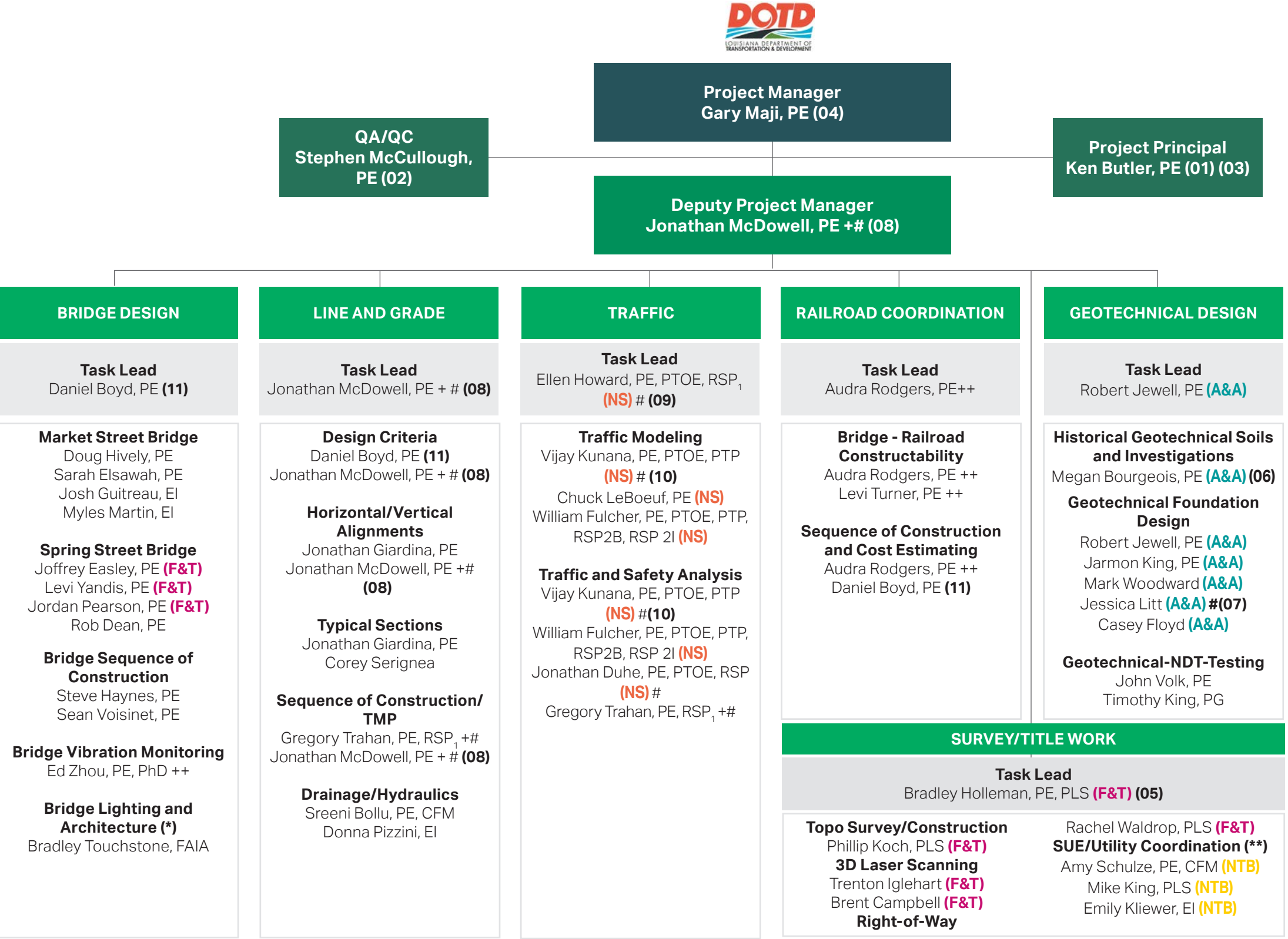


US 190 Over Union Pacific Railroad

Relevance to US 71 Bridges: Road and Bridge design, Railroad Coordination, Drainage Design, Traffic Analysis and Design, Sequence of Construction, Preliminary and Final Design

Sections

14-16



Subconsultant Legend:
Ardaman & Associates, Inc.- A&A
Forte & Tablada, Inc. - F&T
Neel-Schaffer - NS
NTB & Associates - NTB



AECOM ADVANTAGE
We have several AECOM team offices within the Shreveport area so our team can quickly respond any immediate DOTD requests and access site information at a moment's notice.



AECOM's LOCAL TEAM EXPERTISE BRINGS ADDED VALUE TO DOTD

- * **Forte & Tablada** brings leading 3D Laser Scanning and Surveying expertise, relevant historic bridge rehabilitation experience, and local office presence within a few blocks of the project site.
- * **Neel-Schaffer** has extensive mesoscopic traffic modeling experience for LADOTD has performed extensive traffic analysis within the Shreveport metro area.
- * **Ardaman & Associates** has Shreveport offices and project specific knowledge of the subsurface region.
- * **NTB & Associates** has been providing SUE services from its Shreveport offices for numerous years and is very familiar with the local utility providers.

LEGEND

ATSSA Certified	+
Traffic Engineering Modules	#
Minimum Personnel Requirement	(MPR)
PE Not Registered in LA	++

ORGANIZATIONAL CHART NOTES

(*) Since this project is located within the Downtown Development Authority (DDA) area and Festival Plaza, AECOM has added Bridge Lighting/Architecture staff to respond to potential public comment.

(**) While SUE services were not mentioned in the RFP document, there is a strong probability that SUE services may be required due to potential utilities in this downtown urban environment.

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.	Kenneth (Ken) Butler, PE	AECOM	PE.0031476	LA	03.31.2027
2.	Stephen McCullough, PE	AECOM	PE.0050503	LA	03.31.2028
3.	Kenneth (Ken) Butler, PE	AECOM	PE.0031476	LA	03.31.2027
4.	Gary Maji, PE	AECOM	PE.0043044	LA	03.31.2027
5.	Brad Holleman, PLS, PE	Forte & Tablada Inc.	PE.0047165 PLS# 5082	LA LA	03.31.2027 09.30.2026
6.	Megan Bourgeois, P.E.	Ardaman & Associates Inc.	PE.0036725 - Civil	LA	03.31.2028
7.	Jessica Litt	Ardaman & Associates Inc.	NICET / Generalist, Laboratory No. 141243	LA	10.01.2027
8.	Jonathan McDowell, PE	AECOM	PE.0030508	LA	03.31.2027
9.	Ellen Burke Howard, PE, PTOE, RSP1	Neel-Schaffer, Inc.	PE No. 38207 – Civil PTOE 3735	LA All	03.31.2026 08.01.2026
10.	Vijay Kunada, PE, PTOE, PTP	Neel-Schaffer, Inc.	PE No. 32145 - Civil PTOE 2868 PTP 096	LA All All	03.31.2026 04.14.2028 11.07.2028
11.	Daniel Boyd, PE	AECOM	PE. 0036728	LA	03.31.2028

	Firm	AECOM Technical Services, Inc.			
	Name	Gary Maji, PE		Years of Relevant Experience with this Employer	25
	Title	Vice President, Senior Project Manager		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/03.31.27 Additional active licenses in CO, UT			
Year Registered	2018	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Project Manager, Meets MPR 4 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 railroad coordination, 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. Responsible for the conceptual and preliminary design of this 7-mile reconstruction of I-49 through downtown Lafayette, LA. This project includes approximately 20 bridges that span over several interchanges, Vermilion River, BNSF and LDRR 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, and spliced concrete tub girders. Gary led the development and coordination of both conceptual and preliminary railroad submittals for the BNSF and LDRR.				
01/25-Ongoing	DOTD (H.015603), LA 641 Bridge over I-10, Gramercy, LA. Project Manager. Responsible 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.				

02/23-10/24	DOTD (H.001970), LA 561 Bridge over Boeuf River, Hebert, LA. Project Manager. Responsible for the preliminary roadway and bridge design required for the replacement of an existing 3-span truss bridge over the Boeuf River in Richland and Caldwell Parishes. Gary and the AECOM Team worked integrally with DOTD project manager, and district staff to replacement this structurally deficient bridge. Bridge design efforts included pretensioned girder alternative supported on structural bearings, concrete pile bents, and pile supported abutment footings.
07/25- Ongoing	LADOTD, Project No. H013832, Grand Ecore Bridge Rehabilitation Study, Grand Ecore, LA. Contract Manager for development and evaluation of bridge rehabilitation alternatives. LADOTD has commissioned AECOM to perform preliminary study of rehabilitation alternatives for the bridge carrying LA 6 over the Red Rive (Grand Ecore Bridge). The existing structure is 1875 feet long with main spans up to 375 feet, AECOM is evaluating bridge superstructure and substructure rehabilitation alternatives for multiple services based on initial cost, durability, constructibility, and impacts to traffic.
05/12-Ongoing	CDOT, I-76 Corridor Design and I-76/BNSF RR, Fort Morgan, CO. Project Manager and Structures Task Manager. Responsible for the preliminary and final design of more than 27 structures along I-76 within a 16-mile corridor. This design work required safety improvements at four interchanges and complete reconfiguration at three other interchanges. Bridge design efforts evaluated steel plate and pretensioned girder alternatives, supported on pile/column bents, and drilled shaft foundations. As part of the design of the I-76 Bridges over BNSF and Beaver Creek, Gary worked with CDOT and BNSF Railway to managed the development and submittal process for the conceptual, preliminary and final design submittals.
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.
01/22-06/23	Southeast Connector (SEC), TXDOT, Dallas, Texas. Structures Quality Manager. Responsible to assure the design and details associated with (60) sixty bridges and retaining walls located within the SEC project satisfy the technical and quality requirements. Gary supported the development of technical design approach documents, task protocols, and quality documents for the SEC Quality Manual. The \$1.6 billion Southeast Connector Project will rebuild and widen approximately 16 miles of I-20 and I-820.
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.
05/13-07/15	LADOTD (H.001779), Jimmie Davis Bridge, Shreveport, LA. Bridge Engineer. Responsible for the conceptual design and report for bridge replacement and rehabilitation alternatives of the Jimmie Davis Bridge over the Red River. Design efforts evaluated spliced-concrete U-girder, cast-in- place concrete segmental and steel plate girder alternatives. Substructure designs investigated pile/column bents, hammerhead piers, supported on and concrete steel piling and drilled shaft foundations.

	Firm	AECOM Technical Services, Inc.		
	Name	Jonathan McDowell, PE	Years of Relevant Experience with this Employer	23
	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/03.31.27 Additional active licenses in MS, AR, TX		
Year Registered	2003	Discipline	Civil Engineer	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Deputy Project Manager/ Line and Grade Task Leader, Meets MPR 8 Brief Description: Jonathan will serve as a lead roadway designer with more than 26 years of experience as a Project Engineer and Project Manager on diverse urban transportation and public infrastructure projects. His expertise includes feasibility planning, NEPA environmental studies, geometric design, contract administration, and construction engineering and inspection. He has contributed to projects involving roads and streets in urban settings that included both rail and bus transit and bicycle and pedestrian elements. He has extensive experience preparing and reviewing maintenance of traffic and signing plans and is well versed in the full project delivery lifecycle—from concept development through final construction. His technical proficiencies include AutoCAD Land Development Desktop, Civil 3D, MicroStation, InRoads, Openroads, MS Office, MS Project, HEC RAS, STAAD, ArcView, and additional engineering 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).			
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 Road Task Manager. Responsible for the Urban Road Design and Complete Streets improvements to College Drive, Perkins Road, Lee Drive, and other local network roads. The project includes 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, Perkins Road, and adjacent road network to provide congestion relief and improve driver and pedestrian safety. Developed line and grade for the main road widening and local road modifications, participated in stakeholder coordination with KCS railroad, utility companies, impacted business owners, and DOTD. Supporting real estate acquisition and utility relocation processes. Planned network improvements were evaluated using mesoscopic modeling analyzed by Neel-Schaffer.			
10/21-12/24	Port of New Orleans, Preliminary Design for Terminal Access Road, Access Improvements to Judge Perez Hwy (LA 39), and Relocation of St. Bernard Hwy (LA 46), Violet, Louisiana. Deputy Project Manager and Project Engineer for a intermodal container yard facility roads along the Mississippi River. Developed conceptual design for the relocation of St Bernard Highway (LA 46) while keeping access to the town of Violet , improvements to Judge Perez Drive (LA 39), and the access interchange and the new port access road to the terminal gate. Developed conceptual layout for the container terminal internal road plans and developed the geometric design of the wharf ramps over LA 46, the NSRR track, and Miss. River Levee. Developed the conceptual design for the relocation of the mainline Norfolk Southern railroad and the yard lead tracks, intermodal railroad yard tracks, and the support yard tracks. Managed team of engineers and support staff to deliver 30% Plans for two highway improvements packages and the railyard development package.			

10/18-07/24	2024 ENR Award TX/LA Best Project Award. Nashville Avenue Conversion to Container and Crane Rail Expansion, Port of New Orleans, New Orleans, LA. Project Manager and Engineer for the planning, design, and construction support for a \$30 million project to convert the wharf deck and container yard in a highly urban area to support up to four new rail-mounted ship-to-shore cranes and expansion of container marshalling area at the Nashville Avenue Wharves B and C. The project included electrical modifications, pile bracing and repairs, demolition of an existing warehouse, berth dredging, high mast lighting, 1,000 square yards of new paving, regrading an existing truck loading dock, railroad track removal and modifications, and miscellaneous site safety improvements. Jonathan provided design for the site and rail modifications and developed the construction sequencing and maintenance of truck traffic through the facility. Project partially funded through DOTD Ports Priority Program.
02/13-06/18	2017 American Association of Port Authorities (AAPA) Facilities Engineering Award. Mississippi River Intermodal Terminal Improvements, Port of New Orleans, New Orleans, LA. Project Manager and Project Engineer for the planning, design, and construction administration for a \$22 million improvements project to modernize the intermodal yard at the Napoleon Avenue Container Terminal adjacent to an highly urban area. The plan included four 1550 feet process tracks and a run through track to provide access to both ends of the yard. The main lead track crosses the urban, signalized intersection of Napoleon Avenue and Clarence Henry Truckway. Mr. McDowell designed the regrading of the intersection required for the removal and relocation of the yard lead tracks across the intersection. Also designed the traffic signal and urban railroad signal modifications and construction sequencing required to keep the intersection open during construction. Within the facility, Mr. McDowell designed the site layout and coordinated utilities relocations to serve the new yard including water, sewer, air ducts, and electrical for the high mast lighting and to power the RTG cranes and facility maintenance building.
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. Responsible for the relocation of LA 23 and the NOGC Railroad tracks across the proposed sediment diversion. Developed line and grade 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.
10/10-07/16	2018 ENR TX/LA Award of Merit Airport/Transit. New Orleans Regional Transit Authority, Loyola Avenue & Rampart Streetcar Rail Expansion, New Orleans LA. Project Manager and Road Infrastructure Task Leader to prepare two sets of PS&E on accelerated schedules to reconfigure the streetscape to include streetcar tracks in a shared traffic lane and to include bicycle lanes. Mr. McDowell led the urban road design in accordance with the New Orleans Complete Streets Ordinance; led utility coordination tasks in downtown New Orleans and the French Quarter which included a test hole program to locate all underground utilities to reduce utility conflicts; developed the MOT during construction which included shifting northbound Canal Street traffic to the southbound lanes for construction of the half grand union at Rampart Street and Canal Street within 30 days. Performed construction support services without removal of existing streetscape. Coordinated with City Stakeholders and DOTD.
07/15 - Present	State Project No. H.004273.5: I-49 Connector, Lafayette Regional Airport to I-10/I-49/US 167 Interchange, Louisiana Department of Transportation & Development (LADOTD), Lafayette Parish, Louisiana). Project Manager, Leadership Team Member, and Railroad Coordination & Alignment Modifications Task Manager for a NEPA Supplemental EIS and design of a 5-mile urban freeway corridor. Participated in a concurrent Context Sensitive Solutions process and oversaw a signature bridge, urban master plan for local/frontage roads, and rail improvements, including replacing up to three at-grade crossings with underpasses, highway overpasses, and potential Amtrak platform modifications. Proposed rail improvements. Reviewed road design and led railroad coordination.

	Firm	AECOM Technical Services, Inc.			
	Name	Stephen McCullough, PE		Years of Relevant Experience with this Employer	16
	Title	VP, Surface Transportation Deputy Division 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		0050503/LA/03.31.2028 Additional active licenses in AR, TX			
Year Registered	2011	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: QA/QC, Meets MPR 2 Brief Description: Stephen McCullough, P.E. brings over 19 years of structural engineering expertise in the transportation sector, specializing in bridge design, structural leadership, and quality management for both large alternative delivery programs and smaller PS&E projects. He has held senior technical and quality-focused roles on major transportation initiatives across Texas and the U.S., ensuring design accuracy, constructability, and compliance with standards. Stephen has led multidisciplinary teams across Texas, the U.S., Canada, and Europe, overseeing complex designs while upholding rigorous QA/QC standards . He is highly proficient in AASHTO LRFD, AREMA, ACI, and AISC standards, integrating these into project-wide quality processes. As Structural Discipline Lead and Engineer of Record, Stephen managed the delivery of dozens of bridge structures on major projects like the Southeast Connector (Fort Worth) and LBJ East (Dallas), including complex designs such as multi-level connectors, post-tensioned straddle bents, and wide underpasses. On the I-35 Northeast Expansion (NEX) South project, he led a team of 10–15 verifiers, overseeing quality checks for 3,000+ structural drawings and calculations, ensuring compliance and successful delivery of 300+ bridge spans. Stephen's expertise in design leadership, technical verification, and interdisciplinary coordination positions him as a strong leader in delivering high-quality transportation infrastructure 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).				
09/23-Present	TxDOT, I-35 NEX (Northeast Expansion) Design Build Project, San Antonio, TX, Lead Verifier. Stephen McCullough served as Lead Verifier for bridges and retaining walls on the I-35 Northeast Expansion (NEX) Design-Build project, a 4.5-mile corridor expansion featuring elevated lanes, two direct connectors, and over 300 spans of prestressed concrete girders supported by diverse substructures, including hammerhead, multi-column, and offset C-bents. He collaborated with the contractor and owner to develop innovative precast concrete columns and bent caps, enhancing constructability and schedule efficiency. In his quality leadership role, Stephen implemented and managed the quality process for all bridge and retaining wall designs, directing a team of 10–15 Deputy Lead Verifiers across the U.S. He developed workflows and procedures for the Lead Verifier process, ensuring compliance with the project's Design Quality Management Plan (DQMP). Under his leadership, thousands of structural drawings and calculations were reviewed to meet project standards, technical requirements, and contractual quality expectations, playing a critical role in the successful delivery of this complex infrastructure project.				

01/18-06/18	Louisiana 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 alternatives; (1) a traditional slab and stringer styler superstructure, and (2) a truss superstructure with floor beams supporting the cast in place slab deck. In addition to the structural analysis for both these options, Stephen performed cost estimates to provide 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-Present	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. On the SEC project, Stehen led the design and coordinated tasks of all the structures including post-tensioned straddle bents, highly skewed bents, wide underpass structures, live water creek crossings, widenings, four UPRR rail overpasses, and several underpass structures with complex deck geometry. Stephen closely coordinated the design of the four UPRR crossing between the contractor, design team, and the UPRR reviewers. For these four bridges Stephen closely coordinated the bridge staging, construction sequencing, and plan development, including general notes to ensure that compliance with both TxDOT and UPRR requirements were met. Stephen led the design for all pre-stressed concrete and steel girder superstructures on the project as well as the design for all substructure and foundations on the project.
12/19-Present	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, four stack multi-level direct connectors, wide underpass structures, long viaducts, bridge 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.
01/2017-12/2017	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.

	Firm	AECOM Technical Services, Inc.			
	Name	Daniel Boyd, PE		Years of Relevant Experience with this Employer	6+
	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.0036728/LA/03.31.2028 Additional active licenses in MS and TX AECOM Certified PM			
Year Registered	2011	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design Task Lead, Meets MPR 11 Brief Description: Daniel has nearly 20 years of structural engineering experience in the transportation industry, specializing in bridge design and structural discipline management. His work includes serving as Project Manager for the ongoing DOTD US 190: Opelousas Overpasses project, Deputy Project Manager on DOTD Bridge Preservation IDIQ and Movable Bridge Inspection projects, and multiple design build projects in Texas. 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 has also completed DOTD's Historic Bridge Training and is 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 as a Deputy Project Manager and structural task manager for multiple Task Orders as part of AECOM's 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.				
05/25-Ongoing	DOTD, Movable Bridge Rehabilitation Contract #1, Orleans, Cameron, Iberia, Terrebonne, and St. Tammany Parishes, LA Deputy Project Manager and Discipline Leader for Fixed Spans. Performed field work for bridge inspections, review of inspection reports prior to submittal, and coordination with load rating team members on all five bridges that are involved in the project. Currently, coordinating with other disciplines to develop scopes of work for repair and rehabilitation for each of the five bridges. Completed DOTD's Historic Bridge Training as required for this project.				

04/25-Ongoing	DOTD, US 190: UPRR Overpass Near Opelousas, St. Landry Parish, LA. Project Manager and Structures Discipline Leader for this multi-discipline project that is currently providing preliminary and final design services for resurfacing and/or reconstruction and widening US 190 east of the I-49/US 190 Interchange near Opelousas, LA. This project includes bridge replacements over Little Teche Bayou and UPRR and retaining walls near the UPRR tracks, roadway design, supplemental design survey, and bridge hydraulic design and analysis. Extensive railroad coordination will be required for the bridge replacements crossing the UPRR tracks. This coordination is currently in progress with DOTD's Rail Coordinator, Shawn Luke.
01/20-Ongoing	TxDOT, LBJ East Design Build Project, Dallas, TX. Structural Task Leader and engineer of record. Responsible for the design of Ancillary 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.
10/20-04/25	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.
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 IDC engineer for all Overhead Sign Structures and Toll Gantry Structures 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 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.
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.

	Firm	AECOM Technical Services, Inc.			
	Name	Kenneth (Ken) Butler, PE		Years of Relevant Experience with this Employer	28
	Title	Global Head of Complex Structure/ AECOM Fellow		Years of Relevant Experience with Other Employer(s)	12
Degree(s)/Years/Specialization		BS/1984/Civil and Environmental			
Active Registration Number/State/Expiration Date		31476/LA/3.31.27 Additional active license: PE VA, FL, MD, PA, SC, NC, CA, DC, DE, NY, NJ			
Year Registered	1991	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Project Principal, Meets MPR 1 & 3 Brief Description: Ken brings 39 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 has played significant roles on eight major alternate delivery projects including: 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).				
06/14 – 06/18 (Bridge Lead) 06/18 – present (QA Lead)	LADOTD (H.004273) I-49 Connector, Lafayette, LA. Principal Structure Lead. Ken serves as Principal Structure Lead for the 3.5-mile long elevated precast segmental and prestressed concrete u-girder urban viaduct; four flyover connector ramps; three multi-level interchanges; two elevated SPUI's (signature bridges – arches and cable stayed); eleven overpass structures; three railroad bridges; and 27,000-feet of retaining wall.				
10/19 – present	MDTA Harry W. Nice/Thomas "Mac" Middleton Bridge Replacement Project, MD. Design Manager. Ken serves as the design manager for this 1.9-mile long bridge over the Potomac River. Project includes major bridge design over a navigable channel; environmental permitting; 200-ft deep foundations; roadway design; staged construction; and demolition of the existing bridge over the Potomac River. As design manager, Ken is responsible for managing 60+ 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 has full professional liability for all engineering decisions and the final work product. The design took 1-year and he continues to provide construction support to the Design Builder.				

08/17 – present	DDOT Frederick Douglass Memorial Bridge Project, Washington, DC. Design Manager. Ken serves 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 include 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 has 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. Designer of Record. 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-foot-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. Technical Advisor. 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.
01/11 – 08/14	LADOTD (State Project No. 700-92-0016) Florida Avenue Bridge, New Orleans, LA. Bridge Lead. Bridge lead for the design efforts for the \$100 million 1,500-foot-long 5-span main unit crossing the Inner Harbor Navigational Canal. Directed the preliminary and final design phases for the section of bridge, which includes a 470-foot main span over the canal with 156-foot vertical and 300-foot 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 consisted of approximately two miles of elevated structure including high level approaches comprised of prestressed concrete bulb-T girders and curved steel girder interchange ramps.

	Firm	AECOM Technical Services, Inc.		
	Name	Doug Hively, PE	Years of Relevant Experience with this Employer	19
	Title	Associate Vice President, Bridge Group Lead	Years of Relevant Experience with Other Employer(s)	12
Degree(s)/Years/Specialization		BS/1996/Civil Engineering		
Active Registration Number/State/Expiration Date		PE49334 /LA/03.31.2027 Additional active licenses: TX		
Year Registered	2025	Discipline	Civil Engineer	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design Brief Description: Mr. Hively is the Bridge Group Lead for the Austin, Texas office where he supervises a staff of 13 which includes PEs, EITs and CADD technicians. He is an engineer with over 30 years of experience in structural and civil design with most of his years spent in the bridge design practice. His primary experience lies in the realm of bridge replacements, widenings, and interchanges using prestressed concrete and steel girders along with complex substructures. His projects have been for federal, state, county, and city level clients as well as private developers and have ranged in scope from multi-level interchanges to pedestrian bridges. Mr. Hively has been involved with ten design-build projects with significant responsibility regarding delivery of bridge design plans and developing design criteria. He has served in leadership and technical roles for the design and production of numerous bridges in each project and efficiently guided staff during the fast-paced projects. Mr. Hively is proficient with a variety of software packages including OpenRoads, MicroStation with GEOPAK, MDX, STAAD, TxDOT Bridge Geometry System (BGS), PGSuper, spColumn, CONSPAN, LPILE, and RCPier.		
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).			
09/06-06/10	North Texas Tollway Authority, Chisholm Trail Parkway (Section 1), Fort Worth, Texas. Designed a 12-span frontage road bridge that included a 3-span continuous curved steel plate girder unit over the Fort Worth and Western Railroad (FWRR) as well as the I-30 prestressed concrete I-beam bridge replacements over the FWRR using phase construction. Developed the sequence of construction for the I-30 bridges. Design included superstructure, substructure and foundations.			
10/17-07/20	TxDOT – El Paso District, SL 375 Frontage Road Ramps, El Paso, Texas. Design team lead and engineer of record for three bridges in the project that consisted of ramp reversals and addition of frontage roads along a controlled access highway. Supervised design efforts for two new frontage road bridges over Union Pacific Railroad (UPRR) and the widening of a mainlane bridge over a grade crossing. Design elements included concrete U-beams, Tx54 girders, aesthetic bents and drilled shaft foundations. Developed span arrangement that placed bridge bents and foundations outside of UPRR ROW and worked with Roadway team to meet required vertical clearances over UPRR. Coordinated with other discipline leads during development of Bridge Layouts and details. Developed an Exhibit 'A' for submittal to UPRR.			

09/19–07/20	TxDOT - Dallas District, I-635E Design- Build, Dallas, Texas: One of multiple bridge design team leaders for this \$1.7 billion project. Developed and supervised a work plan for three engineers and two CADD technicians for the design and plan production of four bridges - two were direct connectors in the I-635 / I-30 interchange, one was a phase-constructed underpass, and the other was a temporary bridge for MOT. Design included prestressed concrete girders, curved steel plate girders, hammerhead bents, straddle bents, post-tensioned straddle bent caps, and footings with drilled shaft foundations. Developed sequence of construction for bridge replacements. Worked with construction team to provide optimizations that led to cost-effective bridge type and focusing on constructability.
09/09–12/10	North Texas Tollway Authority, SH 161 Toll Road Design-Build, Grand Prairie, TX. Design team lead and engineer of record for three direct connectors at the I-20 and I-30 interchanges and four grade crossings along the mainlanes as part of the large design-build toll facility. Design included curved steel plate girder flyovers, Tx54 prestressed concrete girders, straddle bents, hammerhead bents, and foundations with multiple drilled shafts. Developed Bridge Layouts and checked vertical clearances. Managed the design, detailing and production tasks of support staff.
09/08–09/09	North Texas Tollway Authority, Sam Rayburn Tollway Interchange at Dallas North Tollway, Collin County, TX. Designed two direct connectors as part of an 8-directional interchange. Design included curved steel plate girder flyovers, prestressed concrete I-beams, straddle bents, hammerhead bents, and foundations with multiple drilled shafts.
02/22–06/23	TxDOT – Fort Worth District, Southeast Connector Design-Build, Fort Worth, TX. Acted in a dual role for this \$1.5 billion project. As design team lead and EOR, developed a work plan and supervised the work of two engineers and one technician for the design and plan production of three bridges in the I-20 / I-820 interchange. Design included prestressed concrete girders, inverted-T bent caps, hammerhead, straddle and multi-column bents. As segment lead, oversaw the work of three design teams responsible for design and plan production of nine bridges at the I-20 / US 287 interchange. Assisted the bridge discipline lead in development of standard drawings, bringing optimizations to the construction team and scheduling.
09/20–03/22	TxDOT – Austin District, Oak Hill Parkway Design-Build, Austin, TX. Bridge discipline lead for this \$675 million design-build project. In charge of plan delivery for all 26 bridges on the project as well as overhead sign structures, bridge-related project standards and miscellaneous structures. Worked with constructor and owner through weekly technical workgroup meetings to ensure design met project specifications. Oversaw the work of six bridge design teams to ensure delivery of bridge plans were on schedule. Developed bridge design criteria for all teams to use to ensure design consistency throughout the project.

	Firm	AECOM Technical Services, Inc.			
	Name	Sarah Elsayah, 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/09.30.26			
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, LA. 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	Josh Guitreau		Years of Relevant Experience with this Employer	3
	Title	Structural Engineer 2, EIT		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS/2022/Civil Engineering			
Active Registration Number/State/Expiration Date		EI.0035162/LA/09.30.26			
Year Registered	2022	Discipline	Engineering Intern		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design Brief Description: Joshua has 3 years of experience in structural and bridge engineering across multiple transportation projects. His work has included preliminary and detailed bridge design, reinforced deck design, and substructure analysis for state DOTs including LaDOTD, TxDOT, and SDDOT, as well as bridge load rating evaluations, field assessments, and site visits for LaDOTD, with one year focused on analyzing existing structures to assess capacity and inform maintenance or load decisions. His project experience spans bridge replacement and rehabilitation, box culvert and wingwall design, and construction and quality support for major highway projects. Joshua has demonstrated proficiency with AASHTO LRFD design specifications, reinforced concrete bridge components, and preliminary structural analysis, contributing to the successful execution of projects across multiple states.			
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-Ongoing	LADOTD, LA-561 Boeuf River Bridge Replacement Project, Hebert, LA. Structural Engineer. Responsible for preliminary bridge layout and design, preliminary structural design to generate pile loads, reinforced deck design, as well as performing site visit meeting with LaDOTD to assess condition of current bridge and determine new bridge design parameters.				
08/23-Ongoing	LADOTD, LA-10 Bayou Carron Bridge Project, Washington, LA. Supported geotechnical analysis efforts by determining bridge service loads used in foundation design. Assisted with plan development and coordination to maintain consistency between structural and geotechnical design elements.				
10/23-08/25	LADOTD, Bridge Load Rating, Multiple Locations, LA. Performed substructure analysis for a series of multi-span concrete slab bridges as part of a statewide load rating effort, assessing existing conditions and structural capacity to deliver recommendations supporting effective maintenance and rehabilitation planning.				
11/22-Ongoing	EBR Parish, College Drive, Baton Rouge, LA. Structural Engineer. Performed design verification and structural analysis for box culverts and headwalls to ensure compliance with design standards and structural integrity.				
07/22-Ongoing	TxDOT, I-635 LBJ East Design Build Project, Dallas, TX. Structural Engineer. Performed construction support activities such as responding to RFI's, shop drawing review, plan revisions, and quality support/quality assurance tasks for multiple bridge structures throughout project.				
11/22-12/22	SDDOT, West River Bridges, Prairie City, SD. Structural Engineer. Performed structural design for box culvert wingwalls and completed quantity calculations to support project estimation and planning.				

	Firm	AECOM Technical Services, Inc.			
	Name	Myles Martin, EI		Years of Relevant Experience with this Employer	3.5
	Title	Bridge Design		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS / 2022 / Civil Engineering			
Active Registration Number/State/Expiration Date		EI.# 0035305 / LA / 03/31/2026			
Year Registered	2022	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design - Market Street Bridge Brief Description: Engineering in Training. Myles' role on the design team is to execute the structural engineering tasks assigned or as otherwise directed under general supervision.			
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).				
04/10-Ongoing	ODOT, Brent Spence Bridge Corridor Project, Kenton County, KY. EIT responsible for developing several retaining wall lans to 60% design. Key aspect of the development of plans included: ▶ Using excel to mathematically verify the top of wall elevations by calculating the profile grade and using horizontal distances combined with the road cross slope. ▶ Utilizing Open Roads Designer to develop design models, layouts, and construction drawings, ensuring accuracy and clarity in the 60% design documents. ▶ Using excel and other modeling software to complete quantity calculations for retaining walls.				
08/20-Ongoing	LADOTD, No. H.011993: LA-10 Bayou Carron Bridge Project Stage 6, Opelousas, LA. EIT tasked with review of detailed bearing pad shop drawings and ongoing task related to final stage of bridge design.				
01/25-Ongoing	LADOTD, No. H.01560: LA-641 Bridge Insp and Repair, St. James Parish, LA. EIT tasked with assessing the scope of repairwork including materials, labor and equipment, to generate accurate cost and quantity estimates, utilizing Microstation to develop bridge plans, girder layout and Girder Repair sheets, using Excel and Microsoft Word to summarize pre-inspection damage, and assisting on bridge inspection to evaluate damage on bridge by use of a boom lift to perform visual and physical aminationations to identify wear and damage that could compromise the girders functionality in effort for the overall analysis and design of repair.				
07/23-Ongoing	LADOTD and Development (H.004273), I-49 Connector, Lafayette, LA. Performed construction support activities and quality support/quality assurance tasks for multiple bridge structures throughout project.				
07/24-Ongoing	LADOTD Bridge Load Rating IDIQ, Statewide, LA. EIT tasked with performing load rating on the substructure components of multiple bridges across the state using BRR software and an AECOM proprietary tool.				
08/22-Ongoing	TxDOT, Oak Hill Parkway, San Antonio, TX. Performed construction support activities and quality support/quality assurance tasks for multiple bridge structures throughout project. Tasks commonly done on project include but not limited to: ▶ Preparing and review of detailed girder, prestressed concrete panels, box culvert, steel bridge form, retaining wall and sealed expansion joint shop drawings. ▶ Coordinating Requests for Information responses to resolve technical issues and clarify design details during construction.				

	Firm	AECOM Technical Services, Inc.			
	Name	Rob Dean, PE		Years of Relevant Experience with this Employer	30
	Title	Structural Engineer 2, EIT		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS/1993/Civil Engineering MS/1995/Civil Engineering			
Active Registration Number/State/Expiration Date		PE.0046730/LA/09.30.2026 Additional active licenses: VA			
Year Registered	2022	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Spring Street Bridge Brief Description: Rob is a licensed professional civil engineer who serves as a Bridge Engineer in the Roanoke, Virginia office. His professional experience encompasses a wide range of projects for public and private clients, involving design of new bridge structures, as well as the inspection, rehabilitation, and renovation of existing structures. His responsibilities include condition assessment, rehabilitation alternatives, computation and checking of design calculations, preparation of plans, specifications, and cost estimates. Rob is a nationally certified Bridge Inspection and Tunnel Inspection Team Leader.			
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).				
07/25-Ongoing	LADOTD, Project No. H.013832, Grand Ecore Bridge Rehabilitation Study, Grand Ecore, LA. Senior Bridge Engineer for development and evaluation of bridge rehabilitation alternatives. LADOTD has commissioned AECOM to perform preliminary study of rehabilitation alternatives for the bridge carrying LA 6 over the Red River (Grand Ecore Bridge). The existing structure is 1875 feet long with main spans up to 375 feet. AECOM is evaluating bridge superstructure and substructure rehabilitation alternatives for multiple service life scenarios based on initial cost, durability, constructability, and impacts to traffic.				
04/20-04/24	VDOT, Rehabilitation of Interstate 77 Bridges over Clear Fork Creek, Bland County, VA. Task Manager for rehabilitation of four steel bridges on Interstate 77 in Bland County, Virginia. AECOM developed a program for assessment of the existing structure condition, including sampling of the superstructure concrete to test for chloride content, depth of the chloride front, compressive strength and petrographic examination. Based on the results of our investigation, we developed plans for deep hydro-demolition and concrete deck overlay, elimination of deck expansion joints, structural steel repairs, and substructure rehabilitation.				
11/20-06/23	VDOT, Route 360 Corridor Evaluation of 22 Structures, Fredericksburg District. Task Manager with responsibility for coordinating the collaboration of a multi-discipline team on this task to evaluate rehabilitation needs for 22 structures along the Route 360 corridor. Structures range in length up to 500 feet and include both concrete and steel superstructures. Our assessment of the existing structures including infrared thermography, 3D GPR, and digital image mapping, all performed at traffic speeds. The analysis results supported our data-driven process for rehabilitation recommendations and budget prioritization.				

08/15-11/20	VDOT, Route 685 over Craig Creek (Phoenix Bridge), Botetourt County, VA. Task Manager with responsibility for bridge design and construction plans. AECOM was commissioned by VDOT to provide engineering services for this project to rehabilitate two 120-year-old historic steel truss spans over Craig Creek to extend the service life, improve the condition ratings, and increase the live load capacity. This single-lane bridge with a length of 267 feet is the only means of access and emergency service for dozens of residences, so AECOM developed unique modular construction details to allow major rehabilitation of floor beams and complete replacement of all stringers and bracing members in very short windows of road closure.
01/16-11/20	VDOT, Rehabilitation of 34 Structures in Salem District, VDOT Salem District, VA. Task Manager with responsibility for guiding the work of multiple design teams for this task to replace superstructures for 34 bridges throughout the VDOT Salem District. New structure types included concrete and steel superstructures. Staged construction details were developed to maintain traffic during construction. Where staged construction was not feasible, plan details were developed to permit rapid replacement within a 12-hour road closure. Bridge rehabilitation plans were prepared and bundled in multiple advertisement packages.
04/17-02/24	VDOT, Rehabilitation of Five Structures in the Lynchburg District, VDOT Lynchburg District, VA. Task Manager with responsibility for oversight of five design teams to make field assessments, site survey, develop sequence of construction, bridge engineering, maintenance of traffic, utility relocations, cost estimating, and specifications. AECOM was commissioned by VDOT to provide engineering services for this project for rehabilitation of five structures. Structures ranged in length up to 650 feet. The scope of rehabilitation included concrete deck replacement, deck hydro-demolition and overlay, structural steel repairs, bearing replacement, substructure repairs, and structural steel painting.
02/18-08/20	VDOT, Route 683 and Route 730 Bridges, Virginia DOT Lynchburg District. Task Manager for this task and performed quality control review of superstructure and substructure design calculations and bridge construction plans. AECOM provided engineering services for this project for complete replacement of two bridges using prestressed concrete beams. The project was designed on an aggressive schedule because the original bridges were both washed out during a flood, leaving both bridges closed to traffic.
05/18-03/19	VDOT, Route 3 Bridge over Rappahannock River, Middlesex/Lancaster County, VA. Task Manager with responsibility for coordinating the collaboration of a multi-discipline team for this task to study bridge rehabilitation and replacement alternatives for the Route 3 over the Rappahannock River bridge. The existing bridge is two miles long with a span length of 650 feet over the navigation channel. The study evaluated eight bridge replacement alternatives and provided scoping plans for the recommended alternative based on cost, environmental impacts, constructability, and impacts to traffic.
04/11-05/11	VDOT, I-81 over Reed Creek Bearing Replacement, Wythe County, VA. Senior Bridge Engineer for this project with responsibilities for field assessment, design of emergency bearing repairs, and preparation of construction plans. AECOM was commissioned by VDOT to perform emergency inspection and prepare emergency repair plans for tilted steel rocker bearings.
02/17-09/21	VDOT, Route 58 over NS Railway, Norton, VA. Senior Bridge Engineer and Engineer of Record for this task to rehabilitate the superstructure of this steel girder bridge with a total length of 570 feet and a width of 76 feet. Rehabilitation plans included fatigue cracking retrofit, concrete deck overlay, bearing replacement, and substructure repair.

	Firm	AECOM Technical Services, Inc.			
	Name	Steven Haynes, PE		Years of Relevant Experience with this Employer	24
	Title	Bridge Design		Years of Relevant Experience with Other Employer(s)	21
Degree(s)/Years/Specialization		BS/1978/Civil Engineering			
Active Registration Number/State/Expiration Date		0043319/LA/09.30.2026 Additional active licenses in: CO, TX, WA			
Year Registered	2019	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design Brief Description: Steven is a senior project manager and bridge engineer with extensive experience in the analysis, design, and construction management of bridges and other structures. He is well-versed in AASHTO LRFD bridge design and construction specifications and has applied state-specific design procedures in Louisiana, Washington, Colorado, and Texas. His expertise includes designing steel, precast, and post-tensioned concrete bridges, complex substructures, and retaining walls over 30 feet, often incorporating soil-nail, caisson, and tied-back systems. Steven has led multidisciplinary design teams through all project phases—from studies and civil/structural design to specifications, estimates, and construction—on diverse structures such as arches, tied arches, timber bridges, and approach roadways. He is also skilled in evaluating hydrologic, geotechnical, traffic, safety, economic, and aesthetic factors to deliver feasible designs in collaboration with roadway engineers, and he has performed quality control reviews of final contract plans and specifications for numerous bridge and structural 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).				
07/24 - Ongoing	Brent Spence Bridge Project – Ohio River, Ohio DOT. Lead Structural Engineer. This project is a progressive design/build project where Steven is the Lead Structural Engineer for 5 bridges in Cincinnati OH. Two of the bridges are double-decked structures approaching the Ohio River Crossing Bridges. One Bridge spans 2 railroad facilities where shoring designs will be required by the Design Team. The bridges consist of fabricated structural steel and prestressed concrete girders up to 140 feet in length.				
07/20-09/21	Repair Assessment of Bridge No. 93.1, I-20 EB to I-55 NB, Mississippi Department of Transportation, Jackson MS. Provided technical support for an in-depth finite-element analysis to generate a bridge load rating analysis and repair recommendations for Bridge No. 93.1 in Rankin County, MS. This bridge is in generally fair condition, however, diagonal cracking of the concrete girders with moderate spalling was noted at the dapped girder ends which weakened the structural integrity of the bridge and warranted a load posting				

07/19-12/21	TxDOT, Southeast Connector Design-Build, Fort Worth, TX. Structure Engineer and Task Manager. Responsible for \$1.6 billion design- build project to reconstruct and widen 16.6 miles of I-820, I-20 & US-287. Steven was EOR for 3 of the bridges on the project and designed pre-stressed concrete girders, bent caps, columns, and foundations for these bridges. Steven designed several of the more complicated post-tensioned straddle bents on the projects requiring limited vertical clearance.
7/18-Ongoing	TxDOT, I-635 LBJ East Design-Build, Dallas, TX. Lead Structural Design Engineer. Design-Build project to reconstruct and widen 11 miles of interstate roadway. Steve is the lead structural design engineer and engineer of record for the 280 ft span Skillman St. Tied Arch Signature Bridge supported on abutment caps and drilled shafts.
07/20-12/20	El Paso County, South Academy Blvd over BNSF Rehabilitation, El Paso County, CO. Bridge Engineer. Responsible for the scour mitigation design for a 5-span, prestressed concrete girder bridge over Fountain Creek in Colorado Springs. As part of the bridge preservation efforts, Steve developed bridge foundation strengthening details for the existing piers in the floodplain.
7/15-Ongoing	LADOTD and Development (H.004273) I-49 Connector, Lafayette, LA. Technical Task Leader. Task Assignments included the conceptual designs of Signature Bridge Options totaling approximately 840 feet in length and a main span approximately 400' over Johnstown Blvd. Technical Task Leader and for AECOM Denver's portion of this design study report. Mr. Haynes provided QC for the superstructure and design of the substructure elements for this bridge, including straddle bents in excess of 130' in length. AECOM Denver was tasked with the design for Spliced U-Girder Alternative. The viaduct consisted of multiple structures. The study area and was in excess of 15000' long with a number of ramps. Considering the parallel I-49 structures, the overall bridge length studied was in excess of 10,000 feet each and over 120 spans total. Midas and CSiBridge were utilized for the designs of the structures. Designed the structure in accordance with LADOTD's Guidelines and AASHTO LRFD requirements.
10/17-12/19	Frederick Douglass Memorial Bridge, Washington DC Department of Transportation, Washington DC. Structural Engineer. Responsible for designing foundations for this 3 span suspended arch bridge crossing the Anacostia River. The bridge is 1445' in length with spans 540' over the main channel. Challenges included designing deep pile foundations in soft soils, including the design of the bridge for active threats, such as ship collisions which could potentially damage several supporting piles at the piers. The design plans comply with Washington D.C's DOT Standards and AASHTO's LRFD Requirements.
09/18-05/19	LADOTD (H.011670), I-10 at Loyola Avenue Interchange Design-Build Tender Offer, Kenner, LA. Structure Engineer. Responsible 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. Design tasks included evaluating alternative technical concepts, preliminary design and layouts for prestressed concrete LG girder superstructures, proposal plan development and quantity calculations for contractor estimating and bid.
09/12-06/17	I-225 Light Rail Line Design-Build - Regional Transportation District of Denver, Aurora, CO. Design-build of a 10.5-mile LRT extension with 8 stations and 7 bridges. Steve was the lead structural engineer and engineer of record for the bridges and various wall structures including cast-in-place cantilever walls, caisson walls, soldier pile walls and geometric layouts and design coordination for mechanically stabilized earth walls and soil nail walls. The bridges were designed as ballasted light rail bridges utilizing prestressed concrete BT girders. Substructure designer for a prefabricated pedestrian bridge supported on abutment caps on drilled caisson foundations. Additional responsibilities included extensive structural drafting and detailing as well as post-design construction support services including structural shop drawing reviews and field design changes.

	Firm	AECOM Technical Services, Inc.			
	Name	Sean Voisinet, PE		Years of Relevant Experience with this Employer	12
	Title	Structural Engineer V		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS/2012/Architectural Engineering			
Active Registration Number/State/Expiration Date		PE.0046645/LA/09.30.2026 Additional active licenses in: CO, TX			
Year Registered	2017	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Design Brief Description: Sean is a bridge engineer with more than 12 years of experience in the structural design, rehabilitation, and widening of highway and railway bridges in Colorado, Louisiana, Ohio, and Texas. His experience includes technical design and management primarily of prestressed concrete girder superstructures and complex concrete substructures as well as a variety of transportation structures including complex retaining walls, concrete box culverts, drainage junction structures, and traffic sign structures. His experience also includes developing design criteria, preparing design calculations, construction plans, project special provisions and project cost estimates formatted in accordance with client requirements and project 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).				
03/18-Ongoing	LADOTD (H.004273), I-49 Connector, Lafayette, LA. Structural Engineer. Responsible 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. Sean is responsible for developing conceptual layouts and preliminary design for eight precast concrete segmental span-by-span ramp bridges that frame into the 2-mile viaduct structure through the Lafayette Central Business District.				
01/21-03/24	TxDOT, Southeast Connector Design-Build, Fort Worth, TX. Structures Task Manager and Segment Lead. Responsible for this \$1.6 billion design- build project to reconstruct and widen 16.6 miles of I-820, I-20 & US-287. Sean was a segment lead responsible for coordination and scheduling for 6 teams designing 23 bridges as well as EOR for 7 bridges within the segment. As EOR, Sean led a team of 7 engineers to develop final plans and calculations for 4 prestressed concrete Tx I-girder bridges on multi-column bents and shafts carrying I-20 WB/EB over UPRR. Design tasks included developing superstructure/substructure phasing alternatives for the constructor along with 30% and Final Plan submittals in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.				

07/20-09/21	CDOT, I-76 over BNSF RR and Badger Creek, Brush, CO. Structures Engineer. Responsible for the preliminary design and structure layout for a pair of 6-span (680 ft) continuous prestressed concrete BT girder bridges on highly skewed, multi-column piers on caisson foundations. During preliminary design, Sean evaluated alternative structure depths and optimized layout configurations to reduce roadway profile impacts while maintaining the required railroad clearances and completed 30% design plans and specs developed in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.
07/19-12/21	TxDOT, I-635 LBJ East Design-Build, Dallas, TX. Structural Design Engineer. Responsible for a 24-span (3100 ft) direct connector bridge at the I-635/I-30 Interchange comprised of prestressed concrete Tx I-girders on hammerhead bents on two drilled shaft footing caps and multi-column straddle bents on monoshaft foundations. Additional responsibilities included final substructure and foundation design for the 280 ft span Skillman St. Tied Arch Signature Bridge supported on abutment caps and drilled shafts.
09/23-01/25	TxDOT, I-35 Northeast Expansion (NEX) South Design-Build, San Antonio, TX. Structures Task Lead. Responsible for \$700 million design-build project to construct three elevated lanes in each direction along 4.2 miles of I-35. Lead for a team of four engineers and EOR for final design plans and calculations of a 33-span (4570 ft) segment of the NB elevated lanes bridge comprised of prestressed concrete Tx I-girders. The substructure design consisted of both cast-in-place and precast hammerhead, multi-column, and straddle bent caps, including an eccentric post-tensioned cap and column C-bent with drilled shaft foundations.
02/21-12/21	City of Fort Collins, Lemay Avenue over BNSF/Vine Improvements, Fort Collins, CO. Structures Engineer. Responsible for the 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, Sean designed the single-span bridge comprised of a prestressed concrete box girder superstructure on integral abutments on steel piles with geosynthetic reinforced soil (GRS) supporting walls and a pedestrian underpass concrete box culvert structure with wingwalls. Design efforts included railroad coordination, construction phasing and design submittals developed in accordance with the UPRR/BNSF RR Guidelines for Railroad Grade Separation Projects.
09/18-05/19	LADOTD (H.011670), I-10 at Loyola Drive Interchange Design-Build Tender Offer, Kenner, LA. Structures Engineer for interchange improvements at the I-10 at Loyola Drive to provide new access ramps to and from the new passenger terminal at Louis Armstrong International Airport. Sean's design tasks included evaluating alternative technical concepts, preliminary design and layouts for prestressed concrete LG girder superstructures, proposal plan development and quantity calculations for estimating and bid.

	Firm	AECOM Technical Services, Inc.			
	Name	Ed Zhou, PE, PhD		Years of Relevant Experience with this Employer	28
	Title	Instrumentation Task Leader/Task Manager		Years of Relevant Experience with Other Employer(s)	8
Degree(s)/Years/Specialization		BS/1982/Civil Engineering MS/1990/Civil Engineering PhD/1994/Structural Engineering			
Active Registration Number/State/Expiration Date		21330/MD/9.2.2026 10086/DE/6.30.2026 0402 033413/VA/4.30.2027			
Year Registered	1995	Discipline	Professional Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Vibration Monitoring Brief Description: Ed is AECOM's Bridge Instrumentation & Evaluation Lead in North America, with 28 years of experience in engineering practice. He has comprehensive knowledge and experience in multiple aspects throughout the bridge life cycle including structural analysis through finite element modeling, design, inspection, load rating, problem diagnosis, non-destructive evaluation (NDE), structural health monitoring, preservation, as well as repair, retrofit, rehabilitation, and replacement design of many types of bridge structures. He is an expert in fatigue and fracture of steel bridges and served as a past Chairman of ASCE Fatigue & Fracture Committee. Ed specializes in evaluation of existing bridges using a variety of instrumentation/testing/monitoring technologies and application of digital imaging and unmanned aircraft system (UAS) technologies for condition and deterioration assessment. He also has current experience in development of effective asset management tools to support bridge owners for data-driven decisions. Ed is an active member of TRB Committee AKB40 'Testing and Evaluation of Transportation Structures' and has played a key role in development of multiple national guidelines and standards: co-author of TRB Circular E-C257 'Primer for Bridge Load Testing'; expert panel member of NCHRP Project 20-05 'Load Rating of Bridges and Culverts with Missing or Incomplete As-Built Information'; and co-PI of NCHRP Project 12-81 'Evaluation of Fatigue on the Serviceability of Highway Bridges.			
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).				
12/19-02/20	Colorado Department of Transportation (CDOT): Live Load Test for Investigating Concrete Cracking of Pier 5 Straddle Beam of WB-WB Ramp Bridge over C-470 Express Lanes, Douglas County, CO. Technical Leader for live load testing of reinforced concrete straddle beam (6'-6" wide by 9'-0" deep by 81'-0" long) of Pier 5 of the 9-span prestressed concrete girder structure with a total length of 1,156 ft. The testing was for investigating concrete cracking in the straddle beam discovered during construction before the bridge opened to regular traffic.				

04/14-Ongoing	Connecticut Department of Transportation (CTDOT): Two-Year Structural Monitoring of Extradosed/Cable-Stayed Pearl Harbor Memorial Bridge (I-95 over Quinnipiac River) of Post-Tensioned Segmental Concrete Box Girders, CT. Technical Leader for the development and implementation of a two-year structural monitoring program for the extradosed/cable-stayed 3-span dual structures consisting of post-tensioned segmental concrete box girders. Work scope includes: design of a comprehensive structural monitoring system (SMS) consisting of 252 sensors; development of a procurement package including instrumentation plans, performance specifications and qualification requirements; inspection and oversight during system installation by contractor; acceptance testing and commissioning of SMS; specification and oversight of live load and cable plucking tests at beginning, middle, and end of monitoring period; data collection, processing, management, analysis, interpretation and reporting throughout monitoring period; assessment of actual bridge behavior in comparison with analytical predictions by design models; establishment of normal behavior envelopes and anomalous behavior thresholds for sensor measurements; and recommendations to provide guidance for bridge maintenance, inspection, and load rating. Also included in this project is photogrammetric mapping of existing concrete cracks on interior of box girders and exterior of tower legs in 12 areas surrounding crackmeters at beginning, middle and end of two-year monitoring period.
11/20-Ongoing	VDOT, Route 360 Corridor Evaluation of 22 Structures, Fredericksburg District. Mr. Zhou serves as NDT Task Lead on this task to evaluate rehabilitation needs for 22 structures along the Route 360 corridor. He was responsible for development and quality assurance review on our program for assessment of the existing structure condition, including Infrared scanning for delamination detection, 3-dimensional ground penetrating radar for deck condition assessment, and digital image mapping for crack detection. Structures range in length up to 500 feet and include both concrete and steel superstructures. The analysis results supported our data-driven process for rehabilitation recommendations and budget prioritization.
05/18 – 06/19	CDOT, I-76 over Clear Creek Fatigue Study, Adams County (CDOT NPS Contract), CO. Lead Instrumentation Engineer for a fatigue study for EB and WB I-76 over Clear Creek. These bridges are highly skewed, multi-span, steel plate girder bridges that collectively have over 60 known distortion induced fatigue cracks due to a gap between the cross-frame stiffener and the bottom flange. The project included detailed inspections; instrumentation with strain gages and displacement transducers; full scale load testing; data collection and analysis; three-dimensional finite element analysis (FEA); and developing conceptual fatigue retrofit details. Field testing was used to calibrate the FEA to have an accurate tool to evaluate fatigue retrofit strategies. Adjustments to the model such as member properties and boundary conditions, allow the model to be refined to replicate the load test responses.
07/18-09/20	Virginia Department of Transportation (VDOT): Vibration Testing and Evaluation of External P-T Tendons in Segmental Concrete Box Girders of Cable-Stayed Varina-Enon Bridge (I-295 over James River. Technical Leader for applying the taut cable vibration measurement (TCVM) method for condition evaluation of external post-tensioning (P-T) tendons inside segmental concrete box girders of the 28-span dual structures built in 1990 with concerns on steel strand corrosion inside the grouted PVC duct.

	Firm	AECOM Technical Services, Inc.		
	Name	Bradley Touchstone, FAIA		Years of Relevant Experience with this Employer
	Title	Architectural Feasibility/Section 106/HABS/HAER		Years of Relevant Experience with Other Employer(s)
Degree(s)/Years/Specialization		BA/1993/Architecture		
Active Registration Number/State/Expiration Date		Registered Architect #6057/Louisiana /12.31.2026		
Year Registered	2004	Discipline	Architecture	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge Lighting and Architecture Brief Description: Bradley will use his years of design and facilitation work to help facilitate agreement on bridge and urban design issues. He has over 25 years of experience as a Bridge Architect and in using design features to mitigate impacts associated with visual change, Section 4(f) and S106.		
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).			
03/16-08/19	Gordie Howe International Crossing, Detroit, MI. Bridge Architect and Aesthetics Lead responsible for the development of the aesthetic design requirements for the main bridge and lead author for the aesthetic design guidelines for the entire \$2.7 billion project. Mr. Touchstone served as lead aesthetic consultant to the owner (Windsor-Detroit Bridge Authority) during the two year procurement P3 procurement process.			
02/08-12/11	LADOTD State Project No. 052-02-0024 John James Audubon Bridge, Point Coupee and West Feliciana Parishes, LA. Bridge Architect responsible for the aesthetics associated with the new Audubon Bridge over the Mississippi River in St. Francisville, LA			
11/15-5/17	LADOTD State Project No H.003495, I-49N Segment K – Phase I (I-220 to MLK Dr.). Shreveport, LA. Bridge Architect responsible for aesthetics, public involvement and coordination of the art in public places installation on the new bridge.			
06/11-12/12	Hastings Bridge, Hastings, MN. Bridge Architect and Visual Quality Manager for the replacement of the existing bridge over the Mississippi River. Mr. Touchstone led the architectural design and public involvement process for the river bridge.			
01/14-04/16	Red Wing Bridge, Red Wing, MN. Bridge Architect for stakeholder involvement and preliminary design for the new Mississippi River crossing in historic downtown Red Wing, MN. This work included to development of the Aesthetic Design Guidelines that directed the development of the final bridge design.			
03/07-02/09	kciCON, Kansas City, MO. Bridge Architect for the design/build team constructing the kciCON Bridge. Bradley C. Touchstone, AIA led a community involvement and aesthetic design process for the design build team of Paseo Corridor Constructors resulting in a design which was awarded 95% of the potential points for aesthetics, secured the contract and opened the door to an entirely new level of public input for major bridge projects.			
05/07-05/10	First Street Bridge Restoration and Expansion, Los Angeles, CA. Bridge Architect for the restoration and expansion of this 1920's spandrel arch bridge in Los Angeles, CA. The bridge is listed on the National Historic Register and required HABS/ HAER Recordation for the State Historic Preservation Office and the National Parks Service. Mr. Touchstone led the historic mitigation and design process for the significant urban bridge.			

	Firm	AECOM Technical Services, Inc.			
	Name	Jonathan Giardina, PE		Years of Relevant Experience with this Employer	6
	Title	Roadway Design/Alternatives Development & Conceptual Engineering/Cost Estimates/As-Built Utilities		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: Horizontal/Vertical Alignments. Brief Description: Mr. Giardina 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).				
09/20 – 01/23	DOTD, US 190: UPRR Overpass Near Opelousas, St. Landry Parish, LA. Road Designer responsible for the proposed surface model for this multi-discipline project that is currently in preliminary design for resurfacing and/or reconstruction and widening US 190 from west of the I-49/US 190 Interchange to 0.5 mile east of the UPRR overpass near Opelousas, LA. This project includes bridge replacements over Little Teche Bayou and UPRR and retaining walls for the abutments of the bridge crossing the UPRR tracks.				
01/2 – 01/23	East Baton Rouge Parish, MOVEBR Program, Airline Hwy. Jones Creek Road TEPR Study, Baton Rouge, LA. Traffic Engineering Process and Report for the proposed Jones Creek Road 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 traffic study report.				
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. 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. Project facilitates 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, waterlines, 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.
08/17 – 09/19	Port of New Orleans, Nashville Ave Wharf Improvements, New Orleans, LA. Civil Engineer. The main improvements include upgrading the wharf deck to accommodate for larger rail-mounted cranes. Work includes designing a new rail and supporting crane beam and pilings, demolition and modification or portions of the existing dock, fender and mooring system improvements, and a new sheet pile toe wall along the face of the wharf. Assisted in waterline design, plan development, site visits, invoicing, and document control.
01/19 – 01/24	City of New Orleans Department of Public Works, Milan Group A, New Orleans, LA. Civil Engineer. 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 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. Jonathan worked on the plan development, tabulation of quantities, and development of cost estimates.
09/18 – 05/19	Jefferson Parish Department of Public Works, Mounes Street Drainage Improvements, Jefferson Parish, LA. Civil Engineer. 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	Corey Serigne		Years of Relevant Experience with this Employer	29
	Title	Senior CADD Technician		Years of Relevant Experience with Other Employer(s)	11
Degree(s)/Years/Specialization			Vocational Technical Certificates in Various Graphics/Drafting and Design Applications		
Active Registration Number/State/Expiration Date			NA		
Year Registered	NA	Discipline	NA		
Contract Role(s)/Brief Description of Responsibilities			Contract Role: Typical Sections Brief Description: Corey is a skilled CADD technician with considerable experience in civil engineering projects. He has been responsible for various graphic, cartographic, and CADD applications.		
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–Present	Port of New Orleans, Louisiana International Terminal, LA 46 & LA 39, St. Bernard, LA. Lead CADD Designer. The project consists of realigning LA 46 (St. Bernard Highway) and a new interchange connecting to LA 39 (East Judge Perez Drive), including access roads for the proposed Louisiana International Terminal Container Facility. The tasks included creating a new alignment for the existing LA 46 (St. Bernard Highway), including proposed horizontal and vertical alignments, typical sections, and detail drawings. The LA 39 interchange includes the horizontal and vertical alignment of access roads connecting the proposed intermodal container facility to a new interchange connecting to existing LA 36 (East Judge Perez Drive).				
08/14–07/17	LADOTD, H.011489.5, Safety Studies Retainer Contract, Low Cost Safety Improvements, Statewide, LA. CADD Designer. Corey assisted in preparing Safety Improvement Plans (SIP) for 282 systemic curves located throughout 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 lettersize 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 completion of each letter size plan sets, a meeting will be held with each District to discuss the countermeasures.				
05/10–12/12	LADOTD, 700-92-0024, I-49 South, 11 Stage 0 Interim Improvements for Safety and Efficiency, Wax Lake Outlet to Berwick, St. Mary Parish, LA. Lead CADD Designer. The project goal was to identify improvements in the US 90/I-49 corridor between Wax Lake and Berwick that can be implemented to improve safety and operations pending construction of I-49. These improvements can include partial construction of segments of I-49, rerouting of I-49, and improvements to US 90. Corey's responsibilities include geometric design (horizontal and vertical) for line/grade conceptual drawings, analyzing and proposing several alignments.				

09/17–Present	Coastal Protection and Restoration Authority, LA 23 Over Mid-Barataria Sediment Diversion, Plaquemines Parish, LA. CADD Designer. 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, and sequence of construction plans. Multiple construction activities will be conducted at one time. The sequence of construction is a critical element of design to manage traffic and maintain roadway operations even if evacuation routes would be required. Corey performed 3D modeling using InRoads to develop plan, profile, and typical sections for the relocation of LA 23 across the proposed Mid Barataria Sediment Diversion Channel.
06/21–Present	City of Baton Rouge/Parish of East Baton Rouge, College Drive Enhancements, Baton Rouge, LA. CADD Designer. The project is providing capacity and safety enhancements to the College Drive corridor. Corey developed plan and profile views of multiple alternatives
02/07–06/10	LADOTD, City of Baton Rouge Department of Public Works, 817-40-0008, Siegen Lane Improvements, Highland Road to 650 feet South of Perkins Road, Baton Rouge, LA. CADD Designer. The goal of this project is to produce a design report and a set of plans and specifications for the construction of a four-lane divided roadway to replace the existing two-lane road. Corey's responsibilities include design horizontal and vertical geometry of the new roadway, develop CADD standards in compliance with the client requirements, as well as preparing CADD standard procedure for the surveyor, and coordination and supervision of CADD production.
11/12–1/13	LADOTD, H.009998.1, Safety Retainer Contract LA 935 Feasibility Study, Ascension Parish, LA. CADD Designer. Corey assisted with this Stage 0 feasibility study in accordance with the results of the Roadway Safety Assessment (RSA). The 4-mile study area includes a segment of LA 935 from LA 431 to LA 22 in Ascension Parish. From the RSA, three proposed alternatives were to be considered for a Stage 0.
05/16–07/15	LADOTD, H.001779.5, Red River Bridge at Jimmie Davis Highway (LA 511), Bossier and Caddo Parishes, LA. CADD Designer. The project consists of providing all necessary engineering and related services required to prepare a Supplemental EA in accordance with NEPA, as amended, and the FHWA's regulations and guidelines. Corey was responsible for geometric design (horizontal and vertical) of at-grade and elevated structures, as well as organizing, preparing, and producing deliverable sets of plans and exhibits for the report and for public meetings. Corey drafted a portion of the bridge plans for the redecking and widening of the main and approach spans (deck, prestressed girders, and column bents).
05/10–12/13	LADOTD, 700-92-0024, I-49 South, 23 Stage 0 Interim Improvements for Safety and Efficiency, Raceland to Westbank Expressway, Lafourche, St. Charles, and Jefferson Parishes, LA. Lead CADD Designer. The goal of the project was to identify improvements in the US 90/I-49 corridor between Raceland and the Westbank Expressway that can be implemented to improve safety and operations pending construction of I-49. These improvements can include partial construction of segments of I-49, rerouting of I-49, and improvements to US 90. Responsibilities include geometric design (horizontal and vertical) for Line/Grade Conceptual Drawings, analyzing and proposing several alignments. 07/16–08/17 LADOTD Safety Studies Retainer Contract, US 190 Barrier Feasibility Study, St. Tammany Parish, LA. CADD Designer. This project involved a study of a median barrier within the limits of an existing structure on LA 22. Tasks within this study include existing data collection, geometric layout analysis, safety analysis, field review, bridge rating and structural analysis. A comprehensive report detailing findings of existing conditions, preliminary

	Firm	AECOM Technical Services, Inc.			
	Name	Gregory Trahan, PE, RSP ₁		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/03.31.2027			
Year Registered	2011	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Sequence of Constructions/ TMP / Traffic and Safety Analysis 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	LADOTD, 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. 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. 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. 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. Responsible 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. Responsible 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. Project Engineer. 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, CFM, PMP	Years of Relevant Experience with this Employer	17
	Title	Hydrology/Hydraulics/Scour Analysis	Years of Relevant Experience with Other Employer(s)	3
Degree(s)/Years/Specialization		MS/2003/Civil Engineering;BS/2000/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: Drainage/ Hydraulics Brief Description: Sreeni is a civil engineer with over 20 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 – present	New Orleans Department of Public Works, Broadmoor Groups D & E, New Orleans, LA. Project Manager. Responsible 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 – present	New Orleans Department of Public Works, Milan Group A, New Orleans, LA. Project Manager. Responsible 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.			
06/21 – present	Jefferson Parish West Bank Program Management, Jefferson Parish, LA. Project Manager. Assisting with the implementation of the West Bank projects for Jefferson Parish's Road Bond Improvement Program, which includes 70 roadway and bridge projects throughout Jefferson Parish. He is responsible for the oversight of approximately 10-20 projects, including overseeing the design contractor's work, coordinating review with various Parish Departments, public and private utility companies, and other impacted agencies. Other responsibilities include review of plans and specifications submittal, scheduling, coordination for environmental clearances, ROW acquisition support, construction oversight, and project closeout.			

06/21 – present	Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Diversion Design, . Project Engineer. Responsible for the planning, engineering, and design services for the creation of the Mid-Barataria sediment diversion basin to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. He assisted with detour roadway alignment creation/ selection, TTC planning, and roadway plan preparation.
02/20 – 05/21	Lake Vista Group C and Group E, New Orleans, LA. Project Engineer. Responsible for the design of concrete roadway re-design and replacement, subsurface drainage improvements, drainage design, and water main improvements.
02/20 – 05/21	East Bank Drainage Improvements, St. Charles Parish, LA. Lead Hydraulic Engineer, Project Manager. Responsible for creating H&H models to evaluate flooding within the existing neighborhood, provide alternate solutions to alleviate flooding and develop a report with recommended solutions with cost estimates for 25yr and 100yr rainfall events for Montz: 1,635 acres drainage basin, Norco: 800 acres drainage basin, New Sarpy: 690 acres drainage basin, Ormond: 1,420 acres drainage basin.
08/12 – 01/20	West Bank Hurricane Protection Levee System (WBHPL), St. Charles Parish, LA. Project Manager. Responsible for coordination, preparation of plans and specifications, construction administration and resident inspection. This project is approximately a nine mile levee where the alignment extends from the Sunset Levee District on the western flank to the Davis Pond Guide Levee to the east. This project consists of levees, drainage borrow canals, parallel access roads for levee maintenance, pump stations, tidal exchange structures, and concrete floodwalls (T-Walls) at multiple locations.
08/12 – 01/20	Upper Barataria Risk Reduction (UBRR), Lafourche Basin Levee District, LA. Project Manager. Responsible for coordination with the design team and regulatory agencies; design of the segment of the project (Segment 1, 2 4 & 5). The details of the project are: The Upper Barataria Risk Reduction project provides continuous hurricane and storm damage risk reduction from LA Hwy 308 in Lafourche Parish to the Davis Pond Freshwater Diversion West Guide Levee in St. Charles Parish, affording risk reduction benefits for the six parishes in the project area, including Ascension, Assumption, Lafourche, St. Charles, St. James, and St. John the Baptist. The UBRR project includes the construction and enlargement of approximately 33 miles of hurricane risk reduction between LA Hwy 308 on the western end and the Davis Pond Diversion West Guide Levee on the eastern end. The project includes earthen levees, a 270' steel barge swing gate floodgate in Bayou Des Allemonds, a steel roller gate across LA Hwy 306, tidal interchange structures, concrete T-wall floodwalls, and pump station frontal protection.
08/12 – 01/20	Breaux Ditch Improvements, Jefferson Parish, LA. Project Manager. Responsible for civil design and preparation of the drawings to replace the existing ditch with 8' wide x 4' deep reinforced concrete flume between East Ames Blvd. and Leo Kerner Pkwy. on the West bank of Jefferson Parish to provide improved maintenance and stability. The total project length is approximately 1500 feet.
06/21-Ongoing	Broadmoor Groups D & E, New Orleans Department of Public Works, New Orleans, LA. Project Manager. Responsible 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. Responsible 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	Donna Pizzini, EI		Years of Relevant Experience with this Employer	1
	Title	Drainage/Hydraulics		Years of Relevant Experience with Other Employer(s)	3
Degree(s)/Years/Specialization		MS/Environmental Engineering/2022/Texas Tech University			
Active Registration Number/State/Expiration Date		EIT No. 76588, Texas, 09.09.2030			
Year Registered	2022	Discipline	Civil/Environmental Engineering		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Drainage/ Hydraulics Brief Description: Graduate civil engineer with 3 years of experience in Water Resources and Drainage design. Experience includes hydrologic and hydraulic modeling, floodplain mapping, terrain building/modifications, drainage design, Low-Impact Development, and benefit-cost analyses. Project involvement has included client/public meetings, report writing, coordination with clients and subcontractors, and project oversight from data collection to cost estimations for bid.			
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).				
04/25-Present	LADOTD, Rural Bridge Replacement Initiative, LA. Project Engineer. Responsible for conducting hydrological and hydraulic analysis of existing bridge crossings for drainage improvements following the standards set by the LaDOTD Hydraulics Manual. This project involved data collection, hydrology calculations, and hydraulic analysis of several culvert crossing alternatives through the HEC-RAS software. Completed a written Drainage Analysis Report outlining the results from the modeling including supporting exhibits showing the proposed design for LaDOTD staff consideration.				
02/25-04/25	City of Seattle, Portage Bay SR 520 I-5 to Montlake I/C and Bridge Replacement, Seattle, WA. Project Engineer. Responsible for reviewing design plans and preparing design package calculations for the City of Seattle in the roadway improvements and construction plans. This project involved assessments for quality and consistency in the plan production for multiple alignments and package deliverables.				
12/22-08/23	City of San Antonio, Stormwater On-call Regional Flood Planning Group (RFPG) Drainage Projects, San Antonio, TX. Project Engineer. Responsible for reviewing design plans and project proposals for drainage improvements in the City of San Antonio to evaluate the greatest potential for improvement based on benefit-cost analysis and adverse impact analysis. This project involved prioritization and recommendations to the San Antonio RFPG for consideration in the regional flood plan for grant approval.				
07/23-09/23	Texas State, Clean Coast Texas Collaborative, Aransas County, TX. Project Engineer. Responsible for siting stormwater control measures and preparing construction plans for each site. This project is part of a program developing demonstration projects to improve water quality, enhance water supplies, and manage runoff through community scale retrofits. This program illustrates methods and techniques in the field of Low Impact Development (LID) that can be used by residents, developers, local governments, and commercial operators in the Coastal Zone.				

	Firm	AECOM Technical Services, Inc.			
	Name	Audra Rogers, PE		Years of Relevant Experience with this Employer	13
	Title	Rail Road Coordination		Years of Relevant Experience with Other Employer(s)	8
Degree(s)/Years/Specialization		BS/2002/Civil Engineering MS/2003/Civil Engineering			
Active Registration Number/State/Expiration Date		130275/TX/03.31.2026			
Year Registered	2018	Discipline	Civil Engineer		
Active Registration Number/State/Expiration Date		E-12245/NE/12.31.2026			
	2017		Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Railroad Coordination Lead/ Bridge- Railroad Constructibility Brief Description: Audra has 21 years of experience in the structural and bridge industry as both a Project Engineer and Project Manager on numerous projects. She has experience in precast concrete fabrication, construction observation, structural assessment and inspection, cellular tower analysis, railroad and highway bridge design and commercial structural engineering. Audra is proficient with computer aided design and drawing tools and is also well versed in bridge survey technical abilities in the field. She has performed public project reviews for both BNSF and UPRR for over 19 years.			
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).				
01/15-07/15	KCS Br. VD34.2 Vicksburg Subdivision, Delhi, LA. Project Manager and Engineer for the design of precast concrete double box beam spans replacing an existing timber trestle spans on a bridge near Delhi, Louisiana. The main TPG spans were not replaced.				
07/15-12/15	KCS Br. L801.8 New Orleans Subdivision, Baton Rouge, LA. Project Manager and Engineer for the design of a multi-span precast concrete double box beam bridge replacing an existing 40-span timber trestle bridge near Baton Rouge, Louisiana. H&H analysis and survey services were also provided. The bridge was shortened at one end by filling spans. A golf course path and bridge runs under the railroad bridge and had to be considered in the design.				
07/15-07/16	KCS Br. K646.5 Beaumont Subdivision, LA. Project Manager and Engineer for the design of a multi-span precast concrete double box beam bridge replacing an existing 66-span timber trestle bridge near Florien, Louisiana. The flood elevation was within the existing bridge depth, requiring the bridge to be raised. Special consideration was given to keeping the bridge open as much as possible during staged construction. The alignment of the track was shifted so that the new bridge could be built adjacent to the existing bridge.				

01/17-12-17	72nd Street Bridge Replacement, Omaha, NE. Project Coordinator. In charge of all railroad coordination with Union Pacific Railroad (UPRR) for the 72nd Street Bridge Replacement Project for the City of Omaha. The bridge is an overpass structure over UPRR tracks. Ms. Rodgers is responsible to negotiating the project through railroad reviews and approvals.
06/15-Ongoing	West Dallas Gateway Project, West Dallas, TX. Bridge Lead, Lead Project Engineer. In charge of the design of three railroad underpass grade separation bridges. The grade separations will allow for Bataan Street, Amonette Street, and Herbert Street to pass under the existing UPRR tracks, which currently separate the two areas of the City. The bridges will be built in phases, with the north half of the bridge being built first while the tracks are shifted to the south and the south half of the bridge built when the tracks are shifted onto the new north bridge. This minimizes the time that the UPRR tracks are out of service on a busy section of track.
02/15-Ongoing	Springfield Rail Improvement Project, Springfield, IL. Bridge Review Lead, Lead Project Engineer in charge of the review of the design plans, design calculations, specifications, geotechnical reports and drainage reports on behalf of UPRR for ten underpass structures for the Springfield Rail Improvement Project. Underpass bridges include bridges over Carpenter St., Ash St., Laurel Ave., 5th St., 6th St., Cook St., S Grand Ave., Madison St., Jefferson St., and N Grand Ave. Bridges consist of steel beam or deck plate girder spans with steel deck and drilled shaft substructures. The project includes construction submittal review and some construction observation.
01/19-12/21	Union Pacific Railroad Annual Bridge Replacement Program, Various Locations. Layout, design, and coordination on multiple bridge replacements of timber structures on the UPRR system. Bridges were replaced with either new standard precast concrete spans on pile bents or pipe culverts.
04/09-05/10	Wellborn Road, College Station, TX. Project Engineer for the design of two double span railroad bridges on the Texas A&M campus over Wellborn Road. The superstructure consisted of steel beam spans. The substructure consisted of drilled shafts, some with tension ties utilized to minimize deflection due to expansive soils.
06/09-05/10	Westrail By-Pass, Brownsville, TX. Project Engineer for the design of a multi-span, over 1000 ft. long railroad bridge over the Rio Grande River in Brownsville, Texas. The superstructure consisted of precast concrete box, steel beam, and through plate girder spans. The substructure included pipe piles and drilled shafts. Homeland security requirements were essential considering half of the bridge is located in Mexico.

	Firm	AECOM Technical Services, Inc.			
	Name	Levi, Turner, PE		Years of Relevant Experience with this Employer	1
	Title	Rail Road Coordination		Years of Relevant Experience with Other Employer(s)	18
Degree(s)/Years/Specialization		BS/2007/Civil Engineering			
Active Registration Number/State/Expiration Date		77097/ CA /12.31.2026 26277/ OK /03.31.2027 117563/ TX /03.31.2026			
Year Registered	2010	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Bridge - Railroad Constructibility Brief Description: Mr. Turner is a licensed professional engineer with more than 18 years of experience in freight railroad engineering, design, and construction. Throughout his career, he has successfully delivered a diverse portfolio of freight railroad projects, ranging from freight yards and terminals and goods distribution centers to main line capacity improvements. Levi's broad range of experience and his multi-disciplinary background in project and program management, construction engineering, terminal planning, civil design, and permitting bring a wealth of knowledge to AECOM and our clients.			
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 - 05/21	Knife River Corporation, Honey Creek Quarry, Marble Falls, Texas. Mr. Turner served as Project Manager for the final design of a 7,000 track foot loop track facility at a greenfield aggregate quarry connecting to the Austin and Western Railroad (AWRR), line owned by Capitol Metro and operated by Watco. Utility improvements included significant coordination with Pedernales Electric Cooperative (PEC) to route power to and around the site while accounting for future quarry expansion areas. The design scope also included all grading and drainage, and car loading ramp.				
02/10 - 11/11	SANBAG, Laurel Street Grade Separation, Colton, California. Mr. Turner served as rail design lead grade separation project. The project consisted of an underpass, lowering Laurel Street being to travel under five BNSF railroad tracks. The rail design portion consisted of designing a shoofly for three main line tracks to divert BNSF traffic while the bridge structure was constructed.				
07/10 - 03/12	Alaska Railroad Corporation (ARRC), Eielson Branch Main Line Realignment, North Pole, Alaska . Mr. Turner served as project manager for preliminary engineering and an alternatives analysis as part of the NEPA documentation for the project. The study consisted of producing three viable railroad alignments to relocate approximately eight miles of ARRC main line out of the city of North Pole to eliminate eleven at-grade crossings.				
01/24 - present	Union Pacific Railroad (UPRR) Strang Bypass, La Porte, Texas. Mr. Turner served as Project Manager for the design of this 10,000 track foot bypass around an existing classification yard. The design scope includes track, grading, drainage, and electrical design.				

	Firm	AECOM Technical Services, Inc.			
	Name	John Volk, PE		Years of Relevant Experience with this Employer	39
	Title	Civil Engineer		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		MS/1984/Civil Engineer BS/1983/Civil Engineer			
Active Registration Number/State/Expiration Date		38377/LA/03.31.2026 Additional PE Licenses: PA, NJ, DE, NY, VA, OH, WI, IN, MD, WV, CT, SC, NC, TX			
Year Registered	2013	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical- NDT- Testing Brief Description: John is a geotechnical engineering manager with significant experience in soft soils and ground improvement for major earthen levees and port projects throughout the Gulf Coast and East Coast with contract values more than \$1 billion. He develops cost-effective solutions for foundation improvement and slope stabilization for challenging soils. John's geotechnical analysis and design experience includes seepage and slope stability, settlement, deep foundation design (driven piles, drilled shafts), floodwalls, closure gates, sector gates, and embankment design, following HSDRRS. John has 39 years of experience in the subsurface investigation, foundation design, retaining and earth structures, levees, dam and floodwall design of numerous projects in Pennsylvania and surrounding states (registered in 14 states). He has been significantly involved with Levee/Floodwall Reconstruction in New Orleans and levee design for 15 years.			
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).				
11/19-/06/24	I-635 East Design-Build Reconstruction Project, Dallas, Texas. Project Geotechnical Engineer. Responsible for retaining wall design for the I-635 East Reconstruction Project in Dallas, Texas. This 11-mile design-build highway project (\$1.75 billion) involves 96 MSE retaining walls that range from 15 to 40 feet in height. The highway is underlain by thick deposits of stiff clays. Ground improvement involving limited over-excavation and replacement with crushed aggregate was required to meet stability and bearing requirements. Significant geotechnical investigation and laboratory testing program was performed as part of design.				
01/17 - 06/24	Mid-Barataria Sediment Diversion Project, Plaquemine Parish, Louisiana. Senior Geotechnical Reviewer. Senior Geotechnical Reviewer for pile foundations and deep soil mixing for key elements of this \$1.9 billion project in the soft clays of south Louisiana. Major structures include the 250 by 600 ft inlet structure through the Mississippi River levee, a 2200-ft long railroad bridge, 2200-long highway bridge, 1800 ft long access bridge, and 30-ft high retaining walls. All major structures will be pile supported primarily with 24 to 30-in open-end steel pipe piles up to 120-ft long but also 24 and 30-in square concrete piles, H-piles, and timber piles. Over 2500 piles will be driven, and 27 static load tests will be performed to verify pile design.				

01/07 – 12/14	Design and re-construction of levees of 25 miles in New Orleans East. Lead Geotechnical Engineer. Lead geotechnical engineer for 7.5 miles of levees utilizing wick drains, high-strength geotextiles, and deep mixing methods for ground improvement. LPV 109.02a is a 7.5 mile reach in New Orleans East that included using I-10 as a levee. The existing levees were raised approximately four to seven feet with a protected side raise on virgin ground. The new levee construction requires embankment construction in two stages to heights of 18 to 22 feet above existing grades of the tidal marsh. The raises were be accomplished with the use of stability berms, wick drains and highstrength geotextiles and geotechnical instrumentation. DMM (soil-cement mixing) was utilized under the drainage structures and pump stations.
01/20 – 12/23	Galveston District of USACE 11 Miles of Levees, Freeport, Texas for the USACE. Lead Geotechnical Engineer. Lead Geotechnical Engineer for 11 miles of levees in Freeport, Texas for the Galveston District of USACE. This project includes over 400 explorations (test borings and CPTs) and extensive laboratory testing program. The existing levees will be raised approximately two to seven feet with a protected side raise. The levees protect from the East Brazos River and include earthen levees, T-walls and I-walls. H-piles will be used for the deep foundations of structures.
01/20 – 12/20	Southern Pennsylvania Transportation Authority (SEPTA), Township Line Station, Havertown, PA. Project Geotechnical Engineer. Geotechnical investigation and geotechnical recommendations for upgrades to station platform.
01/24 – present	SEPTA, Wawa to Elwyn Line Reconstruction, Lenni, PA. Project Geotechnical Engineer. Geotechnical recommendations for design and construction of pile foundations including H-piles and micropiles.
01/24 – present	SEPTA, Newtown Bridge Reconstruction, Newtown, PA. Project Geotechnical Engineer. Geotechnical recommendations for design and construction of drilled shaft foundations in Neshaminy Creek.
01/23 – present	PennDOT, P3 Rapid Delivery Bridge Replacement Project, Districts 4-0, 5-0, 6-0, 8-0, Various Counties, PA. Lead Geotechnical Engineer. Responsible for the site reconnaissance and site characterization data along with preliminary foundation recommendations for 125 bridges extending across Districts 4, 5, 6, and 8.
01/14 – 05/16	Design & CM IDIQ Inner Harbor Navigation Canan Miter Gates, LA. Geotechnical Engineer. AECOM, in joint venture, provided construction management services for the replacement of the miter gates at the Inner Harbor Navigation Canal.
01/16 – 12/16	Upper Dublin Township, Flood Retarding Structures, Upper Dublin, PA. Principal Geotechnical Engineer. This project involved two flood control structures on Pine Run and Rapp Run with a storage area of 400 acre-feet. The 15-foot-high dry dams with labyrinth weirs were designed and constructed to reduce flooding in Fort Washington Business Park. Provided a diverse range of services including geotechnical, hydraulics and hydrology, surveying, environmental, permitting, and plans, specs, and cost estimating.

	Firm	AECOM Technical Services, Inc.			
	Name	Timothy King, PG		Years of Relevant Experience with this Employer	37
	Title	Associate Vice President, Principal Geologist-Geophysical Team Leader		Years of Relevant Experience with Other Employer(s)	2
Degree(s)/Years/Specialization		BS/1988/Geology			
Active Registration Number/State/Expiration Date		PG001254-PG/PA/09.2025			
Year Registered	1995	Discipline	Professional Geologist		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical- NDT- Testing Brief Description: Tim has built and is the leader of a geophysical services team in the Germantown, Maryland office. The team consists of eight staff ranging with experience levels ranging from junior to senior-level. As team leader, Tim's management responsibilities include hiring, mentoring, technical oversight, scheduling and performance reviews. His experience includes geohazards assessment and engineering geophysics, engineering geology, and hydrogeology applied to site investigations to evaluate subsurface conditions related to pipelines, storage tanks, terminals, processing facilities, well pads, tunnels, mines, highways, bridges, dams, and other civil infrastructure. He has been responsible for technical and management aspects of investigations at hundreds of sites across the United States. Tim has expertise in the application of geophysics to engineering and environmental problems. Geophysical and nondestructive testing methods he routinely utilizes include , seismic refraction, multichannel analysis of surface waves, seismic reflection, tomography, microgravity ground penetrating radar, marine geophysics, vibration monitoring, electromagnetics, resistivity, geophysical borehole logging, and crosshole and downhole seismic surveying.			
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).				
01/00-10/08	Project Geologist, Woodrow Wilson Bridge Replacement Project, Federal Highway Administration, Alexandria, VA. Managed geotechnical/geological field investigation for a large bridge and highway replacement/expansion project. Conducted soil borings, in-situ testing, vertical seismic profiling, ground penetrating radar and multichannel analysis of surface waves (MASW) investigations as part of the geotechnical investigation, feasibility study and construction phase services for the new bridge and related expansion of I-495 in Maryland and Virginia. The GPR surveys successfully located subsurface voids from ground subsidence associated with jack and bore tunneling for new utility line crossings. The MASW survey was conducted to aid delineation of soft soil zones associated with dredging and hydraulic filling at the existing bridge approach on the Maryland side.				

01/00-10/08	Geologist, Proposed Great River (Charles W. Dean) Bridge, Arkansas Department of Transportation, Desha County, Arkansas and Bolivar County, MS. Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment for the proposed 1,400 feet long cable-stay bridge and approximately 20,000 feet long approach embankments .
01/09-Ongoing	Principal Geologist, On-Call Bridge Design Services for the Maryland State Highway Administration, Statewide, MD. Designed and conducted detailed non-destructive testing of the US 40 over Patapsco River at Baltimore County/Howard County Border. The investigation consisted of high resolution penetrating radar (GPR) surveying of the existing concrete arches to detect and delineate voids and other features of potential structural concern. The bridge repairs include construction services for this 3-ribbed – 180-foot span concrete spandrel arch including review of shop drawings and review of temporary bridges over the Patapsco River.
01/95-01/96	Geologist, Cape Girardeau (Bill Emerson Memorial) Bridge, Missouri Department of Transportation, Cape Girardeau, MO. Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment and design for the 4,000 feet long bridge with 1,150 feet cable-stayed navigation span.
01/02-08/08	Project Geologist, Maryland State Highway Administration, I-70 Expansion, Frederick, MD. As part of the design of lane expansions, new interchanges and new access roads for Interstate I-70 from MD Routes 144 to 355, conducted a comprehensive geophysical investigation to characterize subsurface conditions and aid in locating potential sinkholes and delineating Karst conditions. The geophysical investigation consisted of over 20,000 linear feet of electrical resistivity imaging surveys and provided detailed mapping of subsurface conditions.
01/16-06/22	Principal Geologist, Maryland State Highway Administration, Subsurface Utility Mapping and Avoidance, Statewide On-Call Engineering Services Contracts MD. Designed, managed and conducted geophysical investigations as part of design projects statewide. Investigations include subsurface utility and avoidance surveys utilizing ground penetrating radar (GPR), electromagnetics (EM) and pipe and cable locators.
01/95-01/96	Geologist, Seismic Retrofit Evaluation, I-57 Bridge Over Illinois Route 3, Illinois Department of Transportation, Cairo, IL. Conducted downhole seismic velocity profiling as part of the geotechnical earthquake engineering assessment for the bridge.

	Firm	Ardaman & Associates, Inc.		
	Name	Robert Jewell, P.E.	Years of Relevant Experience with this Employer	19
	Title	Project Engineer/ Branch Manager	Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		B.S. / 2009 / Civil Engineering		
Active Registration Number/State/Expiration Date		38579 / LA / 09-30-2026 Traffic Control Supervisor / LA / 08-23-2028 DOTD Flagger / LA / 07-31-2029		
Year Registered	2013	Discipline	Civil Engineer	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical Task Lead Brief Description: Mr. Jewell serves as the manager of our Baton Rouge office and has over 15 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. He has managed and coordinated many geotechnical field investigations, including shallow and deep borings, CPT soundings, and performed analyses and prepares design recommendation reports for LADOTD projects. Mr. Jewell has extensive experience in construction phase testing and oversight including dynamic and static testing, pile integrity testing, cross hole sonic logging, settlement monitoring, and geotechnical instrumentation. In particular, he has over 15 years of experience performing, analyzing, and reporting for PDA testing.		
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).			
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Project Manager. The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Mr. Jewell managed supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings and ECPT. He helped oversee the preliminary engineering analyses which included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations. A data report and preliminary geotechnical assessment report were submitted.			
07/21-Ongoing	SP NO. H.004100.5 / I-10: LA 415 TO ESSEN LANE ON I-10 & I-12 (CMAR): Baton Rouge Parish, LA. Project Manager. The project consists of a Construction Management at Risk (CMAR) project which includes widening of the east and westbound lanes, elevated structures, interchanges, and ramps along I-10 from LA 415 in West Baton Rouge Parish to Essen Lane on I-10 and I-12 in East Baton Rouge Parish spanning approximately 2.5 miles. Mr. Jewell currently oversee all aspects of engineering analyses pertaining to selection of design reaches, geotechnical design of deep foundations, earth retaining structures, slope stability, soil-structure interaction with existing structures and load testing recommendations. Mr. Jewell helped develop the Geotechnical Data reports, memorandums, and Design reports for this project.			

09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Project Manager. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Project Manager. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
04/21-Ongoing	SP NOs. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Project Manager. The project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers, and creeks. Mr. Jewell oversees all aspects of engineering analyses pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses and construction testing program recommendations.
10/18-11/21	SP NO. H.003370 / I-220 / I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIR FORCE BASE ACCESS ROAD: Bossier Parish, LA. Project Manager. This was a Design Build project which provides direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and constructing an interchange and access road from Interstate 20 in Bossier City, Louisiana. Mr. Jewell managed and oversaw the preparation of the preliminary design and planning report. Mr. Jewell also oversaw the field construction services consisting of PDA monitoring, bi-directional load cell load tests, and settlement monitoring. The PDA program consisted of monitoring PPC piles during initial drive and restrikes to allow for evaluation of setup and early acceptance of pile resistances.
10/15-Ongoing	SP NO. H.013579 / PECUE LANE I-10 INTERCHANGE: East Baton Rouge Parish, LA. Project Engineer. This project consists of twin bridges with MSE wall abutments for both bridges crossing Interstate I-10, a bridge crossing Ward's Creek, and on/off-ramps in south Baton Rouge. Mr. Jewell helped perform analyses including settlement estimates with recommendations for monitoring, driven pile and drilled shaft design including down drag considerations, MSE Wall design, slope stability and pavement section recommendations; all completed according to DOTD standards. Mr. Jewell is currently overseeing the construction phase which includes PDA monitoring, static load testing, and settlement monitoring.
07/15-Ongoing	SP NO. H.004273.5 / I-49 CONNECTOR (LAFAYETTE REGIONAL AIRPORT TO I-10/I-49/US 167 INTERCHANGE): Lafayette Parish, LA. Project Manager. The project consists of construction of 5 miles of freeway consisting of a 3.5-mile elevated structure from I-10 to the Airport in Lafayette, LA. Mr. Jewell oversaw the completion of the Phase I geotechnical investigation, which included 116 deep and shallow soil boring, and 15 CPT soundings, and laboratory testing program per LADOTD guidelines. Mr. Jewell oversaw the completion of the Geotechnical Data Report and assisted with technical reviews pertaining to selection of design reaches, geotechnical design of pile and drilled shaft foundations, drivability, slope stability, earth retaining structures, settlement analyses and construction testing program recommendations, including an advanced test pile program. He is currently overseeing development of the Phase 2 field and laboratory program for each segment.

	Firm	Ardaman & Associates, Inc.			
	Name	Megan Bourgeois, PE		Years of Relevant Experience with this Employer	20
	Title	Principal Engineer/ Assistant Branch Manager		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		B.S. / 2006 / Civil Engineering Traffic Control Supervisor / LA / 6-21-2028 DOTD Flagger / LA / 8-14-2028 Certified NHI Drilled Shaft Inspector			
Active Registration Number/State/Expiration Date		0036725 / LA / 03-31-2026			
Year Registered	2011	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Historical Geotechnical Soils and Investigations. Meets MPR 06 Brief Description: Ms. Bourgeois has more than 19 years of experience with design and analyses of countless types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. She also has extensive experience with geotechnical instrumentation, installation and monitoring, and construction phase testing and laboratory management. She has served as Ardaman's project manager for many LADOTD projects for bridges and roadways throughout Louisiana and completed numerous geotechnical investigations, engineering, and reporting in accordance with LADOTD standards. She has successfully overseen several major contracts for LADOTD and other clients. Ms. Bourgeois also serves as the director of our geotechnical engineering and CMT laboratories in Baton Rouge and has overseen the laboratory testing programs in accordance with LADOTD standards. In this role, she supervises the laboratory managers, oversees testing, provides guidance to laboratory staff, and ensures appropriate protocol is followed and deadlines are met in addition to providing training material and maintaining all laboratory certifications, including AMRL, CCRL, DEQ & USACE.			
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).				
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Project Engineer. The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Ms. Bourgeois helped oversee supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings and ECPT. The preliminary engineering analyses included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations.				

07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. Project Manager. Managed all aspects of this project pertaining to coordination of fieldwork including 37 deep soil borings, 39 ECPTs and 13 geophysical survey transects. A majority of the soil borings were completed from a barge over deep water, some from a marsh buggy over shallow water and thick marsh grass. Ms. Bourgeois also managed and oversaw the laboratory testing program and processing and analyzing of the ECPT and ER data. She also assisted with development of a geotechnical database and preparation and submittal of a geotechnical data report. This project consisted of obtaining geotechnical data under a strict deadline to be used in the design of a replacement of the existing I-10 Calcasieu River Bridge with a new structure and improvements to various other interchanges.
04/21-Ongoing	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Project Engineer. This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, over various size rivers and creeks. Ms. Bourgeois leads technical reviews pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses, construction testing program recommendations, and report preparation in accordance with LADOTD guidelines.
02/20-Ongoing	SP NO. H.004791 / DESIGN SUPPORT SERVICES LA 23, BELLE CHASSE BRIDGE & TUNNEL: Plaquemine Parish, LA. Project Engineer/Laboratory Director. Ardaman's scope consists of review and acceptance of all geotechnical services including technical design reports, field documentation, drawings, and RFI's for the P3 Project consisting of replacing the Belle Chasse bridge and tunnel. In addition, Ardaman performs acceptance verification sampling and testing during the construction for soils and concrete. Ms. Bourgeois assisted in review and acceptance of geotechnical services as well as quality control and review of all acceptance verification sampling and testing during construction.
10/15-Ongoing	SP NO. H.013579 / PECUE LANE I-10 INTERCHANGE: East Baton Rouge Parish, LA. Project Manager. This project consists of twin bridges with MSE wall abutments for both bridges crossing Interstate I-10, a bridge crossing Ward's Creek, and on/off-ramps in south Baton Rouge. Ms. Bourgeois managed all aspects of the project that included field investigations, laboratory testing, and engineering design. Ms. Bourgeois performed analyses including settlement estimates with recommendations for monitoring, driven pile design including down drag considerations, MSE Wall design, slope stability and pavement section recommendations; all completed according to DOTD standards. She is currently assisting with the field construction monitoring.
10/09-Ongoing	SP NO. H.004646.5 / I-20 MISSISSIPPI RIVER BRIDGE REVIEW: Vicksburg, MS. Project Manager. Ms. Bourgeois manages this multi-million-dollar, highly technical project consisting of investigating movement of the I-20 Bridge in Vicksburg, MS. She managed a highly technical team including academia, experts, including internationally recognized geotechnical engineers, geohydrologists, instrumentation specialists, and 3-D geotechnical modeling experts. She managed and personally oversaw a comprehensive laboratory testing program and was involved in refining the geotechnical site characterization for the bank/bluff where there was evidence of shifting creating movement in the bridge structure. The specialized testing, she personally performed or managed included x-ray diffraction, x-ray scanning to identify existing shearing planes and stress-reversal direct shear tests to determine true residual angles of critical strata. She was instrumental in designing the geotechnical instrumentation program for this project including vibrating wire piezometers, Casagrande type piezometers, SAA inclinometers, and traditional inclinometers. In addition, Ms. Bourgeois performed seepage and drawdown analyses, slope stability analyses, evaluation of remedial measures including design and evaluation of large foundation structures and developed technically feasible solutions to mitigate ground movement. She co-authored the geotechnical analysis and design report. She is currently overseeing the comprehensive monitoring program.

	Firm	Ardaman & Associates, Inc.			
	Name	Jarmon King, P.E.		Years of Relevant Experience with this Employer	7
	Title	Project Engineer		Years of Relevant Experience with Other Employer(s)	1
Degree(s)/Years/Specialization		B.S. / 2019 /Civil Engineering Traffic Control Supervisor / LA / 11-08-2027 DOTD Flagger / LA / 05-29-2028			
Active Registration Number/State/Expiration Date		49179 / LA / 03-31-2027			
Year Registered	2024	Discipline	Project Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical Foundation Design Brief Description: Jarmon King serves as a project engineer of Ardaman in the Baton Rouge office with over 7 years of experience. Mr. King is involved with overseeing and conducting geotechnical investigations. Mr. King also prepares soil boring logs; processes and analyzes Cone Penetration Test (CPT) sounding design and analyses of multiple types of foundations including shallow, embankment settlement analysis, deep foundations (pile and drilled shafts), LRFD design, FHWA & GEC design, slope stability (embankment and excavation) and earth retaining structures. Mr. King has experience in overseeing and performing Pile Driving Analyzer (PDA) testing during the construction phase 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).				
07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBRL: LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Project Engineer. The project consists of an Enhanced Planning investigation into S.P. No. H.013284, MRB South GBR: LA 1 to LA 30 Connector, with the objective of constructing a new Mississippi River crossing located between the I-10 and LA 70 River crossings from three proposed alignments. Mr. King helped oversee the field program, development of the laboratory testing program, development of an interactive geotechnical database to compile all the soil borings and ECPT. He helped perform the preliminary engineering analyses included caisson design, driven piles, drilled shafts, embankments, proposed alignment comparisons, environmental concerns, and testing program recommendations. Mr. King assisted in preparation of the Data and Design reports for this project.				
07/21-Ongoing	SP NO. H.004100.5 / I-10: LA 415 TO ESSEN LANE ON I-10 & I-12 (CMAR): Baton Rouge Parish, LA. Project Engineer. The project consists of a Construction Management at Risk (CMAR) project which includes widening of the east and westbound lanes, elevated structures, interchanges, and ramps along I-10 from LA 415 in West Baton Rouge Parish to Essen Lane on I-10 and I-12 in East Baton Rouge Parish spanning approximately 2.5 miles. Mr. King co-manages and oversees the engineering analyses pertaining to selection of design reaches, geotechnical design of deep foundations, earth retaining structures, slope stability, soil-structure interaction with existing structures and load testing recommendations. Mr. King helped develop the Geotechnical Data reports, memorandums, and Design reports for this project.				

04/21-Ongoing	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Assistant Project Engineer. This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers and creeks. Mr. King assisted in engineering design pertaining to selection of design reaches, geotechnical design of pile foundations, drivability, slope stability, settlement analyses, construction testing program recommendations, and report preparation in accordance with LADOTD guidelines.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Assistant Project Engineer. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. Assistant Project Engineer. Assisted with all aspects of this project pertaining to coordination of fieldwork including 37 deep soil borings, 39 ECPTs and 13 electrical resistivity (ER) geophysical survey transects. Most of the soil borings were completed from a barge, some over a considerable amount of water. Some soil borings were completed from a marsh buggy over shallow water and thick marsh grass. He also assisted with the laboratory testing program, processing and analyzing of the ECPT and ER data, development of a geotechnical database and preparation and submittal of a geotechnical data report. This project consisted of obtaining preliminary geotechnical data under an extremely strict deadline to be used in the design phase of a project that will consist of replacing the existing I-10 Calcasieu River Bridge with a new structure and improvements to various other interchanges.
06/20-11/22	SP. NO. H.002825 / NICHOLSON DRIVE (LA HWY 30) SEGMENT 1: East Baton Rouge Parish, LA. Assistant Project Engineer. This project consisted of the reconstruction and widening of a section of Nicholson Drive between the intersections of Brightside Lane and Burbank Drive for the MOVEBR Program. Thirteen shallow soil borings and two deep soil borings were drilled at the subject site and associated laboratory testing was performed. Mr. King oversaw the field investigation and engineering analyses which included pavement and culvert crossing design recommendations in accordance with LADOTD specifications.
10/18-06/21	SP NO. H.000263 / CHEF MENTEUR PASS BRIDGE & APPROACH: Orleans Parish, LA. Assistant Project Engineer. Helped produced soil boring logs and CPT soundings in LADOTD format. Assisted with development of the data report.
10/18-11/21	SP NO. H.003370 / I-220 / I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIR FORCE BASE ACCESS ROAD: Bossier Parish, LA. Assistant Project Engineer. This was a Design Build project which provides direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and constructing an interchange and access road from Interstate 20 in Bossier City, Louisiana. Mr. King assisted with the construction monitoring aspect of the project which included PDA testing and CAPWAP analyses.

	Firm	Ardaman & Associates, Inc.			
	Name	Mark Woodward, P.E.		Years of Relevant Experience with this Employer	8
	Title	Principal Engineer		Years of Relevant Experience with Other Employer(s)	36
Degree(s)/Years/Specialization		M.S. / 2019 / Risk Management M.S. / 1986 / Civil Engineering B.S. / 1982 / Civil Engineering			
Active Registration Number/State/Expiration Date		24206 / LA / 9-30-2027			
Year Registered	1991	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical Foundation Design Brief Description: Mr. Woodward served as a geotechnical engineer for 36 years in the geotechnical branch of USACE New Orleans District, retiring as the Deputy Chief of the Geotechnical Branch and Dam and Levee Safety Program Manager. He was responsible for managing all departments in the branch including engineering, drilling, soils laboratory, dredge material testing, concrete testing, and administration. Mr. Woodward has considerable experience designing and managing various types of projects on the Mississippi River, Atchafalaya Basin and Storm Surge Levees in Southeast Louisiana, Mississippi and Texas, as well as mitigation and coastal projects in Louisiana. These projects included design of major foundation elements for dams, earthen levees, hydraulic structures, floodwalls, revetments, channel stabilization, bank degrading, ground improvement, deep excavations, relief wells, wick drains, dewatering systems, seepage and stability berms, preloads, reinforced levees and marsh creation for mitigation, coastal restoration and protection and beneficial use of dredge material in marsh and coastal environments with field investigations requiring use of specialized marine and marsh drilling equipment. Since 2018, Mr. Woodward has served as Principal Geotechnical Engineer of Ardaman for Louisiana, Mississippi, Alabama, Arkansas, and Texas. Mr. Woodward provides oversight and review of design major foundation elements for transportation, industrial, commercial, and municipal 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).				
04/21-01/2025	SP NO. H.013987 / RURAL BRIDGES PHASE I: Claiborne Parish, LA. Principal Engineer. The Rural Bridges project initiative consists of replacing many older bridges throughout the State of Louisiana. Mr. Woodward provided review of the geotechnical design including pile foundations for 3 bridges.				
01/19-12/23	SP NO. H.008226 / CHENIERE SPILLWAY & BRIDGE REPLACEMENT: Ouachita Parish, LA. Principal Engineer. Mr. Woodward served as the Principal Engineer for this project which included the replacement of the current damaged spillway and bridge structure in Ouachita Parish, Louisiana.				

10/18-11/21	SP NO H.003370 / I-220 I-20 INTERCHANGE IMPROVEMENT AND BARKSDALE AIRFORCE BASE ACCESS ROAD: Bossier Parish, LA. Principal Engineer. This Design Build project consisted of direct access to Interstate I-20 from the Barksdale Air Force Base (BAFB) and an interchange and access road from Interstate 20 in Shreveport, Louisiana. Mr. Woodward provided quality assurance oversight for this project, reviewing the work during the design and construction phase.
05/18-08/19	SP NO. H.011152.5 / I-12 WIDENING (US 190 to LA 59): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which included the widening of I-12 in St. Tammany Parish. Ardaman conducted a geotechnical investigation which included 23 deep soil borings, sampling, and laboratory testing along the 3-mile alignment between US 190 and LA 59 for lane widening which included four bridges structures. Mr. Woodward provided oversight to perform additional soil borings, lab testing and engineering analyses for a retaining wall for one of the bridge abutments.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Principal Engineer. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
05/18-08/19	SP NO. H.011152.5 / I-12 WIDENING (US 190 to LA 59): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which included the widening of I-12 in St. Tammany Parish. Ardaman conducted a geotechnical investigation which included 23 deep soil borings, sampling, and laboratory testing along the 3-mile alignment between US 190 and LA 59 for lane widening which included four bridges structures. Mr. Woodward provided oversight to perform additional soil borings, lab testing and engineering analyses for a retaining wall for one of the bridge abutments.
05/18-09/19	SP NO. H.001344 / US 190: LA 437 TO USE 190 BUS (PH 1): St. Tammany Parish, LA. Principal Engineer. Mr. Woodward provided technical oversight for this project which includes the widening of US 190 to a four-lane boulevard between US 437 and US 190.
05/18-07/18	IMTT ACCESS ROAD PAVEMENT, AVONDALE: Jefferson Parish, LA. Principal Engineer. Served as senior engineer for 2,200-foot-long x 50 -foot wide rigid and flexible roadway design for AASHTO loading per LADOTD guidelines, including subsurface exploration and testing, California Bearing Ratio, subbase material and thickness recommendations, wearing course thicknesses, and construction recommendations.
06/16-07/16	SOUTHEAST LOUISIANA URBAN FLOOD CONTROL, LOUISIANA AVENUE PAVING: Orleans Parish, LA. Chief of Structural Design. Served as decision maker as Chief of Structural Design, USACE New Orleans, for asphalt or concrete paving, looking at factors such as construction cost, durability, maintenance cycles and costs, constructability, construction duration, etc.

	Firm	Ardaman & Associates, Inc.			
	Name	Jessica N. Litt		Years of Relevant Experience with this Employer	12
	Title	Laboratory Manager		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		B.S. / 2010 / Biology			
Active Registration Number/State/Expiration Date		NICET / Generalist, Laboratory No. 141243 / 10-01-2027			
Year Registered	N/A	Discipline	N/A		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical Foundation Design, Meets MPR 07 Brief Description: Ms. Litt serves as Laboratory Manager of Ardaman's Baton Rouge laboratory which is under the direction of a Registered Professional Engineer. She supervises and manages operations of our AMRL Certified, DEQ Accredited, and USACE-validated laboratory and performs and oversees laboratory testing assignments, organizes, and schedules testing, trains and develops technicians, and supervises five laboratory technicians. Ms. Litt is experienced conducting soil mechanics laboratory testing in accordance with appropriate AASHTO and LADOTD testing protocol, which includes Soil Classification, Atterberg Limits, Grain Size Analysis, Gradation Testing, Organic Content, Hydrometer Analysis, Moisture Content, Consolidation Testing, Hydraulic Conductivity, pH, Resistivity, Strength Testing (Unconfined, Unconsolidated-Undrained Triaxial, Consolidated-Undrained Triaxial), Direct Shear, Specific Gravity, and Permeability of Granular Soils.			
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).				
03/25-Ongoing	SP NOs. H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5 / CULVERT REPLACEMENTS: Evangeline, Jackson, Rapides, Richland, St. Landry, Vernon, and Winn Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 100 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis, Hydrometer, Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT in order to produce the LADOTD soil boring logs.				
08/24-Ongoing	SP NOs. H.015568.5, H.015569 / LA 44 ROUNDABOUTS & WIDENING: Ascension Parish, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 10 deep and 14 shallow soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT to produce the LADOTD soil boring logs.				

07/23-Ongoing	SP NO. H.013284 / MRB SOUTH GBR LA 1 TO LA 30 CONNECTOR: West Baton Rouge, Iberville, Ascension, and East Baton Rouge Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 18 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt reviewed the consolidation test results and entered the laboratory test results into gINT in order to produce the LADOTD soil boring logs.
07/23-Ongoing	SP NOS. H.015489, H.015490, H.015491, H.015492 / IJJA: OFF-SYSTEM BRIDGES: Allen, Beauregard, and Calcasieu Parishes, LA. Laboratory Manager. Oversaw the completion of a comprehensive laboratory testing program for 10 deep soil borings that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests in accordance with LADOTD guidelines. Ms. Litt entered the laboratory test results into gINT to produce the LADOTD soil boring logs.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Laboratory Manager. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
10/18-06/21	SP NO. H.000263.5-1 / CHEF MENTEUR PASS BRIDGE AND APPROACH: Orleans Parish, LA. Laboratory Technician. Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content, Visual Classification, Fines Content, Gradation Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Organic Content, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Laboratory Technician. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
11/15-01/21	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / MACARTHUR INTERCHANGE COMPLETION PHASE 2, ROUTE US 90-Z: Jefferson Parish, LA. Laboratory Technician Assisted with completion of a comprehensive laboratory testing program that included Atterberg Limits, Moisture Content and Visual Classification, Fines Content, Sieve Analysis, Triaxial Permeability (constant head), Conventional Incremental Consolidation, Particle Size Analysis (Hydrometer), Unit Weight of Undisturbed Samples, and UU Strength Tests.

	Firm	Ardaman & Associates, Inc.		
	Name	Casey Floyd	Years of Relevant Experience with this Employer	5
	Title	Drilling Supervisor	Years of Relevant Experience with Other Employer(s)	30
Degree(s)/Years/Specialization		High School Diploma		
Active Registration Number/State/Expiration Date		Traffic Control Technician / LA / 9-5-2027 Traffic Control Supervisor / LA / 9-6-2027 DOTD Flagger / LA / 6-04-2028 Louisiana Water Well Driller's License #WWC-212, 6-30-2026		
Year Registered	N/A	Discipline	N/A	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Geotechnical Foundation Design Brief Description: Mr. Floyd has over 30 years of experience drilling in the Louisiana Gulf Coast Region including performing soil borings (on land and over water), CPT soundings, monitor well installation and abandonment, and installation of geotechnical monitoring instrumentation. Mr. Floyd has planned and supervised many LADOTD geotechnical investigation projects. He has arranged right of entry, utility locations, site clearing, arranging for police assistance (if needed) and traffic control/crew safety, and coordinating between engineering staff and drill crew. He has also successfully completed a multitude of LADOTD projects consisting of shallow borings and deep soil borings to depths of approximately 300 feet.		
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).			
03/25-Ongoing	SP NOS. H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5 / CULVERT REPLACEMENTS: Evangeline, Jackson, Rapides, Richland, St. Landry, Vernon, and Winn Parishes, LA. Drilling Supervisor. The project consisted of geotechnical field investigations throughout Louisiana consisting of ten soil borings to depths ranging from 100 to 120 feet. Mr. Floyd oversaw the field investigation program consisting of 10 deep soil borings in accordance with LADOTD guidelines. He performed site reconnaissance at each location and coordinated the access along with traffic control.			
08/24-Ongoing	SP NOS. H.015568.5, H.015569 / LA 44 ROUNDABOUTS & WIDENING: Ascension Parish, LA. Drilling Supervisor. Mr. Floyd oversaw the field investigation program consisting of 10 deep and 14 shallow soil borings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring.			
07/23-Ongoing	SP NOS. H.015489, H.015490, H.015491, H.015492 / IJJA: OFF-SYSTEM BRIDGES: Allen, Beauregard, and Calcasieu Parishes, LA. Drilling Supervisor. Mr. Floyd oversaw the field investigation program consisting of 10 deep soil borings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring.			

03/22-01/25	SP NO. H.002244.5 / BOUDREAUX CANAL BRIDGE REPLACEMENT: Terrebonne Parish, LA. Drilling Supervisor. The project consisted of replacement of the existing LA 56: Boudreaux Canal Bridge with a new bridge just west of the center line of the existing bridge. Mr. Floyd oversaw the field investigation program consisting of 8 deep soil borings and 4 CPT soundings in accordance with LADOTD guidelines. He performed site reconnaissance, coordinated the access along with traffic control and pavement coring. Mr. Floyd oversaw the completion of one of the soil borings that was performed on a barge.
07/23-Ongoing	SP NO. H.012030 / US 371: KCS RAILROAD OVERPASSES HBI: Webster Parish, LA. Drilling Supervisor. The project consists of construction of three bridges for US 371 KC Railroad overpasses that replaced two parallel bridges and one standalone bridge. Ardaman performed the geotechnical investigation and engineering analysis for drilled shafts and made advanced test shaft recommendations.
07/21-01/22	SP NO. H.003931 / I-10 CALCASIEU RIVER BRIDGE: Calcasieu Parish, LA. Drilling Crew Chief. Mr. Floyd helped manage and oversee all aspects of an extensive field investigations program which included 37 deep soil borings and 39 CPT soundings in accordance with LADOTD guidelines. Most of the soil borings were completed from a barge, some over a considerable amount of water. Some soil borings were completed from a marsh buggy over shallow water and thick marsh grass.
09/22-Ongoing	EVANGELINE ROAD & CN RAILROAD CULVERT: St. Charles Parish, LA. Drilling Supervisor. Ardaman completed subsurface exploration and geotechnical engineering evaluation. The project consists of the installation of two reinforced concrete box culverts (RCBCs) on the north and south sides of the CN Railroad as it crosses over Evangeline Road near Montz, Louisiana in St. Charles Parish. Ardaman performed the geotechnical fieldwork and engineering evaluation including recommendations for site preparation, shoring and bedding recommendations, and pavement design in a final report.
04/21-Ongoing	SP NOS. 700-29-0112, 700-29-0130, H.012565, H.012891, H.014251, H.014252, H.014253, H.014254, H.014256, H.014257 / RURAL BRIDGE INITIATIVE PHASE II: West Feliciana, East Feliciana, Livingston, St. Bernard Parishes, LA. Drilling Crew Chief. This project consists of the replacement of multiple small two-lane bridges throughout rural areas of Southeast Louisiana which generally ranged in length from 100 to 400 feet, mainly over small rivers and creeks. Mr. Floyd oversaw all aspects of this project pertaining to coordination of fieldwork including 31 deep soil borings. Some of these borings were performed through the middle of bridges and at hard access locations.

	Firm	Neel-Schaffer, Inc.		
	Name	Ellen Howard, PE, PTOE, RSP ₁		Years of Relevant Experience with this Employer
	Title	Project Manager		Years of Relevant Experience with Other Employer(s)
Degree(s)/Years/Specialization		BS / 2009 / Civil Engineering		
Active Registration Number/State/Expiration Date		PE No. 38207 / LA / 03-31-26 PTOE No. 3735 / 08-01-26 RSP No. 349 / 12-9-28		
Year Registered	2013	Discipline	Civil Engineering	
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Traffic Task Lead, Meets MPR 9 Brief Description: Mrs. Howard joined Neel-Schaffer, Inc. in January 2014. Before joining Neel-Schaffer, Mrs. Howard worked as a Traffic Engineer for DOTD District 62. She also worked as a Traffic Engineer Intern for DOTD's Traffic Engineering Management Section in Headquarters. She worked on a variety of projects involving Traffic Engineering Studies, Signal Timing and Coordination, Corridor Studies, traffic modeling using VISSIM and Transportation Management Studies.		
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 – Present	LA 621 Realignment at LA 73 (Ascension Parish) (SPN H.014366): Traffic Lead for an IDIQ contract consisting of three task order projects involving traffic services, roadway design, and preliminary and final plan development. The project includes widening LA 73 and realigning LA 621 near its existing intersection to relieve congestion and improve safety, as well as design of a multilane roundabout to enhance local roadway connectivity, preparation of a TMP, and approximately one mile of mill and overlay on LA 621. Served as Project Engineer providing traffic forecasting, traffic capacity analyses, and traffic simulation, including development and calibration of VISSIM models to evaluate existing and future traffic operations.			
04/23 - Present	Jimmie Davis Design Build (SPN H.001779): Project involves construction of a new four lane bridge over the Red River; conversion of LA 511 from a five lane roadway to a four lane, median divided facility with turn lanes; construction of full access interchange connections at Arthur Ray Teague Parkway and Clyde Fant Memorial Parkway; and associated roadway drainage improvements. Served as Project Engineer, providing traffic forecasting, traffic capacity analyses, and traffic simulation, as well as development of traffic analyses, transportation management plans (TMPs), traffic signal design, and safety analyses, in support of design build delivery.			
09/25 - Present	LADOTD US 190: Wooddale to Livingston Parish P/L Study (H.016437.5): Traffic Lead for a corridor safety and operational study using an integrated, systematic, and performance based approach to evaluate safety and operational improvements. The study analyzes existing and future traffic conditions along the US 190 corridor to identify treatments to improve safety, access management, and traffic operations. Tasks include collection of traffic and vulnerable road user (VRU) data and performance of traffic forecasting, traffic capacity analyses, and traffic simulation to support detailed safety and operational analyses and development of recommended improvements.			

09-25 - Present	US 61: Cardinal to Bert Corridor Study (H.014035.1): Traffic Lead for a comprehensive safety and operational analysis of approximately two miles of Airline Highway (US 61) in LaPlace to identify corridor deficiencies and evaluate feasible multimodal improvements, with an emphasis on pedestrian safety. The scope includes data collection, crash analysis, and evaluation of existing and future traffic conditions using traffic forecasting, traffic capacity analyses, and traffic simulation to support development of improvement alternatives, conceptual design, benefit-cost analysis, and a phased implementation plan.
02/23 - Present	US 61 at Victoria Drive Pedestrian Crossing, Baton Rouge, LA (SPN 44-23689, H.015227): Traffic Lead. Safety and Traffic study to identify pedestrian safety countermeasures at a high need location on US 61 in East Baton Rouge Parish. This study identified and analyzed a pedestrian crossing location with a high number of predicted pedestrian crashes and expected use consistent with planned regional multiuse paths along Airline Highway in North Baton Rouge.
01/14 – 05/15	Safety Study, LA 49 (Williams Boulevard), Kenner, LA – Stage 0 / Safety Study (S.P. No. 4400001583, T.O. No. H.010570): Traffic Engineer responsible for data collection and evaluation of existing traffic conditions through traffic capacity analyses and traffic simulation, including intersection operational analyses using Synchro and VISSIM modeling to support safety assessments.
07/21 – Present	US 190 Access Management Stage 0 and Traffic Study: Traffic Engineer responsible for initial and final data collection, existing safety analysis and existing and no-build traffic analysis, and the final traffic report.
03/21 – Present	MOVEBR N. Sherwood Forest Extension (C-P Proj. No. 20-CP-HC-0014): Traffic Engineer responsible for initial and final data collection, existing safety analysis, existing and no build HCS analysis, alternatives HCS analysis, and the final traffic report.
09/20 – Present	MOVEBR College Drive Enhancements (C-P Proj. No. 19-EN-HC-0033): Traffic Engineer responsible for calibrated Vissim model, existing and no-build traffic analysis and alternatives analysis.
09/21 – 07/22	MOVEBR Harding Boulevard at Interstate I-110 (C-P Proj. No. 20-CP-HC-0016): Traffic Engineer responsible for initial and final data collection, existing safety analysis and existing and no-build traffic analysis, Tier 1 alternative analysis, and final traffic report. The project involved a traffic study along Harding Boulevard between Rosewood Street and Merle Gustafson Drive including the I-110 Ramps in an effort to improve capacity.
08/20 – 10/21	I 10 & I 12 College Drive Flyover Ramp Design Build Project (S.P. H.013897.1): Traffic Engineer evaluated existing and future traffic conditions through traffic forecasting, traffic capacity analyses, and traffic simulation, including development and calibration of VISSIM models, preparation of traffic analyses, and support of the Interchange Modification Report.
12/19 – 03/20	US 80: Intersection @ Bellevue Rd (S.P. No. 4400010504, T.O. No. H.014044.1): Traffic Engineer responsible for Initial and final data collection, existing safety analysis, and Chapter 1 of Final Report and signalized intersection analysis.

	Firm	Neel-Schaffer, Inc.			
	Name	Vijay Kunada, PE, PTOE, PTP		Years of Relevant Experience with this Employer	18.5
	Title	Senior Vice President		Years of Relevant Experience with Other Employer(s)	4.5
Degree(s)/Years/Specialization		BS/1999/Civil Engineering; MS/2001/Civil Engineering; MS/2002/Computer Science			
Active Registration Number/State/Expiration Date		PE No. 32145/LA/03.31.2026; PTOE No. 2868 /04.30.2028; PTP No. 096/11.07.2028			
Year Registered	2008	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: Traffic Modeling, Meets MPR 10 Brief Description: Vijay serves as a project manager for local and regional transportation plans, traffic impact studies, travel demand models, safety studies, signal warrant analysis, traffic signal timing plans, corridor analysis, interchange modification and justification studies, traffic simulation models (mesoscopic and micro), demographic forecasting, and other traffic engineering related projects for both public and private developments.			
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).				
02/25 - Present	H.016168.1: Baton Rouge Northern Bypass Expressway, East Baton Rouge and West Baton Rouge Parishes, LA (Name/Owner Contact Information: LADOTD, Melissa LeBas, Melissa.LeBas@la.gov, 225-379-1039) As Project Manager and Mesoscopic Modeling Lead , Vijay developed the regional mesoscopic traffic model using Dynameq software to evaluate the proposed Baton Rouge Northern Bypass as part of the Baton Rouge Urban Renewal and Mobility Plan (BUMP). The mesoscopic model covered a five-parish region and included calibration and validation of the 2024 base-year model, as well as development of the 2046 No-Build scenario and multiple 2046 Build scenarios for both non-tolled and tolled alternatives. Ongoing work includes testing "what-if" alternatives and evaluating measures of effectiveness to compare performance, support refinement of the preferred Build alternatives, and document results in formal traffic analysis reports.				
07/20 - Present	H.013284: MRB South GBR: LA 1 to LA 30 Connector, Ascension, East Baton Rouge, Iberville, and West Baton Rouge Parishes, LA (Name/Owner Contact Information: LADOTD, Christina Brignac, Christina.Brignac@la.gov, 225-379-1394) As Mesoscopic Modeling Lead , Vijay developed the regional mesoscopic traffic model using Dynameq software to evaluate proposed Mississippi River Bridge concepts under both tolled and non-tolled scenarios. The effort included calibration and validation of the 2019 base-year mesoscopic model, development of the 2042 No-Build scenario, and development of 2042 Build scenarios for 20 bridge alternatives, all of which were reviewed and approved by LADOTD. Model results served as a key evaluation criterion in screening alternatives and selecting the final three concepts advanced into the environmental planning process. Phase 2 of the study, which includes detailed traffic analysis, is currently ongoing.				
02/21 - 03/25	H.013897: I-10 & I-12 College Drive Flyover Ramp Design-Build, Baton Rouge, LA (Name/Owner Contact Information: LADOTD, Catherine Mastin, PE, catherine.mastin@la.gov, 225-379-1652) As Mesoscopic Modeling Lead , Vijay led the evaluation of the Transportation Management Plan (TMP) for the proposed College Drive flyover ramp improvements and developed mesoscopic traffic models for each maintenance of traffic (MOT) phase . Using Dynameq-based mesoscopic modeling, he evaluated and compared multiple MOT strategies to assess construction-phase traffic operations. The completed analyses supported identification of effective traffic management strategies to minimize congestion and operational impacts throughout construction.				

10/21 – 12/22	College Drive Enhancement Project, Baton Rouge, LA (Name/Owner Contact Information: City of Baton Rouge, Cyndi Pennington, cpennington@brla.gov, 225-389-3246) As Mesoscopic Modeling Lead, Mr. Kunada led the evaluation of multiple on- and off-corridor improvement concepts along and adjacent to College Drive between Perkins Road and I 10. Mesoscopic traffic models were developed and applied to assess individual and combined concepts, enabling comparison of network-level performance across the study area. The analysis identified the concepts, or combinations of concepts, that produced the greatest operational benefits, including reductions in vehicle delay and strategic shifts in traffic volumes to improve overall corridor performance.
01/04 – 12/04	Lafayette Parish Mesoscopic Model, Lafayette, LA (Name/Owner Contact Information: Acadiana Planning Commission, Sara Gary, sgary@planacadiana.org, 337-806-9378) As Engineer II, Mr. Kunada, working for the Lafayette MPO, developed a comprehensive mesoscopic traffic model for the entire Lafayette Parish using TransModeler software. The model was developed for both AM and PM peak periods and incorporated traffic signal timing plans for signalized intersections derived from Synchro models. Intersection control types and geometric characteristics were coded for all remaining intersections throughout the network. The model was calibrated and validated to base year (2000) conditions and future 2030 model was developed. The primary purpose of the model was to identify existing and future bottlenecks within the study area to support the development of a data-driven congestion mitigation strategy. In addition, the model was intended to serve as a centralized traffic data repository to support ongoing planning, operational analyses, and future scenario testing.
07/25 - Present	Shreveport-Bossier (LA) MPO 2050 Metropolitan Transportation Plan and Travel Demand Model Update: As Project Manager, Mr. Kunada is leading the development of a performance-based, multimodal long-range transportation plan, including a comprehensive regional freight component. Responsibilities include overseeing travel demand model development in TransCAD leveraging big data sources, conducting demographic and socioeconomic forecasting, and performing detailed multimodal operational and safety needs analyses. The effort also features a robust public, agency, and stakeholder engagement program to support data-driven decision-making and regional consensus.
08/16 – 10/18	I-10 Mobile River Bridge and Bayway Widening, Mobile, AL: As IMR Lead, oversaw development of IMR from data collection phase through the approval. Tasks included traffic forecast for toll and non-toll options, analysis of the proposed Mobile River Bridge and the widening of the Bayway using Synchro/HCS, as well as the proposed modifications to the interchanges within the study area including Diverging Diamond Interchange (DDI) configurations at three locations, VISSIM modeling for analyzing complex weave conditions and the development of IMR in accordance with ALDOT guidelines and FHWA Policy Points.
12/18 – 02/19	I-635 LBJ East Alternative Technical Concepts, Dallas, TX: Lead the traffic analysis and refinement of the Alternative Technical Concepts (ATC) proposed for three interchanges associated the I-635 LBJ East Project in Dallas, TX. Freeway elements, ramp terminals and frontage roads were analyzed for the original build concept and the proposed ATCs and demonstrated the effectiveness of the proposed ATCs over the original build concept.
08/20 – Present	I-10 & I-12 College Drive Flyover Ramp Design Build, Baton Rouge, LA. Mesoscopic Modeling Lead. Responsible for the analysis of Transportation Management Plan (TMP) for the proposed College Drive Ramp improvements. TMP was prepared for the various maintenance of traffic (MOT) phases. Vijay is leading the Dynameq (Mesoscopic Modeling) modeling for evaluating various MOT strategies and completed the modeling of MOT Phase 1.

	Firm		Neel-Schaffer, Inc.		
	Name	Chuck LeBoeuf, PE, PTOE		Years of Relevant Experience with this Employer	11
	Title	Senior Traffic Engineer		Years of Relevant Experience with Other Employer(s)	1.5
Degree(s)/Years/Specialization			BS/2012/Civil Engineering; MS/2014/Civil Engineering		
Active Registration Number/State/Expiration Date			PE 0042854/LA/03.31.2027; PTOE 5397/11.23.2028		
Year Registered		2018	Discipline	Civil Engineer	
Contract Role(s)/Brief Description of Responsibilities			Traffic Modeling. Mr. LeBoeuf joined Neel-Schaffer in 2014 and has 12.5 years of experience in the engineering field, including 18 months as a Co-Op student with LADOTD. Since joining Neel-Schaffer, Mr. LeBoeuf has provided a wide variety of transportation-related services, including travel demand modeling, GIS, crash analysis, traffic analysis, and mesoscopic modeling. He also has experience in the collection of turning movement counts for development projects. Mr. LeBoeuf has completed DOTD’s Traffic Engineering Process and Report (TEPR) training.		
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).			
04/18 – 04/20		LA 328 (Rees Street) Corridor Study and Plan: Project includes improving LA. Hwy. 328/Rees Street from Latiolais Road to E Bridge Street including considering the impacts of the proposed E Mills Ave extension LA 328 to Doyle Melancon Ext. roadway and outreach			
02/22 – 10/22		Pinhook Road at Kaliste Saloom Road, Lafayette, LA. This project evaluated the conversion of the intersection of Pinhook Road at Kaliste Saloom Road from a full access signalized intersection to a quadrant intersection. For this project, Mr. LeBoeuf analyzed the proposed intersection concept in Synchro and developed signal timings and lane geometry that would reduce intersection delay.			
10/21 – 12/22		College Drive Enhancement Project, Baton Rouge, LA. Several off-corridor concepts were considered near College Drive between Perkins Road and I-10. Mr. LeBoeuf analyzed these off-corridor concepts using mesoscopic modeling to determine which concept, or group of concepts, would result in the most improvements within the study area. These improvements include a reduction in vehicle delays and shifts in traffic volumes.			
02/21 – 03/25		I-10 and I-12 College Flyover Ramp Design-Build Project, Baton Rouge, LA. This project documented the expected work zone impacts to I-10, I-12, and nearby surface arterials due to the construction of the College Drive Flyover. Mr. LeBoeuf analyzed the expected work zone impacts using mesoscopic modeling (Dynameq) for the first phase of construction. The impacts included queueing, shifts in traffic volumes, and traffic speeds.			

07/20 – Present	MRB South GBR: LA 1 to LA 30 Connector, Baton Rouge, LA. This project uses mesoscopic modeling to analyze a proposed new crossing over the Mississippi River from LA 1 to LA 30 between I-10 and LA 70. Mr. LeBoeuf used the existing traffic data to develop peak period volumes and travel times which were to be used in the model calibration and validation. Mr. LeBoeuf developed the Base mesoscopic model by first expanding a previous Dyanmeq me- soscopic model to include the West Bank of the Mississippi River from Baton Rouge to Donaldsonville, and then performing Dynamic Traffic Assignments using Origin-Destination (O-D) matrices. Afterwards, Mr. LeBoeuf used the existing traffic data to calibrate the Base model to better reflect existing traffic conditions. Once the Base model was finished, Mr. LeBoeuf then developed the No Build model, which included proposed highway improvements and an updated O-D matrix. This No Build model was then used as a background model to develop Bridge-specific models for each of the 20 proposed Bridge crossings.
02/25 - Present	Baton Rouge Northern Bypass Expressway (NBE), Baton Rouge, LA. This project uses mesoscopic modeling to determine the feasibility of upgrading Airline Highway in West Baton Rouge and East Baton Rouge Parishes to a controlled-access toll road with parallel toll-free frontage roads. Mr. LeBoeuf expanded the mesoscopic model developed for the Mississippi River Bridge project to cover the entire five-parish Baton Rouge Metropolitan Area. Afterwards, Mr. LeBoeuf used the existing traffic data to calibrate the Base model to better reflect existing traffic conditions. Once the Base model was completed, Mr. LeBoeuf then developed the No Build models, which included proposed highway improvements and an updated O–D matrix for the years 2030 and 2046. Following the development of the No Build models, Mr. LeBoeuf began the Build model development for the proposed Bypass. The proposed Bypass begins at I-10 west of Port Allen and follows Airline Highway from LA 415 to Pecue Lane.
12/18 – 02/19	I-635 LBJ East Alternative Technical Concepts, Dallas, TX. Alternative Technical Concepts were proposed for three interchanges associated the I-635 LBJ East Project in Dallas, TX. For this project, Mr. LeBoeuf analyzed the freeway and frontage road elements, comparing the operational changes between the original build concept and the proposed Alternative Technical Concept.
01/17 – 08/18	I-10 Mobile River Bridge Interchange Modification Report, Mobile, AL. This project analyzed the impacts of the new I-10 bridge crossing the Mobile Riv- er to the south of the existing I-10 Wallace Tunnels in Mobile, AL. Mr. LeBoeuf developed future peak hour volumes using the Travel Demand Model results for Mobile and Baldwin Counties for the No Build scenario, which involved no improvements to study area roadways, and for the Build scenario, which incorporated the new I-10 Mobile River Bridge, a widened I-10 Bayway from Mobile to Daphne, AL, and interchange improvements along I-10 within the study area. Mr. LeBoeuf performed intersection traffic analyses using the existing and future peak hour traffic volumes and recommended the intersection geometry for study area intersections.
01/17 – 02/18	Western Beltway Phase II Feasibility Study, Hattiesburg, MS. This project determined the feasibility of extending MS 42 from I-59 to US 49 north of Hattiesburg, MS. Mr. LeBoeuf developed existing peak hour volumes and volume characteristics such as peak hour factors and heavy vehicle percentages. Mr. LeBoeuf developed future peak hour volumes using the Hattiesburg, MS Metropolitan Planning Organization’s Travel Demand Model results for the No Build scenario, which involved no improvements to study area roadways, and for the Build scenario, which incorporated two roadway alignment alternatives. Mr. LeBoeuf performed intersection traffic analyses using the existing and future peak hour traffic volumes and recommended the intersection geom-etry for study area intersections. Mr. LeBoeuf analyzed crash data to determine crash trends and estimate the expected number of crashes for future scenarios. Mr. LeBoeuf also performed a benefit-cost analysis for each scenario using the expected number of crashes and expected changes in travel times.

	Firm	Neel-Schaffer, Inc.			
	Name	William Fulcher, PE, PTOE, PTP, RSP _{12B}		Years of Relevant Experience with this Employer	6
	Title	Project Engineer		Years of Relevant Experience with Other Employer(s)	3
Degree(s)/Years/Specialization		BS/2012/Civil Engineering; MS/2015/Civil Engineering			
Active Registration Number/State/Expiration Date		PE No. 45329/LA/09.30.2027; PTOE No. 5158/All/11.20.2027; PTP No. 786, RSP No. 351, RSPI No. 147, RSPB No. 33			
Year Registered	2021	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Traffic and Safety 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).				
06/22 – Present	District 03 Safety Investment Plan, LADOTD. Engineer for this study evaluating crashes at 119 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.				
05/20 – 06/21	District 05 Safety Investment Plan, LADOTD: Project Manager, Traffic Engineer, Safety Analyst. Performed area wide safety screening to identify areas with high potential for safety improvements. Identified potential safety improvements to 81 locations including segments and intersections within LADOTD District 05. Prepared a ranked priority list of projects. Coordinated and led project meetings.				
02/19 – 3/20	District 07 Safety Investment Plan, LADOTD. Project Engineer for this study evaluating crashes at 63 locations on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.				
02/18 - 02/19	District 08 Safety Investment Plan, LADOTD. Engineer Intern, Safety Analyst. Identified potential safety improvements to 68 locations including both segments and intersections within LADOTD District 08. Developed an Excel based tool to perform benefit/cost comparisons of safety countermeasures. Prepared a ranked priority list of projects.				
9/21 - 04/24	Retainer Contract for Safety Studies, District 61 Safety Study, LA (S.P. No. 44-10504, T.O. No. H.014684.1). Safety Analyst. Design of Safety Projects. Performed area wide safety screening, crash and data analysis to identify areas with high potential for safety improvements. Identified potential safety improvements to 9 intersections within LaDOTD District 61.				
11/19 - Present	US 80: Intersection @ Bellevue Rd Stage 0/Feasibility Study (S.P. No. H.014044.1). Engineer Intern: Performed traffic data collection, safety analysis, and traffic operational analysis.				

02/18 - 02/19	LA 385 Ryan Street Feasibility Study, Lake Charles, LA (S.P. No. 44-4402, T.O. No. H.012685.1), Engineer Intern. Performed data collection, traffic engineering, and transportation planning services for a feasibility study to determine safety and operational improvements for approximately 1.8 miles of LA 365 in Lake Charles, LA. Services included traffic volume forecasts, intersection and segment analysis, alternative development, and identifying potential safety countermeasures.
02/17 - 10/17	Runway 13-31 RSA & RPZ Improvement Project Traffic Study (S.P. No. H.011279.1): Engineer Intern: Provided traffic analysis and transportation planning services for the proposed relocation of LA 67 to provide an extended runway safety area for the Baton Rouge Metropolitan Airport.
02/17 - 02/18	US 190 & US 171 Signal Timing Study (S.P. No. 44-4064, T.O. No. H.012686.5): Engineer Intern: Provided traffic engineering services including both the development and implementation of traffic signal timing plans for ten signals in DeRidder, LA.
02/20 – 10/21	I-59 at US 49 PEL Study, Forrest County, MS: Traffic Engineer, Safety Analyst. Provided the safety analysis for both existing and future expected conditions. Assisted with traffic engineering services.
01/20 – 09/21	Mississippi State University Master Plan Update, Mississippi State, MS: Transportation Planner. Services included identifying improvements to existing circulation, identifying new beneficial connections, determining areas of parking need, identifying potential new parking locations.
06/17 – 09/18	I-10 New Orleans Master Plan, Port Access Improvements, New Orleans, LA: Engineer Intern. Provided traffic engineering and transportation planning services to develop an operational and capital improvement plan for the I-10 corridor at its junction with US 90B to improve congestion and port access.
06/21 - Present	District 6 Emergency Signal and ITS Repair, Hancock and Harrison Counties, MS: Traffic Engineer. Performed signal inventories and prepared signal design sheets and quantity takeoffs.
10/21 - Present	Harding Boulevard at Interstate I-110 ("MovEBR"): Safety Analyst. Performed crash analysis along Harding Boulevard in the vicinity of I-110 to determine potential safety issues and develop safety improvement recommendations where feasible
09/20 – Present	College Drive Enhancements ("MovEBR"): Safety Analyst. Performed crash analysis along College Drive in the vicinity of I-10 to determine potential safety issues and develop safety improvement recommendations where feasible
06/21 – Present	US 51 between Church Road and Green T Road, Desoto County, MS (S.P. No. SPR- 1(1 2I) /1.08597 -1 10000, T.O. No. NS-P/E 2019-04): Traffic Engineer, Safety Analyst. Provided the safety analysis and assisted with traffic engineering services for improvements to this section of US 51.
05/21 – 09/21	I-59 at US 49 PEL Study, Forrest County, MS: Traffic Engineer, Safety Analyst. Provided the safety analysis for both existing and future expected conditions. Assisted with traffic engineering services.

	Firm	Neel-Schaffer, Inc.			
	Name	Jonathan Duhe, PE, PTOE, RSP		Years of Relevant Experience with this Employer	11
	Title	Project Engineer		Years of Relevant Experience with Other Employer(s)	1
Degree(s)/Years/Specialization		BS/2011/Civil Engineering			
Active Registration Number/State/Expiration Date		PE No. 41047/LA/03.31.2027; PTOE No. 4418; RSP No. 282			
Year Registered	2016	Discipline	Civil Engineer		
Contract Role(s)/Brief Description of Responsibilities		Traffic and Safety 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).				
03/23 - Present	IDIQ for road design projects - this contract includes three separate Task Order projects which include traffic services, road design, preliminary and final plan development. The projects include pavement preservation, constructing new roads, extend existing roads, construction of roundabouts, turn lanes and drainage improvements. 1.) US 90: Roundabout a LA 101 (Calcasieu) (SPN. H.015226); Traffic Services. This project includes the design for a roundabout with high-speed approaches. The design avoids impacts to a gas station, and other development at the intersection. It includes minimum right of way taking and detention pond design. 2.) LA 621: Realignment @ LA 73 (Ascension) (SPN. H.014366); Traffic Services. This project will widening LA 73 and realign LA 621 to near its existing intersection with LA 73 to relieve congestion and improve safety. This project includes the design of a multilane roundabout to provide connectivity for local roadways, traffic analysis, Transportation Management Plan, and 1 mile of mill and overlay for LA 621. 3.) LA 16: N 2nd Street to LA 445 (Tangipahoa Parish) SPN. H.009425.5; Traffic Services. Project includes the mill and overlay of LA 16 from N 2nd Street to east of Duncan Avenue, the in-place base rehabilitation and overlay of LA 16 from east of Duncan Avenue to LA 445. The scope of work will also include the hydraulic analysis and development of construction plans for the rehabilitation of the existing subsurface drainage system to improve drainage along LA 16 from US 51 to approximately 1000' east of Duncan Avenue. 4.) LA 182: US 90 – Greenwood St. Overpass SPN. H.016158; Traffic Services. This project includes pavement rehabilitation along LA 182 from WB Exit Ramp to Greenwood St. Overpass, in Morgan City, LA. The work includes pavement patching, mill and overlay, roadway reinforcing mesh, curb ramps and guard rail.				
02/22 – Present	W. Broussard Roundabout at Duhon Rd. (LA 724). This project will construct a roundabout and required drainage improvements. Includes roundabout. Completed the horizontal and vertical alignments (line and grade). Preliminary and final plans.				

02/20 – Present	I-20 at LA 544 Overpass Replacement, Lincoln Parish, LA. This project will replace the existing LA 544 bridge crossing and interchange with a new bridge and roundabouts. This project includes four multilane roundabouts located in a tight project area with many constraints and large grade changes. The roundabouts will connect ramps and service roads with adjacent businesses. The project includes new bridge with sidewalk over I-20. The entire project limits are complete street compliant which means it provides facilities for all users. Tasks similar to Line and Grade completed: Established design criteria, typical roadway sections, horizontal and vertical geometry, ID structure locations and more. Mr. Duhe provided signal design review. Preliminary and final plans.
08/22 – Present	LRSP Ardenwood Dr Road Diet, Baton Rouge, LA. Project Engineer, Responsible for Data Collection (Traffic Counts and Peak Hour Observations), Traffic Forecasting, Safety Analyses, Corridor Operational Analyses (HCS, Sidra), Safety Analyses, Traffic Report Preparation
07/21 – Present	FYA Signal Improvement (LCG), Lafayette, LA: Project Engineer. Oversaw development of signal plans to upgrade 28 intersections to include flashing yellow arrow signal heads as well as backplates.
09/21 – Present	Harding Blvd at I-110, Baton Rouge, LA: Traffic Engineer. Performing a traffic study along Harding Boulevard between Rosewood Street and Merle Gustafson Drive including the I-110 Ramps in an effort to improve capacity. Assisted with data collection and Initial Data Collection Report.
09/20 – Present	College Drive Enhancement Project, Baton Rouge, LA: Traffic Engineer. Performing a traffic study along College Drive between Perkins Road and Bawell Street/Bankers Avenue including the I-10 Ramps in an effort to improve capacity and safety. Assisted with data collection including peak period observations and travel time runs. Also performed safety analysis along the College Drive corridor.
06/20 – Present	I-10/12 College Drive Flyover Design Build, Baton Rouge, LA: Traffic Engineer. Performing a traffic study at the I-10/12 merge in an effort to improve capacity and safety. Assisted with uncalibrated VISSIM model. Assisted with safety analysis and signal design.
04/20 – 06/21	District 05 Safety Investment Plan District 05, LA: Traffic Engineer. Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
11/17 – 04/19	District 08 Safety Investment Plan District 08, LA: Traffic Engineer. Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
02/19 – 03/20	District 07 Safety Investment Plan District 07, LA: Traffic Engineer. Assisted with safety analysis including reviewing crashes utilizing LaDOTD's CATScan tool and performing benefit-cost analysis of potential safety improvements. Also assisted with report preparation.
11/16 – 04/19	LA 385 (Ryan St) Feasibility Study, Lake Charles, LA: Traffic Engineer. Assisted with intersection analysis including Vistro analysis. Assisted with safety analysis including reviewing crashes, creating collision diagrams, identifying conflict points, and using LaDOTD's CATScan tool to analyze safety. Also assisted with report preparation.

	Firm	Forte & Tablada, Inc.			
	Name	Bradley S. Holleman, P.L.S., P.E.		Years of Relevant Experience with this Employer	5
	Title	Senior Vice President, Geospatial		Years of Relevant Experience with Other Employer(s)	15
Degree(s)/Years/Specialization			BSCE / 2009 / Civil Engineering with Minor in Land Surveying		
Active Registration Number/State/Expiration Date			PLS 5082 / LA / 09/30/2026; PE 47165 / LA / 03/31/2027		
Year Registered	2012	Discipline	Land Surveying		
Contract Role(s)/Brief Description of Responsibilities			Survey/ Title Work Lead, Meets MPR 05		
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).				
09/25 - Ongoing	Contract #OLHC BB1- O.B.2025.04.016 through O.B.2025.04.023, O.B.2025.04.049- Bridge Bundle Program- 9 OLHC Project Numbers (9 Bridge Sites), District 04, LA – Principal-in-Charge for topographic surveying and establishing existing right-of-way for 9 bridge sites on 2 lane State Highways for the Office of Louisiana Highway Construction.				
08/23 – Ongoing	Contract 4400025029 - H.015547, H.015548, H.015549, H.015341, H.015551, H.015552, H.015545, H.015550, H.015544, H.015553- Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program- 10 State Project Numbers (13 Bridge Sites), East Baton Rouge Parish, LA – Principal-in-Charge for topographic surveying and right-of-way mapping services for 13 bridge sites on 2 lane roadways.				
12/21 – Ongoing	IDIQ Contract No. 4400021974 for Professional Surveying Services – Statewide, LA – Principal-in-Charge performing Topographic Surveys for LA DOTD. To date, this IDIQ contract has included a total of 15 separate Task Orders for 15 State Highway Projects. Survey tasks included establishing deep rod control monuments, Conventional Topo, Hydrographic Survey, terrestrial and mobile LiDAR Survey, and producing Existing Drainage Maps.				
09/21 – Ongoing	IDIQ Contract No. 4400021532 for Professional Surveying Services – Statewide with Majority of Work in Districts 03 and 07 –Principal-in- Charge for property surveys, establishing existing right-of-way, right-of-way maps and title take-offs for LA DOTD. Under this contract, a total of 24 task orders have been executed.				
06/21 – Ongoing	Contract 4400019336 - H.014219, H.014222, H.014228, H.014231 and H.014236 – Rural Bridge Replacement Initiative Phase II; 5 State Project numbers (20 Bridge Sites) in Districts 04 and 05, LA – Principal-in-Charge for topographic surveying and right-of-way mapping services for 20 bridge sites on 2 lane rural roadways.				

01/21- Ongoing	H.004273.5 – I-49 Connector – Lafayette Parish, LA – LA DOTD – Principal-in-Charge responsible for providing topographic and property surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long.
08/19 – Ongoing	H.011670- I-10/Loyola Interchange Improvements, Kenner, LA – Surveyor-in-Charge/Principal-in-Charge providing Topographic Survey, Right- of-Way Survey, Drainage Survey, and Right-of-Way Monument Mapping. The project stretches along I-10, from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd for approximately 3.2 miles of roadway. Mr. Holleman originally managed SJB Group’s portion of the Survey and is now serving as Principal-in-Charge for any ongoing or new work Forte and Tablada is tasked with.
03/24-04/24	H.015935 LA Hwy 47 Over Bayou Bienvenue- Emergency Bridge Replacement, St. Bernard/Orleans Parish, LA- Principal-in-Charge to provide topographic surveying for an emergency bridge replacement of the LA 47 bridge over Bayou Bienvenue. In addition to Conventional Topographic survey, Hydrographic survey of the Bayou was included. The bridge deck features and substructures were scanned through terrestrial LiDAR methods.
01/21 – 12/22	Contracts 4400010587 - Task Order 18; 4400015237- Task Order 1; 4400021974 - Task Orders 1, 3, and 4- H.003931 - Calcasieu River Bridge (HBI) – Calcasieu Parish, LA – Principal-in-Charge for this project providing topographic survey, Mobile and Terrestrial LiDAR, Multibeam Hydrographic survey of Lake Charles, and drainage mapping. This project is in a high-traffic industrial area along I-10 and is approximately 7 miles long.
01/21 – 06/22	Retainer Contract No. 4400010587 for Professional Surveying Services – Statewide with Majority of Work in Districts 02, 03, 07, 61 and 62, LA – Principal-in-Charge performing Topographic Surveys for LA DOTD. This Retainer contract included a total of 18 separate Task Orders for 11 State Highway Projects. Survey tasks included establishing deep rod control monuments, Conventional Topo, Hydrographic Survey, terrestrial and mobile LiDAR Survey, and producing Existing Drainage Maps.

	Firm	Forte & Tablada, Inc.			
	Name	Joffrey Easley, M.S., P.E.		Years of Relevant Experience with this Employer	19
	Title	Group Leader – Transportation - Bridge		Years of Relevant Experience with Other Employer(s)	3
Degree(s)/Years/Specialization		BSCE / 2000 / Civil Engineering MS / 2003 / Civil Engineering MBA / 2024 / Business Adm			
Active Registration Number/State/Expiration Date		PE 31542 / LA / 03/31/2027			
Year Registered	2004	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Spring Street Bridge			
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).				
02/25 - Ongoing	Linwood Avenue Bridge Rehabilitation, Shreveport, LA - Project Manager for a rehabilitation and strengthening project on a 75-year old steel bridge over multiple CPKC and UPRR railroad tracks in Shreveport, LA. Determined locations to be rehabilitated/strengthened, developed Conceptual Repair Plans, and coordinated with City of Shreveport, CPKC, and UPRR regarding R/R requirements.				
03/23 – 12/24	E Lewis St Bridge Upgrades, Lafayette, LA - Project Manager for a multi-phase project involving the inspection, load rating, and development of rehabilitation plans for a steel girder and slab span bridge that serves the University of Louisiana at Lafayette. Load rating utilized material testing and a 3-D laser scan to determine appropriate properties to consider for the load rating, followed by a 3D FEM load rating analysis, which resulted in the removal of a 3-ton posting requirement. To improve the long-term performance of the bridge, the bridge was subsequently rehabilitated, which included strengthening of the steel girders using post-tensioned cables, concrete spall and crack repairs of the concrete decks and bents, a urethane-epoxy overlay of the bridge deck, and sidewalk repairs.				
08/22 – 10/23	Tiger Drive Bridge Rehabilitation, Thibodaux, LA - Project Manager, Inspector, and Design Engineer for the rehabilitation of the cast-in-place concrete slab span bridge over Bayou Lafourche in Thibodaux, Louisiana following a marine vessel collision. Scope of work included inspection, coordination for a full-scale load test performed by others, and development of repair details. Repairs included pile jacketing of the impacted PPC pile and epoxy injection of cracks in the pile bent cap. The bridge has been reopened with no vehicular or marine vessel restrictions.				
01/21 – 9/21	Retainer for Bridge Preservation – US90: Westbank Expressway Rehab, Jefferson Parish, LA - Project Manager to develop plans for the rehabilitation of the nearly 6-mile-long Westbank Expressway in Jefferson Parish, LA.				

	Firm	Forte & Tablada, Inc.			
	Name	Levi Yantis, P.E.		Years of Relevant Experience with this Employer	10
	Title	Bridge Engineer		Years of Relevant Experience with Other Employer(s)	2
Degree(s)/Years/Specialization		BSCE / 2013 / Civil Engineering			
Active Registration Number/State/Expiration Date		PE 42390 / LA / 09/30/2026			
Year Registered	2018	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Spring Street Bridge			
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).				
02/25 - Ongoing	Linwood Avenue Bridge Rehabilitation, Shreveport, LA - Project Manager for a rehabilitation and strengthening project on a 75-year old steel bridge over multiple CPKC and UPRR railroad tracks in Shreveport, LA. Determined locations to be rehabilitated/strengthened, developed Conceptual Repair Plans, and coordinated with City of Shreveport, CPKC, and UPRR regarding R/R requirements.				
04/20-06/20	LA DOTD Retainer for Complex In-Depth Bridge Inspections (TO2 – US71 Emergency Repairs), Shreveport, LA - Task order to perform emergency repairs on the US 71 Bridge over the ICG Railroad in Shreveport, LA after the structure was struck due to a train derailment. Levi led the superstructure design and produced the structural details for the emergency repairs.				
04/23-04/25	E Lewis Street Bridge Evaluation & Preservation, Lafayette, LA - Performed an updated load rating of an existing steel girder span that was load posted at 3T under a state load rating contract. Material testing was completed to obtain specific material properties, used with previous load testing data, the need for load posting was determined to no longer be necessary. The bridge then went through a bridge preservation project and Levi performed the girder strengthening calculations that were completed to extend the life of the bridge. An as-designed load rating was also performed after the rehabilitation project was completed.				
10/24-02/25	Beco Road over Babin Canal Bridge Rehab, Ascension Parish, LA - Performed a site investigation to observe existing conditions and determine needed rehabilitation details for failing bulkheads and roadway approaches. Designed sheet pile for abutment replacements.				
09/23– 12/23	Carruth Road Bridge Repair and Load Rating, East Feliciana Parish, LA - Bridge repair details were developed for a timber bridge in East Feliciana Parish after the bridge was closed by LADOTD inspectors due to severe decay in several members. The repair details were used by parish forces to reconstruct the entire bridge utilizing only the original piles. An as-designed load rating was performed after the reconstruction was complete to re-open the bridge.				

03/18-04/22	LA DOTD Retainer Contract for Off-System Bridge Load Rating – Task Order 1, Statewide, LA - Led and assisted in 12 complex moveable bridge inspections and load ratings throughout the state. The bridge types included a single leaf bascule span, a vertical lift truss span, several steel vertical lift spans, multiple pontoon bridges, a steel plate girder swing bridge, a small steel truss/cable swing span, and a non-moveable steel truss.
01/10-10/21	LA DOTD Retainer for Complex In-Depth Bridge Inspections, Statewide, LA - Served as Team Leader for the structural, mechanical and electrical in-depth inspections for multiple movable bridges. Bridge types included vertical lift span bridges and steel swing bridges (through girders and through trusses). Also served as the task manager for preparing the in-depth inspection reports.
09/22-Ongoing	LA DOTD Retainer Contract for Load Rating Services – Task Order 6, Statewide, LA - Leading and supervising the load ratings of on-system girder span bridges throughout the state of Louisiana. Structure types range from prestressed concrete girder spans to continuous steel girder units.
03/23-06/23	Port of New Orleans, St. Claude Avenue Bridge Updated Load Rating, New Orleans, LA - Performed an updated load rating for the single bascule span on St. Claude Avenue after significant section loss was found by LADOTD inspection forces. Performed an inspection to verify and quantify section loss measurements noted in the LADOTD inspection report.
09/24-Ongoing	Hosston River Road Bridge Replacement, Caddo Parish, LA - Structural design lead of the replacement bridge within Caddo Parish on Hosston River Road. The bridge consists of LG-25 girder spans with pile bents. Preliminary member sizing and geometry coordination with the roadway design is currently on-going.
06/24-Ongoing	Dawson Creek Bridge Replacements, East Baton Rouge Parish, LA - Structural design lead of 2 replacement bridges within East Baton Rouge Parish over Dawson Creek on Broussard St. and Hundred Oaks Ave. The 2 bridges are slab spans supported on drilled shafts and helical piles. Special substructure design considerations are being taken to avoid overhead utilities and the close proximity of buildings.
02/24-08/24	Burgess Road Bridge Replacement, Livingston Parish, LA - Structural design lead of the replacement bridge within Livingston Parish on Burgess Road. The bridge consists of curved slab spans with pile bents. An as-designed load rating of both bridges was also completed.
09/22-04/25	LA DOTD Retainer Contract for Load Rating Services – Task Order 1, Statewide, LA - Leading and supervising the load ratings of on-system slab span bridges throughout the state of Louisiana. Team leader for bridge inspections to collect additional deterioration measurements of bridge components.
02/22– Ongoing	Ascension Parish Load Ratings, Ascension Parish, LA - Team leader for the inspection of Ascension Parish owned bridges. Also serving as the lead load rating engineer for the bridges after inspection.
09/22-07/23	Ouachita Parish Bridge Replacements, Ouachita Parish, LA - Performed the structural design of a replacement bridge within Ouachita Parish on Good Hope Road. The bridges consist of curved slab spans with a single sidewalk and bents utilizing drilled shafts. An as-designed load rating was also completed.

	Firm	Forte & Tablada, Inc.			
	Name	Jordan Pearson, P.E.		Years of Relevant Experience with this Employer	13
	Title	Senior Vice President		Years of Relevant Experience with Other Employer(s)	2
Degree(s)/Years/Specialization		BSCE / 2009 / Civil Engineering			
Active Registration Number/State/Expiration Date		PE 38621 / LA / 09/30/2026			
Year Registered	2014	Discipline	Civil Engineering		
Contract Role(s)/Brief Description of Responsibilities		Spring Street Bridge			
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).				
10/21- 07/24	BPPJ FEMA Streets PW 910, Bossier City, LA - Project Manager sub consultant to the Project Management prime consultant, Carlisle Thompson. Assisted the prime with managing the rehabilitation and reconstruction of over 40 Parish Roads that were severely affected from 2016 floods experienced within our community.				
2019-2021	Johnson Koran Road Bridge over Foxskin Bayou, Bossier Parish, LA - Project Manager for the roadway and bridge design for replacement of this new concrete bridge, 140' long, 30' clear roadway with (7) – 20' precast concrete slab spans and precast concrete pile bents with 18" PPC piles.				
2017-2022	Linton Road Bridge over Black Bayou Reservoir, Bossier Parish, LA - Project Engineer for replacement of bridge. New cast-in-place concrete bridge, 220' long, 40' clear roadway with (11) – 20' slab spans and pile bents with 24" PPC piles. Widened 1,030' of roadway embankment across reservoir, with concrete retaining walls each side.				
01/15-12/18	Bossier Downtown Re-Envisioning, Bossier City, LA - Project Engineer for this project that "re-envisioned" the area by adding new infrastructure and landscaping to a deteriorating section of Old Bossier City. The project included geometric design, grading, drainage, paving, utilities, and stormwater detention including "Green Design." Traffic lanes were narrowed to add a designated bicycle lane and pedestrian walkways. Stormwater planters and permeable pavers were incorporated to control stormwater runoff. A public plaza area with decorative pavement and overhead shade structures was also included in the project.				
01/15-10/18	U.S. Hwy 80 Improvements Traffic St. to Kelly Ave., Bossier City, LA - Project Manager for this project which included approximately 4,000 linear feet of pavement and drainage improvements. Our scope of services included topographic surveys, right-of-way plats, roadway plans, which included a major round-about. The project also included approximately 4,500 linear feet of water mains (8" to 30").				
06/16-02/20	Sligo Road Bridge over Foxskin Bayou, Bossier Parish, LA – Project Engineer for roadway and bridge design for replacement of a new concrete bridge, 180' long, 30' clear roadway with (9) – 20' precast concrete slab spans and precast concrete pile bents with 16" PPC piles.				

	Firm	Forte & Tablada, Inc.			
	Name	Philip Koch, PLS		Years of Relevant Experience with this Employer	7.5
	Title	Professional Land Surveyor		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization			BS, Business Management / LSU / 2008		
Active Registration Number/State/Expiration Date			5296 / LA / 03/31/2027		
Year Registered	2021	Discipline	Land Surveying		
Contract Role(s)/Brief Description of Responsibilities			Topo Survey/ Construction		
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).				
09/25 - Ongoing	Contract #OLHC BB1- O.B.2025.04.016 through O.B.2025.04.023, O.B.2025.04.049- Bridge Bundle Program- 9 OLHC Project Numbers (9 Bridge Sites), District 04, LA – Surveyor for topographic surveying and establishing existing right-of-way for 9 bridge sites on 2 lane State Highways for the Office of Louisiana Highway Construction.				
01/25	Contract 4400021974- Task Order 12; H.016332- LA 520: Drain Bridge, Claiborne Parish, LA - Surveyor providing topographic survey services for bridge site on a 2 lane rural roadway. The purpose of this project was to replace a small bridge with a large box culvert.				
08/23-06/24	H.015519 - Smith Road Over Red Chute Bayou, Bossier Parish - LA DOTD - Surveyor for providing Right-of-Way and remaining acreage maps for this project. This 1,045' long project is in a low traffic rural area to replace an old bridge over a bayou.				
01/23 – 02/23	Contract 4400021974- Task Order 6- H.001234 LA 1: Port Allen Canal BR Replacement, Port Allen, LA- Surveyor for monitoring survey. Reestablish control from original contractor and created new control to monitor four bents on the LA1 Bridge. Established baseline for future monitoring of bridge by shooting elevations of footings and top of bent caps. Forte and Tablada was retained by LA DOTD to perform a bridge monitoring survey. Settlement occurred on several of the bridge piers and the department would like to have a more comprehensive understanding of the settlement and moving issues.				
04/18-02/23	H.004273.5 – I-49 Connector, Lafayette Parish, LA – LA DOTD – Party Chief, Survey Intern, and Surveyor for providing topographic survey services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long. Forte and Tablada, Inc. was able to mobilize up to 4 Survey crews on this project, in order to meet phased deadlines.				
06/21 – 01/23	Amite River and Tributaries – Comite River Diversion Project, Zachary, LA- Party Chief, Survey Intern, and Surveyor on McHugh Road Bridge Construction. Established control on site, created monitoring points, performed QA/QC cross sections on canal.				

11/22-12/22	West Colyell Improvement Survey - Phase II, Livingston Parish, LA- Survey Intern and Surveyor for providing topographic and waterway survey services for the 8 mile stretch of West Colyell waterway from Buddy Ellis Rd to Colyell Bay. Checked control from previous phase and established control and benchmarks for this phase. Obtained Cross sections and Bridge Topo information for the length of the project.
07/22-07/22	Greenwell Springs at Morgan Improvements, East Baton Rouge Parish, LA – Survey Intern providing topographic survey for improvements of the intersection of Greenwell Springs at Morgan Rd.
01/21 – 03/21	Crestwood Drive, 11th St., & North St. Drainage Topographic and Right of Way Survey, St. Tammany Parish, LA- Party Chief for topographic and property boundary survey, for the Crestwood Drive, 11th Street, and North Street corridors. Provided right of way maps showing property ownership, servitudes, and public Right of ways for the purposes of acquiring drainage servitudes along these corridors to maintain and potentially improve the drainage in these areas.
08/20-03/21	Sims Road Improvements, East Baton Rouge Parish, LA – Party Chief providing topographic survey along Sims Road from LA 16 and Renniger Road for approximately 2.9 miles. The purpose of the project was to provide an overlay and closed drainage.
01/20 – 07/20	East Baton Rouge Stormwater Masterplan, East Baton Rouge Parish, LA- Survey Technician for hydrographic surveying of bayous and creeks located within East Baton Rouge Parish for the EBR Stormwater Masterplan. The work consisted of establishing cross-sections and stream bed profiles along their length as well as locating over 14,000 subsurface structures for the purposes of hydraulic modeling.
08/19-01/20	H.011670- I-10/Loyola Interchange Improvements, Kenner, LA- Survey Technician providing Topographic Survey, Right- of- Way Survey, and Drainage Survey. The project stretches along I-10, from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd for approximately 3.2 miles of roadway. The Survey was part of a Design-Build Project, which required weekly data updates, to allow the Design team to begin working and stay on schedule. Due to the compressed timeline of the Survey, a total of 3 Survey firms were contracted to split up the workload, with Forte and Tablada, Inc. serving as Prime Surveyor, being responsible for management and QA/QC of all Survey work.

	Firm	Forte & Tablada, Inc.			
	Name	Trenton Iglehart		Years of Relevant Experience with this Employer	2.5
	Title	Senior CAD Technician		Years of Relevant Experience with Other Employer(s)	27
Degree(s)/Years/Specialization			N/A		
Active Registration Number/State/Expiration Date			4227009 / N/A / July 14, 2027		
Year Registered		N/A	Discipline	FAA Certified Remote Pilot	
Contract Role(s)/Brief Description of Responsibilities			3D Laser Scanning		
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 – 07/22		S.P. No. H.012812, US 190 at Northshore and Camp Villere; LADOTD; St. Tammany Parish, LA. Senior Project Designer. Created roadway templates and developed corridor model for the urban multi-lane roundabout at the intersection of US 190 and Northshore Blvd. and the urban single lane roundabout at US 190 and Camp Villere Rd. Created graphical grading sheets from the roadway model to derive accurate cross sections and earthwork volumes. Lisa was also responsible for the creation of several plan sheets including Plan & Profile Sheets, Typical Sections, Geometric Layouts, Joint Layouts and Cross Sections. Assisted in the determination of several quantities including earthwork, asphalt, concrete curb and gutter, and PCC pavement.			
05/24 – Ongoing		H.011670 I-10 Loyola Interchange Improvements, Orleans Parish, LA (4400010586) – Senior CAD Technician field data processing and drafting for topographic surveys. The project stretches along I-10, from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd for approximately 3.2 miles of roadway. Also responsible for Right-of-Way Monument Mapping as part of a later Phase of work.			
03/24 – 04/24		H.015935 LA Hwy 47 Over Bayou Bienvenue – Emergency Bridge Replacement, St. Bernard/Orleans Parish, LA – Hydrographic Task Manager Topographic surveying for an emergency bridge replacement of the LA 47 bridge over Bayou Bienvenue. In addition to the Conventional Topographic survey, Hydrographic survey of the Bayou was included. The bridge deck features and substructures were scanned through terrestrial LiDAR methods. Due to the emergency status of the project, the project was completed in a condensed timeline.			
09/22 – 06/23		H.010468.5 I-20: Monkhouse to I-49 LADOTD, Caddo Parish, LA (4400017713) – Senior CAD Technician processing data and drafting files for Static GPS Control, topographic surveys utilizing Terrestrial Laser Scanning methods of data collection, QL C & D subsurface utility services, existing drainage map development, and Mobile Laser Scanning for interstate approximately 10 miles of interstate rehabilitation.			
09/22 – 06/23		H.004100 I-10 I-110 Phase 7 (Task Order No. 4) (4400014660) – Senior CAD Technician for the topographic survey, HDS 3D Terrestrial Laser Scanning, 3D Mobile laser scanning and S.U.E. Services in support of QL B, C, and D subsurface utility designating for additional areas around and below the I-10 and I-110 flyover interchange.			
01/23 – 04/22		H.12685.5 LA 385 Ryan St Intersection IMPRS, Calcasieu Parish, LA (4400017711) – Senior CAD Technician/LiDAR Technician for 3D Mobile laser scanning field data collection, processing, LiDAR feature extraction and drafting for topographic surveys.			

01/23 – 04/22	H.014752.5 LA 3021 Dual Turn Lanes @ LA 39, Orleans Parish, LA (4400017711) – Senior CAD Technician field data processing and drafting for topographic surveys. The project was located at the intersection of La 39 (N. Claiborne Ave.) and La 46 (Elysian Fields Ave.) and had linear distance of approximately 3600’.
08/21 – 04/22	H.012851 UP RR Corridor, Plaquemine Parish (4400010586) – Senior CAD Technician field data processing, drafting for Topographic Surveys and Existing Drainage Map development.
01/23 – 04/22	H.009300.5 Hooper Road Widening, East Baton Rouge Parish, LA (4400017711) – Senior CAD Technician field data processing, drafting for topographic surveys and existing drainage map development.
03/21 – 06/21	H.010885 LA 91 Bayou Plaquemine Brule Bridge Replacement, Acadia Parish (4400010586) – Senior CAD Technician/Hydrographic Task Manager for field data collection and processing for all Hydrographic survey data. Field data processing and drafting for Topographic Surveys. This project consisted of 0.25 miles of roadway/bridge topographic survey and 500’ upstream & downstream bathymetric cross sections for Bridge Replacement.
04/20 – 11/20	H.000688 US 11 Norfolk Southern Railroad, St. Tammany Parish (4400010586) – Senior CAD Technician/LiDAR Technician for 3D Mobile laser scanning field data collection, processing, LiDAR feature extraction and drafting for Topographic Surveys. This project was for the design of a new US 11 overpass over Norfolk Southern Railroad.
02/20 – 08/20	H.010652 LA 73 - US 61 Airline - Essen Lane, East Baton Rouge Parish (4400010586) – Senior CAD Technician/LiDAR Technician for 3D Mobile laser scanning field data collection, processing, LiDAR feature extraction and drafting for Topographic Surveys. This project was for the design of improvements to Jefferson Highway from Airline to Essen Lane in East Baton Rouge Parish.
01/18 – 04/20	H.004100.5 I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA – Senior CAD Technician for the Topographic Surveys, HDS 3D Terrestrial Laser Scanning, 3D Mobile laser scanning and S.U.E. Services in support of QL B, C, and D subsurface utility designating. This project was for the widening design of Interstate 10 from LA 415 to Essen Lane in East Baton Rouge Parish for approximately 13 miles of roadway.
04/19 – 08/19	H.005121 I-10 to La 1 Connector, West Baton Rouge Parish (4400010586) – Senior CAD Technician field data processing and drafting for Topographic Surveys. This project was for the design of a new route connecting LA 1 to La 415, over the Intracoastal Waterway in West Baton Rouge Parish.

	Firm	Forte & Tablada, Inc.			
	Name	Brent Campbell		Years of Relevant Experience with this Employer	13
	Title	Group Leader – Remote Sensing		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS, Construction Management / LSU / 2013			
Active Registration Number/State/Expiration Date		3956975 / N/A / 10/29/27 - FFA Certified Remote Pilot			
Year Registered	N/A	Discipline	N/A		
Contract Role(s)/Brief Description of Responsibilities		3D Laser Scanning			
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).				
02/25- Ongoing	Contract 4400021974- Task Order 13- H.016278- US 167: Median Improvements, Vermilion Parish, LA - Advanced Measurements Group Leader to provide topographic and Mobile LiDAR surveying for a maiden improvements of the US 167. The survey included over 2 miles along a divided 4 lane highway in a rural area.				
01/16-Ongoing	H.004273.5 – I-49 Connector, Lafayette Parish, LA – LA DOTD – LiDAR technician and Group Leader responsible for providing terrestrial LiDAR survey of roadway features for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long. Forte and Tablada, Inc. completed terrestrial LiDAR scanning services for much of the congested corridor as a means to obtaining topographic data without endangering surveyors.				
01/23- 01/24	Contract 4400021974- Task Order 2- H.014218 US190-Livingston Parish Line, East Baton Rouge Parish, LA– Advanced Group Leader responsible for management and QAQC of performing Mobile LiDAR and extraction for project providing topographic survey. This project is in a dense urban area and is approximately 4 miles long. The purpose of the project is to complete a road overlay and drainage improvements. Mobile LiDAR was utilized, throughout the project, as a means to obtaining topographic data without endangering surveyors.				
05/21-12/22	Contracts 4400010587- Task Order 18; 4400015237- Task Order 1; 4400021974- Task Orders 1, 3, and 4- H.003931- Calcasieu River Bridge (HBI), Calcasieu Parish, LA– Advanced Group Leader responsible for Mobile LiDAR acquisition and extraction, as well as Hydrographic Survey acquisition and extraction efforts. project is in a high-traffic industrial area along I-210 and is approximately 7 miles long. Forte and Tablada completed Mobile LiDAR scanning services for much of the corridor as a means of obtaining topographic data without endangering surveyors. The Survey also included Multibeam Hydrographic survey of Lake Charles, and Terrestrial LiDAR scanning of bridge substructures.				
03/21 – 12/21	MOVEBR (20-EN-HC-0003) Florida Blvd. Corridor Enhancement, East Baton Rouge Parish, LA – Mobile LiDAR Tech responsible for assisting with capturing mobile data. Responsible for processing and extracting the Mobile LiDAR data. This project is in a dense urban area and is approximately 4 miles long. Forte and Tablada completed mobile LiDAR services for much of the congested corridor as a means of obtaining topographic data without endangering surveyors.				

	Firm	Forte & Tablada, Inc.		
	Name	Rachel Waldroup, P.L.S.	Years of Relevant Experience with this Employer	10
	Title	Professional Land Surveyor	Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS / 2020 / Environmental Science AAS / 2015 / Civil Surveying and Mapping Technology		
Active Registration Number/State/Expiration Date		PLS 5277 / LA / 09/30/2026		
Year Registered	2022	Discipline	Land Surveying	
Contract Role(s)/Brief Description of Responsibilities		3D Laser Scanning		
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).			
09/25 - Ongoing	IDIQ Contract #OLHC BB1- O.B.2025.04.016 through O.B.2025.04.023, O.B.2025.04.049- Bridge Bundle Program- 9 OLHC Project Numbers (9 Bridge Sites), District 04, LA – Surveyor for topographic surveying and establishing existing right-of-way for 9 bridge sites on 2 lane State Highways for the Office of Louisiana Highway Construction.			
04/24 – Ongoing	IDIQ Contract No. 4400027919 for Professional Surveying Services – Statewide with Majority of Work in Districts 02, 61, and 62 – Surveyor-In-Charge performing property surveys, establishing existing right-of-way, right-of-way maps and title take-offs for LA DOTD. Under this contract, a total of 7 task orders have been executed. This contract showcases Ms. Waldroup's familiarity with the process of managing an LADOTD Survey IDIQ Task Order from beginning to end.			
08/23 – Ongoing	H.015547, H.015548, H.015549, H.015341, H.015551, H.015552, H.015545, H.015550, H.015544, H.015553- Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program- 10 State Project Numbers (13 Bridge Sites) District 61 (4400025029) –Surveyor for topographic surveying and right-of-way mapping services that included title take-offs, field investigations to survey property boundary evidence, boundary analysis, existing right of way location determination and right of way mapping. The condensed timeline of the projects required that multiple crews be mobilized weekly to stay on schedule.			
09/21 – Ongoing	IDIQ Contract No. 4400021532 for Professional Surveying Services – Statewide with Majority of Work in Districts 03 and 07 – Surveyor/Surveyor-In-Charge performing property surveys, establishing existing right-of-way, right-of-way maps and title take-offs for LA DOTD. Under this contract, a total of 24 task orders have been executed. This contract showcases Ms. Waldroup's familiarity with the process of managing an LADOTD Survey IDIQ Task Order from beginning to end.			
06/21 – Ongoing	H.014219, H.014222, H.014228, H.014231 and H.014236 – Rural Bridge Replacement Initiative Phase II; 5 State Project numbers (20 Bridge Sites) in Districts 04 and 05 (4400019336) – Survey CAD Technician and Surveyor for topographic surveying and right-of-way mapping services that included title take-offs, field investigations to survey property boundary evidence, boundary analysis, existing right of way location determination and right of way mapping.			
03/21 – Ongoing	MOVEBR (20-EN-HC-0003) Florida Blvd. Corridor Enhancement – East Baton Rouge Parish, LA – Survey CAD Technician / Survey Manager for this project providing topographic surveying, drainage mapping, and Right-of-way services. This project is in a dense urban area and is approximately 4 miles long. Forte and Tablada completed mobile LiDAR services for much of the congested corridor as a means of obtaining topographic data without endangering surveyors.			

08/19 – Ongoing	H.011670- I-10/Loyola Interchange Improvements- Kenner, LA- Survey CAD Technician providing Topographic Survey, Right-of-Way Survey, and Drainage Survey. The project stretches along I-10, from the levee in Kenner to the Williams Blvd. off ramp, as well as Loyola Avenue and portions of Veterans Blvd for approximately 3.2 miles of roadway. The Survey was part of a Design-Build Project, which required weekly data updates, to allow the Design team to begin working and stay on schedule.
08/15 – Ongoing	H.004273.5 – I-49 Connector, Lafayette Parish, LA – LA DOTD – Survey CAD Technician, Survey Intern, and Surveyor responsible for providing topographic, terrestrial LiDAR scanning, and property surveying services for the I-49 Connector. The project is in a dense urban area and is approximately 5 miles long.
04/25-07/25	Contract 4400024189 – Task Order 3 - H.016276- Sidney Leblanc Rd over Peebles Coulee, District 03–Surveyor for topographic surveying and right-of-way mapping services that included title take-offs, field investigations to survey property boundary evidence, boundary analysis, existing right of way location determination.
04/25-06/25	Contract 4400024189 – Task Order 2 - H.015911- Grover Jones Rd over Williams Creek, District 04–Surveyor for topographic surveying and right-of-way mapping services that included title take-offs, field investigations to survey property boundary evidence, boundary analysis, existing right of way location determination.
05/21 – 12/22	Contracts 4400010587 - Task Order 18; 4400015237- Task Order 1; 4400021974- Task Orders 1, 3, and 4- H.003931- Calcasieu River Bridge (HBI), Calcasieu Parish, LA – Survey CAD Technician for this project providing topographic survey, Mobile and Terrestrial LiDAR, Multibeam Hydrographic survey of Lake Charles, and drainage mapping. This project is in a high-traffic industrial area along I-10 and is approximately 7 miles long.
08/20–03/22	H.013979, H.013995, H.013992, H.013994, H.013985, H.013954, H.013990- Rural Bridge Replacement Initiative Phase I; 7 State Project Numbers (22 Bridge Sites) in Districts 04, 05, 08 and 58 (4400017598)– Survey CAD Technician for topographic surveying and right-of-way mapping services that included title take-offs, field investigations to survey property boundary evidence, boundary analysis, existing right of way location determination and right of way mapping.

	Firm	NTB & Associates, Inc.			
	Name	Amy K. Schulze, PE, CFM		Years of Relevant Experience with this Employer	7.5
	Title	Sr. Project Engineer		Years of Relevant Experience with Other Employer(s)	20
Degree(s)/Years/Specialization		BS / 1998 / Civil Engineering, Ohio Northern University/ CFM National Certification: US-16-08839 / Electro-Magnetic Locating Instruments Certified/ Certificate of Locating Competency #WA2028 (Staking University)			
Active Registration Number/State/Expiration Date		30295 / Louisiana / 03/31/2027			
Year Registered	2002	Discipline	Professional Engineer		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: SUE/ Utility Coordination Brief Description: Mrs. Amy Schulze, PE, CFM will serve as the SUE Project Engineer/ Manager during this contract. She will supervise and manage any required subsurface utility designating/ locating services. Amy has nearly 30 years of SUE 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).				
12/25 – 03/26	LaDOTD/BPPJ Cong Relief Winfield Road (2025-118/H.003855.5) SUE Project Manager for QL B, C, and D subsurface utility investigations including record reviews, surface feature surveys, underground utility designating, utility base-map development, and utility-owner coordination in support of roadway design.				
06/25 – 03/26	City of Baton Rouge/ East Baton Rouge Parish, Upper Ward Creek Clearing & Snagging Project, East Baton Rouge Parish, LA (25-DR-US-0013) SUE Project Manager for QL C, B, and D surface utility designating, utility coordination services, and surveys in support of SUE for flood reduction and associated channel-improvement work.				
11/25 – 03/26	LaDOTD Kings Hwy: Healthcare & Development Corridor, Caddo Parish, LA (H.015724) SUE Project Manager for surveys in support of SUE, QL B, C, & D utility designating, and utility coordination services in support of rehabilitation and design for roadway reconstruction.				
01/22 – 03/26	LaDOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA (H.001779) SUE Project Manager for surveys in support of SUE, QL A, B, C, & D utility designating/ locating, and utility coordination services for the design-build project to replace the Jimmy Davis Bridge across the Red River.				
04/21 – 03/26	LaDOTD Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (4400019338) SUE Project Manager for QL C & D subsurface utility services and surveys in support of SUE for 21 bridge and culvert replacements as a sub to Sigma/ Waggoner.				
08/21 – 03/26	LaDOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (4400019337) SUE Project Manager for QL C & D subsurface utility services and surveys in support of SUE for 34 bridge and culvert replacements as a sub to BKI.				

08/22 – 03/26	Delta Utilities/ CenterPoint Energy Survey & SUE Services, LA (Various Proj. Nos.) SUE Project Manager for QL B, C, & D subsurface utility designating services and surveys in support of SUE in various parishes throughout Louisiana to assist with utility relocation activities. To date, NTBA has worked on over 100 separate projects stretching from Lake Charles to Lafayette to Shreveport, and along the Northshore of Lake Pontchartrain.
08/20 – 03/25	Baton Rouge North Airpark Utility Corridor Phase 2, Baton Rouge, LA (Unknown) SUE Project Manager for QL B, C, & D subsurface utility designating and surveys in support of SUE at the Baton Rouge Metropolitan Airport. Surveys were performed to locate subsurface utilities within the designated limits. As part of Q LB designating, 4-way sweeps of the area were also performed to confirm that no other utilities exist within the project area.
01/25 – 02/25	LaDOTD Contract for Topographic Surveys, Box Culvert Replacements, Tasks Orders 1-4, Evangeline, St. Landry, & Bienville Parishes (4400021975) SUE Project Manager for QL D subsurface utility record research services and surveys in support of SUE for preliminary designs of box culvert initiative projects.
04/18 – 11/24	LaDOTD I-10: LA 415 to Essen Lane, West & East Baton Rouge Parishes, LA (H.004100.5) SUE Project Manager for QL B, C, and D subsurface utility designating as well as for surveys in support of SUE for approximately 13 miles of roadway.
06/24 – 08/24	St. Tammany Parish Government Carroll Road Survey & SUE, St. Tammany Parish, LA (42200856) SUE Project Manager for QL B, C, and D utility designating services and surveys in support of SUE throughout the approximately 1.5 miles of the project corridor of Carroll Road including all surface streets, drainage ways, and 2 major intersections within and surrounding the project corridor.
06/24 – 08/24	Ascension Parish Government LA 73 to LA 30 Roundabout, Ascension Parish, LA (MA-23-08) SUE Project Manager for QL B, C, and D subsurface utility designating services and surveys in support of SUE for the intersection improvements for the design of a new roundabout as a subconsultant to GEC, Inc.

	Firm	NTB & Associates, Inc.			
	Name	Mike J. King, PLS		Years of Relevant Experience with this Employer	19.5
	Title	Vice President		Years of Relevant Experience with Other Employer(s)	2
Degree(s)/Years/Specialization		B.S. / 2012 / Construction Management, Louisiana State University			
Active Registration Number/State/Expiration Date		5127 / Louisiana / 09/30/2027			
Year Registered	2015	Discipline	Professional Surveyor		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: SUE/ Utility Coordination Brief Description: Mr. Mike King, PLS will serve as NTBA Survey Project Manager for topographic surveying services during this contract. He satisfies MPR No. 5 for topographic surveying experience. Mike will manage field crews, file processing, drafting, and submittals. Mike has over 20 years of surveying 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).				
12/25 – 03/26	LaDOTD/BPPJ Cong Relief Winfield Road (2025-118/H.003855.5) Quality Control Surveyor for surveys in support of QL B, C, and D subsurface utility investigations including record reviews, surface feature surveys, underground utility designating, utility base-map development, and utility-owner coordination for roadway design.				
08/25 – 03/26	LaDOTD I-20: Sam R. Fert Dr. to Red River Bridge, Caddo Parish, LA (H.016413.5) Survey Project Manager for Static GPS Control surveys, topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, and surveys in support of SUE for interstate rehabilitation along I-20, between a point southeasterly of the I-20 & I-49 interchange and the Caddo/ Bossier Parish Line.				
11/25 – 03/26	LaDOTD Kings Hwy: Healthcare & Development Corridor, Caddo Parish, LA (H.015724) Survey Project Manager directing field crews, file processing, drafting, and submittals for Static GPS Control surveys, topographic surveys, and surveys in support of QL B, C, & D utility designating, and utility coordination services in support of rehabilitation and design for roadway reconstruction.				
01/23 – 03/26	LaDOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA (H.001779) Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, property surveys, title take-offs, description preparations, preliminary and final right-of-way mapping, surveys in support of SUE, QL A, B, C, & D utility designating/locating, and utility coordination services for the design-build project to replace the Jimmy Davis Bridge across the Red River.				
08/21 – 03/26	LaDOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (4400019337) Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, property surveys, title take-offs, description preparations, preliminary and final right-of-way mapping, surveys in support of SUE, and QL C & D subsurface utility services for 34 bridge and culvert replacements as a sub to BKI.				

04/21 – 03/26	LaDOTD Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (4400019338) Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, property surveys, title take-offs, description preparations, preliminary and final right-of-way mapping, surveys in support of SUE, and QL C & D subsurface utility services for 21 bridge and culvert replacements as a sub to Waggoner.
08/22 – 03/26	Delta Utilities/ CenterPoint Energy, Surveying & SUE Services, Various Parishes, LA (Various Proj. Nos.) Quality Control Surveyor assisting in staffing, coordination, and QA/QC for topographic surveys, property surveys, surveys in support of SUE, title takeoffs, boundary and right-of-way calculations, CADD drawings, and plats for maintenance and construction projects. To date, NTBA has worked on over 100 separate projects stretching from Lake Charles to Lafayette to Shreveport, and along the Northshore of Lake Pontchartrain.
12/24 – 05/25	LaDOTD Contract for Topographic Surveys, Box Culvert Replacements, Tasks Orders 1-4, Evangeline, St. Landry, & Bienville Parishes (4400021975) Project Manager directing field crews, file processing, drafting, and submittals for Static GPS Control surveys, topographic surveys, and surveys in support of QL D subsurface utility record research for preliminary designs of box culvert initiative projects.
12/17 – 11/24	LaDOTD I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA (44-12323, 44-17713, 44-14660 - Multiple TOs) Assistant Project Manager assisted in the management of field crews and technicians for topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway.
04/22 – 04/23	LaDOTD I-20 Monkhouse to I-49, Caddo Parish, LA (4400017713) Assistant Project Manager assisted in the management of field crews and technicians for Static GPS Control, topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection, surveys in support of SUE, and QL C & D subsurface utility services, drainage map preparation, and Mobile Laser Scanning for interstate rehabilitation.
12/20 – 03/22	LaDOTD LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA (4400017713) Assistant Project Manager assisted in the management of field crews and technicians for topographic surveys utilizing HDS 3D Terrestrial Laser Scanning methods of data collection and surveys in support of QL C & D subsurface utility designating for bridge repair/ rehabilitation.
05/15 – 12/20	City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.) Bossier Parish, LA (City Proj. No. 8-15) Quality Control Surveyor reviewed data and drafting for Static GPS Control surveys, topographic, property, and hydrographic surveying services, surveys in support of SUE, and QL A, B, C, and D subsurface utility designation/locating for a parkway facility design featuring new roads, additional lanes, roundabouts, and a bridge.

	Firm	NTB & Associates, Inc.			
	Name	Emily Kliwer, EI		Years of Relevant Experience with this Employer	1
	Title	Engineering Intern		Years of Relevant Experience with Other Employer(s)	0
Degree(s)/Years/Specialization		BS / 2025 / Civil Engineering, Purdue University Fort Wayne			
Active Registration Number/State/Expiration Date		ET32500282 / IN / 11/30/2124			
Year Registered	2025	Discipline	Engineer Intern		
Contract Role(s)/Brief Description of Responsibilities		Contract Role: SUE/ Utility Coordination Brief Description: Ms. Emily Kliwer, EI will serve as NTBA SUE Assistant Project Manager during this contract. She will support Amy by assisting with the coordination, documentation, and oversight of subsurface utility designating and locating activities to ensure all SUE tasks are completed accurately and efficiently.			
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).				
12/25 – 03/26	LaDOTD/BPPJ Cong Relief Winfield Road (2025-118/H.003855.5) SUE Assistant Project Manager assisting with the management of for QL B, C, and D subsurface utility investigations including record reviews, surface feature surveys, underground utility designating, utility base-map development, and utility-owner coordination in support of roadway design.				
11/25 – 03/26	City of Baton Rouge/ East Baton Rouge Parish, Upper Ward Creek Clearing & Snagging Project, East Baton Rouge Parish, LA (25-DR-US-0013) SUE Assistant Project Manager assisting with the management of QL C, B, and D surface utility designating, utility coordination services, and surveys in support of SUE for flood reduction and associated channel-improvement work.				
08/25 – 03/26	LaDOTD I-20: Sam R. Fert Dr. to Red River Bridge, Caddo Parish, LA (H.016413.5) SUE Assistant Project Manager assisting with the management of surveys in support of SUE and QL C & D subsurface utility services for interstate rehabilitation along I-20, between a point southeasterly of the I-20 & I-49 interchange and the Caddo/Bossier Parish Line.				
11/25 – 03/26	LaDOTD Kings Hwy: Healthcare & Development Corridor, Caddo Parish, LA (H.015724) SUE Assistant Project Manager assisting with the management of surveys in support of SUE, QL B, C, & D utility designating, and utility coordination services in support of rehabilitation and design for roadway reconstruction.				
06/23 – 08/24 08/24 – 03/26	LaDOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA (H.001779) SUE Assistant Project Manager assisting with the management of surveys in support of SUE, QL A, B, C, & D utility designating/locating, and utility coordination services for the design-build project to replace the Jimmy Davis Bridge across the Red River.				
06/23 – 08/24	Ascension Parish Government LA 73 to LA 30 Roundabout, Ascension Parish, LA (MA-23-08) SUE Assistant Project Manager-in-Training supporting the completion of QL B, C, and D subsurface utility designating services, and surveys in support of SUE for the intersection improvements for the design of a new roundabout as a subconsultant to GEC, Inc.				

06/24 – 08/24	St. Tammany Parish Government Carroll Road Survey & SUE, St. Tammany Parish, LA (42200856) SUE Assistant Project Manager-in-Training supporting the completion of for QL B, C, and D utility designating services and surveys in support of SUE throughout the approximately 1.5 miles of the project corridor for roadway improvements.
06/24 -06/24	City of Baton Rouge/ East Baton Rouge Parish, MOVEBR Bluebonnet Blvd. (Perkins – Picardy) East Baton Rouge Parish, LA (19-CP-HC-0034) SUE Assistant Project Manager-in-Training supporting the completion of QL A, B, C, and D subsurface utility designating/ locating and surveys in support of SUE throughout the approximately 1.5 miles of the project corridor.
06/23 – 02/24	LaDOTD IDIQ Contract for SUE Services, I-10, Task Orders 1, 2, 4, & 5, East Baton Rouge Parish, LA (4400014660) SUE Assistant Project Manager-in-Training supporting the completion of QL B, C, D subsurface utility designating services and surveys in support of SUE for four task orders for several additional areas around the I-10 corridor in conjunction with the on-going design-build contract.



LBJ East Design Build Project

Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Construction Phasing, and Program Cost Estimating

Section 17

Firm Name	AECOM Technical Services, Inc.		Past Performance Evaluation Discipline(s)*		Bridge, Other (Railroad Coordination)
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	Louisiana Department of Transportation and Development		
Project Location	Lafayette, LA		Owner's Project Manager	Ryan Morvant, PE	
Owner's Address, Phone, Email		PO Box 94245, Baton Rouge, LA 70804-9245 Phone: 225.379.1067 Email: ryan.morvant@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

Background

The 5.5-mile I-49 Lafayette Connector project is one of the largest undertaken by the DOTD, with an estimated construction cost of \$2.5 billion. AECOM's roles include were multi-discipline primarily supporting CSS, NEPA, Structure Design and Railroad Coordination. The following paragraphs highlight AECOM's structural design and railroad coordination efforts to date.

As Structures Task Manager, Gary Maji, led the design of all bridges and retaining walls along this 5.5-mile corridor. This task was highlighted by the conceptual design and development of a 2-mile continuous elevated six-lane viaduct and the conceptual and preliminary design of the Kaliste-Saloom Interchange through the City of Lafayette. This viaduct structure spans numerous local & arterial grade crossings, an out-of-service rail yard facility, and a Louisiana Delta Railroad track spur. Structural design along the corridor also included (2) new grade-separated interchanges at Kaliste-Saloom and University/Surrey, I-49 and University Bridges over the Vermillion River and the development of over (25) retaining and noise wall structures. **Design work also required the development of conceptual and preliminary railroad design submittals for new grade separations at BNSF and LDOR. These submittals were led by AECOM's Railroad Coordinator, Jonathan McDowell, who initiated and led pre-submittal meetings with DOTD's Rail Unit Lead and BNSF and LDOR representatives to help facilitate the reviews and approvals.**

The AECOM Team performed an alternative structural analysis evaluating precast LG Girder, LU Girder and Precast Segmental Girder alternatives for a 2-mile, twin-viaduct structure through downtown Lafayette. The bridge typical section consists of two separate 75-ft wide structures that provided

four (4) continuous through lanes with 12-ft shoulders.

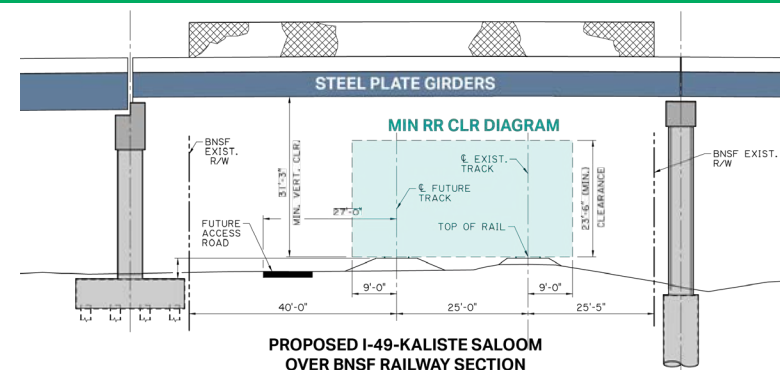
The conceptual design analysis required at the Kaliste-Saloom Interchange required the AECOM Team to **develop conceptual and preliminary railroad grade separated packages for three (3) new crossings at this interchange. This 3-way elevated interchange required significant design coordination. Project team meet several times with the BNSF to communicate design criteria, clearance requirements, right-of-way, drainage, phased construction, and track operations to facilitate reviews and approvals.**

RELEVANCE TO LADOTD

Steel Girder/Complex Structures Design, Railroad Coordination/Grade Separation Structure, Construction Phasing, and Line & Grade (Structures)

PROJECT TEAM

Gary Maji, Daniel Boyd, Jonathan McDowell, Steve Haynes, Sean Voisinet, Derek Chisholm



Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Bridge, Road, Traffic, Other (Railroad Coordination)
Project Name	US 190 UPRR Overpass Near Opelousas			Firm responsibility (prime or sub?)	Prime
Project Number	H.000445	Owner's name	Louisiana Department of Transportation and Development		
Project Location	St Landry Parish, LA		Owner's Project Manager	Hamed Babaizadeh, PhD, PE	
Owner's Address, Phone, Email		1201 Capitol Access Road, Baton Rouge, LA, 70802, 225.379.1331, hamed.babizedadeh@la.gov			
Services Commenced by This Firm (mm/yy)		04/25	Total Consultant Contract Cost (\$1,000's)		\$2,555
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)		\$1,971

Background

AECOM is currently providing preliminary and final design services for resurfacing and/or reconstruction and widening US 190 east of the I-49/US 190 Interchange near Opelousas, LA. This project includes bridge replacements over Little Teche Bayou and UPRR and retaining walls near the UPRR tracks, roadway design, supplemental design survey, and bridge hydraulic design and analysis.

The existing pair of bridges over UPRR were constructed in the 1950's and 60's, have poor condition ratings and substandard railroad vertical clearances and need to be replaced. AECOM is currently developing preliminary design configurations to accommodate construction phasing and UPRR design requirements. The bridges over Little Teche Bayou were also constructed in the late 1950's and 60's and have fair to poor condition ratings and also need replacements.

Extensive railroad design coordination will be required for the US 190 bridge replacements over UPRR tracks. **AECOM initially coordinated with the DOTD/PM and DOTD's Rail Coordinator, Shawn Luke in the development of the conceptual and preliminary railroad submittals so that the design is in accordance with the UPRR/BNSF Railroad Grade Separation Guidelines.** Bridge configurations were developed with UPRR required horizontal and vertical clearances, accommodations for future track, and substructure bents that included the crash wall protection provisions.

Geometric revisions at the I-49/US 190 Interchange ramp connections and the maintenance of traffic requirements along US 190 throughout the duration of project construction will require AECOM to develop bridge configurations that maintain four (4) lanes of traffic at all times.

Detailed bridge hydraulic modeling of the Little Teche Bayou floodplain is currently underway for the Zone A designated floodplain. The project team is using HEC-RAS design software to that bridge span configurations do not create an adverse impact upstream and result in a no-rise certification.

RELEVANCE TO LADOTD

RR Coordination, Topographic Survey/ROW, Bridge Replacement, Staged Construction, Maintenance of Traffic, Traffic Engineering, and Roadway Design

PROJECT TEAM

Daniel Boyd, Jonathan McDowell, Josh Guitreau, Greg Trahan, Sarah Elsworth, Jonathan Giardina, Sreeni Bollu



Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Bridge, Other (Rail Coordination)
Project Name	I-76 over BNSF and Beaver Creek			Firm responsibility (prime or sub?)	Prime
Project Number	N/A	Owner's name	Colorado Department of Transportation		
Project Location	Brush, CO		Owner's Project Manager	Bin Zhang	
Owner's Address, Phone, Email		10601 West 10th Street, Greeley, CO, 970.888.4486, binbin.zhang@state.co.us			
Services Commenced by This Firm (mm/yy)		08/21	Total Consultant Contract Cost (\$1,000's)		\$3,500
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)		\$3,000

Background

As part of our I-76 Corridor on-call contract to improve 16-miles of rural interstate in Morgan County, AECOM prepared value engineering, conceptual, preliminary and final design engineering services for the replacement of the I-76 main bridges over BNSF Railway and Beaver Creek.

The existing bridges were constructed in the early 1970s and designated structurally deficient and functionally obsolete. Numerous steel and concrete bridge configurations were evaluated throughout the conceptual and preliminary design efforts. Bridge layout considered numerous project site constraints including Beaver Creek floodplain hydraulics, constrained site access, atypical alignment skews, impacts to nearby environmental resources, and BNSF Railway coordination.

Throughout the duration of the conceptual and preliminary bridge designs, AECOM's rail task lead, supported the design team helping to identify, confirm, assess, and implement BNSF's Railroad Grade Separation Guideline criteria into project solutions. AECOM worked closely with CDOT's Rail Manager to review submittal packages and directly collaborate with the BNSF Railway Project Manager to help facilitate BNSF reviews and approvals.

Bridge design alternatives were evaluated against numerous criteria. Geometric constraints associated with a highly skewed alignment and BNSF's 225-ft ROW, required AECOM to investigate span configurations with piers located in and beyond BNSF ROW. AECOM's design extended the Span-to-Depth ratio of typical precast girder sections by considering atypical structure depths, reduced girder spacings and post-tensioned design approaches. Span configurations also accommodated two (2) additional future track with access roads resulting in span options extending over 300-ft.

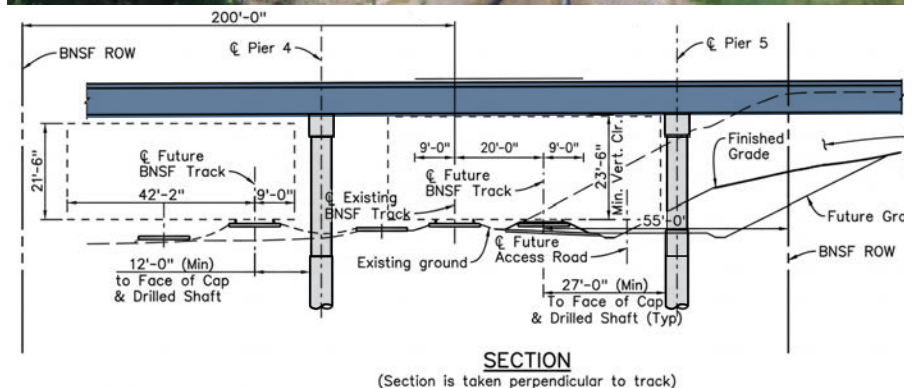
Subsequent discussions with the BNSF Public Projects Manager identified a layout configuration alternative that would allow railroad pier protected substructures within BNSF Railway ROW.

RELEVANCE TO LADOTD

RR Coordination, Topographic Survey/ROW, Bridge Replacement, Span-to-Depth Ratio, Staged Construction, Maintenance of Traffic, Roadway Design

PROJECT TEAM

Gary Maji, Steve Haynes, Sean Voisnet



Firm Name	AECOM Technical Services, Inc.		Past Performance Evaluation Discipline(s)*		Bridge, Road, Traffic	
Project Name	Southeast Connector			Firm responsibility (prime or sub?)		Sub
Project Number	N/A	Owner's name		TxDOT		
Project Location	Fort Worth, TX		Owner's Project Manager		Justin Thomey, PE	
Owner's Address, Phone, Email		2501 S W Loop 820, Fort Worth, TX 76133, 817.370.6500, justin.thomey@txdot.gov				
Services Commenced by This Firm (mm/yy)		12/21	Total Consultant Contract Cost (\$1,000's)			N/A-Unknown
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$42,900

Background

The Southeast Connector project is part of the Texas Clear Lanes initiative, located in southeast Tarrant County. This transformative project spans 16.6 miles along I-20, I-820, and US-287, encompassing three major interchanges, numerous underpass and overpass structures, four overpasses, and two underpasses for the Union Pacific Railroad (UPRR). The project limits extend along I-20 from Forest Hill Drive to Park Springs Boulevard, I-820 from I-20 to Brentwood Stair Road, and US-287 from Bishop Street to Sublett Road, with a total of 71 bridges, including deferred work components. AECOM played a pivotal role in successfully integrating coordination efforts among the contractor, design team, and four intersecting city partners: the City of Fort Worth, the City of Kennedale, the City of Arlington, and the City of Forest Hill. Additionally, AECOM facilitated critical coordination with utility partners, including the North Texas Municipal Water District, ATMOS Energy, AT&T, Spectrum, and ONCOR, ensuring seamless integration of utility relocations and infrastructure needs.

AECOM served as the engineer of record for all drainage, retaining walls, traffic control, and bridge structures for two of the four segments of the project. The retaining walls primarily consist of traditional mechanically stabilized earth (MSE) walls and soil-nail walls for cut sections. **Notably, AECOM was responsible for the bridge design of four railroad overpass structures, coordinating directly with Kiewit and UPRR.**

To ensure uninterrupted rail traffic while adhering to TxDOT and UPRR standards, **AECOM developed the phasing and construction sequencing for the structures crossing the UPRR lines, successfully completing the exhibit A documents and final Released for Construction plans culminating with zero comments from UPRR during the entire design phase.**

In addition to the four railroad overpass structures, AECOM designed and coordinated 28 additional bridge structures. **The firm effectively**

integrated the traffic phasing for both the bridges and the traffic passing beneath them, enabling the contractor to meet critical construction milestones. These structures featured drilled shaft deep foundations, traditional reinforced and post-tensioned substructures, along with pre-stressed concrete I-beam superstructures. AECOM created these plans, details, and calculations under a rigorous project quality management plan that included a comprehensive quality control and quality assurance program.

The Southeast Connector Project stands as a testament to AECOM's success in fostering collaboration and the thoughtful integration of various disciplines while maintaining high-quality standards.

RELEVANCE TO LADOTD

Railroad Coordination/Grade Separation Structure, Exhibit A preparation, construction phasing, drainage design, and line & grade design

PROJECT TEAM

Stephen McCullough, Doug Hively, Sean Voisinet, Steven Haynes, Daniel Boyd



Firm Name	AECOM Technical Services, Inc.			Past Performance Evaluation Discipline(s)*	Bridge, Traffic
Project Name	Route 685 (Ball Park Rd) over Craig Creek – Phoenix Bridge Rehab			Firm responsibility (prime or sub?)	Prime
Project Number	N/A	Owner’s name		Virginia Department of Transportation (VDOT)	
Project Location	Botetourt County, VA		Owner’s Project Manager		Todd Marshall, PE
Owner’s Address, Phone, Email		1401 East Broad Street, Richmond, VA 23219, 540.387.5460, todd.marshall@vdot.virginia.gov			
Services Commenced by This Firm (mm/yy)		05/18	Total Consultant Contract Cost (\$1,000’s)		\$250
Services Completed by This Firm (mm/yy)		09/20	Cost of Consultant Services Provided by This Firm (\$1,000’s)		\$2,100

Background

AECOM provided the professional design services for this project for rehabilitation of this four-span bridge on Route 685 (Ball Park Road) over Craig Creek in Botetourt County. The main spans, originally fabricated in the late 1880's, were relocated to their current location around 1903. The bridge was converted from a railroad bridge to a highway bridge by VDOT in 1963.

Today, the structure is colloquially known as the "Phoenix Bridge" and is listed on the National Register of Historic Places.

The main span over Craig Creek consists of a 150-foot Pratt through truss with seven panels. The compression members of the truss are riveted steel tubular members of the unique design known as the "Phoenix Column" patented by Phoenix Iron Works in the 1860's. The floor system consists of transverse floor joists supported by two longitudinal stringers, which span between the floor beams. The flood plain span consists of a 75-foot Warren deck truss.

AECOM performed an onsite structure assessment, study of rehabilitation alternatives, steel bridge repair design, detailed sequence of construction, roadway and TMP plans, cost estimating, specifications, and engineering support during construction.

As part of the design, VDOT asked AECOM to study rehabilitation alternatives and develop recommendations to address deterioration of primary members, increasing the condition ratings and improving the live load capacity. The most challenging elements of this program, based on the site access constraints, included major rehabilitation of floor beams and complete replacement of all longitudinal stringers and lateral bracing members in the Pratt truss span, painting of all structural steel, and replacement of the timber deck and waterproofing for the entire structure.

To help ensure the feasibility of these challenging steel repairs, AECOM developed a detailed sequence of construction for the contract plans.

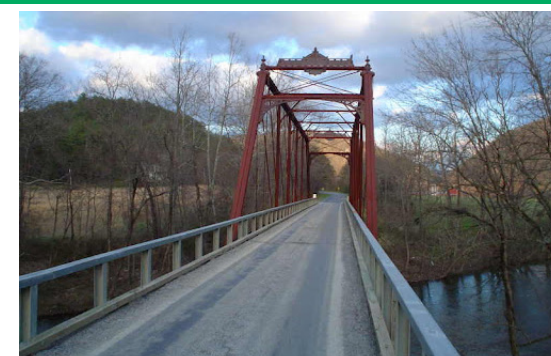
- Repair details were developed to maximize the work that could be completed under traffic.
- Rehabilitation details were also prepared to be completed incrementally and in modular units so that traffic could more easily be restored between work shifts.

RELEVANCE TO LADOTD

In-depth Structure Assessment, Study of Bridge Rehabilitation Alternative, Complex Steel Rehabilitation, Detailed Sequence of Construction, and Transportation Management Plan

PROJECT TEAM

Rob Dean



Firm Name	Forte & Tablada, Inc.			Past Performance Evaluation Discipline(s)*	Bridge	
Project Name	Linwood Avenue Bridge Rehabilitation				Firm responsibility (prime or sub?)	Prime
Project Number	RFS 24-705	Owner's name		City of Shreveport		
Project Location	Shreveport, LA		Owner's Project Manager		David B. Smith, P.E	
Owner's Address, Phone, Email		505 Travis Street, Shreveport, LA 71101/ (318) 673-6050 / David.smith@shreveportla.gov				
Services Commenced by This Firm (mm/yy)		02/25	Total Consultant Contract Cost (\$1,000's)			\$350
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$22.2

Background

Forte and Tablada was engaged by the City of Shreveport to develop rehabilitation and strengthening details for the Linwood Avenue bridge. This steel bridge, which was constructed in 1950 and crosses multiple CPKC and UPRR railroad tracks, has been closed since 2022 following an inspection by LADOTD inspection personnel. Prior to the closure, Forte and Tablada inspected, laser scanned, gathered field measurements, load rated, and developed a set of Load Rating Plans (since the original construction plans are not available) for LADOTD in 2021. Following the closure of the bridge, a Bridge Evaluation Report outlining alternatives to reopen the bridge was submitted to City of Shreveport.

Based on the 2021 load rating by Forte and Tablada, preliminary locations requiring rehabilitation and strengthening have been determined. **Due to the insufficient clearances between the existing highway bridge and the railroad tracks, Conceptual Rehabilitation/Strengthening Plans have been developed and shared with CPKC and UPRR to determine any railroad-specific requirements associated with the rehabilitation.** The Conceptual Plans utilize the laser scanning and Load Rating Plans developed by Forte and Tablada in 2021.

Coordination with both CPKC and UPRR concerning the project scope and development of rehabilitation and strengthening details is ongoing. Linwood Avenue intersects with the Shreveport Healthcare and Development Corridor and is a vital route for the City of Shreveport.

RELEVANCE TO LADOTD

Bridge Design & Rehabilitation, RR Coordination

PROJECT TEAM

Joffrey Easley, Levi Yantis



Firm Name	Forte & Tablada, Inc.			Past Performance Evaluation Discipline(s)*	Bridge	
Project Name	E. Lewis St Bridge Upgrade				Firm responsibility (prime or sub?)	Prime
Project Number	LCG 1946	Owner's name		Lafayette Consolidated Government (LCG)		
Project Location	Lafayette, LA		Owner's Project Manager		Alison Lognion, P.E.	
Owner's Address, Phone, Email		1515 E University Ave, Lafayette, LA 70501 / (337) 291-8522 / alognion@lafayette.go				
Services Commenced by This Firm (mm/yy)		03/23	Total Consultant Contract Cost (\$1,000's)			\$62.25
Services Completed by This Firm (mm/yy)		01/25	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$62.25

Background

The E Lewis Street bridge over Mine Coulee (Recall No. 200286) serves the University of Louisiana at Lafayette (ULL) and is composed of two-lanes with sidewalks and contains two slab spans and one steel girder span. Following an inspection and load rating, **Forte and Tablada was engaged to develop construction plans for the rehabilitation and strengthening of the bridge due to its location along a primary bus corridor for ULL.** Because plans for the bridge could not be located, the bridge was laser scanned to determine precise dimensions and member sizes using in the load rating analysis and plan development.

To improve the capacity and associated load posting of the bridge, the rolled steel girders were strengthened by installing post-tensioning strands to provide additional moment capacity. Rehabilitation activities to improve the long-term performance of the bridge include painting the rolled steel girders, concrete spall repairs, epoxy injection of cracks, and epoxy-urethane overlay of the deck. Additionally, the approaches at all four corners of the bridge were reconstructed to provide a better transition onto the bridge.

RELEVANCE TO LADOTD

Bridge Design & Rehabilitation

PROJECT TEAM

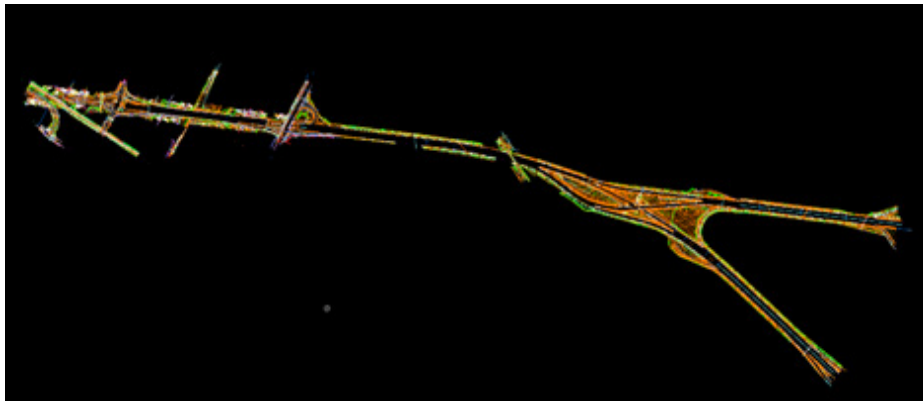
Joffrey Easley, Levi Yantis



Firm Name	Forte & Tablada, Inc.			Past Performance Evaluation Discipline(s)*		Survey	
Project Name	I-10 (LA 415 to Essen Lane on I-10 and I-12) Survey				Firm responsibility (prime or sub?)		Sub
Project Number	S.P. No. H.004100		Owner's name		LaDOTD		
Project Location	East and West Baton Rouge Parishes, LA		Owner's Project Manager		Stanley Ard		
Owner's Address, Phone, Email		1201 Capitol Access Road, Baton Rouge, LA 70804 / 225-379-1292 / Stanley.ard@la.gov					
Services Commenced by This Firm (mm/yy)		01/18	Total Consultant Contract Cost (\$1,000's)			\$6,180	
Services Completed by This Firm (mm/yy)		06/19	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$1,490	

Background

Forte and Tablada, Inc. was responsible for a topographic survey of the I-10 corridor from approximately 500' East of Perkins Rd. to Essen Ln., and the I-12 corridor from the I- 10/I-12 Merge to Essen Ln. Responsibilities on this project were establishing horizontal and vertical control, establishing targets for Mobile LiDAR roadway scans to control precision, and performing a topographical survey to LA DOTD Standards. Forte and Tablada, Inc. was responsible for all field and office work within the above limits of survey as part of a team on the project. This project displays Forte and Tablada's ability to use advanced technology such as lidar scanning to conduct topographic surveys on bridge projects for LA DOTD.



RELEVANCE TO LADOTD

Topographic Survey/ROW

PROJECT TEAM

Russell J. Coco, Jr., Ross Wilson, Tommy Lake

Firm Name	Neel-Schaffer, Inc.		Past Performance Evaluation Discipline(s)*		Traffic	
Project Name	Baton Rouge Northern Bypass Expressway			Firm responsibility (prime or sub?)		Prime
Project Number	44-25299, TO #4 (H.016168.1)	Owner's name		LADOTD		
Project Location	Baton Rouge, LA		Owner's Project Manager		Melissa Lebas	
Owner's Address, Phone, Email		1201 Capitol Access Rd, Baton Rouge, LA, 70802, 225-379-1039, melissa.lebas@la.gov				
Services Commenced by This Firm (mm/yy)		02/25	Total Consultant Contract Cost (\$1,000's)			\$642
Services Completed by This Firm (mm/yy)		12/26	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$612

Background

Neel Schaffer, Inc. (NS) is expanding and refining an existing Dynameq mesoscopic traffic model to support planning level evaluation and conceptual design of the proposed Baton Rouge Northern Bypass as part of the Baton Rouge Urban Renewal and Mobility Plan (BUMP). The effort evaluates current and future traffic operations across the greater Baton Rouge region, including East and West Baton Rouge Parishes, with emphasis on the US 61 and US 190 corridors.

The work includes review of prior corridor studies, evaluation of existing calibrated mesoscopic models, and integration of the Capital Region Planning Commission's MOVE 2046 travel demand model. Comprehensive data collection supports model development, including traffic volumes, turning movements, origin destination patterns, probe based travel time and speed data, and traffic signal inventories. These data are used to establish peak periods and are documented in a formal data collection report. Using MOVE 2046 outputs, NSI is developing, updating, and validating the base year mesoscopic traffic model, including refinements to traffic analysis zones, roadway networks, intersection controls, and trip matrices. The model is calibrated and validated to observed traffic volumes and travel times along key regional corridors. Future year No Build models are then developed for 2030 and 2046 to reflect planned improvements and forecast travel demand.

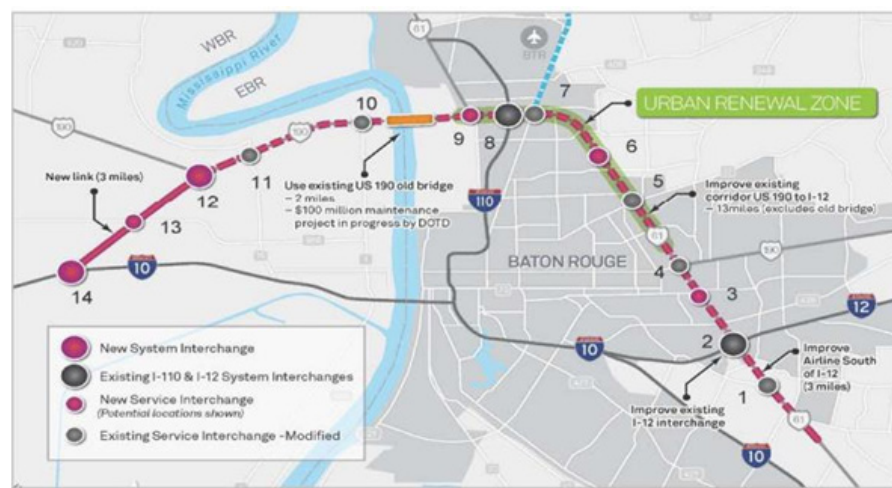
The Build modeling effort applies the validated mesoscopic model to evaluate the operational and system level impacts of BUMP expressway concepts under future conditions. Build models are developed for 2046 and analyzed for AM and PM peak periods. The models represent the full BUMP facility, including expressway mainlines, frontage roads, interchanges, and connections to the regional roadway network. Scenarios are evaluated with and without tolling to assess demand, diversion, throughput, bottlenecks, and access needs. Up to 20 "what if" alternatives are tested, with measures of effectiveness used to compare performance and support refinement of final Build alternatives for documentation in traffic analysis reports.

PROJECT TEAM

Nick Ferlito, Vijay Kunada, and Chuck LeBoeuf

RELEVANCE TO LADOTD

Mesoscopic Traffic Model, Traffic Analysis, Comprehensive Data Collection



Firm Name	Neel-Schaffer, Inc.			Past Performance Evaluation Discipline(s)*		Traffic	
Project Name	I-10 / 12 College Flyover Ramp Design Build				Firm responsibility (prime or sub?)		Sub
Project Number	H.013897		Owner's name		LADOTD		
Project Location	Baton Rouge, LA			Owner's Project Manager		Catherine Mastin, PE	
Owner's Address, Phone, Email		P.O. Box 94245, Baton Rouge, LA 70804; (225) 379-1652; catherine.mastin@la.gov					
Services Commenced by This Firm (mm/yy)		08/20	Total Consultant Contract Cost (\$1,000's)			\$971	
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$971	

Background

Current Task Orders issued under this IDIQ Contract include the following: This project improves the safety and flow of traffic between the I-10/I-12 Split and College Drive by eliminating lane changes that must occur when I-10 WB traffic exits at College Drive. The proposed project realigns the two existing I-12 WB through lanes to more closely follow the I-12 EB existing alignment and replaces the I-10 WB Overpass Bridge with a new structure. In addition, the project physically separates College Drive NB from the free flow lane which connects the I-10 WB exit ramp to Corporate Boulevard. NSI is tasked with performing the traffic engineering and modeling using Vissim and Dynameq software, Interstate Modification Report, Transportation Management Plan (TMP), traffic signal design and is providing the Independent Technical Review for Roadway Design and Traffic Control Plans.

NSI tasks include:

- Field Observations
- VISSIM Modeling
- Prepare the Interstate Modification Report
- Transportation Management Plan (TMP) including Mesoscopic Modeling using Dynameq
- Independent Technical Review (ITR) for the Roadway Design and Traffic Control Plans

RELEVANCE TO LADOTD

Mesoscopic Modeling using Dynameq, Traffic Engineering

PROJECT TEAM

Nick Ferlito, Ellen Howard, Dishili Young Curry, Mai Nguyen, Charles Adams, Kirk Gallien, Chuck LeBouef, Vijay Kunada



Firm Name	Neel-Schaffer, Inc.			Past Performance Evaluation Discipline(s)*		Traffic, Road, Planning	
Project Name	MRB South GBR: LA 1 to LA 30 Connector				Firm responsibility (prime or sub?)		Sub
Project Number	Multiple #s		Owner's name		LADOTD		
Project Location	Baton Rouge, LA, Metro Area			Owner's Project Manager		Christina Brignac	
Owner's Address, Phone, Email		P.O. Box 94245, Baton Rouge, LA 70804; 225-379-1394, christina.brignac.la.gov					
Services Commenced by This Firm (mm/yy)			07/20	Total Consultant Contract Cost (\$1,000's)			\$868
Services Completed by This Firm (mm/yy)			Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$2,500

Background

This project involves the development of a new Mississippi River bridge between LA 1 on the West Bank and LA 30 on the East Bank, along with new interchanges at each terminus. The project vision is to enhance redundancy in the Greater Baton Rouge Area's cross-river transportation network and to locate the new facility where it will maximize daily usage. The project is being advanced using a process similar to the one proposed for the Lafayette Regional Expressway (LRX), Phase 1 – Enhanced Planning Study and Phase 2 – NEPA Process.

Kara Moore and Maria Reid previously managed this project while working for another consulting firm prior to joining Neel-Schaffer.

Neel-Schaffer developed a calibrated and validated regional mesoscopic model using Dynameq, covering the study area along the west bank of the Mississippi River between I-10 and LA 70. The mesoscopic model was chosen to more accurately evaluate traffic and mobility impacts within an already severely congested regional network. The model network incorporated detailed roadway and intersection geometry, traffic control features, and signal timing plans. Dynamic Traffic Assignment (DTA) was employed to simulate individual vehicle behavior—including car-following, lane-changing, and gap-acceptance—resulting in realistic traffic operations. Importantly, this methodology allows traffic to reroute at defined time steps based on real-time congestion conditions, a capability that traditional macroscopic models cannot provide.

Mesoscopic models were developed for the 2019 Base scenario, the 2042 No Build scenario, and 20 initial bridge route alternatives.

Challenges

The initial bridge screening process required evaluating 20 potential bridge route alternatives, with only three ultimately needing to advance to the NEPA phase.

Solutions

Neel-Schaffer developed mesoscopic models for all 20 initial bridge alternatives. Travel time results were compared across alternatives, and these comparisons played a key role in selecting the three alternatives carried forward into the NEPA phase.

Neel-Schaffer is currently conducting a detailed traffic study for the NEPA phase.

RELEVANCE TO LADOTD

Alternative Screening, Traffic and Tolling Analyses, New Corridor, Public Involvement across multiple Parishes

PROJECT TEAM

Vijay Kunada, Charles Leboeuf



Firm Name	Ardaman & Associates, Inc.		Past Performance Evaluation Discipline(s)*		Geotech		
Project Name	I-20 Mississippi River Bridge Review				Firm responsibility (prime or sub?)		Prime
Project Number	SP No. H.004646 09-L1049 H.010603.6 13-3720 H.010612.6 20-3729 H.004647.6 22-3746, 22-3753, 24-3707		Owner's name		LADOTD		
Project Location	Madison Parish, Louisiana		Owner's Project Manager		Chris Nickel		
Owner's Address, Phone, Email		1201 Capitol Access Road, Baton Rouge, LA; 225.379.1100; Chris.Nickel@la.gov					
Services Commenced by This Firm (mm/yy)		10/09	Total Consultant Contract Cost (\$1,000's)			\$10,881	
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$10,881	

Background

Ardaman conducted a geotechnical study to develop a list of technically feasible remedial alternatives to decrease the potential for ground movements to occur at the site of the I-20 Bridge. Movement of the east abutment of the bridge was first realized in 2001 during an inspection. Over the years Mississippi DOT has retained several consultants who have studied the problem, but no viable solution was identified. Ardaman conducted a comprehensive review of past slope stability evaluations and recommendations. This task was followed by developing a refined geotechnical site characterization plan for the bank/bluff area for further analyses. Drilling operations included obtaining extremely sensitive samples containing prehistoric shear planes from the river via barge and on land, all with extremely difficult access conditions. The drilling program also included installation of geotechnical instrumentation such as Shape Accelerator Arrays, inclinometers, and vibrating wire piezometers. Engineering analyses performed included seepage and drawdown analyses and both equilibrium and finite element numerical modeling slope stability analyses. As part of the project, Ardaman developed a full slope stabilization design and construction remediation strategy and a monitoring program for the bluff instability and ground movements affecting the existing I-20 Mississippi River Bridge.

Ardaman is currently managing a phase of the project which involves upgrading the entire instrumentation communication system. It also includes gathering and continuously monitoring various types of instrumentation data, inspects of the site and monitoring changes in topography by obtaining periodic survey data.

RELEVANCE TO LADOTD

Geotech

PROJECT TEAM

Megan Bourgeois, Robert Jewell, Jarmon King, Casey Floyd, Jessica Litt



Firm Name	Ardaman & Associates, Inc.		Past Performance Evaluation Discipline(s)*	Geotech	
Project Name	IIJA Bridge and Highway Program Districts 05			Firm responsibility (prime or sub?)	Sub
Project Number	H.015337	Owner's name	LADOTD sub to Lazenby & Associates, Inc		
Project Location	E. Carroll, W. Carroll, Ouachita, Jackson, Lincoln, Madison, Morehouse, Richland, Union Parishes		Owner's Project Manager	Ryan Spillers	
Owner's Address, Phone, Email		2000 North 7th St., W. Monroe, LA 71291; 318-387-2710; RSpillers@LazenbyEngr.com			
Services Commenced by This Firm (mm/yy)		04/23	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)		\$408

Background

This program consisted of the replacement of multiple 13 small rural bridges and cross-drain structures across northern and northeastern Louisiana in 9 different parishes. These structures generally include short-span slab bridges and multi-cell reinforced concrete box or pipe culverts located along low-volume parish roads crossing small creeks, bayous, and drainage channels. The existing bridges, often supported on timber piles or corrugated metal pipes are being replaced due to age, deterioration, or structural deficiency. Ardaman & Associates, Inc. (Ardaman) was retained to perform comprehensive geotechnical investigations and engineering evaluations to support LADOTD's final design for each site.

The scope of services for the program included field reconnaissance, boring layout, utility clearance, drilling of 120-foot soil borings, SPT and Shelby tube sampling, groundwater measurements, and an extensive laboratory testing program. Laboratory work included Atterberg limits, grain-size distribution, density, moisture content, hydrometer analyses, and unconsolidated-undrained triaxial strength testing. For bridge sites, Ardaman completed LRFD pile design using FHWA methods, drivability evaluations, and verification criteria using the Modified Gates Formula. For culvert sites, Ardaman performed bearing capacity analyses, settlement modeling using Settle3, and bedding/backfill recommendations in accordance with LSSRB and Standard Plans.

Final deliverables included detailed Geotechnical Data Reports and Geotechnical Interpretation Reports containing subsurface characterization, engineering properties, pile design summaries, culvert foundation recommendations, settlement analyses, and construction guidelines. These comprehensive evaluations provide LADOTD with the geotechnical basis necessary for the safe and economical replacement of multiple rural bridges and culverts throughout the program area.

RELEVANCE TO LADOTD

Geotech, Selected CMT

PROJECT TEAM

Robert Jewell, Megan Bourgeois, Jarmon King, Jessica Litt, Casey Floyd



Firm Name	Ardaman & Associates, Inc.			Past Performance Evaluation Discipline(s)*		Geotech	
Project Name	US 371: KCS Railroad Overpasses HBI				Firm responsibility (prime or sub?)		Sub
Project Number	H.012030		Owner's name		LADOTD		
Project Location	Webster Parish, Louisiana			Owner's Project Manager		Hamed Babaizadeh	
Owner's Address, Phone, Email		1201 Capitol Access Road, Baton Rouge, LA (225)379-1937 Hamed.Babaizadeh@la.gov					
Services Commenced by This Firm (mm/yy)		07/23	Total Consultant Contract Cost (\$1,000's)			\$956.8	
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$231.4	

Background

The project consists of a geotechnical subsurface exploration and recommendations for S.P. No. H.012030, US 371: KC Railroad Overpasses HBI, with the objective of replacing two parallel bridges and one standalone bridge located on US 371 between Minden and Sibley, Louisiana. The bridges cross over Kansas City (KC) Railroad at each site. The standalone bridge near Sibley, LA was later removed from the project to be placed under another state project, however the geotechnical exploration that was performed for this site will be included in this description. The three bridges range from approximately 200 feet to 250 feet in length including 4 bents per bridge supported on drilled shafts with varying diameters. For the geotechnical exploration phase of work, Ardaman performed 8 soil borings to a maximum depth of 110 feet below existing ground surface (bgs) targeting the proposed bridge foundations on either side of the KC railroad. Two of the soil borings were performed through the existing bridge deck within the ROW of the KC railroad while occupying one lane of US 371. Coordination with temporary traffic control services and the KC railroad temporary constructions requirements was necessary to perform these soil borings.

Engineering services include supervision of the field program, development of the laboratory testing program, quality control review, and development of an interactive geotechnical database to compile all the soil borings. The engineering analyses included drilled shaft design and advanced test shaft program recommendations. A data report, geotechnical interpretation report, and test shaft memorandum were submitted.

RELEVANCE TO LADOTD

Geotech

PROJECT TEAM

Megan Bourgeois, Robert Jewell, Jarmon King, Casey Floyd, Jessica Litt



Firm Name	NTB Associates, Inc.			Past Performance Evaluation Discipline(s)*	Survey, Other (SUE)
Project Name	Jimmie Davis Bridge (LA 511) Design-Build			Firm responsibility (prime or sub?)	Sub
Project Number	H.001779	Owner's name		LaDOTD Baton Rouge/ James Construction/ Huval & Associates, Inc.	
Project Location	Bossier & Caddo Parishes, LA		Owner's Project Manager	Mr. Thomas Gattle, III, PE	
Owner's Address, Phone, Email		922 West Pont Des Mouton Road, Lafayette, LA 70507 (337) 234-3798 tgattle@huvalassoc.com			
Services Commenced by This Firm (mm/yy)		01/22	Total Consultant Contract Cost (\$1,000's)		\$1,140
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)		\$1,140

Background

NTBA performs Static GPS control, topographic utilizing HDS 3D Terrestrial Laser Scanning methods of data collection and property surveying services, traffic control, utility coordination services, **QL A, B, C, & D utility designating/locating**, as well as preparing title takeoffs, 60% Right-of-Way Maps, Final Right-of-Way Maps, and legal descriptions for the design-build project to replace the Jimmy Davis Bridge across the Red River. The scope of this project consists of constructing a new four lane structure carrying LA 511 across the Red River, converting LA 511 (Jimmie Davis Hwy) into a four-lane, median-divided highway on the east side of bridge; as well as providing full access interchanges between LA 511 and Clyde Fant Memorial Parkway and Arthur Ray Teague Parkway. NTBA designed and implemented a Traffic Control Plan for a bridge closure to verify the horizontal and vertical control set by LaDOTD during the original survey and verified the vertical control for both sides by running digital levels across the bridge, which was not performed in the original survey. All of this was completed during night shifts to ensure the safety of employees and the public as well as to avoid traffic disruptions.

NTBA performed property surveys and title take-offs for approximately 50 properties adjacent to the route and a property survey submittal prepared with apparent right-of-way shown. Final Mylar Right-of-Way Maps have been submitted for 21 parcels requiring right-of-way taking. The set included 21 plan sheets and 1 title sheet.

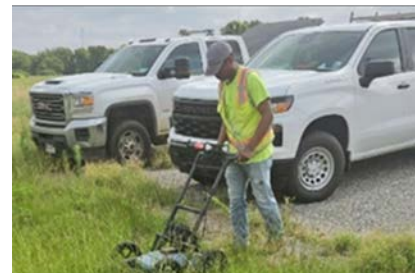
NTBA performed SUE services to designate all utilities within the project limits. A conflict matrix was created showing the utilities in conflict with the construction. We are coordinating with the utility owners to relocate utilities that conflict with the construction and will monitor the relocation to ensure

compliance with relocation plans. NTBA is utilizing the Louisiana Department of Transportation Survey and Design Manual Addendum A as well as CI/ ASCE Standard 38-02.

RELEVANCE TO LADOTD Survey, Other (SUE)

PROJECT TEAM

A. Schulze, D. Brooks, D. Etienne,
M. King, E. Kliever, J. Reppond



Firm Name	NTB Associates, Inc.		Past Performance Evaluation Discipline(s)*	Other (SUE)	
Project Name	Cong Relief Winfield Road			Firm responsibility (prime or sub?)	Sub
Project Number	Parish 2025-118/ H.003855.5	Owner's name	LaDOTD Baton Rouge/ Volkert, Inc.		
Project Location	Bossier Parish		Owner's Project Manager	Mr. Clinton Patrick, PS, PLS	
Owner's Address, Phone, Email		4442 Viking Drive, Suite 300, Bossier City, LA 71111 (318) 210-0761 clinton.patrick@volkert.com			
Services Commenced by This Firm (mm/yy)		12/25	Total Consultant Contract Cost (\$1,000's)		\$71
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)		\$71

Background

NTBA is performing **subsurface utility engineering services** along the proposed roadway corridor extending from Benton Road (LA 3) to one mile east of the Swan Lake Road intersection as a new four-lane roadway, and from that point to the Bellevue/Winfield Road intersection as a new two-lane roadway. These services support roadway design by identifying, documenting, and mapping existing underground utilities to reduce conflicts during construction.

The scope includes **QL B, C, and D subsurface utility designating services** in accordance with CI/ASCE 38-22 and the LaDOTD Location and Survey Manual. Work activities include reviewing available utility records, surveying visible utility surface features, and designating underground utilities using accepted electromagnetic and geophysical locating methods. Designated utilities are marked in the field with standard color-coded paint and flags, surveyed into the project control network, and compiled into a comprehensive utility base map for design.

All activities are coordinated with utility owners, and appropriate traffic control is provided during field operations to ensure safe and efficient data collection.

RELEVANCE TO LADOTD

Other (SUE)

PROJECT TEAM

A. Schulze, D. Brooks, D. Hull, M. King, E. Kliever



Firm Name	NTB Associates, Inc.			Past Performance Evaluation Discipline(s)*	Survey, Other (SUE)	
Project Name	Kings Hwy: Healthcare & Development Corridor				Firm responsibility (prime or sub?)	Sub
Project Number	H.015724	Owner's name		LaDOTD/ City of Shreveport/ Aillet, Fenner, Jolly, & McClelland, Inc.		
Project Location	Caddo Parish, LA		Owner's Project Manager		Mrs. Elba Hamilton, PE	
Owner's Address, Phone, Email		3003 Knight Street, Suite 120 Shreveport, LA 71105 (318) 425-7452 ehamilton@afjmc.com				
Services Commenced by This Firm (mm/yy)		11/25	Total Consultant Contract Cost (\$1,000's)			\$249
Services Completed by This Firm (mm/yy)		Ongoing	Cost of Consultant Services Provided by This Firm (\$1,000's)			\$249

Background

NTBA is performing **QL B, C, D subsurface utility designation services, utility coordination**, and survey services as a sub-consultant to AFJ&M and providing topographic surveying services as a sub-consultant to Forte & Tablada. These efforts support rehabilitation and design activities for roadway reconstruction, pedestrian facility improvements, bicycle accommodations, traffic signal upgrades, highway lighting improvements, utility relocations, and public transit route enhancements.

Preliminary SUE research has already begun. NTBA has initiated QL D records research to identify utility owners and determine the presence of utilities within the project limits. Early data collection includes obtaining utility information from One Call notifications and utility companies, as well as reviewing construction plans, maps, and field notes. This information is being compiled into a GIS database to support upcoming field investigations and utility coordination activities.

As part of the ongoing SUE effort, NTBA is preparing the online GIS map and Survey123 form for use with Field Maps. Following this preparatory work, NTBA will conduct QL B utility designating using electromagnetic and ground-penetrating radar methods to identify and mark the approximate horizontal location of underground utilities. Designating results will be documented in a 2D MicroStation file, incorporated into the GIS map, and used to develop a Utility Conflict Matrix to identify potential conflicts with proposed improvements.

In addition, NTBA is performing topographic surveying services for three intersections as a sub-consultant to Forte & Tablada. Survey tasks include collecting drainage and sanitary sewer structure inverts within the survey

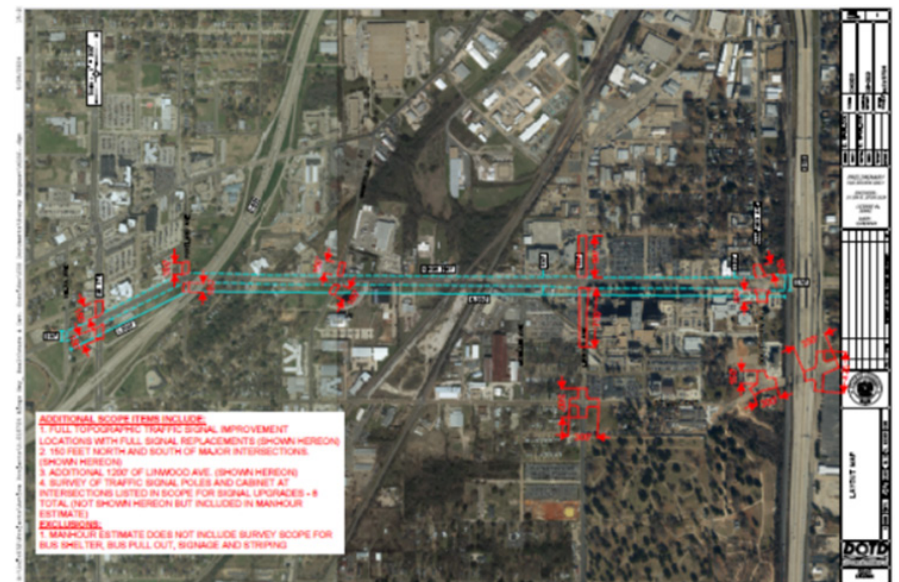
limits and documenting all required topographic features. All survey work is being completed in accordance with the current LaDOTD Location and Survey Manual, which specifies detailed procedures, styles, and methodologies.

RELEVANCE TO LADOTD

Survey, Other (SUE)

PROJECT TEAM

A. Schulze, D. Brooks, J. Reppond, M. King, E. Klierer, D. Hull





Greenville Street over CSX Railroad

Relevance to US 71 Bridges: Bridge Design, Maintenance of Traffic, RR Coordination, Sequence of Construction

Section 18

18. Approach and Methodology

Both the Market and Spring Street bridges in Shreveport, constructed over 80 years ago, are listed in poor condition and load posted, and require bridge rehabilitation and/or replacement. Both structures span across the Canadian Pacific & Kansas City Southern's (CPKC) Vicksburg Subdivision and will require significant rail coordination to obtain approval for the bridge rehabilitation and reconstruction requirements. Through our pre-marketing design and investigative efforts, the AECOM team has developed a project approach that echoes DOTD's project goals including:

- ▶ Identifying cost-effective, bridge rehabilitation (Spring Street) and replacement (Market Street) solutions that remove the structural deficiencies, load postings, and poor condition assessments
- ▶ Supporting DOTD's environmental investigations, including the historic preservation efforts at Spring Street
- ▶ Formulating a construction phasing plan, based upon a detailed traffic study that minimizes traffic and impacts to local business access throughout construction
- ▶ Managing CPKC railroad expectations by developing preliminary designs that meet the railroad grade separation guideline requirements.

This approach was based upon our discussions with numerous DOTD staff and early investigations over the past 12 months. These efforts have helped the AECOM team to confirm the project site constraints so that we can offer DOTD a cost-effective transportation solution developed in accordance with DOTD requirements. Our team is uniquely qualified, offers local offices in Shreveport to help facilitate early design development activities, and consists of the following:

AECOM Team	Roles/Responsibilities
AECOM	Project Management, Stakeholder Coordination, Roadway, MOT, Bridge, and RR Coordination.
Ardaman & Associates, Inc.*	Geotechnical Investigations and Design
Forte & Tablada*	Historic Bridge Rehabilitation, Topographic Survey, Right of Way, 3D Scanning, Vibration Monitoring, and Advanced Bridge Measurements
Neel-Schaffer, Inc.	Traffic Engineering and Analysis
NTB & Associates	Subsurface Utility Engineering

(*) local office in Shreveport

Project Understanding

The following paragraphs briefly identifies several of the key project site constraints that will drive the development of this design project.

Spring Street Bridge Rehabilitation Design

The Spring Street bridge is a 5-span, 238-ft, NSTM bridge in poor condition, with deck, superstructure, and substructure component ratings of 6, 4 and 5; respectively and was constructed in 1937. In 2020, the bridge super and substructure steel elements were repaired under an emergency bridge repair project after a train car impacted the bridge. Substructure repairs required the replacement of the existing steel Bent No. 3 with new steel bent columns partially encased within a 4-ft concrete crash-wall supported by concrete footing and helical piers. The 2015 load rating report identified a 0.79 RF (LA Type 3S2) for the interior stringer in flexure which controls the bridge load rating.

Bridge rehabilitation activities will require the project team to evaluate remediation strategies that promote the long-term preservation of this historic bridge and identify potential solutions that can remove the bridge load posting requirements. Note all mitigations will need to align with the June 2017 Historic Bridge Management Plan.

Market Street Replacement Design

The Market Street bridges consist of (2) separate 22-span, 585-ft structures also in poor condition, with deck, superstructure, and substructure component ratings of 3, 3 and 3; respectively. The approximately 33-ft wide concrete bridge deck is supported by six (6) steel rolled beams with depths ranging from 16-in to 24-in and concrete abutments and bent cap/column bents supported by concrete spread footing foundations. The existing bents located within the CPKC ROW are located along both main and siding tracks providing a bridge span of approximately 35-ft. Current bridge vertical and horizontal clearances are approximately 19.4-ft and 12-ft (main track), respectively.

The roadway is located along a 300-ft long vertical curve with 6.0% and 6.3% approach and exit grades and efforts to increase the Market Street profile may require a roadway design variance. Additionally, tying the new bridge approach grading to the existing intersections at both Crocket and Lake Street will be critical to minimize and intersection reconstruction costs.

Environmental Investigations/Historic Bridge Preservation Efforts

We will advance our design to support DOTD's environmental efforts to obtain a categorical exclusion or environmental assessment. With the Spring Street Bridge Historic Plan Management requirements, our team will work with DOTD to ensure the rehabilitation design components satisfy the plan requirements.

Construction Phasing/Traffic Analysis

Spring Street and Market Street form a traffic couplet into downtown Shreveport, have direct access to I-20, and provide local access along the US 71 corridor. US 71 is major US highway designation with existing and future ADTs of 24,000 and 30,500 (FY2036) with 8% trucks. A bridge construction

approach that includes a detailed traffic analysis of the proposed construction phasing alternatives to identify a preferred construction approach will be critical to the success of this project. **Our discussions with David North, DOTD's District 04 Administrator, confirmed the previous detour implemented as part of the 2017 Spring Street Emergency Repairs, required partial I-20 ramp closures, and I-20 eastbound and westbound detours via Traffic Street in Bossier and Fairfield Avenue (Exit 18A);** respectively. We will use this information along with the existing mesoscopic model, provided by DOTD, to analyze and confirm traffic impacts and perform a safety analysis to identify a preferred phased construction approach.

Railroad Coordination

CPKC maintains (1) main and (1) siding track along this freight rail corridor. These tracks have a 30-mph design speed and day and night train traffic of 9 and 3; respectively. Both bridges have bents located within the CPKC ROW with both substandard vertical clearances of approximately 19.5-ft and horizontal clearances as low at 10-ft. In general, rail agencies prefer piers located outside of their ROW and 23'-0" minimum vertical clearances. When the substructure is required within existing ROW, 25-ft horizontal clearances with crashwall protection are preferred. Both horizontal and vertical clearance offsets will present numerous design challenges, and early engagement/design coordination with Shawn Luke, DOTD's rail lead, and CPKC representatives will be warranted.

Project Approach

We developed a three (3) phased project approach and schedule which includes **Project Definition, Preliminary, and Final Design phases.** The schedule below identifies the completion of the first two phases within a 2-yr timeline. Note the current RFP scope of work currently excludes final design and CE&I services.

AECOM ADVANTAGE

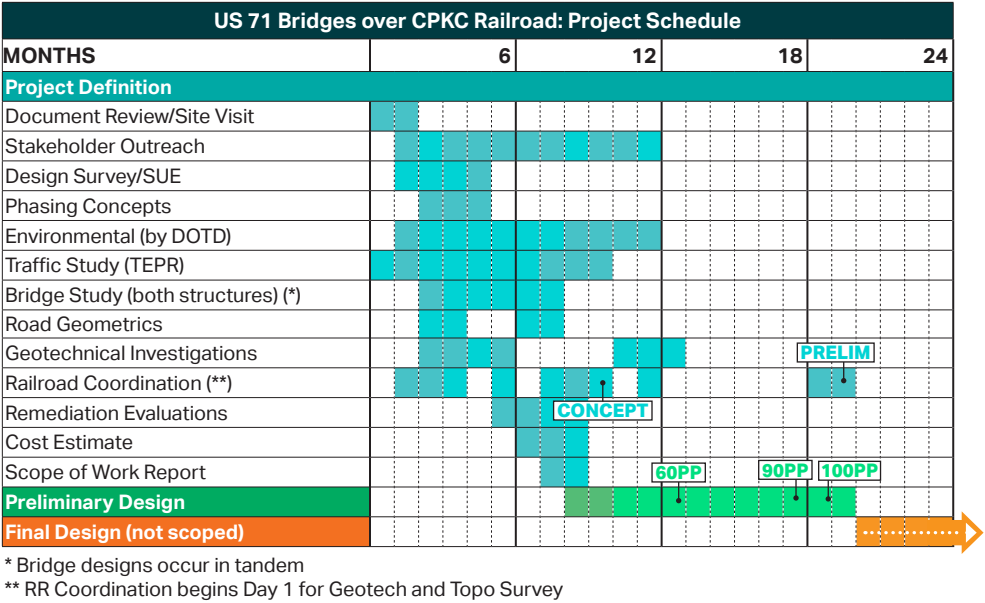


We will utilize our recent experience with the conceptual design of the LA6 Bridge over the Red River to support the rehabilitation of Spring Street.

AECOM ADVANTAGE

AECOM has modeled the construction phasing required to provide continuity of traffic through all phases of bridge and road construction which marches in step with the expectations of DOTD.

This team is ready to implement our plan to deliver this project to DOTD.



Project Definition Phase

Upon NTP, AECOM will request and review the additional supplemental design information (as-built plans, inspection and load rating reports, accident and traffic data, mesoscopic model, etc.) provided by DOTD prior to scheduling a project kickoff meeting with DOTD staff. This review permits our team to briefly confirm our initial design assumptions, identify any missing or unavailable information and prepare a draft of the Project Management Plan (PMP). The PMP will include a detailed schedule for the Project Definition and Preliminary Design phases, a communication protocol, a list of stakeholders and local, state, and federal agencies, general scope of work assignments, and working design criteria document that outlines the bridge and roadway design requirements in accordance with the DOTD BDEM, DOTD's latest Road Design Manual, the Minimum Design Guidelines, and AASHTO's A Policy on Geometric Design of Highways and Streets. AECOM will work with the DOTD/PM to confirm the project schedule and initial design criteria prior to finalizing and submitting the PMP.

Traffic and Analysis/Phasing Alternatives Evaluation

Upon receipt and review of the DOTD mesoscopic model, we will confirm, identify, and obtain any additional traffic counts and forecasting information needed for the construction phasing alternatives analysis. We will work with DOTD HQ and District Traffic staff to confirm growth, methods and forecasted traffic counts, validate current conditions using the DOTD mesoscopic model, and alternative detour traffic simulation models for evaluation and comparison

against the defined design criteria. As part of the development of the Transportation Management Plan (TMP), our team will perform safety analysis, alternate route/detour analysis, and identify/engage stakeholders to assess their impact of the construction phasing throughout the construction duration. As part of the TMP Level 2 efforts, alternatives will also consider existing and no build conditions. All work will be performed in accordance with EDSM VI.1.1.8.

Topographic Design Survey

Forte & Tablata will complete topographic survey including all utilities, along with finished floor elevations of all buildings that fall in the survey limits. This project shall be completed in accordance with the Location and Survey Manual and all current accepted Location and Survey Automation procedures and also meet the designer’s requirements. Design topography collection will also include all necessary information needed to establish the existing conditions, set project control, and evaluate the design alternatives including ROW, CPKC track profile alignments, and project utilities. Data will be compiled and delivered using OpenRoads Design (ORD) format to produce SURVEY, TERRAIN, and 2D DGN files in addition to the Point Listing Text Files, Static GPS/RTK files in accordance with the DOTD Section 30 - Location and Survey Manual.

Our subsurface utility engineering (SUE) investigation efforts, if required, will be performed by NTB & Associates, so that utility location and depth can be determined with respect to the drainage and bridge foundation requirements.

Geotechnical Investigation and Design Services

Ardaman & Associates will perform a geotechnical investigation consisting of soil borings, laboratory testing, optional cone penetrometer test (CPT) soundings, soil classification, site characterization, and soil boring logs in accordance with the latest version of the DOTD Geotechnical Design Manual (GDM). Design investigative efforts will include bridge borings, sampling, borehole abandonment, site characterization and boring logs evaluation as part of the geotechnical investigative plan preparation.

Based on our experience working with rail agencies, drilled shaft foundations are typically preferred option since these subsurface structures limit soil disturbance and vibrations, and help to reduce the foundation footprint. Shoring and temporary construction design elements will also be identified so existing structures that are to remain in place are protected from movement and potential settlement.

Spring Street Bridge Rehabilitation Design.

Our initial task will be to identify the components to be rehabilitated and/or strengthened based on the 2015 Load Rating Report, the DOTD Inspection Reports, and a detailed structural inspection by a certified Bridge Inspector, with the aid of remote inspection techniques (drones, laser scanners, etc.) as

required. We’ll then develop rehabilitation and strengthening alternatives that improve the condition of the bridge, extend its service life, and improve the load rating while also following the requirements of the 2017 Historic Bridge Management Plan to ensure that the character-defining features are maintained. A few of the key design issues are summarized below:

Issue	Implications	Potential Solutions
Historic Preservation Constraint	Details must preserve character-defining features	• Early coordination with DOTD/SHPO • Utilize unique details
Insufficient Girder Flexural Capacity	Shallow steel beams limit load posting	• Post-tensioning • Bottom flange cover plates • CFRP strengthening

Market Street Bridge Design

Bridge design during this phase will focus on the proposed typical section and structure type requirements. AECOM will reference the project specific bridge design criteria to establish bridge and approach roadway geometric requirements. Bridge widths, lane number and sidewalk requirements will be based upon roadway classification, design speed and complete streets guidelines. Bridge designs will consider both precast, pretensioned concrete slab and continuous steel girder alternatives for portions of the bridge that span CPKC ROW. Maximizing the spans and increasing the existing railroad vertical clearance across the tracks to provide improved conditions from existing and are more likely to get accepted by the railroad. All designs will be developed in accordance with the DOTD BDEM design standards.

Rail Coordination

Extensive design coordination and negotiations are anticipated due to the current substandard horizontal and vertical clearances at both Spring Street and Market Street crossings. Existing tie-in grade constraints at both Lake and Crockett Street intersections will challenge AECOM to develop alternatives that can improve the existing conditions at the Market Street grade separation. Other railroad considerations include designing substructures with railroad crash wall protection, confirming site drainage and bridge deck runoff are directed off CPKC ROW, providing bridge barriers with protective fencing over span rail spans, developing designs that minimize track closure windows, and utilizing drilled shaft foundations designed for railroad surcharge loading. This information will be summarized/incorporated into the conceptual and preliminary railroad submittals developed in accordance with the CPKC Railroad Grade Separation Guidelines.

Alternatives Evaluation and Remediation Meeting

AECOM will compile the Spring Street rehabilitation and Market Street Bridge replacement design alternatives, assemble the traffic analysis/construction phasing alternatives, and develop construction cost estimates to evaluate and

identify an initial preferred alternative. The project team will present the result of this project definition phase, provide our recommendation to DOTD for review and concurrence, and prepare a summary report documenting the design decisions, summarizing our findings, and detailing the preferred alternative.

Preliminary Definition Deliverables	
• Project Management Plan • Scope of Work for approval • Additional Data Collection (if req'd) • Safety Analysis (Existing and Alternative)	• Existing and No Build Analysis • Alternative Analysis • Final Report • Conceptual Cost Estimate

Preliminary Design Phase

With the approval of the preferred designs for the Spring Street rehabilitation and Market Street replacement, we will advance geotechnical investigation efforts and establish the Market Street roadway and bridge typical sections and profile alignment for DOTD approval. Key preliminary tasks identified in this phase include:

Market Street Typical Section

Existing Market Street provides two (2) lanes of traffic per bridge with sidewalks along the outside edge of decks. AECOM will confirm the proposed typical section can accommodate future ADT based upon the traffic & safety analysis results and provide pedestrian sidewalk along each side. Additional discussions may be warranted to evaluate 11-ft vs 12-ft lanes so that roadway shoulders can be accommodated into the typical section.

Market Street Vertical Profile (CPKC Vertical Clearance)

The existing Market Street profile locates a 300-ft crest vertical curve alignment centered over the railroad tracks with 6.0% and 6.3% approach and exit grades that provides a 19.4-ft clearance over the tracks. Extensive design coordination between the roadway and bridge team will be required to identify “opportunities for refinement” (e.g. reducing structure depth, increasing roadway grades, reducing “k” value, etc.) to increase this clearance and help facilitate CPKC’s approvals.

Bridge Designs

Maximizing the vertical clearance over CPKC tracks and increasing the bent offsets at the Market Street bridge replacement and advancing the rehabilitation alternatives at the Spring Street Bridge will be the priorities during the initial preliminary design. Our early superstructure design efforts at Market Street identified three (3) initial structure options across the rail spans. They include:

- ▶ Concrete Slab Beam Option with a 18-inch structure depth increases the vertical clearance 9 to 12-inches; however, span remains relatively the same.
- ▶ Continuous Steel Beam Option with a 22-inch structure depth increases the vertical clearance 6 to 9-inches; however, span remains relatively the same.

- ▶ Concrete Box Beam Option with a 30-inch structure depth maintains the vertical clearance; however, the span across the tracks increases to 70-ft.

Preliminary designs for both Market and Spring Street locations will also need to consider constructibility, impacts/benefits to CPKC interim and ultimate operations, costs, and schedule while satisfying DOTD’s BDEM design requirements.

60% Preliminary Plans

AECOM will begin development of general roadway and bridge plans showing typical sections and roadway plan and profiles along Spring and Market Streets. Construction signage, general sequence of construction, and cross section sheets will be included. This set will also include bridge plan and profile layouts to identify the proposed construction at both locations. We will coordinate horizontal and vertical alignment design with DOTD to ensure project design criteria are met. Additional tasks include the submittal of a preliminary hydraulics design report included as a part of the 60% Preliminary Plans delivery.

95% and 100% Preliminary Plan

We 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 any outstanding environmental clearance permits and develop and submit the Preliminary Railroad Grade Separation Package to CPKC for review and approval.

Preliminary Design Deliverables	
• Proposed Schedule • Bridge Design Criteria • Scope of Work Report • 60% Preliminary Plans • 90% Preliminary Plans • Plan-in-Hand Meeting Attendance • 100% Preliminary Plans	• Project Management, Stakeholder Transportation Management Plan • Plan Constructability Review Form • Preliminary Design Report • Design Waivers or Design Exceptions (if required) • Preliminary Construction Cost Estimate

Final Design Phase

This scope of work is not detailed in the current Scope of Services but will be handled by an Supplement Agreement. Planned work includes 60%, 90%, 98% and 100% final plan and construction cost estimates submittals.

Quality Assurance/Quality Control

Please refer to AECOM’s QA/QC program for the US 71: ICG Railroad Overpass Rehab and Market Street Bridge over ICG RR that commits to DOTD policy and is attached in this proposal.



South Academy Blvd over BNSF Railroad

Relevance to US 71 Bridges: Bridge Rehabilitation Design, Roadway Design, Maintenance of Traffic, RR Coordination, Sequence of Construction

Sections

19-23

19. Workload

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
AECOM Technical Services, Inc.	Bridge	44-21593; H.009859.5	TO#1 Bridge Load Rating Services	\$140,545
		44-23921	Bridge Preservation IDIQ	
	Bridge	H.015603.5	LA 641 Bridge Load Rating Services	n/a
	Bridge	H.013832	LA 6 Grand Ecore	\$13,752
	Bridge	H.015519	Smith Road over Red Chute Bayou	\$7,555
	Bridge	H.011993	LA 10 Bayou Carron	\$1,489
	Road	H.016313	LA 1206: Creek Bridge	\$104,865
	Road	H.016315	LA 463: Drain Bridge	\$137,784
	Road	H.016316	LA 499: Ice Branch Bridge	\$52,506
	Road	H.016317	LA 1234: Drain Bridges	\$63,029
	Road	H.016321	LA 970: Creek Bridge	\$45,636
	Road	H.016322	LA 81: W-11 Lateral & Bayou Black Brs	\$31,147
	Road	H.016323	LA 37: Glass Branch Bridge	\$42,214
	Road	H.016324	LA 1047: Drain Bridge	\$52,956
	Road	H.016326	LA 36: Drain Bridge	\$40,760
		44-04128; H.004273.5	I-49 Connector	
	Planning		Tasks 1, 5, 6, 12	\$501,526
	Traffic		Task 2	\$24,765
	Road		Task 4	\$14,923
	Bridge		Task 8	\$5,335

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
AECOM Technical Services, Inc. (Continued)	Environmental		Task 10	n/a
	Environmental		Task 210	\$232,592
	Bridge		Task 301	n/a
	Bridge		Task 302	\$117,662
	Bridge		Task 408	\$114,256
		44-21513	Movable Bridge IDIQ	
	Bridge	H.011969.5 – Ted Hickey	Contract 1 for Movable Bridges (LA 1264)	\$232,368
	Bridge	H.012044.5 – Grand Lake	Contract 1 for Movable Bridges (LA 384)	\$1,832,163
	Bridge	H.011988.5 – Duperier	Contract 1 for Movable Bridges (LA 86)	\$384,351
	Bridge	H.011973.5 - Dularge	Contract 1 for Movable Bridges (LA 315)	\$354,605
	Bridge	H.012737.5- Bayou Bonfouca	Contract 1 for Movable Bridges (LA 433)	\$364,427
	Bridge	H.000445	US 190: UPRR Overpass near Opelousas	\$620,922
	Road	H.000445	US 190: UPRR Overpass near Opelousas	\$931,383
	Traffic	H.000445	US 190: UPRR Overpass near Opelousas	\$250,000
		44-29684	In-Depth Bridge Inspection IDIQ	
	Bridge	H.009730.5	In-Depth Bridge Inspection – TO#1 & 2	\$2,057,027

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Ardaman & Associates, Inc.	Geotech	44-4128; H.004273	I-49 Connector, Lafayette	\$183,132
	Geotech	44-18899; H.004791	LA 23: Belle Chasse Bridge & Tunnel (HBI)	\$22,508
	Geotech	44-19013; H.004100.5 & .6	I-10 CMAR Design Continuation: LA 415 TO ESSEN ON I-10 & I-12	\$540,869
	Geotech	H.004435	I-12 to Bush Construction Phase	\$37,900
	Geotech	44-8671; H.009266	I-10 Widening: LA 73 to LA 30	\$25,760
	Geotech	44-19013; H.002244.5	Boudreaux Canal Bridge (LA 56)	\$180
	Geotech	44-17438; H.013284	MRB GBR LA 1 to LA 30 Connector	\$2,781
	Geotech	44-6189; H.004647.6	I-20 Mississippi River Bridge at Vicksburg	\$1,377,611
	Geotech	44-25025; H.015337, H.015452, H.015453, H.015454, H.015455, H.015456, H.015457, H.015458, H.015459, H.015460, H.015461, H.015462, H.015463	IIJA	\$36,932
	Geotech	44-24652; H.014265.5	N River Road Irving Branch	\$65
	Geotech	44-24652; H.012533.5	LA 1252 Bayou Pt Brule Bridge	\$39
	Geotech	44-24652, H.012607.5	Henderson Bayou Bridge LA 933	\$65
	Geotech	44-24652, H.015568.5, H.015569	Pelican Point Roundabout	\$348
	Geotech	44-24652; H.012842.5	LA 124 Ext. Larto Lake	\$152
	Geotech	44-21519; H.012030.5	KCS RR Overpasses US 371	\$38,876
	Geotech	44-21887; H.012542, H.012453, H.012544, H.012047	Replacement of 15 Bridges	\$300,380

Ardaman & Associates, Inc. (Continued)	Geotech	44-6189; H.016313.5, H.016314.5, H.016315.5, H.016316.5, H.016317.5, H.016318.5, H.016319.5, H.016320.5, H.016325.5	Culvert Replacements	\$31,997
	Geotech	H.015429, H.015430, H.015432	IIJA	\$3,192
	Geotech	H.001798	LA 531: Bridges Near Dubberly	\$16,276
	Geotech	H.004100.5	I-10 CMAR Borings: LA 415 TO ESSEN ON I-10 & I-12	\$638,894
	Geotech	H.06094.5	US 371 Brushy Creek Bridge	\$127,527
	Geotech	H.016204.5	Benton Sidewalks and RR Xing	\$32,218

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Forte & Tablada, Inc.	Bridge/Survey	4400021594/H.011965.6	Task Order No. 2 - IWGO Bridge Rehabilitation (Drone Flyover)	\$47,688
	Bridge	4400021594/H.009859.5	Task Order No. 6 - Load Rate Selected Statewide Bridges	\$932,984
	Bridge	4400021594/H.009730.5	Task Order No. 8 - In-Depth Bridge Inspections	\$127,580
	Bridge	4400021594/H.015546.6	Task Order No. 9 - Caplis Sligo Road Over Red Chute Bayou	\$5,244
	Bridge	4400021594/H.009859.5	Task Order No. 10 - Statewide Bridge Rating	\$915,095
	Bridge	4400023921/H.015519.6	Task Order No. 5 - Smith Road over Red Chute Bayou	\$9,024
	Bridge/Survey	4400024589/H.014990.5	OSBR S. Tiger Bend Rd & East Achord Rd Bridges	\$41,837
	Bridge/Survey	4400013387/H.013137.5	OSBR Ouachita	\$23,249
	Bridge/Survey	4400019864/H.014318.5	OSBR Gurney Road Bridges	\$4,708
	Bridge	4400025037/H.014994.5	OSBR Bonne Idee Rd over Bonne Bayou	\$3,487
	Bridge	4400024586/H.014981.5	OSBR Hosston River Road	\$5,689
	Road	4400024641/H.005734.5	LA 447 Corridor	\$196,843

Forte & Tablada, Inc. (Continued)	CE&I/OV	4400023837/H.013714.6	Valhi Blvd Shared-Use Path (Houma)	\$133,718
	Survey	4400021974/H.016401.5	I-10: I-55 & US 51 Intch Ltg. (LaPlace)	\$170,391
	Survey	4400021532/H.012068.5	LA 1026: Creek Bridge	\$10,719
	Survey	4400021532/H.010116.5	LA 1088: Soult & Trinity Roundabouts	\$22,187
	Survey	4400021532/H.012059.5	LA 19: Bridges near Zachary	\$19,490
	Survey	4400021532/H.013195.5	LA 98 Curve Realignment	\$6,464
	Survey	4400021532/H.005734.5	LA 447 Corridor Study	\$109,275
	Survey	4400021532/H.012563.5	LA 73: Bayou Manchac Bridge (HBI)	\$461
	Survey	4400027919/H.000688.5	US 11: Norfolk Southern RR Overpass (HBI)	\$59,548
	Survey	4400027919/H.015587.5	LA 3211 @ Yokley Rd Roundabout	\$14,063
	Survey	4400021532/H.004100.5	I-10: LA 415 to Essen on I-10 & I-12	\$102,019
	Survey	4400030630/H.015724.5	Kings Hwy: Healthcare & Dev Corridor	\$148,531
	Survey	4400025029/H.015341	D61(EBR) IJJA Off-System Bridge	\$53,978
	Survey	4400025029/H.015341	D61(EBR) IJJA Off-System Bridge - SA 3	\$11,253
	Survey	4400024189/H.016417.5	I-12 Livingston Median Mobile LiDAR	\$43,765
	Survey	H.004100	I-10 Capital Corridor	\$5,760
	Survey	4400004128/H.004273.5	I-49 Connector Additional ROW	\$6,692
	Survey	H.015047	Three Mile Lake	\$7,860
	Survey	4400031228/H.015469.5	Shreveport Pavement Program	\$88,500

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
Neel-Schaffer, Inc.	Planning	SPN 736-99-1548	Travel Demand Model Support Services Statewide (PRIME)	\$46,821
	ITS	4400010428 EWL 3, H.004774.5; H.007300	Kansas Lane: Garrett Road Connector and I-20 Improvements (SUB)	\$805
	Traffic	4400010428 EWL 6, H.004774.5; H.007300	Kansas Lane: Garrett Road Connector and I-20 Improvements (SUB)	n/a
	Planning	4400015733, H.972374.1	Local Public Agency Documented Planning Process, Statewide	\$72,185
	Road	4400017293, H.010616	I-20: LA 544 Overpass Replacement	n/a
	ITS	440005459, H.004780.5	Kansas Lane Connector, S.A. #6	\$552
	Traffic	4400017438, H.013284	MRB South GBR: LA 1 to LA 30 Connector, Ascension, EBR, Iberville & WBR	\$130,966
	Traffic	4400018271, H.014746.1	LA 383 Corridor Study	\$10,547
	Traffic	4400018271, H.014746.5, SA #2	LA 383 Corridor Study	\$54,445
	Planning	4400018271, H.014746.1	LA 383 Corridor Study	\$93,741
	Planning	4400021094	Update Statewide Transportation Plan and Travel Demand Model	\$6,170
	Traffic	4400026458, H.014710.5	Cedar Street Ext. to LA 22 and Roundabout	\$33,740
	Road	4400024927, H.015226.5, S.A. #2	US 90: Roundabout at LA 101, S.A. #2	\$62,647
	Traffic	4400025299, H.013421.5	Dist. 02H Flashing Yellow Arrow Part 2	\$71,946

Neel-Schaffer, Inc. (Continued)	Traffic	4400025299, H.015645.5	LA 47 Hayne Blvd Safety Improvements	\$52,589
	Traffic	4400025299, H.016168.1	Baton Rouge Northern Bypass Expressway	\$419,673
	Road	4400024927, H.014366.5	LA 621 Realignment at LA 73	\$325,925
	Traffic	4400024927, H.014366.5	LA 621 Realignment at LA 73	\$68,011
	Traffic	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet	\$112
	Planning	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet	\$5,318
	Road	4400023689, H.013622.5	LRSP Ardenwood Dr. Road Diet (awaiting NTP for design and should not count as backlog)	\$156,280
	Road	4400024927, H.009425.5	LA 16: N 2nd St. to E. of Duncan Ave.	\$150,429
	Traffic	4400025299, H.015986.5	I-49 at LA 3233 (Harry Gilbeau Road) Traffic Study	\$80,675
	Road	4400028434, H.015568.5	LA 44: Pelican Point Roundabout and Widen	\$88,844
	Traffic	4400023689, H.015574.5	LCG FYA Signal Improvements Phase 2	\$207,261
	Other (Program Management)	4400027987, H.015373.1	LRSP and SRTTP Program Management	\$910,500
	Road	4400024927, H.016158.5	LA 182: Greenwood St. Overpass	\$83,005
	Traffic	4400028585, H.014516.5	Mills Ave & Rees St Intersection Imp	\$97,301
	Safety	4400023689, H.015227. S.A. #1	US 51 @ Victoria Dr. Ped Crossing, S.A. #1	\$23,323
	ITS	4400029436, H.011504.6	Alexandria Phase 2 Technical Support	\$33,611
	ITS	4400029436, H.016447.1	DMS Decom & Upgrades SEA	\$99,329

Neel-Schaffer, Inc. (Continued)	CE&I	4400029441, H.011446.6	Mound Rest Area Renovations	\$82,692
	Other (Electrical)	4400029441, H.015218.5	Grand Prairie Safety Rest Area Lighting	\$30,575

Firm(s)	Past Performance Evaluation Discipline(s) *	State Project Number	Project Name	Remaining Unpaid Balance**
NTB Associates, Inc.	Survey	4400019338 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (Sub to Waggoner)	\$57,492
	Survey	4400019337 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (Sub to BKI)	\$28,748
	Survey	4400025041 H.015406	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program - Lock No. 3 Bridge, St. Tammany Parish (Sub to Waggoner)	\$10,216
	Survey	4400025041 H.015403	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program - W. Yellow Water Road Bridge, Tangipahoa Parish (Sub to Waggoner)	\$12,661
	Survey	4400027686 H.008768.5	IDIQ Contract for Hydrographic Surveying Services – Task Order No. 7 – Spring Bridges	\$53,011
	Other (SUE)	4400026587 H.001779	Jimmie Davis Bridge (LA 511) (HBI) Design Build Project, Bossier Parish (Sub to James Construction/ Huval & Associates, Inc.)	n/a
	Survey	4400027918 H.012869.5	IDIQ Contract for Professional Boundary Surveying Services – Task Order 3 – LA 182 (Univ) @ LA 723 (Renaud) Roundabout, Lafayette Parish	\$27,332
	Survey	4400027918 H.011310	IDIQ Contract for Professional Boundary Surveying Services – Task Order 4 – Ford Street Extension, District 61	\$13,872
	Survey	4400027918 H.015721	IDIQ Contract for Professional Boundary Surveying Services – Task Order 5 – LA 30 Roundabout, Ascension Parish	\$23,592

NTB Associates, Inc. (Continued)	Survey	4400027918 H.015568	IDIQ Contract for Professional Boundary Surveying Services – Task Order 6 – LA 44 Pelican Point Roundabout & Widening, Ascension Parish	\$44,108
	Survey	4400027918 H.014059	IDIQ Contract for Professional Boundary Surveying Services – Task Order 7 – US 80: Bridges Near Minden, Webster Parish	\$15,906
	Survey	4400027918 H.014059	IDIQ Contract for Professional Boundary Surveying Services – Task Order 8 – US 80: Bridges Near Minden, Addt'l Site, Webster Parish	\$14,937
	Survey	44000021975 H.016413.5	IDIQ Contract for Professional Surveying Services – Task Order 6 – I:20 Sam R. Fert Dr. to Red River Br., Caddo Parish	\$305,814
	Other (SUE)/ Survey	4400030630 H.015724.5	Kings Hwy: Healthcare & Dev. Corridor, Caddo Parish (Sub to AFJ&M, City of Shreveport, & Forte & Tablada)	\$75,495
	Other (SUE)	Parish Proj. No. 2025-118 H.003855	Cong Relief Winfield Road, Bossier Parish (Sub to Volkert)	\$42,790

20. Certifications/Licenses: PRIME AND SUB

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

Table of Contents for Certifications and Licenses

Name	Firm
Jonathan McDowell, PE	AECOM Technical Services, Inc.
Gregory Trahan, PE, RSP ₁	
Ellen Howard, PE, PTOE, RSP	Neel-Schaffer, Inc.
Chuck LeBoeuf, PE	
William Fulcher, PE, PTOE, PTP, RSP2B, RSP 2I	
Jonathan Duhe, PE, PTOE, RSP ₁	
Vijay Kundana, PE, PTOE, PTP (MPR 10)	
Joffrey Easley, PE	Forte & Tablata
Levi Yandis, PE	
Trenton Iglehart	
Brent Campbell	
Phillip Koch, PLS	
Rachel Waldropm PLS	
Robert Jewell, PE	Ardaman & Associates
Megan Bourgeois, PE	
Jarmon King, PE	
Casey Floyd	
Jessica Litt	
Amy Schulze, PE, CFM	NTB & Associates, Inc.
Emily Kliewe, EI	

Jonathan McDowell, PE

AECOM Technical Services, Inc.

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 (PDH): Awarded: 2

Philip J. Calone
Authorized Instructor

John H. Smith
Authorized Instructor

Robert J. Calone
Authorized instructor



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 (PDH): Awarded: 3

Philip J. Calone
Authorized Instructor

John H. Smith
Authorized Instructor

Robert J. Calone
Authorized instructor



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 (PDH): Awarded: 3

Philip J. Calone
Authorized Instructor

John H. Smith
Authorized Instructor

Robert J. Calone
Authorized instructor



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

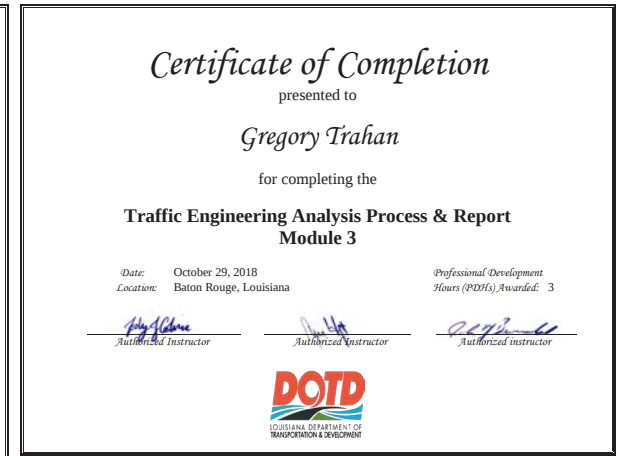
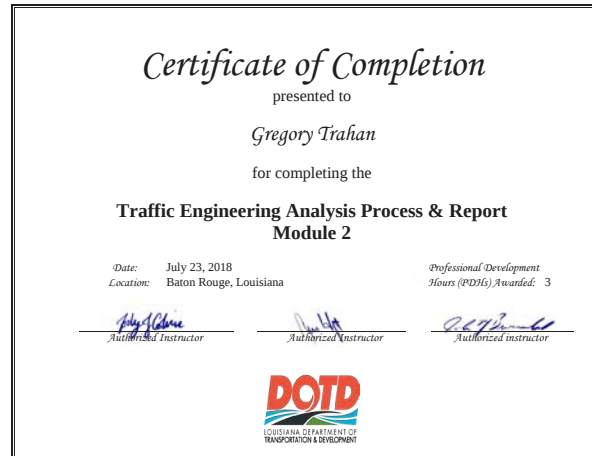
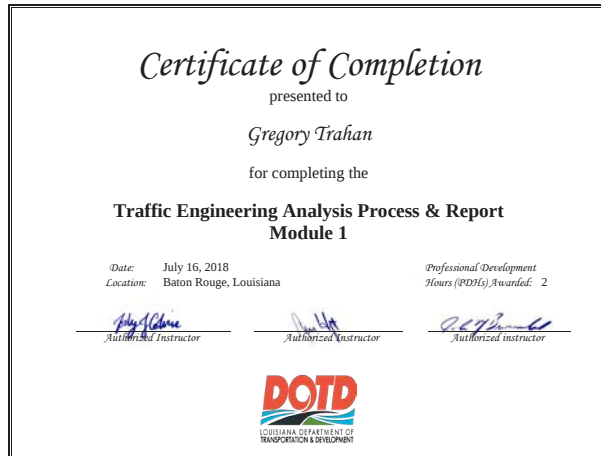
By Flagger Number Beginning with "A":
A1000126301

By Flagger Number Beginning with "V":

Last Name
McDowell

Gregory Trahan, PE, RSP1

AECOM Technical Services, Inc.



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



Transportation Professional Certification Board Inc.

certifies that

Ellen Lee Burke

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

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

*unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 3735 issued in Washington, D.C., U.S.A.*

August 1, 2014

Timothy P. Hoespart
Chair



James W. H. H.
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

Ellen Burke Howard

*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 349 issued in Washington, D.C., U.S.A.*

12/09/2019

Diane W. Morabito
Chair



Jeffrey F. Piniati
Executive Director

Certificate of Completion

presented to

Ellen B. Howard

for completing the

**Traffic Engineering Analysis Process & Report
Module 1**

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

Professional Development
Hours (PDHs) Awarded: 2

John J. Calhoun
Authorized Instructor

John H.
Authorized Instructor

John J. Calhoun
Authorized Instructor



Certificate of Completion

presented to

Ellen Howard

for completing the

**Traffic Engineering Analysis Process & Report
Module 2**

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

Professional Development
Hours (PDHs) Awarded: 3

John J. Calhoun
Authorized Instructor

John H.
Authorized Instructor

John J. Calhoun
Authorized Instructor



Certificate of Completion

presented to

Ellen Howard

for completing the

**Traffic Engineering Analysis Process & Report
Module 3**

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

Professional Development
Hours (PDHs) Awarded: 3

John J. Calhoun
Authorized Instructor

John H.
Authorized Instructor

John J. Calhoun
Authorized Instructor



Transportation Professional Certification Board, Inc.

certifies that

Charles W. LeBoeuf

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

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal.

Certificate number 5897 issued in Washington, DC, U.S.A

11/23/2022

Deborah Snyder
Chair



Jeffrey F. Daniels
Executive Director

Certificate of Completion

presented to

Charles LeBoeuf

for completing the

**Traffic Engineering Analysis Process & Report
Module 1**

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

Professional Development
Hours (PDHs) Awarded: 2

John H. H.
Authorized Instructor

John H. H.
Authorized Instructor

John H. H.
Authorized instructor



Certificate of Completion

presented to

Charles LeBoeuf

for completing the

**Traffic Engineering Analysis Process & Report
Module 2**

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

Professional Development
Hours (PDHs) Awarded: 3

John H. H.
Authorized Instructor

John H. H.
Authorized Instructor

John H. H.
Authorized instructor



Certificate of Completion

presented to

Charles LeBoeuf

for completing the

**Traffic Engineering Analysis Process & Report
Module 3**

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

Professional Development
Hours (PDHs) Awarded: 3

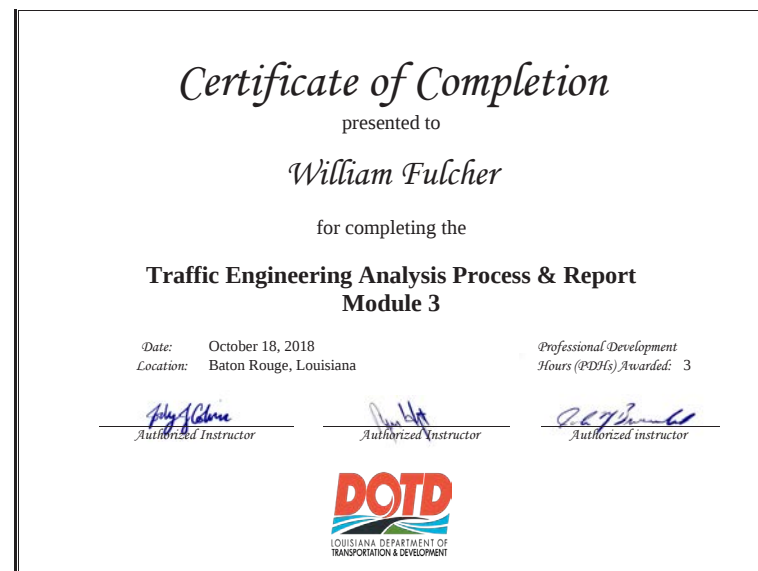
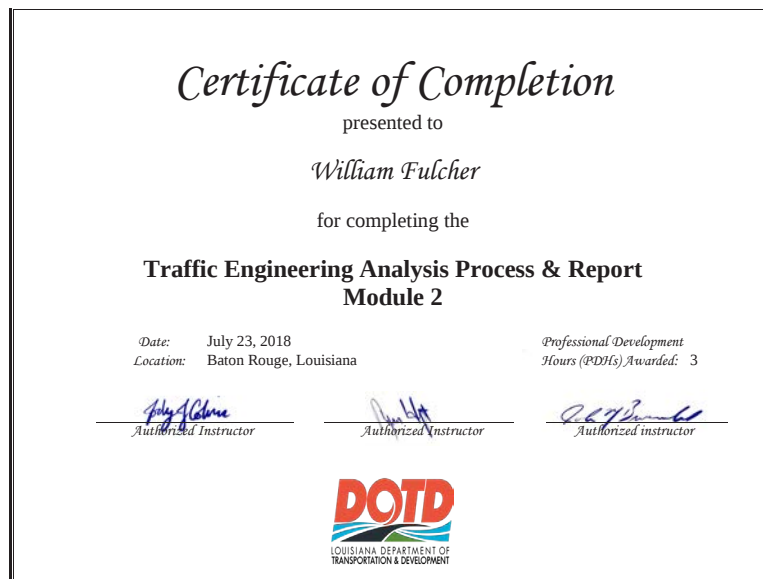
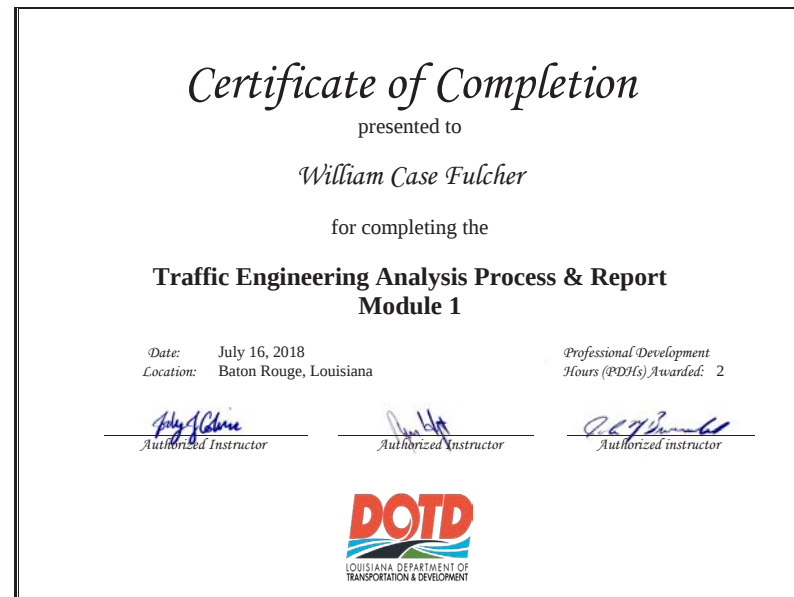
John H. H.
Authorized Instructor

John H. H.
Authorized Instructor

John H. H.
Authorized instructor







Jonathan Duhe, PE, PTOE, RSP

Neel-Schaffer, Inc.



Transportation Professional Certification Board, Inc.

certifies that

Jonathan Paul Duhe

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

Road Safety Professional

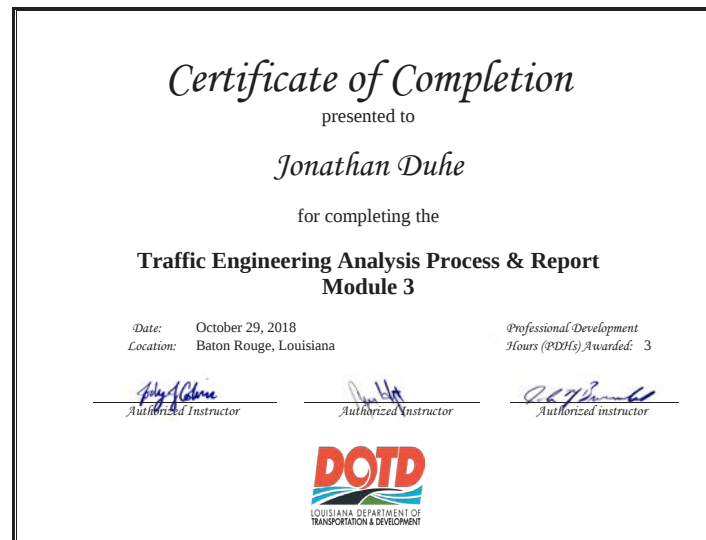
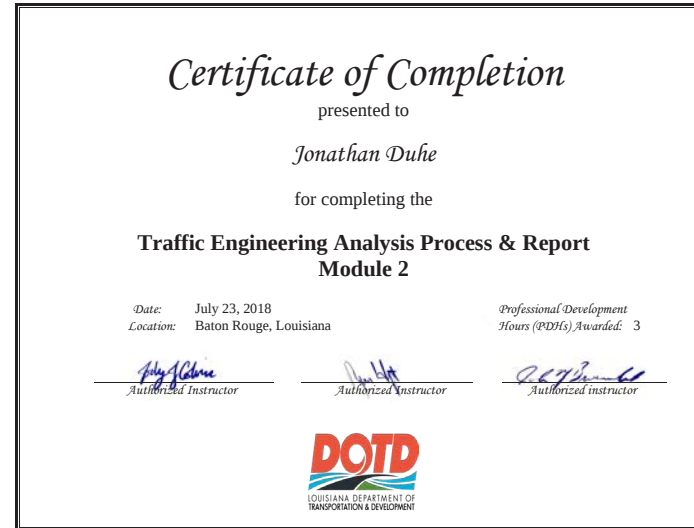
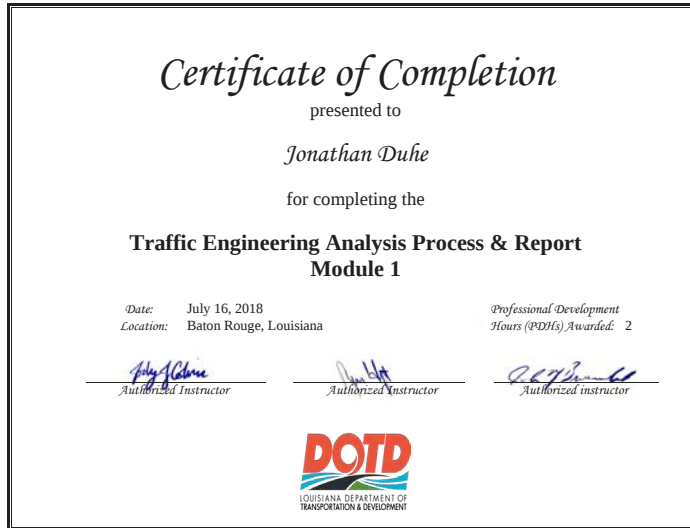
*unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 282 issued in Washington, DC, U.S.A.*

07/17/2019

Diane W. Morabito
Chair



Jeffrey F. Dunatti
Executive Director



Transportation Professional Certification Board Inc.

certifies that

Vijay Kumar Kunada

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

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

unless withdrawn by the Certification Board and subject to the provisions for renewal.

Certificate number 2878 issued in Washington, D.C., U.S.A.

April 14, 2010

Steven D. Hofener
Chair



James W. Schaffer
Executive Director

Transportation Professional Certification Board Inc.

certifies that

Vijay Kumar Kunada

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

PROFESSIONAL TRANSPORTATION PLANNER

Unless withdrawn by the Certification Board, this certificate number 096

issued in Washington, D.C., is subject to the provisions for renewal

November 7, 2007

Steven D. Hofener
Chair



James W. Schaffer
Executive Director

Certificate of Completion

presented to

Vijay Kunada

for completing the

**Traffic Engineering Analysis Process & Report
Module 1****Date:** October 1, 2018**Location:** Baton Rouge, Louisiana**Professional Development****Hours (PDHs) Awarded:** 2.5
Authorized Instructor
Authorized Instructor
Authorized instructor*Certificate of Completion*

presented to

Vijay Kunada

for completing the

**Traffic Engineering Analysis Process & Report
Module 2****Date:** October 10, 2018**Location:** Baton Rouge, Louisiana**Professional Development****Hours (PDHs) Awarded:** 3.5
Authorized Instructor
Authorized Instructor
Authorized instructor*Certificate of Completion*

presented to

Vijay Kunada

for completing the

**Traffic Engineering Analysis Process & Report
Module 3****Date:** December 17, 2018**Location:** Baton Rouge, Louisiana**Professional Development****Hours (PDHs) Awarded:** 3
Authorized Instructor
Authorized Instructor
Authorized instructor**MESOSCOPIC MODELS PROJECT REFERENCES**

PROJECT NAME	OWNER CONTACT INFORMATION
H.016168.1: Baton Rouge Northern Bypass Expressway	LADOTD, Melissa LeBas Melissa.LeBas@la.gov, 225-379-1039
H.013284: MRB South GBR: LA 1 to LA 30 Connector	LADOTD, Christina Brignac Christina.Brignac@la.gov, 225-379-1394
H.013897: I-10 & I-12 College Drive Flyover Ramp Design-Build	LADOTD, Catherine Mastin, PE catherine.mastin@la.gov, 225-379-1652
College Drive Enhancement Project	City of Baton Rouge, Cyndi Pennington cpennington@brla.gov, 225-389-3246
Lafayette Parish Mesoscopic Model	Acadiana Planning Commission, Sara Gary sgary@planacadiana.org, 337-806-9378

Mead & Hunt

In cooperation with the
Louisiana Department of Transportation & Development
presents this

Certificate of attendance and participation for:

Joffrey Easley

Training Course:
Maintenance and Rehabilitation of Historic Bridges

Transportation Training and Education Center
4099 Gourmier Avenue, Room 175
Baton Rouge, Louisiana 70803

Please select the date you attended the course:

- ☐ Tuesday, April 12, 2016
- ☐ Wednesday, April 13, 2016
- ☒ Tuesday, May 10, 2016
- ☐ Wednesday, May 11, 2016
- ☐ Tuesday, June 7, 2016
- ☐ Wednesday, June 8, 2016

You have earned 8 PDH units that can be applied to applicable continuing education requirements for professional engineering licensure.

David E. Spitzer
Mead & Hunt Instructor
Amy Spitzer

Darrell Berry
Mead & Hunt Instructor
Darrell Berry, PE, SE

National Highway Institute
U.S. Department of Transportation
Federal Highway Administration

Certificate of Training

Joffrey Easley

has participated in
FHWA - NHI Course No. 130078
Fracture Critical Inspection Techniques for Steel Bridges (3.5 Days)

hosted by
LA DOTD/LTRC

Date: August 11-14, 2015
Location: Baton Rouge, LA

Hours of Instruction: 25

William H. Landry
Instructor

Valerie Briggs
Local Coordinator

Valerie Briggs
Valerie Briggs, Director
National Highway Institute

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Joffrey Easley
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

4/7/2023 to 4/7/2027
Training Valid Through

Baton Rouge, LA
Location

Don M. Clark
Vice President of Education and Technical Services

Thomas Harman
President, CEO

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

ATSSA
American Traffic Safety Services Association ATSSA.com

National Highway Institute
U.S. Department of Transportation
Federal Highway Administration

Certificate of Training

JOFFREY EASLEY

has Successfully Completed
FHWA-NHI-130053
Bridge Inspection Refresher Training

hosted by
LA DOTD/LTRC

Date: January 11-13, 2022
Location: Baton Rouge, LA

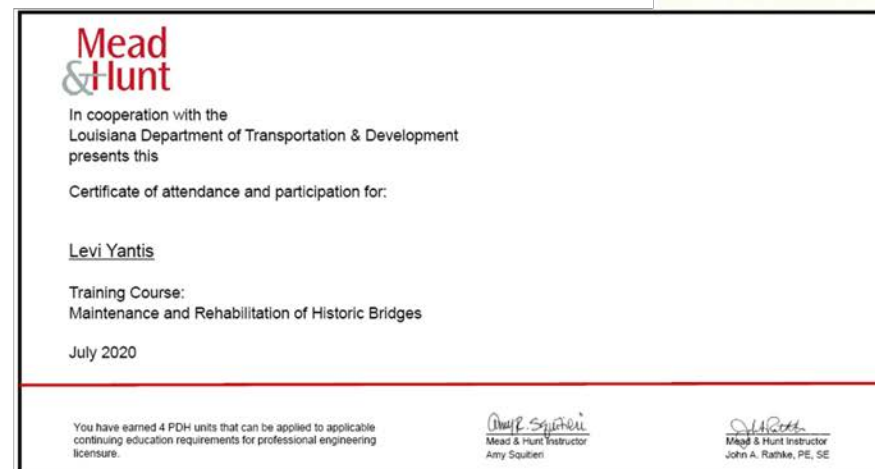
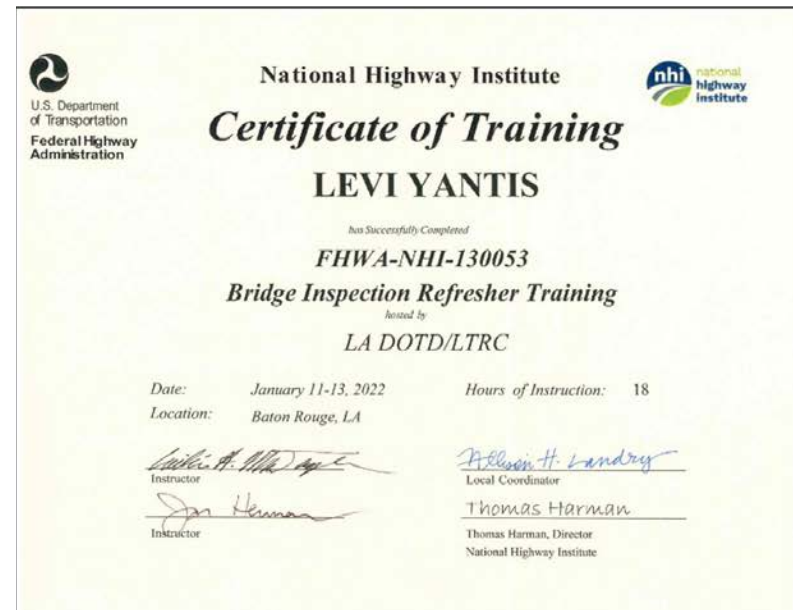
Hours of Instruction: 18

William H. Landry
Instructor

Thomas Harman
Local Coordinator

Thomas Harman
Thomas Harman, Director
National Highway Institute

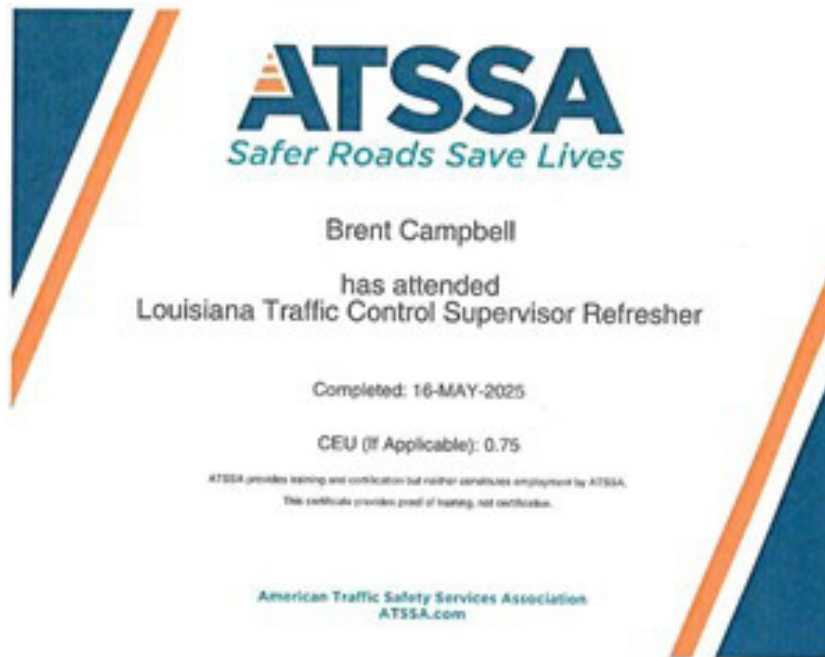




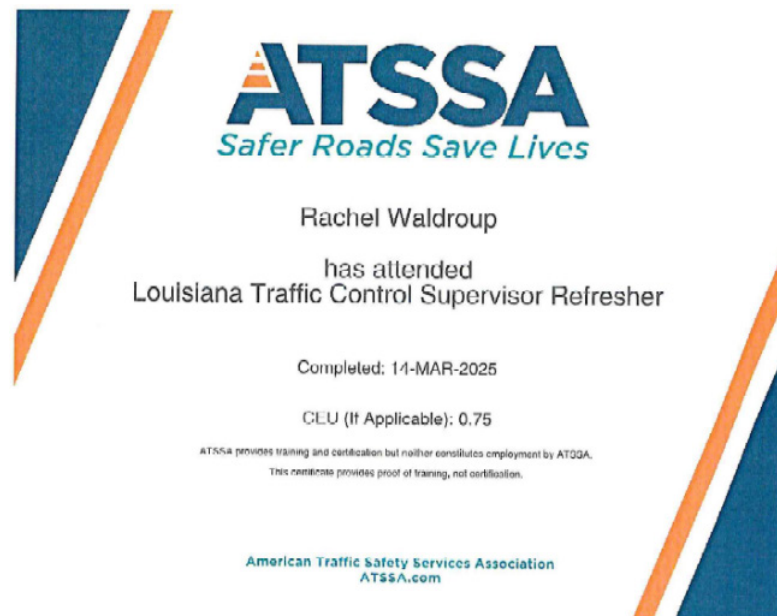
Trenton Iglehart

Forte and Tablada, Inc.









Ardaman & Associates, Inc.



 **SCOPE OF AASHTO ACCREDITATION FOR:**
Ardaman & Associates, Inc.
in Baton Rouge, Louisiana, USA

Aggregate

Standard:	Accredited Since:
C117 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	01/31/2019
C127 Specific Gravity and Absorption of Coarse Aggregate	09/17/2021
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	09/17/2021
C136 Sieve Analysis of Fine and Coarse Aggregates	01/31/2019
C566 Total Moisture Content of Aggregate by Drying	01/31/2019
C702 Reducing Samples of Aggregate to Testing Size	01/31/2019
D75 Sampling Aggregate	01/31/2019



SCOPE OF AASHTO ACCREDITATION FOR:
Ardaman & Associates, Inc.
in Baton Rouge, Louisiana, USA

Quality Management System

Standard:	Accredited Since:
R18 Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	11/09/2009
C1077 (Aggregate) Laboratories Testing Concrete and Concrete Aggregates	09/17/2021
C1077 (Concrete) Laboratories Testing Concrete and Concrete Aggregates	09/17/2021
D3740 (Soil) Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	12/26/2013



SCOPE OF AASHTO ACCREDITATION FOR:
Ardaman & Associates, Inc.
in Baton Rouge, Louisiana, USA

Soil

Standard:	Accredited Since:
T288 Minimum Soil Resistivity	01/31/2019
D421 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	11/09/2009
D422 Particle Size Analysis of Soils by Hydrometer	11/09/2009
D868 The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	08/16/2016
D854 Specific Gravity of Soils	02/14/2012
D1140 Amount of Material in Soils Finer than the No. 200 (75-µm) Sieve	02/14/2012
D1557 Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	08/16/2016
D2166 Unconfined Compressive Strength of Cohesive Soil	08/16/2016
D2216 Laboratory Determination of Moisture Content of Soils	11/09/2009
D2434 Permeability of Granular Soils (Constant Head)	04/27/2022
D2435 One-Dimensional Consolidation Properties of Soils Using Incremental Loading	02/14/2012
D2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)	12/26/2013
D2488 Description and Identification of Soils (Visual-Manual Procedure)	12/26/2013
D2850 Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression	02/14/2012
D2937 Density of Soil in Place by the Drive-Cylinder Method	01/31/2019
D2974 Determination of Organic Content in Soils by Loss on Ignition	02/14/2012
D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	11/09/2009
D4318 Plastic Limit of Soils (Atterberg Limits)	11/09/2009
D4643 Determination of Water (Moisture) Content of Soil by Microwave Oven Heating	01/31/2019
D4972 pH Testing of Soils	12/26/2013
D5084 Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	12/26/2013
D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis	04/27/2022
D6938 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	01/31/2019

Page 2 of 4

This certificate was generated on 08/14/2025 at 3:48 PM Eastern Time. Please confirm the current accreditation status of this laboratory at aashtoresource.org/aap/accreditation-directory

Ardaman & Associates, Inc.



SCOPE OF AASHTO ACCREDITATION FOR:

Ardaman & Associates, Inc.
in Baton Rouge, Louisiana, USA

Concrete

Standard:	Accredited Since:
C31 (Cylinders) Making and Curing Concrete Test Specimens in the Field	09/17/2021
C39 Compressive Strength of Cylindrical Concrete Specimens	09/17/2021
C138 Density (Unit Weight), Yield, and Air Content of Concrete	09/17/2021
C143 Slump of Hydraulic Cement Concrete	09/17/2021
C172 Sampling Freshly Mixed Concrete	09/17/2021
C231 Air Content of Freshly Mixed Concrete by the Pressure Method	09/17/2021
C511 Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	01/12/2022
C1064 Temperature of Freshly Mixed Portland Cement Concrete	09/17/2021
C1231 (6000 psi and below) Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	09/17/2021

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Ardaman & Associates Inc
316 Highlandia Dr
Baton Rouge, Louisiana 70810-5904

Agency Interest No. 30726
Activity No. ACC20250001

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

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

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in a single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:14711.

Tonya Landry
Administrator
Public Participation and Permit Support Division

Issued Date: 10/12/2025
Effective Date: July 1, 2025
Expiration Date: June 30, 2026
Certificate Number: 02052



STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2025

316 Highlandia Dr, Baton Rouge, Louisiana 70810-5904

Certificate Number: 02052

Ardaman & Associates Inc
AI Number: 30726
Activity No. ACC20250001
Expiration Date: June 30, 2026

Air Emissions

Analyte	Method Name	Method Code	Type	AB
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Non Potable Water

Analyte	Method Name	Method Code	Type	AB
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Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
1730 - Amount Of Soil Finer Than The No. 200 Sieve	ASTM D1140	3550	AASHTO	AAP
1731 - Laboratory Compaction Of Soils (Proctor Density)	ASTM D1557	3551	AASHTO	AAP
1731 - Laboratory Compaction Of Soils (Proctor Density)	ASTM D698	3561	AASHTO	AAP
1732 - Unconfined Compressive Strength Of Soil	ASTM D2166	3552	AASHTO	AAP
1734 - Classification Of Soils For Engineering Purposes (Unified Soil Classification System)	ASTM D2487	3554	AASHTO	AAP
1735 - Soil Classification Visual - Manual (Field)	ASTM D2488	3555	AASHTO	AAP
1736 - Unconsolidated, Undrained Triaxial Compression	ASTM D2850	3556	AASHTO	AAP
1738 - Particle Size Analysis Of Soils	ASTM D422 63 (7)	30030854	AASHTO	AAP
1739 - Atterberg Limits of Soils	ASTM D4318	3559	AASHTO	AAP
1740 - Liquid Limit	ASTM D4318	3559	AASHTO	AAP
1741 - Plastic Limit	ASTM D4318	3559	AASHTO	AAP
1742 - Plasticity Index	ASTM D4318	3559	AASHTO	AAP
1743 - Specific Gravity Of Soils	ASTM D854	3562	AASHTO	AAP
1744 - Hydraulic Conductivity (Flexible Wall Permeameter)	ASTM D5084	3563	AASHTO	AAP
1900 - pH	ASTM D4972	3560	AASHTO	AAP
1919 - Hydraulic Conductivity	ASTM D2434	3834	AASHTO	AAP
1954 - In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	ASTM D6938	3854	AASHTO	AAP
2073 - Dry Preparation of Samples	ASTM D421	3972	AASHTO	AAP
2086 - One-Dimensional Consolidation Properties of Soils	ASTM D2435	3994	AASHTO	AAP
2439 - Hydraulic Conductivity (granular material)	ASTM D2434	3834	AASHTO	AAP
2464 - Particle Size Distribution	ASTM D6913	4324	AASHTO	AAP
3850 - Moisture content	ASTM D2216-10	30025106	AASHTO	AAP
7987 - Organic Content of Soil by Ignition	ASTM D2974-07A	30026450	AASHTO	AAP

Clients and Customers are urged to verify the laboratory's current certification status with the Louisiana Environmental Laboratory Accreditation Program.

Page 1 of 1

Ardaman & Associates, Inc.

Last updated by Debra Vance on Jan 28, 2025 at 03:19 PM

ARDAMAN & ASSOCIATES, INC.

Last updated by Debra Vance on Jan 28, 2025 at 03:19 PM

ARDAMAN & ASSOCIATES, INC.

Socio-Economic Types

Check the registrant's Reps & Certs, if present, under FAR 52.212-3 or FAR 52.219-1 to determine if the entity is an SBA-certified HUBZone small business concern. Additional small business information may be found in the SBA's Dynamic Small Business Search if the entity completed the SBA supplemental pages during registration.

Financial Information		
Accepts Credit Card Payments	Debt Subject To Offset	
Yes	No	
EFT Indicator	CAGE Code	
0000	559D4	
Points of Contact		
Electronic Business		
?	8008 S Orange AVE	
JASON PARKER	Orlando, Florida 32859	
	United States	
JASON PARKER	8008 S Orange AVE	
	Orlando, Florida 32859	
	United States	
Government Business		
?	8008 S Orange AVE	
JASON PARKER	Orlando, Florida 32859	
	United States	
JASON PARKER	8008 S Orange AVE	
	Orlando, Florida 32859	
	United States	
Past Performance		
?	8008 S Orange AVE	
JASON PARKER	Orlando, Florida 32859	
	United States	
JASON PARKER	8008 S Orange AVE	
	Orlando, Florida 32859	
	United States	
Service Classifications		
NAICS Codes		
Primary	NAICS Codes	NAICS Title
Yes	541330	Engineering Services
	541380	Testing Laboratories And Services
	541620	Environmental Consulting Services
Disaster Response		
This entity does not appear in the disaster response registry.		



ARDAMAN & ASSOCIATES, INC.

Unique Entity ID	CAGE / NCAGE	Purpose of Registration
QL4JXK7UV9K1	559D4	All Awards
Registration Status	Expiration Date	
Active Registration	Jan 28, 2026	
Physical Address	Mailing Address	
316 Highlandia DR	316 Highlandia DR	
Baton Rouge, Louisiana 70810-5904	Baton Rouge, Louisiana 70810-5904	
United States	United States	
Business Information		
Doing Business as	Division Name	Division Number
(blank)	(blank)	(blank)
Congressional District	State / Country of Incorporation	URL
Louisiana 06	Florida / United States	(blank)
Registration Dates		
Activation Date	Submission Date	Initial Registration Date
Feb 3, 2025	Jan 28, 2025	Jul 23, 2008
Entity Dates		
Entity Start Date	Fiscal Year End Close Date	
Jan 1, 2007	Sep 30	
Immediate Owner		
CAGE	Legal Business Name	
078E8	TETRA TECH, INC.	
Highest Level Owner		
CAGE	Legal Business Name	
(blank)	(blank)	
Executive Compensation		
Registrants in the System for Award Management (SAM) respond to the Executive Compensation questions in accordance with Section 6202 of P.L. 110-252, amending the Federal Funding Accountability and Transparency Act (P.L. 109-282). This information is not displayed in SAM. It is sent to USAspending.gov for display in association with an eligible award. Maintaining an active registration in SAM demonstrates the registrant responded to the questions.		
Proceedings Questions		
Registrants in the System for Award Management (SAM.gov) respond to proceedings questions in accordance with FAR 52.209-7, FAR 52.209-9, or 2. C.F.R. 200 Appendix XII. Their responses are displayed in the responsibility/qualification section of SAM.gov. Maintaining an active registration in SAM.gov demonstrates the registrant responded to the proceedings questions.		
Exclusion Summary		
Active Exclusions Records?		
No		
SAM Search Authorization		
I authorize my entity's non-sensitive information to be displayed in SAM public search results:		
Yes		
Entity Types		
Business Types		
Entity Structure	Entity Type	Organization Factors
Corporate Entity (Not Tax Exempt)	Business or Organization	(blank)
Profit Structure		
For Profit Organization		

Aug 19, 2025 02:55:14 PM GMT
<https://sam.gov/entity/QL4JXK7UV9K1/coreData?status=null>

Page 1 of 2



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.

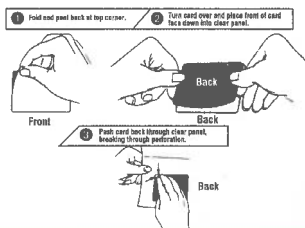
We commend you on your decision to become an ATSSA Certified Flagger. This distinction reflects that you have been trained by the leader in roadway safety and also entitles you to be listed on our National Flagger Database. Please review your state requirements for expiration of your flagger card. Also, 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
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



Office of Conservation
Department of Energy and Natural Resources
STATE OF LOUISIANA

WATER WELL CONTRACTOR'S LICENSE

The Office of Conservation
for the Department of Energy and Natural Resources
State of Louisiana

hereby certifies that

ARDAMAN & ASSOCIATES, INC.

Casey Floyd

has been licensed to drill environmental wells and water wells under the provisions of R.S. 38:3098
and is entitled to practice in the state of Louisiana as a Water Well Contractor.

This License is non-transferable and expires June 30, 2026 unless
renewed, revoked or suspended by the licensing authority as prescribed by statute.

Signed and sealed this 29th day of May, 2025

GAVIN D. BROUSSARD
ENVIRONMENTAL DIVISION ADMINISTRATOR

Office of Conservation
Louisiana Department of Energy and Natural Resources

License No. WWC- # 212



PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Casey Floyd
has attended
Louisiana Traffic Control Supervisor
Training Course

9/6/2023 to 9/6/2027
Training Valid Through

Baton Rouge, LA
Location

Vice President of Education and Technical Services

President, CEO

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



American Traffic Safety Services Association ATSSA.com



Megan Bourgeois
has attended
Louisiana Traffic Control Supervisor Refresher

Completed: 21-JUN-2024

CEU (If Applicable): 0.75

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

American Traffic Safety Services Association
ATSSA.com



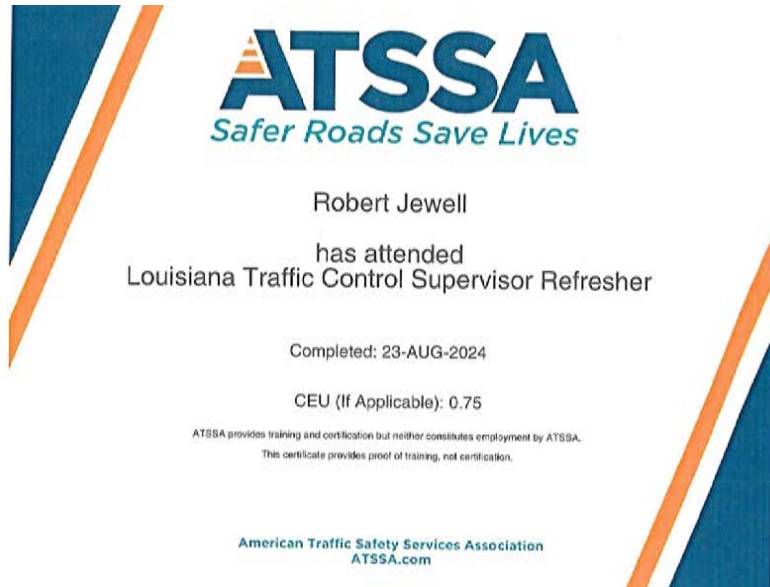
Megan Bourgeois
has attended
National Flagger Certification Training Course

Completed: 15-AUG-2024

CEU (If Applicable): 0

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

American Traffic Safety Services Association
ATSSA.com



ATSSA Corporate Office
15 Riverside Parkway
Fredericksburg, VA 22406
540-368-1701 | ATSSA.com

ATSSA Washington D.C. Office
512 8th Street, SE
Washington, DC 20003

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.

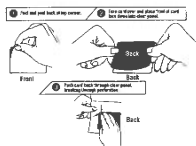
We commend you on your decision to become an ATSSA Certified Flagger. This distinction reflects that you have been trained by the leader in roadway safety and entitles you to be listed on our National Flagger Database. Please review your state requirements for expiration of your flagger card.

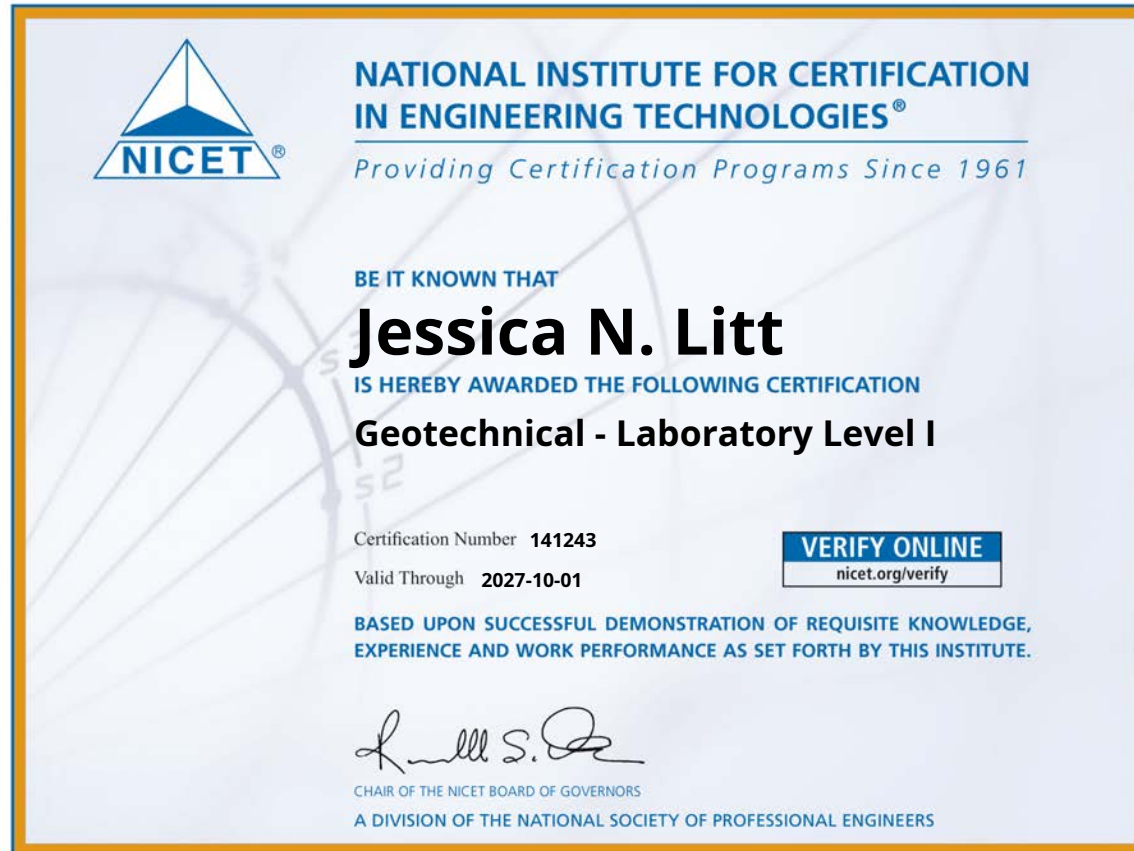
Once again, ATSSA thanks you for your dedication to ensuring that our work zones are safe and that lives will be saved with proper training. Please visit our website at ATSSA.com for additional training courses and work zone safety products.

Sincerely,

Clark Thomas
VP of Learning

Laminating the front of your card with Dual Laminate:







	
Indiana Professional Licensing Agency State Board of Professional Engineers 402 W. Washington Street, W072 Indianapolis, IN 46204	
Engineer Intern	
License Number	Expire Date
ET32500282	11/30/2124
Emily Jean Kliewer	
Mike Braun Governor State of Indiana	Lindsay M. Hyer Executive Director Indiana Professional Licensing Agency

	
Indiana Professional Licensing Agency 402 W. Washington Street, W072 Indianapolis, IN 46204	
Engineer Intern	
License Number	Expire Date
ET32500282	11/30/2124
Emily Jean Kliewer	
Signature 	

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 proposal.

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

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
FORTE AND TABLADA, INC.	Business Corporation	BATON ROUGE	Active

Previous Names

Business: FORTE AND TABLADA, INC.

Charter Number: 25306090D

Registration Date: 2/8/1961

Domicile Address

9107 INTERLINE AVE.
BATON ROUGE, LA 70809

Mailing Address

9107 INTERLINE AVE.
BATON ROUGE, LA 70809

Principal Office Address

9107 INTERLINE AVE.
BATON ROUGE, LA 70809

Status

Status: **Active**

Annual Report Status: **In Good Standing**

File Date: 2/8/1961

Last Report Filed: 1/12/2026

Type: Business Corporation

Registered Agent(s)

Agent:	JUSTIN T. MANNINO
Address 1:	TAYLOR, PORTER, BROOKS & PHILLIPS, L.L.P.
Address 2:	450 LAUREL STREET, 8TH FLOOR
City, State, Zip:	BATON ROUGE, LA 70801
Appointment Date:	8/21/2020

Officer(s)

Additional Officers: No

Officer:	RUSSELL JOSEPH COCO, JR.
Title:	Director, President
Address 1:	9107 INTERLINE AVENUE
City, State, Zip:	BATON ROUGE, LA 70809

Officer:	CHAD A. BACAS
-----------------	---------------

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
NEEL-SCHAFER, INC.	Business Corporation (Non-Louisiana)	JACKSON	Active

Previous Names

Business: NEEL-SCHAFER, INC.

Charter Number: 34112054F

Registration Date: 4/25/1983

Domicile Address

4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Mailing Address

4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Principal Business Office

4450 OLD CANTON ROAD
SUITE 100
JACKSON, MS 39211

Registered Office in Louisiana

450 LAUREL STREET, 8TH FLOOR
BATON ROUGE, LA 70801

Principal Business Establishment in Louisiana

450 LAUREL STREET
8TH FLOOR
BATON ROUGE, LA 70801

Status

Status: **Active**

Annual Report Status: **In Good Standing**

Qualified: 4/25/1983

Last Report Filed: 4/3/2025

Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent:	CORPORATION SERVICE COMPANY
---------------	-----------------------------

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
NTB ASSOCIATES, INC.	Business Corporation	SHREVEPORT	Active

Previous Names

NTB, INC. (Changed: 1/4/2000)

Business: NTB ASSOCIATES, INC.

Charter Number: 34216133D

Registration Date: 8/14/1986

Domicile Address

525 LOUISIANA AVE.
SHREVEPORT, LA 71101

Mailing Address

525 LOUISIANA AVE.
SHREVEPORT, LA 71101

Principal Office Address

525 LOUISIANA AVE.
SHREVEPORT, LA 71101

Status

Status: Active

Annual Report Status: In Good Standing

File Date: 8/14/1986

Last Report Filed: 7/25/2025

Type: Business Corporation

Registered Agent(s)

Agent:	W. JAMES HILL, III
Address 1:	8570 BUSINESS PARK DR.
City, State, Zip:	SHREVEPORT, LA 71105
Appointment Date:	8/14/1986

Officer(s)

Additional Officers: No

Officer:	AARON G BUNCH
Title:	Officer, President
Address 1:	224 TWIN POINT DRIVE
City, State, Zip:	BENTON, LA 71006

Officer:	BRYAN BUNCH
-----------------	-------------

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
ARDAMAN & ASSOCIATES, INC.	Business Corporation (Non-Louisiana)	ORLANDO	Active

Previous Names

Business: ARDAMAN & ASSOCIATES, INC.

Charter Number: 34396031F

Registration Date: 12/13/1991

Domicile Address

8008 SOUTH ORANGE AVENUE
ORLANDO, FL 32809

Mailing Address

3475 E. FOOTHILL BLVD.
PASADENA, CA 91107

Principal Business Office

8008 SOUTH ORANGE AVENUE
ORLANDO, FL 32809

Registered Office in Louisiana

3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana

316 HIGHLANDIA DR.
BATON ROUGE, LA 70816

Status

Status: **Active**

Annual Report Status: **In Good Standing**

Qualified: 12/13/1991

Last Report Filed: 11/13/2025

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:	12/13/1991

Officer(s)

Additional Officers: No

22. Subconsultant information

Firm Name (as registered with Louisiana's Secretary of State)	Address	Point of Contact and Email Address	Phone Number
Ardaman & Associates, Inc.	316 Highlandia Dr., Baton Rouge, LA 70810 8000 Fern Avenue, Shreveport, LA 71105	Jerry Outlaw JOutlaw@ardaman.com	225-324-7527
Forte and Tablada, Inc.	9107 Interline Ave., Baton Rouge, LA 70809 9091 Mansfield Road, Shreveport, LA 71118	Russell "Joey" Coco, Jr. jcoco@forteandtablada.com	225-927-9321
Neel-Schaffer, Inc.	10000 Perkins Rowe, Suite G360 Baton Rouge, LA 70810	Nick J. Ferlito, Jr., PE, PTOE nick.ferlito@neel-schaffer.com	225-924-0235
NTB Associates, Inc.	Corporate Headquarters: 525 Louisiana Ave., Shreveport, LA 71101 Branch Offices: 321 Saint Joesph, Baton Rouge, LA 70802 8643 Main St., Zachary, LA 70791	Amy K. Schulze aschulze@ntbainc.com	225-719-2758

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.

US71: ICG Railroad Overpass Rehab (HBI) & US71: Market St Bridge Over ICG RR (HBI)

QC/QA PLAN

Contract Nos. 4400034051

Louisiana Department of Transportation and Development

March 18, 2026

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1.0 INTRODUCTION TO THE US 71: ICG Railroad Rehab over ICG RR and Market St Bridge over ICG RR (HBI) 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 US 71 Bridges projects, will meet or exceed the LADOTD's QC/QA policy described in the LADOTD Bridge Design and Evaluation Manual (BDEM). 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 US 71: ICG Railroad Overpass Rehab and Market St Bridge over ICG RR (HBI) contract.

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 LADOTD's Bridge QC/QA policy, it is apparent that the primary expectation is that consulting engineers contracting with LADOTD take full responsibility for their submittals at all stages of the bridge design process. By the assignment of this responsibility, 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 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 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 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 the 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 a critical component of AECOM's QMS and 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 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 US 71 Bridges contract, as it pertains to QC/QA, the roles and responsibilities of the design team are described below.

2.1 Quality Assurance Manager

AECOM's QA Manager 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 US 71 Bridges contract, 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 Project Leader, as indicated by the organizational chart. For the US 71 Bridges contract, 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 agrees with 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 issues in the design. This process results 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 Project 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 US 71 Bridges contract, we anticipate this level of review will be completed by 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, etc.) will be filed in the project directory and available for audit.

2.6 Engineer of Record

The Engineer(s) of Record (EOR) for the US 71 Bridges contract will be assigned by the supervisor or discipline lead on the project team. The EOR is responsible for the supervision of the calculations, plan, and special provision 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 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 [Letters, Memorandums, Meeting Minutes, Reports, Cost Estimates, Design tool validation forms, Drawing and Calculation QC forms (LADOTD and AECOM)], 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 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.

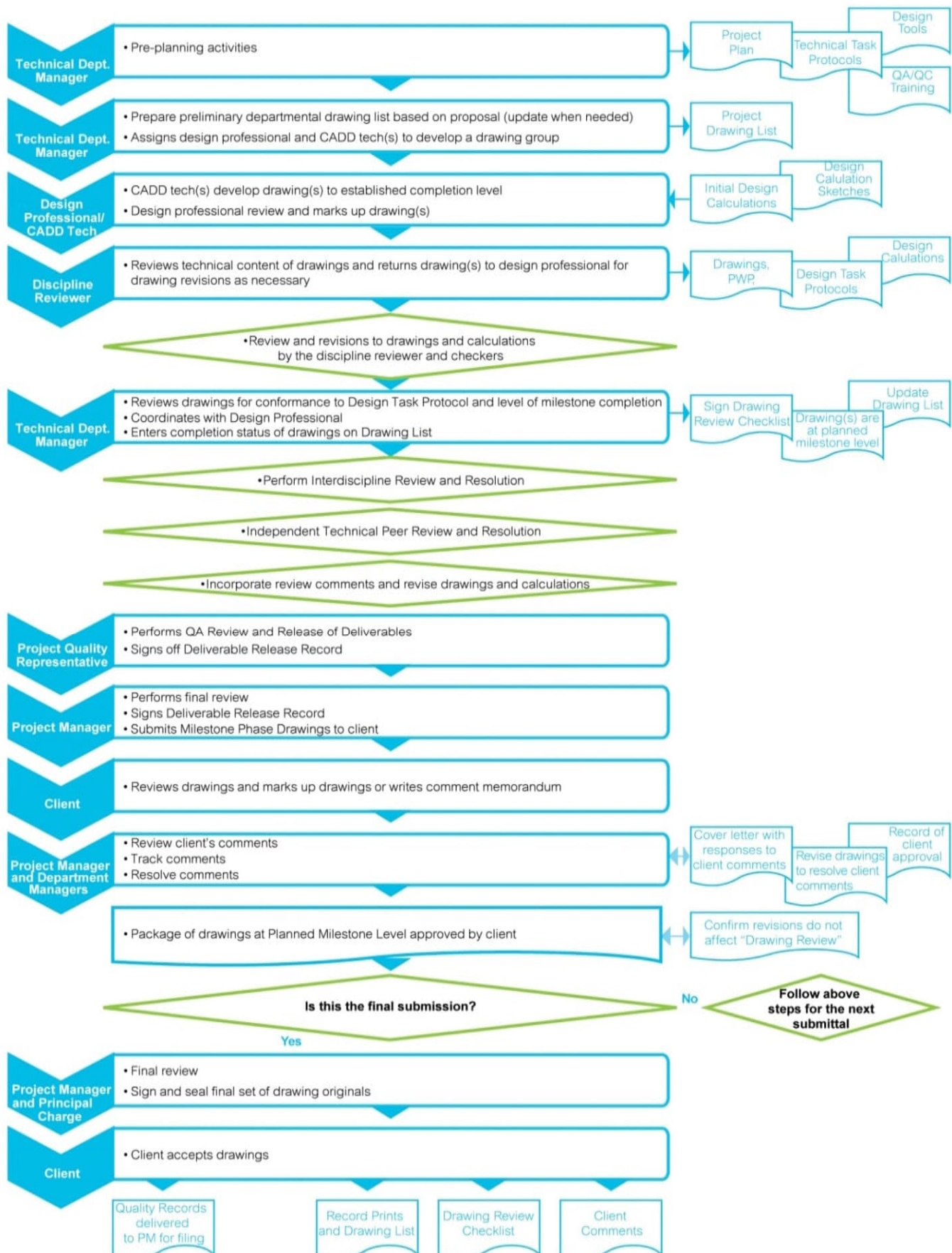
To the extent possible, the design team will select from the pre-approved list of software posted on the LADOTD Bridge Design website. Before using the pre-approved software, the program will be validated as directed in the AECOM QMS prior to use. For special applications where software not included 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 at the preliminary (30%, 60%, 90%, 100%) and final plan (30%, 60%, 90%, 98%, & 100%) development phases. The plan-in-hand meeting will be performed based on the preliminary submittal. In addition, an independent review of the preliminary submittals will be performed by LADOTD. Comments from these reviews must be resolved prior to proceeding to the final plan 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 design plans on the US 71 Bridges contract and our approach to implementation of these procedures is described below.



4.2 Discipline Level QC Review of Inspection & Condition Assessment Reports, Calculations and Drawings

In this first tier of QC review, a detailed review of inspection findings and site information is performed. A similar QC review will be performed on design calculations and drawings if required by the project's scope. Preceding the review, design development for the design phase is completed. Design activity is in a "pencils down" mode and review sets are produced. In the Discipline QC, all inspection findings, design calculations and drawings are thoroughly checked for accuracy, completeness, and for compliance with the project's design task protocols. The reviewer is designated as an engineer within the Quality Control Team. The review is documented in the 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, drawings, and calculations 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. 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 Inspection & Condition Assessment Reports, Calculations and Drawings

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 the 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 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 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 US 71 Bridges contract, 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 resolutions 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 in 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 QUALITY FORMS

8.1 AECOM Quality Forms

AECOM continually updates the quality process. The quality forms and documentation shown in the appendices of this document are examples and should not be used without confirmation that these documents are current and active.

Quality forms for all of AECOM's documentation can be found with the following link. This link is for internal AECOM use only.

[AECOM Project Delivery System \(PDS\)](#)

8.2 LADOTD QA/QC Policy

Similarly, LADOTD's Bridge Design QA/QC policy is defined within the Bridge Design and Evaluation Manual (BDEM), which is also a living document and subject to change. A link to the BDEM is provided below.

[LADOTD Bridge Design & Evaluation Manual](#)

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 Railings

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.

Project No.:
Project Name:
Bridge Task Manager:

[illegible]

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 <u>Documents\ Reference Materials\ Bridge Design Section Archive\ Design Manuals-Guidance</u>	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 <u>Documents\ Standard Drawings</u>	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 <u>Project folder\ Bridge-Facilities\ Discipline\ Plans</u> (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 <u>Project folder\ Published Submittals\ Project Drawings\ Final Plans</u>	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 <u>Project folder\ Published Submittals\ Project Drawings\ Construction Submittals\ Shop Drawings or Erection Drawings or RFIs or Other Construction Submittals</u> (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 <u>Load Rating</u> .	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 <u>Chief Engineer Orders</u> .	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) <i>(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.)</i>	ACT* + 1 CY**	Final Project Acceptance Date + 5 Years	Archive electronically in Project-wise under <u>Project Folder\Published Submittals\Project Documents\Project Correspondence Emails</u>	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 <u>Bridge Design Subject Files</u>	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

	WHO ¹	WHAT	WHEN
 Proposal/ Prelim Plan (Pre-Award)	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.	
Executable Project Plan (Post-Award)	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
Review and Approval of Project Plan	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.	
Project Plan Management	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:

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

- 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)	- 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. - 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

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	= Renamable 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'.					
Lvl1	Lvl2	Lvl3 (C0-C1)	Guidance	Folder Permissions		
				Cannot Delete	Restrict Deletion BUT May Add To	RN = Renamable
(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]				C0 - C3A		
	010_Go_NoGo [GNG]		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.			
	020_RFP [RFP]		In lieu of copy saved here, can be held in approved system.			
	030_Pricing [PRICE]		The document, as received from the eventual client, that requests or invites the submittal of a proposal for the project.			
	040_Proposal [PROP]		Records of pricing strategies, calculations, projections, etc. used to submit a cost quotation, either prior to, or after, selection.			
	050_Presentation [PRES]		The actual signed version of the final proposal submitted, and any relevant records leading up to it.			
	060_Legal_Review [LEGAL]		When applicable, a copy of the PowerPoint or other media used in a presentation to elaborate on our qualifications for the project.			
	070_Negotiations [NEG]		Records of legal review of contract and terms and conditions; copy of Contract Review form if online tool not used.			
	080_Superseded [SS]		Records of negotiations regarding scope, schedule and pricing between AECOM and client.			
	090_Superseded [SS]		Superseded version of documents in the Pre-Contract folder.			
100_Contract [CONT]				C0 - C3A		
	110_Client_Contract [CL_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.			
	120_TO_PO [PO]		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.			
	130_Approval_Matrix [APPRV_MTX]		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.			
	140_Risk_Committee [RSK_COM]		Records of Approval Matrix approvals during the pre-contract and contract review process.			
	150_Subcontracts [SUBS]		Store correspondence for RA/RN/RFPAs, especially when required to submit quarterly Risk Committee approval update forms.			
	160_Vendors_Suppliers [VENDOR]		Signed versions of contracts with technical/professional subs; establish Level 3 folders as needed for Subs Invoices, QA/QC, Insurance Certificates.			RN
	170_Superseded [SS]		Signed versions of contracts/POs with materials, equipment, supply providers; establish Level 3 folders as needed.			RN
	180_Superseded [SS]		Superseded versions of documents in the Contract folder.			
200_Project_Control [PROJ_CONT]				C0 - C3A		
	210_Project_Plan [PLAN]		This folder is intended to contain records related to the overall project management and business administration of the project.			
	220_Risk_Assessment_Register [RSK_REG]		Save project plan and updates throughout project execution.			
	230_WBS_Schedule [WBS_SCH]		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.			
	240_Budget [BUDG]		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.			
	250_Client_Invoices [INV]		Main budget is in APIC; here include supporting budget worksheets, projections, summaries for project team, etc.			
	260_Healthy_Start_Reviews [HS]		Invoices submitted to the client. Level 3 folders, as needed, for things like Progress Reports.			
	270_Project_Reviews [PROJ_REV]		Healthy start reports, action items, follow-up documentation for evidence of closure.			
	280_Closeout [CLOSE]		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.			
	290_Superseded [SS]		Records related to the pending or actual closure of the project.			
	300_Superseded [SS]		Superseded versions of documents in the Project Control folder.			
300_Communications [COMM]				C0 - C3A		
	310_Client [CLIENT]		This folder is intended to house correspondence, records of calls, emails (depending on local IT requirements), meeting minutes and other forms of communication between AECOM and outside entities as well as internally within the AECOM team.			
	320_Sub [SUBS]		Meeting minutes can be linked to meeting minutes in this folder.			
	330_External [EXT]		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.			
	340_Internal [INT]		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.			
	350_Feedback [FEEDBK]		When documents that carry signatures are stored, these should either be electronically signed versions, or scans of wet-signed documents.			
	360_Superseded [SS]		Note: Must defer to local IT requirements regarding for storage email files - email .pst .pvt files.			
	370_Superseded [SS]		General communication outside contract negotiations. Can add a Level 3 set of folders to differentiate between different types of communications.			
	380_Superseded [SS]		Outside/Third Party/Regulatory entities other than those AECOM has a contractual relationship with (agencies, authorities, commissions, etc.)			
	390_Superseded [SS]		File notes, records of conversations.			
	400_Superseded [SS]		Include informal and/or formal client feedback, evaluations, ratings, etc.			
	410_Superseded [SS]		Superseded versions of documents in the Communications folder.			
400_Technical [TECH]				C0 - C3A		
	410_Technical_Approach_Review [TAR]		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.			
	420_Technical_Quality_Reviews [TQR]		Examples of Level 2 folders: Reports, Calculations, Data, Information, etc. Includes all non-CAD, non-GIS working documents.			
	425_Calculation_Review [CALC]		Replace "431_TechnicalArea_X" with appropriate naming convention.			
	430_Technical_Working_Documents		Record of Technical Approach Review and follow-up; resolution of TAR comments.			
	431_TechnicalArea_X		Supporting evidence of quality review activity (markups, check sets, comments log, TQRs, etc.). May include optional QC Review checklists or other discipline-specific checklists.			
	432_TechnicalArea_X		Record of Calculation Review and follow-up and resolutions.			
	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]				C0 - C3A		
	501_Deliverable_X		File the record set (pdflocked version) of issued deliverables submitted to the client / outside entities (e.g. funding agencies, permitting agencies, etc.).			
	502_Deliverable_X		Replace "50X_Deliverable_X" with the appropriate naming convention matching the deliverable naming convention.			
	503_Deliverable_X		It is a requirement that these deliverables will be reviewed in accordance with the Technical Quality Review Procedure - DCS. Records of this review (TQR) are stored in the respective deliverable folder (501, 502, etc.), or storage in folder 420 as determined by the PM.			
	504_Deliverable_X		Include client's interview review comments and transmittals associated to deliverables.			
	580_Other					RN
	590_Superseded [SS]		Where superseded drawings exist as a deliverable, include in this folder for a record of the entire issued set.			RN
	600_Superseded [SS]		Superseded versions of documents in the Deliverables folder.			
600_Construction_Support [CSUP]						RN
	610_Addenda [ADDENDA]		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.			
	620_Communications [COMMS]		Copy of issued contract addenda, as well as other supporting documents leading up to the addenda release.			
	630_RFPs [RFP]		Use Level 3 subfolders as desired to separate among various entities and/or types of communications (emails, meeting minutes, claim documents, etc.).			
	640_Shop_Dwg_Submittals [SHP_DWG_REV]		Requests for information submitted by contractors and our replies.			
	650_Pay_Applications [PAY_APP]		Review of shop drawings and other submittals received from contractors.			
	660_Change_Orders [CHG_ORD]		Pay requests from the contractor, including AECOM's review and response.			
	670_Site_Visits_Inspections [SITE_INSP]		Use Level 3 subfolders as needed to contain information related to each change order including permit approvals.			
	680_Punch_List_Closeout [PUNCH]		Records and notes resulting from AECOM inspections of the work performed.			
	690_Superseded [SS]		Documentation and progress records of contractor efforts to complete the work. Add Level 3 folders for items such as Maintenance Manuals, etc.			
	700_Superseded [SS]		Superseded versions of documents from Construction Support folder.			
700_Quality_Env_Sust [QES]				C0 - C3A		
	710_Plans [Q_E_PLAN]		The electronic tools (IOT, 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.			
	720_Audits_and_CARs [AUDIT_CAR]		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.			
	730_Training [TRAIN]		Project safety, quality, EMS audit findings, nonconformities and corrective action documentation (if documentation not retained in IOT).			
	740_Reserved_for_PMs_option		Evidence of EMS, QMS, etc. training performed for the project.			
	750_Superseded [SS]		Superseded versions of documents in the QES folder.			RN
800_Safety [SAFETY]				C0 - C3A		
	810_Safety_Plan [SFTY_PLN]		This folder would be used on projects that involve field work or other than ordinary office-based physical activities that present a safety hazard.			
	820_Training [TRAIN]		Project-specific safe work plan, safety and health plan, Task Hazard Analyses (THAs), and hazard checklists as applicable.			
	830_Meetings [MTGS]		Include records of project-specific S&H training.			
	840_Incidents [INCID]		Include attendance/agenda of on-site tool box meetings, attendance at contractor mtgs, etc.			
	850_Safety_in_Design [SIG]		Investigation of safety incidents. Coordinate with SH&E and Legal regarding records to keep in project files.			
	860_Superseded [SS]		Include records and reports.			
	870_Superseded [SS]		Superseded versions of documents in the QES folder.			
900_CAD_GIS				C0 - C3A		
	910_CAD		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.			
	911_Discipline_X					RN
	911_1_WIP		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.			
	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

DCS

Unified File Index

Q2[DCS]-222-W11

Rev	Rev Date	Details
1	15-Jul-16	Initial Release as Q2[DCS]-222-W11
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 technical documents and assigned revision numbers as appropriate. TTPs that have been superseded 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

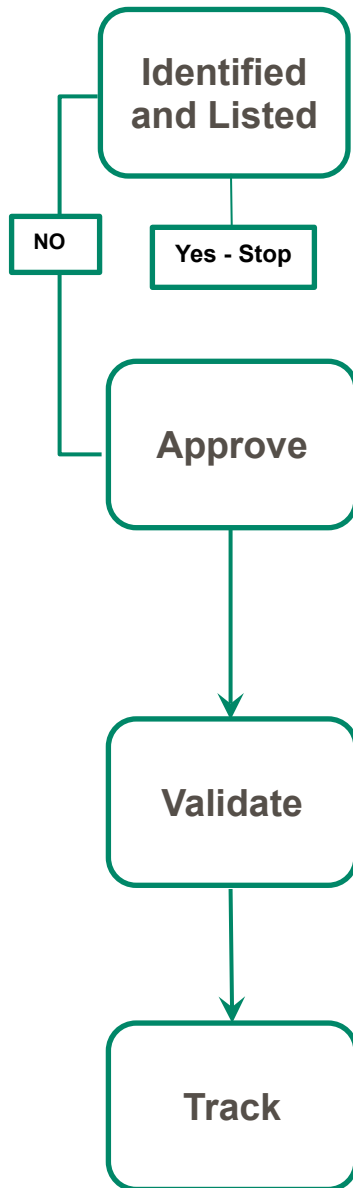
- a. N/A

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	- Perform validation using one of the following: - 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. - Perform a manual calculation to verify the results obtained using the software. - Obtain manufacturer documentation of production of software under a recognized quality standard. - 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:

- Performing calculations;
- Developing input for use in calculations;
- Creating designs or drawings using embedded calculations;
- Generating output provided directly to clients;
- Generating output included in deliverables to clients; or
- 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 consistent 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,

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)

Technical Quality Review Type																	Notes	Project Manager	Technical Lead	Originator	Lead Verifier	Reviewer	Interdisciplinary Reviewer	Independent Reviewer	Project Quality Manager
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										
Recommended scope when TQR Type is conducted Determine need based on project scope 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

TQR Review Types

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Technical Quality Review - Job Aid (Q2[DCS]-351-WI2)

Revision 5 October 14, 2024

DCS

Technical Quality Review - Job Aid

Q2[DCS]-351-WI2

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: <i>Confirm that the required quality checks and reviews have been performed,.....</i> 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)**

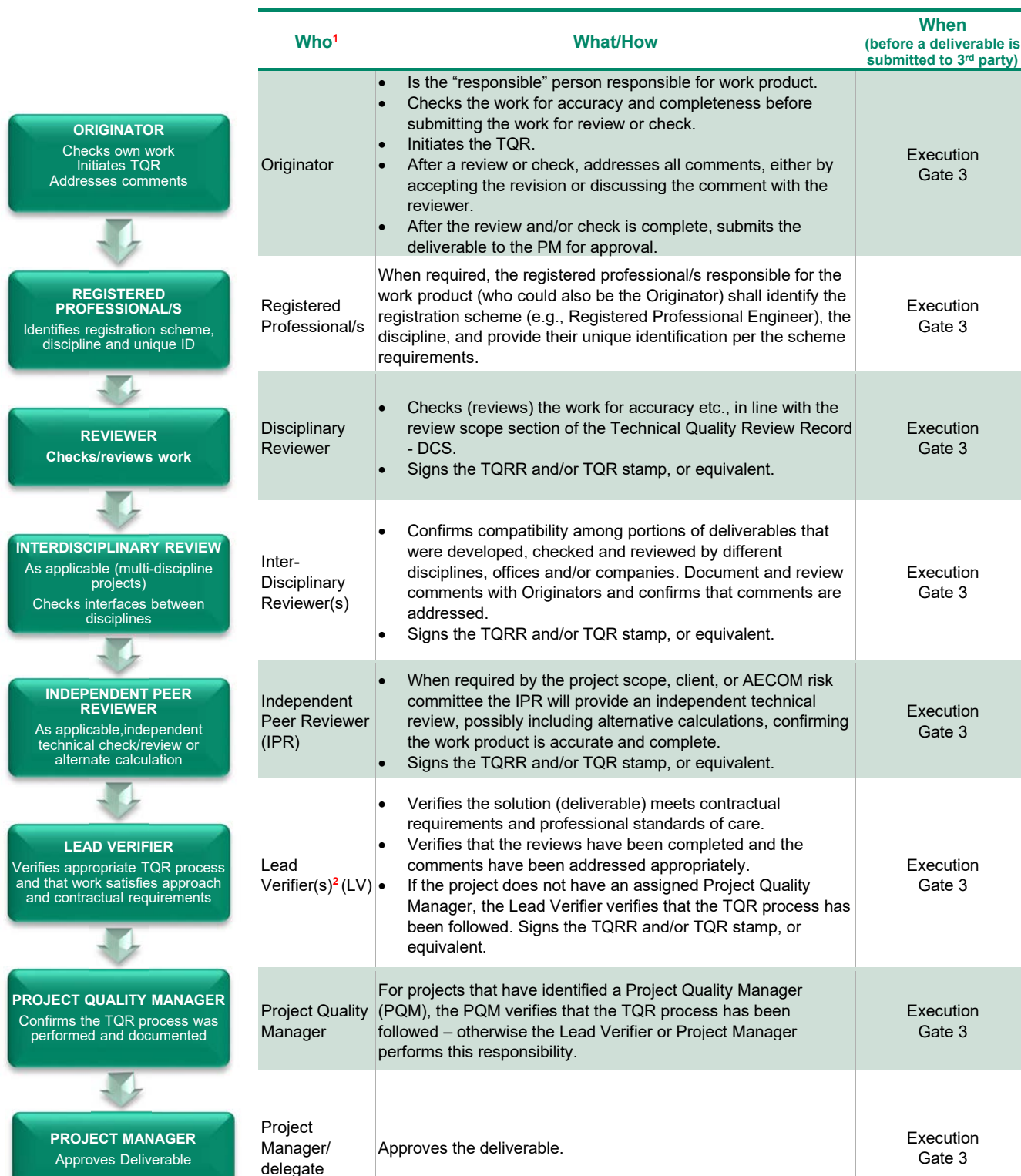
— **All Electronic Design Files**

— **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



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

- 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.
- 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.
- 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

- 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.
- 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

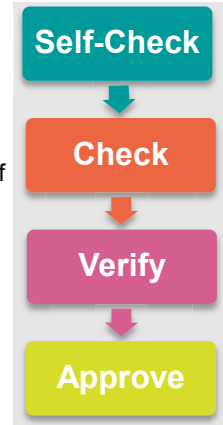
3. Procedure

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.

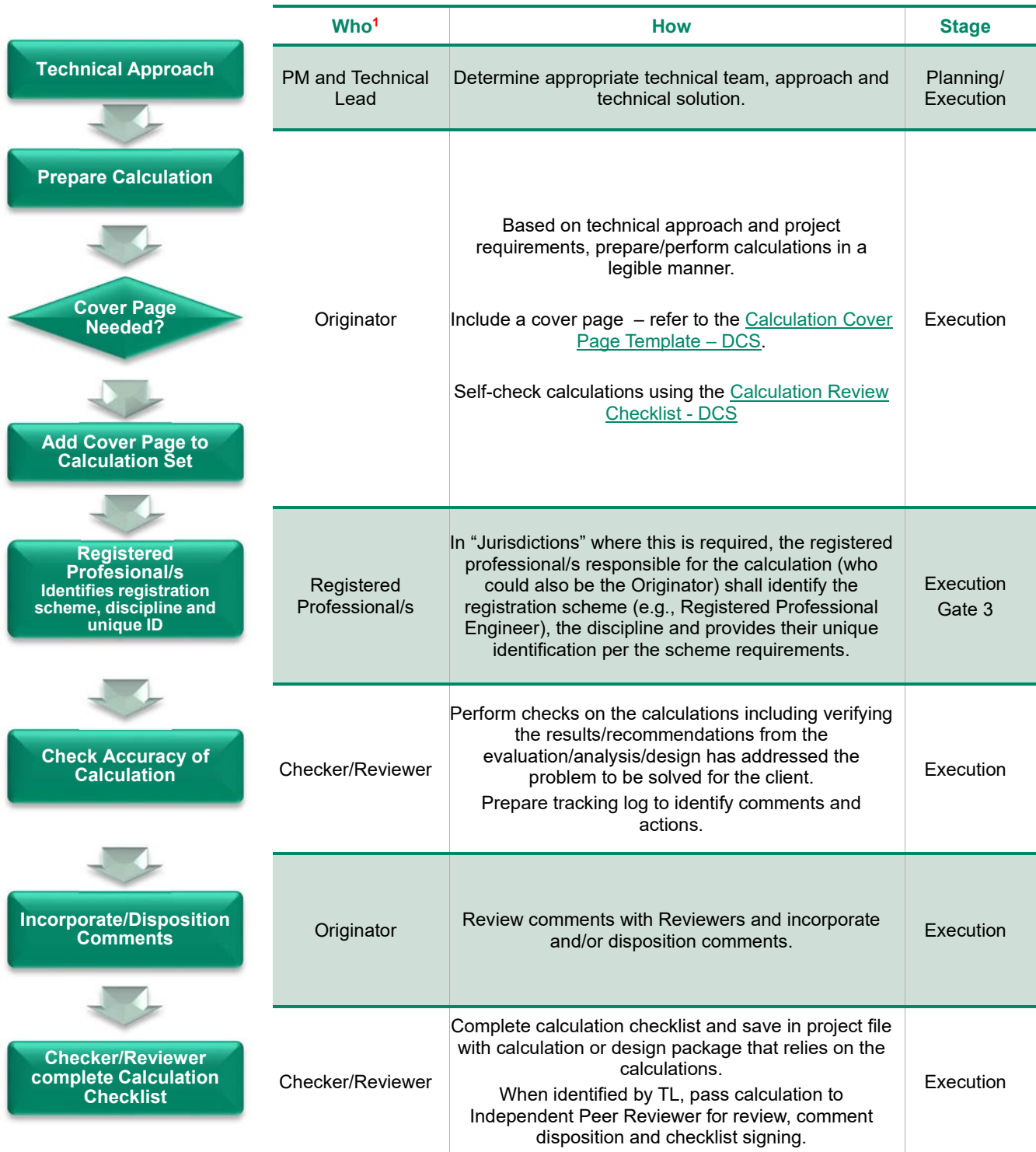
Table 3. AECOM TQR – Internal and External (Client)

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	(Types of comments)
Major Technical Change	

Calculation Preparation Instructions

Q2[DCS]-351-WI5



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

- 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.
- 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:
 - Simple math is included in a technical report and checked as a part of the report review process (documented on the TQRR); or
 - if there is equivalent evidence of checks i.e., stamps/initials on each page; or
 - there is a client equivalent calculation checklist required.
- 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-W1.	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: ☐ Scoping ☐ Preliminary ☐ Final ☐ Voided		Design Verification Required? (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		Superseded by Calculation No.: Supersedes Calculation No.:	
Was Software used: ☐ Yes ☐ No ☐ Non-safety software ☐ Safety Software		AECOM Computer Number: 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

Calculation Number (####-#CAL-###): Click or tap here to enter text.	Calculation Title: Click or tap here to enter text.	Revision: Click or tap here to enter text.	Page: 2 of 3
--	---	--	------------------------

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.

Calculation Number (####-#CAL-###): Click or tap here to enter text.	Calculation Title: Click or tap here to enter text.	Revision: Click or tap here to enter text.	Page: 3 of 3
--	---	--	------------------------

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.

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:	

[illegible]

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

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:

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:		
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

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

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 C—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		

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
	☐ 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.
Review Scope			

For "Format" columns, type N (None), HC (Hard Copy), EF (Electronic File – add network link), or RCF (Review Comment Form).						
Checking (Required for All Projects)	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.
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
Independent Peer Review (C-0 Projects)	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 Review (C-0 Projects)	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

**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

About AECOM

AECOM is the global infrastructure leader, committed to delivering a better world. As a trusted professional services firm powered by deep technical abilities, we solve our clients' complex challenges in water, environment, energy, transportation and buildings. Our teams partner with public- and private-sector clients to create innovative, sustainable and resilient solutions throughout the project lifecycle — from advisory, planning, design and engineering to program and construction management. AECOM is a *Fortune 500* firm that had revenue of \$16.1 billion in fiscal year 2025. Learn more at aecom.com.