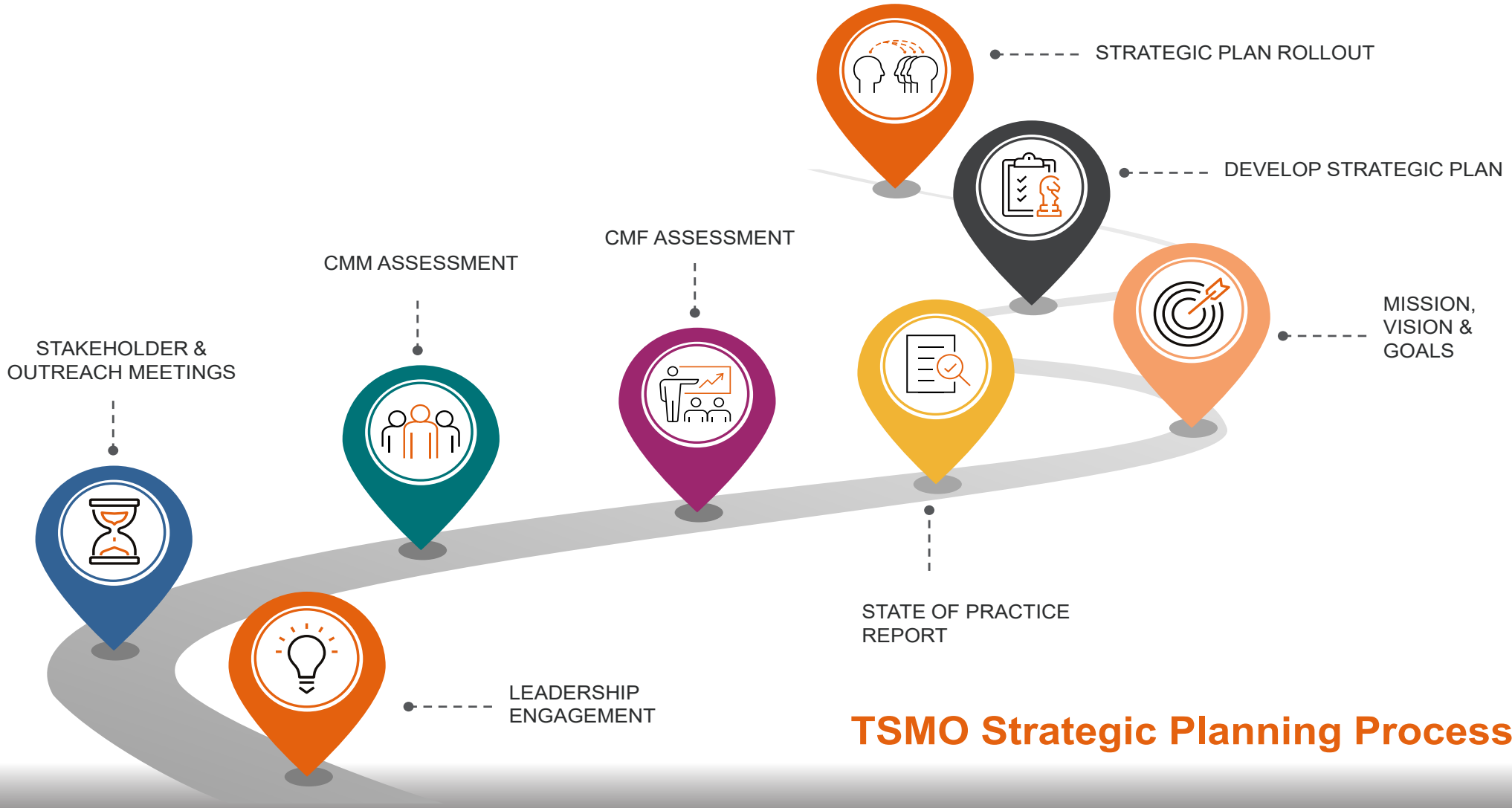
IDIQ CONTRACT FOR TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO) PROGRAM, STATEWIDE

CONTRACT NO. 4400025921 • April 11, 2023



TSMO Strategic Planning Process

Tuesday, April 11, 2023

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

Arcadis
10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816
Phone: 225 292 1004
Fax: 225 218 9677
www.arcadis.com

Subject: **Contract No. 4400025921**
IDIQ Contract for Transportation Systems Management and Operations (TSMO), Statewide

Dear Project Evaluation Team Members,

Over the last two decades, Arcadis and its teaming partners have worked together with DOTD through multiple Indefinite Delivery/Indefinite Quantity (IDIQ) contracts. This has allowed us to learn your organization in an intimate way. We take the time to work with you, as an extension of your staff, to learn what you need to deliver high-quality programs that solve our State's most complex problems. Every contract gives us further insight into the organization with each different from the next. Working on wide range of IDIQ contracts - ITS statewide system design, integration and system verification services, ITS statewide maintenance engineering & inspection (ME&I), ITS construction engineering & inspection, signing and structural design, traffic engineering, safety studies, and linear referencing system (LRS) - we are in tune with many facets of DOTD that will contribute to the development and delivery of a robust TSMO strategic plan and related services. The knowledge gained from each of these contracts allows us to approach TSMO with the big picture in mind. Our local knowledge and experience are complemented by our national TSMO experience where our team has **successfully delivered over 200 TSMO, smart mobility, connected and autonomous vehicle (CAV), and related projects**. This results in well-rounded, streamlined services that are effective and efficient. We are confident our qualifications combined with our intimate knowledge of the program make us the right choice.

OUR TEAM

Our teaming partners for this IDIQ were selected for the individual strengths each partner can provide and complimentary team synergy developed through working together on previous projects. **Arcadis** has provided TSMO planning and implementation services to neighboring states (Texas, Alabama, Georgia, Tennessee) as well as nationally (Idaho, Washington, Connecticut). **HNTB** brings a depth of national TSMO planning and implementation experience, in addition to its wide range of grant application writing and support services. **La Terre (DBE)** brings local experience with public outreach and stakeholder engagement as well as grant application writing, which will be valuable in getting buy-ins from local agencies and entities to create a statewide TSMO culture.

OUR APPROACH

Our team's approach and methodology, as detailed in Section 18 of our enclosed proposal, is **focused on project-specific scoping** to deliver precisely what each unique project requires in a timely and efficient manner. We will achieve this goal through open communication that is integral to understanding DOTD's expectations and ensuring that they are consistently met through regular touchpoints.

To successfully deliver this contract, DOTD requires a team that provides redundancy in experienced TSMO and support staff to respond quickly to task order requests and can deliver multiple task orders simultaneously. As a cornerstone to our approach, the Arcadis Team offers a deep bench of experienced professionals that provide **redundancy in all aspects of this IDIQ contract**.

In addition to the team members presented in this proposal, the Arcadis Team includes a range of experienced local and regional resources that can be utilized as needed to **deliver multiple task orders simultaneously** under this IDIQ, while meeting project schedules and effectively managing overall team workload.

OUR EXPERIENCE

Experience	Value to You
Regional and National TSMO Experience	We have extensive TSMO experience with many state DOTs including several southern states that cover this contract's entire scope of services. From this experience, we can see how others plan and manage their systems. This allows us to bring the best practices and lessons learned to DOTD's TSMO program.
Local, Regional, & National TSMO Experts	Our project management team (PM: Akhil Chauhan, Deputy PM: Chris Hilyer) have direct experience working on and establishing TSMO programs with state DOTs. Akhil is located minutes away from you to discuss any TSMO needs in-person. Project management team is supported by a depth of industry leaders in TSMO to ensure all task orders are efficiently delivered according to DOTD's guidelines and expectations.
Full Lifecycle Services Experience	Problem solving – we understand DOTD is looking for an agile and adaptable consultant to accommodate its TSMO needs and challenges. We have demonstrated our ability to solve highly technical and complex TSMO issues during the full lifecycle of a project including planning, design, construction, and maintenance. This will ensure TSMO is fully integrated in the complete lifecycle of DOTD projects.
Trusted and Reliable Staff with highest past performance ratings	Our team has cultivated a depth of knowledge and balanced skillset that is needed to meet and exceed DOTD's requirements for TSMO services. We have received the highest past performance ratings from DOTD on the work disciplines (ITS, Traffic, Planning, and Data Collection) needed to deliver this program. We will utilize the same knowledgeable, dedicated staff who has already developed trusted relationship with DOTD staff.
Cost-Effective Planning & Delivery	Utilizing our in-depth knowledge of DOTD program, we will apply practical and proactive design ideas to increase return on investment and deliver quality results.

OUR STRENGTHS

At Arcadis, we are **dedicated to innovative solutions** that make our client's jobs easier and facilitates successful project delivery with access to industry leading expertise and technologies that make this a reality. Our innovative project delivery tools that will be made accessible to DOTD include **interactive data dashboards** that simplify analysis of complex data sets through intuitive visualization thus, saving time traditionally spent wading through hard to read spreadsheets. Our experienced and dedicated team, led by Akhil Chauhan, is knowledgeable with these tools and will bring a laser sharp focus on scope, schedule, quality, and budget to ensure projects are delivered on-time for the agreed upon fee.

OUR MOTIVATION

Improving quality of life is our motivation and is at the forefront of every project we deliver. For TSMO projects, that means only progressing **operationally efficient, reliable, safe, and cost-effective strategies** that promote mobility and sustainability for the environment and communities they serve. We look forward to the opportunity to continue partnering with DOTD to improve the mobility, safety, service, and reliability of Louisiana's transportation system. Thank you for your time and consideration.

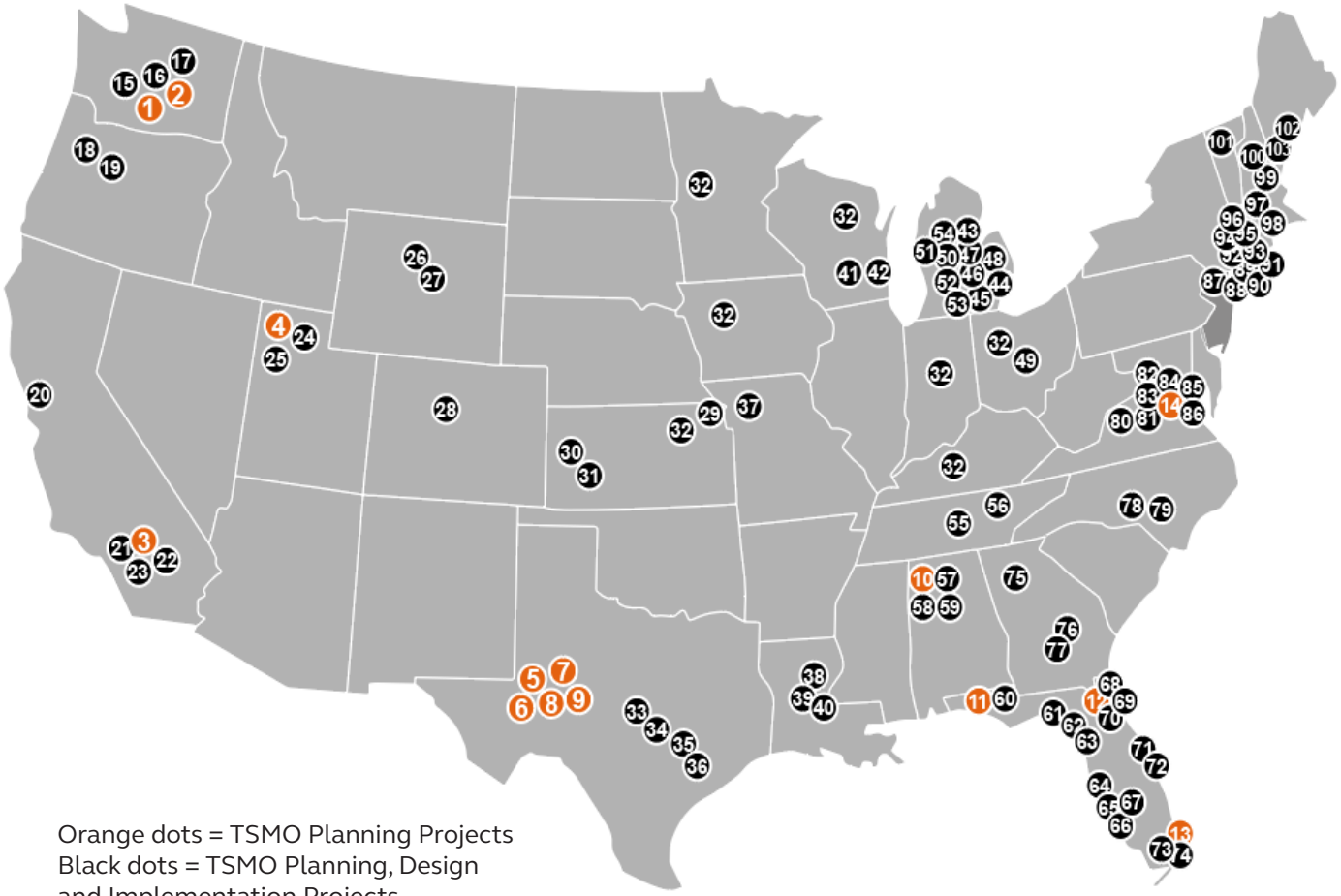
Sincerely,

Akhil Chauhan PE, PTOE, PTP, PMP
Project Manager
Principal Engineer

Marwan Abboud, PE
Principal-in-Charge
National ITS / Traffic / Safety Practice Lead

Sections 1-11

The Arcadis Team has delivered **200+** TSMO, CAV and Smart Mobility Projects.



Orange dots = TSMO Planning Projects
Black dots = TSMO Planning, Design and Implementation Projects

1. Spokane SRMTC Regional TSMO Plan
2. VAST Vancouver Region TSMO Program Support and Plan
3. SANDAG Regional TSMO Plan
4. COMPASS Boise Regional TSMO Plans
5. TxDOT TSMO San Antonio District
6. TxDOT TSMO Laredo District
7. TxDOT TSMO Pharr District
8. TxDOT TSMO Corpus Christi District
9. TxDOT TSMO San Angelo District
10. ALDOT TSMO Program
11. D3 Districtwide TSM&O Contract
12. FDOT D2 TSM&O On-call Services
13. D6 Districtwide TSM&O Contract
14. USDOT TSM&O Support Services
15. Puget Sound Regional Arterial Operations RCTO
16. Olympia Smart Corridors
17. WSDOT Statewide and Regional ITS Architectures
18. ODOT Regional ITS Architectures
19. ODOT Emerging Technology Impact Assessment
20. Metropolitan Transportation Commission (MTC) CV Support Services
21. SANDAG NextOS Regional Plan and Corridor Study
22. MTC Arterial Operations Program Support
23. Otay Mesa Border Crossing ConOps
24. Treasure Valley Detour Plan
25. I-84 Corridor Operations Plan
26. Wyoming CV Pilot
27. Port of Entry/CVISN Technology
28. The City and County of Denver (CCD), CV applications
29. KDOT I-25 "Moving Forward" Study
30. Kansas Statewide Connected and Autonomous Vehicle Vision Plan
31. Kansas Statewide Connected and Automated Vehicle Implementation
32. MAASTO Truck Parking Information and Management Systems
33. MoKan CAV Corridor (Williamson County GEC)
34. USDOT Texas AV Proving Grounds Partnership
35. USDOT V2I Reference Implementation
36. TxDOT Truck Parking Availability System
37. Kansas City Smart City Challenge Support
38. LADOTD CAV Strategic Plan
39. LADOTD ITS Maintenance Program
40. LADOTD ITS System Design
41. Madison Beltline Flex Lanes, WI
42. WisDOT Zoo Corridor Integrated Corridor Management (ICM) Project
43. MDOT ITS Design & Master Plan
44. MDOT I-696 ICM
45. MDOT CV Testbed Development and Expansion
46. Ann Arbor CV Test Environment
47. MDOT I-96 Active Traffic Management
48. MDOT I-94 Truck Parking System DSRC Deployment
49. MDOT V21/CV Program Support
50. MDOT US 23 Active Traffic Management
51. USDOT Safety CV Pilot Model Development
52. MDOT Connected Vehicle (VII) Demo Support
53. MDOT ITS Program Office Support
54. Smart Columbus Program Management and Initialization
55. TDOT Emerging Mobility Strategic Plan
56. TDOT I-24 Smart Corridor
57. ALDOT Regional Traffic
58. Operations Program (RTOP)
59. ALDOT ITS Maintenance Program
60. Smart Bay CAV Pilot (D3)
61. FDOT Central Office AV Support Services
62. FDOT Central Office TIM/CVO
63. FDOT Truch Parking Availability System
64. THEA-Tampa CV Pilot
65. Tampa Bay NEst (D7 - Managed lanes electronic tolling and CAV)
66. Pinellas Smart City (D7)
67. Pinellas Connected Community (D7 - USDOT ATCMTD Grant 1/2021
68. North Florida TPO Smart Region
69. JTA Future Mobility and Data Warehouse
70. Gainesville Pilot
71. USDOT Central Florida Automated Vehicle Proving Grounds
72. SunTrax Program Management Services
73. MDX Emerging Mobility Strategic Plan
74. Keys Coast CAV Pilot (D6)
75. GDOT Regional Traffic Operations Program
76. GDOT Public-Private Initiatives
77. CV Tolling and Other Applications
78. NCTA ITS Program Mgmt
79. NCDOT Broadband Program Mgmt
80. VDOT I-66 Shoulder Lane Control Systemt
81. Next Generation Project Development
82. AASHTO V21 Footprint Analysis
83. USDOT ITS Strategic Plan
84. USDOT Saxton Lab DSRC/CV Standards Development
85. USDOT Integrated ITS Deployment and Research Support
86. USDOT Traffic Incident Management Support
87. New Jersey Turnpike GEC ITS/CV Support
88. NYC CV Pilot
89. GTC Greater Rochester TSMO Plans
90. NITTEC Buffalo-Niagara Operations Support
91. NYCDOT ITS Strategic Plan
92. SWRPA Southwest CT Regional ITS Plan
93. CTDOT Statewide ITS Architecture Update
94. CTDOT ATMS Strategic Plan
95. CTDOT CAV Strategic Plan
96. CTDOT SWZ Guide
97. Massachusetts Regional ITS Architectures
98. MassDOT ITS On-Call Support
99. NDDOT Statewide ITS Architecture
100. NHDOT ITS On-Call Support
101. CCMPO Burlington Region ITS Implementation Plan
102. MaineDOT CVISN and Weigh-in-Motion
103. TIM Strategic Plan

"Arcadis engineers and technicians played a vital role in the success of ALDOT West Central Region's Regional Traffic Operations Program (RTOP), [as part of ALDOT's **TSMO Program**]. *In addition, Arcadis has provided quality design services for 3 of our ITS projects."*

- Jonathan Mills, P.E., TSMO Engineer, ALDOT West Central Region

DOTD FORM: 24-102

(Revised January 1, 2023)

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	IDIQ CONTRACT FOR TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO) PROGRAM STATEWIDE
2. Contract Number(s) as shown in the advertisement	CONTRACT NO. 4400025921
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name **(name must match as registered with the Louisiana Secretary of State where such registration is required by law)**	ARCADIS **ARCADIS U.S., INC.**
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0002808 DUNS 057690414
6. Prime consultant mailing address	10352 Plaza Americana Drive Baton Rouge, LA 70816
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	10352 Plaza Americana Drive Baton Rouge, LA 70816
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Akhil Chauhan, PE, PTOE, PTP, PMP Principal Engineer P. 225 368 6563 | E. akhil.chauhan@arcadis.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Akhil Chauhan, PE, PTOE, PTP, PMP Principal Engineer P. 225 368 6563 | E. akhil.chauhan@arcadis.com

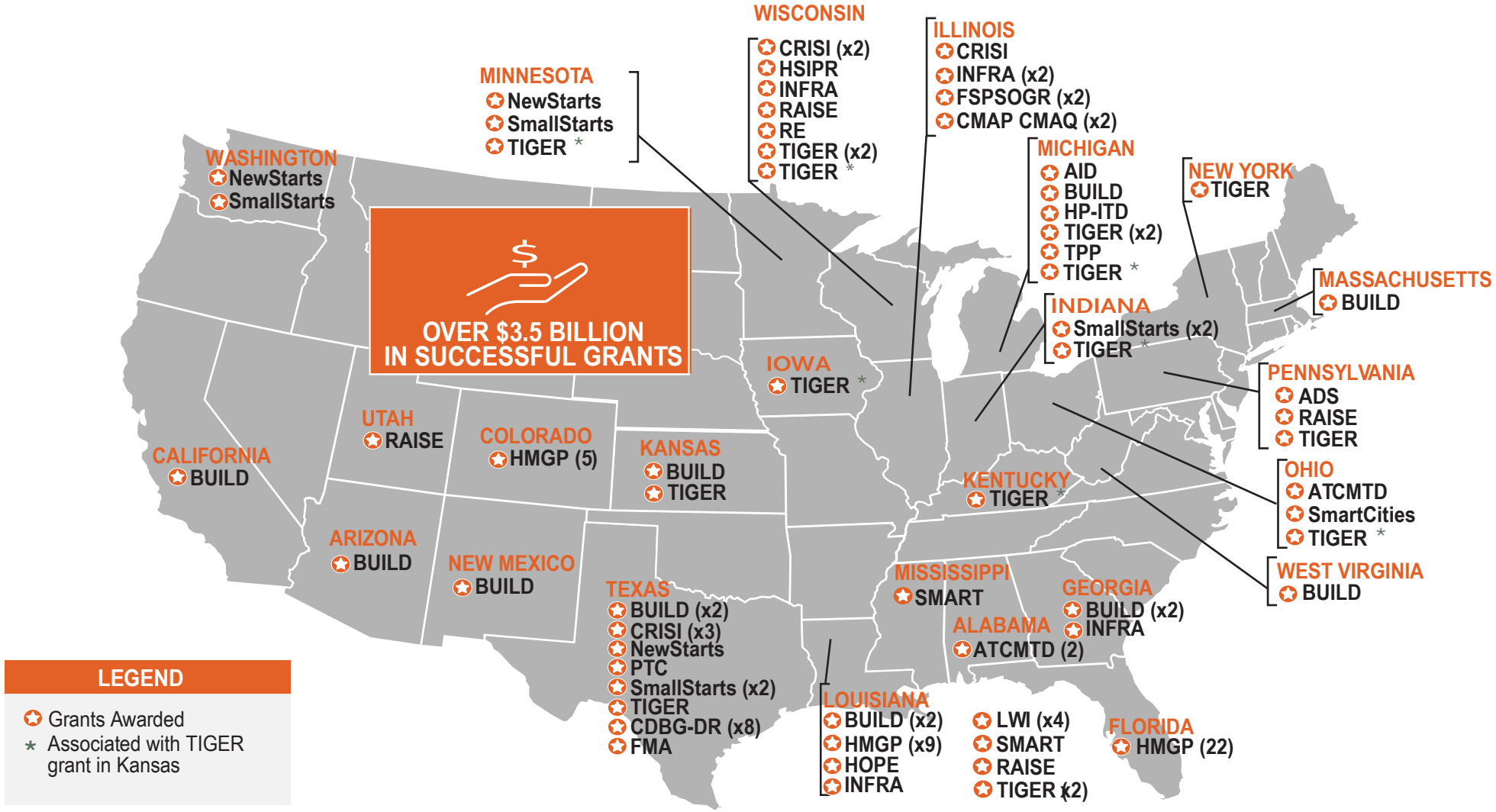
Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	 Akhil Chauhan, PE, PTOE, PTP, PMP Date: **April 11, 2023**

11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	Firm(s): **La Terre Engineering, LLC**	Firm(s)' %: **6%**

Sections 12-14

Arcadis Team Nationally Awarded and Supported Grant Applications.



"The Arcadis team has delivered great success to the Regional Traffic Operations Program (RTOP) in Alabama, [as part of ALDOT's **TSMO Program***]. Since starting with the Tuscaloosa area in 2018, Arcadis has consistently shown improvements across various performance measures on their assigned corridors and become an integral part in managing traffic during home football games at the University of Alabama. They've helped us tell the story and expand the foot print of the program with their repeated success. RTOP is now a statewide program in 2021, with Arcadis involved in efforts in each of the five ALDOT regions to improve signalized corridors. The Arcadis ITS design team also performed very well with the* **ATCMTD grant project** *design work. They provided solid design documents, were very responsive, and helped the department get this important project started off right. We've enjoyed working with and learning from the Arcadis team and look forward to additional successful projects in the future."*

- Brett J. Sellers, PE, Asst. State TSMO Engineer

12. 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 Evaluation Discipline(s)	% of Overall Contract	ARCADIS	HNTB	LA TERRE ENGINEERING, LLC DBE	Each Discipline must total to 100%
ITS	65%	70%	30%		100%
Planning	20%	45%	30%	25%	100%
Traffic	10%	90%	10%		100%
Data Collection	5%	70%	10%	20%	100%
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.					
Percent of Contract	**100%**	**67%**	**27%**	**6%**	

TSMO is a cross-cutting program that is typically led in many DOTs by ITS/ Operations Section, but requires significant contributions from all DOT sections (e.g., Planning, Design, Construction, Maintenance) for it's successful institutionalization and integration within each stage of project development. As such, the table above assumes highest percentage work in this IDIQ will be associated with ITS, with some portion associated with Traffic, Planning and Data Collection.

13. Firm Size:

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)
ARCADIS	Principal	6	6
	Supervisor Engineer	6	8
	Supervisor-Other	4	4
	Engineer	6	10
	Engineer-Other	2	2
	Engineer Intern	2	4
	Professional	1	3
	Engineering - Aide	1	1
	Planner	3	4
	Computer Analyst	1	1
	GIS Analyst	1	3
	Senior Technician	2	2
HNTB	Engineer	1	4
	Engineer – Other	10	15
	Senior Technician	2	5
LA TERRE ENGINEERING, LLC (DBE)	Supervisor – Engineer	1	1
	Engineer Intern	1	1

(Add rows as needed)

14. Organizational Chart

ARCADIS

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Principal-In-Charge

Marwan Abboud, PE[1] ◆

Project Management Team

Project Manager

Akhil Chauhan, PE, PTOE, PTP, PMP[1]*◆

Deputy Project Manager

Chris Hilyer[1]

Technical Advisor & QA/QC

Shahram Malek, PhD, PE[1]

Tim Lomax, PhD, PhD, PE[1]

Legend:
Arcadis[1]
HNTB[2]
La Terre Engineering[3]
Meeting TEPR Requirement*
Staff Meeting MPRs◆

Stakeholder Engagement, Outreach & Training

Engagement & Outreach Planning & Execution
Julie Price, AICP[1]
Cara Vojdani[1]
Lyle Tynes, EI[3]
Seneca Toussant, PE[3]

Training
Matt Glasser, PE[1]
Paul Hsu, PE[1] ◆
Steve Cyra, PE, PTOE[2]

TSMO Strategy & Solution

Service Layer / Tactical Plans
Matt Glasser, PE[1]
Randy Knapick, AICP[1]
James Sorensen[1]
Michelle Boucher[1]
Mike Haas[1]
Luke Dixon, PE, PTOE, IMSA[1]
Kerry NeSmith, PE[1]
Tony Moore, PE[1]◆
Charles Miller, PhD, PE, PTOE[2]
Kenneth Jacobs [2]
Stephen Bahler, PE[2]

Multimodal
Jaap Tigelaar[1]
Nick Seling, PE[2]

Emerging Technology
Paul Hsu, PE1 ◆
Troy Galloway, PE[1]
Arya Rohani, PE[2]
Matt Junak, PE[2]
Greg Krueger, PE[2]

CMM Assessments & TSMO Strategic Plan

Koushik Arunachalam, PE[1]
Samit Deo, PE[1]
Paul Hsu, PE[1] ◆
Laura Hartley, PE, PTOE[1] ◆
Rakesh Sharma, PE, PTOE, PMP, CVP[2]
Matt Junak, PE[2]
Victor Blue, PE, PH.D[2]
Greg Krueger, PE[2]

TSMO Policy Development & Updates

Koushik Arunachalam, PE[1]
Doug Tilt, PE[1]
Paul Hsu, PE[1] ◆
Ranzy Whiticker, PE[1] ◆
Michelle Boucher[1]
Rakesh Sharma, PE, PTOE, PMP, CVP[2]
Matt Junak, PE[2]

Value Added Services

System Engineering Analysis
Paul Hsu, PE[1] ◆
Charles Miller, PhD, PE, PTOE[2]

ITS Architecture
Laura Hartley, PE, PTOE[1]◆
Greg Krueger, PE[2]

ITS Master Plans
Samit Deo, PE[1]
Cory Evans, PE[1]

GIS & Data Analytics
David Ward, GISP[1]
Clay Packard, PE[2]

ITS Techs/Specialists
Tony Jackson, IMSA III[1]◆
Jeff Jones, IMSA II[1]◆
Cody Lemoine[1]◆
Kevin Schneider[2]◆
Michael Matzen[2]◆

Traffic Engineering
Ari Deitch, PE, PTOE, PTP[1]*◆
Kester Hollier, PE, PTOE[1]*◆

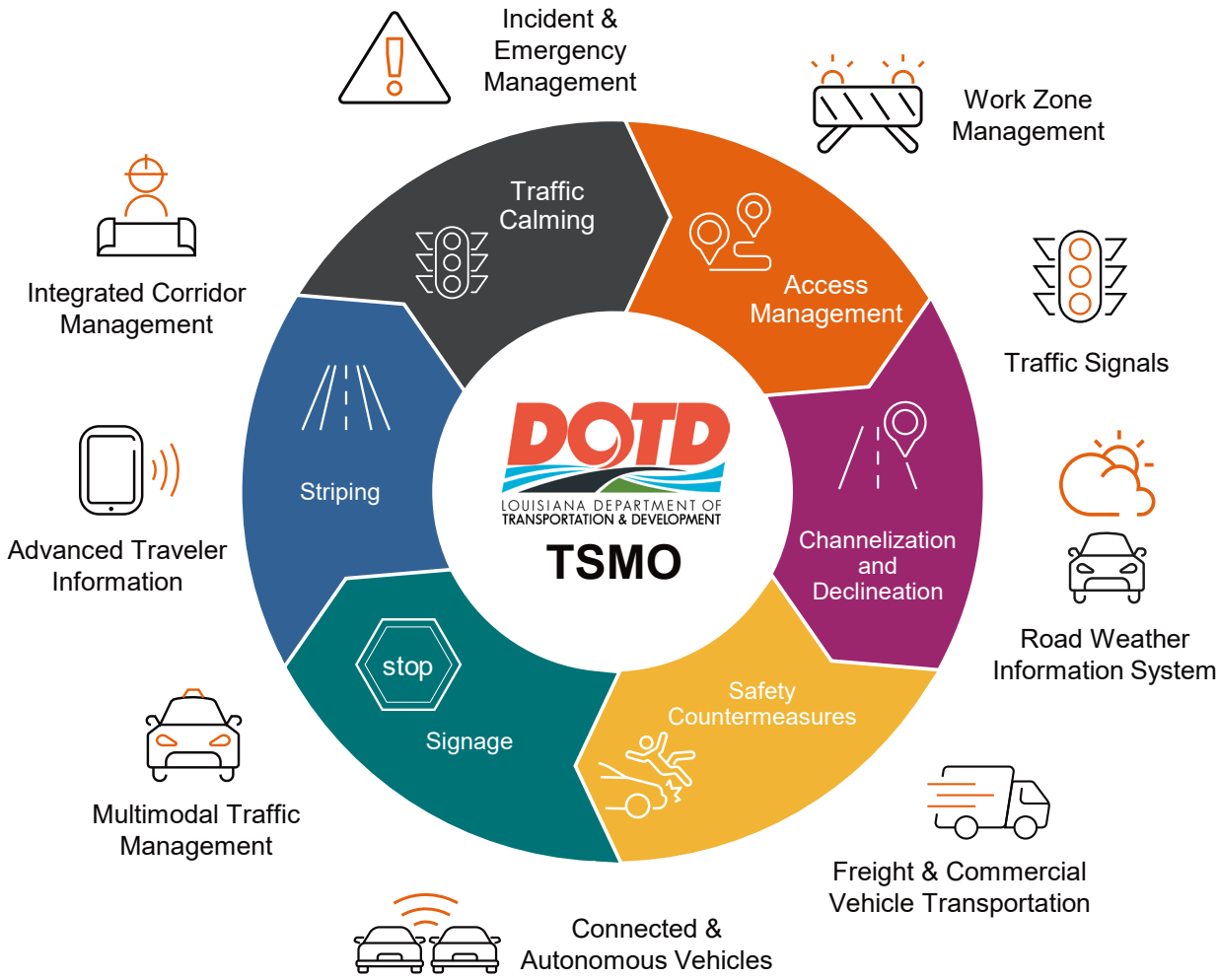
Grant Writing & Support

Julie Price, AICP[1]
Doug Tilt, PE[1]
Ranzy Whiticker, PE[1] ◆
Laura Hartley, PE, PTOE[1] ◆
Chris Kopp, AICP, CTP[2]
Victor Blue, PE, PH.D[2]◆

Funding & Benefit Cost Analysis

Matt Glasser, PE[1]
Kerry NeSmith, PE[1]
Rakesh Sharma, PE, PTOE, PMP, CVP[2]
Matt Junak, PE[2]

Sections 15-16



"Arcadis performance has exceeded our expectations in terms of providing the expertise to analyze the traffic/safety data as well as **engaging the project stakeholders to develop consensus** *toward a complete solution. This project was challenging in many ways but the engineering team at Arcadis* **went beyond the scope of the project** *to make sure that our needs for this project were documented and addressed. The feedback and comments to the deliverables were minimal and were easily and promptly resolved…. Arcadis provided excellent project management throughout the duration of the project. Arcadis provided the project schedule, biweekly and monthly status reports regarding completed and scheduled work in a timely manner.* **Exceptional performance in communications, cooperation and follow-up with stakeholders.**"

- Rosalinda Deville, LADOTD I-10 Queue Warning SEA Project Manager

15. 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.

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license
1	Akhil Chauhan, PE, PTOE, PTP, PMP	ARCADIS	PE. 33703 / 09/30/2024 – Civil	LA
	Marwan Abboud, PE		PE. 34657 / 09/30/2023 – Civil	LA
2	Akhil Chauhan, PE, PTOE, PTP, PMP	ARCADIS	PE. 33703 / 09/30/2024 – Civil	LA
	Marwan Abboud, PE		PE. 34657 / 09/30/2023 – Civil	LA
3	Ranzy Whiticker, PE	ARCADIS	PE.34132 / 03/30/2025 – Electrical	LA
4	Kester Hollier, PE, PTOE	ARCADIS	PE.034304 / 03/30 /2023 – Civil PTOE: 3928/ 11/30/2024	LA
	Ari Deitch, PE, PTOE, PTP, RSP		PE.0041842 / 03/30/2024 – Civil PTOE: 4346/ 11/30/2023	LA
5	Anthony Moore, PE	ARCADIS	PE.37887 / 09/30/2023 – Civil IMSA ID: 127114 / Level I & II: 9/18/2022	LA
	Laura Hartley, PE, PTOE		PE.39030 / 09/30/2024 – Civil	LA
6	E. Paul Hsu, PE	ARCADIS	PE.35983 / 03/30/2025 – Electrical	LA
7	Jeffery Jones, IMSA II	ARCADIS	IMSA ID: 112604 / Level I & II: 8/23/2024	LA
	Cody Lemoine		N/A	N/A
	Victor Blue, PhD, PE	HNTB	N/A	N/A
8	Jeffery Jones, IMSA II	ARCADIS	IMSA ID: 112604 / Level I & II: 8/23/2024	LA
	Cody Lemoine		N/A	N/A
	Kevin Schneider, PE	HNTB	N/A	N/A
9	Anthony Jackson, IMSA III	ARCADIS	IMSA ID: 117627 / Level I & II: 1/26/2025	LA
	Michael Matzen	HNTB	N/A	N/A

(Add rows as needed)

16. Staff Experience:

Firm employed by	ARCADIS			Meet MPR Nos. 1 & 2
Name	Akhil Chauhan, PE, PTOE, PTP, PMP		Years of relevant experience with this employer	15
Title	Principal Engineer		Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			MS / 2003 / Transportation Engineering, Massachusetts Institute of Technology BS / 2001 / Civil Engineering, Indian Institute of Technology	
Active registration number / state / expiration date			PE.033703 / LA / Exp. 09/2024; PTOE #2544 / USA / Exp. 11/2023; PTP #246 / USA / Exp. 12/2024; PMP #1444676 / PA / Exp. 08/2023	
Year registered	2008	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities.			Project Manager	

Experience dates	Experience and qualifications relevant to the proposed contract
	As a Principal ITS engineer and Certified Project Manager, Mr. Chauhan brings a unique experience of closely working with different LADOTD sections and stakeholders such as ITS, Traffic Engineering, Safety, Planning, Data/GIS, Environmental, Roadway Design, Bridge, and the local districts. From planning to design and construction to operations/maintenance, this full cycle interaction at various levels of the Department has given him a comprehensive understanding of needs and requirements on projects and programs, and how different pieces can come together to deliver positive outcomes for LADOTD. With his proactive approach and understanding of issues and challenges, Akhil ensures that his team provides quality deliverables within time and budget. He has more than 20 years of experience in the fields of TSMO, ITS, traffic engineering, safety engineering, transportation planning, and emergency management. He has made several professional publications and presentations related to data and performance measures-driven programmatic ITS maintenance implementation, ITS deployments evaluation, and ITS benefit-cost analysis. Akhil *participates in activities relative to AASHTO's Committee on Transportation System Operations (CTSO) that focuses on TSMO and associated ITS and emerging technologies* such as CAV, with the goal of improving safety, system reliability, and highway system performance. With active participation at different professional organizations such as AASHTO CTSO, Transportation Research Board (TRB), ITS America, Institute of Transportation Engineers (ITE), and ITS World Congress, he keeps himself fully aware of the latest research and industry trends affecting DOTs such as TSMO, Smart Mobility, CAV, Special Event Management, Mobility-on-Demand (MOD)/Mobility-as-a-Service (MaaS), Work Zone Management, Ramp Management, Integrated Corridor Management (ICM), and Traffic Signal Coordination.
5/19 – Ongoing	**TSMO Planning Program, TxDOT, San Antonio, TX.** *Technical Advisor/Principal Engineer.* Developing TSMO Program Plan, ITS Master Plan and Architecture updates for TxDOT San Antonio District while working with District leadership, partner agencies and TxDOT Division. The program plan aims to institutionalize TSMO within the District by *integrating traffic operations within planning, design, construction, operations and maintenance* activities. Through close collaboration with TxDOT leadership, developing a five-year roadmap for the District to improve capabilities in *six TSMO dimensions* and areas of traffic management, signal management, work zone management, and work zone management.
07/16 – 07/21	**Connected & Autonomous Vehicle (CAV) and ITS System Design IDIQ, LADOTD, Statewide, LA.** *Project Manager.* **Key Task Orders,** *1) CAV Strategic Plan:* Development of Louisiana's first CAV Strategic Plan. Scope of services include comprehensive review of State's ITS infrastructure and architecture, federal CAV initiatives, CAV strategic plans in other states, international CV and co-operative ITS (C-ITS) initiatives, state of CAV research, state of CAV in private sector; workshop to develop CAV strategic vision and goals, identify current mobility, safety, multi-modal and infrastructure issues; perform CAV Readiness Analysis to assess maturity level of CAV applications; identify and prioritize CAV pilots and deployments with greatest benefits; identify

	potential partnerships, data requirements and sharing needs, infrastructure and resource implications; and develop CAV Action Plan that includes timeline for CAV application deployments in 5 years. *2) Policy Formulation for LA AV Laws:* Development of a policy and necessary permits to implement the recently passed Louisiana AV law (Act 232) that provides DOTD the sole jurisdiction over the operations of "Autonomous Commercial Motor Vehicles" (ACMV). The proposed policy document outlines requirements and operating constraints for safe operations of autonomous commercial motor vehicles in the state. The policy covers individual ACMVs as well as ACMVs in platooning. Scope also includes developing or, as necessary, modifying the necessary permits to implement the ACMV policy. *3) CAV Technology Team Support:* Provided technical support services and facilitating planning activities related to CAV and their impact on highway infrastructure for the department's CAV technology team. Led and facilitated workshop and web-based discussion for an inter-disciplinary 30-member LADOTD CAV Technology Team that consists of 4 working groups: Highway Infrastructure Technology, Multi-Modal Infrastructure Technology, Departmental Applications, and Policy & Agency Role.
06/17 – 10/18	**ITS Master Implementation Plan, TxDOT, Fort Worth, TX.** *QA/QC Reviewer*. Assisted in developing the Connected Vehicle (CV) Readiness Review for the *ITS Master Implementation Plan* and provided advisory role for the development of the report. The CV Readiness Review covered topics such as CV architecture, CV applications, and a detailed institutional, policy and legal, and technical analysis of CV readiness for the District. The plan incorporated various methodologies in conformance with the latest national/regional ITS architecture. TOPS-BC (a Federal Highway Administration tool) was used to conduct *benefit-cost analysis* and achieve performance measures-driven project prioritization and implementation planning.
04/20 - Ongoing	**ITS Management, Operations, and Maintenance Engineering & Inspection (ME&I) IDIQ, LADOTD, Statewide, LA**. *Principal-in-Charge.* Responsible for contract management, and quality control and assurance to continue providing ITS maintenance program to systematically provide routine and responsive maintenance for the DOTD's statewide ITS infrastructure. Scope includes program management, maintenance management system software, *comprehensive maintenance plan* for routine and responsive maintenance, health and safety and traffic control plan development, and tracking and performance measures reporting.
10/22 – 11/22	**Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Application Support, LADOTD, Baton Rouge, LA.** *Project Manager*. Scope includes *development of grant application* to deploy advanced technology such as Adaptive Signal Control Technologies (ASCT) at 39 signalized intersections along primary alternative route to provide a sustainable solution for efficient mobility across the region. Implementation of ASCT includes hardware upgrades, detection upgrades, communication upgrades, and traffic signal operations software upgrade to adaptive control system to counter the unpredictable fluctuations of traffic flow due to construction, incidents and speciate events.
02/18 – 06/21	**Baton Rouge Pedestrian and Bicycle Safety Action Plan, LADOTD, East Baton Rouge Parish, LA.** *Principal Engineer.* Responsible for contract management and technical advisory for the project, which involved *public and stakeholder outreach*, and a *data-driven, three-tier screening process* to identify safety priority areas and target locations where safety countermeasures (engineering and non-engineering) and strategies will have the most effect.
08/09 – 03/11	**Baton Rouge to Lafayette ITS – Traffic Incident Management (TIM) Phase 2 Design-Build, LADOTD; Multiple Parishes, LA.** *Associate Project Manager / Senior ITS Engineer.* Responsibilities include design of fiber optic and wireless communication along with 13 CCTV cameras, 13 RVDs, four DMSs, and two HARs on I-10, I-49, US-90 and US-190. Supervised integration of ITS sites, network electronics, and wireless systems, wireless routing and site path analysis, recommendation for communication system, including both physical layout of fiber optic and wireless system, and Ethernet network design.

16. Staff Experience:

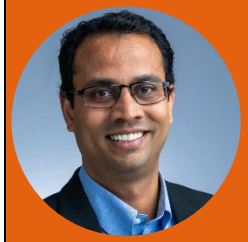
Firm employed by	ARCADIS		
Name	Christopher Hilyer	Years of relevant experience with this employer	1
Title	National TSMO Account Lead	Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization		Accounting / Auburn University Montgomery, 1992	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities		Deputy Project Manager	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Hilyer retired from the Alabama DOT as the State TSMO Administrator. He is a Past President of the Gulf Region Intelligent Transportation Society; as well as an active Board of Directors member and two-time TrueGRIT award winner. He is a past member and served in various leadership roles of the ITS America State Chapter Committee; the AASHTO Committees on Transportation Systems Operations (CTSO) and Transportation Systems Security Resilience (CTSSR); as well as the Eastern Transportation Coalition. He is a 2014 graduate of the Operations Academy, which contributed greatly to the advancement of TSMO in the State of Alabama and played a critical role in the collaboration with many other states.
05/15 – 12/21	**TSMO Program, ALDOT, Statewide, AL.** *State TSMO Administrator*. Developed, formalized, and sustained initial ALDOT *TSMO program*. Utilized Strength, Weakness, Opportunity, and Threats (*SWOT*), Capability Maturity Model (*CMM*) and Capability Maturity Framework (*CMF*) to establish the baseline. This assessment paved the way to develop the initial *TSMO Strategic Plan, TSMO Program Plan, and TSMO Service Layers*. The Strategic and Program Plan focuses on the five goals (Safety, Mobility, Accountability, Collaboration and Innovation) and the CMM dimensions to outline a work plan to mature the program in short, intermediate, and long-term. Program's nine service layers: *1) ITS and Communications; 2) Traffic Signal Management; 3) Traffic Management Centers; 4) Traveler Information; 5) Traffic Incident Management; 6) Emergency Transportation Operations; 7) Work Zone Management; 8) Active Transportation and Demand Management; and 9) Emerging Technologies (CAV, EV)* illustrate the business case with performance metrics and return-on-investment for the program. Led to significant increases in annual operations and maintenance funding; as well as leadership's commitment to fund the initial $50M capital program. Program realized a 250% growth in personnel; an expansion from two Regional Traffic Management Center's to five; and state-wide expansion of Alabama Safety Assistance Patrol (ASAP) Program from two markets to seven. Collectively, this establishes a solid foundation to guarantee continued success and growth in the years ahead.
01/23 – Ongoing	**TSMO Master Plan, TXDOT, San Antonio District, TX.** *TSMO Planner.* Developed a performance and objectives-driven *traffic signal management plan* to address the high-level aspects of the planning, design, and construction requirements to ensure seamless acceptance of new installations to the maintenance and operations phase. This effort includes establishing *best practices* for Management and Planning; Policy and Process; Staffing; Maintenance; and Operations of traffic signals. Developed a *Traffic Interruption Reporting (TIR)* process to coordinate and report lane/road closures across multiple projects and internal/external stakeholders. This includes the needed internal SOPs and external MoAs. Identified District-wide diversion corridors and developed mapping and tools to quickly implement response plans, including alternate traffic signal timing plans for traffic diversion during incident or event management.
06/18 – 12/21	**University of Alabama Football Gameday Traffic Operations, ALDOT, Tuscaloosa, AL.** *State TSMO Administrator*. Building on the success of the Regional Traffic Operations Program (RTOP) Pilot project – a TSMO strategy, we coordinated with the University

	Police, City of Tuscaloosa, and their private partners to improve the ingress and egress associated with Alabama home football games. Initially, we demonstrated the capabilities to remotely monitor traffic and *adjust signal timings due to increased platoons of traffic, weather impacts, work zones, or crashes*. Secondly, this demonstration illustrated the use case to remove police officers from operating traffic signals in the field, which realized a significant improvement in delay. Ultimately, this operation matured and still exists with each passing football season. *Clearance times following games has dropped from upwards of 6 hours to less than 2 hours dependent of the opponent*.
05/15 – 12/21	**Transportation Management Centers (TMC), ALDOT, Statewide, AL.** *State TSMO Administrator*. TSMO Program provided an opportunity to assess TMC operations and make *data-driven recommendations* for renovation, relocation, and growth of new facilities to better facilitate coverage and program deliverables. Three additional TMCs in Montgomery, Tuscaloosa, and Huntsville were added in repurposed space that required renovation designs, funding, and hardware and software solutions. Initially, these three TMCs were operated 12/5 and later expanded to 24/7 as data analysis warranted. The Tuscaloosa and Huntsville locations are located on university campuses through a unique *collaborative partnership agreement*. That model is currently being evaluated for the other TMCs to provide more suitable space allocation and satisfy growing use needs.
01/12 – 12/21	**ALGO, ALDOT, Statewide, AL.** *State TSMO Administrator*. ALGO is the branded fundamental ATMS base solution procured in 2012 and rolled out in 2014 to manage transportation across the State of Alabama. The needs and requirements for sub-systems such as ALGOVideo (*video distribution*), ALGOTraffic (*traveler information*), ALGOReports (*performance metrics*), and ALGOAlerts (*emergency notification*) were defined, advertised, and delivered in subsequent years following the ALGO initial deliverable. This branded solution comprises ALDOT data, public sector stakeholder data feeds, third party data and solutions, and system integrations to deliver the tools needed to provide the highest-level safety and mobility to motorists. This system represents an $8M+/- capital investment with annual recurring O&M costs of $1M+/-. ALGO brand is now being utilized on all future system/sub-system development. One such example is ALGOPass, which will be utilized for tolling operations.
01/17 – 12/21	**Regional Traffic Operations Program (RTOP), ALDOT, Statewide, AL.** *State TSMO Administrator*. A pilot project was initiated in 2017 in Tuscaloosa to systemically improve *traffic signal maintenance and operations*. This project incorporates Advanced Traffic Signal Performance Measure (*ATSPM*) data for maintenance and engineering to improve the reliability of 85 intersections along four US and State routes. Aside from improving the uptime of signal components through regular scheduled maintenance, it utilized data to develop *signal timings* that aimed to increase arrivals on green. *Performance measures* indicated improvement to 90%+/- arrivals on green and an initial *benefit-to-cost of 39:1*. Following the three-year pilot, this program was rolled out statewide across Alabama to over 800 signalized intersections.
07/19 – 11/19	**Advanced Connected Transportation Infrastructure and Operations Network (ACTION), ALDOT, Tuscaloosa, AL.** *State TSMO Administrator*. The team *wrote, applied, and was awarded a $16M ATCMTD Grant* to improve the resiliency and sustainability of the I-20/59 corridor and associated diversion routes. This initiative funded the deployment of CCTV, deep learning algorithms for camera crash detection, *DSRC and C-V2X* radio-based traffic communications.
07/21 – 11/21	**Proactive Route Operations to Avert Congestion in Traffic (PROACT), ALDOT, Cullman Co., AL.** *State TSMO Administrator*. The team *wrote, applied, and was awarded a $10M ATCMTD Grant* for the North Alabama Connected Road Weather and Traffic Management Technology along I-65, US31, and subsequent connector diversion routes.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Koushik Arunachalam, PE, PTP	Years of relevant experience with this employer	18
Title	Principal ITS Engineer	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization		MS / 2005 / Civil Engineering, University of Cincinnati – Main Campus BS / 2001 / Civil Engineering, University of Madras	
Active registration number / state / expiration date		PE 112191 / TX / Exp. 06/2023	
Year registered	2012	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		CMM Assessments & TSMO Strategic Plan, TSMO Policy Development & Updates	

Experience dates	Experience and qualifications relevant to the proposed contract
	Koushik Arunachalam brings over 19 years of experience in the management of projects involving TSMO, ITS Planning and Design, Traffic Signal Timing and Design, Work Zone Planning and Operations, and Planning and Design for Emerging Technologies. He has provided these services to multiple state DOTs (TxDOT, GDOT, FDOT, LADOTD, NCDOT, TNDOT, ALDOT) including 11 TxDOT districts. Koushik's expertise spans across TSMO Program Planning, ITS Master Plans, Connected Vehicles (CV) readiness plans, PS&E packages for ITS, development of Concept of Operation (ConOps) and System Engineering Analysis for ITS, and performing multi-phase and multi-party stakeholder coordination for complex ITS deployments. He has hands-on experience in the development and implementation of signal timing (traditional, traffic responsive and ATSPMs), and development and maintenance of signal and ITS asset management systems. He is well versed at applying probe data (INRIX, Wejo, Replica, etc.) to develop data-driven and performance-based decision support solutions for arterials, freeways and TMC operations. His diverse experience across rural, urban and metro districts helps him bring valuable knowledge and thought leadership to DOTD to develop and implement scalable and practical TSMO solutions.
05/19 – Ongoing	**TSMO Program, TxDOT, Statewide, TX.** *Project Manager*. Managed eleven work authorizations to develop *TSMO Program Plans for five TxDOT districts (San Antonio, Corpus Christi, Laredo, Pharr, San Angelo)*. For TSMO Program Plans, Koushik led *extensive engagement with district leadership, partner agencies and project steering committee* to obtain input on existing TSMO practices, conduct *Capability Maturity Model (CMM)* and Capability Maturity Framework (CMF) assessments *across the 6 dimensions*, and *develop district specific TSMO goals and objectives*. Through these efforts, he led the team in developing *TSMO actions across five program areas*: Traffic Signal Management, Traffic Incident Management, Freeway Traffic Management, Road Weather Management and Work Zone Management. For each of these actions, he *developed implementation time frames*, resource needs and *benefit to cost analysis* to prioritize TSMO actions. **TSMO Tactical Plan:** Koushik guided the development of a *data driven 5-year ITS Master Plan for Corpus Christi, Pharr, and San Angelo districts* with focus on addressing end of life equipment and expanding coverage of ITS communications network, CCTV, DMS, Wrong-Way Driver Warning Systems, Roadway Flood Warning System and Upgrading Over Height Detection System. In coordination with the Traffic Safety Division, *he integrated the TxDOT Divisions' ITS Gap Plan to improve statewide ITS system coverage*. He is also leading *the implementation of TSMO Actions identified in the Program Plans* and developing Regional ITS Architectures for both San Antonio and Corpus Christi districts.

	TSMO Implementation: As a continuation of TSMO efforts, he is currently *leading the implementation of the TSMO actions* developed in the TSMO Program Plans. This includes *policy-level, business process-level, and operational-level implementation of the TSMO actions* to mainstream TSMO across various project development phases (planning through operations & maintenance) to support improved system reliability and safety. He is also managing the *development of two PS&E packages for Corpus Christi District: 1. I-37 DMS Deployment Project* to add eight new LED DMSs to expand traveler information system; and 2. *SH 358 Fiber Optic Deployment Project* (5 miles), with wrong-way driver warning systems (5), DMSs (4) and CCTVs (7) between SH 44 and Harbor Bridge. During the course of the TSMO Program, Koushik has guided TxDOT Laredo and Pharr districts through multiple *technical knowledge exchange workshops on the value of ConOps*, and currently leading development of *Concept of Operations for Traffic Incident Management and Traffic Management Center*.
04/17 – Ongoing	Signal Timing IDIQ, TxDOT, Houston District, TX, *Project Manager*. *Managed ten completed and two ongoing work authorizations, accounting for 210 signals spanning across regionally significant corridors* such as FM 1960, FM 1464, SH 249, FM 529, and US 290 to improve mobility and safety. Applying the *TSMO principle of "plan to operate"*, Koushik managed the multi-phased, multi-disciplinary *construction signal timing* project for SH 249 Tollway Construction. His approach included a detailed review of construction phasing and design plans to develop an understanding of the "during/ after" construction needs of the SH 249 corridor for geometry, signing and signal operations, and providing *temporary radio communications for remote monitoring and control* using Centracs central software. With his passion for innovation and bringing the state- of-the-art to TxDOT, Koushik partnered with TxDOT to deploy the *first ATSPM deployment in the Houston District* at 13 intersections along FM 1464. His efforts included collaboration with Houston TranStar and Miovision for field installation and testing of the Smart Link devices (to leverage existing detection and communications for ATSPM) and configuration of "Cloud" hosted application to analyze and visualize ATSPMs and travel times. The project also reviewed *communication network gaps* along the corridor and coordinated installation of radios for network connectivity to enable remote monitor, control, and troubleshooting using Centracs.
05/18 – 03/19	US 377 ITS Concept Design, TxDOT, Fort Worth, TX. *Project Manager.* Developed a *Smart Corridor concept* including a *communication plan* for the 10-mile segment of US 377 consistent with the TxDOT Fort Worth ITS Master Implementation Plan and regional ITS architecture. Performed in-depth field evaluation of ITS/traffic signal equipment to understand the gaps in existing infrastructure. *Developed ITS concept and cost* to include *fiber and radio communication*, *CCTV*/fisheye cameras *for corridor monitoring*, *DMSs for traveler information*, bluetooth + dedicated short-range communications radios for *CV applications*, traffic signal cabinet/controller/detection upgrades to enable *ATSPMs*, dual radar for speed and vehicle classification, and *emergency vehicle preemption*.
06/17 – 10/18	ITS Master Implementation Plan, TxDOT, Fort Worth District, TX. *Project Manager.* Managed the development of the *Five Year ITS Master Implementation Plan*, identifying *Top 10 Arterials for ITS deployment* and conducting *connected vehicle (CV) readiness review* in the Fort Worth District. This ITS Master Plan evaluated the current systems, determined the *future technology requirements* to create a five-year implementation plan for development and maintenance of ITS. This plan incorporated various methodologies in conformance with the latest National/Regional ITS Architecture. The project scope includes *identifying pilot corridors (arterial and freeway) for CV infrastructure* along with Connected Freight needs. *TOPS-BC* (a Federal Highway Administration tool) was used to conduct *benefit-cost analysis* and achieve *performance measures-driven project prioritization and implementation* planning.

16. Staff Experience:

Firm employed by	HNTB		
Name	Rakesh Sharma, PE, PTOE, PMP, CVP	Years of relevant experience with this employer	18
Title	Project Manager	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		ITS Project Management CITE / 2011 / University of Maryland MS / 2005 / Civil Engineering, University of Cincinnati BS / 2001 / Civil Engineering, National Institute of Technology	
Active registration number / state / expiration date		PE.72324 / OH / Exp. 12/2023; PE. 70902 / FL / Exp. 02/2025 Professional Traffic Operations Engineer (2009)	
Year registered	2007	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans), TSMO Strategic Plan & CMM Assessments (CMM Assessment, Strategic / Program Plan), TSMO Policy Development & Updates, Funding & Benefit Cost Analysis	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Sharma has 18 years of experience combined working in the public and private sectors. Rakesh specializes in connected and automated vehicles (CAV) concept to operation, intelligent transportation system (ITS) design to maintenance, automated traffic signal performance measures (ATSPM), transportation systems management and operations (TSM&O), traffic safety and transportation planning projects. Rakesh's experience with national standards for TSM&O, TIM, signal operations, and working in up to five FDOT TSM&O projects, uniquely qualifies him for this contract. He is intimately familiar with DOTD processes, goals and vision and is aware of the community's needs. Rakesh participates in the state various local ITE and ITS activities and is aware of regional needs and programs.
03/22 – Ongoing	**TSM&O GEC, FDOT Central Office, Various Counties, FL.** *Deputy Program Manager.* Rakesh was responsible for leading the efforts on the Statewide Arterial Management Program (STAMP), which aimed to provide *policy, guidance, and standards on the utilization of various Transportation Systems Management and Operations (TSM&O) strategies* for STAMP efforts. He also *developed the TSM&O Strategic Plan* utilizing the *Capability Maturity Model (CMM) assessment*, which helped define focus areas and outcome performance measures for the state. The TSM&O strategies implemented included the use of Multimodal Intelligent Traffic Signal System, Adaptive Signals, Signal Performance Measures, Traffic Signal Operations and Maintenance, and connected signals. Rakesh oversaw *policy development and updates, TSM&O engagement or mainstreaming, outreach, and stakeholder training/coordination*. He also provided support for grant application writing, project management, program assistance, coordination meetings, and project reporting. Additionally, Rakesh initiated the connected and automated vehicles initiative as part of the TSM&O program, which developed into a $60 million five-year program.
09/11 – 09/22	**TSM&O, FDOT District 2, Duval County, FL.** *Project Manager.* Rakesh played a pivotal role in the successful implementation of various traffic management projects. With expertise in ramp metering, intelligent truck parking, hard shoulder running, adaptive signal system, and transit signal priority, Rakesh provided valuable support to several *active arterial management and signal*-related efforts. He also contributed to other significant aspects of the project, including *freight management, traveler information, active transportation and demand management, and mobility on demand.*

09/21 – Ongoing	ITS and ATMS Districtwide Contract, FDOT District 3, Various Counties, FL. *Project Manager.* Rakesh is responsible for overseeing task work order-based contracts related to Districtwide Statewide Arterial Management Program (STAMP), Connected and Automated Vehicle (CAV), Intelligent Transportation Systems (ITS), and SunGuide efforts. He is also tasked with establishing and nurturing relationships with local agencies in the Panhandle region. Rakesh is involved in several projects, including RTMC video wall replacement, SMART Bay, traffic signal maintenance compensation agreement, and eSTORM. He is instrumental in *developing and considering various Transportation Systems Management and Operations (TSM&O) strategies for deployment in the region*. These strategies include work zone management, traffic incident management, transit management, freight management, traffic signal coordination, ramp management, connected and automated vehicle deployment, and integrated corridor management. Rakesh has also *identified project funding and developed a plan to study the benefit-cost analysis of these initiatives*.
10/21 – Ongoing	Office of Alternative Delivery Indefinite Delivery/Indefinite Quantity (IDIQ), GDOT, Statewide, GA. *Traffic Operations Representative.* Rakesh was an integral member of the design team responsible for project coordination of the Major Mobility Investment Program (MMIP), which comprised of 11 projects, including the incorporation of four express lane facilities. In his capacity as a project coordinator, Rakesh provided oversight to the operations working group, responsible for *establishing policy, standards, and processes* for deviations, as and when required. He also provided significant support towards *grant application writing,* in addition to collaborating on report deliverables for various tasks. Rakesh's proficient management skills, technical expertise, and dedicated approach facilitated seamless coordination of the MMIP program, resulting in the successful achievement of its objectives.
09/10 – Ongoing	Districtwide GEC, FDOT District 3, Washington County, FL. *Project Manager/Task Lead.* Rakesh is tasked with the responsibility of managing several projects and tasks under the purview of FDOT District 3. These initiatives include the SMART Bay, *Hurricane Dashboard, Signal Retiming Dashboard,* eTRAC, SIS ITS project prioritization, RTMC Video Wall, among others. In addition to these responsibilities, Rakesh also provides support for *integrated corridor management, active transportation and demand management, and mobility on demand.* His expertise and proficiency in these areas have significantly contributed to the successful implementation of these projects, ensuring their compliance with regulatory standards and industry best practices.
09/15 – Ongoing	Traffic Incident Management and Commercial Vehicle Operations Contract, Tallahassee, FL. Rakesh is currently serving as the Assistant Project Manager for a task work order-based contract, responsible for supporting the state's goal of achieving zero fatalities by reducing secondary crashes. He achieves this objective by *lending support towards the open roads policy and quick clearance goals*. Rakesh's responsibilities in this capacity include the development of the TIM dashboard, *allocation of funding for road ranger programs*, analysis of freight operations, development of a truck parking availability system, and analysis of road ranger operations. In addition, he is involved in conducting a high-level analysis of freight traffic on Statewide corridors. Rakesh's contributions have been instrumental in achieving the desired outcomes of the contract, ensuring compliance with regulatory standards and industry best practices.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Samit Deo, PE	Years of relevant experience with this employer	6
Title	Traffic/ITS Engineer	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		MS / Civil Engineering / Auburn University, 2007	
Active registration number / state / expiration date		PE. 126985 / TX / Exp. 3/2023; PE. 8404661-2202 / UT / Exp. 3/2023;	
Year registered	2012	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		CMM Assessments, TSMO Strategic Plan, TSMO Strategy & Solution Projects (Service Layer / Tactical Plans), Value Added Services (ITS Master Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Deo has over 16 years of experience in TSMO strategic and program planning, ITS planning and design, traffic engineering and planning, traffic signal optimization, and applying connected vehicle and big data for safety and operational improvements. His experience in all phases of project development has allowed him to understand the challenges faced by various DOT departments and develop TSMO solutions and strategies to incorporate during planning, design, construction, operations, and maintenance. As a result of his hands-on work during TSMO Program Planning, TxDOT has adopted various TSMO strategies and projects for implementation, including integrated corridor management, ITS, traffic incident management, smart work zones, smart traffic signals with performance measurement, emerging technology (CAV, big data), planning process with TSMO inclusion, multimodal improvements, travel demand management, and more. He continues to help TxDOT with TSMO institutionalization by implementing actions developed as part of the TSMO program plans, developing tactical plans for traffic incident management and traffic management center, and deploying ATSPM proof-of-concepts.
5/19 – Ongoing	**TSMO Planning Program, TxDOT, San Antonio, Laredo, Pharr, TX.** *Lead TSMO Engineer.* ***Program Planning*****:** Led the development of TSMO program plans for TxDOT San Antonio, Laredo and Pharr Districts. Conducted extensive *outreach and engagement* with TxDOT and partner agency leadership, stakeholders, and steering committee to identify TSMO needs and opportunities. For TSMO baselining and additional needs and opportunities, developed a *TSMO State of Practice* report and conducted Capability Maturity Model (*CMM*) and Capability Maturity Framework (*CMF*) assessments. Developed district specific TSMO *goals and objectives* to maintain alignment and traceability with TSMO solutions and projects. TSMO actions developed as part of the project spanned across *six TSMO dimensions* (**Business Process, Systems & Technology, Performance Measurement, Culture, Organization & Workforce, and Collaboration**) and *operational areas* such as traffic incidents, work zones, traffic signals and freeway traffic management. *Tactical Planning*: Building on the actions developed as part of the TSMO Program Plan developed a 5-year ITS implementation plan for the Pharr District and currently developing one for the San Antonio District. The plans focus on addressing the end-of-life equipment and expanding coverage of ITS through projects related to communications network, CCTV, DMS, Wrong-Way Driver Warning Systems, Over Height Detection System and traffic signal upgrades. The plans integrate TxDOT's ITS Gap Plan to improve statewide ITS system coverage and resiliency. He is also helping the San Antonio District update their Regional ITS Architecture. *TSMO Implementation*: As subsequent steps to TSMO program plan development, he is currently leading the implementation of several actions, projects and proof of concepts developed as part of the program plans. Key tasks being implemented include the development of a data driven and needs based ITS/signals operations and maintenance program, assessment of staffing levels to support various TSMO projects and programs, evaluate planning level analysis tools to plan for work zones,

16. Staff Experience:

	use of smart work zone decision support tools, pilot deployment of ATSPM, probe data (INRIX) dashboard to identify signals/ corridors requiring timing adjustments, and more.
3/17 – Ongoing	Signal Timing On-Call, TxDOT, Houston, TX. *Lead Engineer*. Conducted hands-on signal re-timing along 120+ signals across regionally significant corridors to improve mobility and safety. For each project, conducted milestone meetings, subconsultant and stakeholder coordination, and signal timing development, testing and field fine-tuning. On each project, *helping TxDOT achieve TSMO goals* of 100% communications, collaboration with partner agencies, performance measures reporting (ATSPM or INRIX), and asset preservation (asset inventories). Implemented the multi-phased, multi-disciplinary *construction signal timing project* for SH 249 Tollway Construction. Key tasks included the detailed review of construction phasing and design plans to develop an understanding of the "during/ after" construction needs of SH 249 corridor for geometry, signing and signal operations, and providing temporary communications to Centracs central software for timing adjustments. Partnered with TxDOT for the first fully operational *ATSPM deployment* in Houston at 13 intersections along FM 1464. Collaborated with Miovision for field installation and configuration to ensure accurate visualization of ATSPM. Utilized ATSPM and custom dashboards to optimize corridor signals, diagnose detector issues and respond to public concerns.
2/19 – 12/20	FM 1960 Mobility Planning, TxDOT, Houston, TX. *Lead Engineer*. For the 11- mile, high-crash and congested corridor, analyzed traditional (traffic counts, crashes) and non-traditional (STRAVA bike, Origin-Destination) types of data using Synchro (signal optimization), VISSIM (alternatives analysis) and Highway Safety Manual (predictive safety analysis) to develop short-, medium- and long-range roadway solutions for vehicles, pedestrians and bicyclists. Collaborated with TxDOT (Planning and Design), TranStar and Stakeholders, and conducted in-person and virtual public meetings to develop the corridor solutions. Solutions included addition/extension of intersection turn lanes, development of innovative intersection/ interchange concepts (Quadrant Intersection, Echelon and Displaced Left Turn Interchange), median improvements, midblock turn locations, driveway consolidations, addition of sidewalk, inclusion of bike lanes and buffers, provision of shared-use shoulder, and *TSMO/ITS improvements* (fiber, Bluetooth, CCTV, DMS). Helped TxDOT prepare MPO TIM application, which for the first time included *TSMO improvements as part of a planning project*.
05/18 – 03/19	US 377 Smart Corridor, TxDOT, Fort Worth, TX. *Lead Engineer.* Developed a Smart Corridor concept including a communication plan for the 10-mile segment of US 377 consistent with the TxDOT Fort Worth ITS Master Implementation Plan and regional ITS architecture. Performed in-depth field evaluation of ITS/traffic signal equipment to understand the gaps in existing infrastructure. Developed ITS concept and cost to include fiber and radio communication, CCTV/fisheye cameras for corridor monitoring, DMSs for traveler information, Bluetooth + dedicated short-range communications radios for CV applications, traffic signal cabinet/controller/detection upgrades to enable ATSPMs, dual radar for speed and vehicle classification, and emergency vehicle preemption.
8/19 – 10/21	Five-Year ITS Master Plan, Sugar Land, TX. Lead Engineer. Developed a blueprint for the City's ITS and signals projects. Evaluated existing signals and ITS assets, including CCTV, DMS, Bluetooth sensors, school zone beacons, emergency vehicle preemption, signal cabinets, cabinet security, ITS Website, communications and railroad monitoring system. Evaluated connected vehicle readiness and an ITS mobile app. Selected and prioritized projects including the upgrade/ installation of railroad monitoring system, ATSPM, ped/bike detection, connected PHBs and RRFBs, signal equipment, CCTVs, Bluetooth sensors, electronic cabinet locks, UPS, asset management system, and communications.

16. Staff Experience:

Firm employed by	HNTB		
Name	Stephen Bahler, PE	Years of relevant experience with this employer	17
Title	ITS Engineer	Years of relevant experience with other employer(s)	37
Degree(s) / Years / Specialization		Graduate Courses / 1977 / Northwestern University BS / 1969 / Civil Engineering, St. Martin's College	
Active registration number / state / expiration date		PE. 64575 / FL / Exp. 02/2025	
Year registered	2006	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Bahler is an intelligent transportation systems (ITS) department manager and a senior ITS project manager with HNTB. His 54 years of experience encompasses a broad range of transportation program and project management, including ITS planning, highway, environmental studies, urban freeway design, construction oversight, architecture and systems engineering for transportation management centers (TMCs), freeways, arterials and transit and traveler information. In the past 10 years, he has worked on TMC projects for the Florida, Minnesota and Kansas Departments of Transportation, as well as for local agencies and authorities.
03/16 – **Ongoing**	**TSM&O General Engineering Consultant (GEC), Florida Department of Transportation (FDOT) Central Office, Statewide, FL.** *Project Manager and Chief TSM&O Engineer.* Responsible for the statewide TSM&O contract. Major work efforts include TSM&O *capability maturity model surveys* and support for statewide working groups; *TSM&O Strategic Plan development, updates, and implementation*; SunGuide® software requirements development and testing; intelligent transportation systems, traffic control devices, and *connected vehicle technology specifications* and testing; Florida's advanced traveler information system (FLATIS) updates and testing; traffic management systems for managed express lanes; traffic signal, active arterial, and *integrated corridor management* systems; *developing federal grant project concepts and applications* including Florida's Regional Advanced Mobility Elements (FRAME) projects which provide connected vehicle implementation in key regional corridors; developed concepts for FDOT's statewide truck parking advisory system (TPAS); developed concepts for emergency (hurricane evacuation) shoulder use (ESU) on key Interstate corridors in Florida; overview and *technical training development* for topics ranging from traffic signals to systems engineering and analysis; developing specifications, standard plans, and operational procedures for wrong-way driving (WWD) detection and warning systems; working with other FDOT offices to mainstream TSM&O within other department manuals and standards; *developing sustainable funding formulas* for FDOT's regional traffic management centers (RTMC) operations, for freeway management systems operations and maintenance, and traffic signal operations and maintenance; updated FDOT's policy and procedure for implementing 23 United States Code 940; and *regional ITS architecture (RITSA) maintenance and update support*.
06/19 – Ongoing	**Tampa Bay Next Program - Owner's Representative General Engineering Consultant Contract, Florida Department of Transportation District Seven, Tampa, FL.** *Chief TSM&O Engineer.* Roles include development of smart work zone (SWZ) strategies for major phases of District Seven managed lanes program, development of SWZ design/build performance and technical requirements, and development of outreach and information materials.

09/20 – Ongoing	**Connected and Automated Vehicle (CAV)-Statewide Arterial Management Program (STAMP) and Managed Lanes (ML) Contract, Florida Department of Transportation (FDOT) Central Office, Statewide, FL.** *Chief TSM&O Engineer* supporting *priority CAV and STAMP activities* including: development of FDOT's initial Smart Work Zone (SWZ) Guidebook, developmental SWZ standard plans, developmental SWZ specifications, developmental SWZ design standards, and drafting the SWZ implementation bulletin; support for procurement of a statewide Lane Closure Notification System; *developing training slides and script for advanced transportation controllers (ACT)*; and, development of research scopes and reviewing University research proposals.
08/13 – 02/16	**District ITS/Advanced Traffic Management System (ATMS) and Traffic Engineering Services, Florida Department of Transportation (FDOT) District 3, Chipley, FL.** *Senior Project Manager.* Responsible for the District 3 TSM&O contract. Roles include development of task work order (TWO) scopes and fees, overseeing home office staff and subconsultants providing services ranging from traffic signal timing and trouble-shooting to *TSM&O strategic plan development*, to *development of a TIM strategic plan*, TIM team support and training and *development of a signal retiming program, including performance measures and criteria for retiming priority*.
06/10 – 02/16	**General Engineering Consultant (GEC), FDOT District 3, Chipley, FL.** *ITS Project Manager.* Assisted the District by developing the ITS content for the design-build (DB) request for proposals. Follow-up assistance included assisting with presentations to District staff and potential bidders, attending alternative technical concept (ATC) meetings and providing valuable input on each ATC proposal, reviewing DB proposals for responsiveness to the request for proposals (RFP), answering technical review committee member questions about the proposals, providing detailed review of network concepts proposed, and reviewing and commenting on submittals developed by the successful DB firms.
09/11 – 02/16	**Statewide Traffic Incident Management/Commercial Vehicle Operations (TIM/CVO) Support Services, FDOT Central Office, Tallahassee, FL.** *Senior Project Manager.* Responsible for *supporting the FDOT TIM program, TIM training, TIM and CVO program outreach*, pilot projects, road ranger service patrol support, and commercial vehicle information system network programs and projects. Assists FDOT with development of TWOs and management of TWOs including work accomplished by home office staff and four subconsultants, provides weekly and monthly progress reports, and performs quality reviews of TWO deliverables.
11/08 – 10/11	**Districtwide ITS Services, FDOT District 7, Tampa, FL.** *ITS Engineer-of-Record.* Developed technical special provision for wireless radio network included in I-75 ITS plans and specifications. Wrote the regional traffic management center (RTMC) configuration management retrofit plan that will guide system expansion and changes to the RTMC ITS subsystems. Supported *development and updates to the District 7 Regional Transportation Management Center Standard Operating Procedures*.

16. Staff Experience:

Firm employed by	ARCADIS		Meets MPR No. 6
Name	Paul Hsu, PE	Years of relevant experience with this employer	7
Title	Senior ITS Engineer	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		BS / 2002 / Electrical & Computer Engineering, Louisiana State University	
Active registration number / state / expiration date		PE.0035983 / LA / Exp. 03/2025	
Year registered	2011 Discipline	Electrical Engineering	
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Emerging Technology), CMM Assessments & TSMO Strategic Plan, TSMO Policy Development & Updates, Value Added Services (System Engineering Analysis), Stakeholder Engagement, Outreach & Training (Training),	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Hsu's comprehensive TSMO experience comes from years of working in both the public and the private sector. He has managed and **led TSMO projects for TXDOT and ITS projects for LADOTD**, FDOT, MDOT and GDOT. His areas of expertise in TSMO and ITS include TSMO program planning, Systems Engineering Analysis (SEA), ITS Master Implementation Planning, CAV Strategic Planning, Regional ITS Architecture (RITSA) development, ATIS, ATMS, Video Distribution Management System (VDMS) communication systems, electrical systems, and traffic management centers (TMC). Paul has developed over 16 SEAs for complex ITS projects. He has a wealth of design experience in developing plans, specifications, special provisions, construction estimates, project schedules, traffic management plans, FAA evaluations, and LADOTD Constructability/Biddability reviews.
01/20 - Ongoing	**TSMO Program Plan Development, TXDOT, Austin, TX / Contract No. 58-8IDP5002.** *Project Manager*. Developed several TxDOT district's TSMO program plans that included Corpus Christi, San Angelo, and San Antonio. The *TSMO program plan accounted for Texas' processes and institutional arrangements for transportation planning, design, construction, maintenance, and operations*. The TSMO program plan included assessments of business processes, institutional arrangements, and mobility challenges. Based on inputs from internal and external stakeholders, the Arcadis team is finalizing a TSMO program plan that includes a strategic business case, programmatic details and an implementation plan for programs and mobility strategies that will enhance TSMO capabilities. The programs and mobility strategies will focus primarily on traffic congestion reduction, ITS and traffic signal operation. The TSMO program plan development process included numerous coordination meetings with TxDOT steering committee and partner agencies for leadership engagement, Capability Maturity Model assessment, and Capability Maturity Framework assessment. As part of the TSMO tactical planning efforts, Paul also assisted the TxDOT districts to develop corresponding *ITS Master Plans to further develop projects for expanding TSMO implementation* in the ITS area. The ITS Master Planning help the TxDOT districts to follow through with the TSMO action items and deploy ITS technology to address applicable TSMO needs identified during the TSMO planning process.
06/17 – 10/18	**ITS Master Implementation Plan, TXDOT, Fort Worth, TX / CSJ 0902-00-198.** *Lead Project Engineer.* The plan included identifying the top 10 arterial and freeway segments in need of ITS connectivity, identifying pilot corridors for ITS deployments focusing on connected freight needs, and conducting a *connected vehicle (CV) readiness review*. The team evaluated existing ITS infrastructure and determined the future technology requirements to create a five-year implementation plan for development and maintenance of ITS. TOPS-BC (FHWA) was used to conduct *benefit-cost analysis* and achieve performance measures-driven project prioritization and implementation planning.

06/22 - Ongoing	Regional ITS Architecture Update, TXDOT, San Antonio, TX / Contract No. 58-8IDP5002 WA 7. *Project Manager*. Leading a team to update Regional ITS Architecture (RITSA). The analysis includes identifying ITS applications to mitigate transportation needs, develop short and long term ITS implementation plans, and assess the impact of ITS projects on the transportation system. ITS applications focus on traffic congestion reduction, traffic signal operations, traffic incident management, integrated corridor management, traveler information, and safety service patrol. The RITSA development process places significant emphasis on stakeholder engagement to identify regional ITS collaboration and integration opportunities. *Coordination activities with stakeholders includes developing a stakeholder engagement plan, conducting stakeholder surveys, conduct engagement workshops, and organizing any follow up focus meetings* to gathering additional inputs and project information.
06/18 – 10/19	I-10 Queue Warning Systems Engineering Analysis (SEA), LADOTD, Baton Rouge, LA / H.013482.1. *Project Manager*. Led a comprehensive team of ITS, Traffic, Data, and Safety engineers specialized in their respective areas to complete a highly complex and first of its kind ITS Systems Engineering Analysis involving the evaluation of a Queue Warning system for a frequently congested corridor on I-10 eastbound from LA-77 to I-110. The analysis developed short, medium, and long-term options to provide a comprehensive approach in enhancing the traveler's safety. In addition to developing the operational concept, physical architectures, and alternative analysis configuration, also provided preliminary 30% design plans that included *Queue warning design alternative analysis*, communication system integration, opinions of probable costs, and design drawings.
04/19 – 02/20	Video Distribution Management System Replacement SEA, LADOTD, Statewide, LA / H. 013841.1. *Project Manager.* Utilized the Systems Engineering Analysis process to evaluate various replacement options for the current Video Distribution Management System (VDMS) in order to provide necessary system upgrades. Five different products and three different hosting solutions were evaluated to gain insight on available technology. Led the Arcadis team to *develop a list of needs and system requirements* that was used to compare the different products across several categories in detail. The selected concept consisted of a hybrid-hosted system which combined the benefits from the local and cloud-hosted solutions and represented the most value.
07/16 – 07/21	Connected & Autonomous Vehicle (CAV) and ITS System Design IDIQ, LADOTD, Statewide, LA. *Lead Project Engineer.* Key Task Orders, *1) CAV Strategic Plan:* Development of Louisiana's first CAV Strategic Plan. Scope of services include workshop to develop CAV strategic vision and goals, identify current mobility, safety, multi-modal and infrastructure issues; perform CAV Readiness Analysis to assess maturity level of CAV applications; identify and prioritize CAV pilots and deployments with greatest benefits; identify potential partnerships, data requirements and sharing needs, infrastructure and resource implications; and develop CAV Action Plan that includes timeline for CAV application deployments in 5 years. *2) Policy Formulation for LA AV Laws:* Development of a policy and necessary permits to implement the recently passed Louisiana AV law (Act 232) that provides DOTD the sole jurisdiction over the operations of "Autonomous Commercial Motor Vehicles" (ACMV). The proposed policy document outlines requirements and operating constraints for safe operations of autonomous commercial motor vehicles in the state. The policy covers individual ACMVs as well as ACMVs in platooning. *3) CAV Technology Team Support:* Provided technical support services and facilitating planning activities related to CAV and their impact on highway infrastructure for the department's CAV technology team. Led and facilitated workshop and web-based discussion for an inter-disciplinary 30-member DOTD CAV Technology Team that consists of 4 working groups: Highway Infrastructure Technology, Multi-Modal Infrastructure Technology, Departmental Applications, and Policy & Agency Role.

16. Staff Experience:

Firm employed by	HNTB		
Name	Matt Junak, PE	Years of relevant experience with this employer	18
Title	CV Systems Operations Lead; Emerging Technologies; Software	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization		MS / 2006 / Transportation Engineering, Michigan State University BS /2004 / Civil Engineering, Michigan State University	
Active registration number / state / expiration date		PE.6201056130 / MI / 2024	
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategic Plan & CMM Assessments (Strategic / Program Plan), TSMO Policy Development & Updates, Funding & Benefit Cost Analysis	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Junak has 18 years of experience in ITS design and system management, systems engineering, transportation planning, traffic engineering, highway design, transit technologies and project management. He is knowledgeable in national and MDOT standards and procedures for ITS and traffic engineering planning and design. Matt's emerging mobility experience includes full lifecycle services (planning, design construction and engineering) for CAV test facilities, autonomous shuttle demonstrations, RSU design and deployment and more. Matt serves as an industry service lead on HNTB's Innovation Council, responsible for building and maintaining relationships with companies in automotive, communications, data management and analytics, traffic management, automated vehicles, ITS and emerging mobility solutions. In this role, Matt identifies industry best practices and acts as a compass for HNTB and our clients. He is also a voting member of the ITS America standing committee on Mobility on Demand, is an active member of TRB and served as a technical expert for the ITE connected intersections project.
10/18 – 12/22	MDOT ITS Program Office Support, Various Locations, MI. *Connected and Automated Vehicle task lead* responsible for providing as-needed support to MDOT's ITS Program Office. Project tasks include *standardization of ITS practices* across the state, *updates to Special Provision and ITS details*, development of a device modernization plan, fiber management software evaluations, *development of the ATM strategies and Concepts Guide*, 2020 North American International Auto Show (NAIAS) Michigan Mobility Challenge procurement support, *development of the 2018 ITS Strategic Plan*, project prioritization and selection, IP assignments, and research on various ITS topics as directed by MDOT.
02/22 – Ongoing	MDOT CV-ATMS, Statewide, MI. *Project Engineer.* Responsible for providing procurement, testing and deployment support for the selection of a *CV-ATMS software package* to manage and operate MDOT's CV ecosystem. System components include bringing RSUs, traffic flow restrictions and lane closure management, work zone data exchange and road weather data into an integrated environment. *Procurement support services* include the development of detailed system requirements, request for proposals (RFP), vendor scoring and evaluation and Department of Technology, Management and Budget (DTMB) supporting documentation. The project includes *stakeholder engagement* with multiple state agencies to define a shared vision of success, risks, lessons learned, costs and system capabilities.

02/16 – 08/22	KDOT Mid-America Association of State Transportation Officials (MAASTO) Regional Truck Parking Information and Management System (TPIMS), Various Locations, MI, MN, IN, IA, KY, WI, OH AND KS. *Deputy Project Manager.* Responsible for *systems engineering, concept of operations, system requirements, final design oversight and TIGER (now BUILD) grant* administration responsible who oversaw the project's technical aspects and coordinated with the project team located across eight states. Matt is the project manager for Michigan's final design responsible for the implementation of custom video algorithms, coordination with a design-build vendor, and design assistance during construction. HNTB provided grant writing support, leading to a $25 million TIGER Grant award in 2015.
09/19 – Ongoing	Innovate Mound Program Management, Macomb County, MI. *ITS Task Lead.* Responsible for leading the ITS and emerging mobility discipline, administering meetings, *developing needs assessment/technology scan documentation, developing an innovation register* and supporting design-build efforts. Innovate Mound will reconstruct approximately nine miles of Mound Road from 11 Mile Road to M-59 and add a fourth lane in each direction from 17 Mile Road to M-59. The project includes new concrete pavement, drainage, curbs and driveways, *signal optimization*, roadway widening, *CV and fiber optic communications* technology, enhanced non-motorized facilities and energy efficient lighting.

16. Staff Experience:

Firm employed by	ARCADIS		Meet MPR No. 5
Name	Laura Hartley, PE, PTOE	Years of relevant experience with this employer	3
Title	Senior Transportation Engineer	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		BS / 2006 / Civil Engineering, University of Mississippi	
Active registration number / state / expiration date		PE.0039030 / LA / Exp. 09/2024 Professional Traffic Operations Engineer PTOE 4322 Exp. 11/2023	
Year registered	2014	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Value Added Services (ITS Architecture), CMM Assessments & TSMO Strategic Plan, Grant Writing & Support	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Hartley's experience includes developing Intelligent Transportation System (ITS), traffic and transportation planning projects for various Departments of Transportation and municipalities across the Southeast. Her ITS experience and responsibilities include a wide range of activities from overall program management and the initial planning and systems engineering analysis to design development, software requirements, implementation, integration, construction, operations, and maintenance. She has led several ITS architecture projects, developed multiple TSMO Master Plans, ITS Master plans, ITS Benefit Cost Analysis and Grant Applications.
03/07 – 06/15	**ITS Integrator Task 2: Planning Documents, Mississippi Department of Transportation (MDOT), Statewide, MS** *Project Engineer.* Task 2 included providing updates to existing ITS planning documents and developing several new planning documents. Laura assisted in the development of the first Statewide ITS architecture and four regional Architectures, the development of the *strategic deployment plan*, the development of the ITS master plan guidelines document, along with other planning documents. Laura also led the development of the update to the Statewide ITS Architecture and associated *stakeholder workshops*, combining the four regional architectures to form one all-inclusive document. As part of this effort, she also developed a project-specific website to engage stakeholders, solicit additional feedback and *promote a knowledge exchange*.
10/19 – Ongoing	**TSMO Program Planning and ITS Architectures, Texas Department of Transportation (TxDOT), San Antonio and Corpus Cristi, TX.** *Senior Transportation Engineer.* This project includes developing TSMO Program Plan and Architecture updates for TxDOT San Antonio District and the ITS Architecture for the Corpus Christi District. The program plan aims to institutionalize TSMO within the District by *integrating traffic operations within planning, design, construction, operations and maintenance* activities. Through close collaboration with TxDOT leadership, a five-year roadmap for the District to improve capabilities in *six TSMO dimensions* and areas of *traveler information, signal coordination, work zone management, and traffic incident management* was developed. Efforts are currently underway to update the ITS Architectures. The focus of the ITS Architecture is to establish a framework to help regional stakeholders deploy and integrate their vast ITS infrastructure. As part of the TSMO program plan Laura was responsible for *identifying focus areas* and reviewing *CMM assessments*. For the Architectures Laura is responsible for providing senior oversight, evaluating regional transportation needs and identifying suitable ITS service packages. Laura was also responsible for developing the *Stakeholder Engagement Plans* and supporting the stakeholder workshops.
12/15 – 01/17, 02/16 – 01/18	**West Central Region and North Region TSM&O Conceptual Master Plan, Alabama Department of Transportation, North and West Central Region, AL.** *Project Manager and Project Engineer* for the development of Transportation System Management & Operation (TSM&O) Master Plans for ALDOT's West Central Region and North Region. Each project included the development of

	an Existing System Description and Needs and *Benefit Analysis*, Deployment Recommendations, analysis of high traffic and safety hot-spots, existing deployments, proposed deployments and proposed diversion routes, a Regional Systems Engineering analysis, *Stakeholder Meetings*, and a TSM&O Conceptual Master Plan. The documents focus on the areas of *Freeway and Arterial Management, Emergency / Incident Management, Special Event Management, Traveler Information, Freight Management, Travel Weather Management, and Work Zone Management*. Laura was responsible for serving as the project manager and project engineer, providing project *oversight and reporting*. She coordinated with team member to analyze the existing system and needs, led multiple stakeholder meetings and workshops and as responsible for the development of each Systems and Engineering Analysis and final TSM&O Conceptual Master Plan Documents.
03/07 – 06/15	**ITS Integrator Task 9: Develop ITS Business Plan, MDOT, Statewide, MS**. *Project Manager, Project Engineer.* This task included the development of a strategic MDOT ITS business plan and elements provided under Task 1 (Program Management) and Task 2 (Planning Documents), as well as a final strategic business plan intended to combine the elements in a manner that addresses both past and future program needs. As a part of this effort Laura conducted a *detailed benefit/cost analysis* of the entire DOT ITS program (2006 to 2014) and updated *the strategic deployment plan* to include the latest communications, device deployments and future projects list for inclusion in the final strategic business plan. The business plan looks at various past and future expenditures and prioritizes projects based on need and existing programmed roadway projects, with emphasis on deployments that would result in the most cost-effective and benefit-increasing results. It addresses benefits and costs for the program going forward—based on proposed project schedules—and includes operations and maintenance, systems and software, design and construction, and a high-level view of strategic goals and initiatives—including all areas—with various *funding opportunities* laid out.
01/23 – 03/23	**US 190 (Vine Street) Reconstruction RAISE Grant BCA, LADOTD, Opelousas, LA.** *Project Manager, Senior Transportation Engineer* Project included providing support in the preparation of a Rebuilding America's Infrastructure with Sustainability and Equity (RAISE) *grant application* for DOTD for the reconstruction of Vine Street in the City of Opelousas. Laura served as the sub-consultant project manager and senior engineer in the development of the *Benefit Cost Analysis* for the grant application. She also provided input and review on the project narrative, budget and merit criteria documents.
03/07 – 06/15	**ITS Integrator, Task 1: Program Management, MDOT, Jackson, MS.** Responsibilities included providing *program level project management* services and coordination, tracking, and reporting of ITS related projects, providing document control, *developing program reports*, developing outreach and marketing materials, developing *grant applications*, presentations and award submittals and coordinating with other consultants and vendors. Developed or assisted in the development of the several grant applications under this project including a *successful Tiger Grant application for MDOT, LADOTD and AHTD*. Laura was also responsible for the development of several *ITS policies* under this task including document control and change management policies and was responsible for the development SEAs for over 15 MDOT ITS projects developed during this period.
10/22 – 12/22	**SMART Grant Application for US Hwy 80, MDOT, Jackson, MS.** *Project Manager.* Provided project coordination, QAQC and oversight for the development of a SMART *grant application* along US Hwy 80 in Brandon and Hinds counties. This project was aimed to improve existing mobility and safety along the corridor by implementing a pilot regional traffic operations program and upgrading deteriorating and end-of-life equipment through this historically disadvantaged community. In addition to providing QAQC and local knowledge to the grant narrative, Laura was responsible for coordinating with MDOT in submitting all required materials and forms.

16. Staff Experience:

Firm employed by	HNTB		
Name	Kenneth Jacobs, TSOS, RSP1, CVP, ENV SP	Years of relevant experience with this employer	2
Title	TSM&O Group Director	Years of relevant experience with other employer(s)	37
Degree(s) / Years / Specialization		Certificate / 1978 / Architectural Drafting, Arizona State University Credit-Hours / 1978 / Pre-Engineering, Arizona State University	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ken Jacobs has more than 37 years of progressive experience in Transportation Systems Management and Operations (TSM&O) with a focus in Advanced Traffic Management Systems, traffic engineering, traffic safety, traffic signal design, signal operations and maintenance. Ken successfully served as the Director of Transportation for Pinellas County, Florida for over five years until moving to HNTB. He is a strategic leader with a successful track record of advancing the transportation field, developing strong intergovernmental partnerships and driving safety and technology change initiatives, including arterial level ITS, traffic incident management, advanced traveler information systems, smart work zones, adaptive signal control and regional trail systems. Ken has extensive experience in grants administration, capital improvement planning and project development. Ken offers concentrated experience directing all phases of transportation project activities including project planning, programming, contracts, agreements, design, operations and maintenance.
02/21 – Ongoing	**Pinellas County Traffic Engineering Consultant Services for Advanced Traffic Management System, Pinellas County Government, Countywide, FL:** Project manager for various work orders including traffic engineering studies, mast arm designs, intersection analysis, signal warrant studies and safety and Americans with Disability Act (ADA) evaluations for this continuing services contract. This also includes assisting Pinellas County with Project Management services to implement a $4.6 million Advanced Transportation Congestion Management Technology Deployment (ATCMTD) grant.
06/21 – Ongoing	**District 7 Intelligent Transportation Systems (ITS) Engineering Analysis & Minor Design – Continuing Services Contract, District 7, Tampa, FL:** Subconsultant - Task Manager working directly for the District 7 TSM&O Engineer providing subject matter expertise on all facets of connected vehicle, signal operations and design, smart work zone technology and project development, grant facilitation and contract review. Periodic review of strategic and master plan development with input into integrated corridor management, traffic incident management and advanced signal operations. Overseeing the Connected Vehicle program for the District, working with local jurisdictions seeking funding opportunities and to install CV infrastructure projects.
06/21 – Ongoing	**District 7 TBNext Owned Representative GEC, District 7, Tampa, FL:** Task lead for Smart Work Zone concept design, specification development and RFP language development for the Westshore Interchange and later the Downtown Interchange (DTI) projects that are part of the on-going TB Next Interstate Improvement Project in Tampa Bay. Standard index sheets and development specifications for smart work zone alternatives were produced that have since been provided and used in other state districts. RFP Technical Specification language was added to the Design/Build RFP for multiple FDOT District 7 projects.

06/21 – 03/22	**Tampa Hillsborough Expressway Authority, Tampa FL:** Task Manager for multiple work orders including traffic engineering studies for multiple intersections, signing and marking studies, RFP development for fiber inventory and procurement assistance for reversible lane control software and TMC video wall replacement. Developed white paper for future ITS operations and needs assessment and advantages in updating the ITS Masterplan.
02/21 – 02/22	**City of Tampa Production Support Contract, Tampa, FL:** As part of a five year, $5 million contract, Task Lead for multiple work orders including West River BUILD Grant Multi-Model Trail and Complete Streets project, which included grant agreement support, concept plan development and cost estimates and Hanna Avenue Neighborhood Traffic Impact Analysis overseeing complete streets, safety concept development and impact evaluations for a new City facility with over 500 employees.
01/06 – 1/20	**Multiple ASCT Projects, Pinellas County, Pinellas County, FL. Project Manager.** Responsible for implementation of multiple adaptive control software algorithms including OPAC, Rhodes, InSync and Centracs Adaptive. Includes 14 years of experience installing and testing a wide variety of ASCT projects including overseeing the largest ASCT installation in Florida with over 160 intersections along major state and county roadways operating various ASCT programs. Thorough understanding all major ASCT software capabilities and operational characteristics. Provided research and development of the ASCT selection, implementation, evaluation and deployment processes. Served as a site visit location and subject matter expert for United States Department of Transportation ASCT Everyday Counts Program for OPAC and Rhodes.
01/16 – 02/21	**Multiple Transportation Projects, Pinellas County, Pinellas County, FL:** Director of Transportation overseeing all transportation related functions including engineering, design, ATMS/ ITS, transportation planning, traffic safety, traffic operations, traffic and roadway maintenance, sidewalk and the Americans with Disability Act (ADA) programs, access management, right of way (ROW) permitting, roadway and parks design sections. Managed a staff of 125 employees and developed annual operating and capital improvement program (CIP) budgets, administered purchasing contracts, various municipal maintenance contracts and interlocal agreements. Other responsibilities include responding to citizen requests and complaints, speaking on behalf of programs and projects at County Commission meetings and representing the County and Department in professional organizations, public meetings, media and traffic related litigation.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Randy J. Knapick, AICP	Years of relevant experience with this employer	24
Title	Principal Planner	Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization		MS / 2000 / Transportation, Massachusetts Institute of Technology (USDOT Fellowship Recipient) BS / 1998 / Civil and Environmental Engineering/Certificate in Transportation, University of Pittsburgh BA / 1998 / B.Phil. Urban Planning and Design, University of Pittsburgh	
Active registration number / state / expiration date		American Institute of Certified Planners (AICP), Certificate #018598	
Year registered	2003	Discipline	Certified Planner
Contract role(s) / brief description of responsibilities.		TSMO Strategic Plan & CMM Assessments (Strategic / Program Plan)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Knapick helps communities address the opportunities and challenges of our evolving mobility environment through policy, technology, and infrastructure projects. He specializes in application of advanced transportation and smart cities technologies to improve mobility. Randy has managed TSMO and ITS strategic planning efforts at the agency, regional, state, and national scales. He works with agencies, elected officials, and community stakeholders to articulate visions, develop strategies, and formulate actionable implementation plans. Recently, Randy served on the project panel for NCHRP Synthesis 51-15 on Best Practices in Statewide TSMO Plans.
01/13 – 04/14	**TSMO Strategic Plans, COMPASS, Boise, ID.** *Project Manager.* Worked for *two generations of regional operations strategies* and ITS architectures for the Treasure Valley region. Following completion of the first plan, Randy helped COMPASS establish and facilitate a Regional Operations Work Group to help advance key elements of the regional vision.
06/16 – 09/18	**TSMO ITS Strategic Plan/ARC-IT Architecture Update, Genesee Transportation Council, Rochester, NY.** *Project Manager.* Development of a regional ITS strategy for New York's second-largest metropolitan area, with an *emphasis on TSMO elements*, including more *deliberate linkages to regional planning*, performance measures, and innovative funding strategies.
05/08 – 06/10	**TSMO Program Support, Regional Transportation Commission of Southwest Washington, Vancouver, WA.** *Sr. Planner.* Supported a regional interagency operations/ITS coordination committee for over 12 years. Led development of a *regional TSMO plan* to advance the implementation of system operations and guide transportation technology implementation over 10 years.
01/21 – 03/22	**I-84 Operations Plan, COMPASS and Idaho Transportation Department, Boise, ID.** *Project Director*: Worked for development of an operations strategy for the I-84 and I-184 corridors in the Treasure Valley between Boise and Caldwell. The plan focuses on *technology-driven strategies and operational partnerships* to improve the capacity, reliability, and safety of this principal transportation corridor.
05/11 – 02/12	**Regional Concept for Transportation Operations (RCTO) and Arterial Management Plan, Puget Sound Regional Council, Seattle, WA.** *Sr. Planner.* Developed a *Regional Concept for Transportation Operations* (RCTO) for multi-jurisdictional and multi-modal arterial management.

01/19 – 06/20	**Detour and Incident Management Plan Update, COMPASS, Boise, ID.** *Project Director.* Developed operational concepts and facilitated working group for the development of an updated, *web-based detour and incident management planning tool* to support integrated incident response in the Treasure Valley.
01/18 – 09/18	**ITS Strategic Plan Update, San Diego Association of Governments (SANDAG), San Diego, CA.** *Smart Cities/ITS Strategic Planning Advisor.* Worked for an update of the San Diego region's *multi-agency, multi-modal mobility technology strategy*.
06/12 – 05/13	**Traffic Management Center (SRTMC) ITS Strategic Plan – Washington State Department of Transportation, Spokane, WA.** *Project Manager.* Worked for the update of the Spokane region's *multi-modal Intelligent Transportation Systems Plan*, with a focus on operations policy and interagency agreements.
02/19 – 10/19	**Emerging Technology Impact Assessment, Oregon Department of Transportation (ODOT), City, OR.** *Subject Matter Expert.* Worked for a study of the statewide policy and organizational impacts of *emerging transportation technologies* in Oregon.
05/12 – 04/13	**Regional Integration of ITS Systems (RIITS) Strategic Plan, Los Angeles County Metropolitan Transportation Authority (LACTMA), Los Angeles, CA.** *Strategic Planning Task Leader.* Development of a vision and implementation plan for RIITS, a regional, multi-agency, and multi-modal data portal for the LA region.
03/06 - 06/08	**Regional ITS Architectures for Massachusetts, Massachusetts Department of Transportation, Boston, MA.** *Sr. Planner.* Led the development of four regional ITS architectures (Metropolitan Boston, Southeast, Central, and Western) covering the entire Commonwealth of Massachusetts.
03/16 – 03/17	**ITS Program Organizational Assessment, Client: Alberta Ministry of Transportation, Edmonton, Alberta.** *Lead Investigator.* Study to improve the organizational effectiveness of AT's province-wide ITS program, which was diffused among numerous departments and programs.
08/10 – 09/13	**"Smart Corridors" Signal Coordination and Transit Signal Priority Implementation, Thurston Regional Planning Council, Olympia, WA.** *Project Manager*. Federally-funded interagency project to plan and deploy coordinated traffic signal and transit signal priority technology in two key regional corridors.
02/04 – 10/05	**Automated Commercial Vehicle Screening System (ACVSS) - Action Plan and Automated Weigh Station Design, Maine Department of Transportation, Augusta, ME.** *Project Manager.* Assisting MaineDOT with the development of a CVISN action plan and its first-ever automated commercial vehicle inspection systems deployment for fixed and mobile inspection sites. Evaluated stakeholder needs and design criteria from a variety of transportation, enforcement, and industry perspectives, taking into account CVISN compliance objectives. Developed functional specifications for the preferred system and provided procurement-phase assistance.
01/03 – 12/05	**Incident Management System, Connecticut Department of Transportation, Hartford, CT.** *Project Coordinator.* Software development and implementation for a *traffic monitoring/ incident detection system* for the freeway system.
04/18 – 12/19	**Reimagine RTS, "RTS On Demand" New Mobility Implementation Strategy, Regional Transit Service, Rochester, NY.** *Project Manager*. Develop *new mobility options* (microtransit, mobility as a service, and demand-responsive) to replace existing RTS fixed route service with an operating model that is more financially sustainable.

16. Staff Experience:

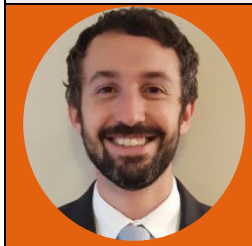
Firm employed by	HNTB		
Name	Clay Packard, PE	Years of relevant experience with this employer	2
Title	Data Analytics	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization		MS / 2005 / Computer Science, University of Oklahoma BS / 2005 / Computer Engineering, University of Oklahoma	
Active registration number / state / expiration date		PE. 00073014 / FL / 02/2025	
Year registered	2011	Discipline	Professional Engineer
Contract role(s) / brief description of responsibilities.		Value Added Services (GIS & Data Analytics)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Packard is an experienced practitioner and a trusted advisor in a broad range of software and systems engineering. His expertise ranges from technology and systems development, project management and team leadership for transportation systems management and operations (TSM&O) and intelligent transportation systems (ITS). Prior to joining HNTB, Clay served as a consultant TSM&O systems architect and program manager for the Florida Department of Transportation's (FDOT's) District 5 to help fulfill a vision of data-driven, automated integrated corridor management system. Clay has developed a culture among developers
04/21 – Ongoing	**FDOT Central Office, Connected Vehicle (CAV), Managed Lanes (ML), and Statewide Arterial Management Program (STAMP) General Engineering Consultant** –Program consultant for systems and technology providing planning, oversight, and technical support to the following projects. • **Connected Vehicle to Everything (V2X) Data Exchange Platform (DEP) –** System Engineer and Lead Subject Matter Expert for the V2X DEP. The data excahnge platform is responsible for collecting data from connected vehicle devices, transportation systems, OEMs, and other data sources geographically coincident to the connected and automated vehicle deployments. • **Traffic Signal Controller (TSC) Health Monitoring System (HMS) – System Engineer** – performed feasibility study of obtaining health and status from TSCs, extract data statewide into the central office, and visualize specific health and status information. • **Connected Vehicle Roadside Unit (RSU) Health Monitoring System (HMS)**. The roadside unit health monitoring sytem is responsible for collecting real-time health and status from roadsaid units throughout the state of Florida. • **Interstate 4 Managed Lanes Congestion Modelling Perofrmance Dashboard –** Lead developer to incorporate probe veihicle and traffic event data to calcualte, visualize, and compare the performance measures between general purpose and managed lanes.
04/21 – Ongoing	**FDOT Central Office, Motor Carrier Size and Weight General Engineering Consultant, Tallahassee FL** – Systems Engineer and Software Development Manager to lead a team to plan, develop, integrage, operate, maintain, and enhance the real-time commercial vehicle data collection systems and share with other agencies including enforcement and neighboring states. • **Freight Operations Exchange (FOX) –** Systems Engineer performing system architecture, development, troubleshooting, O&M • **Statewide ITS Architecture Updates –** Made updates to the statewide ITS architecture. • **Inter-office Data Sharing Collaboration Workshop –** facilitated meeting with other offices to discuss data sharing integration opportunities
04/21 – Ongoing	**FDOT Central Office, Statewide Transportation Systems Management and Operations, Tallahassee, FL** – Provided technical support via the following projects: **SunGuide Alert Viewer** – developed the concept of operations for delivering real-time wrong way alerts to highway patrol dispatcher and oversaw the development. **Traffic detector device simulator** – maintained the traffic detector device simulator software with automated configuration of the system under test. **Center to Center Data Distribution Architecture Update** – developed the

	architecture to distribute data from traffic management centers to the central office for use in situational awareness dashboards and applications.
04/21 – Ongoing	**FDOT Traffic Engineering and Operations Office, Traffic Incident Management General Engineering Consultant** **Road Ranger Funding Allocation Model -** Lead Architect and Developer to process patrol regions and quantities to meet a minimum response time level of service for based on mutlipe aggregated historic time-series attributes including travel times, and road ranger patrol time-on-scene at events. **Work Zone Data Exchange –** Developed concept of operations to integrate the WZDx data feed into the traffic management center operations software.
08/21 – Ongoing	**Kansas Department of Transportation – US 83 Connected Corridors Connected Vehicle Project –** Systems Engineer ATCMTD grant application writing and support. Provided writing and support for cooperative agreement between KDOT and USDOT, Systems Engineering analysis and project management plans development for the connected vehicle deployment project providing traffic signal coordination and traveler information.
02/15 – Ongoing	**Data Initiatives Consultant, FDOT District 5, Orlando, FL –** Consultant Program Manager who provided systems architecture and program management to build a culture among a team of contractors towards a vision of a data-driven, automated, traffic operation in Central Florida, including the following: **Regional Integrated Corridor Management System (R-ICMS) –** Program Manager who oversaw the procurement, development, and delivery of the R-ICMS. The R-ICMS system improves the recovery of non-recurring congestion for the integrated arterial and freeway network for incidents on freeways that temporarily reduce capacity. The R-ICMS provides automated and predictive decision support needed to select the most beneficial diversion routes whose increased demand is accommodated by activating signal timing flush patterns.
02/09 – 02/15	**FDOT Central Office (CO) ITS General Engineering Consultant (GEC), Tallahassee, FL** • **SunGuide® Software –** Project Manager who served as FDOT's statewide SunGuide® software project manager overseeing the software support, maintenance, and development contract and championing statewide stakeholder coordination at the Change Management Board and Users Group. • **Traffic Engineering and Research Laboratory (TERL) Data Center –** Project Manager who managed the ITS network, systems, and other software projects at FDOT's TERL. Engineered and developed automated testing tools for the SunGuide® software and cloned SunGuide® systems using databases collected statewide to run each District's SunGuide® deployment in a private data center in the TERL. • **Traffic Operations Data Custodian** – Served as the first Data Custodian for the FDOT statewide, interoffice data sharing program.
02/12 – 02/14	**FDOT Central Office (CO) Commercial Vehicle Operations General Engineering Consultant (GEC), Tallahassee, FL** • **Container Number Database System –** Systems Engineer who planned, designed, implemented, and operated the Container Number Database System that alerted law enforcement in real-time when out of compliance commercial vehicles are detected at weight stations. This system downloaded the overdue citations from the FHSMV and the out-of-service list from the PRISM daily. The system also received real-time license plate, USDOT, and container number sightings from MCSAW weigh stations and Florida Agriculture and Consumer Service's interdiction stations. The system had a real-time web application front end for users to register for real-time notifications in the part of the state they patrolled so they would receive the notifications most relevant to them.
03/15 – 07/16	**Arterial Performance Measures Dashboard Systems, FDOT District 7, Tampa, FL –** Project Manager who led a series of stakeholder discussions, an ensemble of industry experts, and a team of software engineers to develop the Concept of Operations, Design and Requirements of the District 7 Arterial Performance Monitoring program dashboard presenting performance and status of the program and operations using Bluetooth probe detection data.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Matthew T. Glasser, PE	Years of relevant experience with this employer	1
Title	National TSMO Account Lead	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		BS / Civil Engineering / Georgia Institute of Technology	
Active registration number / state / expiration date		PE.041510 / GA / Exp. 12/2023	
Year registered	2016	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		TSMO Strategy & Solution (Service Layer / Tactical Plans), CMM Assessments & TSMO Strategic Plan, Stakeholder Engagement, Outreach & Training (Training), Funding & Benefit Cost Analysis	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Glasser is a Senior Traffic Engineer and Manager with more than 11 years of experience in traffic engineering and transportation planning. He has strong technical competency in interstate and arterial operations and TSMO strategic planning. He leverages best practices with proven innovative methods through a project's lifecycle. He specializes in institutionalizing performance management through data-driven transportation and signal analytics. ***As GDOT's former SME traffic data analytics subject matter expert and current RITIS user group co-chair, he is uniquely suited to maximize DOTD's use of RITIS to understand roadway performance intricacies as well as depict a concise and visually compelling success story for the program***. Matt also has extensive knowledge of ITS and Traffic Signal maintenance, standards, and guidelines; Emergency and Special Event Operations; and TIM and TMC Management.
12/19 – 04/22	**Assistant State Traffic Engineer, Georgia Department of Transportation (GDOT), Atlanta, GA.** *Assistant Office Head*. Administrator of GDOT's interstate operations programs with supervisory responsibility for the Office of Traffic Operations' (OTO) Intelligent Transportation Systems (ITS), Advanced Traffic Management System (ATMS), 511, Transportation Management Center (TMC) floor operations, Coordinated Highway Assistance and Maintenance Program (CHAMP), Statewide Traffic Incident Management Services (STIMS), and administrative services. *Developed and managed GDOT's comprehensive TSMO strategic vision* to maintain the state's status as a national leader in pursuing, implementing, and deploying innovative initiatives and emerging technologies. Managed the Towing and Recovery Incentive Program (TRIP). This included the completion of a *statewide feasibility study and expansion strategy* as well as implementing programmatic improvements, such as new performance metrics, revised monthly meetings, and a faster invoicing process. Managed the development and delivery of GDOT's new ATMS platform, including contractual negotiations. *Proposed and developed a comprehensive interagency third-party data acquisition, management, and governance program, thereby saving an estimated $5 million / year in direct agency costs through more efficient resource sharing*. Prepared and managed GDOT's TMC operations floor transition from in-person to off-site during COVID, thereby allowing GDOT to be one of the first agencies in the country to provide its services entirely from a remote setting. Oversaw the pilot, study, and procurement of GDOT's stranded motorist location platform, which reduced the time to find motorist by 20 minutes on average and won the ITS GA 2021 Small Project of Significance Award. *Coordinated with state and regional partners to devise solutions to improve safety and mobility on interstate corridors*. Reviewed, edited, and revised standards, policies, and guidance related to ITS technologies, data governance, TMC operations, incident management, and express lane operations.
12/14 – 03/17	**Assistant State ITS Engineer, GDOT Employee, Atlanta, GA.** Supervisor of GDOT's ITS design / operations / maintenance team and consultant contracts. Authored and managed GDOT's ITS comprehensive maintenance contract, which serviced more than

16. Staff Experience:

	3,000 devices throughout Georgia and received the 2016 ITS America Best of ITS Award. Led the scoping and contract negotiations to incorporate newly installed and critical ITS infrastructure for the managed lane system, including a new emergency maintenance incentive program. *Authored and managed GDOT's Road Weather Information System deployment program, which won the 2015 ITS GA Innovation: Outside the Box Award. Led team of engineers to develop a five-year strategic vision, which was used to steer GDOT resources towards needed projects and program development.* Oversaw pilot study to determine appropriateness of integrated corridor management (ICM), which included a strategic ITS expansion plan and methodology development for optimal DMS placement. Coordinated with internal and external stakeholders to ensure proper ITS design and delivery. Reviewed and edited GDOT ITS policy, specifications, and design guidelines. QA/QC all proposed and designed ITS deployments within the state of Georgia to ensure adherence to national and state standards.
10/22 – Ongoing	Regional Synchronization Performance Analysis Support, Orange County Transportation Authority, Orange County, CA. *Project Manager and Technical Lead*. Responsible for evaluating needs and recommending tailored enhancements for arterial performance management KPIs. Conducted national survey of metrics, *provided an educational seminar for stakeholders, and hosted a design-think workshop to identify highly impactful and valuable data sources that could be shared between OCTA and all 34 stakeholder agencies*. Utilized knowledge of national trends, data quality control measures, and best practices to deliver contractual needs on a compressed schedule. *Assisted the agency with writing a successful 2022 SMART grant for TSP*.
09/22 – Ongoing	SR 400 Express, GDOT, Atlanta, GA. *Technical Lead*. Subject Matter Expert for ITS, traffic signal, and traffic management design and operations for the SR 400 DBFOM. Utilizes knowledge of design guidelines, specifications, and SOPs in addition to experience with GDOT to ensure an appropriate design that can exceed contractual requirements while minimizing long-term maintenance and financial obligations.
03/17 – 12/19	Regional Traffic Operations Program (RTOP) Manager, GDOT Employee, Atlanta, GA. *Program Manager*. Administered the RTOP, an *active traffic management program – a TSMO Strategy* - that services and operates more than 1,900 traffic signals and associated ITS devices throughout Metro Atlanta. *Developed RTOP master planning document*, and managed initiative to modernize the RTOP concept of operations into a statewide arterial concept of operations. Consolidated three isolated traffic operations contracts into the larger RTOP program, thereby expanding available services and resources to local agencies without increasing cost to GDOT. Directed state traffic operations leading up to and during major event in Metro Atlanta, including Super Bowl LIII (2019) and the 2018 College Football Playoff National Championship. Super Bowl LIII planning and operations won the 2020 state and national ACEC engineering excellence award for Studies, Research, and Consulting Engineering Services. *Managed state traffic operations response to the I-85 bridge collapse by rapidly managing the installation of new traffic signal and ITS equipment, coordinating law enforcement deployments, and regularly performing route and regional analyses*. Utilized ATSPM and probe data analytics to monitor real-time operations, identify anomalies, and improve measured deficiencies. Proposed, evaluated, and executed plan to transition the state to vehicle probe data, thereby bringing speed and travel time metrics to an additional 10,000 directional miles of Georgia's roadways at annual cost savings of over 97% per mile. Proposed and assisted with the initial public-private partnership procurement for a statewide fiber optic and wireless communication expansion. Reviewed, edited, and revised GDOT traffic signal and ITS policies, specifications, and design guidelines. *Coordinated with regional stakeholders and partners to devise regional arterial solutions to improve safety and mobility on regionally significant corridors*.

16. Staff Experience:

Firm employed by	HNTB		Meets MPR No. 7
Name	Victor Blue, PhD, PE	Years of relevant experience with this employer	8
Title	Senior ITS Project Engineer	Years of relevant experience with other employer(s)	35+
Degree(s) / Years / Specialization		Ph.D./ 1996 / Transportation Engineering, Rensselaer Polytechnic Institute, Troy, NY MS / 1973 / Transportation Planning, New Jersey Institute of Technology, Newark, NJ BS / 1969 / Electrical Engineering, New Jersey Institute of Technology, Newark, NJ	
Active registration number / state / expiration date		PE. 79517 / FL / Exp 2/2025	
Year registered	2015	Discipline	ITS/Tolling/Signals/CAV
Contract role(s) / brief description of responsibilities.		Value Added Services (System Engineering Analysis), TSMO Strategic Plan & CMM Assessments (CMM Assessment, Strategic / Program Plan), Grant Writing & Support	

Experience dates	Experience and qualifications relevant to the proposed contract
	Dr. Blue, PE is a Senior ITS Project Engineer in the HNTB West Florida Transportation Systems Management and Operations (TSM&O) group with 40 years of experience in project planning, engineering, and research and over eight years at HNTB. Dr. Blue's core expertise and experience include TSM&O/intelligent Transportation systems (ITS)/connected and automated vehicles (CAV) development, systems engineering (SE), transportation engineering, and simulation. Other key subject areas include data privacy, human research protections and safety management. He has contributed expertise on several advanced federal projects: the Tampa Connected Vehicle (CV) Pilot, Smart Columbus and Pinellas Connected Communities (ATCMTD grant). He has promoted SE for the Florida Department of Transportation (FDOT) by producing templates for FDOT TSM&O SE documents and creating FDOT SE for ITS Courses for use statewide. In ITS, he has contributed SE to the Statewide Express Lanes Software (SELS), Truck Parking Availability Systems, Motor Carrier Size and Weight (MCSAW) Mainline Bypass Truck Weigh-in-Motion (WIM) and the Freight Operation Exchange (FOX) software system for statewide truck data. With CAV he has contributed to CAV Pilots in Tampa, Pinellas County, Gainesville, the Florida Keys, Bay County and I-75 FRAME. He wrote up SE for two sections of Tampa Bay Next (TBNext) and produced a TBNext ITS Master Plan. He has written statewide reports for Hard Shoulder Running (HSR)/Evacuation Lanes and for Emergency Management Communications.
3/21 – Ongoing	**Pinellas Connected Communities (PCC), U.S Department of Transportation (USDOT), Pinellas County, FL.** *ATCMTD Grant and Primary Author.* Drafted SE documents for CAV with advanced features for demand management and predictive analytics using 3rd party mobile and intersection video with mobile rerouting.
4/17 – 4/20	**Smart Columbus Program, USDOT.** *Coauthor Data Privacy Plan and Safety Management Plan.* Includes eight projects: CV, AV, Multimodal Trip Planning Application, a Common Payment System, Parking Management, among others and also CV Environment Research Protocol for Institutional Review Board (IRB) human-use oversight.
03/15 – Ongoing	**HNTB Corporation, Statewide, FL.** *Senior ITS Project Engineer.* responsible for various projects including: • FDOT Training Courses for Systems Engineering for ITS, • Motor Carrier Size and Weight (MCSAW) – Freight Operation Exchange (FOX), ConOps • FDOT Statewide Express Lanes Software (SELS) ConOps • TBNext ITS Master Plan • TBNext Section 4/5 and TBNext Section Seven ConOps, PSEMP, RTVM

	• Systems Engineering Templates for FDOT ConOps, PSEMP, RTVM, Verification & Validation Plans • Concept of Operations (ConOps) CV SPaT Deployment • I-75 FRAME CV and ICM - Ocala and Gainesville, ConOps • Temporary Shoulder Use Guide • Florida TSM&O Strategic Plan • MCSAW Mainline Bypass ConOps and PSEMP • State Emergency Management Communications Plan • Statewide Truck Parking Availability System ConOps, PSEMP • Lakeland ITS Railroad Bypass, FDOT District 1 • Smart Bay CV and ATSPM ConOps and PSEMP, FDOT District 3 • Video Wall ConOps and RTVM, FDOT District 3 • Technical Report on Automated Traffic Signal Performance Measures and ITS Performance Measures, FDOT District 3 • Traffic Incident Management Strategic Plan, FDOT District 3 • Freeway Management System for I-10, FDOT District 3 • Henry E. Kinney Tunnel (HEKT) ConOps, FDOT District 4 • Florida Keys CV & ATSPM Deployment ConOps, FDOT District 6 • Before/After Study Pedestrian Warning Signs, FDOT District 7 • I-75/I-4 Interchange Hard Shoulder Running, FDOT District 7
9/15 – 5/20	**Tampa Hillsborough Expressway Authority CV Pilot Deployment, USDOT.** *Coauthor.* Drafted Phase I ConOps, Safety Plan, Performance Measures, System Requirements, Comprehensive Development Plan, Human Use and Protections and Phase II Project Management Plan and Data Privacy Plan. Task Leader on Human Use Approval, Phases I-IV: developed Human Use Research Protocol and Informed Consent Documents, liaison with IRB, Human Use Summary report to USDOT.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	James Barrett Sorensen, PE	Years of relevant experience with this employer	18
Title	Director	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		MS / 2005 / Transportation, Massachusetts Institute of Technology BS / 2003 / Civil and Environmental Engineering, University of California, Davis	
Active registration number / state / expiration date		PE.49008/ MA / Exp. 06/2024; PE.16690/ ME / Exp. 12/2023; PE.0034879/ CT / Exp. 01/2024; PE.92065/ FL / Exp. 02/2025	
Year registered	2011	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Sorensen is a Director at Arcadis IBI Group with more than 18 years of transportation engineering experience. James' professional focus is on the planning, implementation, and management of complex transportation systems. James has led numerous Intelligent Transportation Systems (ITS) projects, including advanced public transportation systems, traveler information systems, traffic management applications, and public safety and emergency response technologies. He also has provided transportation strategic planning and transportation technology assessments for a wide variety of public agency and private sector clients. James is committed to context-sensitive solutions and the role of technology in sustainable transportation design.
01/13 – Ongoing	**Operations and Systems Engineering Services for Bridgeport Operations Center, Connecticut Department of Transportation, Bridgeport, CT.** *Project Manager* for operations and systems engineering support services for the Bridgeport Operations Center (BOC), a 24/7 highway traffic management center. Work includes BOC operations, provision of statewide ATMS software, and Systems Engineering. Recent project tasks include updates to the Connecticut Statewide ITS Architecture, development of Smart Work Zone guidelines, and development of CTDOT's first Connected and Automated Vehicle (CAV) Strategic Plan. IBI Group also provides CTDOT's traveler information website CTroads.org. Work also includes Traffic Incident Management (TIM) coordination and training.
09/20 – Ongoing	**Real-time Statewide Travel Time System (MassDOT GoTime), Massachusetts Department of Transportation, Boston, MA.** *Project Manager* for deployment, implementation, integration, and ongoing operations and maintenance of Massachusetts' statewide real-time travel time system. Work includes hosting and using IBI Group's ATMS software platform to communicate with Bluetooth readers throughout the state and third-party crowdsourced data to post real-time travel time messages to hybrid DMS throughout the state. Travel times are also made available via an API for third party use. Work also includes managing field device maintenance using IBI Group's inSIGHT Asset Management application.
02/17 – Ongoing	**On-call ITS Support Services, Massachusetts Department of Transportation, Boston, MA.** *Project Manager* for providing ITS task services for MassDOT as part of on-call service agreement. Work has included design of CCTV and VMS on various roadways throughout the state, the design of ITS devices on Braga Bridge, design and maintenance of video sharing with State Police Airwing, review of contractor ITS submittals, upgrades to existing ATMS and ATIS software, acting as the owner representative witnessing ITS implementation and testing efforts, and development of ITS test plans and procedures. Current work includes construction phase support for CCTV and VMS deployments.

11/17 – Ongoing	Next Generation ATMS, Pennsylvania Turnpike Commission, Harrisburg, PA. *Project Manager* for development and implementation of a next generation ATMS software platform for the Penn Turnpike. Work includes existing conditions assessment, development of business rules requirements, and phased development, testing, and deployment. Integration with third-party data sources such as Inrix and Waze is included.
01/21 – Ongoing	CTfastrak AV Transit V2X Project Systems Engineering, Connecticut Department of Transportation, Bridgeport, CT. *Project Manager* for Systems Engineering services for CTDOT's Automated Vehicle Transit V2X project. CTDOT is using CTfastrak, its exclusive BRT fixed transitway, as a testbed for CAV technologies. IBI Group is leading Systems Engineering tasks for the V2X portions of the project to allow upgraded traffic signal controllers at intersections along the fixed transitway to broadcast SPaT and MAP data to automated transit vehicles. Tasks include development of a V2X Concept of Operations, alternatives analyses of various technology components, backhaul communications alternatives analysis, ITS architecture review, and development of functional requirements.
05/21 – 12/21	Traffic Incident Management (TIM) Strategic Plan, Maine Department of Transportation, Augusta, ME. *Project Director* providing corporate oversight and QA/QC for Statewide TIM Strategic Plan. Project is focused on working with statewide and regional TIM committees to establish a TIM vision and set achievable strategic goals and objectives to progress TIM initiatives throughout the state.
04/17 – 04/21	F.E. Everett Turnpike ATMS Design, New Hampshire Department of Transportation, NH. Providing preliminary engineering and systems engineering support for the design of CCTV, DMS, and various ITS and communications field equipment deployments along one of New Hampshire's main commuter and commercial vehicle corridors.
06/17 – 08/18	Connecticut Statewide ITS Architecture Update, Connecticut Department of Transportation, CT. *Project Manager* for the update of the Statewide ITS Architecture for Connecticut. Work included needs assessment, stakeholder outreach, development of updated service packages and operational concepts, ITS standards, and an ITS architecture maintenance plan.
08/15 – 08/17	Transit Signal Priority Upgrade, Massachusetts Bay Transportation Authority (MBTA), Boston, MA. *Project Manager* for design and pilot implementation of an upgraded Transit Signal Priority (TSP) system for the MBTA. Work includes development of a combined center-to-center and center-to-intersection hybrid system architecture to support regional TSP for buses and light rail vehicles. IBI Group developed and implemented a TSP manager software to support the hybrid approach and assisted MBTA and local municipalities with implementation of field communications to stand-alone intersections.
06/15– 04/16	NYCDOT ITS Strategic Plan, New York City Department of Transportation (NYCDOT), New York, NY. Developed an updated ITS Strategic Plan for the New York City Department of Transportation. Strategic Plan was coordinated to be consistent with regional and city-wide transportation planning efforts. Strategic areas and objectives were identified for improving provision of ITS services and incorporating new ITS technologies to address city transportation needs.

16. Staff Experience:

Firm employed by	HNTB		
Name	Charles Miller, PhD, PE, PTOE	Years of relevant experience with this employer	36
Title	Project Manager	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		PhD / 1999 / Civil Engineering, Vanderbilt University MS / 1990 / Civil Engineering, University of Kansas BS / 1985 / Civil Engineering, University of Kansas	
Active registration number / state / expiration date		PE.0031994 / LA / Exp. 03/2024 Professional Traffic Operations Engineer (PTOE)	
Year registered	1990	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Value Added Services (System Engineering Analysis), TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Dr. Miller has served as a senior project manager and project engineer on a wide range of transportation planning and traffic engineering projects. Specific areas of expertise include traffic operations analysis, Intelligent Transportation Systems (ITS), travel demand modeling and traffic signal design. From May of 1998 through June of 2001, Dr. Miller worked full-time with the Tennessee Department of Transportation on development implementation of their ITS program as a research professor at Vanderbilt University. ITS experience over the three-year period ranged from strategic planning for ITS to ITS system design and implementation. In 2015, Dr. Miller was named by the Mayor of Kansas City, Missouri to the Smart City Advisory Board, an organization focused on successful implementation of the Smart + Connected City framework in Kansas City. He served on the board until 2019.
6/19 – Ongoing	**I-10 Truck Parking Availably System, Texas, New Mexico, Arizona and California.** *Systems Engineering Lead.* Responsible the four-state Advanced Transportation and Congestion Management Technologies Deployment Grant (ATCMTD) funded project implementing a Truck Parking Availability System (TPAS) along the 1-10 corridor in Texas, New Mexico, Arizona and California. The system will monitor truck parking availability at 37 truck parking locations and provide the availably information to truck drivers through roadside signs, traveler information systems (511) and third-party applications. For the project a Concept of Operations, Systems Engineering Management Plan and high-level system requirements are being developed.
8/21 – Ongoing	**U.S. 30 Corridor ITS and Fiber Deployment Project, Story County, IO.** *Project Manager.* Responsible for FDOTs District 5 ITS network migration project. Troubleshooted network management system and supporting switch upgrades and vulnerability remediation for the Central Florida Expressway Authority (CFX) as well as provided advanced troubleshooting for network related issues of ITS systems (various customers). Reconfigured local video multicast networks supporting hundreds of CCTVs to provide resiliency and reduce system downtime. Aided in winning a $22.5 million Communications General Consulting Contract with FDOT.
12/20 - Ongoing	**U.S. 20 Corridor ITS and Fiber Deployment Project, Waterloo, IO.** *Project Manager.* Responsible for project that design and developed bid package for deployment of fiber optic backbone cable along U.S. 20 from U.S. 63 to IA 21. One additional CCTV camera was also constructed. The branch fiber optic connections were also made to the new camera and two existing cameras. The project also includes provide construction engineering and inspection services.

1/19 – 6/20	Kansas Statewide Connected and Autonomous Vehicle (CAV) Vision Plan, Statewide, KS. *Project Engineer.* Assisted in developing a Vision Plan that will allow the state of Kansas to maximize the benefits from the CAV evolution in transport. The project coordinated through workshops with state agencies and legislative leaders.
1/17 – 1/20	MAASTO Regional Truck Parking Information Management System (TPIMS) Kansas Deployment Design, Statewide, KS. *Project Manager.* Responsible for designer for the design of the TPIMS deployment in along the I-70 and I-135. The project deployed multiple cameras at 22 rest areas for use in monitoring truck parking availability and deployment hybrid static/dynamic roadside signs. The signs are deployed at 19 locations across the two corridors. For the rest area and sign location fiber optic network connect were designed. At the rest areas power for operation of the cameras and network gear was obtained from the existing rest areas buildings. Power service for the signs was coordinate with local electric utilities.

16. Staff Experience:

Firm employed by	ARCADIS		Meets MPR Nos. 1 & 2
Name	Marwan Abboud, PE	Years of relevant experience with this employer	24
Title	Principal	Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization		MS / 1983 / Transportation Engineering, Georgia Institute of Technology BS / 1981 / Civil Engineering, Georgia Institute of Technology	
Active registration number / state / expiration date		PE.0034657 / LA / Exp. 09/2023	
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Principal-In-Charge	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Abboud is the Arcadis National ITS and Traffic Engineering Practice Operations Manager with more than 35 years of experience in the fields of ITS, transportation planning, traffic engineering, TSM&O and highway design. He has managed and engineered numerous ITS, traffic engineering, planning projects and asset management type projects. He has extensive experience in developing strategic implementation plans, designs and upgrades of ATMS, ATIS and TCC, as well as planning, design and timing of traffic signal systems. Marwan is also the national operations director for Asset and Mobility Management (AMM), which includes TSMO and its subareas of intelligent transportation systems and transportation asset management, traffic engineering, planning, and GIS services. Here is a sampling of relevant TSMO projects that Marwan worked on or supported:
04/20 – Ongoing	**ITS Management, Operations, and Maintenance Engineering & Inspection (ME&I), LADOTD, Statewide, LA / 4400016811.** *Resource Manager*: Responsible for resource allocation and management, quality control and assurance. This project falls under the TSMO umbrella as it relates to intelligent systems management and operation. For this project, Arcadis was selected to continue building on the ITS maintenance program to systematically provide routine and responsive maintenance for the Louisiana Department of Transportation & Development's statewide ITS infrastructure. Such infrastructure includes CCTV cameras, dynamic message signs (DMS), radar vehicle detectors, and ramp meters, totaling more than 500 sites statewide. The project scope includes program management, maintenance management system software, comprehensive maintenance plan for routine and responsive maintenance, health and safety and traffic control plan development, and tracking and performance measures reporting.
06/13 – 12/19	**ITS Maintenance Retainer Contract – Program Management and Maintenance Management System, LADOTD, Statewide, LA / 4400002500, 4400007102.** *Resource Manager*: Responsible for resource allocation and management, quality control and assurance. This project falls under the TSMO umbrella as it relates to intelligent systems management and operation. For this Arcadis was awarded the first-ever ITS maintenance contract to establish a program to systematically provide routine and responsive maintenance for the Louisiana Department of Transportation & Development's statewide ITS infrastructure. Such infrastructure includes CCTV cameras, dynamic message signs (DMS), radar vehicle detectors, and ramp meters, totaling more than 500 sites statewide. The project scope includes program management, maintenance management system software, comprehensive maintenance plan for routine and responsive maintenance, health and safety and traffic control plan development, and tracking and performance measures reporting.

5/19 – Ongoing	**TSMO Planning Program, TxDOT, San Antonio, TX.** *Technical Advisor/Principal in Charge.* Supported various activities in the development of the TSMO Program Plan, ITS Master Plan and Architecture updates for TxDOT San Antonio District while working with District leadership, partner agencies and TxDOT Division. The program plan aims to institutionalize TSMO within the District by *integrating traffic operations within planning, design, construction, operations and maintenance* activities. Through close collaboration with TxDOT leadership, developing a five-year roadmap for the District to improve capabilities in *six TSMO dimensions* and areas of traffic management, signal management, work zone management, and work zone management.
07/16 – 07/21	**Connected & Autonomous Vehicle (CAV) and ITS System Design IDIQ, LADOTD, Statewide, LA.** *Principal In Charge.* Supported many activities including providing input and review to the three main task orders out of this contract including , *1) CAV Strategic Plan:* Development of Louisiana's first CAV Strategic Plan workshop to develop CAV strategic vision and goals, identify current mobility, safety, multi-modal and infrastructure issues; perform CAV Readiness Analysis to assess maturity level of CAV applications; identify and prioritize CAV pilots and deployments with greatest benefits; identify potential partnerships, data requirements and sharing needs, infrastructure and resource implications; and develop CAV Action Plan that includes timeline for CAV application deployments in 5 years. *2) Policy Formulation for LA AV Laws:* Development of a policy and necessary permits to implement the recently passed Louisiana AV law (Act 232) that provides DOTD the sole jurisdiction over the operations of "Autonomous Commercial Motor Vehicles" (ACMV). *3) CAV Technology Team Support:* Provided technical input and planning activities related to CAV and their impact on highway infrastructure for the department's CAV technology team. Supported the workshops and web-based discussion for an inter-disciplinary 30-member LADOTD CAV Technology Team that consists of 4 working groups: Highway Infrastructure Technology, Multi-Modal Infrastructure Technology, Departmental Applications, and Policy & Agency Role.
08/09 – 03/11	**Baton Rouge to Lafayette ITS – TIM Phase 2 Design-Build, LADOTD, Multiple Parishes, LA / 737-99-0604.** *Resource Manager*: Responsibilities included the assessment and evaluation of design for accuracy, adequacy, compliance, conformance, cost effectiveness, and quality. Responsible for QA/QC of design deliverables for the project, and coordination activities associated with the project. Also responsible for the QA/QC of the overall design of the ITS, electrical, and structural systems. Performed QA/QC of all efforts relating to position of field devices, including sites for 13 CCTV cameras, 13 Radar Vehicle Detectors, four DMSs, and two HARs. He also provided QA for the communication system, including both physical layout of the fiber optic and wireless system, and Ethernet network design. He provided oversight of the electrical design, including power services to all field devices. Provided QC to the critical bridge attachment conduit system that made use of a stable and secure design, chemical anchor support system under the bridge deck.
05/13- 01/17	**I-75 Express Lanes Design-Build, GDOT, Henry and Clayton Counties, GA.** *Quality Control Lead*: ITS design of 18 miles of interstate corridor and 1.5 miles of arterials corridor. The project designs included three Master HUB units, 40 miles of fiber optic backbone system, 60 CCTV cameras, 30 Infrared cameras, 50 Changeable Message Signs (CMS), 61 Microwave Detector Units (MDS), and 60 Automated Vehicle Identification (AVI) units. Project also involved designing barrier separated managed lane Access Control Systems that include communication and control to 60 gates and seven open road tolling systems.

16. Staff Experience:

Firm employed by	HNTB			
Name	Steve Cyra, PE, PTOE		Years of relevant experience with this employer	36
Title	Traffic Incident Management (TIM)		Years of relevant experience with other employer(s)	27
Degree(s) / Years / Specialization			BS / 1986 / Civil Engineering, University of Wisconsin	
Active registration number / state / expiration date			PE. 90967/ FL / Exp. 02/2025	
Year registered	2021	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities.			Stakeholder Engagement, Outreach & Training (Training), TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Throughout his 36-year career, Mr. Cyra has acquired experience on a wide range of transportation systems management and operations (TSM&O), intelligent transportation system (ITS) and emerging mobility projects throughout the country. As a National Technical Advisor, Steve offers extensive TSM&O experience, particularly in the specialty areas of traffic incident management (TIM) where he is recognized nationally as a TIM expert having supported TIM efforts in over 30 states and 50 cities. Steve's extensive experience with both ITS and Traffic Incident Management from CAV support to SHRP 2 training make him uniquely positioned bring national best practices to TDOT.
09/15 – Ongoing	**TIM Program and Commercial Vehicle Support, Florida Department of Transportation (FDOT) Central Office, Various Counties, FL.** *Lead Engineer.* Providing statewide support for FDOT's TIM Program. Led the development of TIM strategic plan that was formally adopted in January 2019. The project also includes providing technical support for a variety of ITS elements that support TIM and operations.
04/08 – 05/21	**Implementation of Strategic Highway Research Program (SHRP) 2 "National Traffic Incident, Management Responder Training," FHWA, Nationwide.** *Master Instructor/Project Manager.* Responsible for implementing a comprehensive, national program of TIM responder-level training. The basis of this training was developed through the second SHRP.
04/15 – 05/19	**Development of TIM Plans, Iowa Department of Transportation (Iowa DOT), Cedar Rapids and Iowa.** *Project Manager.* Development of comprehensive TIM Plans for the Cedar Rapids and Iowa City regions. Projects included extensive facilitation of discussion with TIM responders and stakeholders in the identification of TIM safety improvement needs and corresponding strategies. The plan included Ramp Management, Active Transportation and Demand Management, and Integrated Corridor Management.
04/17 – 05/19	**Advanced TIM Training for Mid-Level Managers and Decision Makers Workshops, FHWA, Nationwide.** *Project Manager.* Conducted over 60 TIM workshops throughout the U.S. Responsible for workshop content development, local coordination, results documentation and delivery/facilitation. Plan included Work Zone Management, Traffic Incident Management, Special Event Management, and Road Weather Management.
04/17 – 05/18	**I-15 Managed Lanes Operations and TIM Plans, San Diego Association of Governments, San Diego County, CA.** *Project Engineer.* Responsible for development of operations and TIM plans for a managed lanes operation involving movable concrete barrier. Also led development of a field operations guide used by California Department of Transportation personnel to reconfigure managed lanes.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Shahram Malek, PhD, PE	Years of relevant experience with this employer	13
Title	Operation and Maintenance Lead	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization		PhD / 1992 / Civil Engineering, Georgia Institute of Technology- Main Campus	
Active registration number / state / expiration date		PE022998 / GA / Exp. 12/2023	
Year registered	1996	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Technical Advisor & QA/QC, TSMO Strategy & Solution (Service Layer / Tactical Plans), TSMO Strategic Plan & CMM Assessments (Strategic / Program Plan)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Dr. Malek has 30 years of experience in project management and TSMO program assistance services. He has extensive knowledge and hands-on experience in planning, design, deployment, operation and maintenance of systems ranging from small traffic control systems to large statewide systems. He served as a project manager and technical lead on numerous Department of Transportation projects, including the Georgia DOT's Regional Traffic Operations Program (RTOP), Advanced Transportation Control (ATC) Hardware/Software Specifications, ATC Deployment On-Call, and Fast-Forward Signal Upgrade Programs. He served as the curriculum developer and principal instructor for FHWA's Demonstration Project 105, providing technology demonstration/instructional presentation on traffic operations principals/practices to more than 2,000 local, state and federal transportation professionals in 48 states.
02/06 – 02/09	**TSMO Planning Program, TxDOT, San Antonio, TX.** *Technical Advisor/Principal Engineer.* Developing TSMO Program Plan, ITS Master Plan and Architecture updates for TxDOT San Antonio District while working with District leadership, partner agencies and TxDOT Division. The program plan aims to institutionalize TSMO within the District by *integrating traffic operations within planning, design, construction, operations and maintenance* activities. Through close collaboration with TxDOT leadership, developing a five-year roadmap for the District to improve capabilities in *six TSMO dimensions* and areas of traffic management, signal management, work zone management, and work zone management.
04/10 – Ongoing	**Regional Traffic Operations Program, Georgia Department of Transportation, Metro Atlanta, GA.** *Project Manager and Technical Lead.* For regional program which shifted the responsibility from the operation and maintenance of 1500+ traffic signals along regionally significant corridors to an Arcadis-led team of consultants/contractors/system suppliers. Numerous "firsts" were planned and deployed during the first RTOP contract, such as the regional communication architecture, video sharing architecture, TMC operation of traffic signals, Cloud-based traffic signal system, flashing yellow arrow operation and the first effective implementation of Traffic Responsive Signal Operation. Active involvement with all key RTOP stakeholders through various tasks and other ongoing contracts allows effective interaction with key decision makers on matters that affect the performance of RTOP. This multi-faceted program has defined performance measures that require specific uptime for traffic control and monitoring devices along the corridors and has defined goals for increased throughput and reduction in delays/stops during peak periods. To accomplish these objectives, we established processes as defined in the six TSMO dimensions to address process, technology, institutional culture and staff development practices that were required for the program to succeed.. We provided routine and preventive maintenance to meet the required program metrics for operation uptime for the various assets. As the program manager, Arcadis executes all construction engineering and inspection (CE&I) services on all installation and maintenance performed by our contractor partners and assists in review and acceptance of work done by other entities/contractors on our project corridors. We also collaborated with other GDOT offices with projects in planning, design or implementation phase that impacted the RTOP corridors and provided input and insight to ensure desired outcome.

04/01 – 04/08	Intelligent Transportation System On-Call Services, Alabama Department of Transportation, Montgomery, AL. *Project Manager.* This Project initiated the Statewide ITS program rollout and as consultant to the ALDOT we help defined the processes, procedures, and specifications for ITS planning, design, operations, and maintenance. Managing the various tasks but also leads many of the technical activities including the design and implementation of the Mobile Transportation Management Center (TMC) that monitors numerous tunnels and bridges. In addition, supervises and is responsible for QA/QC of the regional architecture's developments throughout the State. Also contributed to the State's standards and specifications rewrite activity which resulted in the new ITS field hardware and communication standards for the State of Alabama.
03/20 – Ongoing	ITS On-Call Services Contract: I-24 SMART Corridor Operations & Maintenance, TDOT, Davidson & Rutherford Counties, TN Integrated Corridor Management (ICM) Technical Lead. Responsible for delivering all I-24 SMART Corridor Operations and Maintenance activities. The project is tasked with providing technical support to TDOT by developing and implementing Operations and Maintenance strategies for the I-24 SMART Corridor from Nashville to Murfreesboro. The project includes implementing Active Traffic Management, Active Arterial Management, and Integrated Corridor Management. Dr. Malek has been involved in all aspects of the project including developing Standard Operating guidelines (SOGs) for various sub-components such as the Lane Control System, Variable Speed Limits, Dynamic Message Signs and Closed-Circuit Television Cameras. He also reviewed the development of the I-24 SMART Corridor diversion scenarios, incident management signal timing plans and provided extensive coordination between TDOT and the local agency stakeholders. Additionally, we have instituted the SOP and SOG processes and practices in to everyday operation at the TDOT Region 3 TMC.
06/13 – Ongoing	ITS Maintenance Retainer Contract – Program Management and Maintenance Management System, LADOTD; Statewide, LA. *Technical Advisor / QA/QC.* Responsible for developing, implementing, and managing ITS maintenance plans, policies, standards, procedures, and guidelines. Responsibilities also include deployment planning, installation, configuration validation, data migration support and ongoing update to database, training, and annual MMS software support. Arcadis provided routine and responsive maintenance for the LADOTD's statewide ITS infrastructure. Such infrastructure includes CCTV cameras, dynamic message signs (DMS), radar vehicle detectors, and ramp meters, totaling more than 500 sites statewide. The project scope includes program management; maintenance management system software; comprehensive maintenance plan for routine and responsive maintenance; health and safety and traffic control plan development; and tracking and performance measures reporting.
04/10 – Ongoing	Intelligent Transportation Systems Maintenance and Project Management, Georgia Department of Transportation, Atlanta, GA. *Project Manager.* Responsible for supervising design upgrades and maintenance management procedures for program. Managed all task orders where Arcadis responsibility included upgrading the entire 540 CCTV camera system in 24 GDOT HUBs from the obsolete analog to state-of-the-art digital encoding system, which was completed in a span of four months and commissioned in January 2011. Arcadis was also responsible in supporting the inventory and engineering design upgrades of the structures for 45 Dynamic Message Signs (DMS) sites, in addition to the inventory and upgrade support of the numerous microwave data systems sites that are critical for the field devices operation.
08/09 – 03/11	Baton Rouge to Lafayette ITS – TIM Phase 2 Design-Build, LADOTD; Multiple Parishes, LA. *Senior ITS Engineer.* Responsibilities include supporting the specification refinement and technology testing and reviews of various proposed ITS products that were being proposed for this project. The one-year contract included designing, installing, integrating, and accepting fiber optic and wireless communication along with 13 CCTV Cameras, 13 RVDs, four DMSs, and two HARs on I-10, I-49, US 90 and US 190 between Baton Rouge and Lafayette, Louisiana.
01/12 – 12/12	Hattiesburg Intelligent Transportation System & Traffic Message Channel Upgrades, Mississippi Dept of Transportation, Jackson, MS. *Project Manager and Technical Lead.* Full responsibility for the delivery of all communication, software, and system component. Arcadis also performed configuration of all field devices including CCTV systems, DMS system, Radar Detection Stations and supporting communication electronics and made all system work back at the two responsible TMCs. Additionally, Arcadis was responsible for all submittal deliveries, and delivery and execution of the various acceptance testing plans for each of the system components and the overall project.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Tim Lomax, PE	Years of relevant experience with this employer	<1
Title	Technical Advisor & QA/QC	Years of relevant experience with other employer(s)	43
Degree(s) / Years / Specialization		PhD / 1987 / Civil Engineering, Texas A&M University ME / 1982 / Civil Engineering, Texas A&M University BS / 1979 / Civil Engineering, Texas A&M University	
Active registration number / state / expiration date		PE.54597 / TX / Exp. 09/23	
Year registered	1983	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Technical Advisor & QA/QC	

Experience dates	Experience and qualifications relevant to the proposed contract
	Dr. Lomax retired from the Texas A&M Transportation Institute (TTI) as a Regents Fellow, the highest honor the Texas A&M System bestows on researchers. He was awarded the Institute of Transportation Engineers Theodore M Matson Award in 2009 for lifetime contributions to urban mobility issues. He has been a lecturer in the National Operations Senior Leadership Academy on the topic of performance management since 2012. Dr. Lomax was also involved in developing and evaluating a wide range of mobility solutions, including high-occupancy vehicle facilities, and in improving decision-making processes and performance measurement. He also played a role in regional and statewide congestion analyses and in developing principles and performance measures to evaluate and communicate solution strategies. He was the lead researcher in a project to examine the benefits of transportation improvements and the cost of addressing congestion in major Texas metropolitan regions for the Texas Governor's Business Council and a joint working group of the TxDOT and the state's Metropolitan Planning Organizations. Dr. Lomax was the coordinator of gameday transportation at Texas A&M University from 2014 to 2021 and assisted with event weekend transportation programs for LSU Football and Circuit of the Americas in Austin TX. These engagements emphasized providing a better fan/guest/attendee experience requiring extensive coordination between local business groups, local governments, event operations, marketing, law enforcement, and transportation operations groups.
12/19 – 02/23	**Texas Clear Lanes (TCL) Economic Benefit Analysis, TxDOT, Statewide, TX.** *Lead Researcher:* TTI assessed the effect of the $61 billion Texas Clear Lanes initiative aimed at reducing congestion and improving safety and the environment in Texas' 4 largest metropolitan regions. With each of these areas projected to grow by more than 80 percent by 2050, these corridor projects are designed to *improve mobility and reliability and reduce crashes and stop-and-go* traffic which will have environmental benefits. TTI estimated the economic effect of changes in congestion, crashes, and emissions with an input/output model approach using corridor and county-level characteristics. The land development benefits of the TCL projects were also estimated using previously completed projects as a guide. The project effects will be tracked during construction and after, creating a robust before/after database that will inform future project and program decisions.
09/08 – 09/11	**Texas 2030 Committee Transportation Needs Study, TTI, Statewide, TX.** *Co-Leader:* Examined urban and rural mobility needs using the travel demand models from TxDOT and the metropolitan planning organizations and created a set of target options and *communication tools*. Reports were prepared in 2009 and 2011 for technical and *policy oversight* audiences; TTI was also responsible for incorporating the bridge and pavement maintenance needs into technical reports and executive summary reports and a website, as well as providing support for testimony to state Legislative committees through 2017.

11/13 – 12/21	**Texas A&M Special Event Transportation Coordination, TTI, Brazos County, TX.** *Principal Investigator:* Coordinated gameday and *special event transportation operations* at Texas A&M University from 2014 to 2021. A 2014 football stadium expansion to more than 100,000 seats and an emphasis on providing fans with better game weekend experiences began the engagement. This effort *entailed extensive coordination and planning* between game attendees, local business groups, local governments, athletic operations, marketing, and transportation operations groups on campus and in the community. This role was extended to all campus and many community events and construction projects with a transportation effect. This involved extensive planning and design activity and on-the-ground coordination of participating groups during the events.
04/15 – 08/16	**Transportation Incident Management Improvements, TTI, Statewide, TX.** *Principal Investigator:* Led a group to develop a set of performance measures and best practice guidelines for first responders to *evaluate incident response programs*. These included engagement with responders from urban and rural regions. Procedures addressed needs of a range of stakeholders from field personnel and operations center staff to policy makers and agency leaders. Work for Policy Research Center was also designed to inform the legislators and identify the benefits of improved incident management programs and increased investment.
07/07 – 07/09	**Work Zone Safety and Mobility Performance Measurement Primer, FHWA, National, US.** *Researcher:* Played a key role in developing a primer for FHWA to assist agencies in establishing and monitoring a useful set of work zone safety and mobility performance measures for travelers, residents, and agencies. Work zone performance measures help agencies improve understanding of how *decisions during planning, design, and construction affect work zone safety and mobility*, and thus can help improve how they make decisions for future work zones. Primer describes possible work zone performance measures, data and provides guidance to help agencies select and implement measures that make sense for work zone programs. Primer also discusses use of measures across multiple projects to assess an agency's overall efforts and outcomes against its policies.
02/04 – 05/07	**Cost-Effective Measures and Planning Procedures for Travel Time, Delay, and Reliability, TRB, National, US.** *Researcher:* The project developed a guidebook (published as NCHRP Report 618) that presents a framework and *cost-effective methods to predict, measure, and report travel time, delay, and reliability* data from a customer-oriented perspective. Assisted in developing a framework for time-of-day variations, transit and highway modes, passenger and freight travel, vehicle and user types, and levels of aggregation (such as facility type, functional classification, and system/corridor/segment). The framework and methods formed the basis for follow-on work that used the expanding datasets from traffic management centers and third-party information providers to improve decision-making across a broad range of settings from operations to planning.
09/11 – 08/13	**Mobility Investment Priorities, TTI, Statewide, TX.** *Principal Investigator:* led TTI's team to respond to a mandate from the 2011 Texas Legislature session to provide assistance to the metropolitan planning organizations, TxDOT District offices and other project partners in development of projects and programs to address mobility concerns. Specifically, TTI served as facilitator and coordinator of studies to provide assurance to the Texas Legislature and Transportation Commission that: 1. Projects have the greatest impact considering factors including congestion, economic benefits, user costs, safety and pavement quality 2. The best traffic and demand management principles are being applied to the projects 3. The funding scenarios take advantage of all feasible options so that public funds provide the greatest "bang for the buck" 4. Public participation in the concept development ensures the most inclusive planning process possible

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Michelle Boucher, PE	Years of relevant experience with this employer	3
Title	TSMO Engineer	Years of relevant experience with other employer(s)	28
Degree(s) / Years / Specialization		MS / 1997 / Civil Engineering, University of Massachusetts BS / 1990 / Civil Engineering, University of Vermont	
Active registration number / state / expiration date		PE.41261/ MA / Exp. 06/2024; PE.14847 / NH / Exp. 03/2025; PE.018.0116836 / VT / Exp. 07/2024	
Year registered	1999	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans), TSMO Policy Development & Updates	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Boucher has more than 31 years of experience in intelligent transportation systems (ITS), highway operations, smart work zones, traffic incident management, and engineering, combined with a strong project management and document writing background. Prior to joining Arcadis IBI Group, Michelle held several senior positions in the ITS field, most recently as the Managing Director of Kanaan Consulting (KCUS). She was an On-Site Contractor with the Volpe National Transportation Systems Center (Volpe) and spent over 20 years at the Massachusetts Department of Transportation (MassDOT) as the Director of ITS.
03/16 – Ongoing	**Work Zone Manager (WZM) Application, MassDOT, Statewide, MA.** *Project Manager.* Leads the effort to provide systems engineering services to MassDOT for the development of a WZM application that provides for *central monitoring of WZ sites* throughout the state and allows for WZ performance reporting. This effort involved the development of a Concept of Operations, System Requirements Specifications, and application development. A vendor API specification was replaced with a WZDx device feed as the basis for data exchange within the WZM application. Arcadis IBI Group provides support services for the system and continues to make improvements to meet FHWA work zone data exchange (WZDx) efforts.
01/15 – Ongoing	**GoTime System, MassDOT, Statewide, MA.** *Deputy Project Manager.* Oversees the operations and maintenance of the field devices deployed throughout the state. The system posts travel times to hybrid variable message signs along the interstates by acquiring data from Bluetooth devices. The *operation is managed through a central software system* and asset management system that allows for the monitoring of device tickets, performance reporting, and a map overview.
09/20 – 12/21	**Wrong way driver system on four SB M-10 Exit Ramps, MDOT, Grand River to Jefferson in Detroit, MI.** *Project Manager.* Led the effort to *design a wrong way driver system* on four exit ramps following the system engineering process. Stakeholder meetings informed the concept of operations document and the requirements for the WWD system design. The project will conclude with the bid documents for constructing and operating the WWD system.
02/22 – 08/22	**Wrong way driver mitigation plan, MaineDOT, Statewide, ME.** *Project Manager.* Managed the project to develop a Wrong Way Driver (WWD) mitigation plan. MaineDOT is interested in improvements that reduce the number of wrong way drivers. The project includes a review of the current state of practice and existing wrong way driver system technology.

04/21 – 12/21	**Strategic Traffic Incident Management (TIM) Plan, MaineDOT, Statewide, ME.** *Project Manager.* Managed the project which included stakeholder meetings, documenting existing conditions and developing the *Statewide Strategic TIM Plan* including a roadmap for moving the TIM Program forward in Maine.
01/20 – 08/22	**Mass511 Traveler Information System, MassDOT, Statewide, MA.** *Project Manager.* Managed the daily operations of the Mass511 system. Mass511 makes certain traffic and travel conditions available to the public by way of real-time information programs via a web UI, IVR and mobile app.
08/20 – 05/21	**ITS for I-275 from M-153 to north of Northline Road, MDOT, Canton, MI.** *Lead ITS Engineer.* Worked for the development of plans, specifications, and cost estimate for replacing an existing fiber optic system with new fiber and conduit due to full depth reconstruction of the roadway. This project includes a temporary cellular network during construction for the existing ITS infrastructure (cameras, VMS, and MVDS).
05/21 – 07/21	**Traffic Incident Management (TIM) Practice Analysis, ODOT, Statewide, OH.** *Lead ITS Engineer.* Led the effort to analyze ODOT TIM practices by reviewing the ATMS capabilities and data that support TIM activities and develop recommendations for optimizing TIM activities through improved use of the ATMS data capabilities. The work was completed through a review of ODOT current data and processes, stakeholder interviews, and researching best practices. The final deliverable was traffic incident response improvement recommendations.
08/19 – 05/20	**Connected Vehicle Route 9 Corridor Project, MassDOT, Framingham, MA.** *Lead ITS Engineer.* Provided technical assistance in the development of a concept of operations for the design and implementation of a Connected Vehicle Signal Phase and Timing Pilot project for MassDOT. This pilot project will provide MassDOT with a tangible first step for deploying vehicle-to-infrastructure (V2I) applications.
10/15 – 12/16	**Work Zone ITS Implementation Tool, Federal Highway Administration (FWHA), Washington, DC.** *Lead ITS Engineer.* Worked as part of the team that designed, *developed, and implemented a Work Zone ITS Implementation Tool for the FHWA*. This tool complements the FHWA's Work Zone ITS Implementation Guide (FHWA-HOP-14-008) and assists users in the planning of work zone ITS systems. The tool provides appropriate recommendations such as targeted ITS technologies and field devices for a specific work zone based on user inputs.
01/14 – 12/14	**Baltimore-Washington Parkway Safety Plan, National Park Service (NPS), Baltimore, MD.** *Safety Engineer.* Drafted and finalized the safety plan for the NPS. The development of the plan included *stakeholder meetings, a webinar, and the preparation of several power point presentations* for the stakeholder meetings and to accompany the final report.
06/13 – 06/14	**SHRP2 L38 Travel Time Reliability, FHWA, Washington, DC.** *Safety Engineer.* Drafted and finalized the implementation plan for the FHWA SHRP2 L38 Travel Time Reliability bundle which provided feedback on the incorporation of existing reliability tools into Department of Transportation business processes. This work included *two stakeholder webinars and a two-day in-person stakeholder workshop*.
01/13 – 12/13	**Safety Technical Report, NPS, Washington, DC.** *Safety Engineer.* Drafted and finalized the Safety Technical Report of the NPS Long Range Transportation Plan. The safety chapter included baseline conditions, macrotrends, crash types, identifying safety objectives, and measuring performance with a focus on the 4-E's of safety (Education, Engineering, Enforcement, and Emergency Management).

16. Staff Experience:

Firm employed by	ARCADIS			Meets MPR No. 3
Name	Ranzy Whiticker, PE		Years of relevant experience with this employer	3
Title	Principal ITS Engineer		Years of relevant experience with other employer(s)	24
Degree(s) / Years / Specialization			BS / 1994 / Electrical and Computer Engineering, University of Tennessee	
Active registration number / state / expiration date			PE.0034132 / LA / Exp. 03/2025	
Year registered	2008	Discipline	Electrical and Computer Engineering	
Contract role(s) / brief description of responsibilities.			TSMO Policy Development & Updates, Grant Writing & Support	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Whiticker has more than 27 years of experience in the development, design and management of information communication systems and programs, including ITS, tolling systems, and emergency response systems. His work has included hands-on design, development, integration and operations of numerous types of communication, data and information systems. He has **established partnerships for resource sharing and data integration** between ITS programs and various emergency and transportation management agencies, and he has directed the implementation of innovative solutions such as video distribution management systems, public information display systems (PIDS), and connected and autonomous vehicle (CAV) technologies for multiple departments of transportation (DOT) and local agencies.
02/19 – 07/19	**TSMO General Engineer Consultant, Florida Department of Transportation Central Office, Tallahassee, FL.** *Project Engineer QA/QC.* To update the Central Offices systems engineering training presentation documentation and PSEMP templates.
10/12 – 07/15	**ITS System Design IDIQ, LADOTD, Statewide, LA.** *Project Manager.* General program assistance, ITS system configuration, configuration verification and management, 511 ATIS concept of operations and high-level requirements, video system support and ATMS system support. Tasks and activities included assisting in project management services, coordination and provision of management oversight of the ITS program, system configuration and documentation support, Traveler Information Systems; *public relations and sponsorship program support*, and system configuration management support.
06/06 – 06/15	**ITS Integrator, MDOT, Statewide, MS.** *Principal, Project Manager and Project Engineer.* Planning, design, integration, and operations and management of ITS projects, systems and program as directed by the MDOT project manager. Responsibilities included system evaluation and recommendations for ITS systems and *development of technical specifications*, including typical field ITS devices; communications equipment; *Traffic Incident Management*; adaptive signal control technology software; Traveler Information Systems including 511 and Smart Work Zone systems; and grant development and grant project designs.
08/18 – 07/19	**Tampa Hillsborough Expressway Authority GEC, Tampa, Florida.** *Project Engineer.* Review Connected Vehicle Pilot Project and responsibilities included the developing a Requirements Traceability and Verification Matrix, tracing requirements back to needs defined in the Concept of Operations and Phase 2 System Design Document (SDD) for the Connected Autonomous Vehicle (CAV) grant project deliverables; Development of the ITS Master Plan including updating SOPs in regards to operations of ITS, TMC, and Toll operational management systems including express lane monitoring, gate management systems. Also, developed materials for *submission of AV Grant* and development of requirements for TMC Video Wall RFP.
10/12 – 10/16	**Video Distribution Management System (VDMS), DOTD; Statewide, LA / H.005730.5.** *Project Manager.* Designed and implemented a Video Distribution Management System (VDMS) for the distribution of DOTD video sources statewide. The Video Distribution Management System was designed to collect video sources from throughout the state and distribute

	amongst their internal ITS systems and externally to media, partners, and other agencies, and to and from other regional and the Statewide Traffic Management Center(s).
11/16 – 07/17	**Mississippi River Bridges Incident Management, Freight Movement and Security ITS Project, MDOT, Various Locations.** *Project Manager and Engineer.* Provided project design and construction oversight of an ITS project among Mississippi Department of Transportation (MDOT), Arkansas Department of Transportation (AHTD) and DOTD to build a regional ITS network to improve operational efficiency at the four Mississippi River crossings between the states using traffic monitors, dynamic message boards, river monitoring, and other means of conveying traveler information and detour route management. The project included testing and performance measure creation and monitoring for reporting to the FHWA.
11/16 – 07/17	**Tupelo Cell Tower and ITS Field Device Deployment WA#5, MDOT, Tupelo, MS.** *Project Manager.* For the proposed ITS and wireless system improvements. Developed construction plans, detailed specifications, and cost estimates. The project included erection of a new wireless tower to support multiple cell carriers and establish MDOT's regional cell tower. The design included interconnecting 13 traffic signals, 18 closed-circuit television (CCTV) cameras, and seven Bluetooth detection systems with dedicated short-range communications (DSRC) capabilities over 32 miles of freeway and four miles of urban/state highway.
06/99 – 12/00	**Systems Integration, GDOT, Norcross, GA.** *Senior Electrical Engineer.* Responsible for design evaluations and technical studies for GDOT's Navigator system. Responsibilities included developing operational and functional requirements for tasks such as presence detection systems. Performed evaluation studies such as lightning protection, solar-powered field sites, and video transport technologies.
10/08 – 06/14	**ITS Task 7: Design of MDOT's ATMS Software, MDOT, Jackson, MS.** *Principal and Project Engineer.* Responsible for software functional requirements, development, deployment, and management of TMC software, 511 integration, MDOT Traffic website and mobile applications. Provided integration of TMC operations and ITS devices with the ATMS software.
06/99 – 06/06	**ITS Oversight and Development, Florida's Turnpike Enterprise, Ocoee, FL.** *Project Manager.* Served as one of 4 leads on the development of the Florida Turnpike Electronic Tolling Communications Master Plan. Responsibilities included system planning, design, communication and integration of ITS along Florida's Turnpike facilities with custom-developed software for multiple TMCs and field equipment, such as Closed-Circuit Television cameras, vehicle detection devices, dynamic message sign system, highway advisory radio system, and SunNavSM transportation management software development.
08/20 – 06/23	**I-24 Smart Corridor, TDOT, Nashville, TN.** *Senior Project Engineer.* Responsible in supporting the *planning, operations, and maintenance of the I-24 SMART Corridor* to develop, implement, and deploy comprehensive system management strategies and operational and maintenance processes. Project objective is to provide the ability to monitor and control traffic; improve system and travel time reliability; and improve the safety, efficiency, maintenance, operations, and mobility of all users (motorists, transit riders, transit operators, and freight haulers).
02/22 - Ongoing	**Jacksonville Transit Authority (JTA) - Ultimate Urban Circulator Program, Jacksonville FL.** *Project Engineer and Arcadis PM.* Design Build project will include eight Autonomous Shuttle in the City of Jacksonville FL; *Integration of 15 signals on the AV route/loop* in downtown Jacksonville; Construction of Maintenance Yard for AV shuttles; Deployment of charging Stations for AV shuttles; Multiple Sheltered Stops.

16. Staff Experience:

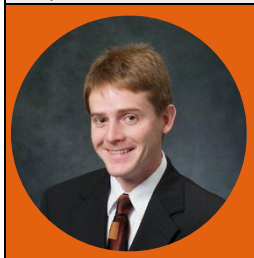
Firm employed by	ARCADIS		
Name	Luke Dixon, PE, PTOE, IMSA II	Years of relevant experience with this employer	4
Title	Certified Project Manager	Years of relevant experience with other employer(s)	12
Degree(s) / Years / Specialization		MS / 2007 / Civil Engineering, Auburn University BS / 2005 / Civil Engineering, Auburn University	
Active registration number / state / expiration date		PE. 113826 / TN / Exp. 6/2024; PE. PE035874 / GA / Exp. 12/2023; PE. 27819 / KY / Exp. 6/2023; PE. 28849 / SC / Exp. 6/2024; PE. 76733 / FL / Exp. 2/2025; PE. 31850-E / AL / Exp. 12/2023; PE. 402063958 / VA / Exp. 10/2023; PE. 43970 / NC / Exp. 12/2023; PTOE # 3753 / USA / Exp. 11/2023	
Year registered	2010	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Dixon has 16 years of transportation engineering experience including signal timing, signal design, traffic signal warrant analysis, Intelligence Transport System (ITS) design, signing and pavement marking, safety analysis, and traffic control plans. He has extensive knowledge and hands-on experience with planning, design, deployment, operation, and maintenance of traffic signal & ITS systems projects on state routes and interstates. Mr. Dixon currently leads the ITS and Traffic divisions in Tennessee for Arcadis. Additionally, he is the active past president of the Tennessee Section of the Institute of Transportation Engineers (ITE) and has presented at various conferences including ITE and ITS Tennessee.
03/20 – Ongoing	**I-24 SMART Corridor Operations and Maintenance, TDOT, Davidson & Rutherford Counties, TN.** *Integrated Corridor Management (ICM) Project Manager:* Responsible for overseeing all I-24 SMART Corridor Operations and Maintenance activities. The project is tasked with providing technical support to TDOT by developing and implementing Operations and Maintenance strategies for the I-24 SMART Corridor from Nashville to Murfreesboro. The project includes implementing *Active Transportation and Demand Management, Active Arterial Management, and Integrated Corridor Management*. Also assisted with TSMO policy development and updates, including developing Standard Operating guidelines (SOGs) for various sub-components such as the Lane Control System, Variable Speed Limits, Dynamic Message Signs and Closed-Circuit Television Cameras. Supported the development of the I-24 SMART Corridor diversion scenarios, incident management signal timing plans and provided extensive TSMO engagement, outreach, and stakeholder training between TDOT and the local agency stakeholders.
1/19 – 12/20	**I-40 SmartWay Expansion Knox/Sevier Counties, TDOT, Knox & Sevier County, TN.** *Technical Advisor:* Responsible for the expansion of TDOT's existing SmartWay system in Knox and Sevier Counties. This *TSMO strategy and solution project* included the installation of a new fiber optic trunk line, 15 CCTV cameras, 18 RDS units, and 2 multi-color DMS signs along a 11.4 mile stretch of I-40. These devices will allow TDOT to provide *Traveller Information, Traffic Incident Management, Road Weather Management and Active Transportation and Demand Management* for the corridor.

12/18 – 11/19	I-440 Traffic Management, Design, Installation and Operations, TDOT, Davidson County, TN. *Project Manager:* Heavily involved with the installation of the BlueTOAD units and the coordination between TDOT and Metro Nashville Public Works to manage diversion traffic during the I-440 Design Build widening project. The *TSMO strategy and solution project* included the installation of 21 BlueTOAD traffic monitoring devices to allow for *Active Transportation and Demand Management and Work Zone Management.* Devices were connected to Nashville MPW's network or utilized a cell modem. The project also included Traffic Signal Coordination, 58 traffic signals on the routes parallel to I-440 were retimed to handle project diversion traffic. The BlueTOAD devices were used to actively monitor and adjust the signal timings as traffic patterns changed during the various phases of construction to mitigate vehicle delays as best possible.
4/21 – 05/22	I-81 SmartWay ITS Expansion, TDOT, Sullivan County, TN. *Project Manager:* This *TSMO strategy and solution* project includes the installation of new fiber optic trunk line, 19 CCTV cameras, 20 RDS units, and 3 DMS signs along a 23 mile stretch of the I-81, from south of the I-26 to south of the I-381 in Virginia. These devices will allow TDOT to provide *Traveller Information, Traffic Incident Management, Road Weather Management and Active Transportation and Demand Management* for the corridor.
02/19 – 12/20	I-75 SmartWay Expansion Anderson/Knox Counties, TDOT, Anderson & Knox County, TN. *Project Manager*: Responsible for the expansion of TDOT's existing SmartWay system in Anderson and Knox Counties. This *TSMO strategy and solution project* includes the installation of new fiber optic trunk line, 10 CCTV cameras, 20 RDS units, and 2 multi-color DMS signs along a 12.4 mile stretch of I-75. These devices will allow TDOT to provide *Traveller Information, Traffic Incident Management, Road Weather Management and Active Transportation and Demand Management* for the corridor.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Cory Evans, PE	Years of relevant experience with this employer	7
Title	ITS Design Engineer	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization		BS / 2008 / Civil Engineering, North Carolina State University	
Active registration number / state / expiration date		PE93162 / FL / Exp. 02/2025; PE50794 / AL / Exp. 12/2023; PE88121 / OH / Exp. 12/2023; PE054565 / NC / Exp. 12/2023; PE049990 / GA / Exp. 12/2023	
Year registered	2008	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Value Added Services (ITS Architecture, ITS Master Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	As a Traffic Design Engineer and Certified Project Manager, Mr. Evans has extensive experience leading design for interstate and arterial Intelligent Transport Systems (ITS) backbones, signing and marking plans, and traffic signals including traffic signal interconnect systems. He has unique design experience practicing design throughout the southeast and has been the design lead on various transportation projects. Cory ensures his design team successfully provides quality deliverables within time and budget. He has been involved in the design or various ITS systems that include ***emerging technologies*** including parking management systems, guiderail senser systems, and ***CAV technology.*** He is proficient with the latest design software packages including MicroStation, OpenRoads, SignCAD, AutoTURN, GuidSIGN and ProjectWise.
6/21 – Ongoing	**I-20/285 EIC, Dekabl County, GA.** *Lead ITS, Signal and Signing EOR* responsible for the GDOT General Purpose Lane Intelligent Transportation System, including requirement for traffic surveillance, *traveler information dissemination, Incident management, road weather information*, and communication. ITS equipment includes DMS, VDS, CCTV, RWIS, communications network including network equipment, communication HUBS, duct banks, power design with fiber backbone and wireless communications. The design includes ITS devices and communications along approximately 8 miles of I-20 and I-285 with several interchanges that also require several metal-pole mast arm signal designs with several temporary signal designs to accommodate unique MOT staging plans. As part of the DJV, we were responsible for the design of overhead signing for the 8-mile project including advance guide signs, supplemental signs, exit direction signs, and interchange sequence signs. Coordination between signing and ITS was required to co-locate ITS devices and ensure adequate sign spreading and spacing for static and dynamic message signs.
2/22 - Ongoing	**I-6064, I-95, Lumberton, NC.** *Lead ITS and Signal Engineer* responsible for the design of an ITS network for interstate coverage of approximately 6 miles. I-95 is a critical corridor through Lumberton that serves as the backbone for goods and services along the East Coast. The project includes widening and elevating a portion of the facility that is heavily traversed and frequently congested. The ITS network will operate via cellular communications and includes CCTV and DMS locations. The widening will impact several interchanges within the project limits which requires the redesign of 8 traffic signals and design of 2 separate *signal interconnect systems*. One interchange will operate in final build as a DDI, requiring unique signal design experience considering signal spacing along the arterial.
07/19 – 5/21	**I-59 Rubblization, Hattiesburg, MS.** *ITS Engineer* for four fixed and PTZ closed-circuit television (CCTV) camera locations along I-59 north of Hattiesburg, MS. As part of this design, 72 fiber count will connect four ITS sites to the existing ITS network south of the project limits. FAA coordination was required for this project due to its proximity to an air facility.

1/22 – Ongoing	**I-65 ITS Design, Sumner and Robertson Counties, TN.** *Lead ITS Engineer* responsible for the design of an interstate ITS network along I-65 north of Nashville, TN. The ITS network includes proposed CCTV device locations with RVD to capture vehicle data, and DMS locations to *disseminate critical information to drivers* as they approach congested areas. The proposed ITS network is part of a larger, multi-phase construction project that will communicate directly to the TMC center upon completion of all phases of construction. As part of the design process, the ITS team toured the TMC to gather critical information used for guidance in design which will improve TMC operations. Innovative design approaches were considered in conjunction with TDOT as part of *policy development and updates* to improve the design process which will have positive influences through the letting and construction phases.
6/22 - Ongoing	**I-10 Calcasieu, Calcasieu Parish, LA.** *ITS Engineer* responsible for the design of an interstate ITS network including backbone trunkline communication to connect ITS device locations that include CCTV DMS coverage of I-10 across the Calcasieu River. The P3 pursuit includes coordination with several agencies to incorporate tolling requirements in addition to the dedicated ITS network over a leased network.
10/25 – 2/22	**Plans, Specifications & Estimates West Central Alabama *Advanced Connected Transportation Infrastructure & Operations Network*, University of Alabama Construction Administration, Tuscaloosa, AL.** *ITS Engineer* to deploy an *Advanced connected transportation infrastructure* and operations network on freeways and arterials in and around Tuscaloosa, Alabama. The core theme is to leverage technologies advances to enhance efficiency, capability and safety. This will streamline traffic flow and improve mobility on the region's road network during both normal operations and situations when roadway capacity or traffic demands adversely affect traffic operations. Key components include a network of sensors and cameras, communications technologies and *traffic signal systems* as well as mobility tools for passenger and freight traffic. These will facilitate near real-time exchange of data among vehicles, network elements and users. The imitative will deploy Network Pan-Tilt-Zoom Cameras, Deep-Learning Algorithms for Camera Crash Detection, Dedicated Short-Range Communication Radios, Advanced Traffic Signal Controllers, Mobile Phone Application Platform, Transit In-Vehicle and User Applications, V2I, V2V, and V2P based Traffic Communications, Cable Median Crash Sensors, and Communication network.
06/17 – 11/21	**Wekiva Parkway Design Build ITS Design, Lake and Seminole Counties, FL.** *ITS Engineer* for approximately 7 miles of ITS network along Wekiva Parkway. This design included a Walk-in DMS location for *Traveler Information* to communicate controlled burns within the vicinity of the parkway. This design also included eight PTZ CCTV locations and 12 multipoint video distribution system locations along the tolled facility. Each ITS device location was designed to include the addition of a break-away base to allow for the use of portable *Road Weather Information System*.
07/19 – 6/21	**SR 7/US 11 ITS Design, Alabama Department of Transportation (ALDOT), Tuscaloosa, AL.** *ITS Engineer* for 32 locations of data collection and surveillance including 2 Walk-in DMS locations. This project consists of over 20 miles of 144 count fiber as an alternative route for the ALDOT backbone fiber through the West Central Region. The design will connect two ALDOT regions and associated arterial traffic controllers to the West Central Region TMC. ALDOT is utilizing this project to improve standards for statewide fiber optics design.

16. Staff Experience:

Firm employed by	HNTB		
Name	Greg Krueger, PE	Years of relevant experience with this employer	9
Title	Emerging Technologies; ITS/CAV Standards Regulations	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization		MS / 1995 / Civil Engineering (Traffic Operations), Texas A&M University BS / 1993 / Civil Engineering, Colorado State University	
Active registration number / state / expiration date		PE. 6201047061 / MI / Exp. 10/2024; PE.133640 / TX / Exp. 12/2023	
Year registered	2000	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Value Added Services (ITS Architecture), TSMO Strategic Plan & CMM Assessments (Strategic / Program Plan	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Krueger is an internationally recognized leader in CV, specializing in emerging technologies in transportation. With more than 29 years of experience, Greg supports the firm's ITS programs and clients nationwide. He works with both public and private sector clients to facilitate the deployment of CAV on the nation's roadways. Previously, Greg was manager of the United States Department of Transportation (USDOT) Southeast Michigan CV Test Bed where he oversaw the day-to-day operations and technology enhancements for the original proof of concept facility. He also served as the MDOT's program manager for its statewide ITS program, overseeing all development, deployment, operations and maintenance of ITS throughout the state of Michigan. Additionally, Greg has supported the Safety Pilot Model Deployment effort in Ann Arbor, MI as well as a variety of other CV programs for the USDOT, MDOT and the American Association of State Highway and Transportation Officials (AASHTO).
11/18 – Ongoing	**Kansas Statewide CAV Vision Plan, Statewide, KS.** *Subject Matter Expert/Industry Coordination Lead.* Supports KDOT and the AV Task Force to develop a CAV vision and framework for the State of Kansas. The Kansas CAV Vision Plan includes individual blueprints for Kansas state agencies involved in CAV policy, deployment and operational considerations. Each blueprint provides a high-level plan for how state agencies can incorporate CAV into their organizational business planning, staffing and activities.
09/19 – Ongoing	**Innovate Mound Program Management, Macomb County, MI.** *Subject Matter Expert/Industry Outreach Lead.* Supports the development of the Innovate Mound corridor, a nine-mile corridor in the Metro Detroit area that supports engineering, design and fabrication for the major automakers. The goal of the technology component of the Innovate Mound program was the integration of technology in the corridor to support transportation over the next 20-50 years including CAVs, advanced sensor technologies, edge and fog computing technologies and a corridor-wide data management program.
03/20 – 11/20	**Virginia CAV Strategic Plan, Statewide, VA.** *Subject Matter Expert.* Responsible for full update of the VDOT CAV Strategic Plan. HNTB evaluated all 30+ program areas within VDOT to determine the impacts of CAV on each of those program areas. Once the impacts were identified, HNTB identified action plans for each of those program areas. Greg identified the impacts and developed response plans for each of the affected areas.

12/16 – 1/22	Smart City Challenge, ITS Program Management and Program Initialization, Columbus, OH. *Senior Technical Adviser.* Responsible for providing ITS program management services to the City of Columbus for the USDOT Smart City Challenge. HNTB is supporting four enabling technology suites including the Columbus Connected Transportation Network, the Smart Columbus Operating System, Enhanced Human Services and AV solutions. HNTB is also working with the city and its partners to develop a sustainable business plan to perpetuate Smart Columbus beyond the grant period. Greg co-authored the application for the $40M USDOT Smart City Challenge grant which has leveraged more than $500M in partnership investments for Smart Columbus.
03/19 – Ongoing	Ultimate Urban Circulator (U2C), Jacksonville Transportation Authority (JTA), Jacksonville, FL. *Project Manager.* Responsible for the development of a comprehensive automated transit service solution for JTA. This project examines converting the existing elevated Skyway system into a seamless mobility system that utilizes the Skyway infrastructure as well as provides new connections to at-grade operations of autonomous and CVs. Greg is responsible for leading all of the technology design components for the program including the vehicles, supervisory system, data lake, cybersecurity, communications system and other infrastructure-based technology. HNTB is serving as a system manager for the technology components and is responsible for all of the systems engineering elements including a SEMP, ConOps, system requirements and architecture updates with SET-IT and ARC-IT.

16. Staff Experience:

Firm employed by	HNTB		
Name	Arya Rohani, PE	Years of relevant experience with this employer	1
Title	National ITS Practice Leader	Years of relevant experience with other employer(s)	37
Degree(s) / Years / Specialization		MBA / 2000/ University of California, Irvine (Honors) Smart City Program Certificate/ 2016 / Harvard University BS / 1984 / Civil Engineering, University of Florida	
Active registration number / state / expiration date		Professional Engineer: CA #42849, 1987; Cisco Certified Design Associate (CCDA)	
Year registered	1987	Discipline	ITS
Contract role(s) / brief description of responsibilities		Emerging and integrated mobility applications for surface transportation	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Rohani is an infrastructure and technology expert with extensive experience helping clients to navigate and optimize their technology decision-making. He specializes in emerging mobility technologies such as TSMO, smart cities, connected and automated vehicles (CAV) and ITS. Arya also brings expertise in strategic planning and program management. Arya has earned a reputation for mobility innovation through his work with Los Angeles Department of Transportation (LADOT), Orange County Transportation Authority (OCTA) and the City of Irvine, where he developed numerous traffic, transit, ITS and TSMO solutions. These experiences also provide him with relevant insights for creating innovative solutions to mobility challenges. Additionally, his deep technology expertise with companies such as Cisco Systems (11 years) and Ingram Micro enable him to offer unique insights to clients to help them make the right technology investment decisions for their unique environment.
11/14 – 7/19	**Contra Costa Transportation Authority (CCTA), Shared Autonomous Vehicles (SAV) Partnership, CA.** *Project Manager.* Created a unique partnership that brought SAVs to the U.S in 2016. This groundbreaking mobility solution was first implemented in Bishop Ranch, a large business park in Northern California, followed by other implementations in Northern and Southern California communities. Arya forged the unique partnership between the team and EasyMile, the premier manufacturer of SAV — enabling his clients to remain on the cutting edge of our mobility transformation.
11/14 – 3/18	**Contra Costa Transportation Authority (CCTA), GoMentum Station - Connected and Automated Vehicles (CAV) Testbed, Concord, CA.** *Project Manager.* Responsible for the initial concept and program launch of the largest CAV testbed in the U.S. This facility provides a unique environment for various auto makers, technology companies and others to collaborate on innovative CAV projects. The ultimate objective was to facilitate and accelerate technology route-to-market through innovative solutions and partnerships. The activities paved the way for introduction of integrated emerging mobility solutions for the region.
6/17 – 10/20	**CCTA, Cities of Oakley and Brentwood, Northern California Smart City Program, Bay Area, CA.** *Project Manager.* Developed the overall company strategy for Smart City services. Projects worked on include the Bay Area, Smart City initiatives in the cities of San Francisco, Brentwood and Oakley, to name a few. His contributions led to the assessment and analysis of the necessary infrastructure investments and capabilities needed to support Smart City services. Such services require and generate extensive data which must be acquired, stored, managed and analyzed in a way to contribute to Smart City solution deployment. Arya worked closely with technology leaders across a wide spectrum of products and solutions covering advanced traffic and transportation management, smart streetlights, smart parking and curbside management and Internet of Things (IoT) applications.

11/14 – 5/17	Caltrans, I-80 Integrated Corridor Management Project (ICM) - Active Traffic Management System (ATMS), San Francisco, CA. *Project Director.* Managed technology selection and implementation tasks related to networking and communications. This included functional requirements and improvements to Caltrans District 4 ATMS comprising of active traffic management and integrated corridor management. Arya actively participated in the development of concept of operations field and TMC communications and integration including development of broader TSMO strategies. The project components include freeway management systems, adaptive ramp metering, active traffic management and speed harmonization.
4/97 – 10/00	Caltrans, Southern California Showcase Project, Southern California. *Deputy Program Manager.* Responsible for an innovative approach to integrating four Southern California Caltrans Districts 7, 9, 11 and 12 by integrating District 7 Active Traffic Management (ATMS) software kernels with those of impacted cities and other agencies (such as transit service providers, CHP and emergency management). Extensive coordination and collaboration were the cornerstones of Arya's contributions to this project, which required knowledge of Caltrans ATMS and integration with local agencies.

16. Staff Experience:

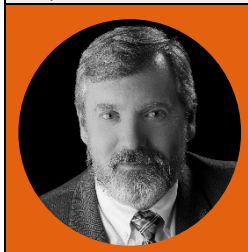
Firm employed by	ARCADIS		
Name	Troy Galloway, PE	Years of relevant experience with this employer	6
Title	Principal Transportation Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		MS / Civil Engineering / Florida International University, 2002	
Active registration number / state / expiration date		PE.045705 / GA / Exp. 12/2023	
Year registered	2020	Discipline	Civil Transportation
Contract role(s) / brief description of responsibilities		TSM&O Strategies (Emerging Technology)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Galloway has more than 11 years of experience in transportation engineering and special event traffic planning. He began his career at the Georgia Department of Transportation (GDOT) managing multiple signal improvement programs. He previously worked with the Georgia World Congress Center Authority, where he managed special event traffic planning for more than 500 annual events per year. He currently serves as a principal transportation engineer with Arcadis, where he supports state and local traffic projects and programs. Troy has extensive knowledge in traffic operations, ITS, special events, and emerging technologies in traffic engineering.
11/19 – 12/22	**Regional Traffic Operations Program (RTOP), GDOT, Atlanta, GA.** *Deputy Project Manager.* Oversaw the infrastructure team's activities in developing redundancies to the RNET and maintaining a high communication and closed-circuit television (CCTV) uptime. Assisted in the day-to-day management of zone staff and the baselining effort, which allowed the RTOP 1 team to baseline 1,000 new, not previously, RTOP signals. Focusing on efficiency and effectiveness enabled the team to be flexible in the face of many changes brought on by COVID-19. Coordinated the reorganization of the Traffic Signal Operations Specialist Program to meet the needs of all Zone Managers and GDOT. This effort freed up our zone team to focus on maintaining operations along corridors, while a dedicated staff member focused on data collection, reporting, and supporting remotely. Oversaw all maintenance activities, including on-call requests, TEAMS tickets, GDOT and local let project coordination, and daily management of assets, manages the allocation of resources – be it RTOP resources, GDOT contractors, or local resources – for the expeditious handling of necessary repairs. Developed standard operating procedures and workflows for maintenance activities, including detection trouble shooting, communications loss, TEAMS tickets and coding, and OCR development. Also led the development of the On Call Request (OCR) management application. This application has provided GDOT and contractors with greater transparency and the ability to bid out and document OCR activities throughout all stages of work.
04/17 – 02/20	**Renew Atlanta Bond and Transportation Special Purpose Local Option Sales Tax, City of Atlanta, Atlanta, GA.** *Traffic and ITS Manager*. Managed the traffic and ITS group's $60 million program and leveraged an additional $10 million of State and Federal match. Served as Project Manager for the Citywide Signal Operation and Signal Upgrade project, which improved signal equipment and introduced new technologies to over 300 signals throughout the City of Atlanta. Through these projects and in partnership with GDOT, Renew Atlanta installed 118 CCTVs, 347 Wavetronix units, 18 Gridsmarts, more than 400 pedestrian upgrades, 78 cabinet upgrades, and 88 Cyber Security Locks, among other work to improve the City's signal infrastructure. The team led numerous public engagement and local stakeholder meetings to gain community buy-in and support for the projects. Worked on the North Avenue Smart Corridor that won the Mobility Award at the Smart City World Expo in Barcelona and rolled out the first Connected Vehicle deployment in Georgia.

09/16 – 06/17	SunTrust Park Traffic Management Plan, Cobb County Department of Transportation, Smyrna, GA. *Traffic Engineer/Project Lead*. Responsibilities included the design, simulation, and implementation of the entire traffic management plan. The team completed modeling, design, and operations of ingress and egress patterns on 34 intersections and 27 parking lots. The plan included lane utilization, police officers' duties, and pedestrian operations to make a successful traffic management plan. The project utilized adaptive signal software and full color dynamic digital message boards for special event traffic, the first of its kind in Georgia.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Mike Haas	Years of relevant experience with this employer	8
Title	TSMO Solutions Program Manager	Years of relevant experience with other employer(s)	18
Degree(s) / Years / Specialization		BS / 1997 / Electrical Engineering, Old Dominion University	
Active registration number / state / expiration date		Transportation Research Board, Regional TSMO Committee - Chair of Data for Operations Subcommittee; Institute of Transportation Engineers; Institute of Electrical and Electronics Engineers; Project Management Institute Scrum Master Certified	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution - Service Layer / Tactical Plans	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Haas is an experienced **TSMO Program Manager with 25 years' experience** leading and delivering successful technology solutions. He has extensive hands-on experience leading and developing ATMS, ATIS, and Regional Integrated TSMO software solutions that include **Work Zone Management (including WZDx), Traffic Incident Management, Event Management, Road Weather Information Systems, Traveler Information, Ramp Metering, Active Traffic Management**, Video Management, Data Analytics, TMC Operations, and Decision Support. Mr. Haas a degree in Electrical Engineering and focusses on software project management, planning and application of emerging technologies including connected and autonomous vehicle capabilities, and regional integration.
02/12 – 11/15	**Louisiana 511 Traveler Information System, LADOTD, Statewide, LA.** *Lead Client Contact* for Louisiana traveler information program. Coordinated with ATIS stakeholders to provide program support. DOTD ATIS included 511 IVR, traveler web sites, control room user interface, alternate bandwidth-sensitive web interface for low-BW connections, ATMS interface, GIS mapping with traffic conditions, and a standards-based data distribution hub. Working in close coordination with DOTD staff, wrote the sole-source justification that allowed Louisiana to transition from an expiring contract for ATIS services to a new three year contract agreement for continued development and support of the 511 traveler information program.
10/19 – Ongoing	**ATMS and Active Traffic Management, Ohio Department of Transportation (ODOT), Statewide, OH.** *Project Manager* for the Ohio Statewide ATMS. Mike leads a $10,000,000 program including on-site staffing, Traffic Management Center (TMC) operations review, requirements validation, project planning, transition planning, system design and deployment to replace legacy ATMS, Variable Speed Limit Corridor, and Dynamic Hard Shoulder Running Corridor with inSIGHT ATMS solution. The project involves close coordination with numerous stakeholders across the state.
03/23 – Ongoing	**ATMS and Active Traffic Management, Nevada Department of Transportation (NDOT), Statewide, OH.** *Project Manager* for the Nevada Statewide ATMS. Mike leads a $4,500,000 program including Traffic Management Center (TMC) operations review, requirements validation, project planning, transition planning, system design and deployment to replace legacy ATMS, Active Traffic Management Corridor with inSIGHT ATMS solution. The project involves close coordination with numerous stakeholders across the state.
06/15 - Ongoing	**ATMS, Wisconsin Department of Transportation (WisDOT), Statewide, WI.** *Project Manager* for the WisDOT Next Generation ATMS. Mike leads a $5,000,000 program including on-site staffing, Traffic Management Center (TMC) operations review, requirements validation, project planning, transition planning, system design and deployment to replace a legacy ATMS with IBI

	Group inSIGHT ATMS solution. The project involves close coordination with numerous stakeholders including the Traffic Operations and Safety Lab University of Wisconsin-Madison, Wisconsin State Police, Milwaukee County Sherriff, and internal WisDOT stakeholders across the state.
07/17 – Ongoing	ATMS, Pennsylvania Turnpike Commission (PTC), PA. *Program Manager* for ITS Software Systems. Mike works closely with IBI Group and PTC project management for the replacement of a legacy ATMS that includes integration with Pennsylvania Department of Transportation (PennDOT) ATMS, law enforcement, PTC traveler information, PennDOT traveler information, Waze, truck parking and numerous other external systems and stakeholders.
11/06 – 11/11	I-81 Corridor Northwest Region TMC/ATMS, Virginia Department of Transportation (VDOT), VA. *Project Manager* for VDOT I-81 Corridor Systems Integrator. Open Roads provided rapid deployment of ATMS in two TMCs on the I-81 Corridor in Virginia. In addition to two initial deployments, extensive additional functionality was delivered over multiple iterations which included regional integration, new device integration, traffic signal system integration and communication design and implementation. Mike managed more than 20 operators and technicians who provided 24/7 operations and maintenance of the system.
11/06 – 11/11	I-81 Corridor Southwest Region TMC/ATMS, Virginia Department of Transportation, VA. *Project Manager* for the VDOT I-81 Corridor Systems Integrator. Open Roads provided rapid deployment of ATMS in two TMCs on the I-81 Corridor in Virginia. In addition to two initial deployments, extensive additional functionality was delivered over multiple iterations which included regional integration, new device integration, traffic signal system integration and communication design and implementation. Mike managed more than 20 operators and technicians who provided 24/7 operations and maintenance of the system.
04/08 – 11/11	Illinois District 4 ATMS, Illinois Department of Transportation (IDOT), IL. *Project Manager* for IDOT District 4 ATMS. Deployed a fully functional and secure system in less than four months that enabled IDOT operators as well as system users from East Peoria Public Works, The solution was built around OpenTMS Enterprise and included a public traffic web page, incident and work zone management, and device command and control.
01/07 – 11/11	Delaware State ATMS, Delaware Department of Transportation (DelDOT), DE. *Project Manager* for DelDOT ATMS. Deployed a scaled down ATMS package to meet targeted needs for device management and traveler information. Worked closely with client to customize the modular ATMS architecture to deliver required new capabilities within the traffic operations center alongside existing systems in a manner that minimized the impact on TOC staff.
08/14 – 06/15	Intelligent Roadway Information System (IRIS) ATMS Evaluation, Nebraska Department of Roads (NDOR), NE. *Lead Investigator for NDOR*: Supported NDOR assessment of ATMS alternatives by introducing the open source ATMS, IRIS developed by Minnesota Department of Transportation. NDOR elected to conduct a 12-month pilot deployment of IRIS as a fact-finding initiative to evaluate if IRIS possessed the necessary attributes to meet Nebraska's freeway management needs.
02/12 – 06/15	Iowa 511 Traveler Information System, Iowa Department of Transportation (Iowa DOT), IA. *Lead Client Contact* for Iowa traveler information program. Coordinated with ATIS stakeholders at all levels of Iowa DOT up through and including the agency Director to provide program support. Led the integration of Waze crowd-source traveler information into Iowa's traffic operations center and traveler information systems. Scheduled and facilitated multiple conversations between Iowa DOT and Waze legal counsel representatives and drafted the final agreement that is the basis for allowing bidirectional sharing of information between Waze and Iowa.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Kerry NeSmith, PE	Years of relevant experience with this employer	1
Title	Senior Transportation Engineer	Years of relevant experience with other employer(s)	34
Degree(s) / Years / Specialization		BS / 1987 / Civil Engineering, Mississippi State University	
Active registration number / state / expiration date		PE.20118 / AL / Exp. 12/2023	
Year registered	1994	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Guidelines & Standards, Funding & Benefit Cost Analysis	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. NeSmith is a member of the Institute of Transportation Engineers and American Society of Civil Engineers and a Civil Engineer with more than 35 years' experience. He is a Registered Professional Engineer in the State of Alabama. He can work independently with minimum supervision and is committed to providing high quality services for every task. He is a professional, capable, and motivated individual who consistently performs in challenging environments.
11/13 – 12/21	**Standard Drawing Additions and Updates, Alabama Department of Transportation, Montgomery, AL.** *State Traffic Engineer and Deputy State Maintenance Engineer*: Worked within a collaborative team environment to develop a new standard drawing for the striping of two-lane entrance ramps for freeways. Existing drawings for striping and markings were updated and revised to bring into compliance with the 2009 Manual on Uniform Traffic Control Devices.
11/13 – 12/21	**Area Traffic Engineer training, Alabama Department of Transportation, Montgomery, AL.** *State Traffic Engineer and Deputy State Maintenance Engineer:* Developed a one-hour training presentation twice a year for Area Traffic Engineers and presented current and emerging practices and strategies for optimizing traffic operations. These presentations included emphasis on safety practices, existing standards and guidance to be implemented as well as field photographs illustrating good practices and those which were non-conforming and in need of corrective action.
11/13 – 12/21	Work Zone **Traffic Control Review, Alabama Department of Transportation, Montgomery, AL.** *State Traffic Engineer and Deputy State Maintenance Engineer:* Participated in a team review of *work zone* traffic control being implemented on selected projects around the state. The team would review the plan in the office for accuracy and conformance to standards and then perform a daytime and night-time assessment of in-place devices on the project.
11/13 – 12/21	**Signing and pavement marking plan review, Alabama Department of Transportation, Montgomery, AL.** *State Traffic Engineer and later as Deputy State Maintenance Engineer:* Reviewed numerous project plans for accuracy and conformance with applicable standards related to signing and pavement markings. Submitted comments to designers (both consultants and internal staff) to address any identified deficiencies with the plans.
01/15 – 12/21	Road Weather Management **program manager, Alabama Department of Transportation, Montgomery, AL.** *Deputy State Maintenance Engineer: Served as ALDOT's program manager and representative for Road Weather Management. Attended numerous national meetings, making presentations, serving on discussion panel for matters related to ALDOT's road weather management. Organized collaboration meetings and led FHWA Pathfinder project for ALDOT to further collaboration between numerous external stakeholders.*

01/15 – 12/21	Capability Maturity Models, Alabama Department of Transportation, Montgomery, AL. *Deputy State Maintenance Engineer:* Participated in various *CMM* efforts and annual *assessments* within ALDOT to assess ALDOT's status related to implementation of *TSM&O* and *Road Weather Management*.
03/22 – Ongoing	Jefferson County Signal Operations, Jefferson County, Birmingham, AL. *Senior Transportation Engineer:* Serving as Arcadis Assistant Project Manager for a project to deliver improved *coordinated signal operations* on various county-maintained urban and suburban corridors in Jefferson County using modeling software and detailed field observations.

16. Staff Experience:

Firm employed by	ARCADIS		Meet MPR No. 5
Name	Anthony Moore, PE	Years of relevant experience with this employer	5
Title	Senior ITS CE&I Engineer	Years of relevant experience with other employer(s)	27
Degree(s) / Years / Specialization		BS / 1994 / Civil Engineering, University of Missouri	
Active registration number / state / expiration date		PE.0037887 / LA / Exp. 09/30/2023	
Year registered	2013	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Moore is an ITS Engineer that has spent the last 10 years successfully working on LADOTD ITS CE&I projects as the Project Engineer on IDIQ contracts. ***He currently specializes in ITS CE&I but has extensive experience in Work Zone Management, Traffic Signal Coordination, Integrated Corridor Management, and Project Management***. traffic and ITS engineering, design, signal timing development and deployment, and Intelligent Transportation System (ITS) design. He has more than 32 years of experience in the fields of traffic and safety analysis, signal design, and ITS design. As an ITS CE&I Engineer, his focus has been safety during construction and future maintenance of constructed components. He has successfully worked on projects at the Louisiana Department of Transportation and Development (LADOTD), Florida DOT, Missouri DOT, Kansas DOT, Texas DOT, City of Kansas City, Missouri, City of Olathe, City of Gainesville, Florida, and Lee County, Florida. Other certifications include: ATSSA TCS, TCT, Flagger, IMSA Traffic Signal Technician Level II.
02/16 – 08/17	**CE&I for Lake Charles ITS Phase 2, LADOTD; Calcasieu Parish, LA.** *Project Engineer/ Manager*. Provide construction management services *including Work Zone Management* to LADOTD on ITS expansion project in the Lake Charles metropolitan area. The ITS expansion project includes the installation of fiber optic communications cable, Dynamic Message Signs and Closed-Circuit Television cameras on I-10. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
08/21 – Present	**CE&I for I-10 US 61 to Laplace ITS Deployment, LADOTD, Ascension, St. James and St. John the Baptist Parishes, LA.** *Project Engineer/ Manager*. *Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS expansion project that includes the installation of approximately 23 miles of fiber optic communications cable and conduit and the installation of ten Closed Circuit television cameras including four that will be solar powered. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD, including RFIs and shop drawings. traffic signal equipment upgrades and modifications.
02/19 – 08/21	**CE&I for US 190 ITS Deployment, LADOTD, West Baton Rouge, Pointe Coupee and Landry Parishes, LA.** *Project Engineer/ Manager*. *Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS expansion project that includes the installation of approximately 48 miles of fiber optic communications cable, the interconnection of four traffic signals onto the LADOTD communications network, and the installation of two communications HUB buildings. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD, including RFIs and shop drawings.

10/19 – 08/21	**CE&I for Alexandria ITS Deployment Phase 3, LADOTD, Rapides Parish, LA.** *Project Engineer/ Manager*. *Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS expansion project in the Alexandria metropolitan area. The ITS expansion project includes the installation of fiber optic communications cable, Dynamic Message Signs and Closed-Circuit Television cameras on US 71, US 165, and LA 28. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
10/16 – 08/17	**CE&I for I-10 Bonnet Carre Emergency Crossing, LADOTD, St. John and St. Charles Parishes, LA.** *Project Engineer/ Manager*. *Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS repair project in St. John and St. Charles Parishes. The ITS expansion project includes the installation of fiber optic communications cable, one Dynamic Message Sign, and the repair of two emergency crossing gates on the elevated section of I-10 near the Bonnet Carre spillway. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
12/15 – 10/16	**CE&I for New Orleans Hospitality Zone, LADOTD, Orleans Parish, LA.** *Project Engineer/ Manager. Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS expansion project in the New Orleans metropolitan area. The ITS expansion project includes the installation of Ramp Metering signals on 6 freeway entrance ramps to US 90B, fiber optic communications cable, and Closed-Circuit Television cameras. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
12/12 – 06/16	**CE&I for New Orleans Core ITS, LADOTD, Jefferson and Orleans Parish, LA.** *Project Engineer/ Manager. Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on ITS expansion project in the New Orleans metropolitan area. The ITS expansion project includes the installation of fiber optic communications cable, Dynamic Message Signs and Closed-Circuit Television cameras on I-10, I-610, and US 90B. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
03/13 – 8/15	**CE&I for Weigh In Motion, LADOTD, Jefferson and Orleans Parish, LA.** *Project Engineer/ Manager*. *Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on statewide weigh in motion upgrade project. The weigh in motion project includes the installation of fiber optic communications cable, Dynamic Message Signs, Closed Circuit Television cameras, and weigh in motion scales on I-10, I-12, and I-20. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
06/14 – 11/15	**CE&I for Dynamic Message Sign (DMS) Ladder Statewide, LADOTD, Statewide, LA.** *Project Engineer/ Manager. Provide Project Management, Work Zone Management and Integrated Corridor Management services* to LADOTD on DMS Ladder project to install new DMSs and ladder/walkway systems on existing DMS poles. As Project Engineer, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Douglas Tilt, PE	Years of relevant experience with this employer	23
Title	ITS System Integration Technical Advisor	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization		BS / 1996 / Civil Engineering, Georgia Institute of Technology-Main Campus	
Active registration number / state / expiration date		PE. 0033502 / LA / Exp. 03/2024	
Year registered	2007	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Service Layer / Tactical Plans), TSMO Policy Development & Updates, Grant Writing & Support, Funding & Benefit Cost Analysis	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Tilt is a Senior Project Manager with more than 23 years of experience in traffic engineering, Intelligent Transportation System (ITS)/advanced transportation management system (ATMS) design, transportation planning, and transportation design. He has managed and designed numerous projects throughout the southeastern United States, including traffic signal projects, ITS/ATMS projects, intersection improvement projects, traffic and corridor studies, roadway concept development, and safety and operation studies.
06/13 – Ongoing	**ITS Maintenance Retainer Contract – Program Management and Maintenance Management System, Louisiana Department of Transportation and Development (LADOTD), Statewide, LA.** *QA/QC Compliance*. Responsible for developing, implementing, and managing ITS maintenance plans, policies, standards, procedures, and guidelines. Responsibilities also include deployment planning, installation, configuration validation, data migration support and ongoing update to database, training, and annual MMS software support. Arcadis provided routine and responsive maintenance for the LADOTD's statewide ITS infrastructure. Such infrastructure includes Closed-circuit television (CCTV) cameras, Dynamic Message Signs (DMS), radar vehicle detectors, and ramp meters, totaling more than 500 sites statewide. The project scope includes program management; maintenance management system software; comprehensive maintenance plan for routine and responsive maintenance; health and safety and traffic control plan development; and tracking and performance measures reporting.
08/16 – Ongoing	**ITS Maintenance Retainer Routine Maintenance Task Orders – CCTV Camera, DMS, Vehicle Detectors (VD), and Ramp Meter, Louisiana Department of Transportation and Development, Statewide, LA.** *QA/QC Compliance*. Responsible for providing routine maintenance of statewide ITS sites including, CCTV cameras, DMS, VD, and ramp meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also include development of detailed checklist by device type; integration of checklist with MMS software; standardized reporting; development of routine maintenance schedule; and coordination with statewide Traffic Management Center (TMC), regional TMCs, and DOTD districts before, during, and after all routine maintenance activities.

08/09 – 03/11	Baton Rouge to Lafayette Intelligent Transportation Systems - Traffic Incident Management Phase 2, Louisiana Department of Transportation and Development, Baton Rouge, LA. *ITS Design Manager/QC Manager.* Provided ITS design, construction, and integration services. Responsibilities included managing, leading, and reviewing design of fiber optic and wireless communication along with 13 CCTV cameras and RVDs, four DMSs, and two HARs on I-10, I-49, US 90 and US 190 between Baton Rouge and Lafayette, LA. Managed and reviewed monthly project reports, schedule, and budgets. Interacting with the client and other stakeholders on a regular basis for project progress review meetings. Conducted and supervised several field trips to verify design requirements and to meet technical specifications.
08/13 – Ongoing	ITS Maintenance Retainer Routine Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD, Statewide, LA. *Senior Technician.* Responsible for providing routine maintenance of statewide ITS sites including CCTV cameras, DMS, VD, and ramp meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also included development of detailed checklist by device type; integration of checklist with MMS software; standardized reporting; development of routine maintenance scheduler; and coordination with statewide traffic management center (TMC), regional TMCs, and DOTD districts before, during, and after all routine maintenance activities.
6/20 – Ongoing	Statewide Broadband Program, GDOT, Statewide, GA. *PM/ITS Technical Advisor*: Technical advisor working with a team of legal and financial experts to develop a series of DB projects to deploy the nation's largest CV infrastructure. The DB projects will expand GDOT's fiber network to over 1,300 miles covering every interstate mile statewide and deploy over 500 CV roadside units at all interstate interchanges. In parallel with the DB projects, GDOT, with Arcadis and their legal and financial efforts, are developing a first-of-its-kind for Georgia Operate Maintain and Commercialize (OMC) broadband program. The OMC will leverage GDOT's interstate value to gain commercialized broadband revenue share. This shared revenue provides GDOT a revenue stream to pay for ITS operations and maintenance and further expand NaviGAtor's role in improving safety and operations.
01/18 – 04/21	North Avenue Smart Corridor, City of Atlanta, Fulton County, GA: *PM/CAV Engineer.* Engineer of record for the design of the North Avenue Smart Corridor Demonstration project. The project improved multimodal traffic operations for 2.3 miles of North Avenue, which links some of the City's most important businesses. The deployment included dedicated short-range communication (DSRC) and cellular-based communication to test and evaluate various CV applications at different transmission and user saturation rates. Applications included collision warning and avoidance, emergency vehicle pre-emption, and signal detection. In addition to broadcasting these basic safety messages, signal phasing and timing information is also transmitted. The project included deployment of an adaptive signal system, travel time detection system, and smart pedestrian detection. The technologies deployed tie back to Renew Atlanta's technology hub
01/15 – 01/16	New Orbital Highway and Truck Route – Project 23 (Contract 2), Qatar Public Works Authority "ASHGHAL", Doha, Qatar. P*roject ITS Technical Lead*. Project ITS Technical lead for this design-build project. Contract 2 of the New Orbital Highway included a 38km roadway network with 7 interchanges and 1 tunnel. The project also included truck only facilities to separate passenger and commercial truck traffic. ITS requirements included a communication network with Lane Control Signs, DMS, magnetometers, License Plate Recognition cameras, and CCTV cameras. Responsibilities included ITS device layout design, coordination with other disciplines, design report and documentation, and overall ASHGHAL design guideline and specification adherence.

16. Staff Experience:

Firm employed by	ARCADIS			Meets MPR No. 9
Name	Anthony Jackson, IMSA III		Years of relevant experience with this employer	5
Title	Senior Technician/Inspector - Lead		Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization			Pre-Civil Engineering Coursework / 2016 – Ongoing / Baton Rouge Community College	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	ATTSA TCT, TCS, Flagger; IMSA Traffic Signal Level II and III. Manufacturer certifications in COHU, Daktronics, Econolite (Autoscope), Trafficware, and Fall Protection (Authorized Person)	
Contract role(s) / brief description of responsibilities			Value Added Services (ITS Techs/Specialists)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Jackson has 23 years of experience in field inspection and investigation, testing/QA, and construction inspection and testing of structural components on LADOTD ITS CE&I projects. He has 19 years of experience working on ITS and traffic signal projects including construction, inspection, system integration and maintaining traffic signal and ITS systems in the transportation industry. He has experience with complex intelligent transportation system (ITS), and Traffic Signalizations. He has a thorough knowledge of LADOTD standards and specification. He has certified technical trainings on ITS assets and systems such as COHU, Axis, Daktronics, ISS RTMS Traffic Detector, Trafficware TS2, and Econolite Autoscope and others. He also has certifications as an IMSA Level III Traffic Signal Technician, and Traffic Signal Inspector for Advance Technologies.
08/21 – Ongoing	CE&I for I-10 US 61 to Laplace ITS Deployment, Ascension, St. James, St. John the Baptist Parishes, LA / S.P.N. H.013710 F.A.P No. H.013710. *Senior Technician/Lead Inspector.* *Provide field inspection and investigation services to LADOTD on ITS expansion project that includes the installation of approximately 23 miles of fiber optic communications cable and conduit and the installation of ten Closed Circuit television cameras including four that will be solar powered*. As Senior Technician/Lead Inspector, responsibilities include overseeing all aspects of construction and inspection including providing support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD, including Daily Work Reports, materials testing submittals, *insuring work zone management*, and daily pay item field diaries.
02/19 – 08/21	CE&I for US 190 ITS Deployment, LADOTD, West Baton Rouge, Pointe Coupee, and Landry Parishes, LA / S.P.N. H.011511 F.A.P No. H.011511. *Senior Technician/Inspector - Lead.* *Provide field inspection and investigation services to LADOTD on ITS expansion project that includes the installation of approximately 48 miles of fiber optic communications cable, the interconnection of four traffic signals onto the LADOTD communications network, and the installation of two communications HUB buildings*. As Project Technician, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, *insuring work zone management*, directing field inspectors, and maintaining project documentation required by LADOTD.

10/19 – 08/21	**CE&I for Alexandria ITS Deployment Phase 3, LADOTD, Rapides Parish, LA / S.P.N. H.011505 F.A.P No. H.011505.** *Project Technician.* Provide construction management services to LADOTD on ITS expansion project in the Alexandria metropolitan area. The ITS expansion project includes the installation of fiber optic communications cable, Dynamic Message Signs and Closed-Circuit Television cameras on US 71, US 165, and LA 28. As Project Technician, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, *insuring work zone management*, directing field inspectors, and maintaining project documentation required by LADOTD.
05/13 – Ongoing	**ITS Maintenance Retainer Contract – Program Management and Maintenance Management System, LADOTD, Statewide, LA.** *Sr. Technician*. Premier duties were to integrate, troubleshoot, and perform preventative maintenance, on CCTV Cameras, DMS, VD, and *Ramp Management*. Performs QA/QC checks after any work is performed on the routine and responsive maintenance. The site visits for quality control on maintenance activities to secure thoroughness of work against maintenance procedure. It also allows the inspection of the TCP installation, and usability for current roadway geometrical conditions.
06/15 – 12/15	**District 04 Controller Upgrade Traffic Signalization and Related Work, Bienville, Bossier, Caddo, Claiborne, Desoto, Red River, Webster, Jefferson, Orleans, St. Bernard, St. Charles Parishes, Baton Rouge, LA.** *Project Manager/Sr. Technician*. Participated in planning and bidding to obtain contracts for projects. Acting Traffic Control Supervisor on the project and coordinated work schedule with LADOTD. Served as Lead Technician on project and approved partial estimates and change orders. On site, was responsible for programming ATC controllers timing, *traffic signal coordination*, and installing GPS in the controller cabinets. Maintain proper traffic control by coordinating the shutdowns of major and minor signalized intersection with state and local police departments.

16. Staff Experience:

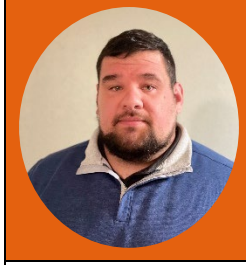
Firm employed by	ARCADIS		Meets MPR NOs. 7 & 8
Name	Jeffery Jones, IMSA II	Years of relevant experience with this employer	10
Title	Project Manager / Sr. ITS Technician	Years of relevant experience with other employer(s)	11
Degree(s) / Years / Specialization		2005 / Electrical Engineering Coursework / University of New Orleans 2005 / Electrical Engineering Coursework / Delgado Community College	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	ATTSA TCT, TCS, TCDS, Flagger; Manufacturer certifications in COHU, Daktronics, Pelco, Axis, Econolite (Autoscope), Fall Protection (Authorized Person), Pelco, IMSA I, IMSA II / Louisiana Contractor License (Statewide Electrical, Telecommunications and Electrical Signs, Scoreboards, Displays, Billboards Construction)
Contract role(s) / brief description of responsibilities.			Value Added Services (ITS Techs/Specialists)

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Jones *has 21 years of experience designing, integrating and maintaining information systems and technology in the transportation industry*. He has experience with complex intelligent transportation system (ITS) networks that include wireless MESH, fiber optics, and copper. He has a thorough knowledge of WIFI, Cell Networks and Dedicated Short Range Communication (DSRC) systems and standards. He has certified technical trainings on ITS assets and systems such as COHU, Axis, Daktronics, ISS RTMS Traffic Detector, Trafficware/Naztec TS1 and TS2 Traffic Controller, Econolite Autoscope and others. He is IMSA II certified and is a licensed electrical contractor.
02/19 – 08/21	US 190 ITS Deployment, LADOTD, West Baton Rouge, Pointe Coupee, and Landry Parishes, LA. *Project Manager*. *Provided project management and QA/QC services to LADOTD on ITS expansion project that included the installation of approximately 48 miles of fiber optic communications cable, the interconnection of four traffic signals onto the LADOTD communications network, and the installation of two communications HUB buildings*. As Project Manager, responsibilities included overseeing all aspects of construction and inspection including oil engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
08/13 – 08/16	ITS Maintenance Retainer Responsive Maintenance Task Order – CCTV Camera, LADOTD, Statewide, LA. *Field Manager / Project Manager* responsible for providing responsive *maintenance of statewide ITS sites* including, CCTV camera and DMS. Responsible for responsive and emergency maintenance of ITS sites in Louisiana. Responsive maintenance involves the repair or replacement of any reported failed or malfunctioned equipment. Emergency maintenance is responsive maintenance that requires immediate repair, such as sites requiring traveler information, or incidents and events.
08/13 – 08/16	ITS Maintenance Retainer Responsive Maintenance Task Order for Dynamic Message Sign (DMS), LADOTD, Statewide, LA. *Field Manager / Project Manager* responsible for responsive and emergency *maintenance of all 79 DMS sites in Louisiana*. Responsive maintenance is the repair or replacement of any reported failed or malfunctioned equipment. Emergency maintenance is responsive maintenance requiring immediate repair, such as sites requiring traveler information, or incidents and events. Sites were classified by risk to safety, with Class A, B, or C as well as level of criticality, with High, Medium or Low. Each site requires different safety precautions based on classifications. Our project team assessed each site and applied the appropriate LADOTD traffic control details. When necessary, we developed a customized traffic control plan and worked with LADOTD staff for approval.

08/16 – Ongoing	**ITS Maintenance Retainer Contract Program Management (PM) and Maintenance Management System (MMS), LADOTD, Statewide.** *Field Manager / Project Manager* responsible for program and project management, maintenance and related services for the LADOTD ITS maintenance program. Responsible for managing the routine maintenance of CCTV camera, Dynamic Message Sign (DMS), vehicle detector (VD) and ramp meter sites, and responsive/emergency maintenance of CCTV camera and DMS sites located throughout the state of Louisiana. Developed Traffic Control Plans (TCP) and worked with the LADOTD project manager to determine safety class and critical level assignments for all ITS sites. Performed training for and installation of the maintenance management system (MMS). *Worked on the development of performance measures reports, ITS Maintenance Plan, Program Management Plan (PMP) and Health and Safety Plan (HASP) for the project. Developed procedures and checklists for the performance of maintenance activities at ITS sites*. Performed site inspections, validation and quality control checks for maintenance activities performed under the contract.
08/16 – Ongoing	**ITS Maintenance Retainer Routine Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD; Statewide, LA.** *Field Manager / Project Manager* responsible for providing routine maintenance of statewide ITS sites including, CCTV cameras, DMS, VD, and ramp meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also include development of detailed checklist by device type; integration of checklist with MMS software; standardized reporting; development of routine maintenance scheduler; and coordination with statewide traffic management center (TMC), regional TMCs, and DOTD districts before, during, and after all routine maintenance activities.
08/16 – Ongoing	**ITS Maintenance Retainer Responsive Maintenance Task Orders – CCTV Camera and DMS, LADOTD; Statewide, LA.** *Field Manager / Project Manager* responsible for providing responsive maintenance of statewide ITS sites including CCTV camera and DMS. Responsive or emergency maintenance occurs in response to malfunctioning or faulty components that prevent the normal operations of ITS devices. Also responsible for tracking a responsive maintenance ticket to see that the work is done within the defined response time based on a site location.
06/13 – 08/16	**ITS Maintenance Retainer Contract Program Management and Maintenance Management System, LADOTD, Statewide, LA.** Project Manager responsible for developing, implementing, and managing ITS maintenance plan, policies, standards, procedures, and guidelines. Responsibilities also included deployment planning, installation, configuration validation, data migration support and ongoing update to database, training, and annual MMS software support. Arcadis was *awarded the first-ever ITS maintenance contract* to establish a program to systematically provide routine and responsive maintenance for the LADOTD's statewide ITS infrastructure. Such infrastructure includes CCTV cameras, DMS, radar vehicle detectors, and ramp meters, totaling more than 500 sites statewide. *The project scope includes program management; maintenance management system software; comprehensive maintenance plan for routine and responsive maintenance; health and safety and traffic control plan development; and tracking and performance measures reporting*.
10/19 – 08/21	**Alexandria ITS Deployment Phase 3, LADOTD, Rapides Parish, LA.** *Project Manager*. Provide construction management services to LADOTD on ITS expansion project in the Alexandria metropolitan area. The ITS expansion project includes the installation of fiber optic communications cable, Dynamic Message Signs (DMS) and Closed-Circuit Television (CCTV) cameras on US 71, US 165, and LA 28. As Project Manager, responsibilities included overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.

16. Staff Experience:

Firm employed by	ARCADIS			Meets MPR Nos. 7 & 8
Name	Cody Lemoine		Years of relevant experience with this employer	5
Title	Senior Technician		Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			N/A	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	ATTSA TCT, TCS, Flagger; Senior Technician; Manufacturer certifications in COHU, Daktronics, Pelco, Axis, Econolite (Autoscope), ComTrain Tower Safety and Rescue (Certified Competent Instructor)	
Contract role(s) / brief description of responsibilities.			Value Added Services (ITS Techs/Specialists)	

Experience dates	
	Mr. Lemoine has seven years of experience in ITS CE&I and ITS design, integration, and maintenance. He has extensive experience with ITS communication system field inspection and investigation and design including wireless MESH, fiber optics, and copper networks. He has a thorough knowledge of WIFI, Cell Networks and Dedicated Short Range Communication (DSRC) systems and standards. He has certified technical trainings on ITS assets and systems such as COHU, Axis, Daktronics, ISS RTMS Traffic Detector, Trafficware/Naztec, Econolite Autoscope and others. He has been certified through Comtrain as an in-house competent level instructor in Tower Safety and Rescue. He has 4 years of construction engineering and inspection while working on ITS Maintenance and CE&I projects for LADOTD.
08/21 – Ongoing	**CE&I for I-10 US 61 to Laplace, LADOTD, Ascension, St. James and St. John the Baptist Parish, LA.** *Senior Technician.* Provide *field inspection and investigation services to LADOTD on ITS expansion project that includes the installation of approximately 23 miles of fiber optic communications cable and conduit and the installation of ten Closed Circuit television cameras including four that will be solar powered*. As Senior Technician/Lead Inspector, responsibilities include overseeing all aspects of construction and inspection including providing support and quality control oversight to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD, including Daily Work Reports, materials testing submittals, daily temporary traffic control, and daily pay item field diaries.
02/19 – 08/21	**CE&I for US 190 ITS Deployment, LADOTD, West Baton Rouge, Pointe Coupee, and Landry Parishes, LA.** *Senior Technician*. *Provide field inspection and investigation services to LADOTD on ITS expansion project that includes the installation of approximately 48 miles of fiber optic communications cable, the interconnection of four traffic signals onto the LADOTD communications network, and the installation of two communications HUB buildings*. As Senior Technician, responsibilities included overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.
10/19 – 08/21	**CE&I for Alexandria ITS Deployment Phase 3, LADOTD, Rapides Parish, LA.** *Project Technician.* Provided construction management services to LADOTD on ITS expansion project in the Alexandria metropolitan area. The ITS expansion project included the installation of fiber optic communications cable, Dynamic Message Signs and Closed-Circuit Television cameras on US 71, US 165, and LA 28. As Project Technician, responsibilities include overseeing all aspects of construction and inspection including providing engineering support to the contractor during construction, directing field inspectors, and maintaining project documentation required by LADOTD.

05/13 – Ongoing	ITS Maintenance Retainer Contract – Program Management (PM) and Maintenance Management System (MMS), LADOTD, Statewide, LA. *Senior Technician*. Responsible for maintenance and related services for the LADOTD ITS maintenance program. Responsible for managing the routine maintenance of CCTV camera, dynamic message sign (DMS), vehicle detector (VD) and ramp meter sites, and responsive/emergency maintenance of CCTV camera and DMS sites located throughout the state of Louisiana. Performed training for and installation of the maintenance management system (MMS). Developed procedures and checklists for the performance of maintenance activities at ITS sites. Performed site inspections, validation and quality control checks for maintenance activities performed under the contract.
08/13 – Ongoing	ITS Maintenance Retainer Routine Maintenance Task Orders – CCTV Camera, DMS, VD, and Ramp Meter, LADOTD, Statewide, LA. *Senior Technician.* Responsible for providing routine maintenance of statewide ITS sites including, CCTV cameras, DMS, VD, and ramp meters. Routine maintenance activities typically include inspecting site equipment, changing air filters, vacuuming dust out of a cabinet, cleaning CCTV domes, cleaning DMS face plates, and cleaning cooling fans, as well as record keeping. Responsibilities also include development of detailed checklist by device type; integration of checklist with MMS software; standardized reporting; development of routine maintenance scheduler; and coordination with statewide traffic management center (TMC), regional TMCs, and DOTD districts before, during, and after all routine maintenance activities.

16. Staff Experience:

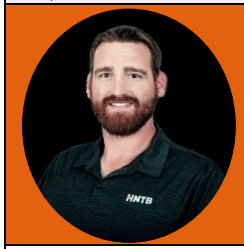
Firm employed by	HNTB		Meets MPR No. 8
Name	Kevin Schneider, PE	Years of relevant experience with this employer	1
Title	Principal Technologist	Years of relevant experience with other employer(s)	25
Degree(s) / Years / Specialization		MS / 2007 / Computer Engineering, University of Central Florida BS / 1996 / Electrical Engineering, University of Central Florida	
Active registration number / state / expiration date		PE.00095507 / FL / 03/2025	
Year registered	2022	Discipline	Computer Engineering
Contract role(s) / brief description of responsibilities.		Value Added Services (ITS Techs/Specialists)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Kevin Schneider brings more than 20 years of experience as a principal technologist having provided services to the US Army, the Florida Department of Transportation (FDOT) District 5, Walt Disney and the Orlando Regional Healthcare Systems. His experience includes development of marketing and collateral material, business development and planning efforts to include cost, risk, scope and support. He is the point of contact for technology projects and/or leads specific technical or functional portions of projects. In addition, he determines scope of work and objectives, project cost estimates, proposal and contracts preparation. He actively manages project budgets, schedules, communications, documents and research/applies business skills and consulting methodologies to collect and analyze data to determine the applicability, functionality, and viability of new technologies to clients and technology staff.
09/22 – 03/23	**Motor Carrier Size and Weight (MCSAW), Florida Department of Transportation (FDOT), Tallahassee, FL.** *Principal Network Engineer*. Responsible for re-design of the network topology and implementation of standards and controls to improve the reliability, stability, and security of the MCSAW statewide network. Developed new IP addressing architecture, including Statement of Work (SOW) and detailed implementation plan to roll out new IP addressing scheme. Developed configuration standards based on best practices and NIST controls for Layer2/Layer3 switches and pushed out to network equipment using python scripts to speed deployment and provide consistency. Built new Network Management System (NMS) using LibreNMS and setup topology maps and dashboard to provide situational awareness on backbone and individual sites. Integrated NMS with a multi-vendor opensource back-up system for network equipment to capture all configuration changes. Supported and maintained Next Generation Firewall system (NGFW) for organization. Developed a new security DMZ to provide more granular controls and isolation for publicly facing web and data transfer sites. Performed system security audits and remediation on Linux servers and security appliances using National Security Agency (NSA) Security Technical Implementation Guides (STIGs) to improve the security posture on both internal and externally facing systems.
03/16 –07/17	**Intelligent Transportation Systems (ITS), Florida Department of Transportation (FDOT) District 5, Orlando, FL.** *Senior Network Engineer/Lead Engineer.* Responsible for FDOTs District 5 ITS network migration project. Troubleshooted network management system and supporting switch upgrades and vulnerability remediation for the Central Florida Expressway Authority (CFX) as well as provided advanced troubleshooting for network related issues of ITS systems (various customers). Reconfigured local video multicast networks supporting hundreds of CCTVs to provide resiliency and reduce system downtime. Aided in winning a $22.5 million Communications General Consulting Contract with FDOT.

07/17 – 07/22	Indefinite Delivery/Indefinite Quantity (IDIQ), US Army, United States. *Pre-Sales Solutions Architect.* Responsible for a $300 million IDIQ effort supporting the US Army. The program combines data, voice, VTC and infrastructure upgrades throughout the area of responsibility. This required reviewing customer requirement documents, creating gap analysis and coordinating the development of internal engineering and subcontractor teams to support the various technical disciplines. Reviewed vendor equipment specifications to develop product sets for new programs. Assessed customer requirements and translated into design specifications. Provided "surge support" for various programs that required broad networking skill sets and have DoD 8570 IAT Level III certification requirements. Developed responses to government request for information to demonstrate how to provide unique capabilities to address customer needs. Conducted site surveys at locations throughout the United States to support proposal development activities and survey supported gathering data requirements and heat load/power requirements for HVAC design and UPS design.
01/08 – 03/16	Government Solutions, Army's National Training Center (NTC) and Joint Readiness Training Center (JRTC), United States & Germany. *Senior Network Systems Engineer.* Supported data network deployments at the NTC and JRTC. Work included L2/L3 network installation and support, configuration of Type I encryption systems (Taclanes) or classified networks, vulnerability assessments and remediation using security technical implementation guidelines, acceptance testing, and developing operations, administration, maintenance and provisioning manuals. Lead Data Engineer supporting the on-site installation, acceptance testing and user migration of the DREN and NIPRnet at the United States Military Academy at West Point. Responsible for the entire installation and user migration for over 20,000 network connections supporting the cadets and staff at West Point. Lead Data Engineer for the $22 million in network upgrades for the Army in Sembach and Wiesbaden, Germany.
12/05 – 01/08	Walt Disney Contract, Orlando, FL. *Supervisor.* Oversaw a network team responsible for supporting over 50,000 hosts across the 44 square mile of the Walt Disney World property, satellite linked ships and other sites around Central Florida. Led the team to the forefront of compliance for SLA and change process requirements. Provided tier III support for all network troubleshooting problems in Orlando LAN/MAN/WAN. Developed processes for documentation and operational procedures. Supported root cause analysis for severity I outages. Deployed authenticated, authorized and accounted using TACACS across the switched network to rein in unauthorized changes. Initiated role-based access control to limit change capabilities to the appropriate groups. Developed standards and best practices in conjunction with teams in New York and California. Provided role as technical adviser to management team for project strategy and deployment.
02/97 – 05/05	Orlando Regional Healthcare Systems, Orlando, FL. *Lead Networking Engineer.* Responsible for design, installation and support of corporate network systems supporting 15,000+ users and spanning eight hospital campuses and 40+ remote sites. Built and supported network data network for over 10,000+ users on multiple hospital campuses. Designed TI and VoIP network for 13,000 port carrier class voice network (SL100). Created a nine node private OC-III SONET ring delivering voice and data services to all campuses. Built Geo-diverse data center networks with stretch clusters and SAN over DWDM. Constructed dual homed internet connection through each data center using BGP. Developed a wireless network for bedside support of patients. Integrated SNMP based network monitoring systems with drawing packages and inventory management to enable real-time monitoring of all network systems and provide access to site level drawings with only a few mouse clicks. Built high speed PACS network to centralize radiology image processing for area hospitals and provided technical advisory to management and steering committees for strategic planning of department and disaster recovery/business continuity as well as provided network and technical training to project groups, field service techs and biomed technicians.

16. Staff Experience:

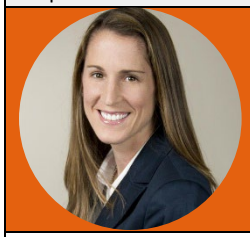
Firm employed by	HNTB			Meets MPR No. 9
Name	Michael Matzen		Years of relevant experience with this employer	6
Title	Assistant Project Administrator – Tolling/ITS/Lighting/Signals		Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			BA / 2011 / Contemporary Worship (Media Production), Baptist College of Florida Major, Graceville, FL	
Active registration number / state / expiration date			CTQP Earthwork Inspection L1, CTQP Asphalt Level 1, CTQP Concrete Field Technician L1, ACI Level 1 Testing, CTQP Drill Shaft Inspection	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities.			Value Added Services (ITS Techs/Specialists)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Matzen is an Assistant Project Administrator with 19 years of experience including in tolling, signalization, lighting and intelligent transportation system (ITS) design, construction, and implementation. Michael understands the technical and logistical requirements for implementing tolling systems on FDOT/FTE Projects, is skilled in dynamic message signs (DMS), closed-circuit television (CCTV) systems, and microwave vehicle detection system units. He is fluent in the operational programming of basic and advanced timing/cycle structures of most traffic signal controllers throughout the industry. Michael also has an advanced understanding of highway lighting operations, wiring, grounding and installation.
04/18 – Ongoing	**First Coast Expressway from East of CR16A Spur to East of CR209, Florida Department of Transportation (FDOT) District 2, Clay & St. Johns Counties, FL.** *Assistant Project Administrator.* Construction of seven miles of new limited access four-lane expressway. Project roadway work includes new construction elements including excavation and embankment, drainage, base, asphalt pavement, eight (8) new bridges, MSE Walls, lighting, ITS and three (3) toll facilities. The project lighting and ITS systems will cover the full corridor and the signals will be necessary at the new CR16A area. The project includes the replacement of the Shands Bridge.
07/20 – Ongoing	**First Coast Expressway from North of SR 16 to North of SR 21, Florida Department of Transportation (FDOT) District 2, Clay County, FL.** *Senior ITS/Tolling/Signals/Lighting Lead.* Responsible for the construction of 11.5 miles of new limited access four-lane expressway. Project roadway work includes new construction elements including excavation and embankment, drainage, base, asphalt pavement, twenty-six (26) new bridges, MSE Walls, lighting, ITS and five (5) toll facilities. The project lighting and ITS systems will cover the full 11.5-mile corridor and the signals will be necessary at three interchanges; Blanding/ SR23, Henley Road/ SR23 and CR218/ SR23. Two new diverging diamond interchanges and deep-water bridges over Black Creek are key complex elements of this project. initial concept and program launch of the largest CAV testbed in the U.S. This facility provides a unique environment for various auto makers, technology companies and others to collaborate on innovative CV/AV projects. The ultimate objective is to facilitate and accelerate technology route-to-market through innovative solutions and partnerships. The activities directly related to Smart City mobility solutions resulted in more efficient and sustainable communities.

07/20 – 06/22	SR9A/I295 at Dames Point Bridge, Lighting in Duval County District 2, FL. *Senior Inspector.* responsible for the removal and replacement of the cable stay accent lighting, aviation lights, navigational lights, back-up generator system, supporting conduit and conductors. Mike has full oversight responsibilities ensuring the Contractor installs these complex electrical systems in accordance with Contract Documents and national electric code.
06/15 – Ongoing	I–295 Express Lanes from J. Turner Butler (JTB) to SR 9B Design Build, Florida Department of Transportation (FDOT) District 2, Jacksonville, FL. *Senior Inspector in charge* of the tolling, ITS, lighting and signals for this project that will add two express lanes in each direction between the JTB Interchange and SR 9B and toll them through four overhead gantry tolling locations. The tolling locations require extensive upgrades to the ITS System in the corridor. All corridor lighting will be upgraded for the new lanes and signal improvements are to be completed at the intersection of I-295 and Gate Parkway, I-295 and Bay Meadows Road, JTB and Kernan Boulevard and JTB and Gate Parkway. Mike has full coordination and oversight responsibilities for the corridor including installation of tolling, ITS, lighting and signals. Mike also coordinates the sitework and installation of all equipment necessary for the Florida Turnpike Enterprise tolling installation contractor to install the tolling equipment.

16. Staff Experience:

Firm employed by	ARCADIS		
Name	Julie Price, AICP	Years of relevant experience with this employer	10
Title	Senior Transportation Planner	Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization		MA / 2005 /Urban & Regional Planning; BA / 2003 / Urban & Regional Planning	
Active registration number / state / expiration date		AICP #176869 / USA / Exp. 03/2024	
Year registered	2007 Discipline	Planner	
Contract role(s) / brief description of responsibilities.		Stakeholder Engagement, Outreach & Training (Engagement & Outreach Planning & Execution), Grant Writing & Support	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Price has 21 years of experience as a professional urban and transportation planner. She has worked for local and regional governments managing various programs, performing land use and transportation studies, and developing streetscape plans. Julie performs traffic analysis to mitigate negative impacts of major developments around the region. Julie identifies trends and makes forecasts related to long-range planning efforts. She surveys, workshops, and public meetings, and mediates negotiations to achieve resolutions among stakeholders and clients.
10/10 – 10/11	**Comprehensive Transportation Plan, Cobb County, Marietta, GA.** *Corridor Study Lead.* Organized and executed three focus group sessions, interviewing stakeholders and community members during the listening tour, website design and updates, and responding to inquiries via website and email. Led the Health Impact Assessment (HIA) development including stakeholder committee communication, meeting facilitation, HIA review and recommendations. Assisted with the development of existing conditions and *needs assessment*, project commendations, and *project evaluation and prioritization*.
09/14 – 07/16	**Cartersville-Bartow MPO Planning, Bartow County, Cartersville, GA**. *Planner.* Responsible for compiling a wide range of options from multiple sources, including those previously identified in plans and studies, stakeholder input, new options established through *needs assessments*, and *best practices/innovative strategies* for similar projects.
09/13 – 11/13	**Martin Luther King Jr. Drive Improvements, City of Atlanta, Atlanta, GA.** *Planner* on this *complex corridor project*. Julie coordinated with the city, project engineers, consultant teams, and subcontractors to craft and deliver relevant, cohesive messaging. Julie communicated the most relevant engineering and cost information, and effectively captures public input and comments in a way that can guide the overall project.
03/14 – 12/15	**SR 5/Bright Star Road Transportation Study, City of Douglasville, Douglasville, GA**. *Planner.* Activities include organizing and facilitating stakeholder and technical committee meetings, ongoing directed communication with these committees to receive valuable and impactful information, preparing materials and agenda for public meetings, creating and dispersing advertisements for public meetings, existing conditions and *data collection*, land use and economic analysis, *alternatives analysis, recommendations.*
06/19 – 09/21	**DeKalb Avenue Corridor Improvement, City of Atlanta, Atlanta, GA**. *Transportation Planning Lead.* for the Renew Atlanta Bond Program On-Call contract. Responsible for coordinating with project engineers and the City to ensure outreach communicates the most relevant engineering and cost information, and effectively captures public input and comments in a way that can guide the overall project. In the short-term, this project includes resurfacing, removal of a reversible lane, and addition of a bi-directional cycle track and improved pedestrian infrastructure.

04/14 – 05/16	I-285/SR 400 Interchange Reconstruction, GDOT, Metro Atlanta, GA. *Public Involvement Team Member.* Responsible for Arcadis' GDOT GEC On-Call contract including operational improvements along the I-285/SR 400 interchange. Responsibilities included *preparing materials, advertising for public information and public hearing open houses*, responding to public comment, and documentation of public information open house information and land use and development review as part of the DEIS.
10/15 – 11/21	Atlanta Downtown Connector Study, GDOT, Atlanta, GA. *Transportation Planning Lead/ Stakeholder Engagement Lead.* Responsible to review and evaluate various options to provide Connector congestion relief and improve operations. Study included identification of corridor-wide design alternatives for 8.5 miles of interstate through the heart of Downtown Atlanta. Study identified and evaluated corridor management and capacity adding solutions to provide congestion-relief and reduce driver frustration.
01/22 – 04/22	RAISE Grant Application – West Tuscarawas Street Multimodal Safety Project, City of Canton, OH. *Project Team Leader.* Responsible for *writing and developing the complete RAISE grant application*. This effort included collaborating with various City staff, helping secure letters of support, researching the project details, developing maps and charts to support the grant, developing the benefit cost analysis information, and writing the content for each criteria section.
01/2016 – 06/16	Together for Safer Roads Grant writing – North Avenue Corridor, City of Atlanta, Atlanta, GA. *Project Team Lead.* Responsible for *writing and developing complete Together for Safer Roads grant application* for the North Avenue Corridor in the City of Atlanta. This was a winning grant that provided additional technical support underscoring how smart improvements can improve the overall safety metrics on North Avenue. As a growing multimodal corridor connecting Georgia Tech, GDOT headquarters, MARTA North Avenue Station, Coca Cola world headquarters, and Ponce City Market, combining vehicles, transit, cyclists and pedestrians, the opportunities for improvement are strong.
12/18 – 04/19	BUILD Grant writing – SR 15/US 441 Widening and Reconstruction, GDOT, Rabun County, GA. *Project Team Leader.* Responsible for *writing and developing the complete BUILD grant application* for the SR 15/US 441 Widening and Reconstruction project for the GDOT. This BUILD grant application was submitted to the U.S. DOT. This effort included interviewing various GDOT staff, helping secure letters of support, researching the project details, developing maps and charts to support the grant, developing the benefit cost analysis information, and writing the content for each section for the grant application.
02/16 – 06/16	TIGER Grant writing – MLK Jr. Drive Corridor Improvement Initiative, City of Atlanta, Atlanta, GA. *Project Team Leader.* Responsible for *writing and developing the complete TIGER grant application* for the Martin Luther King Jr. Drive Corridor Improvement Initiative for the City of Atlanta. This TIGER grant application was a winning grant and was funded by the U.S. DOT. This effort included interviewing various city staff, helping secure letters of support, researching the project details, developing maps and charts to support the grant, compiling the benefit cost analysis information, and writing the content for each section.
02/17 – 09/17	SMART Study: Southwest Houston Sub-Regional Planning Study, TxDOT, Houston, TX. *Engagement Lead.* Worked for this innovative SMART (Sustainable Mobility Alternatives for Regional Transportation) study for the southwest Houston area to review drivers of transportation change and long-term needs for the future. Led *stakeholder workshop* to co-create goals, objectives, and performance measures to guide the study.
02/16 – 03/17	North Avenue Smart Corridor, City of Atlanta, GA. *Project Team Lead* for the assessment of the Atlanta Traffic Control Center, including peer review and utilization improvement recommendations. The project included development of a "smart corridor" concept for North Avenue through extensive *stakeholder coordination*.

Firm employed by	ARCADIS		
Name	Cara Hodgson Vojdani	Years of relevant experience with this employer	4
Title	Principal Transportation Planner	Years of relevant experience with other employer(s)	22
Degree(s) / Years / Specialization		MA / 2008 / Public Administration, Georgia State University BA / 2000 / Political Science and Concentration in Women's Studies, Furman University	
Active registration number / state / expiration date			
Year registered		Discipline	
Contract role(s) / brief description of responsibilities.		Engagement & Outreach Planning & Execution	

Experience dates	Experience and qualifications relevant to the proposed contract
	Ms. Vojdani is strategic, innovative, and effective communications professional with 22 years' experience leading successful, multi-faceted campaigns for state, regional, and local organizations including the City of Atlanta, Metropolitan Atlanta Rapid Transit Authority (MARTA) and Georgia Department of Transportation (Georgia DOT). For 17 years, her experience has primarily focused on the transportation industry. Her engagement approach is focused on fostering meaningful connections with stakeholders and the community through multifaceted proactive outreach.
01/19 – Ongoing	**Georgia DOT – GEC Communications, GDOT, Atlanta, GA.** *Communications and Engagement Lead*: Assisting with I-285 Westside Express Lanes communications and stakeholder and public engagement for the General Consultant (GEC) work for Georgia DOT. Coordinating communications, including videos, for the Georgia DOT I-85 Corridor Study. Led engagement and communications for Renew Atlanta DeKalb Avenue interim concept implementation and long-term design concept development.
8/13 – 11/18	**Multiple Projects, HNTB, Atlanta, GA.** *Communications Director/Department Manager:* Led a 14-member communications team providing program management, communications, public relations, outreach/ engagement, digital, and creative services to regional and state transportation agencies including MARTA, SRTA, and GDOT. Led communications and outreach activities for MARTA's Planning Department, including More MARTA Atlanta, the city's largest expansion program in 40 years. As Communications Manager, worked collaboratively with team members to accomplish the following: • Served as firm's communication program manager for major state and regional transportation initiatives including, GDOT's Georgia Express Lanes, Georgia Commute Options (GCO), Fulton County Transit Master Plan and Xpress Commuter Service Transit Demand Management marketing plan. • Led internal and external communications campaigns for Georgia Express Lanes, including the I-75 South Metro, Northwest Corridor, and I-85 Extension projects. • Led the GCO communications team, delivering strategic communications services designed to inspire commuters and employers to engage in clean commute activities. • Coordinated GCO's efforts with partner organizations, including Transportation Management Associations, transit and transportation agencies, and local governments, further raising awareness about the benefits of clean community. • Provided communications support for public outreach activities for the development of the Fulton County Transit Master Plan.

	• Coordinated development of a marketing and community engagement plan for Xpress to encourage commuters to use the transit service during Transform 285/400 construction.
01/06 – 07/13	Metropolitan Atlanta Rapid Transit Authority (MARTA), Atlanta, GA. *Manager of Communications:* Managed all day-to-day media relations activities including writing and distributing press releases, responding to media inquiries, securing positive cover for MARTA in local and national news stories, responding to emergency situations, executing communication plans and coordinating interviews with the General Manager/CEO, MARTA Board of Directors, and Assistant General Managers. Managed major communications and media outreach campaigns educating the public, customers, and partners about MARTA's mission and initiatives. Wrote content and coordinated production of MARTA's annual report, Transit Times external newsletter, and the MARTA stop internal e-newsletter. Drafted speeches for MARTA's General Manager/CEO, board members, and directors. Oversaw all commercial filming and photography on the transit system in coordination with MARTA's legal, police, and operations departments. Developed campaigns to educate partners, customers, and the community about the MARTA service and the benefits of transit. Led internal communications, including managing the Internal Communications Specialist position.
01/19 – 12/22	I-85 Corridor Study, GDOT, Gwinnett County, GA. *Communications Manager:* Activities include writing and preparing project videos, assisting with social media and supporting outreach activities.
05/19 – 01/20	DeKalb Avenue Complete Street, City of Atlanta, GA. *Communications Manager:* Led communications and stakeholder engagement for the DeKalb Avenue interim concept implementation and long-term design concept development. This work included the development of a communications plan, project materials and a stakeholder presentation. Coordinated stakeholder meetings and assisted in preparing for a public meeting to present the project concept.
01/17 – 01/18	Fulton County Transit Master Plan, Fulton County, GA. *Communications Manager:* Provided communications support for public outreach activities for the development of the Fulton County Transit Master Plan.
01/17 – 01/18	Xpress Bus Service, Fulton County, GA. *Communications Manager:* Coordinated the development of a marketing and community engagement plan for Xpress designed to encourage commuters to use the transit service during the 285/400 construction project.

16. Staff Experience:

Firm employed by	HNTB		
Name	Chris Kopp, AICP CTP	Years of relevant experience with this employer	13
Title	Transportation Planning Practice Leader	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		MS / 1997 / Civil Engineering, Northwestern University, Evanston, IL BA / 1994 / Architecture, University of Cincinnati, Cincinnati, OH	
Active registration number / state / expiration date		American Institute of Certified Planners, 2000 (#016227) AICP Certified Transportation Planner	
Year registered	2000	Discipline	Planning
Contract role(s) / brief description of responsibilities.		Grant Writing & Support	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Kopp brings more than 27 years of experience managing a wide variety of transit planning studies, most recently helping states and regions develop transit system visions and corridor plans. Chris has managed GIS software development projects to visualize transit market opportunities, prepared alternatives analyses and federal New Starts documentation, conducted economic and financial analyses of proposed projects and investment programs, and advised transit agencies as they explore strategic issues related to funding, governance, and program implementation. He has prepared documentation for $2 billion worth of federal discretionary grants. Chris has advised more than 20 transit agencies on financial issues and understands the role of public transportation in building more sustainable and livable communities and knows the issues agencies face when implementing new rail or bus rapid transit project.
11/19 – 02/20	**LA 1 Phase 2 Improvements INFRA Grant Application, Port Fourchon, LA.** *Economics Lead*: Responsible or the development of a grant application, benefit-cost analysis, and economic impact assessment for elevation of a roadway connecting the mainland with a major port serving the Gulf of Mexico oil and gas industry. The robust, defensible and well documented benefit-cost analysis results were unchallenged by USDOT reviewers and a key contributor to the project's success in the competitive federal grant program. The project was awarded an Infrastructure for Rebuilding America (INFRA) grant of $135 million in 2020, the largest award in the annual funding round. Contact: Henri Boulet, LA 1 Coalition.
07/19 – 02/20	**Merrimac Bridge BUILD and INFRA Grant Applications, WisDOT, Merrimac, WI.** *Economics Lead:* Responsible for the development of a benefitcost analysis for a bypass around the Canadian Pacific's Muskego yard to create capacity for planned intercity passenger rail improvements. The project was awarded an Infrastructure for Rebuilding America (INFRA) grant of $6.75 million in 2020. Contact: Arun Rao, WisDOT; Service Budget: $650,000; Construction Budget: $13,499,920.
05/19 – 07/19	**U.S. 285 Safety and Resilience Project BUILD Grant Application, NMDOT, New Mexico.** *Task Manager:* Responsible for the development of a benefit-cost analysis for safety upgrades to a rural highway serving the Permian Basin oil and gas development area. The project was awarded a Better Utilizing Investments to Leverage Development (BUILD) grant of $12.5 million in 2019.
02/19 – 04/19	**I-90/I-495 Interchange BUILD Grant Application, MassDOT, Westborough, MA.** *Task Manager:* Responsible for the development of a benefit-cost analysis for improvements at a major system interchange on the Massachusetts Turnpike to support a federal discretionary grant application. The project was awarded a Better Utilizing Investments to Leverage Development (BUILD) grant of $21.0 million in 2020.

02/19 – 04/19	I-69 Construction INFRA Grant Application, INDOT, Indianapolis, IN. *Task Manager:* Responsible for the development of a benefit-cost analysis for construction of the final segment of I-69 in Indiana to support a federal discretionary grant application under the Infrastructure for Rebuilding America (INFRA) program.
05/18 – 06/18	Keystone Corridor CRISI Grant Application, PennDOT, PA. *Task Manager:* Responsible or the development of a benefit cost analysis for an Automatic Block Signal (ABS) upgrade project between Park and Paoli to support a federal discretionary grant application under the FRA Consolidated Rail Infrastructure and Safety Initiative (CRISI) program.
11/15 – 05/16	TramLinkBR Financial Plan, Baton Rouge, LA. *Advisor.* Responsible for the development of a financial plan for a new streetcar line that combines a range of value capture strategies, including tax increment finance and benefit assessment districts. Chris supported the entrance of the project into the FTA Small Starts Project Development phase. HNTB developed the project's financial plan and helped the city identify $35 million of committed local funding sources.
01/19 – Ongoing	CTA Red Line Extension Program Management Services, Chicago, IL. *Financial Planning Lead.* Responsible for positioning the project to compete in the FTA New Starts process through the Project Development phase. Responsibilities include competitive grant strategy, local value capture financing revenue estimation, funding risk management, and preparation of Request for Entry into Engineering. HNTB provides program management services for the CTA RLE project — a proposed 5.6-mile heavy rail rapid transit extension of the Red Line on Chicago's Far South Side, with a total project cost of approximately $2.5B. The project will construct four new stations that feature bus connections and parking facilities, and provide a modern, efficient car storage yard and shop facility. RLE is one part of CTA's Red Ahead Program to extend and enhance the entire Red Line.
09/18 – 09/22	Metra Strategic Capital Planning, Chicago, IL. *Project Manager.* Responsible for a task order contract to provide project development, grant application support, project feasibility analysis, fare policy analysis, capital and operating cost estimates, ridership and revenue forecasting, benefit-cost analysis, Title VI/Environmental Justice equity analysis, cash flow scenarios and other services. Tasks have included development of discretionary federal grant applications that have yielded more than $30 million for Metra projects. Chris also developed a feasibility study for a proposed regional rail service between downtown Chicago and Chicago-O'Hare International Airport that evaluated competitiveness under a range of FTA and FRA funding programs.
05/18 – 09/19	South Cook Mobility Study, Cook County, IL. *Project Manager.* Providing an assessment of planning scenarios related to physical connections, transit service levels, fare policies and other policies associated with changes to the Metra Electric District and Metra Rock Island District lines in southern Chicago and Cook County. The study is applying the FTA STOPS model to evaluate the relative effects of a range of policy changes on ridership, fare revenue and net operating cost on Metra commuter rail and connecting transit services.
06/17 – 12/20	Des Moines Transit Funding Study and DART Transit Optimization Study, Des Moines, IA. *Project Manager/Task Lead.* Responsible for an evaluation of potential transit program scenarios and funding sources for the Des Moines metropolitan region. The study evaluated the financial sustainability a range of funding options to address a structural deficit in the long-term property tax revenues for the Des Moines Regional Transit Authority (DART). The project included an assessment of the potential impact of shared autonomous vehicle technology on local funding needs for fixed route bus service expansion throughout the region.

16. Staff Experience:

Firm employed by	La Terre Engineering, LLC		
Name	Seneca Toussant, PE	Years of relevant experience with this employer	3
Title	Principal/Lead Civil Engineer	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization		BS / 1999 / Biological Engineering, Louisiana State University	
Active registration number / state / expiration date		PE.36080 / LA / Exp. 09/2023	
Year registered	2011	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Stakeholder Engagement, Outreach & Training (Engagement & Outreach Planning & Execution)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Toussant has more than 22 years of civil engineering experience including program management, master planning, roadways, water and wastewater treatment, drainage, and utilities, as well as traffic control and stakeholder coordination and outreach. Mr. Toussant has successfully completed construction management, contract administration, inspection, and documentation for projects with construction budgets as small as $50K to larger and more complex improvements of up to $20M.
06/20 – 12/22	**MOVEBR Capacity Program Management, Baton Rouge, LA.** *Project Manager*: Served project manager for specialty contracts for the MoveBR Capacity program management team. Responsible for the specialty contracts program which include environmental services, geotechnical services, surveying, lighting design and landscaping services. Responsibilities included *coordination meetings*, project reporting, *stakeholder engagement and outreach*, preparing project scopes, soliciting proposals, contract negotiations, submittal coordination and submittal reviews.
08/21 – Ongoing	**Port of South Louisiana Program Management, Reserve, LA:** *Project Manager*. Part of the program management team for the Port of South Louisiana. His responsibilities includes assistance with *grant applications*, data collection and review and *stakeholder coordination* for the Port of South Louisiana Port Commission as well providing Quality Assurance and oversite..
05/21 – 05/22	**FEMA Disaster Recovery Program City of Lake Charles, Lake Charles, LA.** *Project Manager:* Served as part of the *program management* team for the City of Lake Charles FEMA Disaster Recovery Program. Provided Quality Assurance and Peer review for projects and *report deliverables* as part of the City's Disaster Recovery Program.
02/22 – Ongoing	**Louisiana Watershed Initiative LA 22 Gapping Project, Ascension, LA.** *Project Manager*: Responsible for the grant administration team which include *stakeholder outreach* and coordination, construction administration assistance, site inspections, review of contractor invoices and construction monitoring for the LA 22 gapping project.
09/22 – Ongoing	**ADAPT -Ascension Drainage Assistance Program Team, Ascension, LA.** Part of the program management team for Ascension Parish and responsibilities include overseeing the quality of construction documents, coordinating and documentation for the parish, interface with the end users and other stakeholders as required by Ascension Parish and the program management team. His responsibilities include *project management* and *program assistance*, and *coordination meetings*.

06/20 – Ongoing	Iberville Parish Louisiana Watershed Initiative Coordination, Plaquemine, LA. *Project Manager:* Responsible for assisting Iberville Parish with coordination for the Louisiana Watershed Initiative program and the three regions that contain Iberville Parish. Tracked, coordinated and attended meetings with Regions 5, 6 and 7 on the Parish's behalf and provided updates to the Parish as the program evolved. He also *prepared grant applications* and *benefit cost analysis* for the Parish for submittal to LWI for project funding.
12/14 – 03/15	Greater Lafourche Port Commission, 2035 Master Plan, Port Fourchon, LA. *Project Engineer:* Responsible for the preparation of the Greater Lafourche Port Commission 2035 Master Plan. Defined the scope of the document and researched, collected and compiled existing data and information to develop and prepare the Port's *Strategic Master Plan*. Directed efforts required for economic specialist to prepare projections and impacts to the port, state, local and federal economies. Regularly updated commission members at Port Fourchon and was responsible for *stakeholder engagement and outreach*, tenant and *stakeholder interviews* as part of the planning efforts.
11/17 – 06/20	Greater Lafourche Port Commission, Integrated Feasibility Report and Environmental Impact Statement, Port Fourchon, LA. *Engineering Lead:* Involved in Draft and Final Feasibility Report and Environmental Impact Statement (IFR-EIS) for improvements to the federal navigation project at Port Fourchon on behalf of GLPC. Responsibilities include developing the engineering appendix to address the engineering items that relate to the construction and maintenance of the tentatively selected plan (TSP). Engineering analyses were performed to develop *benefit cost analysis* and schedules of the general navigation features and environmental restoration comments of the federal project and those associated features needed to achieve project benefits. He was also responsible for *project management*, *coordination meetings* and *project reporting*.
08/11 – 10/12	Caddo Parish Regional Water/Utility District Master Plan, Shreveport, LA. *Lead Engineer:* Responsible for the preparation of this *comprehensive planning document* that would provide guidance for the sound stewardship of water resources for both parishes including *policy development*. Responsibilities included identifying historical water usage, water resources and laws, compacts and regulations that affected local water resources, identified, and evaluated, including *stakeholder engagement and outreach* for all public water systems and users in Caddo and Bossier parishes which included 46 public water systems in Caddo Parish and 25 systems in Bossier Parish.
06/20 – Ongoing	Diamond D Industries Traffic Permitting Services, Calcasieu Parish, LA. *Project Manager*: Providing traffic permitting and *stakeholder coordination* on behalf of Diamond D Industries and Entergy Louisiana with multiple LADOTD Districts and local governments throughout Louisiana. This support includes coordinating schedules, providing proper notifications, preparing plans and permits for laydown yards, access and road closure permitting, temporary traffic controls with LADOTD and the Parishes.
12/15 - 08/16	I-210 Exit Ramp Lane Addition, Calcasieu Parish, LA *Project Manager:* Responsible for *project management, coordination meetings and project reporting* and also prepared plans, including demolition, geometric drawings, signing plans, associated drainage improvements for the addition of a right turn lane at the existing Interstate Highway Off Ramp. Project included determining existing ROW and required ROW, coordinating existing utility relocations, and determining the required section based on the design criteria, roadway classification and traffic engineer's recommendations.

16. Staff Experience:

Firm employed by	LA TERRE ENGINEERING, LLC		
Name	Lyle Tynes, EI	Years of relevant experience with this employer	2.5
Title	Civil Engineer	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		BS / 2020 / Civil Engineering, Louisiana State University	
Active registration number / state / expiration date		EI.35128 / LA / Exp. 09/2024	
Year registered	2022	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities.		Stakeholder Engagement, Outreach & Training (Engagement & Outreach Planning & Execution)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Tynes is a recent graduate of Louisiana State University in Civil Engineering, and his experience includes program management and compiling construction packages for a wide range of projects including preparing drawings, specifications, and other construction documents as well as coordinating with clients and stakeholders.
08/21 – Ongoing	**Port of South Louisiana Program Management, Reserve, LA:** *Project Engineer*. Part of the program management team for the Port of South Louisiana. His responsibilities includes assistance with *grant applications*, data collection and review and *stakeholder coordination* for the Port of South Louisiana Port Commission.
09/22 – Ongoing	**ADAPT -Ascension Drainage Assistance Program Team, Ascension, LA.** *Project Engineer*. Part of the program management team for Ascension Parish and responsibilities include overseeing the quality of construction documents, *project coordinating* and documentation for the parish, interface with the end users and other stakeholders as required by Ascension Parish and the program management team.
02/22 – Ongoing	**Louisiana Watershed Initiative LA 22 Gapping Project, Ascension Parish, LA.** *Project Engineer*: Part of the *grant administration* team for the project and responsibilities include *stakeholder engagement and outreach*, construction administration assistance, site inspections, review of contractor invoices, and construction monitoring for the LA 22 gapping project.
08/21 – 12/22	**MoveBR Capacity Management Program, Baton Rouge, LA.** *Project Engineer*: Responsible for *coordination meetings*, *project reporting*, *stakeholder engagement and outreach*, drafting and permit drawing support for required USACE permitting for roadway improvement projects as part of the capacity management program for the City of Baton Rouge's MoveBR Capacity Program.
08/21 – Ongoing	**Diamond D Industries Traffic Permitting Services, Calcasieu Parish, LA.** *Project Engineer*: Providing traffic permitting on behalf of Diamond D Industries and Entergy Louisiana with multiple LADOTD Districts and local governments throughout Louisiana. This support includes *work zone management*, coordinating schedules, providing proper notifications, preparing plans and permits for laydown yards, access and road closure permitting, temporary traffic controls with LADOTD and the Parishes.

09/21 – 3/22	**East Baton Rouge Parish Subdivision Review, Baton Rouge, LA .** *Project Engineer*: Provided review services for East Baton Rouge Parish for residential subdivision plans for conformance to the East Baton Rouge Parish Uniform Development Codes. His responsibilities *included project management of report deliverables*, *project coordination and project reporting* to East Baton Rouge Parish Subdivision Engineering Division.
03/23 – Ongoing	**Sharp Road (Florida Blvd to Old Hammond Hwy), Baton Rouge, LA.** *Project Engineer*: Providing roadway design services including preparation of existing and proposed drainage maps, subsurface drainage design and preparation of preliminary and final plans, including typical sections and plan and profile sheets.
01/21 – Ongoing	**Louisiana Watershed Initiative Town of Maringouin Improvements, Maringouin, LA.** *Project Engineer*: Responsible for preparing LWI *grant applications, benefit cost analysis*, preparation of preliminary and final construction documents for the Town of Maringouin Drainage Improvements project. His responsibilities include preparation of preliminary and final plans, permitting and permit coordination with DOTD, bidding and construction administration.
10/21 – Ongoing	**Steep Bayou Watershed Flood Prevention Plan, Rayville, LA.** *Project Engineer*: Responsible for the hydrologic and hydraulic modeling of Steep Bayou using HEC-RAS for the NRCS Watershed flood prevention plan. He is leading alternative analysis efforts and responsible for preparing probable opinions of construction cost and *benefit cost analysis* for each alternative.
3/22 – Ongoing	**Ward Creek at Siegen Lane Channel Improvements, Baton Rouge, LA.** *Project Engineer*: Responsible for *stake holder coordination*, utility coordination and permitting with DOTD for the proposed channel improvement of Ward Creek at Siegen Lane in Baton Rouge, Louisiana. His responsibilities also include preparation of permits and permit figures.
1/22 – Ongoing	**Louisiana Watershed Initiative White Castle Canal Drainage Improvements, White Castle, LA.** *Project Engineer*: Assisted in the preparation of *grant applications* for the White Castle Canal Drainage Improvement project for Iberville Parish. His responsibilities included preparation of reports, cost estimates and *benefit cost analyses* and also preparation of preliminary and final construction documents for 4.5 miles of channel improvements for the White Castle Canal.
6/20 – Ongoing	**Bayou Maringouin Dredging Statewide Flood Control Project, Maringouin, LA.** *Project Engineer*: Prepared *grant applications* and assisted with the hydraulic modeling of the existing conditions of the Bayou Maringouin watershed using HEC-RAS. He was also responsible for creating and organizing an inventory of properties located within the inundation boundaries and preparing cost estimates and *benefit cost analyses* to support the *grant application*.
3/22 – Ongoing	**Early Warning Systems and Rain Gauges Project | Livingston Parish, LA.** *Project Engineer*: Provided engineering services for the installation of 24 stream gauges and 46 weather stations to provide Livingston Parish with critical lifesaving tools and technology to collect data and make flood predictions in advance of storms to monitor and forecast rain and flooding events, analyze risks, disseminate timely and authoritative warnings and active emergency preparedness and response plans. His responsibilities included *stakeholder engagement*, *outreach and training*, assistance with preparation of operation plans and *policy*, preparing cost estimates and *Phase 2 benefit cost analysis*.

16. Staff Experience:

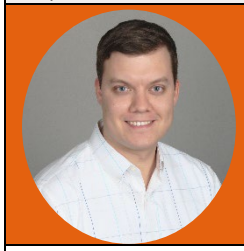
Firm employed by	ARCADIS		
Name	Jaap Tigelaar	Years of relevant experience with this employer	15
Title	Certified Project Manager	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		MS / 2007 / System Engineering and Policy Analysis, Transportation & Logistics, Delft University of Technology	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Multimodal)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Tigelaar has 14 years of experience as Transportation Engineer. He started his career in the Netherlands bud made a transfer to the US in February 2019. Since bikes and pedestrians always play an important role in Dutch projects, he had experience on safe and convenient alternatives for mixed used corridors. At the 2020 Georgia Walk Summit, Jaap did a presentation on the "bicycle street" (In Dutch fietsstraat). This is a typical Dutch solution for a mixed used road, optimized for bikes and where cars are considered as "quests." Jaap has experience working on complete street projects, traffic safety projects, corridor studies and planning studies.
10/19 – 10/22	**Dekalb Avenue Safety Improvement Complete Street Project, Atlanta Department of Transportation, Atlanta, GA.** *Traffic Lead*: The purpose of this project was to improve multimodal access, mobility, operations, and safety along Decatur St/Dekalb Ave between residences, businesses, and Marta Transit Rail Line. The project included improvements for all users - pedestrians, bicyclists, transit, and vehicles. A short-term scope included a bike path and *Improving the Bike and Pedestrian Crossings* along a Dekalb Avenue between the intersections with Oakdale and Hurt Street. In Vissim and Synchro, the impact of the short-term solution and the conflict between vehicles and bikes was investigated. For the long-term, bike facilities along the entire corridor were upgraded.
02/19 – 07/21	**Sun Trust Park, Cobb County Police Department and DOT, Cobb County, GA.** *Traffic Lead:* The scope of this project was to update the *Special Event Traffic Management Plan* for the Cumberland Area including Sun Trust Park in Cobb County. This included the analysis and recommendations on managing the intersections, roadway, car parking, bus parking, *Mobility on Demand* (Uber driver drop-off and pick-up), and pedestrian operations, to ensure safe and efficient gameday operations for attendees and the travelling public.
02/22 – Ongoing	**CHCNGA TPO 2050, Chattanooga-Hamilton County/North Georgia Transportation Planning Organization, TN+GA.** *Project Manager:* Supporting the development of the 2050 Regional Transportation Plan (RTP). The 2050 RTP will identify transportation needs, opportunities, and investment priorities for the TPO region. The scope of this project includes a road safety audit, to identify potential safety challenges along major facilities and identify counter measures for corridors and intersections with safety concerns. Supported the development of a smart corridor network, ripe for future technology improvements. Special attention went to analyzing potential signal upgrades to incorporate smart corridors for public transport, bicyclists, and pedestrians to *Improve bike and Pedestrian Crossings* and provide better *Transit Management*. *Road Weather Management* was suggested as smart corridor upgrade for bicyclists. This is a technique implemented in the Netherlands, where bicyclist gets priority at signals when it is raining.

09/09 – 10/19	**Development Station Area Driebergen-Zeist, Dutch Railroad Authority, Netherlands.** *Traffic Lead:* The station of Driebergen-Zeist is a transport hub where several transport modalities meet in one place, including trains, motor vehicles, bikes, and pedestrians. Created a completely new design of the rail tracks and rail overpass, train station, and road structure. Conducted a complete analysis of all the converging traffic in the station complex and immediate area, modelling and optimizing the interaction of various transport mechanisms safely and without impacting the environment too much. This included *Traffic Signal Coordination* for all signals in the study area, to prevent congestion under the overpass or spill back at the bike crossings, and *Transit Management* with signal preemption for busses to minimize delays at the signals. Because of the high bike and ped volumes near the train station, special attention went into the crossings. *Bike and ped crossings were improved* with special colors and on plateaus for better recognition and at locations with signals, signal timing was optimized to reduce waiting times for bikes. For through bikes a separate bi-directional bike path was created. Since the bike storage was created under the train tracks, a special bike path was designed leading into it to minimize travel times for multi modal travelers. During the construction, Arcadis did the *Work Zone Management*. This included coordination with constructor and road authorities, reviewing the work zone plans, (temporary) signal plans and verify the actual work zone to check the traffic safety for all modalities.
02/18 – 12/18	**Bicycle Storage Koningin Julianaplein, City of The Hague, Netherlands.** *Traffic Lead:* The purpose of this study was to develop the preferred alternative for a safe and optimal layout of Koning Julianaplein (Queen Juliana Square) at Bezuidenhoutse Road in The Haque (Netherlands). The *Improved Bike and Pedestrian Crossing* was located next to a new bicycle storage for 8,000 bikes near the Central Train Station in The Hague that would provide a significant higher bike volume at the Koningin Julianaplein. To analyze the conflict of cars, trams, pedestrians, and bicycles, Jaap and his team analyzed the existing and future intersection alternatives in a Vissim model, including vehicle actuated traffic signals with *Transit Management* (pre-emption for trams). The City of The Hague implemented the preferred alternative.

16. Staff Experience:

Firm employed by	HNTB		
Name	Nick Seling, PE	Years of relevant experience with this employer	1
Title	Transportation Engineer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		BS / 2016 / Civil Engineering (Minor in Spanish), Ohio State University	
Active registration number / state / expiration date		PE. 86747 / OH / Exp 12/2023	
Year registered	2022	Discipline	Professional Engineer
Contract role(s) / brief description of responsibilities.		TSMO Strategy & Solution (Multimodal)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Seling is an engineer in the Traffic group currently working on the Columbus Traffic Signal System. He gained construction management experience working for the City of Columbus. Nick is familiar with AutoCAD, MATLAB, and GIS.
01/22 – Ongoing	**Columbus Traffic Signal System (CTSS) Design Phase F, Columbus, OH.** *Project Engineer.* Responsible for addressing City comments. HNTB is providing engineering services in support of design and system integration during the migration of the existing CTSS to an open architecture that can serve central Ohio stakeholders with system connectivity and interoperability. The desired outcome is to transition the existing CTSS to a new software and hardware package maximizing the existing infrastructure with the use of recent investments of CTSS Phase A project based on the November 2005 Columbus Traffic Signal System Assessment and Strategic Plan.
03/15 – 01/22	**Columbus Traffic Signal System Construction Phases C, D and E, Columbus, OH.** *Project Engineer.* Tasked with managing construction for the City of Columbus. Working with contractors and other government agencies, Nick oversaw a team of construction inspectors and ensured compliance with plans and contract documents. He led progress meetings, directed field changes, and created project as-built documentation. Nick also served as the Construction Division's coordinator for fiber optics on other projects that tied into the CTSS network.
07/19 – 12/21	**Smart Columbus Connected Vehicle Environment, Columbus, OH.** *Project Engineer.* Tasked with managing construction of new infrastructure to support the Connected Vehicle Environment project, including the installation of fiber optic drop cables and Roadside Units at 78 intersections throughout the city. Nick worked closely with the City's Traffic Operations department and the prime contractor in order to meet tight testing deadlines and mitigate material delivery delays, ensuring that project milestones were met.
06/17 – 06/19	**COTA Cleveland Avenue Bus Rapid Transit, Columbus, OH.** *Project Engineer.* Supported the development of COTA's Cleveland Avenue Bus Rapid Transit corridor. New bus stops were installed at over sixty locations connecting downtown Columbus and the Polaris area on the city's north side, and equipment was installed at traffic signals along the route to enable traffic signal priority/preemption applications. Nick worked on the construction of the physical infrastructure as well as the traffic signal tie-ins to the CTSS network, provided regular construction updates to the FTA, and helped ensure that no major delays impacted this high-profile project.

01/17 – 01/22	Reach Boulevard Edgar Waldo Way, and Generations Pass; Lucas and Cherry Street Extensions; Franklinton Curb Extensions, Columbus, OH. *Project Engineer.* Responsible for managing construction of new roadways and arterial street rehabilitations. Nick administered the construction of new streetscapes, including waterlines, storm sewers, and streetlights, and coordinated with other City departments and private owners to resolve field conflicts and resident concerns.

16. Staff Experience:

Firm employed by	ARCADIS			Meets MPR No. 4
Name	Ari Deitch, PE, PTOE, PTP, RSP	Years of relevant experience with this employer	8	
Title	Senior Traffic Engineer	Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization		BS / 2012 / Biological Engineering, Louisiana State University		
Active registration number / state / expiration date		PE.0041842 / LA / Exp. 03/2024; PTOE #4346 / USA / Exp. 11/2023 PTP #690 / USA / Exp. 07/2025; RSP #37 / USA / Exp. 12/2024		
Year registered	2017	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities.		Value Added Services (Traffic Engineering), TSMO Strategy & Solutions (Multimodal)		

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Deitch is a Senior Traffic Engineer and Project Manager specializing in traffic engineering studies and design, traffic safety, transportation management, multimodal improvements, and conceptual roadway design. Mr. Deitch has experience managing and working on a wide range of transportation projects for LADOTD, and other DOTs and municipalities across the country, pertaining to intersection and corridor studies, signal warrant analysis, access management, ITS design, pedestrian and bicycle improvements, complete streets, transportation management plans, Stage 0 feasibility studies, NEPA studies, signal design, and signing and marking design. He has experience with traffic analysis software's and methods and is proficient in Highway Capacity Software, Synchro, Vistro, Vissim, Sidra and MicroStation software.
04/16 – 09/18	**New Orleans Pedestrian Stage 0 Safety Feasibility Study, LADOTD, Orleans Parish, LA.** *Project Manager.* Responsible for assessing existing and future safety deficiencies related to *pedestrian and bicycle modes* and *selecting safety countermeasures for 20 high-risk locations*. Developed design drawings for proposed short-term and long-term improvement phases and conducted *benefit-cost analysis* to inform project prioritization. Conducted safety analysis using *Highway Safety Manual predictive methods*. Organized and lead project stakeholder meetings to review alternatives, obtain feedback, and develop *context sensitive solutions*. Completed Stage 0 documentation including Preliminary Scope and Budget and Environmental Checklists for all 20 intersections.
02/18 – 06/21	**Baton Rouge Pedestrian and Bicycle Safety Action Plan and Road Safety Assessments, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer.* Responsible for *assessing existing and future safety deficiencies* related to pedestrian and bicycle modes at identified high-risk intersections and segments in East Baton Rouge Parish. Assisted with the development of screening criteria to identify high priority locations with a history of pedestrian and/or bicycle crashes. Participated in *Road Safety Assessments (RSAs)* at 10 priority locations to identify and evaluate safety deficiencies and *develop safety countermeasures* to *improve safety for pedestrians and bicyclists*.
01/18 – 12/18	**US 377 from SH 170 to IH 820 ITS Design, TxDOT; Fort Worth, TX.** *Traffic Engineer*. Responsibilities included the *development of ITS concept plans* to refine the ITS strategies recommended in the ITS Master Implementation Plan and North Central Texas ITS Deployment Plan. The project scope included field review to inventory the existing equipment along the corridor, an infrastructure gaps assessment to identify where additional or updated ITS equipment is needed, and development of ITS concept plans that detail the equipment type, location, quantities, and cost required to address the identified gaps and satisfy the project goals.

04/19 – 12/19	**Traffic Signal Design IDIQ - EBR Signal Upgrades and Design Plans, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer of Record.* Responsible for supervisory tasks and oversight of this project involving *field signal inventory* and the creation of updated *signal design plans and quantities* for 39 intersections in East Baton Rouge Parish.
02/15 – 09/18	**Traffic Engineering IDIQ - US 71 Corridor - Phase II and III Traffic and Safety Corridor Study, LADOTD, Rapides Parish, LA.** *Project Manager.* Responsible for overseeing and managing project tasks including *traffic data collection*, *signal warrant analysis*, *traffic analysis*, crash analysis, alternative and countermeasure development, predictive safety analysis, and conceptual drawings.
08/19 – 02/20	**Traffic Engineering IDIQ - US 61 Access Management and Corridor Study, LADOTD, East Baton Rouge Parish, LA.** *Senior Traffic Engineer.* Project purpose was to evaluate the effectiveness of proposed access management improvements along US 61 and identify feasible alternatives to maximize operational and safety benefits. Provided technical oversight for *traffic analysis* using Highway Capacity Software 7, *signal warrant analysis*, and *predictive safety analysis*. Assisted with the development of *construction cost estimates* and *benefit-cost analysis*.
04/19 – 12/19	**US90 Traffic Signal Timing Upgrades, LADOTD, Lafayette Parish, LA.** *Technical Lead* of project tasks involving *traffic data collection and analysis*, *signal inventory*, peak period determination and observations, warrant analysis, travel time runs, *traffic signal timing upgrades* using Synchro 10 software, and development of updated TSI forms following latest LADOTD standards.
02/15-01/18	**Traffic Engineering IDIQ - LA 3105 (Green Acres to LA 72) Corridor Study, LADOTD, Bossier Parish, LA.** *Traffic Engineer.* Responsible for development/evaluation of existing and future year conditions using a *calibrated microsimulation model (Vissim)*. Designed alternatives for phased implementation based on identified needs and input from local stakeholders including medians, restricted intersections, roundabouts, roadway widening, and *signal timing enhancements*.
07/15 – 12/18	**I-85 Express Lanes Extension, GDOT & SRTA; Gwinnett County, GA.** *Traffic Engineer.* ARCADIS Team provided design services to support Georgia DOT (GDOT) and Georgia State Road and Tollway Authority's (SRTA) initiatives to extend 10 mile of newly constructed toll lanes north of the existing I-85 Express. Mr. Deitch was responsible for assisting with the *development of ITS design plans* that utilized conventional ITS, Open Road Tolling Infrastructure, and a Generator Backed Power Systems.
07/14 – Ongoing	**Pete's Highway Traffic Study and Environmental Assessment, LADOTD, Denham Springs, LA.** *Traffic Engineer.* Responsible for *traffic analysis* of proposed alternatives using Vissim software. Played a key role in the development of preliminary *roadway design drawings*, incorporation *LADOTD's Complete Streets Policy*, and implementing *enhanced pedestrian safety measures* such as high visibility crosswalks. Work involves completing an Environmental Assessment and providing traffic engineering services related to *improving operations and safety* along Range Avenue at the I-12 interchange. Conducted *signal warrant analysis* and developed *optimized timing plans* for proposed improvements.
02/15 – 11/17	**Traffic Engineering IDIQ - Intersection Feasibility Study - Evangeline Thwy, Johnston St, & Louisiana Ave, LADOTD, Lafayette Parish, LA.** *Traffic Engineer:* Responsible for *review of existing crash data*, *traffic operations analysis*, *signal warrant analysis* and *development of design alternatives*. Objective is to develop alternatives for the intersection of Evangeline Thruway (US 167/90) and Johnston Street (US 167) / Louisiana Avenue (LA 94) that will *improve safety and mobility*. Evangeline Thruway consists of two one-way roadways with three lanes in each direction. Three alternatives for each intersection at Johnston Street / Louisiana Avenue were developed based on the results traffic and safety analysis.

16. Staff Experience:

Firm employed by	ARCADIS			Meets MPR No. 4
Name	Kester Hollier, PE, PTOE		Years of relevant experience with this employer	2
Title	Senior Traffic Engineer		Years of relevant experience with other employer(s)	16
Degree(s) / Years / Specialization			BS / 2004 / Civil Engineering, Louisiana Tech University	
Active registration number / state / expiration date			PE.034304 / LA / Exp. 03/2025; PTOE #3928 / USA / Exp. 11/2024	
Year registered	2009	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities.			TSMO Strategy & Solution (Service Layer / Tactical Plans)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Hollier possesses a wide breadth of experience in traffic engineering studies and design including feasibility studies, intersection and corridor traffic studies, signal timing and design, roadway design, complete street improvement projects, traffic modeling and analysis, transportation safety, and construction management and inspection. Working on a wide variety of projects from the planning and conceptual phases to the design and construction phases, has given him the experience to help identify the needs and requirements for projects. This experience allows him to understand stakeholders ranging from local public agencies to state DOTs and helps provide expertise in achieving successful solutions for a variety of projects. **Mr. Hollier meets MPR #4 and has completed LADOTD Traffic Engineering Process and Report Training.**
11/20 – Ongoing	**I-10 CMAR – Traffic Engineering Services, LADOTD, East Baton Rouge Parish, LA.** *Project Manager.* Responsible for traffic engineering tasks including development of permanent signing plans, *traffic signal plans*, interchange modification reports, *and transportation managemnet plans* for the widening of I-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. Extensive historical crash and safety analysis is being performed in support of the IMR and TMP. One critical component of the project is *maintaining traffic during the construction* of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to *minimize delay*. Signal timing plans are also being developed for implementation along alternate routes for *real time traffic operation monitoring*.
03/21 – 03/22	**City of Mandeville Pedestrian and Bicycle Plan, New Orleans Regional Planning Commission, Mandeville, LA.** *Project Manager*. Responsible for the development of an update to the Pedestrian and Bicycle Plan for the City of Mandeville and St. Tammany Parish. Tasks included existing data collection, field inventories, and land-use research to determine proposed maintenance and new projects for the *accessiblity and connectivity to different parts of the study area for multi-modal users*. Provided a draft *complete streets policy* for the City of Mandeville and provided the project prioritization rankings for projects for future implementation.
11/17 – 07/20	**LA 466 (5th Street) Improvements Traffic Study, City of Gretna, Jefferson Parish, LA.** *Project Manager / Senior Traffic Engineer*. Responsible for the *traffic study and impacts* for the proposed *complete streets improvements* along the LA 466 corridor between LA 23 and Richard St. in Gretna, Louisiana. Tasks included data collection along the corridor and at designated intersections, safety and crash analysis along the corridor, trip generation/land use and performing existing traffic analysis and future traffic analysis for proposed final alternative. The traffic study was prepared to follow the Louisiana Department of Transportation and Development's *Traffic Engineering Process and Report Guidelines*. The project also included a stand-alone *pedestrian study* along the corridor at designated intersection and the design of *accessible pedestrian signals* at signalized intersections.

11/14 – 08/17	**Williams Boulevard Traffic Signal Improvements, City of Kenner, Kenner, LA.** *Traffic Engineer*. Responsible for the *design and timing of traffic signals* along the Williams Blvd. (LA 49) corridor in Kenner, Louisiana for pedestrian improvements. Intersections included Airline Hwy. (US 61), 25th Street, 21st Street, and W. Metairie Ave. Reviewed geometric layouts and sidewalk layouts for pedestrian improvements.
08/13 – 05/14	**Mississippi Service Road 42 Traffic Signals, MDOT, Petal, MS.** *Project Manager / Traffic Engineer*. Responsible for *traffic engineering design*, *layout*, and *plan preparation for actuated traffic signal designs and interconnection* according to Mississippi Department of Transportation standards along MS 42 near Petal, MS.
10/20– Ongoing	**MOVEBR Terrace Ave. (Highland Rd. – Perkins Rd.), City of Baton Rouge, Baton Rouge, LA.** *Project Manager*. Responsible for the traffic study focused on *traffic signal warrant analysis*, *HAWK signal warrant analysis*, and *crosswalk analysis* at several locations along Terrace Ave. in Baton Rouge, LA. Developed traffic signal removal plans and sign plans for pedestrian and bicycle improvements for a more complete streets section along the corridor.
10/18 – 01/19	**LA 22 Traffic Circulation and Corridor Analysis, NORPC, St. Tammany Parish, LA.** *Senior Traffic Engineer*. Responsible for the development of *three future alternatives* along Northshore Boulevard between I-12 and US 190 in Slidell, LA. Managed the *data collection* process and peak period observations to determine existing traffic patterns as well as the *safety analysis* along the corridor. Developed three alternatives that used a combination of *traffic signal retiming*, J-turns, and roundabouts to provide better *access management* along Northshore Boulevard as well as improve traffic flow in the corridor for current and proposed future conditions with consideration given to proposed future developments using trip generation and land use analysis.
01/10 – 04/11, 07/13 – 01/14	**Stumberg Lane Extension, City of Baton Rouge Green Light Plan, East Baton Rouge Parish, LA.** *Traffic Engineer*. Responsible for the *design of new traffic signals* at US 61 (Airline Highway) and LA 73 (Jefferson Highway) for the extension of Stumberg Lane in Baton Rouge, LA. Also, responsible for the *design and layout of the fiber optic interconnect* along the proposed extension.
11/07-12/08	**Marathon Oil Access/US 61 Modification, LADOTD, Gary, LA.** *Traffic Engineer*. Responsible for the design of a new entrance and turning lanes for US 61 (Airline Hwy.) into the Marathon Oil Refinery in Gary, LA. Responsible for the traffic analysis and Traffic Impact Study as well as the *traffic signal design and layout*.
05/09 – 07/13	**LA 23 Widening (Lapalco Blvd. – Engineers Rd.), LADOTD, Jefferson and Plaquemines Parishes, LA.** *Traffic/Civil Engineer*. Responsible for the *road design and geometrics* for the widening of LA 23 in Jefferson and Plaquemines Parishes between Lapalco Blvd. (LA 428) and Engineers Rd. (LA 3017). Developed *traffic analysis* for the *traffic signal timing* and required turn bay lengths at intersections. Developed *traffic signing plans*, *pavement marking layouts* and *temporary traffic control plans*.
10/10 – 07/15	**Barriere Road Feasibility Study/Traffic Study, US Department of Defense, Plaquemines Parish, LA.** *Civil/Traffic Engineer*. Responsible for the geometric layout and design of the *realignment alternatives* of Barriere Rd. between LA 23 to the US Naval Air Station. *Developed and reviewed traffic analysis* for arrival and departure patterns for the South US Naval Air Station entrance gates.

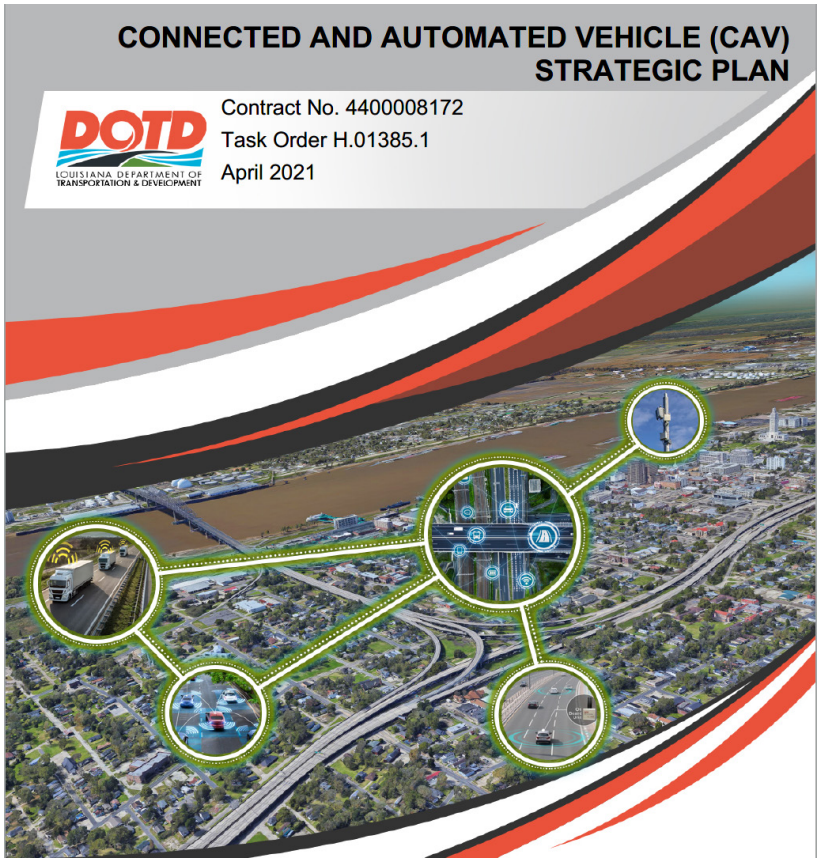
16. Staff Experience:

Firm employed by	ARCADIS		
Name	David Ward, GISP	Years of relevant experience with this employer	19
Title	GIS Program Manager	Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization		BA / 1999 / Environmental Studies, Eckerd College	
Active registration number / state / expiration date		Geographic Information Systems Professional (GISP) 51378 / Exp. 4/25/2025	
Year registered	2011 Discipline	Geographic Information Systems Professional (GISP)	
Contract role(s) / brief description of responsibilities.		Value Added Services (GIS & Data Analytics)	

Experience dates	Experience and qualifications relevant to the proposed contract
	Mr. Ward has extensive experience as a project and task manager, Geographic Information Systems (GIS) analyst, database developer and administrator, and with experience in GIS development, implementation, and integration, database modeling and development, asset and work order management systems integration and development, environmental policy support, marine science analysis and modeling, transportation system modeling and analysis, utilities infrastructure modeling, information management, and enterprise information systems design and development. His technical experience is in the areas of ArcGIS, ArcGIS Server, ArcSDE, SQL Server, and Oracle.
1/18 – 6/25	**IRAIS & RCI Next using Esri R&H, Florida Department of Transportation (FDOT), Tallahassee, FL.** *Program Manager*: Leading the database architecture efforts to develop a statewide dual carriageway system, in addition to locating existing Roadway Characteristics Inventory data on the new network. Supports the training and knowledge transfer efforts and is responsible for ArcGIS Portal, Event Editor, ArcGIS Enterprise, and application/tool development using an agile program delivery method.
2/19 – 6/23	**HPMS & CPM Reporting using Esri Roads and Highways (FY2019 – FY2022), Louisiana Department of Transportation and Development (LADOTD), Baton Rouge, LA.** *Program Manager:* Provided critical data translation and quality assurance/quality control support for the April and June Highway Performance Monitoring System (HPMS) reports submitted to the Federal Highway Administration (FHWA). Responsible for translating linear referenced event data from one route network to another, validating and cross-checking event data against FHWA HPMS guidelines, and formatting the submittal files appropriately.
2/19 – 6/24	**Enterprise Systems Integration w/ Esri Roads and Highways, Louisiana Department of Transportation and Development (LADOTD), Baton Rouge, LA.** *Program Manager:* Provided Agile project management techniques, data analysis, and systems design consulting in support of LADOTD's mission to integrate enterprise business systems with their Roads and Highways Implementation. MS2, Deighton dTIMS, Agile Assets, and the State's crash data systems are being integrated with Roads and Highways to facilitate data sharing, data management, and federal reporting (HPMS & CPM).
9/16 – 1/20	**AASHTOware SafetyAnalyst Implementation and Integration, Arizona Department of Transportation (ADOT), Phoenix, AZ.** *Project Manager:* Responsible for Integrating SafetyAnalyst with ADOT's Enterprise GIS to leverage temporality and changes over time to the road segments and other data values. SafetyAnalyst is also integrating the Safety Data Mart (SDM) and other enterprise databases for the required data values for SA analysis modules. Used an Agile approach to develop and integrate systems to support statewide crash and safety analysis.

1/17 – 12/17	Deighton dTIMS Pavement and Bridge Management Integration w/ Esri Roads and Highways, Indiana Department of Transportation (InDOT), Indianapolis, IN. *Project Manager:* Responsible for a feasibility study and implementation plan to integrate the Deighton dTIMS pavement and bridge management programs with InDOT's existing R&H. Provided background and training to Deighton personnel to understand the touchpoints between R&H and dTIMS through ArcGIS Server REST endpoints and the enterprise database. Systems development and architecture design to support the development of the next generation of dTIMS software.
3/17 – 6/22	Nevada DOT Enterprise GIS Implementation using Esri R&H, Nevada Department of Transportation (NDOT), Carson City, NV. *Program Manager:* Responsible for the assessment, design, and implementation of Roads & Highways linear referencing for Nevada Department of Transportation (NDOT). Led efforts for initial discovery and needs assessment that capture current conditions and desires for future functionality and developing a plan for enterprise implementation. Utilized a customized Agile Project Management system to direct team's efforts via user story generation to track task work.
1/11 – 12/11	Arizona Safety Action Plan (ASAP), Arizona Department of Transportation (ADOT), Phoenix, AZ. *Senior Systems Analyst:* Responsible for the development and analysis of statewide crash information to support the development of a Safety Action Plan for ADOT to minimize the impact of fatalities and serious injuries throughout the state. Conducted detailed historical analysis of crash information to establish trends within the emphasis areas of the SHSP. Performed business process reviews and analysis to reengineer ADOT's workflows and methodologies to better support the State's safety mission.
10/18 – 9/20	Enterprise Implementation of Esri Roads and Highways and Road Log Development, Montana Department of Transportation (MDT) | Helena, MT. *Program Manager:* Leveraging the Agile method to led the team through the implementation of an enterprise linear referencing system using Esri Roads & Highways. Developed the database schema and model in Oracle & ArcSDE to support the LRS and directed the efforts for data migration and business process workflow development. Responsible for the overall program including the development of a Statewide Road Log (Straight-Line Diagram Reporting).
1/16 – 9/16	HPMS & CPM Reporting FY2015 - FY2016 using Esri Roads and Highways LRS, Arizona Department of Transportation (ADOT), Phoenix, AZ. *Project Manager:* Responsible for the Highway Performance Monitoring System (HPMS) and Certified Public Mileage (CPM) federal reporting requirements for ADOT FY2015 & FY2016. Oversaw the development and evaluation of sample panel sufficiency, as well as the workflow established to help team members efficiently extract roadway characteristic information from construction plans. Kept the team on track with the federal deadline and made sure the use of external business system datasets, such as traffic and pavement management, were fully integrated with Roads & Highways.
1/12 – 12/12	Traffic Control Asset Inventory Analysis – MUTCD, Tennessee Department of Transportation (TDOT), Nashville, TN. *Principal Designer:* Responsible for an alternatives analysis and system design for enterprise systems and business processes that incorporates the State's Linear Referencing System, LiDAR, Asset Inventory, and financial Work Management System into a replacement system that supports asset management and MUTCD compliance for all DOT assets. System included field/mobile applications as well core enterprise RDBMS and management applications. Solution centralized Asset Management across all TDOT Regions.
5/16 – 12/21	Enterprise Implementation of Esri Roads and Highways, Wyoming Department of Transportation (WYDOT), Cheyenne, WY. *GIS Program Manager:* Worked between the client and team to support the implementation of an enterprise advanced linear referencing system using Esri Roads & Highways. Also, works on the data modeling and translation efforts, workflow development, Event Editor web map configuration, and general support.

Sections 17



AUTONOMOUS COMMERCIAL MOTOR VEHICLE (ACMV) POLICY

Contract No.4400008172
Task Order H.012845.1

"The future of mobility is changing, and it's our responsibility to ensure that future works in the best interest of our residents and visitors alike," said Steve Glascock, former LADOTD ITS Director. "This CAV plan presents a clear path forward in establishing Louisiana as a next-generation transportation leader."

17. Firm Experience:

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	ITS, Traffic, Planning
Project name	**TSMO Program Plan and Implementation Support**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Texas Department of Transportation (TxDOT)
Project location	Various Locations, TX	Owner's Project Manager	Barbara Russell
Owner's address, phone, email	9500 N. Lake Creek Pkwy., Austin, TX 78717, 512.506.5116, Barbara.Russell@txdot.gov		
Services commenced by this firm (mm/yy)	05/19	Total consultant contract cost ($1,000's)	$1,976
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$376

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

Firm Members Involved: Akhil Chauhan, Marwan Abboud, Shahram Malek, Chris Hilyer, Koushik Arunachalam, Paul Hsu, Samit Deo

In 2018, Arcadis was selected by TxDOT to perform services for the Traffic Operations Division to support statewide needs. Arcadis is working with six TxDOT districts that includes Austin, San Antonio, Corpus Christi, San Angelo, Laredo, and Pharr Districts.

The work consists of ITS planning services including the ***preparation of TSMO program plans***, Concept of Operations for TSMO mobility strategies, ITS master plans, regional ITS architectures, analysis, preliminary designs, implementation plans, and related documents.

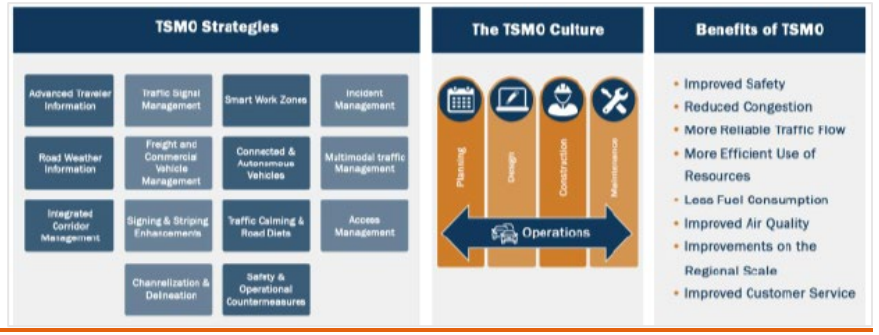
Arcadis developed and executed a streamlined process to develop the ***TSMO program-level and operational-area-level actions.*** The six program areas selected across Districts for development of TSMO actions included ***traffic signal management (TSM), traffic incident management (TIM), traffic management (TM), work zone management (WZM), special event management, and road weather management***. The process, beginning with District Engineer's (DE's) endorsement, included extensive engagement with the district leadership, partner agencies, and project steering committee to obtain input on existing TSMO practices, complete ***Capability Maturity Model (CMM)*** and Capability Maturity Framework (CMF) assessments, develop district-specific TSMO goals and objectives, and cocreate the TSMO actions included in Program Plan.

Arcadis Added Value

- Development of TSMO strategies and implementation plan
- Streamlined process to develop the TSMO program-level and operational-area-level actions
- Actively engaged TxDOT leadership, districts and partner agencies in the development of the plan

The TSMO Program Plan document included:

- **Developing Business Case** to establish a data-driven business case to support sustained investment in TSMO strategies.
- **TSMO Vision, Mission, Goals & Objectives:** Shares the TSMO vision and mission developed as part of the Statewide TSMO Strategic Plan and the district-specific TSMO goals and objectives developed in collaboration with the district leadership and district TSMO steering committee.
- **Capability Maturity Model:** Discusses the ***six dimensions of CMM***, how TxDOT and partner agencies assessed their capability across each dimension, and opportunities to improve within each dimension. Discussion also includes a summary of CMF assessment across six program areas.
- **Five-Year TSMO Implementation Plan:** Summarizes TSMO actions developed based on input from district leadership, an understanding of the district's TSMO state of practice, and a review of CMM and CMF self-assessments and provides an implementation time frame.
- **TSMO Tactical Plan Assessment:** Evaluates the need for tactical plans, with specific operational focus such as plans for WZM, TIM, TSM, regional TM, and ITS implementation.



17. Firm Experience:

Firm name	HNTB	Past Performance Evaluation Discipline(s)*	ITS, Traffic, Planning
Project name	**TSMO General Engineering Consultant**	Firm responsibility (prime or sub?)	Prime
Project number	CAG42	Owner's name	Florida Department of Transportation (FDOT)
Project location	Tallahassee (Statewide), FL	Owner's Project Manager	Fred H. Heery III, PE
Owner's address, phone, email	605 Suwannee Street, Tallahassee, FL 32399; (850)414-4100; Fred.Heery@dot.state.fl.us		
Services commenced by this firm (mm/yy)	3/2016	Total consultant contract cost ($1,000's)	$25,000
Services completed by this firm (mm/yy)	On-going	Cost of consultant services provided by this firm ($1,000's)	$5,871 (thru 12/2023)

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

Firm Members Involved: Rakesh Sharma, Steve Novosad, Clay Packard, Mark Parry, Steve Cyra, Ken Jacobs, Steve Bahler, Subhasis Ghosh, Victor Blue

HNTB is providing ongoing in-house and home office support for FDOT's TSMO Program Office. Project tasks include TSMO planning services, SunGuide® software, ITS product evaluation and testing, FL511, ITS, Federal Grants, training development, mainstreaming, and technology innovations support. As a first step to the project HNTB ***developed a TSMO Strategic Plan using the six (6) capability maturity model*** review and engaged with stakeholders via outreach/training activities. HNTB also developed/reviewed/revised policies within state. HNTB provided project/program management assistance and performed coordination meetings and periodic project reporting as part of this project.

Benefit Statement: *"HNTB supported the FDOT TSMO Program since its inception in 2016. HNTB developed the TSMO strategic plan for the program and mainstreamed the tools throughout the life cycle of the project from planning to maintenance. HNTB understands the importance of mainstreaming and internal/external stakeholder outreach for the success of the program, which will be utilized for this project as well."*

Innovative approach and expertise applied for this project include the following:

- **TSMO Program:** In a previous contract, HNTB supported development of the FDOT 2017 TSMO Strategic Plan. Under current contract, HNTB is updating the strategic plan. The Strategic Plan includes statewide TSMO Priority Focus Areas and Performance Metrics. Priority Focus Areas include connected and automated vehicles and other emerging technologies. This program focused on work zone management, road weather management, transit management, freight management, rampa management, and traffic signal coordination.
- **TSMO Mainstreaming:** supports TSMO Program's efforts to mainstream TSMO into program manuals, standard plans, and the FDOT Design Manual. HNTB support publishing of a quarterly newsletter called TSMO Disseminator.
- **Grants:** development of grant applications including grants for emerging technologies such as connected and automated vehicle (CAV) systems and integrated corridors. Also supports funding and benefit-cost analysis activities.
- **Training:** HNTB supports development of computer-based training modules. Training in progress include intermediate and advanced systems engineering modules. This also includes stakeholder trainings.
- **Innovations:** HNTB is supporting development and implementation of data sharing software called Digital Integration and Video Acquisition System (DIVAS) and other emerging technologies. Other innovative strategies such as CAV deployment, mobility on demand, improved bike and pedestrian crossings, integrated corridor management, and active transportation and demand management.

Arcadis Added Value

- Development of TSMO strategic plan, arterial action plan, and connected vehicle business plan.
- Mainstreamed TSMO into various intra and inter agency functions.
- Engagement with leadership and industry to approve strategic plan.
- Identified funding for various program functional areas.

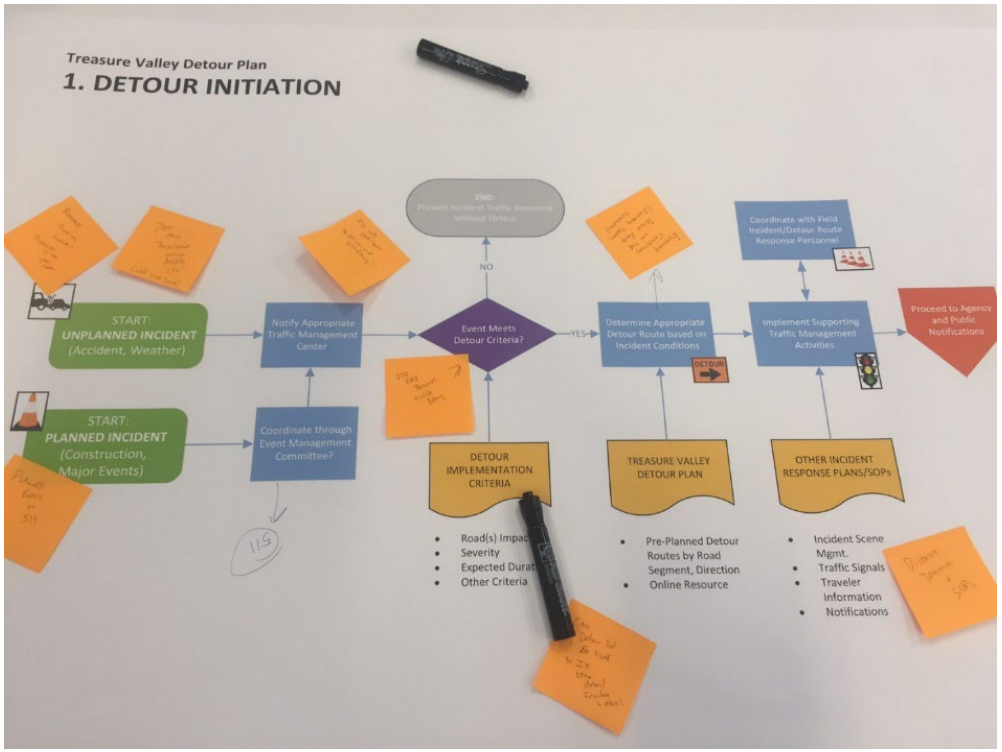
17. Firm Experience:

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	ITS, Traffic, Planning
Project name	**Regional Transportation System Management and Operations (TSMO) Program Support**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Community Planning Association of Southwest Idaho (COMPASS)
Project location	Boise Metro Region, Idaho	Owner's Project Manager	MaryAnn Waldinger, Principal Planner
Owner's address, phone, email	700 NE 2nd St., Meridian, ID 83642, 208.475.2242, MWaldinger@compassidaho.org		
Services commenced by this firm (mm/yy)	06/2012	Total consultant contract cost ($1,000's)	$680
Services completed by this firm (mm/yy)	09/2022	Cost of consultant services provided by this firm ($1,000's)	$420

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

Firm Members Involved: Randy Knapick

Since 2012 Arcadis IBI Group has provided ***TSMO strategic planning services*** in Idaho's Treasure Valley, a two-county area encompassing metropolitan Boise. With limited capability to expand roadway capacity, the region sought more effective TSMO strategies leveraging multi-agency ITS investments. Other challenges included the need to formalize interagency operating partnerships, to effectively share ITS and communications infrastructure, and make the policy case for ***TSMO as a core regional strategy***.



On behalf of COMPASS, the region's metropolitan planning organization, Arcadis IBI Group led the ***development of the region's first TSMO strategic plan*** for transportation operations in the Treasure Valley in 2014, followed by a comprehensive update in 2020. For both efforts, our team led outreach to multimodal transportation and emergency management agencies understand how operations and ITS investments can respond to regional needs.

Recognizing the value of ongoing regional coordination for TSMO, COMPASS retained Arcadis IBI Group to facilitate ***ongoing regional operations and communications work groups*** following the completion of the 2014 plan. In 2018, Arcadis IBI Group prepared an update of the regional I-84/I-184 Detour Plan. This multi-agency effort convened a working group to review and update operational responses to a variety of freeway incident and closure scenarios.

Most recently, Arcadis IBI Group helped develop an I-84/I-185 Operations Plan, which evaluated ***multi-modal operational strategies***, ITS investments, and opportunities to ***improve inter-agency collaboration***. The plan vetted techniques used in other regions against needs in the Treasure Valley, as well as the implementation feasibility based on cost and institutional factors.

The TSMO projects described above complement a 20+ year history of Arcadis IBI Group TSMO and ITS work in the region. This includes delivery of the Advanced Traffic Management System (ATMS) solution for Ada County Highway District, a statewide 511 Traveler Information System for the Idaho Transportation Department, ITS field device design, and architectural/systems design for two traffic management centers.

17. Firm Experience:

Firm name	HNTB	Past Performance Evaluation Discipline(s)*	ITS, Traffic, Planning
Project name	**Office of Traffic Operations Engineering Support Services**	Firm responsibility (prime or sub?)	Prime
Project number	TOOTO2201015	Owner's name	Georgia Department of Transportation (GDOT)
Project location	Atlanta (Statewide), GA	Owner's Project Manager	Alan Davis, P.E.
Owner's address, phone, email	935 United Avenue, Atlanta, GA 30316; (404) 635-2828; aladavis@dot.ga.gov		
Services commenced by this firm (mm/yy)	01/22	Total consultant contract cost ($1,000's)	$15,000
Services completed by this firm (mm/yy)	On-going	Cost of consultant services provided by this firm ($1,000's)	$ 3,911

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

Firm Members Involved: Loren Bartlett, Taylor Glakas, Charlie Farnham, Steve Novosad, Brad Humphrey, Rakesh Sharma, Craig Toth, Debra Vermillion, Mark Demidovich, Jessica Ridley, Mahesh Atluri

HNTB is providing support services for GDOT's Office of Traffic Operations for its TSMO program. The support includes developing projects for all seven districts in TSMO, ATMS, ITS specifications, ITS programs and asset management, federal grants, training development, ITS design guidelines, arterial management, and technology innovations support. Innovative approach and expertise applied for this project include the following:

- **TSMO Program:** HNTB supports the development and delivery of GDOT's TSMO and Major Mobility Investment Programs (MMIP). Through these programs, HNTB developed statewide strategies for TSMO projects and MMIP business practices, systems and technology, performance measures, culture, organization and work force, and collaboration. TSMO projects include traffic incident management, work zone management, transit management, freight management, traffic signal coordination, mobility on demand, ramp management, and integrated corridor management. HNTB also facilitates the transition to awarded contractor and facilitates the ***development and assessment of capability maturity model*** and requires review/update of current policies and procedures.
- **TSMO Guidelines and Specifications:** supports updates including new standards and requirements for the GDOT TSMO and ITS Design Guidelines and Specifications. This includes requirements and design standards related to emerging technology solutions, ped-bike crossing strategies, in addition to updates based on trends in TSMO and ITS technologies.
- **Federal Grants and Work Program support:** development of grant applications including grants for TSMO and emerging technologies such as smart work zone, CAV systems, integrated corridor management, and active traffic and demand management. HNTB also administers grants requirements, including reporting and account tracking, plans development, stakeholder engagement, following the systems engineering process for the deployment of operations programs. HNTB develops grant application including benefit-cost analysis to support the application. HNTB also develops strategies to mainstream TSM&O projects in GDOT's work program.
- **Training:** development of training and outreach strategies and content development for workforce and leadership. HNTB established and updated protocols and inform workforce development and stakeholder training and outreach.
- **Innovations:** in work zone management, traffic incident management, traveler information, transit management, freight management, integrated corridor management, mobility on demand, and active transportation and demand management.

Arcadis Added Value

- Program management and TSMO strategy expansion.
- Mainstreaming TSMO program from planning to operations and maintenance.
- Engagement with stakeholders and leadership to develop and shape the TSMO program.

ATSPM
Automated Traffic Signal Performance Measures

Automated Traffic Signal Performance Measures (ATSPM)

SigOps Metrics

RITIS

Regional Integrated Transportation Information System (RITIS)

17. Firm Experience:

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	ITS, Traffic, Planning
Project name	**TSMO Implementation & Tactical Plan**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Texas Department of Transportation (TxDOT)
Project location	San Antonio, Corpus Christi, Laredo, Pharr, San Angelo	Owner's Project Manager	Barbara Russell
Owner's address, phone, email	9500 N. Lake Creek Pkwy., Austin, TX 78717, 512.506.5116, Barbara.Russell@txdot.gov		
Services commenced by this firm (mm/yy)	06/21	Total consultant contract cost ($1,000's)	$1,976
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$376

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

Firm Members Involved: Akhil Chauhan, Marwan Abboud, Shahram Malek, Chris Hilyer, Koushik Arunachalam, Paul Hsu, Samit Deo

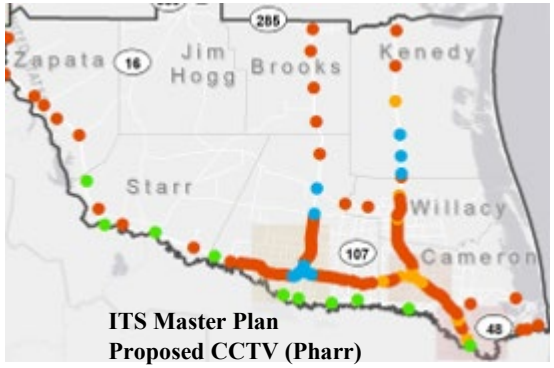
Arcadis Added Value

- Developing scalable and implementable TSMO strategies
- Implementing pilot projects for early wins
- Leveraging data analytics for actionable insights
- Integrating TSMO policy on construction projects

TSMO Implementation: As the next step from the approved TSMO Program Plans, Arcadis is working with four TxDOT districts that includes San Antonio, Corpus Christi, Laredo, and Pharr Districts on the ***Implementation of TSMO Program Plans***. As part of this implementation plan, Arcadis has ***prioritized TSMO actions*** to be implemented within the first 2 years across the ***six program areas (TSMO strategy & solution areas)*** that included ***traffic signal management (TSM), traffic incident management (TIM), traffic management (TM), work zone management (WZM), special event management, and road weather management***. For example, with San Antonio district, we developed 21 TSMO actions for the overall program that has cross-cutting impacts across planning, design, construction and operations, and 68 actions to improve capability maturity for TSM, TIM, TM, and WZM.

To gain early wins in institutionalizing TSMO, Arcadis worked with district leadership to ***integrate TSMO elements such as fiber and ITS*** into existing meeting discussions for the Design Concept Conference (***schematic phase***), District Design Review Team (***design phase***) and District Safety Review Team (***pre-construction phase***) meetings. San Antonio district has institutionalized another recommendation from the TSMO Program Plan by utilizing ***dashboards to track and report Highway Emergency Response Operator (HERO) activities*** by time of the day, route and incident type, and provide feedback into the route planning to reduce incident response time.

As a continuation of TSMO implementation efforts, Arcadis team is currently managing the ***development of two PS&E packages*** for Corpus Christi District: 1. ***I-37 DMS Deployment Project*** to add eight new LED DMSs to expand traveler information system; and 2. ***SH 358 Fiber Optic Deployment Project*** (5 miles), with ***wrong-way driver warning systems (5), DMSs (4) and CCTVs (7)*** between SH 44 and Harbor Bridge. During the course of the TSMO Program, Arcadis has guided TxDOT Laredo and Pharr districts through multiple technical knowledge exchange workshops on the value of ConOps, and currently leading development of ConOps for TIM and Traffic Management Center. To improve traffic signal operations and maintenance, ***pilot deployments for Automated Traffic Signal Performance Measures (ATSPM)*** are being developed and implemented for major arterial corridors for San Antonio and Pharr districts.



ITS Master Plan
Proposed CCTV (Pharr)

TSMO Tactical Plans: Developing TSMO Tactical Plans is a critical part of the planning efforts for a sustainable TSMO program. Arcadis has led the development of a ***data driven 5-year ITS Master Plan*** for San Antonio, Corpus Christi, Pharr, and San Angelo districts with focus on addressing end of life equipment and expanding coverage of ITS communications network, CCTV, DMS, Wrong-Way Driver Warning Systems, Roadway Flood Warning System and Upgrading Over Height Detection System, additionally conducted emerging technology reviews such ***Connected Vehicle (CV) readiness***. The plan incorporated various methodologies in conformance with the latest national/regional ITS architecture. Our current efforts with tactical plans include developing ***Regional ITS Architectures*** for both San Antonio and Corpus Christi districts. Arcadis led ***stakeholder engagement*** at many levels including MPOs, Counties, Cities, Transit Authorities, Council of Governments, and Private Sectors to evaluate regional transportation needs and identify suitable ITS applications/service packages to be included in the Regional ITS Architectures.

17. Firm Experience:

Firm name	HNTB	Past Performance Evaluation Discipline(s)*	ITS, CE&I/OV
Project name	**ITS Program Office & TSMO Support Services**	Firm responsibility (prime or sub?)	Prime
Project number	CS 84900; JN Various	Owner's name	Michigan Department of Transportation (MDOT)
Project location	Statewide, MI	Owner's Project Manager	Collin Castle
Owner's address, phone, email	425 W. Ottawa St, P.O. Box 30050, Lansing, MI 48933; (517) 636-0715; CastleC@michigan.gov		
Services commenced by this firm (mm/yy)	01/19	Total consultant contract cost ($1,000's)	$1,038
Services completed by this firm (mm/yy)	12/22	Cost of consultant services provided by this firm ($1,000's)	$883

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

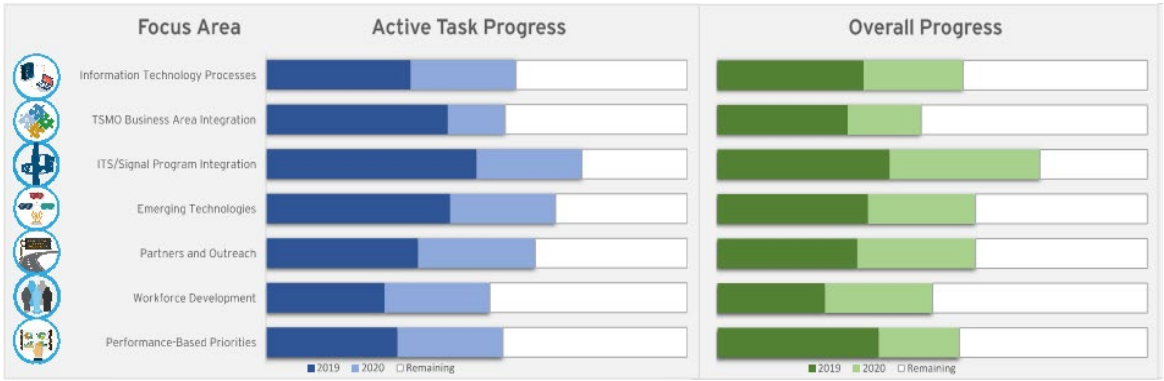
Firm Members Involved: Jeff Feeney, Matt Junak, Greg Krueger

HNTB provided as-needed support to MDOT's ITS Program Office (ITSPO) that also included various TSMO strategies. Project tasks included standardization of TSMO strategies, ITS practices, specification development, and ITS detail updates, ATMS software, device modernization plan, and fiber management software evaluations. Other tasks included development of the ATM strategies and Concepts Guide, 2020 North American International Auto Show (NAIAS) Michigan Mobility Challenge procurement support, development of the 2018 ITS Strategic Plan, project prioritization and selection, IP assignments and research on various ITS topics as directed by MDOT. Innovative approach and expertise applied for this project include the following:

Arcadis Added Value

- HNTB supported MDOT ITS program office and TSMO strategies since its inception in 2007 setting it ground up.
- Manage $32M funds and project selection process under ITS/TSMO.
- Integrated ITS and TSMO focus areas into statewide program.

- **Strategic Plan Update:** A Strategic Plan Action Tracker update was developed in 2019 and 2020 to assess the program's performance against the established TSMO and ITS focus areas, goals, and actions. Percent complete for each action, next steps, and upcoming activities were summarized in a dashboard to provide direction on how each action is being accomplished.



- **Performance Measures:** An evaluation of industry best practices and previous TSMO and ITS Funding Template submissions was conducted. This information compiled into a framework to begin developing how the success of ITS and TSMO projects will be measured to better understand the impact on Michigan's roadways.
- **ITS Project Prioritization and Work Program Cost Estimation:** The Project Proposal and Project Cost Estimates templates were updated to address comments, provide clarity, and add relevant information. Helped prioritize projects for WZM, TIM, Special Event Management, Freight Management, Traveler Information, Ramp Management, Active Transportation and Demand Management, and CAV Deployment.
- **Operations & Maintenance (O&M) Technical Working Group and Budget Support:** Five O&M Technical Working Groups (TWGs) were established for major functional areas (maintenance, courtesy patrol, operations centers, ATMS, and Power & Communications). TWGs are being used to evaluate current practices, develop consistent cost estimating practices, refine budget projections, and establish methodologies for future project selection in each of the functional areas. Support was provided to analyze the O&M Budget Template to assist the program in assessing rising O&M costs. The template was broken into various subcategories to identify trends in software, maintenance, operations, and other O&M functions. Future anticipated costs were then developed in coordination with the O&M TWGs.

17. Firm Experience:

Firm name	ARCADIS	Past Performance Evaluation Category(ies)*	ITS, Planning
Project name	**CAV & ITS Statewide System Design, Integration and System Verification Services IDIQ**	Firm responsibility (prime or sub?)	Prime
Project number	4400008172	Owner's name	LA Department of Transportation and Development (DOTD)
Project location	Statewide, LA	Owner's Project Manager	Rosalinda B. Deville
Owner's address, phone, email	1212 E. Highway Drive, Baton Rouge, LA 70802 / 225.379.2523 / Rosalinda.Deville@la.gov		
Services commenced by this firm (mm/yy)	07/16	Total consultant contract cost ($1,000's)	$2,000
Services completed by this firm (mm/yy)	07/21	Cost of consultant services provided by this firm ($1,000's)	N/A

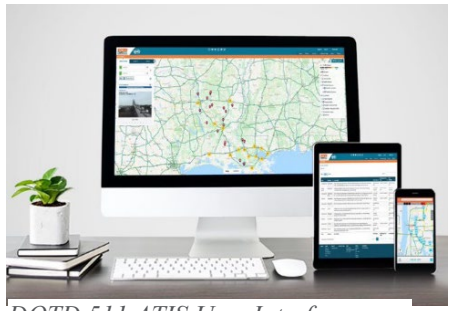
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Firm members involved: Akhil Chauhan, Paul Hsu, Marwan Abboud, Jeff Jones, David Ward, Drew Knott

Arcadis provided specialized and technically complex ITS Systems Engineering Analyses (SEA), Connected & Autonomous Vehicles (CAV) Strategic Planning, system integration and support, Independent Verification and Validation (IV&V) services, and development of technical specifications to support DOTD's ITS program. Notable contract task orders:

DOTD Statewide CAV Strategic Plan

- **Statewide CAV Strategic Plan:** Arcadis developed a framework for planning, design, and implementation of CAV technologies. Key activities included facilitating workshops that helped DOTD define high-level goals and suitable implementation strategies for CAV projects. These planning-focused workshops aligned DOTD's needs with emerging solutions to provide direction for the CAV strategic implementation plan. The plan outlines specific actions to begin its smart mobility journey and prepare for the CAV future.
- **CAV Technology Team Support:** Arcadis provided technical support services and facilitating planning activities related to CAVs and their impact on highway infrastructure for the department's CAV technology team. The purpose of the project was to keep DOTD updated on industry trends while preparing Louisiana for the future of transportation.
- **Policy Formulation for LA AV Laws:** Development of a policy and necessary permits to implement the recently passed Louisiana AV law (Act 232) that provides DOTD the sole jurisdiction over the operations of "Autonomous Commercial Motor Vehicles" (ACMV). The proposed policy document outlines requirements and operating constraints for safe operations of autonomous commercial motor vehicles in the state.
- **Advanced Traveler Information System (ATIS) Integration Support Services:** Arcadis assisted DOTD to migrate from their ATIS 511 system that was launched in 2005 to a brand-new system with a significant number of upgrades. Arcadis provided integration expertise and technical support throughout the project implementation process, including contractor submittal reviews, RFI tracking and support, scope/design/configuration changes technical support, software deployment support, and system acceptance testing (SAT) support.
- **Advanced Transportation Management System (ATMS) Upgrade Support:** Assisted DOTD in deploying a major upgrade to their existing ATMS. Arcadis provided technical support during project scheduling, data migration, system integration, system testing, and redundancy failover setup.
- **Engineering Design / Integration:** Arcadis' role has been to provide ***ITS Planning*** for a variety of technically complex ITS projects. Through expert knowledge about complex ITS and attention to detail, Arcadis has contributed to the successful deployment of several ITS projects as well as to CAV capacity-building for DOTD.



DOTD 511 ATIS User Interfaces

Arcadis Added Value

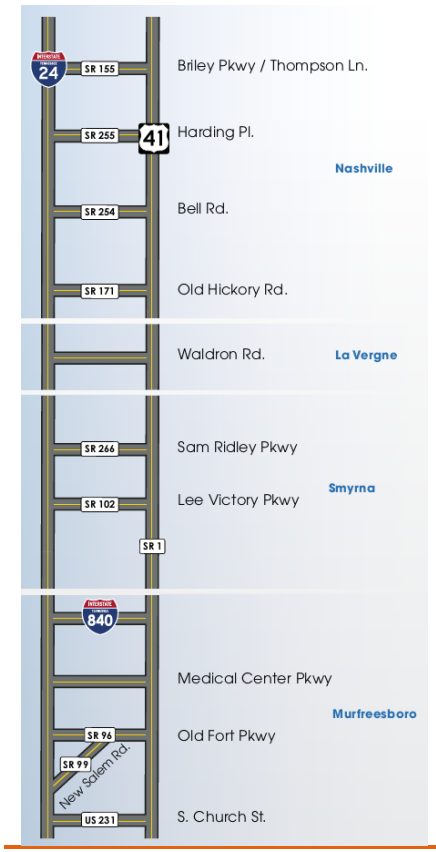
- Maintain expertise in fast evolving ITS technologies
- Manage multi-agency outreach and coordination
- Address highly complex ITS system integration issues
- Evaluate most practical ITS technologies for DOTD
- Leverage in-depth knowledge to provide comprehensive ITS engineering design and technical support

17. Firm Experience:

Firm name	ARCADIS	Past Performance Evaluation Discipline(s)*	Traffic, ITS
Project name	**I-24 SMART Corridor Operations and Maintenance**	Firm responsibility (prime or sub?)	Prime
Project number	30093334	Owner's name	Tennessee Department of Transportation (TDOT)
Project location	Davidson & Rutherford Counties, TN	Owner's Project Manager	Lee J. Smith, PE
Owner's address, phone, email	505 Deaderick Street, Nashville, TN 37243, 615.253.6705, lee.j.smith@tn.gov		
Services commenced by this firm (mm/yy)	03/2020	Total consultant contract cost ($1,000's)	$4,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$4,000

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

Firm Members Involved: Shahram Malek, Gautam Mistry, Sachin Karmarkar, Matthew Richardi, Venkata Peddisetty, Ranzy Whiticker, Troy Galloway, Katherine Teipel, Luke Dixon



Arcadis is providing ITS and TSMO support services for the Operations and Maintenance of the I-24 SMART Corridor. The I-24 SMART Corridor contains 28 miles of freeway and 58 miles of arterial roadway and contains physical, technological, and operational improvements to actively manage traffic.

The program's goals include providing users with improved travel time reliability, increased mobility for all modes of traffic, reduced concentration of crashes, and the development of agency coordination with the project stakeholders.

The SMART Corridor will ***implement TSMO strategies - Integrated Corridor Management (ICM) and Active Corridor Management (ACM) for the first time in Tennessee***. The project will provide improvements to the existing network by introducing Active Lane Control, Variable Speed Limits, Ramp Metering, Emergency Pull-off Locations, upgraded full-color Dynamic Message Signs (DMS), and Closed-Circuit Television (CCTV) cameras along the freeway. The arterials are currently being upgraded with new traffic signal equipment including signal controllers, radar detection, video detection, CCTV cameras, arterial DMS, and Bluetooth DSRC/C-V2X devices.

Arcadis is working alongside TDOT Traffic Operations to develop ***Operations and Maintenance Polices and Guidelines*** for the corridor and to promote stakeholder engagement. This includes developing ***Standard Operating and Maintenance Plans, Standard Operating Guidelines*** for all system assets, Incident Management Signal Timing Plans and Protocols, and Implementing Traffic Responsive Signal Operation. Arcadis will develop project ***performance measures*** and measures of effectiveness for the corridor.

Arcadis Added Value

- Assisting TDOT implement their first TSMO ICM program
- Providing coordination between TDOT and local agencies to implement TSMO ACM on the project arterials
- Arcadis embedded staff at region 3 TMC will serve as TSMO ICM coordinators to provide training and promote communication among stakeholders

17. Firm Experience:

Firm name	LA TERRE ENGINEERING, LLC	Past Performance Evaluation Discipline(s)*	Planning
Project name	**MoveBR Capacity Program Management**	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	East Baton Rouge Parish
Project location	Baton Rouge, LA	Owner's Project Manager	Prime: Travis Woodard, PE
Owner's address, phone, email	6767 Perkins Road, Suite 200, Baton Rouge, LA 70808, 225.769.0546, travis.woodard@csrsinc.com		
Services commenced by this firm (mm/yy)	06/20	Total consultant contract cost ($1,000's)	$500
Services completed by this firm (mm/yy)	12/22	Cost of consultant services provided by this firm ($1,000's)	$500

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

Firm Members Involved: Seneca Toussant, PE, Lyle Tynes, EI

La Terre Engineering LLC (LTE) provided program management support to CSRS, Inc for the MOVEBR program. LTE provided project management services for specialty contracts which included ***stakeholder and consultant engagement***, project scoping, proposal review and contract documents for environmental services, geotechnical services, surveying, lighting design and landscaping services. LTE's specific services and tasks included ***management and review of reports*** and deliverable, ***meeting coordination, project reporting, public outreach*** support and technical reviews for quality assurance.

Arcadis Added Value

- Streamlined deliverable submittal and review process
- Engaged consultant and stakeholder coordination to maintain project schedules

MOVEBR

The MOVEBR Transportation and Infrastructure Improvements Program is the most significant transportation infrastructure investment in East Baton Rouge Parish history. The 1/2 cent sales tax proposition was approved by the voters of East Baton Rouge Parish on December 8, 2018. The tax became effective on April 1, 2019 and will continue for 30 years until March 31, 2049.

17. Firm Experience:

Firm name	LA TERRE ENGINEERING, LLC	Past Performance Evaluation Discipline(s)*	Planning
Project name	**Louisiana Watershed Initiative LA 22 Gapping Project, Louisiana - Grant Management Services**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Pontchartrain Levee District
Project location	Baton Rouge, LA	Owner's Project Manager	Monica Salins Gorman
Owner's address, phone, email	2069 Railroad Avenue, Lutcher, LA 70071, 225.869.9721, mgorman@leveedistrict.org		
Services commenced by this firm (mm/yy)	02/22	Total consultant contract cost ($1,000's)	$150
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$150

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

Firm Members Involved: Seneca Toussant, PE, Lyle Tynes, EI

La Terre Engineering LLC (Prime) is providing ***grant management services*** to the Pontchartrain Levee District (PLD) for the Louisiana Watershed Initiative LA 22 Gapping project in Ascension Parish. LA Hwy 22 functions as a barrier impeding natural hydrology in the Amite River floodplain. The LA Hwy 22 Bridge Construction and Drainage Improvements project includes the construction of two bridge structures and the excavation of two drainage basins for the purpose of improving local hydrology, reducing area flood risk and restoring the McElroy Swamp. LTE's scope of work includes the following:

- Establishing project files at PLD's office to demonstrate compliance with all applicable state, local, and federal regulations.
- Prepare the Requests for Payment to ensure consistency with the procedures established for the CDBG-MIT funds Program.
- Assist PLD in meeting the Office of Community Development's financial reporting requirements.
- Attend and assist PLD during the Office of Community Development's monitoring visit(s), prepare close-out documents.
- ***Stakeholder Outreach and Coordination***

Arcadis Added Value

- Assistance with grant applications
- Stakeholder outreach and engagement

17. Firm Experience:

Firm name	LA TERRE ENGINEERING, LLC	Past Performance Evaluation Discipline(s)*	Planning, Road Design
Project name	**Port of South Louisiana Program Management**	Firm responsibility (prime or sub?)	Sub
Project number	N/A	Owner's name	Port of South Louisiana
Project location	Reserve, LA	Owner's Project Manager	Prime: Rebecca Howell, PE, WSP
Owner's address, phone, email	301 N. Main Street, Baton Rouge LA 70802, 225.508.3872, rebecca.howell@wsp.com		
Services commenced by this firm (mm/yy)	08/21	Total consultant contract cost ($1,000's)	$15 (E)
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$15 (E)

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

Firm Members Involved: Seneca Toussant, PE, Lyle Tynes, EI

Arcadis Added Value

- Assistance with grant applications
- Stakeholder outreach and engagement

LTE is part of the team selected by the Port of South Louisiana, Board of Commissioners for the Port of South Louisiana's Program Management Contract. The Port of South Louisiana spans 54 miles of the Mississippi River across St. James, St. John the Baptist and St. Charles Parishes and is one of the largest tonnage port districts in the western hemisphere. LTE is providing oversight of the master and ***strategic planning*** efforts which includes ***strategic plan implementation, grants applications and management*** procurement support including assessment of consultant capabilities, alternative delivery methods and public private partnerships, design management and construction administration through the life of the contract.

Under the program management contract, LTE is assisting with ***grants application and management*** which includes:

- ***Preparation and submittal of Grant Applications*** in accordance with federal/state guidelines
- Data Collection and Review
- ***Stakeholder Coordination***
- Preparation of ***benefit cost analyses*** to support ***grant applications***

LTE is assisting with the coordination of design and report deliverables and providing QA/QC reviews of consultant deliverables, providing construction administration support services for a dock access bridge, construction of the administration building and general cargo dock reinforcement / strengthening.

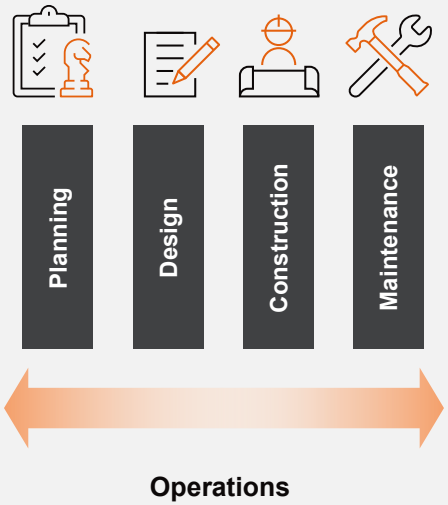
Section 18

Arcadis has worked with TxDOT to develop TSMO program and implementation plans – improving the agency's processes and culture to integrate TSMO within their project lifecycle and project development process.

TSMO Strategic Plan

Advanced Traveler Information	Traffic Signal Management	Smart Work Zones	Incident Management
Road Weather Information	Freight and Commercial Vehicle Management	Connected & Autonomous Vehicles	Multimodal Traffic Management
Integrated Corridor Management	Signing & Striping Enhancements	Traffic Calming & Road Diets	Access Management
	Channelization & Celineation	Safety & Operational Countermeasures	

The TSMO Culture



Benefits of TSMO

- Improved Safety
- Reduced Congestion
- More Reliable Traffic Flow
- More Efficient Use of Resources
- Less Fuel Consumption
- Improved Air Quality
- Improvements on the Regional Scale
- Improved Customer Service

"Arcadis deliverables were high quality, complete, and on-time; managed budget and resources very well; promptly responded (within 12 hours); proactive and anticipated needs; took responsibility for all products."-Rafael Guzman, TxDOT Laredo District, TSMO Program Plan

18. Approach & Methodology

Project Understanding and Arcadis Team

For this IDIQ Arcadis has assembled a team of experts who have public and private sector experience of developing, implementing and institutionalizing TSMO programs for multiple state DOTs. Serving at the leadership level of AASHTO, ITS America and ITE, our experts have advanced the national TSMO practice by contributing to the AASHTO Operations Manual and MUTCD. Over the last two decades Arcadis has also served DOTD on numerous traffic, safety and ITS IDIQs, helping lay the foundation of DOTD's TSMO program. As illustrated, Arcadis has developed a deep understanding of DOTD's TSMO vision and goals for this IDIQ through our formal and informal meetings with DOTD TSMO champions and stakeholders.

DOTD's TSMO Needs for this IDIQ

Arcadis, in partnership with HNTB and La Terre Engineering, will collaborate with DOTD's internal and external stakeholders to address each of these needs. HNTB brings multi-state TSMO planning and implementation experience and La Terre brings local agency experience, both of which are critical to develop a holistic and localized TSMO program for DOTD. This partnership will also enhance our ability to execute multiple task orders simultaneously.

Arcadis' Project Manager, Akhil Chauhan, brings over 20 years of TSMO and ITS experience. His notable DOTD TSMO projects include the CAV Strategic Plan, Real-Time Traffic Data Assessment, I-10 Queue Warning System, and ITS Maintenance Program. Akhil has also served as principal engineer on TxDOT TSMO planning projects. Arcadis' Deputy Project Manager, Chris Hilyer, served as ALDOT's Statewide TSMO Administrator, developing the statewide TSMO program and overseeing O&M funding increase from $5 million to $20 million. Chris will collaborate with Akhil, our task leads and subconsultants to develop the DOTD's TSMO program and associated strategy and solution projects.

Our Technical Approach

Project Management and Program Assistance

For this unique IDIQ Arcadis is prepared to assist DOTD in developing scope documents for the TSMO Strategic Plan, and recommend additional projects and scopes in support of DOTD's program vision. To scope each project Akhil will meet with the DOTD PM to discuss the project background and goals. He will share Arcadis' experience on similar projects, including TSMO strategic and business plans, designing and implementing proof-of-concepts and participating in scanning tours, and suggest scope elements to address DOTD's goals. At DOTD's request, Arcadis is prepared to develop the initial scope of services based on the meeting discussions, and refine it collaboratively with the DOTD PM to make sure it accurately reflects DOTD's desired outcomes. **Value to DOTD:** Detailed and collaborative scoping will provide mutual understanding of tasks and deliverables, and avoid scope revisions, supplemental agreements and schedule impacts.

Coordination Meetings and Project Reporting

Upon receipt of Notice to Proceed, Akhil will request a kickoff meeting with the DOTD PM and stakeholders to review project purpose and need, scope, study methodologies, communication protocols, schedule, QA/QC plan, risk management, and data needs. Arcadis will schedule biweekly or monthly meetings with the DOTD PM to provide progress updates and will submit monthly progress reports showing schedule and % completion. Meetings will be held at project milestones and upon submittal of key deliverables to discuss and resolve comments. **Value to DOTD:** Early and ongoing communication will provide adherence to project schedule.

Strategic Plan Development

The TSMO Strategic Plan will be consistent with other DOTD plans, policies and procedures, and will adhere to DOTD's Vision, Mission and Values. Our strategic planning approach illustrated below includes several tasks outlined in the RFP that may also be completed as separate task orders.

Proposed TSMO Strategic Planning Workflow

Conducting these tasks as part of strategic planning provides comprehensive input into developing the initial TSMO strategy and solution projects and sets the tone for the TSMO program. Our strategic planning approach is as follows:

1. Secretary Endorsement: At the onset of the Plan development, we will work with the DOTD PM to develop a TSMO Endorsement Letter to be signed by the Secretary. The letter will introduce purpose and need of DOTD's TSMO program and seek department staff's buy-in. **Value to DOTD:**

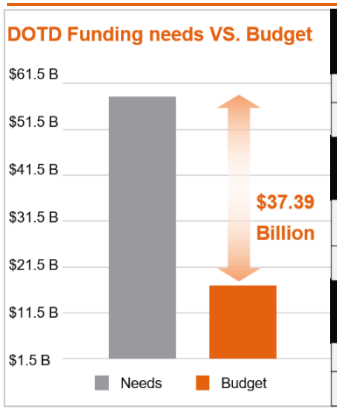
Support from the top leadership will increase staff participation in the TSMO plan development and empower the staff to adopt TSMO in their projects.

2. Steering Committee: A Steering Committee consisting of department leadership and PMs will be established to guide the development of the plan by providing key inputs and deliverable reviews. **Value to DOTD:** Steering committee will provide multi-disciplinary perspectives from planning, design, construction, operations and maintenance. This process should help eleminate organizational silos and help develop actions to integrate TSMO within the project development process and project lifecycle.

Example from a TSMO Project: *Arcadis and TxDOT steering committee developed a dashboard by leveraging existing striping data across spreadsheets to generate insights that allow prioritization of re-striping projects based on retro-reflectivity and cost and mitigate conflict with resurfacing projects.*

3. Leadership Engagement: We will individually meet and work closely with the department leadership from DOTD, DOTD districts and stakeholders to introduce the TSMO initiative and present TSMO business case and case studies. We will collect information on the sections' activities and challenges and discuss TSMO opportunities to address those challenges. **Value to DOTD:** Leadership engagement meetings will improve understanding and buy-in of TSMO and help identify TSMO champions within each department.

Example from a TSMO Project: *During Leadership Engagement we ask questions to better understand a section's innerworkings. Discussion focuses on funding sources and opportunities, processes, responsibilities and challenges, nature of internal/external collaboration, and use of data and technology. TSMO opportunities identified during these meetings often become TSMO strategies and projects in the TSMO Strategic Plan.*



2019 Congestion

City	Delay/Commuter	Cost/Commuter	Total Delay	Total Cost
Baton Rouge	61 Hours	$1,270	25.3 Million	$591 Million

2019 Safety

City	Total Crashes	PDO Crashes	Injury Crashes	Fatal Crashes	Total Cost Due to Crashes
Baton Rouge	15,057	11,600	3,422	35	$738.9 Million

2019 Environmental Impacts

City	Excess Fuel Consumption	Excess CO2
Baton Rouge	12.1 Million Gallons	124,000 Tons

A Scalable TSMO Business Case for DOTD

4. TSMO Vision, Mission, Goals and Objectives: In collaboration with the steering committe, we will develop the TSMO Vision, Mission and Goals in alignment with DOTD's Vision, Mission and Values that include Safety, Innovation, Multimodal, Reliability, Efficiency, Economic Opportunity and Sustainability. These and additional goals will be discussed with the steering committee to finalize the TSMO program goals. We will craft practical and measurable Objectives corresponding to each Goal to track the implementation of the TSMO program. **Value to DOTD:** Establishes alignment and traceability between the DOTD overall goals and objectives and the TSMO goals and objectives and resulting strategies and projects.

Example from a TSMO Project: *"Reliability" as a goal has allowed TxDOT to set objectives for, track and report asset and travel time reliability to enable continuous improvement in operations.*

5. Capability Maturity Model (CMM) and Capability Maturity Framework (CMF) Assessments: CMM, a concept adopted from the IT industry, is a self-assessment mechanism for agencies to benchmark their TSMO maturity (scale 1-4) across six capability dimensions (Business Process, Systems & Technology, Performance Measurement, Culture, Organization & Workforce, and Collaboration). The assessment results are used to identify needs and actions to improve maturity within each dimension. Arcadis will conduct a CMM assessment workshop with DOTD and stakeholders to discuss the CMM concept and its importance, identify maturity levels within each capability dimension, and identify opportunities for improvement as well as collaboration. Capability Maturity Frameworks (CMFs) are the CMM concept applied to operational areas such as traffic incidents, work zones and traffic signals. Similar to the CMM workshop, we will conduct a CMF assessment workshop with DOTD and stakeholders to identify CMF related opportunities. **Value to DOTD:** CMM and CMF assessments will provide a systematic and traceable way to track the evolution of TSMO within DOTD. CMM and CMF needs identified during assessments will be scaled as TSMO strategies applicable to both existing and new highways.

Example from a TSMO Project: *A few needs identified during previous CMM assessment are: 1. Evaluate TSMO strategies during planning, 2. Document Benefit-Cost ratios of TSMO projects to support project selection, 3. Develop a data-driven and needs-based Operations and Maintenance budgeting process.*

A few needs identified during previous CMF assessment are: 1. Deploy signal performance measures/ATSPM for all signals, 2. Evaluate adoption of smart work zones during construction, 3. Continuously track ITS asset performance to improve asset uptime, 4. Establish a taskforce to begin the district's traffic incident management (TIM) efforts.

6. Stakeholder Engagement: We will develop a Stakeholder Engagement Plan to identify the internal and external stakeholders, engagement methods, time commitments, desired outcomes, and stakeholders' roles and responsibilities during plan development and later. We will conduct Stakeholder workshops to introduce stakeholders to TSMO,

discuss case studies, and conduct exercises to reinforce TSMO importance in their daily work. The workshops will also discuss training opportunities for new and existing Stakeholder employees to improve their TSMO knowledge and capabilities. **Value to DOTD:** The stakeholder approach will reinforce the fact that TSMO is not just mandated by leadership, but the value TSMO brings is understood by all staff and they feel empowered to apply TSMO principles in their daily work.

Example from a TSMO Project: *During Stakeholder Engagement we ask questions to better understand stakeholder goals, priorities, funding for operations, if/how federal funding is utilized, and nature of collaboration with other sections and agencies on funding and projects. We discuss and identify opportunities for collaboration with the MPO and local agencies for funding and regional programs (e.g., TIM, work zones, signal operations, data sharing).*

7. State-of-Practice Report: We will research DOTD's current TSMO related activities, including policies, procedures, standards, planned and programmed projects, existing traffic management system (TMS) deployments and programs, and available funding opportunities. We will research national TSMO best practices from exemplary DOTs. We will conduct a TSMO SWOT (strength, weakness, opportunities and threats) analysis based on the information collected, and document the DOTD TSMO State-of-Practice Report. **Value to DOTD:** The State-of-Practice report will provide an indication of DOTD's TSMO and TMS needs and opportunities.

8. TSMO Strategy and Solution Projects: The ideas, opportunities and needs discussed during the steering committee, stakeholder, leadership, CMM and CMF meetings and workshops as well as in the state-of-practice report will be discussed with the DOTD PM and steering committee and developed into TSMO strategy and solution projects and actions. The projects and actions will be summarized in the Implementation Plan section as Program-Level (high-level) and Operational Area-Level (e.g., for traffic signals, TIM, work zones, road weather, special events, etc.) projects and actions. The projects and actions will be prioritized based on cost (to implement) and impact (magnitude of improvement) and will be assigned an implementation timeframe (Year 1-2, 3-4, etc.). A lead and supporting section will be assigned for each project or action and measure of success (% complete, Yes/No) defined. **Value to DOTD:** Early and ongoing collaboration with the DOTD PM and steering committee during the strategic plan development will make sure that the TSMO projects and actions developed are practical and implementable, and have adequate resources committed to their implementation.

Example from a TSMO Project: *Arcadis collaborated with TxDOT to develop TSMO strategies and solutions that included: integration of TSMO elements within the project development process, data driven and needs based ITS/signals operation and maintenance, adverse weather collaboration and process improvements, systematic deployment of smart work zones, formalizing a TIM program through formulation of a taskforce, integration of performance measures/ATSPM within project identification/prioritization, ongoing TMS performance tracking and before/after studies, and more.*

9. TSMO Tactical Plan Assessment: Tactical plans build upon the higher-level recommendations provided in a TSMO Strategic Plan related to specific services, projects and programs and provide more detailed recommendations and actions to operationalize those services, projects and programs. Examples of existing DOTD tactical plans that may need to be updated based on TSMO plan recommendations include, Regional ITS Architectures and ITS Business Plans. Additional tactical plans that may be evaluated include, ITS Master Plans, Data Collection and Performance Measures Plan, Signal Management Plan, Emergency Management Plan, Work Zone Management Plan, TIM Plan, etc. Tactical plans include discussion and analysis of existing conditions, needs and gaps, opportunities and challenges, recommendations including responsibilities and staffing, and a more detailed cost estimate for implementation. **Value to DOTD:** Tactical plan assessment charts the path for TSMO evolution beyond the strategic plan. With this assessment DOTD can plan to formalize existing programs and ideate new ones.

10. Report Deliverables: Outcomes from the steps described above will be documented in the TSMO Strategic Plan for DOTD. The strategic plan will serve as the guiding document for TSMO implementations across the state. All meeting records, data, research and analyses conducted as part of the plan development will become report appendices. This information will be made available to DOTD and stakeholder staff through an easily accessible website. **Value to DOTD:** The TSMO website will provide a central location to store the strategic plan and future tactical plans and TSMO implementation products (documents, drawings, spreadsheets, dashboards, etc.).

Our approach to policy development, funding and grants presented below will accelerate DOTD's TSMO adoption and integration.

Policy Development and Updates

New policies or enhancements to existing policies may be necessary to integrate TSMO processes and strategies within the existing project development process and daily work of each section. In states including Georgia, Florida, Tennessee and Alabama the Arcadis Team has closely collaborated with DOT executive leadership and internal and external stakeholders to develop/update policies for TIM, safety service patrol, traffic signals, connected vehicles, data management, etc. We will evaluate existing DOTD policies and the need for new ones, considering the policy need, stakeholder and leadership input on what works/needs improvement, impact

on other processes, policies and funding, and national best practices. Our experience of developing emerging technology policies and proof-of-concepts will enable DOTD to set a strategic course toward adopting the technologies.

Value to DOTD: Our comprehensive policy experience will support the institutionalization of TSMO projects, programs and policies and successful adoption of emerging technologies.

Example: *TxDOT's recent TMS policy requires prioritizing TMS expansion on evacuation routes, maintaining 90% asset uptime, adding TSMO projects to long range plans, adding TSMO enhancements to project development process and providing services such as TIM and traveler information for work zones.*

Funding and Benefit-Cost Analysis

Arcadis will work with all DOTD sections to understand existing funding sources and levels and identify opportunities to fund standalone TSMO projects and integrate TSMO elements within planned projects. We will collaborate with DOTD and stakeholders to identify common needs and pursue federal funding to address those needs (e.g., TIM, signal operations). We recently helped TxDOT Houston develop an MPO TIP application supporting TSMO/ ITS as part of FM 1960 Planning Study and helped ALDOT obtain CMAQ federal funding for Regional Traffic Operations Program (RTOP). We will develop detailed business case based on safety, mobility and emissions cost savings to justify critical TSMO programs and support sustained funding. We will apply TOPS-BC (FHWA Benefit-Cost Tool) analysis to document the value of TSMO/ ITS projects, allowing these projects to compete fairly with capacity building projects for project selection. As an example, Arcadis' pilot deployment of ALDOT's RTOP program resulted in a 39:1 Benefit-Cost Ratio, resulting in funding to scale the program statewide.

Value to DOTD: Our experience of optimizing existing funding, identifying new funding, and experience navigating federal funding criteria (e.g., Buy America, Justice40) will support sustainable funding for TSMO projects and programs.

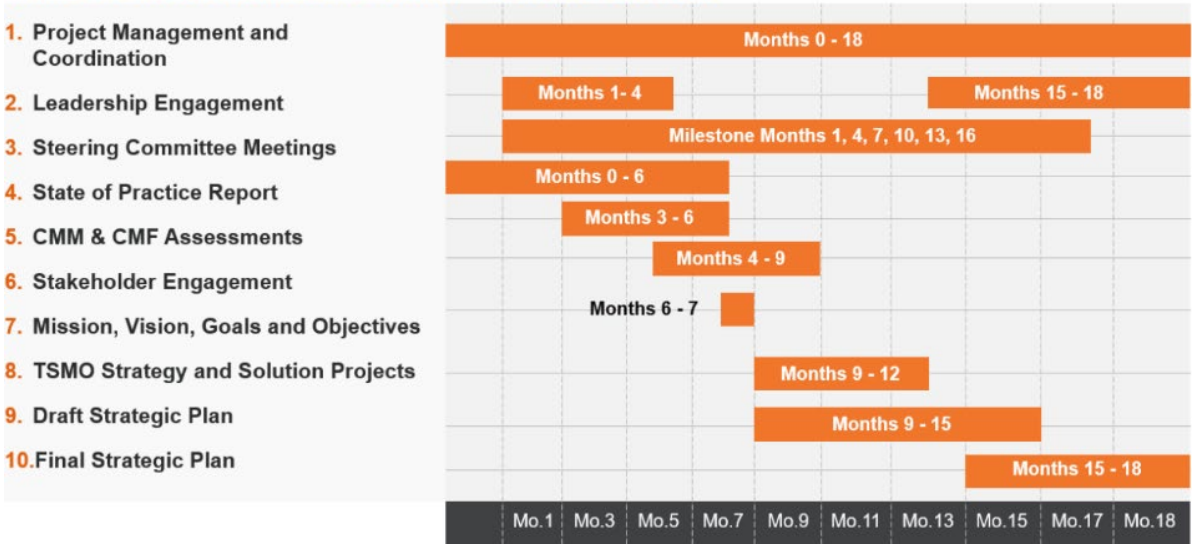
Grant Application Writing and Support

Arcadis Team has led more than 85 successful grant applications since 2009, securing over $6.2 billion in funding for agencies. Our team's successful grants in Louisiana include, $135 million INFRA grant for LA1 Phase II Improvements, $25 million for DOTD Rural Ferry Program, and $59 million INFRA Grant for North Baton Rouge. Our step-by-step approach for grants is 1) Identify grants early, 2) Align projects with grant opportunities, 3) Make projects implementation-ready, 4) Develop a project win plan, 5) Develop a winning grant application and apply, 6) Document lessons learned and prepare to apply for the grant again. Value to DOTD: Our experts bring a high win-rate to help DOTD secure and sustain federal TSMO funding through grants.

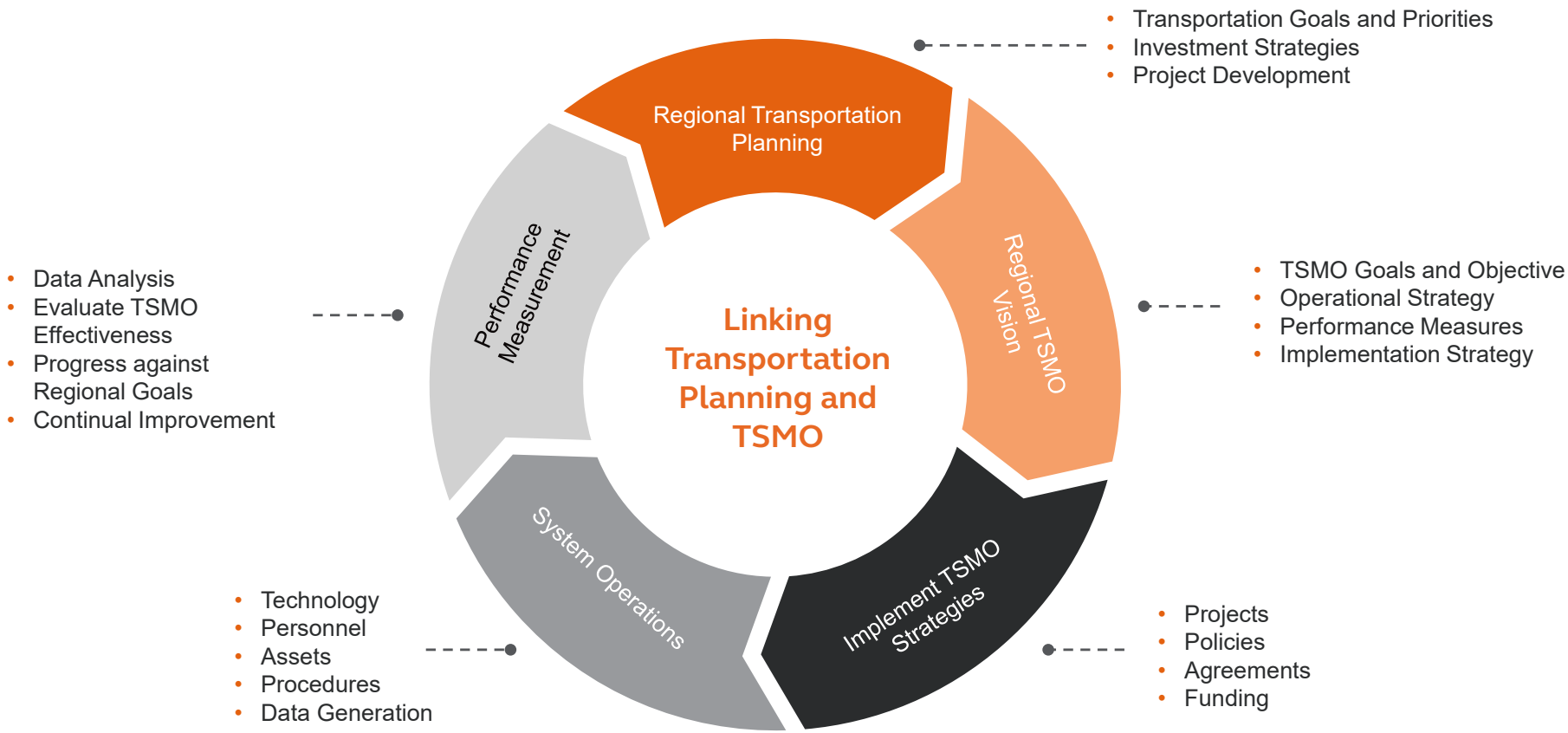
Schedule

As a primary component of this IDIQ, the TSMO Strategic Plan is anticipated to take about 18 months to complete. Throughout the process, we will coordinate closely with DOTD through leadership engagement, steering committee meetings, CMM/ CMF, and strategy and solution stages to ensure timely buy-in of strategies and projects. Meetings and workshops will be scheduled up to 4 weeks in advance to account for leadership and stakeholder availability, and provide timely discussions and task completion.To facilitate the review and approval process, Arcadis will provide a timely response to comments (within 2 weeks) and provide a comment-response matrix to easily track and document the review process.

TSMO Strategic Plan Development – Sample Schedule



Section 19-21



"The Arcadis team developed an innovative approach for prioritizing locations based on crash history while also considering other available data elements. The document will be a great resource to planners, engineers, designers, law enforcement agencies, and public officials as they make decisions on current and proposed projects in the city with the goal of reducing fatalities and serious injuries for our most vulnerable road users."
- Adriane S. McRae, PE, LADOTD Highway Safety Administrator, Baton Rouge Safety Action Plan

19. Workload:

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
Arcadis	ITS	4400016811 / H.013868.5	ITS Program Management and Operations (2022)	$155,434
		4400016811 / H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2022)	$275,760
		4400016811 / H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2022)	$79,654
		PO No. 2000715744; PO No. 2000719098; PO No. 2000719099; PO No. 2000733237	Scope for Damaged Electrical for I-10 Atchafalaya Bridge, I-20 @ Bert Kouns CCTV Upgrade, DMS Site Communication Upgrades, Ethernet and Power Surge Protectors	$18,750
		4400018646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$53,825
	Traffic	4400007175 / H.011328.2	I-49 South (Ricohoc to Berwick)	$171,365
		4400024204 / H.012889.5	I-20 Rehab (Pines Road to I-220)	$80,568
		4400017033 / H.005121	LA 1/LA 415 Connector	$69,503
		4400018780 / H.972419.1	SHSP Update and Regional SHSP Marketing/Advertising Support	$6,810
		4400014845 / H.012018.6	Adaptive Traffic Signal Design and Implementation	$17,741
		4400019379 / H.013797	LA 30: EBR PL – I-10	$355,478
		4400018646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$139,048
		4400021121 / H.000413	Cross Bayou Bridge Replacement	$111,962
		4400024307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	$234,650
		4400023690 / H.015213.5	District 04 Pedestrian Safety Improvements	$257,853
	Road	4400007175 / H.011328.2	I-49 South (Ricohoc to Berwick)	$342,731
		4400016923 / H.012901.6, H.010634.6	US 90Z (Bodenger Blvd. – Stumpf Blvd.)	$251,394
		4400019010 / H.010116.5	LA 1088: Soult and Trinity Roundabouts	$83,268
		4400024084 / H.009300.5	CMAR Contract for Hooper Road Widening (LA 3034 – LA 37)	$109,063
		4400024307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	$106,659
	Bridge	4400018646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$255,668
		4400021121 / H.000413	Cross Bayou Bridge Replacement	$148,603
	CE&I/OV	4400011306 / H.011220.6-1; H.013710.6	I-10 CBD2 Carrollton-Lafitte Ave and Supplement Nos. 1 & 2, I-10: US 61 to Laplace ITS Deployment	$22,182
		4400025046 / H.013710.6	I-10: US 61 to LaPlace ITS Deployment (CE&I)	282,879
	Environmental	4400004727 / H.002397.2	LA 16 (Pete's Hwy) Interstate 12 Interchange Route	$20,109
		4400009703 / H.000688.2	US 11 Norfolk Southern Railroad	$3,008

		4400007175 / H.011328.2	I-49 South (Ricohoc to Berwick)	$804,100
		4400009281 / H.009932	US 80 Widening: Vancil Road to Well Road Environmental Assessment	$5,343
		4400024307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	$85,327
		4400019338/ H.012891; H.014215; H.014213; H.014279; H.014276; H.014278; H.014216; H.014241; H.012565; H.014251; H.014257; H.014253; H.014256; H.014254; H.012061; H.014252	Rural Bridge Replacement Initiative Phase II – Multiple State Project Numbers – Districts 02, 03, 07, 61, and 62	$152,550

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State project number	Project name	Remaining Unpaid Balance**
HNTB Corporation	Environmental	4400007600 / H.003931	I-10 Calcasieu NEPA Restart (Lake Charles, LA)	$81,944
	Bridge	State Contract No. 44-13321	IDIQ Contract for In-Depth Bridge Inspection	
		4400013321 / H.009730	Gno 1 & 2	$1,055,323
		4400013321 / H.009730.5	Calcasieu, EBR, and West Feliciana Parishes In-Depth Inspections for I-10 Baton Rouge and John James Audubon Bridge	$621,794
	Other	State Contract No. 44-17329	IDIQ Contract for Innovative Procurement Support Services	
		4400017329 / H.012357.1	Task Order No. 1:1-12 Managed Lane Conversions	$105,671
		4400017329 / H.001779.5	Task Order No. 3: Jimmie David DB Procurement	$241,765
		4400017329 / H.003931.5	Task Order No. 4: I-10 Calcasieu Toll Support	$48,763
		4400017329 / H.015223.1	Task Order No. 10: BR-NO Pass Rail Corridor	$133,203
		4400017329 / H.015223.1	BR No Pass Rail	$292,095
	Bridge	State Contract No. 44-17264	Retainer Contract for Bridge Preservation	
		4400017264 / H.014588.5	I-20: Orange Street Overpass Repair	$18,700
		4400017264 / H.010319.5	I-110: North Street to Plank Road	$1,160
		4400017264 / H.001166.6	Caddo Lake CRES	$110,529
		4400017264 / H.012889	I-20: Rehab	$71,904
		4400017264 / H.012066.5	LA 3213: Gramerey Bridge	$10,741
		4400017264 / H.012622.5	I-12: Bridge Widening over Flog Branch	$303,073
		4400017264 / H.002337.5	LA 327-5 Bayou Fountain	$58,246

		4400017264 / H.014324.6	LA 3250: I-49 RR OP Repair	$37,769
		4400017264 / H.010251.5	Chippewa Street Pump Station	$274,207
	Bridge	H.014454.6	Boeuf River Bridge CRES	$33,316
		H.014672.6	I-12: LA 1032 Overpass Repair	$34,245
		H.012083.5	I-10: Calcasieu River Bridge Int. Repairs	$228,464
	Other	State Contract No. 44-23640	DOTD Statewide Toll Services GEC	
			Task Order No. 1: Program Support	$271,754
		4400023640 / H.004791.6	Task Order No. 2: PIBC Integration	$481,269
		4400023640 / H.015135	Task Order No. 3: LA1 Facility Implementation	$806,328
			Task Order No. 4: Marketing	$155,316
			Task Order No. 5: Bridge Inspection	$51,792
		State Contract No. 44-21094	Statewide Transportation Plan	$2,721,900
	Bridge	4400025029 / H.015341	IIJA Off-System Bridge Program	$12,901
	Bridge	State Contract No. 44-23512	Statewide Complex Bridge Inspection	
		4400023512 / H.009730.5	Task Order No 1	$1,255,488
	Other	State Contract No. 44-4900		
		440004900 / H.008145.6	LA 1 Phase 2	$6,092,265

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
La Terre (DBE)	N/A	N/A	N/A	$0

20. Certifications/Licenses:

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

STAFF CERTIFICATION CHART SUMMARY	
Names	**Relevant Certification**
Arcadis Staff	
Akhil Chauhan, PE, PTOE, PTP, PMP *Meets MPR Nos. 1&2*	Professional Engineer – LA / PE.0033703 / Exp. 09/2024 – Civil Professional Traffic Operations Engineer – #2544 / Exp. 11/2023 Professional Transportation Planner – #246 / Exp. 12/2024 Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Marwan Abboud, PE *Meets MPR Nos. 1&2*	Professional Engineer – LA / PE.0034657 / Exp. 09/2023 – Civil
Chris Hilyer	Operations Academy Senior Management Program Regional Operations Forum – Strategic Highway Research Program and TRB Incident Traffic Control for Responders – Grant, The American Traffic Services Association National TIM Responder Certificate NHI /ALDOT – ITS Procurement Course FHWA-NHI Value Engineering Workshop FHWA Speed Management Workshop FHWA Road Safety Audits for Locals FEMA – Introduction to the Incident Command System FEMA – National Incident Management System FEMA – ICS for Single Resources and Initial Action Incidents FEMA – National Response Framework, An Introduction
Ranzy Whitiker, PE *Meets MPR No. 3*	Professional Engineer – LA / PE.34132 / 03/30/2025 – Electrical
Kester Hollier, PE, PTOE *Meets MPR No. 4*	Professional Engineer – LA / PE.0 034304 / Exp. 03/2023 – Civil Professional Traffic Operations Engineer – #3928 / Exp. 11/2024 Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Ari Deitch, PE, PTOE, PTP, RSP *Meets MPR No. 4*	Professional Engineer – LA / PE.0041842 / Exp. 03/2024 – Civil Professional Traffic Operations Engineer – #4346 / Exp. 11/2023 Professional Transportation Planner - #690 / Exp. 07/2025 Road Safety Professional – 37 / Exp. 12/2024 Traffic Engineering Analysis Process & Report Modules 1, 2, & 3
Tony Moore, PE, IMSA II *Meets MPR No. 5*	Professional Engineer – LA / PE.0037887 / 09-30-2023 – Civil ATSSA Traffic Control Supervisor Refresher – LA State Specific – Exp. 1/2026 Traffic Engineering Analysis Process & Report Module 1, 2, & 3
Laura Hartley, PE, PTOE	PE.39030 / 09/30/2024 – Civil

20. Certifications/Licenses:

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

STAFF CERTIFICATION CHART SUMMARY	
Names	**Relevant Certification**
Meets MPR No. 5	Professional Traffic Operations Engineer – #4346 / Exp. 11/2023
Paul Hsu, PE *Meets MPR No. 6*	Professional Engineer – LA / PE.0035983 / 03-31-2023 - Electrical
Jeff Jones, IMSA II *Meets MPR Nos. 7 & 8*	IMSA I – AA_112604 / Exp. 08/2024 IMSA II – BE_112604 / Exp. 08/2024 ATSSA Traffic Control Supervisor Refresher – LA / Exp. 06/2023 ATSSA Registered Flagger – LA / Exp. 08/2024
Cody Lemoine *Meets MPR Nos. 7 & 8*	ATSSA Traffic Control Supervisor Refresher – LA State Specific – Exp. 2/2026 Comtrain Certified Competent Climber/Rescuer Comtrain ED R17 In-House Instructor for Authorized and Competent Climber/Rescuer NFPA 70E: Standard for Electrical Safety in the Workplace Image Sensing Systems, Inc - RTMS Traffic Detector Technical Training
Tony Jackson, IMSA III *Meets MPR No. 9*	IMSA III – Traffic Signal Senior Field Tech – CE_117627 / Exp. 01/2025 IMSA Traffic Signal Inspector for Advanced Technologies – AT_117627 / Exp. 01/2025 ATSSA Traffic Control Supervisor Refresher – LA / Exp. 01/2026 FHWA – NHI – 133121 Traffic Signal Design & Operation

Transportation Professional Certification Board Inc.

certifies that

Akhilendra Singh Chauhan

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

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Unless withdrawn by the Certification Board this certificate number 2544 issued in Washington, D.C. is subject to the provisions for renewal

November 24, 2008

Steven D. Hofener
Chair

PTOE
PROFESSIONAL
TRAFFIC
OPERATIONS
ENGINEER

Executive Director

Cut Here

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

Mr. Akhilendra Singh Chauhan

License/Certificate Type - Number	Expiration Date
PE.0033703	09/30/2024

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Transportation Professional Certification Board Inc.

certifies that

Akhilendra Singh Chauhan

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

PROFESSIONAL TRANSPORTATION PLANNER

Unless withdrawn by the Certification Board, this certificate number 246 issued in Washington, D.C. is subject to the provisions for renewal

December 1, 2009

Steven D. Hofener
Chair

PTP
PROFESSIONAL
TRANSPORTATION
PLANNER
TRANSPORTATION PROFESSIONAL CERTIFICATION BOARD INC.

Executive Director

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 3/27/2023 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Cut Here

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

Mr. Marwan B. Abboud

License/Certificate Type - Number: PE.0034657

Expiration Date: 09/30/2023

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

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Certificate of Completion

CHRISTOPHER O. HILYER

has successfully completed
100 hours of instruction for the course

Operations Academy Senior Management Program

Sponsored by the Center for Advanced Transportation Technology at the University of Maryland and the I-95 Corridor Coalition

October 2014

And has been awarded
10.0 Continuing Education Units

CATT CENTER FOR ADVANCED TRANSPORTATION TECHNOLOGY

operationsacademy SENIOR MANAGEMENT PROGRAM

Thomas H. Jacobs, Director
Center for Advanced Transportation Technology

Certificate of Completion

CHRIS HILYER

has successfully completed
40 hours of instruction for the course

Regional Operations Forum

Sponsored by the Center for Advanced Transportation Technology at the University of Maryland, SHRP2 Strategic Highway Research Program and the Transportation Research Board

December, 2015

And has been awarded
4.0 Continuing Education Units

SHRP2 STRATEGIC HIGHWAY RESEARCH PROGRAM

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Thomas H. Jacobs, Director
Center for Advanced Transportation Technology

The American Traffic Safety Services Association

Hereby recognizes that

Chris Hilyer

has attended the

Incident Traffic Control for Responders-Grant

Training Course

March 04, 2008
Date

Birmingham, AL
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

Executive Director

National TIM Responder Training Program Completion Certificate

This acknowledges that

Chris Hilyer

has successfully completed the National Traffic Incident Management Train-the-Trainer Course and earned 10 Professional Development Hours (PDHs).

Date: *February 25, 2015*

Mark R. Kehrli
Director, FHWA Office of Transportation Operations

U.S. Department of Transportation Federal Highway Administration | SHRP2SOLUTIONS | AASHTO | TRB

U.S. Department Of Transportation
Federal Highway Administration

NHI NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute
Certificate of Training

Christopher Hilyer

has participated in

Intelligent Transportation System (ITS) Procurement Course

hosted by

Alabama Department of Transportation, Design Bureau

Location: Montgomery, Alabama

Hours of instruction: 7

Date: November 4, 2004

Instructor

Director, National Highway Institute
Federal Highway Administration

Coordinator

Director, Office of Professional Development
Federal Highway Administration

U.S. Department Of Transportation
Federal Highway Administration

National Highway Institute

Certificate of Training

NHI NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Christopher O. Hilyer

has participated in

FHWA-NHI-134005 Value Engineering Workshop

hosted by

Alabama Department of Transportation

Date: *June 18-22, 2007*
Location: ***Montgomery, AL***

Instructor

Instructor

Hours of Instruction:
40 hours = (CEU: 3.0 Units)

Local Coordinator

Joseph S. Toole, Associate Administrator
Office of Professional and Corporate Development

DEPARTMENT OF TRANSPORTATION UNITED STATES OF AMERICA

Federal Highway Administration

Certificate of Completion

is hereby granted to

CHRIS HILYER

has completed to satisfaction

Speed Management Workshop

PDH 4

August 26, 2009

[name, title]

RESOURCE CENTER

DEPARTMENT OF TRANSPORTATION UNITED STATES OF AMERICA

Federal Highway Administration

Certificate of Completion

is hereby granted to

Chris Hilyer

has completed to satisfaction

Road Safety Audits for Locals

PDH 16

Granted: May 17, 2007

[name, title]

RESOURCE CENTER

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

CHRISTOPHER O. HILYER

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of this course:

IS-00100.a
Introduction to the Incident Command System
(ICS 100)

Issued this 6th Day of April, 2009

Cortez Lawrence, PhD
Superintendent
Emergency Management Institute

0.3 CEU

FEMA Form 16-31, October 05

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

CHRISTOPHER O. HILYER

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of this course:

IS-00200.a
ICS for Single Resources and
Initial Action Incidents

Issued this 6th Day of April, 2009

Cortez Lawrence, PhD
Superintendent
Emergency Management Institute

0.3 CEU

FEMA Form 16-31, October 05

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

CHRISTOPHER O. HILYER

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of this course:

IS-00700.a
National Incident Management System (NIMS)
An Introduction

Issued this 6th Day of April, 2009

Cortez Lawrence, PhD
Superintendent
Emergency Management Institute

0.3 CEU

FEMA Form 16-31, October 05

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

CHRISTOPHER O. HILYER

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of this course:

IS-00800.b
National Response Framework, An Introduction

Issued this 6th Day of April, 2009

Cortez Lawrence, PhD
Superintendent
Emergency Management Institute

0.3 CEU

FEMA Form 16-31, October 05

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 3/27/2023 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Cut Here

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

Mr. Ranzy Loedward Whiticker

License/Certificate Type - Number	Expiration Date
PE.0034132	03/31/2025

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

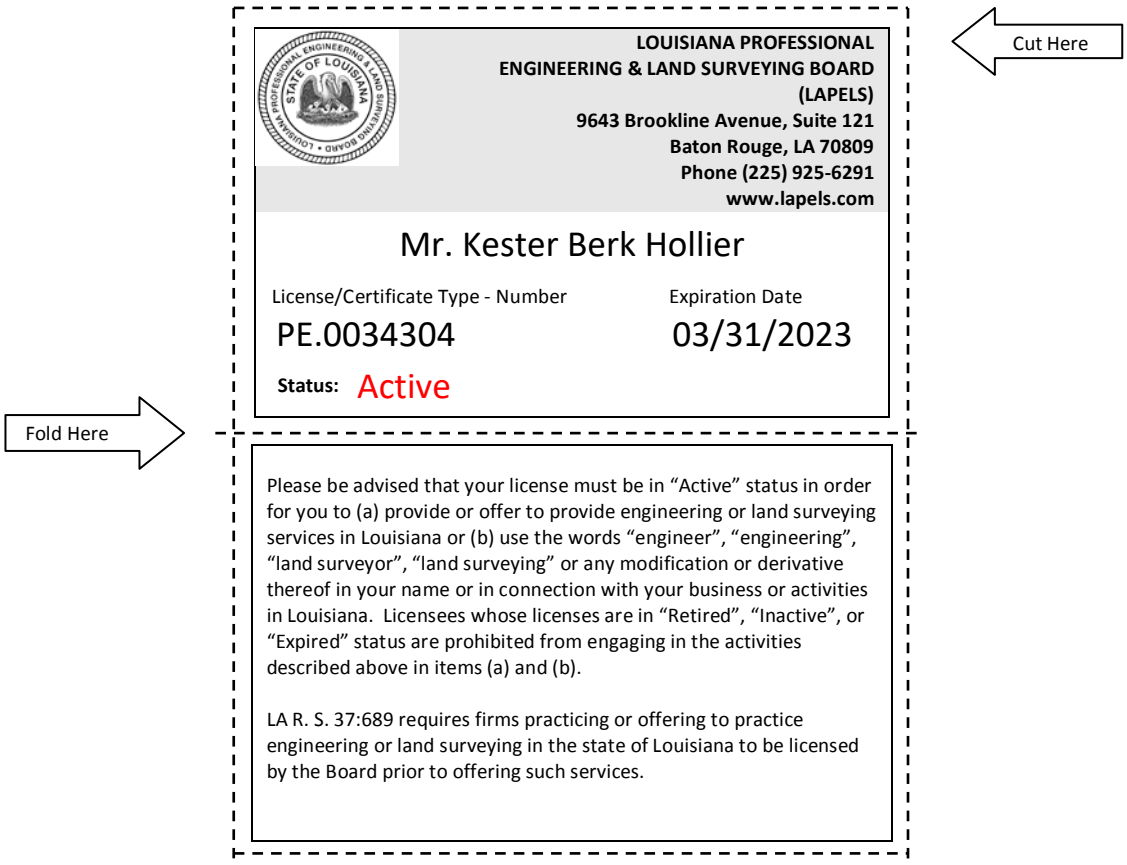
LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Disclaimer
All information provided by LAPELS on this web page, and on its other web pages and internet sites, is made available to provide immediate access for the convenience of interested persons. While LAPELS believes the information to be reliable, human or mechanical error remains a possibility, as does delay in the posting or updating of information. Therefore, LAPELS makes no guarantee as to the accuracy, completeness, timeliness, currency, or correct sequencing of the information. Neither LAPELS, nor any of the sources of the information, shall be responsible for any errors or omissions, or for the use or results obtained from the use of this information. Other specific cautionary notices may be included on other web pages maintained by LAPELS.

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 12/06/2018 , the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:



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Transportation Professional Certification Board Inc.

certifies that

Kester Beck Hollier

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

PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

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

Certificate number 3928 issued in Washington, D.C., U.S.A.

November 18, 2015

Kenneth W Ackert
Chair

PTOE
PROFESSIONAL TRAFFIC OPERATIONS ENGINEER
TRANSPORTATION PROFESSIONAL CERTIFICATION BOARD INC.

Executive Director

Certificate of Completion

presented to

Kester Hollier

for completing the

Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Kester Hollier

for completing the

Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Kester Hollier

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Cut Here

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

Mr. Ari J. Deitch

License/Certificate Type - Number	Expiration Date
PE.0041842	03/31/2024

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

Transportation Professional Certification Board, Inc.

certifies that

Ariel Jacob Deitch

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

Professional Traffic Operations Engineer

unless withdrawn by the Certification Board and subject to the provisions for renewal. Certificate number 4346 issued in Washington, DC, USA

11/20/17

PTOE PROFESSIONAL TRAFFIC OPERATIONS ENGINEER

Michael K. Park
Chair

Jeffrey F. Paniati
Executive Director

Transportation Professional Certification Board, Inc.

certifies that

Ari Jacob Deitch

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

Road Safety Professional

unless withdrawn by the Certification Board and subject to the provisions for renewal.
Certificate number 37 issued in Washington, DC, USA

12/21/2018

Diane W. Morabito
Chair

ROAD SAFETY PROFESSIONAL

Jeffrey F. Paniati
Executive Director

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Ari Deitch

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

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

Mr. Anthony James Moore

License/Certificate Type - Number	Expiration Date
PE.0037887	09/30/2023

Status: Active

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Anthony J Moore

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

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

Director of Training

Baton Rouge, LA
Location

President, CEO

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

This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

Certificate of Completion

presented to

Tony Moore

for completing the

Traffic Engineering Analysis Process & Report
Module 1

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

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Tony Moore

for completing the

Traffic Engineering Analysis Process & Report
Module 2

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

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Certificate of Completion

presented to

Tony Moore

for completing the

Traffic Engineering Analysis Process & Report
Module 3

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

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 12/6/2022 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

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

Ms. Laura Evans Hartley

License/Certificate Type - Number: PE.0039030

Expiration Date: 09/30/2024

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

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LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 3/27/2023 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Cut Here

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

Mr. Elun Paul Hsu

License/Certificate Type - Number	Expiration Date
PE.0035983	03/31/2025

Status: Active

Fold Here

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

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Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

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Certificate of Completion

FIBER INSTRUMENT SALES, INC.

Advanced Fiber Optic Training Course

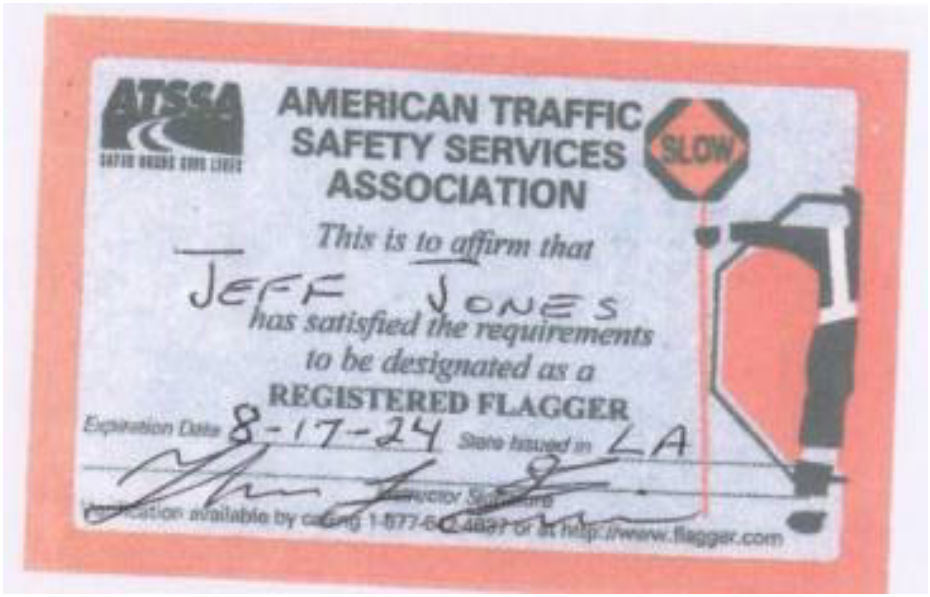
This certifies that

Jeff Jones

has successfully completed the Fiber Instrument Sales, Inc. Advanced Fiber Optic Training Course on June 9th , 2011.

BICSI CECs:
RCDD - 5
Installer - 5
Technician - 5
Certified Trainer - 5

John C. Bruno
Training Specialist



Certificate of Completion

FIBER INSTRUMENT SALES, INC.

Fiber Optic Training Course

This certifies that

Jeff Jones

has successfully completed the Fiber Instrument Sales, Inc. Fiber Optic Training Course on June 8th , 2011.

BICSI CECs:
RCDD - 6
Installer - 6
Technician - 6
Certified Trainer - 6

John C. Bruno
Training Specialist

IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Jeff A. Jones

is hereby certified as a

Traffic Signal Technician Level I

by completing all requirements and examination for certification
on 8/23/2021

Valid thru 8/23/2024
Certification #AA_112604

IMSA CERTIFIED PUBLIC SAFETY TECHNICIAN

Jeff A. Jones

is hereby certified as a

Traffic Signal Field Technician Level II

by completing all requirements and examination for certification
on 8/23/2021

Valid thru 8/23/2024
Certification #BE_112604

State of Louisiana

State Licensing Board for Contractors

This is to Certify that: ARCADIS U.S., INC
Attn: Kim Lasnicki
110 West Fayette St., Suite 300
Syracuse, NY 13202

is duly licensed and entitled to practice the following classifications

ELECTRICAL WORK (STATEWIDE); SPECIALTY: HAZARDOUS MATERIALS SITE REMEDIATION; SPECIALTY: SIGNS, SCOREBOARDS, DISPLAYS, BILLBOARDS (ELECTRICAL & NON-ELECTRICAL); SPECIALTY: TELECOMMUNICATIONS; SPECIALTY: TELECOMMUNICATIONS (EXCLUDING PROPERTY PROTECTION AND LIFE SAFETY SYSTEMS); SPECIALTY: TOWER CONSTRUCTION

Witness our hand and seal of the Board dated,
Baton Rouge, LA 21st day of June 2016

Director Chairman Treasurer

Expiration Date: June 20, 2019

License No: 34050

This License Is Not Transferrable

UNITED STATES OF AMERICA

XI

DEPARTMENT OF TRANSPORTATION • FEDERAL AVIATION ADMINISTRATION

IV NAME
JEFFERY ALAN JONES

V ADDRESS [redacted]

VI NATIONALITY	SEX	HEIGHT	WEIGHT	HAIR	EYES
USA	M	72	205	BROWN	BROWN

IVa D.O.B. [redacted]

IX HAS BEEN FOUND PROPERLY QUALIFIED TO EXERCISE THE PRIVILEGES OF

II REMOTE PILOT

III CERTIFICATE NUMBER 4411792

X DATE OF ISSUE 30 JUL 2020

XIV

VIII ADMINISTRATOR

Training Certificate

PRESENTED TO

Jeff Jones

for successful completion of a webinar presentation on

Traffic Controller (Naztec TS1 & TS2) and Streetwise Training Course

September 5, 2013

8 PDH's

Michael Trueblood, PE, PTOE
Facilitator

Trafficware UNIVERSITY

LAPELS Continuing Professional Development Provider - CPD.0000281

OSHA Occupational Safety and Health Administration

36-005330879

This card acknowledges that the recipient has successfully completed a 10-hour Occupational Safety and Health Training Course in

Construction Safety and Health

JEFF JONES

Marie Athey
(Trainer name – print or type)

6/16/2015
(Course end date)

The American Traffic Safety Services Association

Hereby recognizes that

Jeff Jones
has attended
Traffic Control Design Specialist - 1 day
Training Course

06/22/2015
Date

Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Training & Products Dept. Director

President, CEO

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Jeff Jones
has attended
Traffic Control Supervisor Refresher-LA State Specific
Training Course

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

Baton Rouge, LA
Location

Director of Training

President, CEO

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

This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

The American Traffic Safety Services Association

Hereby recognizes that

Cody Lemoine

has attended

Traffic Control Supervisor Refresher-LA State Specific Training Course

02/02/2018
Date

Baton Rouge, LA
Location

ATSSA
SAFER ROADS SAVE LIVES

Donna M. Clark
Training & Products Dept. Director

Ryan A. Wentz
President, CEO

This certificate acknowledges that

Cody M. Lemoine
Arcadis

was certified as a Comtrain 4th ED R17 In-House Instructor for Authorized & Competent Climber/Rescuer on 10/30/2018
in
Austin, TX
Certificate # 18896-106970-21

Shayne Campbell
Comtrain Authorized Signature
Certification expires 24 months from date of training

This certificate acknowledges that
Cody M. Lemoine of
Arcadis
was certified as a Competent Climber/Rescuer on 10/30/2018
In Austin, TX
Comtrain Certificate
18896-106969-44

Shayne Campbell
Comtrain Instructor
Certification expires 24 months from date of training

COMTRAIN

IN-HOUSE INSTRUCTOR

As per the Authorized Trainer Agreement for Certified Instructors of Comtrain's "Tower Climbing Safety and Rescue Course"

(RE-CERTIFICATION REQUIRED EVERY 24 MONTHS)

www.comtrainusa.com
512-275-6600

4th Edition

COMTRAIN

Tower Climbing Safety & Rescue Advanced Course Certification Card

(RE-TRAINING REQUIRED EVERY 24 MONTHS)

COMPETENT CLIMBER & RESCUER

www.comtrainusa.com
512-275-6600

4th Edition

COMTRAIN

CODY M. LEMOINE

Is Certified as an "In-House Instructor" of Comtrain's "Authorized & Competent Tower Climbing Safety and Rescue" Course for

ARCADIS

Certified
10/30/2018
in
AUSTIN, TX

Shayne Campbell
Comtrain Authorized Representative

www.comtrainusa.com
512-275-6600

Certificate #: 18896-106970-21

Certificate of Completion

This is to certify that

Cody Lemoine

has completed

NFPA 70E: Standard for Electrical Safety in the Workplace 2017-18

Completion Date 02/26/2019

Course Duration 4.0

Certificate # 000015380357

360training.com

6801 N Capital of Texas Hwy, Bldg I, Suite 250 ♦ Austin, TX 78731 ♦ 877.881.2235 ♦ www.360training.com

CERTIFICATE OF ACHIEVEMENT

is hereby granted to

MR. CODY LEMOINE

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

IMAGE SENSING SYSTEMS, INC.

Andrew Thoms
Sales Engineer Manager

19-Jan-16
Date

ImageSensing systems

Precision decisions.


CERTIFIED
PUBLIC SAFETY TECHNICIAN
IMSA
Anthony Jackson, III
is hereby certified as a
Traffic Signal Inspector for Advanced Technologies
by completing all requirements and examination for certification
on 1/26/2022
Valid thru 1/26/2025
Certification #AT_117627
Toby Cummings, CAE - Executive Director


CERTIFIED
PUBLIC SAFETY TECHNICIAN
IMSA
Anthony Jackson, III
is hereby certified as a
Traffic Signal Senior Field Tech Level III
by completing all requirements and examination for certification
on 1/26/2022
Valid thru 1/26/2025
Certification #CE_117627
Toby Cummings, CAE - Executive Director

ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Anthony Jackson

has attended

Traffic Control Supervisor Refresher-LA State Specific

Training Course

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

Director of Training

Baton Rouge, LA
Location

President, CEO

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

This certificate provides proof of training, not certification.

ATSSA American Traffic Safety Services Association ATSSA.com

U.S. Department of Transportation
Federal Highway Administration

National Highway Institute

NATIONAL HIGHWAY INSTITUTE

Certificate of Training

ANTHONY JACKSON

has participated in

FHWA-NHI-133121

Traffic Signal Design and Operation

hosted by

LA DOTD/LTRC

Date: *December 13-14, 2016*

Location: *Baton Rouge, LA*

Hours of Instruction: 12

Instructor

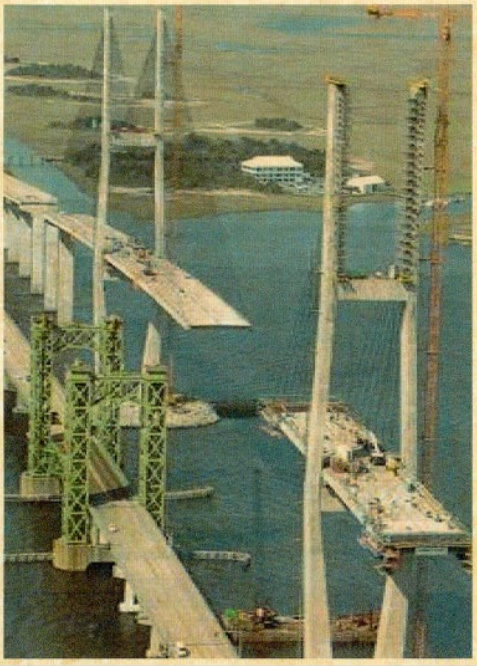
Instructor

Local Coordinator

Valerie Briggs, Director
National Highway Institute

State of Louisiana

Department of Transportation and Development



Awards this certificate to

Anthony Jackson

for

Successful Completion of the Requirements
for Certification in

Structural Concrete Inspection

Department Certifying Authority

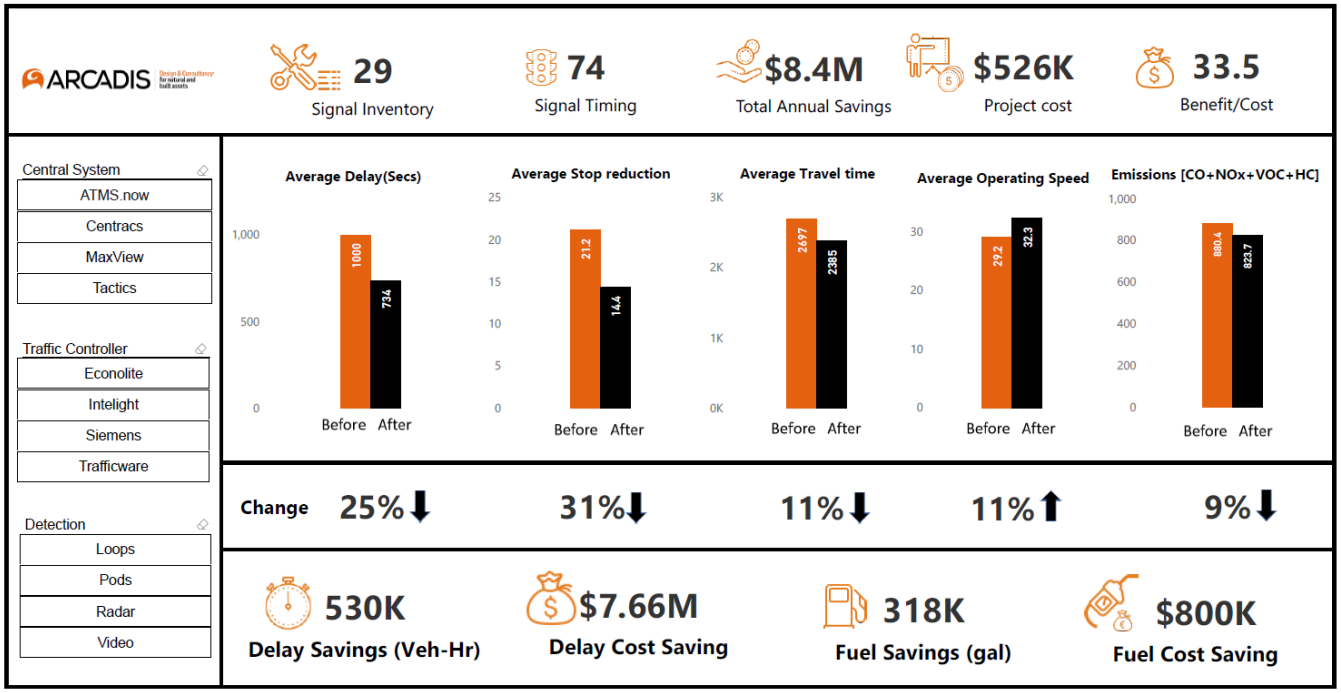
21. <u>QA/QC Plan:</u>

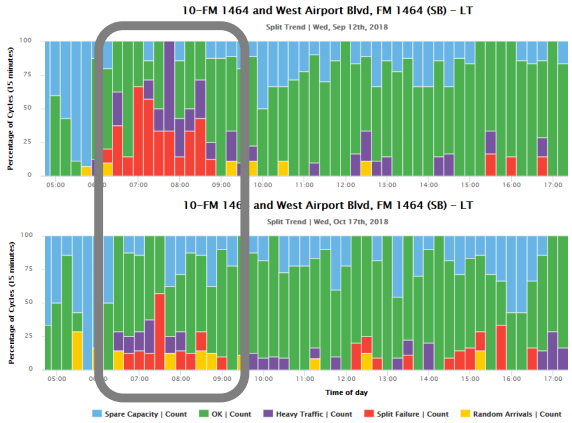
If the advertisement requires submission of a QA/QC plan, include it here. **Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted**.

Sections 22-23

TSMO in action – Arcadis is applying systems and technology and performance measurement enhancements to TxDOT Houston's signal timing program.

TEXAS SIGNAL TIMING DASHBOARD





"The consultant has been overly prepared for kickoff and all intermediate meetings while providing documentation for all decisions made. Arcadis has completed all required data collection and analysis in a timely and organized manner. All analyses submittals have been clear and easy to read/understand with all assumptions stated. Additionally, the consultant realized that due to the complexity of this particular corridor, VISSIM had to be used to analyze the existing no build and future conditions. With that, Arcadis analyzed the LA 3105 study area in VISSIM at no extra charge. Any concerns/comments DOTD may have had were efficiently addressed. Arcadis has provided alternatives that are constructible and make sense. The consultant came over **prepared for the Stakeholder and Public meeting**. *The* **presentation boards, conceptual alternative layouts, and VISSIM video for the public meeting expertly explained all of the essential points of the study clearly and effectively**."

22. Sub-consultant information:

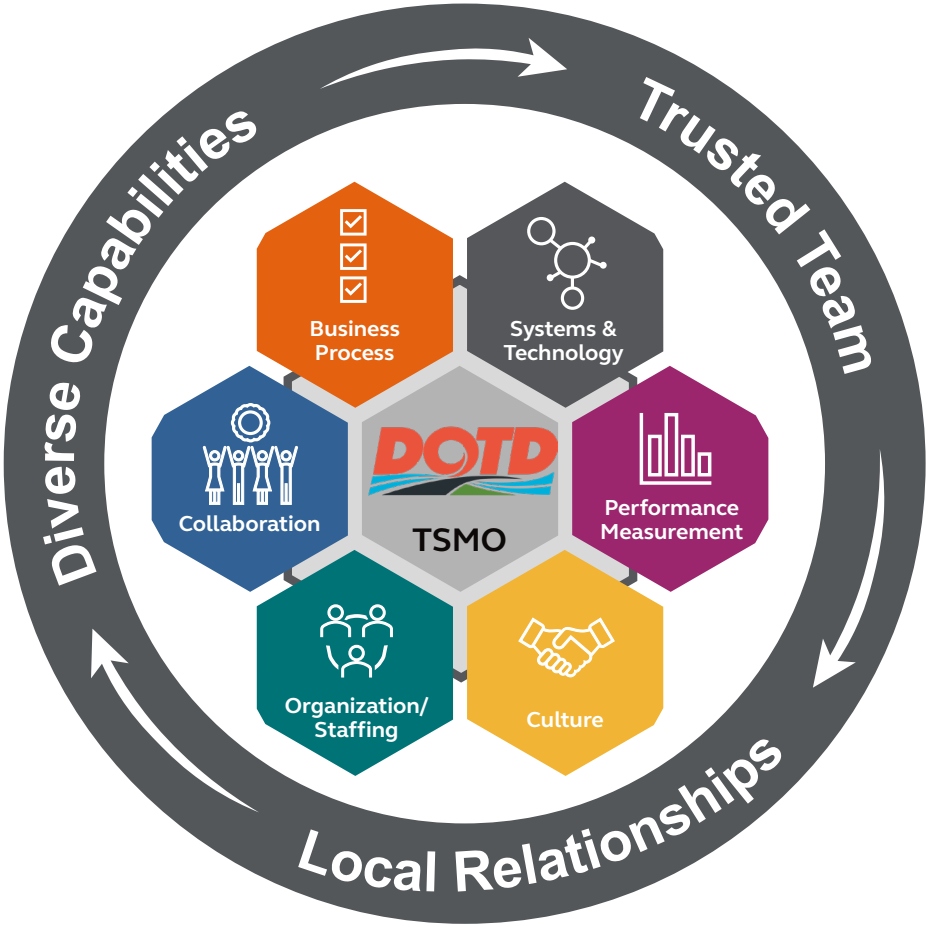
If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (Name must match as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
HNTB	10000 Perkins Rowe # 640, Baton Rouge, LA 70810	Craig Toth ctoth@hntb.com	850-536-8517 office 813.373.9939 cell
La Terre Engineering, LLC (DBE)	343 Third Street Suite 511B Baton Rouge, LA 70801	Seneca Toussant, P.E. stoussant@laterre-eng.com	225.960.1160 office 225.718.5328 cell

(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**.



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