## 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.

1. Contract Name as shown in the advertisement
2. Contract Number(s) as shown in the advertisement
3. State Project Number(s), if shown in the advertisement
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)
6. Prime consultant mailing address
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)
8. Name, title, phone number, and email address of prime consultant's contract point of contact
9. Name, title, phone number, and email address of the official with signing authority for this proposal

## IDIQ Contracts for Electrical Services Statewide

4400026073; 4400026074

## n/a

## WSP USA Inc.

EF. 0000623

WSP USA Inc.
1100 Poydras Street, Suite 1175
New Orleans, LA 70163
WSP USA Inc.
1100 Poydras Street, Suite 1175
New Orleans, LA 70163
Max Nassar, Senior Vice President
Senior Managing Director, Gulf States (LA, AL, MS)
225-218-3584, Max.Nassar@wsp.com
Max Nassar, Senior Vice President
Senior Managing Director, Gulf States (LA, AL, MS)
225-218-3584, Max.Nassar@wsp.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,


Signature above shall be the same person
listed in Section 9: listed in Section 9:

Date: 5/25/23

Prime consultant name: WSP USA Inc.
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.
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

Firm(s): Civil Design \& Construction, Inc. (CD\&C)

Firm(s)' \%:
7\% and each firm(s)' percentage.

## Past Performance Evaluation Discipline Table:

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

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

| Past Performance <br> Evaluation Discipline(s) | \% of Overall <br> Contract | Prime <br> WSP USA Inc. | Firm B <br> CD\&C | Firm <br> MM | Firm D <br> (otal to $100 \%$ |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- |
| Other | $93.0 \%$ | $64.5 \%$ |  | $35.5 \%$ |  |  |
| Survey | $7.0 \%$ |  | $100.0 \%$ |  |  |  |
|  | $\mathbf{1 0 0 \%}$ |  |  |  |  |  |
| Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant. |  |  |  |  |  |  |
| Total Percent of Contract | $\mathbf{1 0 0 \%}$ | $60.0 \%$ | $7.0 \%$ | $33.0 \%$ | $\mathbf{1 0 0 \%}$ |  |

## 14. Firm Size:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (please specify)" and include the classification title inside the parentheses.
The DOTD Job Classification(s) to be used can be found at the following link:
http://wwwsp.dotd.la.gov/Inside LaDOTD/Divisions/Engineering/CCS/Job Qualification/Job\%20Classifications\%20with\%20Descriptions.pdf

| Firm name DOTD Job Classification |  | Number of personnel committed to this contract | Total number of personnel available in this DOTD Job Classification (if needed) |
| :---: | :---: | :---: | :---: |
|  | Accountant | 2 | 15 |
| SP USA Inc. | Administrative | 2 | 17 |
| - - | Engineer | 5 | 27 |
| $1-1$ | Engineer - Other | 4 | 12 |
|  | Professional | 5 | 15 |
|  | Supervisor - Engineer | 4 | 11 |
| Civil Design \& Construction, Inc. (CD\&C) | Surveyor | 1 | 3 |
|  | Party Chief | 3 | 5 |
|  | Instrument Man | 2 | 3 |
|  | Rodman | 1 | 2 |
|  | CADD Operator | 1 | 1 |
|  | Senior Technician | 2 | 5 |
|  | Supervisor - SUE | 1 | 1 |
| Mott MacDonald M <br> MOTT | Engineer (Electrical \& Structural) | 4 | 100+ |
|  | Inspector | 1 | 20+ |

(Add rows as needed)

Prime consultant name: WSP USA Inc.

## 15. Organizational Chart:

Provide an organizational chart showing ALL relevant prime consultant and sub-consultant (if applicable) personnel assigned to the contract, area of project responsibility for each, and reporting lines for the purposes of this contract. An individual's role does not necessarily have to match their DOTD job classification identified in Section 13. If applicable, identify all personnel performing traffic engineering analysis and/or QC of traffic engineering analysis by placing an asterisk next to their name. Include the certificates required by the Traffic Engineering Process and Report Training Requirements article of the Advertisement in Section 20. It is acceptable to use an $11 \times 17$ format for Section 14.


LOUISIANA DEPARTMENT OF
TRANSPORTATION \& DEVELOPMENT

All staff listed are WSP unless noted otherwise.

SUBCONSULTANTS
Civil Design \& Construction (C)
Mott MacDonald (M)

> TECHNICAL ADVISORS
> Paul Letkovich, PE
> Karla E. Weston, PE (C)


## 16. Minimum Personnel Requirements:

Use the table below to identify both prime consultant and sub-consultant staff designated to work on this contract meeting the Minimum Personnel Requirements (MPRs) specified in the advertisement. Ensure the résumé reflects the required experience stated in the MPR. Make sure the P.E. discipline is also listed (highlighted in table) that is meeting the MPR; e.g. professional civil engineer should show the discipline of the license as civil if meeting that MPR.

(Add rows as needed)

## 17. Staff Experience:

Résumés shall be provided for all prime and sub-consultant personnel listed in Sections 14 and/or 15 of the proposal. Résumés of personnel not identified in Section 14 or Section 15 of the proposal should not be included and will not be evaluated. Résumés should be limited to $\mathbf{2}$ pages per person. Any certificates required by the advertisement are to be placed in Section 20.
Firm employed by WSP USA Inc.

| Name | Max Nassar |  |  |  | Years of relevant experience with this employer | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Title | Senior Vice President Senior Managing Director - Gulf States (LA, AL, MS) |  |  |  | Years of relevant experience with other employer(s) | 42 |
| Degree(s) / Years / Specialization |  |  |  | BA / 1976 / Psychology / Louisiana State University |  |  |
| Active registration number / state / expiration date |  |  |  | $\mathrm{n} / \mathrm{a}$ |  |  |
| Year registered |  | n/a | Discipline | n/a |  |  |
| Contract role(s) / brief description of responsibilities |  |  |  | Project Director - Max will serve as executive for the WSP staff. Max serves as WSP's managing director for the Gulf States area. |  |  |

Experience dates Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed ( $\mathrm{mm} / \mathrm{yy}-\mathrm{mm} / \mathrm{yy}$ ) intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
Max is a Louisiana native. Over the past 25 years, he has overseen a multiplicity of infrastructure projects in the Southeast United States and in Central America. Many of these projects have been in Louisiana and Mississippi and have been performed for a variety of public and private clients including Louisiana Department of Transportation and Development, the Mississippi Department of Transportation, the Louisiana Department of Natural Resources, the New Orleans Regional Planning Commission the New Orleans Regional Transit Authority, the Louisiana Coastal Protection and Restoration Authority, the Jackson Mississippi Municipal Airport Authority, the Louis Armstrong New Orleans International Airport, the Port of New Orleans, the Port of South Louisiana and many others. Max possesses demonstrated experience in NEPA Project Leadership, Government and Stakeholder Relations, Program Management, Project Management, Program and Project Development, and Construction Management and Inspection services related to major infrastructure and facilities projects which include roadway, highway and bridge infrastructure, drainage and utilities infrastructure, railways and transit ways, airport facilities, and various waterfront infrastructure and facilities.
LADOTD, IDIQ Contract for Electrical and Mechanical Engineering Services, Louisiana | Project Executive for this Task Order based engineering services contract which supports efforts on mechanical and electrical services related to roadways, pump stations and other mechanical and electrical needs.

- Task Order 1: State Project No. H.010439: Boyd Street \& 21st Street Pump Station Improvements
- Task Order 2: State Project No. H.010439.5: Boyd Street \& 21st Pumping Station Improvements I-710

06/17 - present

- Task Order 3: State Project No. H.O10565: Acadian St. Pumping Station Improvements
- Task Order 4: State Project No. H.O10565.5: Acadian Street Pumping Station
- Task Order 5: State Project No. H.972249.7: Generator Site Investigation and Load Study for Airline Drive Pump Station
- and LADOTD Maintenance Facility and Construction Docs for Airline Drive Pump Station
- Task Orders 6 \& 9: State Project No. H. 0 10253: Bluebonnet Blvd Pump Station Improvements LA 1248
- Task Orders 7, 8 \& 10: State Project No. H.010251: Chippewa St Pumping Station Improvements US61/190

| 04/20-present | LADOTD, Contract for Innovative Procurement and Alternative Delivery Support Services, LA \| Project Executive. This project includes provision of engineering, financial management, management and administrative advice and services to assist with Innovative Project Delivery Methods in connection with administering the procurement process of Design Build, Construction Management as Risk, and/or Public Private Partnership (P3) Projects. The current effort includes leading the procurement of the $\$$ 1 billion Calcasieu Bridge in Lake Charles, Louisiana. Included in the effort was a Level 2 Toll Study. The Calcasieu Bridge is one of the most critical projects in Louisiana's Transportation System as well as along the I-10 East West Trade Route. It has been identified as detrimental to economic development. WSP is currently working on Task \#3 under this contract. |
| :---: | :---: |
| 01/22-present | Louisiana Watershed Initiative LA 22 Gapping Project, Pontchartrain Levee District, Grant Management Services, Ascension Parish, LA \| Project Executive. WSP is a subconsultant providing grant management services of CDBG-MIT funds for the Pontchartrain Levee District (PLD) for the Louisiana Water Initiative (LWI) LA 22 Gapping Project. The project scope of work includes: establishing project files to demonstrate compliance with all applicable state, local and federal regulations, Ensuring PLD has an acceptable financial management system that is in accordance with CDBG-MIT program requirements, preparation of requests for payment, assist PLD with meeting OCD's financial reporting requirements, attend and assists PLD during OCD monitoring visits and prepare PLD's responses to monitoring findings and preparing close-out documents. |
| 10/19 - present | LADOTD Level 1 Toll Feasibility Study for a new Mississippi River Bridge between LA 1 and LA 30 (Project I.D. No. Number 101, a Priority B Megaproject in the Louisiana Statewide Transportation Plan), Baton Rouge \| Project Executive. The project includes enhancing the Capital Region Planning Commission (CRPC) Travel Demand Model (TDM to include a toll diversion model in order to be able to use the model to evaluate demand for the 3rd Crossing alternatives under different tolling scenarios. Additionally, WSP will generate estimates of annualized gross toll revenue based on the demand as well as prepare a conceptual plan to implement tolling including public outreach, economic impacts, toll infrastructures, institutional requirements, revenue risk, etc. |
| 08/06-12/12 | LADOTD, Emergency Repairs New Orleans Signals, New Orleans, LA \| Project Executive. In the aftermath of Hurricane Katrina, the Louisiana DOTD immediately undertook an emergency effort to restore Traffic Control Systems on the Federally Funded System in multiple parishes within the Greater New Orleans region. Funded by FHWA Emergency Relief Grant Funds, the project consisted of condition assessment, preliminary and final design, financial management and budget controls, construction engineering and inspection, and program management. |
| 06/20 -present | LADOTD, Harvey Tunnel Mechanical and Electrical Inspection and Rehabilitation, Belle Chase, LA \| Project Executive for this project which consists of replacing the main power distribution system to support a full upgrade of the tunnel ventilation and drainage systems as well as ancillary systems such as SCADA, fire alarm and gas monitoring systems. |

Firm employed by WSP USA Inc.

| Name David | David Loduca, PE, LEED 2.0 (MPR 7, 2, 3, 4A) |  |  | Years of relevant experience with this employer | 22 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Title Assi | Assistant Vice President, Electrical |  |  | Years of relevant experience with other employer(s) | 20 |
| Degree(s) / Years / Specialization |  |  | PHD, Engineering Management / Missouri University of Science \& Technology / 2011 MS, Engineering Management, University of Missouri-Rolla / 2005 AAS, Management, Virginia Western Community College / 1995 BS, Electrical Engineering, Virginia Military Institute / 1981 |  |  |
| Active registration number / state / expiration date |  |  | Professional Engineer: Louisiana (PE.28117) exp. 3/31/25; U.S. GBC LEED 2.0 (MO); Accredited Professional Record: National Council of Examiners for Engineering and Surveying; (9600) Project Management Professional (1826714) |  |  |
| Year registered | PE: 1998 | Discipline | Electrical |  |  |
| Contract role(s) / brief description of responsibilities |  |  | PIC/Project Manager - Meets all requirements for MPR 1, 2, 3, and 4A. Provides oversite of all aspects of the project. |  |  |

Experience dates Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed (mm/yy-mm/yy) intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).

Dave is a registered engineer in Louisiana with an expertise in electrical systems design. Dave currently serves as project manager for the electrical on-call contract with the Louisiana Department of Transportation and Development (LADOTD) under which WSP has completed the inspections and upgrades of four Department-owned pump stations and is currently in the design phase of upgrading three others. In addition to his leadership on multiple pump station projects, he is experienced on projects including highway lighting, renewable energy, airport landside facilities, telecommunications facilities, government facilities, industrial facilities, light rail and subway lighting and electrical systems, campus lighting, educational facilities, transportation maintenance facilities, commercial offices, restaurants, retail stores, and gas stations. He supports construction management and administration by answering requests for information and conducting site surveys, inspections, submittal reviews.

LADOTD, IDIQ Contract for Electrical and Mechanical Engineering Services, LA | Project Executive for this Task Order based engineering services contract which supports efforts on mechanical and electrical services related to roadways, pump stations and other mechanical and electrical needs.

- Task Order 1: State Project No. H.010439: Boyd Street \& 21st Street Pump Station Improvements
- Task Order 2: State Project No. H.010439.5: Boyd Street \& 21st Pumping Station Improvements I-110
- Task Order 3: State Project No. H.010565: Acadian St. Pumping Station Improvements
- Task Order 4: State Project No. H.010565.5: Acadian Street Pumping Station
- Task Order 5: State Project No. H.972249.1: Generator Site Investigation and Load Study for Airline Drive Pump Station
- and LADOTD Maintenance Facility and Construction Docs for Airline Drive Pump Station
- Task Orders 6 \& 9: State Project No. H. 0 10253: Bluebonnet Blvd Pump Station Improvements LA 1248
- Task Orders 7, 8 \& 10: State Project No. H.010251: Chippewa St Pumping Station Improvements US61/190

Pontchartrain Levee District, Cross Bayou Pumping Station (CBPS), St. Rose, LA | Project Manager/Electrical Engineer - The CBPS has five 1000 hp diesel main, and one 250 hp low-flow submersible pumps that, combined, provide over one half million gallons per minute of flow capacity. WSP focused on several key systems: the 1000 hp diesel pump drives, including the radiators
1/21-present and cooling air circuit; individual day and main fuel tanks, including the fuel transfer piping and systems; power takeoff, rightangle gear reducer, and linkage assemblies of each main pump, including the water lubrication system; the main pumps, including the accessory water lubrication system; the standby generator, including the transfer switch; the bridge crane; the bar screen and motorized trash rake; the lighting and electrical system; the main station ventilation system; and the telemetry and
controls. The project team reviewed O\&M experience, developed a Rough Order of Magnitude Repair Estimate and developed a Scope of Services and Plan for state-of-good-repair upgrade of the station.

St. Charles Parish, New Sarpy Pump Station Improvements, New Sarpy, LA | Electrical Engineer. WSP providing mechanical, electrical and SCADA/telemetry services for the New Sarpy Pump Station Upgrades. St. Charles Parish desires to increase the

6/22 - present and SCADA/telemetry. The first phase of the project includes an initial site investigation and assessment of the existing station to provide the Parish with recommendations for station upgrades. In the second phase, WSP will prepare preliminary and final plans and provide support through bidding and contracting and construction administration phases.
MDOT, Metro Region Freeway Lighting Public Private Partnership, Detroit, MI | Project Manager and Lighting Designer of Record for project to upgrade freeway within the entire Michigan Metro Region in Michigan under a Public Private Partnership (P3) contracting structure-MDOT's first P3. The work addressed lighting equipment, electrical circuiting and controls on ramps, interchanges, underpasses, and main line for 120 miles of freeway, including ramps, underpasses, interchanges, and 10 roadway tunnels. The 15 -year term design, build, finance, operate, and maintain project upgraded of over 16,000 luminaires and minimized future maintenance cycling, reduce energy consumption by more than half, and modernizes roadway illumination to AASHTO standards. The project investigated and selected new LED equipment that replaced existing high-intensity discharge lamps, replaced missing and damaged poles, restored damaged median pole foundations, and upgraded damaged circuiting, all within a two-year construction window.

MDOT, Interstate 96 Freeway Corridor Reconstruction Design Services, Michigan Department of Transportation, Livonia, MI | Principal Investigator for a study evaluating the costs of freeway main lane lighting, and to assess the impact on vehicular traffic between different lamp and mounting technologies. WSP provided freeway design services and coordinated public outreach and engagement activities for the reconstruction of 3 miles of Interstate 96, a complex, eight-lane depressed urban freeway. The project area was between Newburgh and Middlebelt. In addition to road reconstruction, the firm provided the design for the rehabilitation of 17 bridges, as well as complex freeway and ramp design for three interchanges.

TxDOT, Interstate 10 East Corridor Study, El Paso, TX | Lead Electrical Engineer for design of new roadway lighting on a 5-mile stretch of existing divided highway. David designed the fixture layout and prepared electrical and illumination calculations. He prepared the drawings under Texas Department of Transportation standards and included electrical and materials summaries. WSP performed a corridor study for Interstate 10 in the Texas Department of Transportation's El Paso District. The project included high-mast lighting with 10 electric services, underpasses, high mast fixtures, and frontage road access ramps.

SPUI Interchange at US 131 and Stadium Drive, Kalamazoo, MI | Lead Electrical Engineer and Lighting Designer for
2012-2015
reconstruction of single-point urban interchange, including adjacent park \& ride lot. Work involved lighting design and new electrical service for main lane, ramps, and high-mast lighting structures to conform to AASHTO Standards.

Firm employed by WSP USA Inc.

| Name | Paul Lutkevich, PE |  |  |  | Years of relevant experience with this employer | 25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Title | Senior Vice President, Lighting Design, Senior Engineering Manager |  |  |  | Years of relevant experience with other employer(s) | 13 |
| Degree(s) / Years / Specialization Active registration number / state / expiration date |  |  |  | BS / University of Massachusetts-Dartmouth / 1982 |  |  |
|  |  |  |  | Professional Engineer: MA (38509) exp. 6/30/24 |  |  |
| Year registered |  | 1995 | Discipline | Electrical |  |  |
| Contract role(s) / brief description of responsibilities |  |  |  | Technical Adivsor - Provides expertise and QA/QC for all engineering disciplines. |  |  |
| Experience dates |  | Experience and qualifications rele |  |  | d contract; i.e., "designed drainage", "designed g |  |

Paul Lutkevich is a Technical Director and Professional Fellow for lighting design at WSP | Parsons Brinckerhoff. He has over 40 years of experience in design and construction of infrastructure systems including roadways, tunnels, pedestrian facilities, and transit systems. He is actively involved in the development of national and international standards for outdoor lighting. Paul was also a member of the US delegation in the FHWA/AASHTO Bilateral Lighting Technology Exchange Program between outdoor lighting experts and international organizations in Europe. He has been involved in research with the FHWA investigating topics concerning lighting and safety, adaptive lighting implementation, visualization techniques, environmental and health impacts of lighting, and context sensitive solutions. He has written and spoken extensively about outdoor lighting including urban lighting, lighting for pedestrians, aesthetic considerations in outdoor lighting, and lighting for safety. He is a co-author for the
Transportation Association of Canada's outdoor lighting standards which used the latest research from North American and international sources to compile a comprehensive design guide for the outdoor environment. He is Task Lead for Highways and Interchanges as well as Street Lighting for the IES Roadway Standard Practice Committee writing IES RP-8. He also was the lead researcher for the revisions to the FHWA Roadway Lighting Handbook and is lead researcher for the NCHRP Solid State Lighting Guidelines and assisting AASHTO in the writing of AASHTO SSLG-1 Solid State Lighting Guide as well as the new AASHTO GL-8.
LADOTD, Contract for Innovative Procurement and Alternative Delivery Support Services, LA | Lighting Design/QC. This project includes provision of engineering, financial management, management and administrative advice and services to assist with Innovative Project Delivery Methods in connection with administering the procurement process of Design Build, Construction Management as Risk, and/or Public Private Partnership (P3) Projects. The current effort includes leading the procurement of the $\$ 1$ billion Calcasieu Bridge in Lake Charles, Louisiana. Included in the effort is a Level 2 Toll Study. The Calcasieu Bridge is one of the most critical projects in Louisiana's Transportation System as well as along the I-10 East West Trade Route. It has been identified as detrimental to economic development.
FDOT, Pensacola Bay Bridge Replacement Design-Build, Pensacola, FL | Lead Lighting Designer for the aesthetic and roadway lighting for the Penbay Bridge. Aesthetic lighting included color change/dynamic lighting effects for the bridge 1/20 - present structure. WSP is providing design services to replace the 3.7 -mile existing bridge with twin structures featuring wishbone-tied arch main spans and lowered 10 -foot-wide shared-use paths. Detailed piers, color-changing light-emitting diode lighting, decorative railings, and surface finishes will further enhance the architectural theme of the bridges. The project is replacing the signalized interchange at U.S. 98 and 17th Avenue with a direct connection from U.S. 98 to the Pensacola Bay Front Parkway and Interstate 110. Improvements are also being made to the Gulf Breeze Wayside Park.
MDOT, Metro Region Freeway Lighting Public Private Partnership, Detroit, MI | Technical Advisor for project to upgrade freeway within the entire Michigan Metro Region in Michigan under a Public Private Partnership (P3) contracting structureMDOT's first P3. The work addressed lighting equipment, electrical circuiting and controls on ramps, interchanges, underpasses, and main line for 120 miles of freeway, including ramps, underpasses, interchanges, and 10 roadway tunnels. The $15-y e a r ~ t e r m ~$
2016 - present

|  | design, build, finance, operate, and maintain project upgraded of over 16,000 luminaires and minimized future maintenance cycling, reduce energy consumption by more than half, and modernizes roadway illumination to AASHTO standards. The project investigated and selected new LED equipment that replaced existing high-intensity discharge lamps, replaced missing and damaged poles, restored damaged median pole foundations, and upgraded damaged circuiting, within a two-year window. |
| :---: | :---: |
| 12/19 - present | MassDOT, I-93 Southeast Expressway Relighting Project (Phase 1 and 2), Boston, MA \| Lighting Designer responsible for construction documentation, design and production, and construction coordination for the eight-lane freeway that included a moveable high-occupancy vehicle (HOV) lane. The lighting design included several design ideas, all of which need to be demonstrated to meet local and national standards for freeway lighting design. The lighting replacement involved using existing structural infrastructure as well as repair or replacement of exiting barriers and foundations for lighting pole assemblies. This included unique challenges for traffic management and repair procedures due to constraints for lane closures on an active and heavily congested highway system. Median barrier and foundations on bridge decks offered a unique challenge on the 30 plus year old barrier while working on a heavily congested expressway. WSP was heavily involved in construction and supporting the efforts closely with the District and Contractor. This project has also developed into a second Phase extending the relighting and foundation replacements another 4.5 miles south. |
| 1/21-present | Mass DOT, Multiple Highway Lighting Projects, Boston, MA \| Project Manager for an on-call lighting contract with the Massachusetts Department of Transportation (MassDOT). Work included relighting I-93 in Boston, providing lighting workshops for MassDOT, and electrical replacement for lighting systems along Route 128. WSP is providing rehabilitation services to the lighting systems on State Route 3 in Braintree and Quincy as well as on Interstate 93 in Boston, replacement of lighting control equipment on Interstate 93 in the Milton Tunnel, and rehabilitation of Interstate 91 lighting systems in Springfield, Massachusetts. |
| 05/14 | MassDOT, LED Street Lighting Conversion, Cambridge, MA \| Lead Lighting/Electrical Designer for the citywide replacement of the city's streetlighting system with LED streetlights and an adaptive control system for monitoring and dimming the streetlights during low pedestrian periods. The conversion cut the city's power costs and maintenance to more than half. Client: City of Cambridge. |
| 06/21-02/23 | Federal Highway Administration Roadway, Lighting Handbook, Nationwide \| Lead Researcher/Author of the current and newly released revised Federal Highway Administration lighting handbook providing guidance to lighting designers and state, city, and town officials concerning the design and application of roadway lighting. WSP was retained by Federal Highway Administration to provide guidance to lighting designers to address the concerns and issues of roadway lighting. |
| 2022 | Federal Highway Administration, Lighting Workshop \| Developer \& Instructor for a comprehensive 3 day training workshop for FHWA safety engineers relating to infrastructure lighting to be used by FHWA to inform safety professionals and state and municipalities responsible for lighting of all aspects of lighting systems and their impact on safety and the environment. |
| 2017-2020 | National Academies of Science, National Cooperative Highway Research Program, Solid State Lighting Guide \| Lead Researcher for the development of a Solid State Lighting Guide including recommendations for various lighting metrics, adaptive and Smart lighting systems, health and environmental impacts, safety, and pedestrian and cyclist considerations. Research was the basis for AASHTO SSLG-1 Solid State Lighting Guide. |


| Firm employed by WSP USA Inc. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | Kevin Walsh, PE (MPR 4B) |  |  |  | Years of relevant experience with this employer | 9 |
| Title | Assistant Vice President, Electrical Engineer |  |  |  | Years of relevant experience with other employer(s) | 8 |
| Degree(s) / Years / Specialization |  |  |  | BS / Electrical Engineering / University of Massachusetts-Dartmouth / 2007 |  |  |
| Active registration number / state / expiration date |  |  |  | Professional Engineer: Louisiana (PE.0044049) exp. 3/31/24 |  |  |
| Year registered |  | 2019 | Discipline | Electrical |  |  |
| Contract role(s) / brief description of responsibilities |  |  |  | Electrical Engineer - Meets all requirements for MPR 4B. |  |  |
| Experience dates ( $\mathrm{mm} / \mathrm{yy}-\mathrm{mm} / \mathrm{yy}$ ) |  | Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", <br> "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s). |  |  |  |  |
|  |  | Kevin intelli build for th powe emer voltag | d electrical on systems aintenance of lighting ting, small ems. Kevin ns, as well ing various | ineer on a d <br> ), transit sta lities and hig tems, ITS p ver, lightnin also been r ghting phot ware applic | range of projects including highways, bridges (fixed air traffic control centers, commercial/mixed use fac ducation facilities. As an electrical engineer, he has bee stems, industrial control systems (for movable brid ection, fire alarm, telecommunications, security, stan ible for the development of electrical load, equipme ic analysis, short circuit, selective coordination, and arc | nd movable), ies, warehouse en responsible <br> s), low voltage by and sizing, and flash risk |
| 06/20 - present |  | LADOTD, Harvey Tunnel Electrical Inspection and Rehabilitation, Belle Chase, LA \| Electrical Engineer/Electrical Task Manager for this project which consists of replacing the main power distribution system to support a full upgrade of the tunnel ventilation and drainage systems as well as ancillary systems such as SCADA, fire alarm and gas monitoring systems. |  |  |  |  |
| 07/18-12/22 |  | FDOT, Pensacola Bay Bridge Replacement Design-Build, Pensacola, FL \| Engineer-of-Record for the ITS electrical design bridge, maintenance lighting design, and assisted in the design of the roadway and aesthetic lighting power distribution system. WSP is providing design services to replace the 3.7 -mile existing bridge with twin structures featuring wishbonetied arch main spans and lowered 10 -foot-wide shared-use paths. Detailed piers, color-changing light-emitting diode lighting, decorative railings, and surface finishes will further enhance the architectural theme of the bridges. The project is replacing the signalized interchange at U.S. 98 and 17th Avenue with a direct connection from U.S. 98 to the Pensacola Bay Front Parkway and Interstate 110. Improvements are also being made to the Gulf Breeze Wayside Park. |  |  |  |  |
| 01/16-10/19 |  | FDOT, Interstate 95 Express Lanes Phase 3A-2 Design-Build, Broward/Palm Beach Counties, FL \| Engineer-of-Record responsible for the lighting and ITS electrical design. Performed various calculations and electrical system modeling such as short circuit studies, selective coordination analysis, and arc flash risk assessments. WSP is providing engineering design services on this eight-mile design-build project to extend express lanes on Interstate 95 and install an intelligent transportation system and toll systems. The project includes widening high-occupancy vehicle lanes and converting them to managed lanes, resulting in two tolled express lanes in each direction. The project also includes new improvements to the Atlantic Boulevard interchange. Work includes milling, resurfacing, drainage, bridge widenings, pedestrian bridge replacement, retaining walls, sound barrier walls, toll gantries, signing and pavement marking, signalization, lighting, ramp |  |  |  |  |

metering, utility relocation, and landscaping. Structures include a new pedestrian bridge, new ramp bridge at Atlantic Boulevard, and bridge widening at nine crossings, including a canal, railroad, and multiple roads in a heavily urbanized area.

FDOT, North Bridge Replacement Design, Broward County, FL I Lead Electrical Engineer. WSP is providing design services for the replacement of the existing bascule bridge over the intercostal waterway with a high elevation fixed bridge. The project also includes mill and resurfacing of Federal Highway from Sunny Lane to north of Juanita Avenue, mill and 11/19 - present roadways for the extension of Sunny Lane and Juanita Avenue between Federal Highway and Old Dixie Highway. The existing signalized intersection of State Road ATA and Old Dixie Highway will be removed. A new signalized intersection at Federal Highway and Juanita Avenue will be added. Turn lane modifications were also implemented to U.S. Route 1 (northbound and southbound) to accommodate Janita Avenue to the east.

FDOT, State Road 60 Intelligent Transportation System and Lighting Design-Build, Hillsborough County, FL | Engineer-of-Record responsible for the lighting and ITS electrical design within the Hillsborough County portion of the project. WSP served as the lead design firm for the design and construction of intelligent transportation systems, signalizations, and lighting facilities on the State Road 60 (Courtney Campbell Causeway) corridor from McMullen Booth Road to west of Bayport Drive. Project work includes installation of luminaires, closed-circuit television, microwave vehicle detection sensor, and an arterial dynamic message sign subsystems. The project requires extensive stakeholder coordination between local agencies, utility agency owners, and adjacent ongoing Florida Department of Transportation projects. The firm developed a project system engineering management plan, project intelligent transportation system architecture, requirements traceability verification matrix, and perform its facility management data collection.

FDOT, Interstate 10/Interstate 95 Interchange Design-Build, Duval County, FL | Electrical Engineer. WSP, as the Fuller Warren Bridge and shared-use path over the St. Johns River. The project includes the design of ancillary structures attached to the Fuller Warren Bridge, preparation of hydraulic design recommendations, independent peer review, and other associated tasks.

FDOT, Interstate 95 Phase 3B-1 Design-Build, Broward/Palm Beach Counties, FL | Engineer-of-Record responsible for the lighting system design. Kevin performed lighting circuit calculations, designed lighting power systems, and performed lighting photometric analysis. WSP provided design services on this Interstate 95 design-build project. The project provided additional capacity, resulting in improved operational conditions, more reliable travel times and reduced user delay. Project improvements included guardrails; barrier walls; attenuators; shoulder gutters; drainage; bridge widenings; bridge replacement; bridge maintenance repairs; temporary and permanent retaining walls; noise walls; sign structures; portable traffic monitoring sites; toll gantry and associated infrastructure including toll equipment building; intelligent transportation systems; signing and pavement markings; express lane markers; lighting; ramp (metering) signals; utility relocation; landscape relocation; and any additional items required to provide a complete highway system.

Firm employed by WSP USA Inc.

| Name Tod | Todd Mitchell, PE (MPR 6) |  |  | Years of relevant experience with this employer | 21 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Title Sen | Senior Structural Engineer |  |  | Years of relevant experience with other employer(s) | 7 |
| Degree(s) / Years / Specialization ${ }^{\text {a }}$ ( ${ }^{\text {a }}$ |  |  |  |  |  |
| Active registration number / state / expiration date |  |  | Professional Engineer: Louisiana (PE. 0042135) exp. 3/31/24; Project Management Professional: US (3197765) |  |  |
| Year registered | 2017 | Discipline | Civil |  |  |
| Contract role(s) / brief description of responsibilities |  |  | Structural Engineer - Meets all requirements for MPR 5. Provides structural expertise for light poles, foundations, anchor bolts, base plates, structure mounted light pole attachments, steel brackets, and concrete anchors in accordance with AASHTO Standard Specifications. |  |  |

## 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 years of experience specified in the applicable MPR(s).


Todd has diversified engineering experience from bridges to buildings. As a senior structural engineer with WSP, he has experience in bridge and building design, structural inspections, and plan preparation for a variety of projects. Todd's work has involved preliminary and final design of a multitude of structure types, several of which were design/build projects. These include continuous steel girder bridges, precast I-beam/box-beam bridges, slab bridges, conventional reinforced concrete structures, and structural steel frame structures. Miscellaneous design experience includes emergency response, load ratings, bridge and ancillary structures condition inspections and studies, concrete corrosion assessment and repair, bridge strengthening (including Carbon Fiber Reinforcing Polymer), steel strengthening, steel heat straightening, pile jackets, and the design of structural components of light poles (steel and aluminum), and light pole foundations including anchor bolts, base plate, concrete components, drilled shafts, as well as structure mounted light pole attachments.

FDOT, Pensacola Bay Bridge Replacement Design-Build, Pensacola, FL | Engineer-of-Record for the ITS electrical design bridge, maintenance lighting design, and assisted in the design of the roadway and aesthetic lighting power distribution system. WSP is providing design services to replace the 3.7 -mile existing bridge with twin structures featuring wishbone-tied arch main
07/18-12/22 spans and lowered 10-foot-wide shared-use paths. Detailed piers, color-changing light-emitting diode lighting, decorative railings, and surface finishes will further enhance the architectural theme of the bridges. The project is replacing the signalized interchange at U.S. 98 and 17th Avenue with a direct connection from U.S. 98 to the Pensacola Bay Front Parkway and Interstate 110. Improvements are also being made to the Gulf Breeze Wayside Park.

| 05/20-10/21 | FDOT, Interstate 95 Express Lanes Phase 3A-2 Design-Build, Broward/Palm Beach Counties, FL \| Project Engineer who provided structures QC support. WSP is providing engineering design services on this eight-mile design-build project to extend express lanes on Interstate 95 and install an intelligent transportation system and toll systems. The project includes widening high-occupancy vehicle lanes and converting them to managed lanes, resulting in two tolled express lanes in each direction. The project also includes new improvements to the Atlantic Boulevard interchange. Work includes milling, resurfacing, drainage, bridge widenings, pedestrian bridge replacement, retaining walls, sound barrier walls, temp lighting, temp barrier, mounted lighting, toll gantries, signing and pavement marking, signalization, lighting, ramp metering, utility relocation, and landscaping. Structures include a new pedestrian bridge, new ramp bridge at Atlantic Boulevard, and bridge widening at nine crossings, including a canal, railroad, and multiple roads in a heavily urbanized area. |
| :---: | :---: |
| 02/17-10/20 | FDOT, Interstate 10/Interstate 95 Interchange Design-Build, Duval County, FL \| Project Engineer who provided structures quality control (QC) support. WSP, as subconsultant, performed structural design work for the Interstate 95 interchange at Interstate 10, and preliminary design of the Fuller Warren Bridge and shared-use path over the St. Johns River. The project includes the design of ancillary structures attached to the Fuller Warren Bridge, preparation of hydraulic design recommendations, independent peer review, median light pole design, anchor bolts and other associated tasks. |
| 3/21-present | FDOT, Traffic Operations Design-Build Push Button Contract III, Districtwide, FL \| Structural Design Engineer-of-Record. WSP is responsible for this design-build task work order contract involving constructability analysis, design services, post-design services, and contract tracking/inventory and evaluation. Elements of work include roadways, structures, intersections, interchanges, pole, foundation, anchor bolt, drilled shaft design, geotechnical activities, intelligent transportation system, surveys, drainage, signing and pavement markings, signalization, lighting, utility coordination and relocation, maintenance of traffic, cost estimates, environmental permits, Federal Aviation Administration and Federal Communications Commission permits, quantity computation, specification packages and coordination, public involvement efforts, and all necessary incidental items for a complete project. Fifty-one tasks have been completed under this contract. |
| 1/14-1/19 | FDOT, Interstate 75 Express Lanes Section E Design-Build, Broward County, FL \| Design Support Engineer/QC/Post Design Support. WSP is providing design services for the implementation of four new express lanes connecting to three existing reversible express lanes via a new reversible 2,000-foot flyover bridge, utilizing a concrete box beam design. Project elements of the 4.7-mile project have included highway widening, bridges and structures, light pole design with special arms, foundations, drainage, permitting, intelligent transportation systems, signing, marking, and lighting. |

## Firm employed by WSP USA Inc

| Name | Ramzi Dkeidek, PE |  |  |  | Years of relevant experience with this employer | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Title | Structural Engineer |  |  |  | Years of relevant experience with other employer(s) | 0 |
| Degree(s) / Years / Specialization |  |  |  | BS / 2012 / Civil Engineering / University of South Florida |  |  |
| Active registration number / state / expiration date |  |  |  | Professional Engineer: Florida \#84293 exp. 2/25/25 |  |  |
| Year registered |  | 2017 | Discipline | Civil |  |  |
| Contract role(s) / brief description of responsibilities |  |  |  | Structural Engineer |  |  |

Experience dates Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed (mm/yy-mm/yy)

Ramzi is a structural engineer with valuable experience on multiple bridge projects (design-build and design-bid build). His work includes structural analysis and design of concrete bridge superstructures and substructures, and the preparation of structures plans and contract drawings. Ramzi has experience with multiple bridge rehabilitation projects, including bearing replacements, pile jackets, cathodic protection, pier cap repair and performed load ratings for multiple structure types. Ramzi has completed the 30-hour Occupational Safety and Health Administration Construction Safety course.

FDOT, Interstate 95 Express Lanes Phase 3A-2 Design-Build, Broward/Palm Beach Counties, FL | Structural Engineer. Ramzi's responsibilities include the superstructure and substructure design for eight bridges, as well as plans production. Ramzi also was responsible for the design of an atypical super-elevated median barrier (six feet maximum elevation between shoulder/roadway) with a $5^{\prime}-4$ " high sound wall mounted on top of the median barrier and custom variable height median barrier with a mounted aluminum light pole. WSP is providing engineering design services on this eight-mile design-build project to extend express lanes on Interstate 95 and install an intelligent transportation system and toll systems. The project includes widening highoccupancy vehicle lanes and converting them to managed lanes, resulting in two tolled express lanes in each direction. The project also includes new improvements to the Atlantic Boulevard interchange. Work includes milling, resurfacing, drainage, bridge widenings, pedestrian bridge replacement, retaining walls, sound barrier walls, toll gantries, signing and pavement marking, signalization, lighting, ramp metering, utility relocation, and landscaping. Structures include a new pedestrian bridge, new ramp bridge at Atlantic Boulevard, and bridge widening at nine crossings, including a canal, railroad, and multiple roads in a heavily urbanized area.

FDOT, Interstate 10/Interstate 95 Interchange Design-Build, Duval County, FL | Project Engineer. WSP, as subconsultant, performed structural design work for the Interstate 95 interchange at Interstate 10, and preliminary design of the Fuller Warren Bridge and shared-use path over the St. Johns River. The project includes the design of ancillary structures attached to the Fuller Warren Bridge, preparation of hydraulic design recommendations, independent peer review, and other associated tasks.

FDOT, Collins Road Design Update, Jacksonville, FL | Structural Engineer. Ramzi's responsibilities included the design of the pile bents, end bents and prestressed flat slabs, miscellaneous structure design and plans production. WSP was selected to provide final design engineering services for conversion of the existing two-mile, two-lane rural roadway to an urban multi-lane facility with curb and gutter, sidewalks, and bicycle provisions on both sides. New water and sewer facilities are required to address conflicts with proposed infrastructure, and the design incorporates a new lighting system along the corridor. Services also include bridge widening and mast arm signals.

FDOT, Veterans Memorial Bridge Replacement, Daytona Beach, FL | Structural Engineer. Ramzi was responsible for the design and plans production of the custom pedestrian railing and the Americans with Disability Act compliant landing. Ramzi also prepared a detailed cost estimate and assisted in plan production. WSP provided design services for this signature high-level fixed bridge replacement. The replacement bridge consists of spandrel arch approach spans and features a through-arch main span on approximately the same alignment as the existing bridge, which minimized environmental and right-of-way impacts. The new bridge has a vertical clearance of 65 feet and a horizontal clearance of 125 feet. The typical section consisted of two 11 food through lanes, one in each direction, and five outside shoulders. Eight foot sidewalks, separated by a 1.5 foot railing are also on both sides of the bridge. The design included special features to honor the veterans of Volusia County, including a memorial plaza amphitheater and a series of educational plaques located at scenic overlooks along the bridge.

FDOT, 2008-2017 Skyway Bridge Corridor Engineering Services, Tampa Bay, FL | Assistant Engineer. Ramzi provided onsite inspections for repairs of: modular expansion joints, transverse and longitudinal post-tensioned pour-backs and low-level American Association of State Highway and Transportation Officials beam bearing replacement and structural repairs. This contract also includes inspection of the world's longest fishing pier. WSP provided technical support services including general structural, electrical, and segmental, cable-stayed engineering design, maintenance of traffic, drainage and geotechnical services for minor and major repairs or rehabilitation of bridges and sign structures in the Skyway Corridor and other bridges in District Seven as assigned by task work order. Specific tasks included replacing pile jackets, maintenance access hatch design, leak inspection quality assurance, scour countermeasures, and main column repairs.

NCDOT, Interstate 85 Design-Build, Cabarrus County, NC | Structural Engineer. Ramzi was responsible for the design and plans production of two bridges, including the design of an integral abutment. WSP was part of the design-build team responsible for widening a 7.7-mile section of Interstate 85 in Cabarrus and Rowan Counties from four to eight lanes. The project included improvements to interchanges at U.S. Route 29/601, Dale Earnhardt Boulevard and Lane Street, as well as the elimination of a street-level railroad crossing. Additional services include the design of structures, drainage, water and sewer, traffic signals and intelligent transportation systems, as well as development of a traffic control plan. The traffic control design consisted of phased construction of a diverging diamond Interchange at an existing full-clover interchange, and phased construction of roundabouts at the ramp terminals of an existing diamond interchange. This required the design of a temporary diamond interchange and temporary signals to phase construction.

FDOT, Kennedy Boulevard Bridge, Tampa, FL | Structural Engineer for the rehabilitation of this iconic and historical two-leaf Bascule Bridge. The work included deck sealer and joint repairs, structural concrete repairs to the connection of the arch approach span, control house repairs, replaced all sidewalk deck grating, replaced the segmental thread bolt nuts and deteriorated rivets and repaired balustrades. Ramzi was responsible for the onsite assessment for the required repairs and for plans production. (completed at another firm)

| Degree(s) / Years / Specialization | YEng, Electrical, Electronics Engineering (1995) |
| :--- | :--- |

costs for low voltage distribution, motor control centers, LED tunnel lighting, medium voltage distribution, transformers, UPS and grounding systems at Lytle Road Tunnel. Other duties include systems coordination for SCADA and traffic management systems and preparing SKM power systems study for arc flash, short circuit and breaker coordination study.
Grand Central Terminal Employee Facilities CMI Services, Metro North Railroad, New York, New York: Resident Engineer responsible for the construction management and inspection (CMI) for the $\$ 21$ million design/build project to build a new train crew facility to accommodate Metro North Railroad conductors and train engineers (T \& E) crews. CMI included architectural structures, new 13.8 kV electrical substation, showers, bunk rooms, new HVAC, communications, fire alarm, sprinkler systems, LV power electrical distribution, communications and PA systems.
Mr. Lutley specializes in major rail and road infrastructure projects with experience in all aspects of electrical underground road tunnel, railway, subway and light rail electrical design, inspection, and project management. Systems include power distribution, electrical services, road tunnel lighting, uninterruptable power supply (UPS), medium voltage distribution system, electrical protection systems, traction, Supervisory Control and Data Acquisition (SCADA) systems, cable coordination, grounding, standby generation, power systems studies and EMC management within railway, road tunnel and wastewater treatment infrastructure. Mr. Lutley's project experience covers the whole project life cycle from feasibility for Public Inquiry to detailed design, construction, commissioning, and project close-out. His duties include managing small teams of 10-15 senior engineers, to prepare project deliverables including writing specifications, reports, preparing drawings, managing scope schedule, cost, estimation and whole life cost budgeting. He has also performed Resident Engineer duties and management of construction support services. He has a proven ability to deliver projects on time and within budget. Mr. Lutley is an active member of the IES Roadway Lighting Sub-Committee for ANSI/IES RP-8, design of Road Tunnel Lighting.

| Degree(s) / Years / Specialization | Years of relevant experience |
| :--- | :--- |
| with this employer |  |

Mr. Harvey is a Principal Project Manager and has international road and transit tunnel design and analysis experience using both Computational Fluid Dynamics (CFD) and the Subway Environment Simulation (SES) computer program. Additionally, he has experience with evacuation modeling for determining emergency egress requirements and has tunnel inspection and assessment experience. Mr. Harvey is the current chairman serving the Committee for NFPA 502, Standard for Road Tunnels, Bridges and Other Limited Access Highways. He is a non-voting member of the ASHRAE committee for SPC-217 "Non-Emergency Ventilation in Enclosed Road, Rail and Mass Transit Facilities" . Mr. Harvey also sits on the PIARC working group dealing with alternative propulsion systems under the Technical Committee "Road Tunnel Operations" which is developing international guidance for tunnel owners and tunnel designers regarding the use of alternative fuels in road tunnels. Mr. Harvey has also been published in various venues covering topics of tunnel ventilation, emergency egress, fire protection including deluge systems.

| Firm employed by: Mott MacDonald |  |
| :--- | :--- |
| Structural Engineer |  |

Mr. Hendricks serves as a principal engineer in Mott MacDonald's Structural Engineering Department. His professional experience includes structural design, load rating and inspection of transportation structures including concrete, steel and timber bridges and box culverts for vehicles and pedestrians as well as the design of miscellaneous structures associated with drainage projects such as non-standard head walls, energy dissipation structures, weirs, and retaining walls. Mr. Hendricks is a qualified team leader for NBI bridge inspections and has performed emergency inspection and repair design services following major flood events.



Prime consultant name: WSP USA Inc.

Mr. Gibbs is a Principal Project Manager and the Global Practice Leader for Mott MacDonald's Electrical Engineering and Instrumentation, Controls \& Automation (ICA) practice. His broad range of technical experience includes: medium and low voltage power distribution, overcurrent protective device coordination studies, short circuit analysis, load flows, arc flash hazard analysis, interior, exterior area, and roadway lighting, generator paralleling, power factor correction, grounding and lightning protection systems, industrial control systems and networks, SCADA, instrumentation systems, access security systems, airfield visual and navigational aids (aeronautical ground lighting), and electrical inspection.


|  | included field reconnaissance to determine severity of inundated roadways due to Hurricane Katrina, preparation and detailing of <br> roadway rehabilitation plans, typical sections, providing quantity calculations, etc. |
| :---: | :--- |
| $12 / 11-4 / 12$ | H.005902.5 - Consulting Services for the Permanent Repair to Federal Aid Eligible Roads as a Result of Damage due to <br> Hurricane Katrina in 2005. Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes - Group 29 Ms. Weston |
| served as the Principal-in-charge/Project Manager for this project which included survey, field reconnaissance to determine severity <br> of inundated roadways due to Hurricane Katrina in the City of New Orleans, preparation and detailing of roadway rehabilitation <br> plans, typical sections, providing quantity calculations, etc. |  |
| $01 / 06-07 / 06$ | Picardy Avenue Extension-City/Parish of East Baton Rouge: Mrs. Weston served as Principal-in-Charge for this extension of <br> Picardy Avenue, connecting Bluebonnet Blvd. with I-10 West. Duties included project layout and design as wells as subsurface <br> drainage design for approximately $1 / 2$ mile. |


| Civil Design \& Construction, Inc. (CD\&C) |  |  |  |
| :---: | :---: | :---: | :---: |
| Ralph Burgess, PLS |  | Years of relevant experience with this employe | 12 |
| Principal Land Surveyor |  | Years of relevant experience with other employer( | 12 |
| Degree(s) / Years / Specialization |  | BS / 2004 / Industrial Design \& Supervision, Southeastern LA |  |
| Active registration number / state / expiration date |  | 5040 / Louisiana - September 30, 2024 |  |
| Year registered | 2010 Disciplin | Land Surveyor |  |
| Contract role(s) / brief description of responsibilities. |  | Mr. Burgess serves as the Survey Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Burgess has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial 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 years of specified in the applicable MPR(s). |  |  |
| 10/20-01/21 | H014302 US 165 Lighting, Monroe, LA: Mr. Burgess served as the Survey Manager on this project. CD\&C was a sub-consultant on this project and was responsible for topographic surveying of US 165 south of Monroe for a highway lighting improvement. The topographic data for this project was collected both traditionally and with the use of 3D Terrestrial Scanning. |  |  |
| 09/21-03/22 | H. 014747 Southern University Ravine Protection, East Baton Rouge Parish:Mr. Burgess was the Survey Manager for this project. CD\&C as a sub-consultant on this project was responsible for topographic survey of the sites at Southern University The topographic data for this project was collected both traditionally and utilizing 3D Scanning. Mr. Burgess worked with SUE sub-consultant, TBS, as well as CD\&C crews to obtain and incorporate all utility data as well. |  |  |
| 08/21 - On-Goin | H.011833.5 St. Mary Street Sidewalks; Scott, LA:Mr. Burgess was the Survey Manager for this project. CD\&C completed a topographic along this route. The survey utilized 3D Terrestrial Scanning of all hard surfaces and traditional methods for all other features. CD\&C SUE personnel worked to coordinate the collection for all the utility information and location such that survey crews could collect data and incorporate for the submittal up to QLD Level B however an official SUE submittal was not required of this project. Final submittal will be in accordance with latest LADOTD Location and Survey standards. |  |  |
| 7/17-12/18 | H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD \& Cardno, Inc for utility locations, coordination of crews and 3D terrestrial scanning crew along with office personnel, coordination. Special duties were merging of two state projects with project survey for final submittal to combine all projects together. |  |  |
| 03/22-09/22 | H.010960.5-2 Roundabouts at LA 182, Lafayette, LA: Mr. Burgess served as Survey Manager for the project. CD\&C completed a topographic along this route. The survey utilized 3D Terrestrial Scanning of all hard surfaces and traditional methods for all other features. CD\&C SUE personnel worked to coordinate the collection for all the utility information and location such that survey crews could collect data and incorporate for the submittal up to QLD Level B however an official SUE submittal was not required of this project. Final submittal was in accordance with latest LADOTD Location and Survey standards. |  |  |
| 07/20-04/21 | H.001352.5 and H.002273.5 Comite River Diversion Bridge at LA 67, LA 19 and LA 19 Railroad Bridge, East Baton Rouge Parish: Mr. Burgess was the Survey Manager for this project. CD\&C as a sub-consultant on this project was responsible for topographic surveying |  |  |


|  | the LA 67 and LA 19 sites of the Comite River Diversion project. This included merging of data from a previous survey on one portion of the site and field verifications of that data. The topographic data for this project was collected traditionally. |
| :---: | :---: |
| 01/18-01/20 | H. 004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: . Burgess was the surveying Manager for this project. CD\&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every $500^{\prime}$ for control verification and incorporation of the Mobile Lidar for the I-10 pavement. |
| 7/17-12/18 | H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD \& Cardno, Inc for utility locations, coordination of crews and 3D terrestrial scanning crew along with office personnel, coordination. Special duties were merging of two state projects with project survey for final submittal to combine all projects together. |
| 01/16-08/1 | H.005733.5 US 190 Superstreet, St. Tammany Parish, LA: Mr. Burgess served as Survey Manager for the project. Duties included complete topographic survey and drainage map for this project including all utility coordination. The survey began at the intersection of US 190 and Holiday Square Frontage Road. From this point, the survey proceeded in a northerly direction along US 190 for approximately 2.9 miles to a point that is 700 feet South of Intersection of US 190 and E. Boston St. in Covington, LA. This project also included work in the Abita River and utilized 3D Terrestrial Scanning for the main route. |
| 10/15-12/18 | H.003184.5 I-10 Texas State Line -East of Coone Gully, Calcasieu Parish, LA: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, coordination of utility companies on the project, review and verification of drainage crossing I10, merging of existing topographic survey of bridges from LADOTD and final review of all survey data for submittals |
| 08/16-12/17 | H. 011235 I-49 South at Verot School Road, Lafayette, LA: Mr. Burgess served as the Survey Manager for the project. Duties included meeting with LADOTD, and all consultants on the team, coordination of both traditional crews and 3D terrestrial scanning crew, coordination of survey crews with Cardno, Inc, utility locations on the project, met and review right of entry with landowners for project, review of drainage map, merging of existing topographic survey of the I-49 Connector project from LADOTD with current survey of project, review of apparent right of way mapping for prime consultant, and final review of all survey data. |
| 07//14-10/15 | H.011088.5 I-110 North Street to Plank Road, EBR Parish, LA: Mr. Burgess served as Survey Manager for the project. Duties included meeting with LADOTD, coordination of traditional crews and 3D terrestrial scanning crew, review and verification of drainage map, merging and final review of all survey data for submittals. Other special duties were coordinating with LADOTD District 61 for a rolling lane closure for location of drainage located in the interior of the project along the existing crash wall. Also, coordination with LADOTD Records and EBR City Parish regarding the research of all drainage structures that enter and leave the project area. |
| 04/17-07/17 | H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Mr. Burgess served as Survey Manager on this project which included a complete topographic survey, utility coordination, channel cross-sections and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. |


| Civil Design \& Construction, Inc. (CD\&C) |  |  |  |
| :---: | :---: | :---: | :---: |
| Chris Ballard, PLS |  | Years of relevant experience with this employe | 8 |
| Survey Project Manager |  | Years of relevant experience with other employer( | 19 |
| Degree(s) / Year | Specialization | BS / 2004 / Biological Science / Southeastern LA University |  |
| Active registration number / state / expiration date |  | 5033 / Louisiana - September 30, 2022 |  |
| Year registered | 2010 Disciplin | Land Survey |  |
| Contract role(s) / brief description of responsibilities. |  | Mr. Ballard serve as the Survey Project Manager for this project. He will work to oversee the project progress stays on schedule, aide in both crew coordination and office production, and provide final QC on the firms' deliverable to the Prime Consultant. Mr. Ballard has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures. He has overseen projects utilizing traditional means and methods of collecting data as well as those that include the use of 3D Terrestrial 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 years of specified in the applicable MPR(s). |  |  |
| 09/01/18-01/20 | H. 004100 I-10: LA 415 to Essen Lane on I-10 and I-12, West and East Baton Rouge, LA: Mr. Ballard is the Surveying Project Manager for this project. CD\&C as a sub-consultant on this project is responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415 including work on Tributaries of the Intercoastal Canal. This work included using 3D Scanning for the bridge at I-10 bridge @ LA 415 as well as scanning every $500^{\prime}$ for control verification and incorporation of the Mobile Lidar for the I-10 pavement. |  |  |
| 04/17-07/17 | H.010006.5-3 LA 58 Petit Caillou Bridge Rehabilitation (Sarah Bridge), Terrebonne Parish, LA: Mr. Ballard served as the firms Survey Project Manager on this project which included a complete topographic survey, utility coordination, channel cross sections, and the scanning of the existing vertical lift bridge for the design of its repairs/replacement. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning and hydrographic surveying. |  |  |
| 02/19-09/19 | Bridge Replacements in East Feliciana Parish, Rural East Feliciana Parish, LA: Mr. Ballard is serving Survey Project Manager for this project for East Feliciana Parish Police Jury. It includes the replacement of 2 bridges which were damaged from flooding and the repairs to many rural roadways throughout the parish. These projects are being funded thru FEMA and all documentation has to be in accordance with FEMA's policies and procedures. |  |  |
| 01/17-12/17 | East Baton Rouge Parish Bridges, East Baton Rouge Parish, LA: In 2017, CD\&C has performed topographic surveys for at least 4 Bridge Replacement Projects throughout East Baton Rouge Parish. Mr. Ballard served as Survey Project Manager on each of these projects which included cross-sectioning and tracing the channel at each location. These included bridges over Dawson Creek, Claycut Bayou, Copper Mill Bayou, and Cypress Bayou. |  |  |
| 10/16-11/16 | H.012728.5 LA 443: Tangi River Bridge Replacement, Tangipahoa Parish, LA: Mr. Ballard served as the Project Manager for this Project. Among the duties performed for the project were review of the crew work conditions, review \& processing of the survey data, verification, and review of final submittal. CD\&C completed a topographic survey which included all utilities with depths, all drainage, all building information including finish floor elevations, and all super/substructure of the bridge over the Tangipahoa River. Additional information regarding the river was located by traditional means upstream and downstream for the engineer's design of the new bridge. To |  |  |


|  | utilize data collection of the failed bridge, 3D Terrestrial Scanning was incorporated in conjunction with traditional means to complete the topographic survey. Due to the nature of the project being an Emergency Bridge replacement all staff worked on this project non-stop until field work was completed in less than 3 weeks. |
| :---: | :---: |
| 09/17-09/17 | H.012650.5-1 District 62 Bridges, Livingston and Tangipahoa Parishes, LA: Mr. Ballard served as a Survey Project Manager for this project which included 5 bridge sites in District 62. In addition to all of the existing data for the bridge and roadway at each site, each channel was cross-sectioned both upstream and downstream of the bridge. These included bridges over the US 190 Bridge over Gray's creek, 2 bridges on LA 442 both crossing East Hog Branch, LA 1063 over the Natalbany River, and US 51 over Ponchatoula Creek. Several of these bridges including the US190 one was surveyed utilizing 3D Terrestrial Scanning. |
| 10/15-12/18 | H.003184.5 I-10 Texas State Line - East of Coone Gully, Calcasieu Parish, LA: Mr. Ballard served as the Survey Project Manager on this project which is a 6-lane widening of I-10. Duties performed on this project included the review of the survey information from crew, verification of project delivery schedule, processing of data and final review of submittal of project. 3D Terrestrial Scanning was used in conjunction with traditional means and methods for the completion of this project. |
| 01/16-0 | H. 005733.5 US 190 Superstreet, St. Tammany Parish, LA: Mr. Ballard served as the Survey Project Manager on this project. CD\&C provided a complete topo survey \& drainage map along with utility coordination for the project. Project duties included processing of data, review of field notes and weeklies, \& performing final punch list. This project also included work in the Abita River utilized 3D Terrestrial Scanning for the main route. |
| 10/15-01/16 | H. 011773 Hanks Dr/Landis Drive Pedestrian Improvements, East Baton Rouge Parish, LA: Mr. Ballard served as the Survey Project Manager on this project that included a topographic survey and establishment of the ROW for Hanks Dr. for installation of new sidewalk. |
| 06/11-09/13 | 260-01-0028, H.002372 LA 42 Widening and Improvements, Ascension Parish, LA: Mr. Ballard worked as a PLS on this project which included boundary and topography, establishing the existing ROW and acquisition of additional ROW. |
| 07/17-12/18 | H.010960.5-2, LA 30 Roundabout at Tanger I-10, Ascension Parish, LA: Mr. Ballard served as the Survey Project Manager on this project that includes a complete topo survey, utility coordination and drainage, along with finish floor elevations of all buildings that fall within the survey limits. Project included data collection of the topography via traditional means and methods along with 3D terrestrial scanning. |





## 18. Firm Experience:

Identify the team's project experience most relevant to the scope in the advertisement. The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated. Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

| Firm name | WSP USA Inc. |  | Past Performance Evaluation Discipline(s)* |  |  | ** Bridge; Other: Electrical |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project name | Retainer Contract for Electrical \& Mechanical Services, Statewide |  |  | Firm respon sub?) | ility | rime or | Prime |
| Project number | ```H.010439, H.010565, H.972249, H.010251, H.010253``` | Owner's name | Louisiana Department of Transportation and Development |  |  |  |  |
| Project location | Baton Rouge \& Metairie, Louisiana |  | Owner's Project Manager |  | Sarah Golz, PE |  |  |
| Owner's address, phone, email |  |  | n Rouge, LA 70802, (22) | -1420 sar | Iz@l |  |  |
| Services commenced by this firm (mm/yy) |  | 07/19 | Total consultant contract cost (\$1,000's) |  |  |  | \$2,500 |
| Services completed by this firm (mm/yy) |  | Ongoing | Cost of consultant services provided by this firm (\$1,000's) |  |  |  | \$2,500 |

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
Under a statewide retainer contract with the Louisiana Department of Transportation and Development (LADOTD), WSP is providing engineering design services for rehabilitation of storm water pumping stations along the l-110 corridor in Baton Rouge. WSP is the prime consultant for the rehabilitation effort of six (6) stormwater pump stations. WSP is providing architectural, mechanical, electrical, and hydraulic design services and coordinating structural and civil design services from a local subconsultant partner. The WSP team is coordinating closely with the city of Baton Rouge and Entergy, the local electrical utility to satisfy the Department's specific needs and requirements. As part of the included task orders thus far include:
H. 010439.5 Task Order Nos. 1 and 2: Boyd Avenue Pump Station (total pumping capacity $=35.7$ cfs); Old 21 st Street Pump Station (total pumping capacity $=42.3 \mathrm{cfs}$ ); New 21st Street Pump Station (total pumping capacity $=53.5 \mathrm{cfs}$ )
H. 010565.5 Task Order Nos. 3 and 4: Acadian St Pump Station (total pumping capacity $=6.7 \mathrm{cfs}$ )
H.972249.1 Task Order No. 5: Airline Drive Pump Station (total pumping capacity = 33.42 cfs); task included a standby generator study for the East New
 of the Airline Drive pumping station.
H. 010251 Task Order Nos. 7, 8 and 10: Chippewa Pumping Station (total pumping capacity $=33.42$ cfs); task included programming of mecha nical, electrical, architectural and hydraulic upgrade of the station and a hydrology study to compare the existing capacity to the $2-5-5$ and $10-y e a r ~ s t o r m s$, and a follow-on study to include 25- and 50-year storms.
 architectural upgrade of the station building and follow-on work to provide an advanced warning system for motorists at the roadway segment protected by the pump station

Key Staff: Max Nassar, David Loduca

Prime consultant name: WSP USA Inc.


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
To address infrastructure issues associated with freeway lighting within its Metro Region, MDOT invited bidders to compete for a design-build-finance-operate-maintain (DBFOM) agreement to upgrade 15,000 lamps, nearly half of which were non-functioning, maintain the newly upgraded freeway lighting system and finance the project over a lengthy term. MDOT chose Freeway Lighting Partners (FLP), a consortium of three firms: Aldridge Electric, the design/build partner; Cofely GDF Suez, the operate/maintain partner; and Star America, the finance and lead partner. WSP Role: The design-build partner, Aldridge Electric, contracted with WSP to screen lighting equipment, design the lighting for all segments, provide design guidance with structural rehabilitation of median barriers and aid with management of traffic.

Project Elements: Upgrade of approximately 15,000 luminaires for 120+ miles of freeway, including main line segments, ramps and interchanges, underpasses, and tunnels.

- Replace heads of pole-mounted surface roadway fixtures with new LED units
- Replace underpass fixtures with new LED units
- Upgrade lighting controls
- Complete redesign of tunnel fixtures, including upgraded controls
- Replacement or rehabilitate non-lighting support elements, such as missing and damaged light poles, and damaged median barrier light pole foundations
- Cost effective traffic management design
- Project involves a 2-year initial design-build phase to completely replace existing equipment, followed by a 13-year operate maintain phase to maintain surveillance of lighting inventory and ensure that lighting continues to operate according to requirements
Noteworthy Features: The teams approach involved several key components including:
. A strategy that left existing light poles in place but replaced only the luminaire heads with new LED luminaires. This constrained the improvement possibilities because pole-spacing would not be adjustable.
- A strategy to completely re-design tunnel illumination to ensure maximum efficiency.
- Initial review of existing equipment and screening of available LED products for durability, efficacy, efficiency, and cost. The team chose products that were cost effective, high efficacy compared to its power consumption, and durability that would ensure equipment would survive Detroit environment over the long term.

Key Staff: David Loduca, Paul Lutkevich

| Firm name | WSP USA Inc. | Past Performance Evaluation Discipline(s)* | Bridge; Other: Electrical |
| :--- | :--- | :--- | :--- | :--- |


| Project name | SR 30 over Pensacola Bay Bridge Replacement Design-Build |  |  | Firm respons sub?) | ity (prime or | Sub |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project number | n/a | Owner's name | Florida Dept. of Transportation, District 3 |  |  |  |
| Project location | Escambia and Santa Rosa County, FL |  | Owner's Project Manager |  | Kerrie Harrell, PE |  |
| Owner's address, phone, email 605 Suwannee Street, MS 57, | ne, email 605 Suwannee Street, MS 57, Tallahassee, FL, 32399-0450, kerrie.harrell@dot.state.fl.us |  |  |  |  |  |
| Services commenced by this firm (mm/yy) |  | 08/16 | Total consultant contract cost (\$1,000's) |  |  | \$297,000 |
| Services completed by this firm |  | Q3, 2023 | Cost of consultant services provided by this firm (\$1,000's) |  |  | \$297,000 |

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
WSP is the lead design firm on the \$398.5-million SR 30 (US 98) Pensacola Bay Bridge Replacement design-build project in Florida's panhandle. This project includes design and construction of new westbound and eastbound bridges, shared use paths on the outside of each structure, improvements to public facilities in the Pensacola and Gulf Breeze Wayside Parks, and reconstruction of the bridge approaches. The design and construction approach provides an iconic structure that encourages users to explore and enjoy the entire journey from shore-to-shore. At night, the bridge will provide a ribbon of light across the bay. A wishbone tied arch main span creates the iconic center piece for the project. The arches are designed to maximize the visual impact from all perspectives and provide a durable easily maintained structure. The architectural details of the tower supported shade structures and piers mimic the arch's wishbone, providing aesthetically pleasing views in both the low-and high-level portions of the bridge. Lighting, railings, surface finishes and other details are detailed to accentuate the architectural theme throughout the project.
Numerous elements are accentuated with a color-changing LED architectural lighting system. White lights embedded in the curb of the multi-use path, along with color changing exterior fascia beam lights, will create a ribbon across the Bay. The tied arches and piers contain color-changing lights as well. The entire system is preprogrammed with multiple color combinations, including a turtle-friendly pattern, all of which can be controlled remotely. Demonstrating special event options using 3D modelling helped the community and local officials visualize the lighting impact and buy into the architectural theme.

Specific work items performed as part of this project include:

- Inspection and evaluation of a mock-up pier lighting scheme
- Performing a design alternative analysis using 3D computational lighting models.
- Computer modeling and visualizations including nighttime evaluation of mounting and accessibility.
- Review of control system schemes for the LED lighting bridge aesthetic, including animations of color chasing, rolling, and varying light patterns along the entire 3 -mile bridge.
- Shared Use path, roadway, intersection, and crosswalk lighting analysis for meet FDOT lighting requirements.
Key Staff: Kevin Walsh, Paul Lutkevich

| Firm name | WSP USA Inc. | Past Performance Evaluation Discipline(s)* | Road, Bridge, Traffic; Other: Electrical |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Project name | I-95 Express Lanes Phase 3A-2 Design-Build | Firm responsibility (prime or sub?) | Prime |  |
| Project number | n/a | Owner's <br> name | Florida Dept. of Transportation, District 4 |  |


| Project location | Broward/Palm Beach Counties, FL | Owner's Project Manager | Vanita Saini, PE |
| :--- | :--- | :--- | :--- |


| Owner's address, phone, email 3400 | 3400 West Commercial Blvd., Fort Lauderdale, FL 33309, Vanita.Saini@dot.state.fl.us |  |  |
| :---: | :---: | :---: | :---: |
| Services commenced by this firm (mm/yy) | 07/16 | Total consultant contract cost (\$1,000's) | \$14,000 |
| Services completed by this firm (mm/yy) | 10/19 | Cost of consultant services provided by this firm (\$1,000's) | \$14,000 |

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
WSP served as the Lead Design Engineer for the design and construction of Phase 3A-2 of the I-95 Express Lanes Project (including interchange ramp signals) that extends from north of Commercial Boulevard at milepost 15.537 to south of SW 10th Street at milepost 22.927 in Broward County. The project design involved an atypical superelevated median barrier (six feet maximum elevation between shoulder/roadway) with a 5'-4" high sound wall mounted on top of the median barrier and custom variable height median barrier with a mounted aluminum light pole. WSP is providing engineering design services on this eight-mile design-build project to extend express lanes on Interstate 95 and install an intelligent transportation system and toll systems.
The project also included converting the existing high occupancy vehicle (HOV) lanes to managed lanes and widening that has created two tolled express lanes in each direction. The project also included widening bridges at nine crossings including a canal, railroad, and multiple roads in a heavily urbanized area. A new pedestrian bridge,
 new ramp bridges, and multiple retaining walls were additional structure designs. All traffic bridges use Florida-I Beams (FIB) founded on multicolumn piers or pile bents. The pedestrian bridge is a Contech prefabricated truss founded on spread footers.
Other project improvements include: milling, resurfacing, and overbuilding of the existing l-95 travel lanes and shoulders; roadway widening and interchange improvements at Atlantic Boulevard; guardrail; barrier wall; attenuators; shoulder gutters; drainage; bridge widenings; pedestrian bridge replacement; temporary and permanent retaining walls; sound barrier walls; sign structures; portable traffic monitoring sites; tolling gantries and associated infrastructure including toll equipment buildings; Intelligent Transportation System (ITS); signing and pavement markings; managed lane markers; signalization; lighting; ramp (metering) signals for four interchanges from Cypress Creek Road to Sample Road; utility relocation; landscaping; and any additional items required to provide a complete highway system.
The project includes widening l-95 bridges at nine crossings including the I-95 bridge over the C-14 canal. The existing is a twin bridge with three equal spans of 84 foot each, a total length of 252 foot and a total width of approximately 87 foot each bridge. Each of the bridges are widened to the outside to provide a total of 101-foot width, it includes 6-12 foot lanes of traffic and two shoulders. The existing pile bent substructure is widened using the same type of bent cap supported on 24 -inch prestressed piles. The existing superstructure consists of AASHTO type IV beams carrying an 8 -inch reinforced concrete slab. The superstructure is widened to the west using FIB 36 beams and to the east using type IV AASHTO beams.
Recipient of 2020 DBIA Transportation - Roadways: Florida Region Project of the Year
Key Staff: Kevin Walsh, Todd Mitchell, Ramzi Dkeidek


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
The purpose of this freeway lighting study was to evaluate the costs of freeway main lane lighting and to assess the impact on vehicular traffic between different lamp and mounting technologies for use on a four-mile segment of I-96 in the Metropolitan Detroit Area. The study optimized the design of five different median and house side configurations using AASHTO and IES standards and compared installation, energy, and maintenance costs, including consideration for maintenance of traffic issues.
Additionally, WSP was responsible for the three-mile reconstruction of this eight-lane section of a depressed freeway, including ramps at three urban interchanges. Design effort includes drainage study, coordination with MDOT bridge design, complex MOT. Responsibilities include all aspects of freeway design, including detailed drainage, utility coordination, freeway lighting, complex geometrics for the mainline and the ramps, public involvement program. The project was coordinated with another consultant's design of the adjacent three-mile section of I-96 for a consistent corridor reconstruction. This project included engineering services to design lighting for main lane median lighting, median lighting to provide replacement illumination for bridge lighting, ramp lighting, and bridge approach lighting.
Project Elements: AASHTO Standards, Specifications and Procedures, MDOT Standards, Specifications, and Procedures, Drainage Studies and/or Design, Cost Estimates Performed, Stage Construction Plans, Maintaining Traffic Coordination, Geometric Improvements, Right-of-Way Plans, Construct Critical Paths based upon staging


## Design Elements

Preparation of a study to evaluate life-cycle costs of various lighting technologies and design strategies Preparation of final illumination calculations and design
Preparation of voltage drop calculations
Power circuit design and device placement
Development of interim and final plan, special provisions and pay items quantities.

Key Staff: David Loduca


KEY STAFF: Lionel Lutley, Norris Harvey


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
Mott MacDonald, along with other local partners, developed a strategic team to deliver on ALDOT's largest transportation project, to date. The I-10 Mobile River Bridge and Bayway Project is a $\$ 1.5 \mathrm{~B}$ project to increase capacity of the existing Interstate 10 system between Mobile and Baldwin County, Alabama. The project is 12 -miles of improved roadway that includes a new 1,250 -foot, six lane cable stayed bridge. Additional roadway and bridge improvements include six reconfigured interchanges, rehabilitation of existing interstate roadway and side roads, and replacement almost eight miles of Bayway Bridge.

With home offices in the project area, personal knowledge of the project location, driver perception, and understanding of environmental conditions were used to develop integrated concept designs which were presented as the preferred alignment assigned to the FHWA Final Environmental Impact Statement (FEIS). The initial phase of services included: field verification of the project geometric and topographic surveys, geotechnical drilling and testing, development and implementation of the test piling program, roadway and bridge designs, a project aesthetic plan, including lighting, landscaping, and architectural, preliminary structural designs including bridge foundations and retaining walls, development of drainage improvements including detention and treatment, environmental investigation and determination of wetlands, protected species, and cultural resources within the project area, early coordination with AHJs including USACE and Coast Guard for work within wetland and Section 404 areas, coastal engineering and storm surge modeling including sea-level rise, mand cost estimating.

Due to the size and cost of the project, ALDOT selected to procure final design and construction through a Public Private Partnership (P3) as a Design Build Finance Operate and Maintain (DBFOM) project type for a 50 -year concession. We provided services such as: preparation of project definition and programming documents, and scheduling and cost estimating. This was to be the first ever P3 concessionaire in the state, for the largest transportation project in the state.

KEY STAFF: Andrew Gibbs, Bart Hendricks


Prime consultant name: WSP USA Inc.


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
Mott MacDonald was selected by the Louisiana Department of Transportation and Development (DOTD) for a statewide retainer contract to provide tunnel inspection and repair/rehabilitation plan preparation for the Houma, Harvey, and Belle Chasse tunnels located in Louisiana.

The Houma Tunnel runs underneath the Gulf Intracoastal Waterway at Houma and was opened to traffic in 1961. The Harvey Tunnel, located on the west bank of Jefferson Parish in suburban New Orleans, carries the Westbank Expressway under the Harvey Canal (part of the Intracoastal Waterway) and was opened to traffic in 1957. The Belle Chasse Tunnel, the first underwater tunnel in the state, serves commuters from the New Orleans area to Plaquemines Parish and was opened to vehicular traffic in 1956. Each of these tunnels are heavily utilized by users and serve a significant volume of vehicular traffic.

As the age of these tunnels indicate, the tunnels were constructed prior to the development of current design standards and codes and are deficient in regard to currently applicable design standards and codes.

Mott MacDonald performed a variety of professional services for the DOTD including inspection and evaluation of the tunnel structural/geotechnical components, inspection and evaluation of the tunnel mechanical, electrical and civil components and preparation of assessment reports detailing current deficiencies, code compliance issues and providing recommendations for the required repair and rehabilitation of each tunnel. Mott MacDonald also prepared order of magnitude cost estimates for each of the recommended repairs/rehabilitation projects.

Mott MacDonald will also be providing technical services associated with preparing plans and specifications for the repair/rehabilitation work and provision of construction support and inspection services, and other services related to the maintenance, preservation, and replacement on the Belle Chasse Tunnel.

## Project Highlights:

- Provided in-depth inspections of all tunnel components with cost estimates for recommended repairs.
- Tunnel Inspections and Assessment Reporting were conducted in accordance with the draft Tunnel Operations, Maintenance, Inspection, and Evaluation (TOMIE) Manual and the Specifications for the National Tunnel Inventory (SNTI)
- Key Mott MacDonald staff (Michael Broussard, David Watson, Raymond Sales) participated significantly in the inspections and reporting for each of these tunnels and are certified as National Certified Tunnel Inspectors.

KEY STAFF: Lionel Lutley, Norris Harvey,



Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance e evaluation discipline(s) this project is being used to represent.

Project Description: This project was the topographic survey of US 190 in Covington. The survey limits were along a portion of the existing routes of US 190, Holiday Square Frontage Road, US 190 Service Road, Holiday Blvd., Holycrest Plaza Driveway, Louis Prima Drive, Park Place Drive, Lake Drive, Crestwood Blvd., $9^{\text {th }}$ Avenue, Three Rivers Road, River Highlands Blvd., Harrison Ave., Maple Ridge Ave., North $12^{\text {th }}$ Street, Sunshine Ave., North $6^{\text {th }}$ Street, Riverside Drive, and North $2^{\text {nd }}$ Street and is approximately 2.9 miles in length.

CD\&C's Role: CD\&C's role was to provide the complete topographic survey and drainage map for this project including all utility coordination. The survey begins at the intersection of US 190 and Holiday Square Frontage Road. From this point, the survey proceeded in a northerly direction along US 190 for approximately 2.9 miles to a point that is 700 feet South of Intersection of US 190 and E. Boston St. in Covington, LA. The width of the survey and DTM extended to the Western Edge of Pavement to Eastern Edge of Pavement along US 190 and tied in with the existing topographic features picked up on the previous survey done under H. 011137.5 and H. 011152.5 (Interstate 12 Survey). This also included cross sectioning a portion of the Abita River in the project area. All topographic survey elements were performed in accordance with the latest LADOTD Location and Survey Manual and
 conformed to the latest standard practices/procedures. All deliverables were in LADOTD required formats. 3D Terrestrial Scanning was used in conjunction with traditional means and methods to complete this project.

Members Involved: CD\&C employees involved in the project included Karla Weston, PE, Ralph Burgess, PLS, Survey Manager; Christopher Ballard, PLS Survey Project Manager; Philip Dupree, Party Chief; Jacob Stoehr, Party Chief; Trent Norris, 3D Scanning Technician; John Ewing, Survey Technician.

## Performed in LA: $\mathbf{1 0 0 \%}$

Prime consultant name: WSP USA Inc.


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
Project Description: This project is located in West Baton Rouge and East Baton Rouge Parishes in the cities of Port Allen and Baton Rouge, LA. A complete Topographic survey including all utilities (ASCE 38-02, QL "B") with depths and all drainage is required, along with Finish floor elevations of all buildings that fall within the survey limits. The survey begins 1,500 feet West of the western most entrance/exit ramps of the LA 415 and I-10 Interchange. From the I-10, I-12 split the survey shall proceed in southerly and easterly directions along the existing main alignment of I-10 for approximately 1.5 miles \& I-12 for approximately 1.5 miles to end the route limits.

CD\&C's Role: CD\&C as a sub-consultant on this project was responsible for topographic surveying the portion of I-10 in West Baton Rouge Parish beginning at the start of the project limits to a point just before the approach of the I-10 Bridge and the limits of the project along LA 415. This work included using 3D Scanning for the bridge at $\mathbf{I}-10$ bridge @ LA 415 as well as scanning every 500 ' for control verification and incorporation of the Mobile Lidar for the I10 pavement.

Members Involved: Karla E. Weston, P.E.; Ralph Burgess, PLS, Christopher Ballard, PLS; Phil Dupree, Party Chief; Jacob Stoehr, Party Chief; Trent Norris, 3D scanning technician; John Ewing, Survey Tech;

## Performed in LA: $\mathbf{1 0 0 \%}$



Prime consultant name: WSP USA Inc.


Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance e evaluation discipline(s) this project is being used to represent.

Project Description: This project performed topographic survey utilizing both traditional means and methods as well as 3D terrestrial scanning in Ouachita Parish. The project began at the intersection of Charleston Drive and US 165 and continued North until the intersection of La 15 and US 165. The survey limits extended 500 feet from the intersection of US 165 and the major side street along LA 15, Ticheli Rd, Dellwood Dr., Richwood Road 1/Martin Luther King Dr., and Richwood Road 2. This project is approximately 4 miles in length.

CD\&C's Role: CD\&C's role was to provide a limited topographic survey specifically for electrical lighting design. In addition, since most of the project limits are wide, the topographic data for this survey was collected through a combination of conventional ground survey and Terrestrial LiDAR data collection methods. Specified
 project limits to include the area between the established apparent right-of-way for the width of the project.

Members Involved: CD\&C employees involved in the project included Karla Weston, PE, Ralph Burgess, PLS, Survey Manager; Christopher Ballard, PLS Survey Project Manager; Scott Benton, 3D Scanning Technician, Trent Norris, 3D Scanning Technician, Philip Dupree, Party Chief; Jason Stoehr, Party Chief;

Performed in LA: 100\%


## 19. Approach and Methodology:

About WSP USA
With offices in New Orleans and Baton Rouge, and led by Max Nassar, Senior Vice-President, WSP is local, and one of the world's leading engineering professional services consulting firms. The offices in Baton Rouge and New Orleans have been continuously operating for over three decades. We have more than 66,000 employees across 40 countries, including engineers, technicians, scientists, architects, planners, surveyors, program and construction management professionals, and various environmental experts. WSP USA has approximately 6,360 transportation employees and a robust team specializing in highway electrical/lighting design.
Our proposed project manager, David Loduca, PhD, PE, LEED AP (MPR 1, 2, 3, 4A), is a registered professional engineer in Louisiana (28117). David has over 40 years of experience in electrical systems design and management, including serving as design lead and project manager for Multiple Stormwater Pump Station Improvements Contract (H.010439, H.010565, H.972249, H.010251, H.010253) for the LADOTD. In addition to roadway lighting, his experience ranges from lighting and electrical design of municipal and industrial facilities, subway and light rail, telecom facilities, and maintenance fueling facilities.

Max Nassar will be serve as the Project Director on this IDIQ agreement. Over the past 25 years, Max has overseen a multiplicity of infr astructure projects in the Southeast United States and in Central America and with a value in the billions. An experienced project manager/director, Max serves in this role on multiple DOTD Projects, including Multiple Storm water Pump Station Improvements Contract (H. 010439 , H. 010565 , H.972249, H.010251, H.010253), Contract for Innovative Procurement and Alternate Delivery Support Services, Level 1 Toll Study for a new Mississippi River Bridge Between LA 1 and LA 30 and Emergency Repairs New Orleans Signals. Max will ensure that David has the resources necessary to complete all DOTD projects on-time and within budget.
Paul Lutkevich, PE will serve as a Technical Advisor for this project. He brings unmatched expertise in lighting standards. Paul serves on a variety of standard and code-making panels for development of national and international standards for outdoor lighting. He has been involved in research with the FHWA investigating topi cs concerning lighting and safety, visualization techniques, and context sensitive solutions. He has written and spoken extensively about urban lighting, lighting for pedestrians, aesthetic considerations in outdoor lighting, and lighting for safety. He is a co-author for the Transportation Association of Canada's outdoor lighting standards, co-author of the International Municipal Signal Association Lighting certification program and is the lead researcher for the revisions to the FHWA Roadway Lighting Handbook. Paul is recognized as a Technical Fellow, WSP's highest technical distinction.
Supporting David from WSP will be a qualified team of experts that offer a combined 75+ years of experience in the areas required on this contract

## Teaming Partners

Mott MacDonald is one of the world's largest employee-owned companies, with 16,000 employees and over 180 offices delivering sustainable outcomes worldwide. Mott MacDonald in North America

## MOTT <br> M <br> MACDONALD

 is a vibrant infrastructure development and engineering company with over 60 offices and 2,400 staff in the United States and Canada. The staff included in Section 16 will provide Electrical,Lionel Lutley, PE, PMP (MPR 5) is an Electrical Engineer specializing in major rail and road infrastructure projects with experience in all aspects of electrical underground road tunnel, railway, subway and light rail electrical design, inspection, and project management. Lowry Denty, PE (MPR 6) is a Structural Engineer with over 30 years' experience in project manager, and special inspector, involved in all aspects of project design, administration, and threshold inspections for local, state, federal, and private clients. His broad base of structural engineering experience includes structural design and construction administration for water and wastewater facilities, marine/port structures, aviation facilities, commercial, municipal, educational, and federal operations buildings, parking structures, surge/seawalls, pedestrian and vehicular bridges and boardwalks, and a variety of transportation projects throughout the United States. Andrew Gibbs, PE (MPR 7) will lead field inspections for this IDIQ Agreement. He is the Global Practice Leader for Mott MacDonald's Electrical Engineering and Instrumentation, Controls \& Automation Practice.


Established in 2005, Civil Design \& Construction, Inc. (CD\&C) is an Engineering and Land Surveying firm located in Port Allen, LA. CD\&C is a Woman-Owned Small Business certified by the SBA and is also certified by Louisiana Department of Transportation \& Development as a DBE Civil Engineering and Land Surveying Firm. CD\&C has a combined staff of highly skilled design engineers, surveyors, cost estimators, and construction experts that produce a quality design while adhering to all regulations. Ralph Burgess, PLS (MPR 8) will serve as the Survey/SUE Manager of this Project. With 24 years' experience, he has an extensive background in providing topographic surveys for LADOTD in accordance with Location and Survey policies and procedures.

On this IDIQ Agreement, CD\&C will ensure that the topographic survey shall adhere to all modern survey theory, practice, and procedures, and follow the latest version of the LADOTD Location and Survey Manual including typical surveying methods as applied by LADOTD. This includes all accepted horizontal and vertical control standards as stated in the manual. The LADOTD feature table code list and symbols shall be utilized and met with those included in the latest edition of the survey feature code guidebook produced by the LADOTD Location and Survey Section and Automation. 3D Terrestrial Scanning may be utilized in conjunction with traditional means and methods to capture topography as applicable for each site and will adhere to all LADOTD Standards as related to Terrestrial and Mobile Scanning. All deliverables will adhere to the electronic standard as set forth by LADOTD

Management Approach \& Methodology
WSP has a long-standing culture of maintaining a focus on project delivery which includes proactive management of scope, schedule, and budget; continual confirmation of the DOTD's needs; development of staff for technical excellence; consistent quality control and assurance with managing these types of projects.

Each task under this IDIQ on-call agreement will be assigned to the task lead with the appropriate experience for the project. The task lead will also be the lead designer for the assignment, meeting with the DOTD to develop assignment scope, schedule, and budget whether a simple study or full service through final design and constr uction. The task lead will meet with DOTD by teleconference where possible, in person at DOTD Headquarters in Baton Rouge when necessary. The task lead for each specific assignment will staff accordingly for the appropriate skill sets: topographical survey, lighting cal culations and design, traffic management, drafting, quality reviews, inspections, and other related construction services. The depth of WSP, with Mott MacDonald and CD\&C in these areas will allow for additional staff to be assigned under the task lead to effectively deliver the product in the time allocated by the Department within the task budget. We are committed to meeting your needs for deliverables in your required time constraints. The staff assigned to this project are the key corporate individuals in these various areas of technical expertise. WSP has successfully delivered engineering tasks under other LADOTD Contracts and, likewise, have successfully delivered roadway lighting design for other DOTs and municipalities. WSP understands that the Department is a public agency and recognize that getting results out to the public on schedule is essential. A sample schedule is included on at the end of this approach.

## Monthly Reports

WSP will submit monthly progress reports to the DOTD Project Manger (PM). These reports will identify work progressed during that period, completed work, deliverables status, information needed from the DOTD, progress chart indicating percent of time elapsed, and percent of work completed, budget status, and will identify problems or issues, and propose methods to ameliorate any concerns.

## Cost Control

The main cost control tool will be WSP's computerized management information system which provides data on charges for labor and expenses on a weekly basis. Our Project Manager will review weekly charges at a subtask level to allow for timely corrective measures if potential deviations from the plan are detected.

WSP employs an integrated approach for ISO 9001 (Quality): 2015 and Occupational Health and Safety Assessment Series (OHSAS) 18001 (Safety) that aligns our business practices and processes to create a single method of providing assurance for Safety, Health, and Quality (SHQ). Quality is always the result of thorough consideration, sincere effort, and intelligent direction. The safety, reliability, maintainability, and human factor considerations within infrastructure projects demand that systematic, consistent, and authoritative process controls be implemented and executed. For consistency in delivery, there will be a written QA/QC plan developed for each task, which will include an independent QA/QC review at the completion of each phase of work, as well as at technical reviews and cross-discipline reviews. To ensure quality control across the Design Team, each subconsultant is required to either follow WSP's QA/QC Plan or present their own Quality Plan for WSP approval. Lighting systems meeting AASHTO or IES recommendations has been shown to have a significant effect on safety and reductions of fatalities associated with roadways.

WSP is author of the current FHWA Roadway Lighting Handbook as well as currently working on the revision to this document with safety, and the metrics and eval uation tools to achieve it, being the driving intent of the guide. In addition to this, given that current research shows the lighting/safety relationship to be highest regarding pedestrian and cyclist safety, WSP was part of the research team for the recently completed FHWA Research Report: Street Lighting for Pedestrian Safety which evaluated not only lighting levels, but also spectral content of light sources and different evaluation techniques for the effectiveness of lighting. By being involved in emerging research around lighting and safety, WSP strives to keep our clients informed of new information and techniques to assist them in improving safety for road users as well as advance the available recommendations concerning lighting criteria and implementation


Design Approach \& Methodology
Plans standards, design, plan deliverables and Construction Engineering Services shall be in accordance with the most recent DOTD standards and as outlined in the RFQ Attachment A Scope of Services. Specifically, all new equipment and design will conform to the following standards:
. LA DOTD Illumination \& Electrical Standards
LA DOTD "A Guide to Constructing, Operating, and Maintaining Highway Lighting
Systems"
ANSIIIES RP-8
IES DG-19 Design Guide for Roundabout Lighting
LA DOTD Electrical Plan Layout and Presentation
Louisiana Standard Specifications for Roads and Bridges
8. National Electrical Code (NFPA 70)
9. Standard for Electrical Safety in the Workplace (NFPA 70E)
10. Bridge Design \& Evaluation Manual
11. Bridge Design Technical Memoranda
12. AASHTO Design Guides
13. All other local and applicable codes

Typical Task Order assignment will incorporate the following steps:

| Assignment Kickoff | - Kick-Off Meeting with DOTD to confirm mutual expectations and identify relevant stakeholders. <br> - Retrieve available existing data from DOTD. <br> - Identify related projects that require coordination. <br> - Conduct initial site assessment with DOTD Staff and Stakeholders (local government and electrical utility) |
| :---: | :---: |
| Preliminary Plans (30\%) | - Perform Topographic Survey, adhering to the LADOTD Location and Survey Manual and modern practices and procedures. <br> - Identify roadway classification, select design parameters using IES-RP-8, and optimize design parameters, including preliminary equipment selection based on roadway geometry. <br> - Preliminary FAA evaluation will be performed for high mast equipment. <br> - Size lighting controllers based upon preliminary load analysis. <br> - Prepare preliminary design locating lighting poles, service equipment, three-line circuit diagram and demolition plan (if required) <br> - Perform QA/QC in accordance with ISO 9001 Certification and requirements designated by Bridge Design and Evaluation Manual, Part I Chapter 3 <br> - Prepare and submit: 30\% Final Design plans and Preliminary Opinion of Probable Construction Costs |
| Design Development (60\%) | - Identify Technical Special Provisions <br> - Develop relevant design data, including roadway data, light pole data, luminaire data, and pole layout data, plus relevant performance data. (see sample Luminaire Performance Table) <br> - Prepare point-to-point illuminance calculations using an industry standard lighting software using photometry that conforms to IES LM-63 <br> - Design refinement, including addressing comments from DOTD on previous submittal. <br> - Perform QA/QC in accordance with ISO 9001 Certification and requirements designated by Bridge Design and Evaluation Man ual, Part I Chapter 3 <br> - Prepare and submit: Roadway Illumination Analysis, 60\% Final Design Plans and Specifications, Detailed Opinion of Probable Construction Costs |
| Advanced Check Print (95\%) | - Address comments received from the DOTD on $60 \%$ Submittal <br> - Prepare Load Letter and obtain available fault current energy from local utility for each proposed service point. <br> - Submit FAA form7460-1 (7460), Notice of Construction or Alteration, and coordination with LA Airport District Office Airspace Analyst as required for high mast equipment. <br> - Refine design, including addressing comments from DOTD on previous submittal, update pay items, select standard traffic manag ement plans and details, provide traffic management plan (if required) <br> - Prepare electrical calculations, including voltage drop, conduit fill, and fault current calculations. <br> - Perform QA/QC in accordance with ISO 9001 Certification and requirements designated by Bridge Design and Evaluation Manual, Part I Chapter 3 <br> - Prepare and submit: Updated Roadway Illumination Analysis, Final Electrical Calculations, $95 \%$ Final Design Plans and Specifications, Construction Proposal Documents, Detailed Opinion of Probable Construction Costs |
| Final Plans (98\%) | - Address comments received from the DOTD on $95 \%$ Submittal <br> - If available, plan updates will address comments and design modifications to conform to the FAA determination letter <br> - Perform QA/QC in accordance with ISO 9001 Certification and requirements designated by Bridge Design and Evaluation Manual, Part I Chapter 3 <br> - Prepare and submit: Final Roadway Illumination Analysis, 98\% Finals Design Plans and Specifications, Construction Proposal Documents, Summary of Estimated Quantities, Final Opinion of Probable Construction Costs |
| Consultant's Project Delivery (100\% Final Plans) | - Address comments received from the DOTD on 98\% Submittal <br> - Prepare and submit: Final Roadway Illumination Analysis, 100\% Final Design Plans and Specifications, Construction Proposal Documents, Summary of Estimated Quantities, Final Opinion of Probable Construction Costs |
| Construction Engineering Services | - Provide support and construction related engineering services for the duration of construction. <br> - Attend a Pre-Construction Meeting, perform site inspections, attend a pre-final and final inspection. <br> - Provide Monthly Reports to the DOTD PM <br> - Coordination and communication with DOTD, Government Entities, utility companies, stakeholders, other ongoing projects |



Sample Task Order Schedule


Sample Luminaire Table


## 20. Workload:

For all contracts where a firm on the team is a prime consultant or sub-consultant and where $\mathbf{a}$ ) the consultant selection was made by DOTD, and b) a contract was executed by the consultant and the contracting entity by the date the advertisement for this proposal was posted, list all work meeting the following criteria:

1) one of the team's firms is responsible for the performance of the work;
2) authorization to perform the work has been provided, as provided in the contract between the consultant and the contracting entity;
3) the work has not yet been performed and invoiced; and
4) the work is not currently suspended for an indefinite period of time.

For indefinite delivery/indefinite quantity (IDIQ) contracts, list open Task Orders individually. List only the portion of the fees attributable to firms on the team.

Firm(s)
ALL FIRMS MUST BE REPRESENTED
IN THIS TABLE

Past Performance Evaluation Discipline(s) *

Contract Number and State Project Number

Remaining
Unpaid
Balance**


Prime consultant name: WSP USA Inc.

* The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE\&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify). If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.
** Round to the nearest dollar. Do not round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. NOTE: ALL FIRMS MUST BE REPRESENTED IN THIS TABLE. LEAVING THE "REMAINING UNPAID BALANCE" COLUMN BLANK IS NOT ACCEPTABLE.


## 21. Certifications/Licenses:

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



Prime consultant name: WSP USA Inc.

## Mott MacDonald Certs/Licenses

| ENGINE | LOUISIANA PROFESSIONAL ENGINEERING \& LAND SURVEYING BOARD <br> (LAPELS) <br> 9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com |
| :---: | :---: |
| Mr. Lowry Jay Denty |  |
| License/Certificate Type - Number | Number Expiration Date |
| PE. 0038440 | 03/31/2024 |
| status: Active |  |

LOUISIANA PROFESSIONAL
ENGINEERING \& LAND SURVEYING BOARD ENGINEERING \& LAND SURVEYING BOARD
9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com

## Mr. Andrew Kent Gibbs

| License/Certificate Type - Number | Expiration Date |
| :--- | :--- |
| PE.0045679 | $09 / 30 / 2023$ |
| Status: Active |  |


| LOUISIANA PROFESSIONAL |
| :---: | ---: | ---: |

$\left.\begin{array}{|r|r|r|}\hline\end{array} \begin{array}{r}\text { LOUISIANA PROFESSIONAL } \\ \text { ENGINEERING \& LAND SURVEYING BOARD } \\ \text { (LAPELS) }\end{array}\right)$


## RTA 1 DOTD D

LOUISIANA UNIFIED CERTIFICATION PROGRAM
Disadvantaged Business Enterprise Program (DBE)
Small Business Element (SBE)

Civil Design \& Construction, Inc.

## Civil

NC541330, NC541340, NC541350, NC541370

Certificate Eligibility: March 2023 to March 2024


Rharda Wallace
Rhonda Wallace, DBE/SBE Programs Manage
Louisiana Department of Transportation \& Development

|  | LOUISIANA PROFESSIO |
| :---: | :---: |
|  | ERING \& LAND SURVEYING BOAR |
|  | 9643 Brookline Avenue, Suite 12 |
|  | Baton Rouge, LA 7080 |
|  | Phone (225) 925-629 |
| Mrs. Karla Ewing Weston |  |
| License/Certificate Type - Number | Expiration Date |
| PE. 0031010 | 03/31/2024 |
| status: Active |  |

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

## Name

Civil Design \& Construction, Inc
Ms. Karla WestonP. O. Box 857
Port Allen, Louisiana 70767

License/Certificate Information w/ Supervision

| License | Status | First Issuance Date | Expiration Date | Supervisor(s) |
| :--- | :--- | :--- | :--- | :--- |
| VF. 0000555 | Active | $02 / 10 / 2006$ | $09 / 30 / 2023$ | Mr. Ralph D. Burgess \# PLS. 0005040 - Active |

The American Traffic Safety Services Association
fereby recognizes that
Karla Weston
has attended
Traffic Control Supervisor-LA State Spec-Grant Training Course

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## LOUISIANA PROFESSIONAL ENGINEERING \& LAND SURVEYING BOARD <br> (LAPELS) <br> 9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <br> www.lapels.com

Mr. Christopher Lyle Ballard

| License/Certifacte Type - Number | Expiration Date |
| :--- | :--- |
| PLS. 0005033 | $09 / 30 / 2024$ |

PLS. 0005033
09/30/2024
Status: Active



## 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,


Laminating the front of your card with Dual Laminate:




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Sincerely,
Nome M. Clark
VP of Education and Technical Services

Laminating the front of your card with Dual Laminate:



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

## Dear Certified Flagger:

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has satisfied the requirements to be designated as a
CERTIFIED FLAGGER

$$
\frac{\text { Expiration Date } 3 / 12024}{\text { verification availato b le instructor Signature } 1 \text { s. ant }}
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safer roads save lives

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American Traffic Safety Services Association



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

Sincerely,


Laminating the front of your card with Dual Laminate:


AMERICAN


May 9, 2022

Dear Mr. Benton:
The Certification Board of the American Traffic Safety Services Association (ATSSA) has approved your application for certification as a Traffic Control Supervisor. Enclosed in this packet please find your wallet card, certificate, and an ATSSA TCS patch to be worn on your left shoulder.

This certification shall remain in effect until 4/29/2024. If during this time your employment status, name or address changes, please let us know so we may keep your record current.

You are to be commended for maintaining your knowledge of traffic control issues and fulfilling the requirements for certification. It is not an easy achievement and your accomplishment indicates a dedication to improving the traffic control services you perform. Please call us at 877-642-4637 if we can assist you with any future training needs.

Sincerely,

Training and Business
Development Department





## QA/QC Plan:

If the advertisement requires submission of a QA/QC plan, include it here. Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted.

Due to length of document, WSP USA Inc. has included a QA/QC plan on pg. 64 of our submittal.

## 22. Sub-consultant information:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name
(Name must match as registered with Louisiana's Secretary of

State) Address

| State) | Address | Point of Contact and email address | Phone Number |
| :---: | :---: | :---: | :---: |
| Mott MacDonald | 650 Poydras Street, Suite 2550 New Orleans, LA 70130 | David Skipper, Senior Vice President, David.Skipper@mottmac.com | 850-602-9776 |
| Civil Design \& Construction Inc. | 3251 Southern Pacific Road Port Allen, LA 70767 | Karla E. Weston, PE, President, kweston@cdcbr.com | 225-765-1802 |
|  | Pent |  |  |
| (Add rows as needed) |  |  |  |

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. Any information included in this section will be redacted if not required by the advertisement.

N/A

## Quality Management Plan

## IDIQ Electrical and Related Services for LADOTD

## 1 PURPOSE

This Quality Management Plan (QMP) shall be used to ensure WSPs quality assurance and quality control (QA/QC) provisions are followed to provide deliverables that meet the highest quality of workmanship expected by the client. The QMP outlines the necessary tasks to conform to the LADOTD QA/ QC process at each step of the design process and ensures proper documentation is generated in the event of a project audit.

## 2 SCOPE

The QMP applies to all WSP and WSP subcontractors (Mott Macdonald and CD\&C) working on scope deliverables for the LADOTD Electrical IDIQ. Any deliverable, internal or external, must follow the provisions of the QMP before it is submitted. The QMP follows WSP's procedures explained in WSP USA Quality Control Procedures Manual for Checking of Design Deliverables. Mott Macdonald and CD\&C are expected to apply the provisions of the QMP to any deliverable submitted to WSP, another subcontractor or the Client. All subcontractors are responsible for their own QA/ QC efforts.

The Client will be responsible for approving this QMP and all procedures contained within. Once approval is granted, The Client will follow the protocols defined within this document when providing comments for any deliverable. The QM P provides timelines and expectations for comment resolution and final submittal on deliverables.

In case of perceived deviation between this QMP and referenced documents, processes identified on this QMP will govern.

## 3 ROLES AND RESPONSIBILITIES

Each of the key team members identified in The Project RFP has a specific role in the quality process. The QMP defines the QA/ QC responsibilities of each team member and show the lines of communication between key personnel.

## WSP Project Manager \& QA/ QC Lead (Dave Loduca):

- Directs QA/ QC activities and sets schedule of tasks.
- Approves all deliverables to client.
- Ensures all steps in QA/ QC process are implemented for design deliverables.
- Updates client PM on any quality issues found and works with Quality Administrator to resolve any quality issues.
- Provides direct contact to Client PM and manages client expectations for quality of deliverables.
- Serves as key contact for all questions related to their assigned process.
- Verifies that QMP procedures are being followed.
- Maintains record of completed QMP procedures.

The PM shall serve as the primary QA/ QC lead for The Project. Independent QC checks will be performed as necessary with qualified personnel in the WSP New Orleans and other offices.

Task Leads (WSP \& Subcontractors, as assigned)

- Receives and incorporates requests for updates and improvements to all documents directly related to their assigned process(es).
- Maintains check prints and other key documents.
- Initiates communication of key changes made within their process area to staff members directly affected by a change.
- Checks work (QA) before submittal to reviewer.
- Back checks comments from internal or external reviewer (i.e. PM, Quality Admin or Client Representative).
- Performs corrections necessary based on review comments.
- Performs independent technical reviews per request of Project.


## Support Staff (WSP \& Rani)

- Checks work (QA) before submittal to Task Lead.
- Performs corrections necessary based on review comments.


## Client Project Manager

- Provides technical reviews and comments for assignment submittals.
- Provides verification that comments have been addressed properly.


## Plan Check Personnel (WSP \& Subcontractor, as assigned)

- Perform QC review functions as assigned in the WSP USA Quality Control Procedure Manual.
- Ensures that QC review-related records are saved to the project file.


Figure 1- QMP Staff Organization

## 4 PROCEDURE

WSP and its subcontractors will use the procedures outlined in the following documents for QA purposes:

- WSP USA Project Quality Control Procedure Manual (Rev 0: 2/ 15/ 2022) (Attached)
- WSP USA TEC 301: Checking of Planning \& Design Deliverables (Rev 3: 5/ 19)

The WSP Project Quality Control Manual describes procedures that reflect the minimum requirements for the process, guidelines, responsibilities, and requirements to check work product deliverables, including, but not limited to, reports and studies, drawings, specifications, calculations, and cost estimates. This procedure includes:

- Preparing deliverables for QC reviews
- QC Checking roles and responsibilities, steps and color coding
- Quality records requirements

The TEC 301 supplement outlines the procedure for checking and documentation of studies, reports, drawings, specifications, calculations, and cost estimates. It is the basis for recording QA/ QC procedures and generates a verification of the procedure used in potential QA/ QC audits.

The QA/ QC lead will verify that the QMP has been followed for each of the deliverables. If the deliverable is ready for submittal, the QA/ QC lead, the Task Lead and the PM will sign the PD 206-01 Review Certification form and attach it to the deliverables package.

Comments received from the client will be sorted into a comment resolution spreadsheet for tracking. The Task Leads will address the comments with their support staff and provide responses. The responses are then reviewed by the QA/ QC lead and the PM before they are shared with the client. The client and the PM will come to a consensus on the comment responses and then distribute the list of items to be addressed back to the Task Leads. All follow-up QA/ QC activities will follow the TEC 301 guidelines used for the original submittal. Timelines and critical dates for receipt of client comments, the comment resolution process and the revised deliverables shall be determined by the PM and the Client's PM during the scope negotiation process.

## Development of Project Design Criteria

The Consultant Team will develop specific design criteria for each assignment and submit for LADOTD's review and approval prior to initiating the design process. The Consultant Team will maintain a current list of the criteria throughout the design process and specifically list design assumptions made or design exemptions obtained and reference in the calculations and drawings where appropriate.

The Consultant Team shall use the design criteria checklist in AppendixA.

## Design Development

The engineer directly responsible for the development of design calculations, drawings, special provisions including Non-Standard items, and cost estimate will be licensed by the State of Louisiana as a professional engineer or certified as an intern.

The designer will follow the established design criteria and organize and maintain design calculations in a standard calculation book format, guided by the checklist found in AppendixB.

The designer will communicate with the detailer and supervise the detailing work to ensure that the drawings adequately and accurately present the design information. Both the designer and the detailer will be responsible for performing a check their own work and minimize errors.

## Quality Control (QC) Checkers

The design checker is the engineer responsible for performing a full technical review of the design calculations, drawings, special provisions including Non-Standard items, and cost estimate. The design checker must be licensed by the State of Louisiana a professional engineer or certified as an engineer intern; however, if the designer is an engineer intern, the design checker must be a professional engineer.

The detail checker is the individual responsible for performing a full review of the CAD drawings. The detail checker can be a designer or a detailer. The detailer performing the original design and detailing shall not be permitted to perform as design or detail checker.

During the design check process, the design checker will verify the accuracy of the designer's calculations, pay items, quantities, special provisions including Non-Standard items, and cost estimate. The design checker may perform a redline check of the designer's calculations or produce an independent set of calculations and compare the results; the WSP Project Manager will determine which method to use depending on the complexity of the assignment. The designer's calculations are the cal culations of record and will be updated to correct any errors or omissions discovered by the design checker. The calculations of the design checker will become a part of the cal culation of record when independent checking calculations are produced. The design checker will ensure that the drawings adequately and accurately present the design information.

During the detail check process, the detail checker will ensure drawings are in accordance with the design information and conform to CAD standards and verify dimensions and quantity calculations.

The checker may begin the checking process at the completion of the entire design/ detail process or may check components of the designer/ detailer's work as it is completed. Likewise, the checker may provide feedback at the completion of the entire checking process or as each component of check is completed. Resolve and correct discrepancies that arise between the designer/ detailer and the checker and correct the calculations and plan details. If the designer/ detailer and the checker are unable to resolve their discrepancies, the issue should be brought to the attention of the WSP Project Manager.

The design and detail check will be considered complete after the designer, design checker, detailer, and detail checker are satisfied with the state of the design calculations, drawings, special provisions, and cost estimate. The design and detail check will be completed no later than the $95 \%$ Final Plans stage and the designer will prepare a QA information package, that includes the documents listed below and provide the package to the reviewer to perform quality assurance (QA):

- QA Information Plan Checklist (AppendixQ
- Calculation Book
- Plans
- Special Provisions, including non-standard items
- Cost Estimate
- Relevant documents, such as checklists, review comments, etc., utilized by the designer, design checker, detailer, and detail checker

Notify the reviewer if design revisions are required after the QA information package is submitted and provide revised information.

## Quality Assurance (QA) Reviewers

The QA reviewer is the engineer responsible for ensuring that the QC process as described in the QC Checking Process has been completed and the design calculations, drawings, special provisions, and cost estimate conform to this Quality Management Plan. The reviewer will be licensed by the State of Louisiana as a professional engineer and must have substantial experience in the comparable designs.

The QA reviewer will perform a cursory review of all documents in the QA information package submitted by the designer, focusing on constructability of plan details. The QA reviewer will provide feedback to the designer and ensure that all issues are resolved. Upon completion of the QA process, which shall be no later than the $98 \%$ final plans stage, the design calculations, plan details, special provisions, and cost estimate shall be considered as final.

Complete the QC/ QA certification found in AppendixDthat is signed by the designer, design checker, detailer, detail checker, and QA reviewer.

## Sealing of Design Calculations and Plans

The WSP Project Manager will assign an EOR for the assignment. The EOR is the engineer responsible for supervision and/ or preparation of plans, sealing calculations, plans, and special provisions if required. The EOR will be licensed by the State of Louisiana as a professional engineer and have commensurate experience in the design. The EOR can be the designer, the design checker, the reviewer, or the supervisor/ team leader who is directly involved in the project design activities.

The EOR will be responsible for ensuring that the QC/ QA certification is signed by all responsible parties and ensure that design information from other relevant disciplines, such as geotechnical, that is shown on plans is co-stamped by the Engineer in the relevant discipline. If practical, organize work from other disciplines on separate sheets
to reduce the number of stamps on a sheet. Each sealing professional will clearly identify his/ her responsibilities when more than one engineering stamp is required on a sheet.

The EOR will assemble design calculations from all designers and finalize the calculation book and seal the cover sheet of the calculation book.

The EOR will ensure the names of the designer, design checker, detailer, detail checker, and reviewer are correctly shown on the title block of each plan sheet. Stamp all plan sheets or designate a designer, design checker, or reviewer who shall be licensed by the State of Louisiana as a professional engineer to stamp the sheets developed under their supervision. The EOR must stamp the general notes sheets.

The EOR will ensure all special provisions are accurately shown on the construction proposal. The special provisions are typically stamped by the Specification Engineer as part of the construction proposal; however, if the Specification Engineer is not qualified or not willing to stamp the special provisions, the EOR must stamp these provisions.

## 5 RECORDS

The EOR will archive design files including calculation books, plans, special provisions, cost estimate, and other pertinent documents in accordance with the records retention policy (see AppendixF). The WSP Project Manager will deliver design files to the LADOTD Task Manger no later than 30 calendar days after the stamped final plans are delivered, and also deliver revisions made to these documents due to plan revisions and change orders with the signed plan revisions or change order sheets.

Upload the final calculation book and other final design documents for the assignment to the archiving location designated in the record retention policy within 30 calendar days of delivery of final stamped plans.

## 6 FORMS

- AppendixA- Design Criteria Worksheet (LADOTD Form)
- AppendixB- Final Calculation Book Checklist (LADOTD Form)
- Appendix C- QA Information Package Checklist (LADOTD Form)
- AppendixD- QC/ QA Certification (LADOTD Form)
- AppendixF- Bridge Design Section Records Retention Policy (LADOTD Form)
- TEC301, Appendix D- Bluebeam Revu Studio QC Review Coversheet Form (attached)

Revision History

| Rev | Date | Description | Reviewed <br> by: | Approved <br> by: |
| :---: | :---: | :---: | :---: | :---: |
| 0 | $05 / 23$ | Original Release | DPL | MJN |
|  |  |  |  |  |

## Attachments

| Document Title |
| :--- |
| WSP USA Project Quality Control Procedure M anual (Rev 0: 2/ 15/ 2022) |
| Bluebeam Revu Studio QC Review Coversheet Form (TEC301, AppendixD-1) (Rev 1: 8/ 19) |

# WSP USA Procedure 

## Project Quality Control

EFFECTIVE DATE: FEBRUARY 15, 2022

REVISION HISTORY

| REV | EFFECTIVE <br> DATE | DESCRIPTION OF <br> CHANGE | DATE OF <br> MCC <br> REVIEW | ISSUING PROCESS | PROCESS <br> OWNER |
| :--- | :---: | :---: | :---: | :--- | :--- |
| 0 | $2 / 15 / 2022$ | New Procedure | $2 / 14 / 2022$ | Project Delivery | S. Summers |

## PROJ ECT QUALITY CONTROL

A key component to WSP USA's Quality Management System (QMS) is the analysis of risk and opportunity. This ensures continual process improvement and risk reduction with respect to the project and to WSP. Risk identification should be conducted at all stages of the project life cycle, from pursuit to closeout (see Figure 1). Risk reductions improve downstream processes and ensure project success.

This QMS project quality control (QC) process can be modeled as a series of Swiss cheese cubes where the holes represent scope or delivery risks. These risks may include lack of understanding the scope, ineffective communication, erroneous decision making and absence of quality assurance/ qual ity control (QA/ QC) process. With proper implementation of project QC procedures, the number of risks is minimized (fewer holes) and the risks are managed (smaller holes) ensuring project success (no continuous path through the holes).

Figure 1.


## PURPOSE

This Project Quality Control (QC) Review procedure describes the minimum requirements for the process, guidelines, responsibilities and requirements to check work product deliverables, including, but not limited to, reports and studies, drawings, specifications, calculations, and cost estimates. This procedure includes:

- Preparing deliverables for QC reviews
- QC checking roles and responsibilities, steps and color coding
- Quality record requirements


## SCOPE

These requirements apply to all WSP USA Region, Business Line and Business Unit documentation and processes used in the Safety, Health and Quality Management Systems (SHQMS) including all project delivery policies, processes and procedures.

## ROLES AND RESPONSIBILITIES

Roles and responsibilities for project QC are outlined in Table 1 below.
Table 1. Overall Roles and Responsibilities

| ROLE | RESP ONSIBILITIES |
| :---: | :---: |
| PROJ ECT MANAGER (PM) | - Responsible for the implementation of this procedure, quality of project deliverables, and work products. <br> - Define QC review schedules and approvals for submittal within the project management plan (PMP) in accordance with the project QC budget. <br> - Define the type of QC review to be performed (electronic, hard copy, etc.) within the PMP including any special requirements that link to security or clearance criteria that must be followed by the QC review team. <br> - Retain original checked deliverable-related documents/ files. <br> - Verify QC review-related records have been saved to the project file by the QC review team. <br> - Confirm staff assigned to the project are qualified and available. <br> - Fullfils role of Quality M anager (see below) when an independent Quality Manager is not required to meet project/ client requirements. |
| TECHNICAL LEAD(S) | - Assign QC reviewer(s) with technical expertise in a specialty or specific discipline. <br> - Account for the performance of the design and QC to deliver the required outcome. |
| ORIGINATOR, CHECKER, BACKCHECKER, CORRECTOR, and VERIFIER | - Perform QC review functions as assigned in the QC Review Responsibilities table shown directly below. <br> - Ensure all QC review-related records are saved to the project file. |
| ALL PROJ ECT TEAM PERSONNEL | - Take personal responsibility for the quality of their work product by diligent preparation and review(s) for accuracy and completeness prior to the formal QC review process. |
| QUALITY MANAGER, when applicable and/or per project requirements | - Provide oversight and guidance for review(s) for conformance with project and quality procedures. |
| BLUEBEAM STUDIO HOST (if applicable; may be fulfilled by the PM or designee assigned by the PM) | - Establishes Bluebeam Studio Session. Identifies the studio session name: project number, submittal name, date (yyyymmdd). <br> - Obtains the final checkprint PDFs from the Originator. <br> - Appends the Bluebeam Studio Session Cover Sheet to every PDF |

## ROLE

## RESP ONSIBILITIES

file intended for upload and review into the studio session. The cover sheet contains files embedded for the WSP QA/ QC profile and toolsets required for use in the session.

- Distributes notification and invitations to the specific session for review to begin.
- Grants access to each person approved to perform the review.
- Locks the specific session after review is complete.
- Maintains quality records available for future reference, update, or audit in the project file by archiving the files from the studio session and exporting the Markup List to the project file system (WSP Server, ProjectSolve, ProjectWise, SharePoint, etc.).
- Retains records of "clean" deliverables in the project file.

Additional roles and responsibilities are discussed in detail in the following QC Review sections of this procedure.

## PROCESS

## GENERAL - DELIVERABLE REVIEW S

1 The review of contractual deliverables prior to submittal is a joint effort between the PM and their project and quality review teams. The PM communicates, schedules and provides the level of effort for reviewer to QC contractual deliverable. This information is captured in the PMP. The PM may request additional QC reviews for non-contractual deliverables following the same process.
2 At a minimum, all QC reviews require two qualified staff members to perform the QC Review process; typically a Originator/ Backchecker/ Corrector and an Checker/Verifier. These individuals are selected by the Technical Lead(s) and captured in the PMP by the PM.
3 The PM is responsible for identifying the need for conducting an interdisciplinary review process and the selection of independent reviewers (independent of the core project team), as needed; these requirements, if needed, must be captured in the PMP.
4 Each discipline must be represented in the QC Review process; accordingly, this process is repeated by each discipline to ensure that the QC Review is comprehensive.
5 QC reviews follow a uniform process to check that the deliverable's content and results are complete and accurate to meet contractual and functional criteria and objectives. The Checker reviews the work product and uses checkprints or other evidence to document the review. The deliverable review assesses the project deliverable(s) against the following:
a Scope of work for the project
b Applicable project design criteria and requirements
c Applicable codes, technical guidelines, and professional standards
d Available design documents
e Contractual and deliverable requirements
f Previous review comments, if applicable
g Cost effectiveness
6 QC review expectations and procedural requirements for each deliverable type are described below.

## QC REVIEW PROCESS- PROJ ECT CONTRACT VALUE < \$200K

QC review for projects that have a contract value $<\$ 200 \mathrm{~K}$ is a four-step process which can be completed using multiple methods:
$\frac{\text { Step 1 }}{\text { Originate }}>\frac{\text { Step 2 }}{\text { Check }}>\frac{\text { Step 3 }}{\text { Correct }}>\frac{\text { Step 4 }}{\text { Verify }}>$

Table 1 details the roles and responsibilities for QC reviews for projects that have a contract value < $\$ 200 \mathrm{~K}$.

Table 1: General QC Review roles and responsibilities for projects that have a contract value < $\mathbf{\$ 2 0 0 K}$

| STEP | ROLE | RESP ONSIBILITIES |
| :---: | :---: | :---: |
| ] | ORIGINATOR | - Prepare design and work products under direction and supervision of the Technical Lead. <br> - Self-check all work for completeness, technical accuracy and adequacy. <br> - Assemble deliverable for review, including checkprint stamp (when applicable) and initiate QC Review process. |
| 2 | CHECKER (cannot be the Originator) | - Refer to PMP to identify specified review time and coordinate with PM if additional time is needed for the review. <br> - Thoroughly review each document for technical adequacy and completeness, correctness to the requirements for all input, and coordination/ compatibility with other disciplines. <br> - Indicate agreement or disagreement. Mark corrections for clear understanding. |
| 3 | CORRECTOR (often the Originator) | - Discuss any disagreements with Checker and reach concurrence on corrections. <br> - Incorporate the agreed corrections. <br> - Prepare a clean revised and updated document(s). |
| 4 | VERIFIER (often the Checker) | - Examine the clean, updated document alongside the checkprints. Verify and indicate that the corrections were properly addressed and incorporated. <br> - Document concurrence with Corrector's disagree status. If necessary, return to Step 3 to correct any mistakes found. <br> - Communicate with PM to provide a "ready" status for verified work product. <br> - Ensure all QC review-related records are saved to the project file. |

## QC REVIEW PROCESS- PROJ ECT CONTRACT VALUE $\geq$ \$200K

QC review for projects that have a contract value $\geq \$ 200 \mathrm{~K}$ is a five-step process which can be completed using multiple methods:

| $\frac{\text { Step 1 }}{\text { Originate }}$ |
| :---: |$\frac{\text { Step 2 }}{\text { Check }}>\frac{\text { Step 3 }}{\text { Backcheck }}>\frac{\text { Step 4 }}{\text { Correct }}>\frac{\text { Step } 5}{\text { Verify }}$

Table 2 details the roles and responsibilities for QC reviews for projects that have a contract value $\geq \$ 200 \mathrm{~K}$.

Table 2: General QC Review roles and responsibilities for projects that have a contract value $\mathbf{~ \$ ~} \mathbf{2 0 0 K}$

| STEP | ROLE | RESPONSIBILITIES |
| :---: | :---: | :---: |
| 1 | ORIGINATOR | - Prepare design and work products under direction and supervision of the Technical Lead. <br> - Self-check all work for completeness, technical accuracy and adequacy. <br> - Assemble deliverable for review, including checkprint stamp (when applicable) and initiate QC Review process. |
| 2 | CHECKER (cannot be the Originator) | - Refer to PMP to identify specified review time and coordinate with PM if additional time is needed for the review. <br> - Thoroughly review each document for technical adequacy and completeness, correctness to the requirements for all input, and coordination/ compatibility with other disciplines. <br> - Indicate agreement or disagreement. Mark corrections for clear understanding. |
| 3 | BACKCHECKER (often the Originator) | - Review Checker's edits/ corrections/ comments and verify as valid. <br> - Discuss any disagreements with Checker and reach concurrence on corrections. |
| 4 | CORRECTOR (often the Originator) | - Incorporate the agreed corrections. <br> - Prepare clean revised and updated document(s). |
| 5 | VERIFIER (often the Checker) | - Examine the clean, updated document alongside the checkprints. Verify and indicate that the corrections were properly addressed and incorporated. <br> - Document concurrence with Backchecker's disagree status. If necessary, return to Step 3 to correct any mistakes found. <br> - Communicate with PM to provide a "ready" status for verified work product. <br> - Ensure all QC review-related records are saved to the project file. |

## "S|"

## QC REVIEW STEP PROCESS TASKS

The following section will provide the QC Review process tasks by type of methods used for the review:

- Bluebeam and Adobe QC Review
- Microsoft File QC Review
- Hardcopy QC Review


## BLUEBEAM AND ADOBE QC REVIEW PROCESS TASKS

The electronic Bluebeam and Adobe QC Review process follows the same four or five-step QC review process; a Bluebeam toolkit has been created to standardize the review process in this software program. The roles and responsibilities from Table 1 or 2 apply these QC reviews. Please refer to WSP USA Bluebeam Studio Session and Toolsets Training Guide for additional Bluebeam QC Review process details.

## MICROSOFT FILE QC REVIEW PROCESS TASKS

Files created in Microsoft software programs (e.g., Word, Excel, PowerPoint) use the "Track Changes" and "Comments" functions (as available) to record the four- or five-step QC review process. The roles and responsibilities from Tables 1 or 2 apply these QC reviews. Table 3 and Exhibits A through D provide the QC review step details for Microsoft software files.

Table 3: Microsoft QC Review Roles and Tasks for projects that have a contract value $\geq \mathbf{\$ 2 0 0 K}$ (note: for projects that have a contract value of <\$200K- follow steps 1, 2, 4 and 5 shown below)

| STEP | ROLE | TASKS |
| :---: | :---: | :---: |
| ] | ORIGINATOR | - Prepare original documents and any backup material required for checking. |
| 2 | CHECKER (cannot be the Originator) | - For Word files: <br> - Turn on "Track Changes" for traceability of review steps and to identify Checker's/ Backchecker's/ Verifier's names. <br> - Use "Comments" function to record comments. <br> - Indicate corrections and deletions in tracked changes. <br> - For other Microsoft Software: <br> - Use "Comments" to indicate corrections and/ or comments. <br> - Refer to Exhibit A for example of Checker's tracked changes process. |
| 3 | BACKCHECKER (often the Originator) | - Review all changes. <br> - Leave as is with edit corrections, if agreed. <br> - Update text and add comment for any disagreement to discuss with the Checker to reach concurrence. <br> - Use "Comment Reply" function to reply to all comments in the file, including any disagreements with Checker and disposition. <br> Do not accept or reject track changes. |


| STEP | ROLE | TASKS |
| :---: | :---: | :---: |
|  |  | - Make any new edits in track changes mode, as needed. <br> - Refer to Exhibit B for example of Backchecker's tracked changes process. |
| 4 | CORRECTOR (often the Originator) | - Incorporate agreed-upon corrections by accepting and/ or rejecting tracked changes. <br> - Indicate "Comment Resolved" to closeout comments, as applicable. <br> - Retain the draft document version with all tracked changes. <br> - Prepare clean update document. <br> - Refer to Exhibit C for example of Corrector's tracked changes process. |
| 5 | VERIFIER (often the Checker) | - Review clean (no markup) version to verify edits have been incorporated correctly (Exhibit C). <br> - Add new comment (in original file with track changes) if updates are not made or issues have not been resolved. <br> - Document concurrence with Backchecker's disagree status. If necessary, return to Step 3 to correct any mistakes found. <br> - Communicate with PM to provide "ready" status for verified work product. <br> - Verify all QC review-related records are saved to the project file. |

## HARD COPY QC REVIEW PROCESS TASKS

As each deliverable is drafted and deemed ready for checking, the Originator prepares a checkprint stamp (see Table 4 a and 4 b below). The checkprint stamp is applied to the initial page of the deliverable. If there is a lack of space, a cover page, that includes the project name and number, can be used. A separate stamp is required for each discipline. The color scheme used for the QC Review is identified in the checkprint stamp in Table 4a and 4b.

To begin, the Originator enters their name, date and discipline in the checkprint stamp and passes the checkprint and draft deliverable to the Checker. The checkprint stamp consists of the information in Table 4a and 4b; roles and tasks for hard copy QC reviews are detailed in Table 4c. The roles and responsibilities from Table 1 or 2 apply these QC reviews.

Table 4a: Hard copy QC Checkprint stamp for projects that have a contract value <\$200K

| WSP USA Inc. |  |  |  |
| :---: | :---: | :---: | :---: |
| SUBMITTAL: |  |  |  |
|  | Name | Date | Discipline |
| ORIGINATOR |  |  |  |
| CHECKER |  |  |  |
| Correct: Yellow highlight or |  |  |  |
| checkmark |  |  |  |
| Incorrect: Red |  |  |  |
| Comments: Black Cloud or Leader |  |  |  |
| CORRECTOR <br> Blue Circle |  |  |  |


|  | VERIFIER <br> Correct: Yellow highlight in blue <br> circle <br>  <br> return to Corrector |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

Table 4b: Hard copy QC Checkprint Stamp for projects that have a contract value $\geq \mathbf{\$ 2 0 0 K}$

| WSP USA Inc. |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: |
| $\qquad$     <br>  SUBMITTAL: Name Date  <br>  Discipline    <br>  ORIGINATOR    <br> CHECKER <br> Correct: Yellow highlight or <br> checkmark <br> Incorrect: Red <br> Comments: Black Cloud or Leader     <br> BACKCHECKER <br> Agree: Green Check <br> New Comment: Green text <br> Disagree: Green strikethrough     <br> CORRECTOR <br> Blue Circle     <br> VERIFIER <br> Correct:Yellow highlight in blue <br> circle <br>  <br> return to Corrector     |  |  |  |  |  |

## Table 4c: Hard Copy QC Review Roles and Tasks

| STEP | ROLE | TASKS |
| :---: | :---: | :---: |
| 1 | ORIGINATOR | - Prepare original documents and any backup material required for checking. |
| 2 | CHECKER (cannot be the Originator) | - Review each deliverable for technical adequacy and conformance to applicable codes, standards, scope and format. <br> - Perform specific accuracy checks, when necessary. <br> - Follow the color scheme provided in the checkprint stamp (Table 4a or 4b) for all checking requirements. <br> - Enter name, date and discipline in the checkprint stamp and pass the checkprint and reviewed deliverable to Backchecker upon completion of checking process. |
| 3 | BACKCHECKER (often the Originator) | - Review Checker's marked changes on the checkprint. <br> - Follow the color scheme provided in the checkprint stamp (Table 4b) for all backchecking requirements. <br> - Discuss any comments that are not agreed with or if there are additional comments with Checker. Capture the results of the discussion in the selected color scheme as either "New Comment" or "Disagree." |


| STEP | ROLE | TASKS |
| :---: | :---: | :---: |
|  |  | - Enter name, date and discipline in the checkprint stamp and pass the checkprint and updated deliverable to Corrector upon completion of backchecking process. |
| 4 | CORRECTOR <br> (often the Originator) | - Responsible for correction of the original document. <br> - Circle each correction on the checkprint according to the checkprint stamp color scheme when making the changes to the original document. <br> - Enter name, date and discipline in the checkprint stamp and pass the checkprint and corrected deliverable to Verifier upon completion of correction process. |
| 5 | VERIFIER (often the Checker) | - Receive a clean print and the checkprint(s) from Corrector. <br> - Confirm corrections have been incorporated without error. <br> - Mark the clean print in red if the corrections are not made or are incorrect and return to Corrector. <br> - Enter name, date and discipline in the checkprint stamp and pass the checkprint and final deliverable to PM or Originator upon completion of verification process. |

Note: if project <\$200K, only steps 1, 2, 4 and 5 are required.

## RECORDS

|  |  |  |  | DISPOSITION OF |
| :--- | :--- | :--- | :--- | :--- |
| RECORD AFTER |  |  |  |  |

## REFERENCES

- SHQ Manual
- WSP USA Bluebeam Studio Session and Toolsets Training Guide


## FORMS

None

## Exhibit A QC for Project Related Word Files- Checker (Step 2)

Turn on "Track Changes" to indicate correction, deletions, and/ or comments


## Exhibit B QC for Project Related Word Files- Backchecker (Step 3)

Review all edits. Leave as is with edit corrections, if agreed, or add comment, if disagreed.


Exhibit C QC for Project Related Word Files- Corrector (Step 4) and Verifier (Step 5)
Incorporate agreed-upon corrections; retain the version with all track changes and prepare clean update with accepted changes. Review clean (no markup) version to verify edits have been incorporated correctly and communicate with PM to provide "ready" status for verified work product.
 with the appropriate delegation of authority (DOA) signatory authority.
The Subcontracting process is more fully described in the Subcontracting Process flowchat (Figures 1 and 2).

### 2.1 SUPPLIER REGISTRATION SYSTEM

All third parties from whom WSP acquire goods or services must be registered and approved in the Supplier Regitation System. Whether we are seeking to conduct buxiness for the first time, or we have a longstanding relationship, supplier regitration, approval, and annual maintenance of that approval is a preerequivite. Subcontractors can rea; prequalun (2wn. com with any questions or technical issues.

### 21.1 CONFIDENTIALITY AGREEMENT

When required, no information relating to the location or identity of WSP's Client is to be provided to p Subcontractors before the Subcontractor has completed the confidentiality agreement section of the Sups Sytem.

### 2.2 SCOPE OF WORK AND SPECIAL SITE REQUIREM

A detailed scope of work must be provided. The scope of work must contain sufficient details to assign specific tasks, identify deliverables, and measure performance. It is suggested that the signatory review before the Subcontractor agreement is issued to alleviate any concems at execution.
2.2.1 TEMPLATE SELECTION

Approved request for proposal (RFP) templates and subcontract agreements, which are available in the


## 2 SUBCONTRACTING PROCESS

Before the subcoutracting process befins, the PM must confrm the following

- WSP har an active, executed, complete Clieut centract
- WSP's Climat has provided uritten authorization to start work and expend fount
-WSP's Client has authocized WSP to issue a subcceatract(v) for certain wook to the proposed Subcoritractor(x)
Eveny Subcuntratter that ne use for a projet (ez, driling, surveying, analytical services, remediation services, etc) must

 mbeoutrat muit be executed for sach Subcometor for one Sobcontractor.
EAE PMIS WSP has MSAs with several compunier and laboritories; a curneat litt of compmies with MSAs, inclucting the MSA documents, ate maintained in the EAE PMI Toolbox Contrict Toolbox
All communications should be adrensed to EkE's Project Cournet Admunitraton (PCAD) at WSPEEUSA:
 utit the approgriate delegation of authoritiv( (DOA) nignatog nutherib:
The Subcoutracting procest is mate fully deanibed in the Subcoutracting Process flowchart (Figires 1 and 2)
2.1 SUPPLIER REGISTRATION SYSTEM

All third partien from whom WSP acquise goode or services munt be regitered and approved in the Supglier Regitation Saztem. Whether we are seeking to condoct butinat for the first time, or we have a longstanding relaticonhip, wupplier regiutration, approval, and ammal maintenance of that approszl is a prerequinte. Sabcontractorn can reach ouf to nequalug Cure conn with my questions of technical imuei.
21.1 CONFIDENTIALITY AGREEMENT

When required, no information relating to the location or identity of WSP', Client is to be provided to potential Sabcontractors before the Subcontractor has completed the confidentiality agreement section of the ?iuplier Pegitatation Sytum
2.2 SCOPE OF WORK AND SPECIAL SITE REQUIREMENTS

A detailed scope of work muar be provided. The ccope of work mut contuin mefficiemt details to maign responuibility for specific task, identify deliterables, and meanse performance. It is mugyented that the signatory review the scope of work


## Quality Assurance / Quality Control Review Process

The Quality Control (QC) and Quality Assurance (QA) Review is completed using Bluebeam Revu Studio per TEC 301, Appendix D. The following profile and toolsets are to be uploaded into Bluebeam prior to performing the review. This form must be appended to each Checkprint using Bluebeam before uploading to Studio Session.

## Profile:

WSP QC Aug 2019.bpx

Document Reviewed:

Project Name:

Project Number:

A review has been completed by the QA and QC Reviewer(s) as indicated below. The specific project document(s) and/or task(s) stated above were reviewed with the intention that the design and associated tasks regarding this project were undertaken in accordance with accepted engineering practices and requirements set forth by the Client. All work has been reviewed in regards to its technical soundness, ethical content, and cost effectiveness

## Quality Assurance Review Certification

|  |  |  |
| :--- | :--- | :--- |
|  |  |  |

## Quality Control Review Certification

|  |  |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |

