Butler, Fairman & Seufert, Inc. (BF&S) is pleased to submit our Letter of Interest (LOI) for the Intersection Improvement (Roundabout) on US 52 at SR 9 with Associated Bridge Work assignment in the Greenfield District. Our team offers wide-ranging road and bridge expertise to successfully deliver high quality projects on time and under budget.

THE BF&S ADVANTAGE:

Maintenance of Traffic Solution to Avoid Lengthy Detours:
Accessibility to both US 52 and SR 9 to accommodate area freight and agricultural transport without lengthy detours is of high importance. BF&S proposes the evaluation of a large offset roundabout with construction sequencing to reduce impacts on motorist and provide safety for all. Our design approach includes input from our highly experienced construction experts to ensure that each strategy is constructible, cost effective and minimizes traffic delays. See Page 9 for details.

Cost Savings Through Practical Design Efforts:
The BF&S design staff has established a culture that implements practical design concepts throughout the project delivery. Lead by seasoned Project Manager, Mike Matel, our team has the following bridge rehabilitation solutions for an overall savings in the range of $500,000 - $700,000:

- **SR 9 over Brandywine Creek** – Convert the end bents to semi integral to prolong the life of the substructure and eliminate long-term joint maintenance. Potential long-term savings $200,000 - $300,000.
- **US 52 over Big Blue River** – Construct new end bents and superstructure while keeping the interior piers. In addition, shifting the waterway to the west would allow for a more efficient span arrangement. We would also review the life-cycle costs to determine whether the superstructure should be steel or concrete. Potential long-term savings $300,000 - $400,000.

The remainder of this LOI details the wide-ranging experience and abilities of the BF&S team. We are ready to deliver the services necessary to complete your project goals and appreciate the opportunity to continue to serve the Greenfield District.

Respectfully submitted,

BUTLER, FAIRMAN & SEUFERT, INC.
About BF&S
BF&S was founded in 1961 to provide specialized bridge and roadway engineering services. Over the years, we have met the demand for new services by expanding our expertise, capabilities and professional staff. BF&S has over 45 Professional Engineers, Land Surveyors, Landscape Architects and Architectural Historians as well as a technical support staff of approximately 105.

About Franco
Franco Consulting Engineers (FCE) is a DBE and MBE certified consulting engineering firm qualified to provide professional services in Highway Design, Project Consulting, Project Management, Environmental Reports, Utility Coordination and Construction Inspection. FCE was established on April 4, 2006. Their company’s mission is to provide consulting engineering services on transportation projects, from concept planning through construction, with a motivated and skilled professional team committed to delivering excellent services using common sense and practical experience.

Capacity and Availability of Staff
Our team consists of highly qualified professionals ready to provide the services required for this assignment. Our teaming partner will be FCE (DBE) who is a highly skilled and motivated professional team committed to delivering excellent services using common sense and practical experience. We have the combined resources of responsive engineers and support staff with a wide-range of expertise to assist as needed. Mike Matel, PE will be the Bridge Project Manager and Dan Isaacs, PE will be the Road Project Manager. Mike Matel will also serve as the overall project manager and will be the primary contact person for INDOT. He will be responsible for communicating and coordinating with INDOT and our team members to ensure INDOT’s goals and expectations are being met. Mike has over 35 years of experience working with INDOT on various bridge and road projects. The BF&S team has success delivering multiple project types with several INDOT Project Managers.

INDOT Pre-Qualification Team Roles
BF&S  |  93%  |  3.1, 5.2, 5.5, 5.6, 6.1, 8.1, 9.2, Utility Coordination
Franco Consulting Engineers (DBE)  |  7%  |  5.2, 7.1

Mike Matel, PE will be the Bridge Project Manager and Dan Isaacs, PE will be the Road Project Manager.
Mike Matel, PE
OVERALL PROJECT MANAGER

Mike has over 35 years of bridge engineering experience for state and local rehabilitation and replacement projects. He has been responsible for all aspects of project delivery and compliance and is extremely familiar with the INDOT procedures and processes. He is known for his organizational skills and quality control and assurance which allows for successful completion of multiple projects that are on time and within budget. He has shown his leadership skills and ability to coordinate all disciplines throughout the life of a project and reach the desired results. Mike has experienced all kinds of schedules and challenges for numerous clients throughout the State.

Project Experience

Project Manager for the Replacement of the State Road 26 over the South Fork of the Wildcat River Bridge.
This three span continuous composite hybrid bulb-tee beam bridge had an overall length of 362 feet with an overall width of 74 feet. Portions of the new structure were built in phases to accommodate traffic being maintained during construction.

Bridge Project Manager for the Hoosier Heartland SR 25 project in Tippecanoe County.
This 11 mile new road construction project included 7 twin structures along the mainline and 5 bridges which spanned over SR 25 and the Norfolk Southern Railroad. Extensive use of MSE walls and concrete bulb-T beams were used. All the design work was completed and to construction within 2.5 years from Notice to Proceed.

Project Manager for 2 Bridge Rehabilitations in Clinton County.
Bridge 508 was a single span arch, located in a historic district of Frankfort. The bridge deck received an overlay. Extensive cracks in the arch ring were repaired and the historic brick bridge railing was restored. The superstructure for Bridge 9 was removed and replaced. The exposed interior bent cap piles were encased in concrete.

Project Manager for the Rehabilitation of Three Twin Structures Located on US 41 in Evansville, Indiana.
A comprehensive bridge corridor study was completed in which 3 levels of rehabilitation was investigated for each structure. Seven maintenance of traffic scenarios were also investigated. These bridge rehabilitations consisted of 4 bridge deck replacements and 2 bridge concrete overlays.

Howard County Bridge No. 508
“All Final Tracing files were uploaded two weeks early and with the correct naming convention. Mike Matel Project Engineer was very quick to answer any and all question that was presented.”
- Joseph Sheedy, Greenfield District

EDUCATION
BS – Civil Engineering, Michigan State University

REGISTRATION
Indiana PE – 10606148
Kentucky PE - 28519
Dan Isaacs, PE  
**ROAD PROJECT MANAGER**

As a leader in the Road Department for over 24 years, Dan has an extensive background developing and managing a wide variety of INDOT road projects throughout the State. He has the ability to see the big picture early in design allowing him to incorporate influences from environmental issues, utility conflicts and right-of-way impacts. He has been involved in projects with multiple teams and understands the communication required to ensure the goals and expectations are being met. Dan is known for his attention to detail and success in delivering quality projects while demonstrating leadership skills and abilities to manage projects through challenging designs and accelerated schedules. He has more than adequate availability to dedicate time to the project and ready to take on the task. Under Dan’s leadership, we are confident that our team can meet and exceed your expectations.

**Project Experience**

*Project Manager for Perimeter Parkway Phase 1a Roundabout, Purdue University.*  
This project is an integral part of a new southern gateway to the Purdue campus from relocated US 231. The roundabout and in particular the central island provide a focal point and aesthetic treatment opportunity to create a positive image as well as defining an entry point for the public entering and exiting the campus. Purdue University incorporated a central island treatment with the opening of US 231.

*Road Project Manager for the Hoosier Heartland SR 25 roundabout, Tippecanoe County.*  
One of the first roundabouts designed and constructed on an INDOT road. The project was designed to accommodate trucks delivering wind turbine blades. Capacity analysis using HCS/Synchro/Sidra was performed to assist design. 3D micro-simulation modeling using VISSM was performed to determine future operation and provide simulation for public presentation.

*River Road Roundabout, West Lafayette.*  
BF&S provided the concept and preliminary design for this multilane roundabout, replacing an existing signalized arterial intersection. The solution addressed a site with a steep approach profile unable to accommodate proper storage of vehicle queues at the signalized intersection. BF&S designed the roundabout with an elevated grade and on a tilted plane to mitigate the steep approach. Due to grade changes, retaining walls were included to minimize right-of-way impacts. The resulting approach profile and roundabout geometry improved safety, capacity and reduced vehicle queue. The roundabout location provided landscaping opportunities to an area that serves as a gateway to Purdue University.

**EDUCATION**

- BS – Civil Engineering, Purdue University

**REGISTRATION**

- Indiana PE – 60910078
- Illinois PE – 062-025713
- Kentucky PE - 28497

**TRAINING**

- 2014 - INDOT Roundabout Certification
- 2013 - INDOT Updated Parameters for Roundabout Design
- 2012 - INDOT Roundabout Design & Construction Training
- 2011 - TRB - 3rd International Roundabout Conference
- 2011 - INDOT Roundabout Design for Large Trucks
Katlyn Shergalis, PE  
**PROJECT ENGINEER**  
**BRIDGE**  

**EDUCATION**  
ME Civil Engineering – Trine University  
BS Civil Engineering – Trine University  

**REGISTRATION**  
Indiana PE – 11500289  

Katlyn is responsible for design and development of bridge replacement and rehabilitation projects. Prior to joining BF&S, she was employed in the INDOT Bridge Design Group as a Lead Design Engineer. Her previous experience at INDOT makes her very knowledgeable with INDOT design policies and procedures.

**Relevant Project Experience:**  
- SR 25 over Wea Creek (overlay)  
- SR 46 over Indian Creek (overlay)  
- CR 900 N over Little River (super structure & widening)  
- SR 63 over Wabash River (overlay)  
- Bridge No. 503 in Howard County (Superstructure replacement)

**Andrea Langille, PE  
**PROJECT ENGINEER**  
**ROAD**  

**EDUCATION**  
BS – Civil Engineering, University of New Brunswick  

**REGISTRATION**  
Indiana PE – 10300065  
Kentucky PE - 28462

Andrea has 15 years of experience as a transportation engineer. She is responsible for project management and design on State and Local roadway rehabilitation and reconstruction projects. She also has experience as a construction engineer where she was responsible for overseeing the day to day operations of construction projects.

**Relevant Roundabout Project Experience:**  
- 61st Avenue & Wisconsin Street - Hobart  
- 93rd Avenue & Chase Street - Crown Point  
- CR 900 East & 100 North - Hendricks County  
- Ditch Road & Casey Road - Westfield

**Tom Vandenberg, PE, PTOE  
**TRAFFIC**  

**EDUCATION**  
BS – Civil Engineering, Purdue University  

**REGISTRATION**  
Indiana PE – 10606544  
Kentucky PE - 28468  
PTOE - Certification 2499

Tom has over 15 years of experience in traffic engineering and transportation planning. His work experience includes the performance of transportation master plans, traffic impact studies, corridor studies, access management plans, pedestrian mid-block crossing studies, road impact fee studies, traffic safety and crash analysis.

**Relevant Project Experience:**  
- Hoosier Heartland Highway and S.R. 25 Roundabout Traffic Analysis - Tippecanoe County  
- Corridor Study for County Line Road - Hobart  
- Traffic Modeling for Preliminary Engineering Services of the Louisville Southern Indiana Ohio River Bridge (LSIORB) Project - Jeffersonville  
- Multiple traffic studies performed for the INDOT roundabout design checklist including level-of-service and queue length analyses
OVERALL PROJECT UNDERSTANDING

The BF&S Team is well prepared to deliver the Project Development Services indicated in Item #1 of RFP # 1708. We are eager to provide engineering services for both the roadway and bridges listed on this Greenfield District project. We have experience with bundling projects through on-call services we are currently providing within the Fort Wayne District. The bundle will require our team to prepare roundabout intersection plans for improved level of service and increased safety at the intersection of US 52 and SR 9. Plans for bridge replacements on US 52 over the Big Blue River and two bridge deck overlays over Brandywine Creek on both US 52 and SR9 are required as well. We are ready and capable of delivering this bundle of projects to be **Ready for Construction 7/29/2020**.
INTERSECTION PROJECT UNDERSTANDING

INDOT has evaluated and identified a need to improve the intersection of US 52 and SR 9 that is currently controlled by a 4-way stop with a red/red flashing beacon. This intersection has an accident history and has a Level of Service of F during peak periods. Signalizing this intersection and installation of auxiliary lanes would provide an acceptable level of service, but would not improve the safety of the intersection as much as incorporation of a roundabout. The need to incorporate additional auxiliary lanes that would provide required deceleration and storage could lead to greater right-of-way impacts than would be introduced by constructing a roundabout. All corners provided large areas of existing right-of-way that make a roundabout the appropriate selection. The US 52 bridge over Brandywine Creek immediately east of the intersection is being bundled with the intersection project and will require maintenance of traffic coordination. The roundabout will be sized and constructed to accommodate large trucks and farm equipment.

Right-of-way plans and grants were studied for the project and yielded the following: At the intersection of SR 9 and US 52, record plans from 1934 indicate a wide, diamond-shaped existing right-of-way configuration.

PROJECT APPROACH

As part of the Engineering Assessment, we will begin the project with the evaluation of positioning of the roundabout considering both the long-term and short-term goals of INDOT as well as construction costs, environmental impacts, right-of-way impacts, utility impacts and long-term maintenance costs. All the alternatives will be presented to INDOT to ensure you have a comprehensive understanding of all the options available. As alternates are being evaluated, our survey team will commence collecting topographical data, and our environmental team will begin gathering information for the environmental document. Shown in this proposal is an example of one alternate placement of the roundabout that will be evaluated. At this stage, the northeast corner appears to be the most preferable area to position the roundabout. In addition to the impacts getting evaluated, we will also consider maintenance of traffic during construction. Often times intersections are closed for the construction of a roundabout; however, sequencing construction to maintain traffic may be preferable in lieu of a lengthy detour.
Off setting the intersection improves the ability to maintain traffic through the intersection with a temporary signal set up and avoiding lengthy detours for both state roads.

**PHASE 1**
- Set up temporary signalized intersection using existing strain poles and span wire
- Minimal areas of temporary pavement required
- Utilize auxiliary lanes for two-way traffic
- Relocate drive for property in NE corner
- Construct pavement areas as shown

**PHASE 2**
- Adjust signal heads as needed
- Move traffic onto areas of existing and newly constructed pavement
- Continue to construct areas of pavement as shown

**PHASE 3**
- Continue to maintain traffic movements with the temporary signal
- Complete small portions of the roundabout

**PHASE 4**
- Remove temporary signal
- Run traffic on roundabout
- Finish roundabout with construction of splitter islands and truck aprons
Hadley Road & Center Street Trail Roundabout
Plainfield, IN

Concord Road & Maple Point Drive Extension Roundabout
Lafayette, IN

Brooks School and Fall Creek Road Roundabout
Fishers, IN

Diebold Road Roundabout
Fort Wayne, IN

Chase & 93rd Avenue Roundabout
Crown Point, IN

Roundabout at SR 32 and Presley Ave.
Noblesville, IN
BRIDGE APPROACH

We have conducted site visits, taken photographs and reviewed the latest bridge inspection report. Based upon this information and the RFP work descriptions, the following is the recommended scope of work for these structures:

**SR 9 over Brandywine Creek – Bridge Deck Overlay**
**US 52 over Brandywine Creek – Bridge Deck Overlay**
**US 52 over Big Blue River – Superstructure Replacement with New End Bents**

**INITIAL OBSERVATIONS**

**SR 9 over Brandywine Creek:**
The bridge was built in 1982 and has only had minor repairs to it. Overall, the structure is in good condition. The deck and wearing surface are in fair condition with several cracks, delaminations and patched areas. The end bent joints are failing and in poor condition. The bottom of the deck is in good condition with minor cracks and efflorescence. The beams and substructures are in good condition; however, the end bents are showing early signs of deterioration due to water leaking at the joints. The current bridge rail is substandard. While the scope suggests a rail/overlay with joint and approach slab replacement, consideration should be given to converting the end bents to semi integral to prolong the life of the substructure and eliminate long-term joint maintenance. Although the initial cost may be $50,000 - $75,000 more, long term savings of $200,000 - $300,000 will be realized.

**US 52 over Brandywine Creek:**
The bridge was built in 1955 and overlaid in 1986. Overall, the structure is fair condition given its relative age. The existing overlay is in fair to poor condition with several cracks, patches and delaminations. The joints have dirt and debris in them and are failing. The railings have several cracks. The underside of the arches have several delaminations and spalls that are leeching. The recommended scope is to overlay the deck and replace the joints and approach slabs. Patching deteriorated areas on the underside of the arches should be considered. BF&S recently performed a similar scope of work on SR 18 over Salamonie River in Blackford County. Due to the length of the detour, suggested maintenance of traffic would be phased construction with signals. A traffic analysis should be performed to determine if traffic would back up into the intersection at SR 9 and US 52.
US 52 over Big Blue River:
The bridge was built in 1938 and has been rehabilitated several times. The last repair occurred in 1987, and the structure is now in fair to poor condition. Overall, the structure is in fair to poor condition. The deck has a few transverse and longitudinal cracks, delaminations and patches. The underside of the deck and copings have spalls and exposed rebar along with efflorescence. The steel beams have several rust spots and section loss, particularly at the end bents. The substructures are in fair to good condition with moderate to heavy deterioration at the end bents and a few minor deteriorated areas at the piers.

With the superstructure and end bents in poor condition and the piers in good condition, we offer a cost-saving option of constructing new end bents and a new superstructure while saving the interior piers. Our preliminary hydraulics analysis shows the floodway follows more of the western bank allowing us to shift the geometry of the rehabilitated bridge to the west. This equalizes the spans and allows for a more efficient span arrangement. An Engineering Assessment, identifying life cycle costs, would be performed to determine if the superstructure should be steel or concrete. By saving the interior piers and associated waterway work in lieu of new piers, we estimate a project savings of $300,000 - $400,000. Due to the length of the detour, suggested maintenance of traffic would be phased construction with signals.

State Road 52 over Blue River