



**Missouri's  
Local  
Program**  
*for community  
development*

## COVER SHEET

(This must accompany your firm's letter of interest and does not count in the page limit)

Firm's Full Legal  
Name:

Bacon Farmer Workman Engineering & Testing, Inc.

Firm Contact Name:

Barry Horst, PE

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3437 William Street

Cape Girardeau, MO 63701

Work Category:

- Roadway Design
- Trails & Sidewalks
- Construction Inspection
- Traffic Engineering & TEAP
- Structures
- Environmental
- Historic Preservation
- Multimodal Planning / Systems and Facilities Design
- Transportation Planning – **NEW CATEGORY**



Skyline Road Roundabout

2026-2029 LPA On-Call Traffic Engineering &amp; TEAP

Missouri's Local Program for Community Development

LPAoncall@modot.mo.gov

**Bacon Farmer Workman Engineering & Testing, Inc.**

(BFW) is pleased to submit our statement of interest and qualifications for providing Traffic Engineering and TEAP services for the Missouri's Local Program.

The BFW team proposed for this project consists of

highly experienced traffic engineers with extensive backgrounds working on MoDOT and LPA projects. With our seasoned staff, proven project history, and available capacity, BFW is fully prepared and committed to providing these services for the LPAs, delivering high-quality products on time and within the budget constraints established by the agency.

**Workforce Diversity**

BFW is committed to continually fostering a diverse workforce across all our office locations. We have an excellent record of minority and female hiring, with 28% of our current workforce comprised of these groups. We understand the importance of diversity and the value it brings through new ideas, innovation, and creativity. We believe that more varied perspectives lead to stronger teams, more satisfied clients, and the best possible solutions.

**General Experience of Firm**

BFW personnel have comprehensive experience providing traffic studies, highway capacity analyses, traffic signal warrants, traffic signal management, highway safety manual analyses, and traffic modeling. BFW has a history of successful traffic studies for several Departments of Transportation, counties, cities, school districts, and commercial establishments. Examples of our services delivered include:

**Traffic Impact Studies**

BFW is proficient in using ITE Trip Gen to develop Traffic Impact Studies and has provided these studies for local school districts, colleges, and universities including Murray State University, Southern Illinois University, West Kentucky Community & Technical College, Harrison County High School, McCracken County High School, and Lone Oak Middle School. We have also provided traffic impact studies for commercial entities. One of our long-term clients is O'Reilly Auto Parts and on multiple occasions, we have prepared studies for this organization to help them plan for a new facility. We have provided traffic impact studies for complex multiuse developments such as the proposed industrial/commercial plaza at Prosperity Business Park in Springfield, IL. BFW's Traffic Department completed TIS Coursework at the University of Kentucky and we are officially registered to provide Traffic Impact Studies in the state of Kentucky. Similar registration is not required in Missouri, but BFW Engineering is very familiar and has performed Traffic Impact Studies in Missouri in accordance with EPG 905 guidelines.

**Safety Studies**

Improving travel safety for all road users is a focus area for BFW traffic personnel. BFW incorporates safety analysis in all our traffic studies. From high level network safety screening to detailed intersection crash diagrams, BFW provides safety assessments that will meet any highway safety analysis needs that the LPA may have. Our team is proficient in Highway Safety Manual (HSM) principles and applicable software, including AASHTO's HSM Spreadsheets, Interactive Highway Safety Design Model (IHSDM) software, Safety Performance for Intersection Control Evaluation (SPICE) tools, Crash Modification Factors, and associated Benefit-Cost Ratio ranking schemes. BFW is very familiar with MoDOT's EPG and facilitating Road Safety Audits. Our safety analysis services also include near miss assessments at intersections and identifying Wrong Way Driving prevalence on divided highways.

**Traffic Operations**

BFW Personnel are well equipped to provide the LPAs with operational analysis of the Missouri roadway system. We have provided origin/destination data for CORSIM to support AJRs, VISSIM microsimulation for queue, travel time, and delay analysis, Synchro HCM Analysis, HCS-HCM Analysis, and CAPx for intersection, interchange, and roadway improvement projects. Our team can provide operational analysis for all road and intersection types in the state of Missouri. BFW traffic personnel are fluent in traffic signal coordination optimization for travel times and standalone signal retimes that consider LOS, clearance intervals, and safety. Our team has analyzed and designed successful traffic signal and roundabout intersection improvement projects that meet operational needs of Missouri travelers.

# Past Performance, Familiarity & Capability

BFW has successfully delivered traffic engineering services to multiple organizations, including traffic signal analysis and design, roundabout analysis and design, intersection studies/improvements, traffic studies, operational studies, and safety studies.

## Traffic Signals

This work included management of traffic signals using traditional timing and coordination, as well as adaptive InSync Traffic Management Software. We have also provided estimates and management of contracts for fiber expansion and interconnection of multiple traffic signals. Our staff has in-depth experience with recommending signal timing plans and providing follow-up retimes. Additionally, BFW Traffic personnel are equipped to retrofit Traffic Signals with ADA compliant Pedestrian facilities and Phasing. Some specific projects BFW has provided Traffic Signal services are below.

### **I-270 & IL 159 Interchange Design Study, IDOT**

The traffic portion of this project included an evaluation of traffic volumes, coordination timing optimization, retime, and added pedestrian phasing for a signalized corridor.

### **I-270 & IL 157 Interchange Design Study, IDOT**

The traffic portion of this project included an evaluation of traffic volumes, establishing standalone signal timing plans, and improved right-turn geometrics based on 95th Percentile Queue Length.

### **Traffic Impact Study, Harrison County School District**

The traffic signal portion of this project included an operational analysis of three intersections in Cynthiana, KY. The operational analysis included a Signal Warrant Analysis and signal timing plans for the three intersections.

### **MO 25 & BUS 60, Dexter SS4A**

This p19890312 project included a safety and operational performance analysis of an intersection in Dexter, MO. The intersection and associated traffic volumes were determined to meet Signal Warrants at the intersection and were selected as the preferred alternative. BFW provided the design for this signalized intersection.

## Roundabouts

BFW can provide excellent analysis and design services for intersections with considerations for roundabout improvements. Our team has analyzed and designed roundabouts as detailed below.

### **Route Y & Route BB Intersection, MoDOT SE District**

Provided roundabout design, fastest path analysis, truck turning geometric analysis, and sight distance analysis for this rural high-speed roundabout near Sikeston, MO.

### **Ingram Interchange, Sikeston, MO**

Provided roundabout design, fastest path analysis, truck turning geometric analysis, and sight distance analysis for this ramp terminal in Sikeston, MO.

### **Route AD/BUS 60, Dexter, MO**

Provided intersection analysis, BCR Scheme for selection, HSM Analysis, TS&O Report, and design services for a roundabout in Dexter, MO.

### **MO 51/Alma Ave, Perryville, MO**

Provided intersection analysis, BCR Scheme for selection, HSM Analysis, and design services for a roundabout in Perryville, MO.

### **HSIP Project Complete with Applications**

BFW Traffic has experience providing services for HSIP safety improvement projects.

### **Corinth Road intersection with Jordan's Fort Road**

This project improved sight distance at the intersection by relocating Jordan's Fort Road easterly to the summit along Corinth Road.

### **Skyline Road intersection with Crenshaw Road**

This location has a tremendous amount of traffic volumes with an unusually high number of crashes. This project proposed placing a roundabout at the intersection to greatly reduce these issues.

## Traffic Safety & Operations

BFW's Traffic Department has project experience focused on safety improvements.

### **Dexter SS4A**

Highway Safety Manual Analysis, Highway Capacity Manual Analysis, BCR and network screening of three intersections in Dexter, MO. This project also included signal design, roundabout design, and roadway design.

### **US 412 Corridor**

Highway Safety Manual Analysis Safety Manual Analysis Highway Capacity Manual Analysis, 3D Traffic Modeling and Access Control Analysis in Dunklin County.

### **MO 25 Conceptual Study**

Pedestrian Data Collection, Bicyclist Data Collection, Highway Safety Manual Analysis in Malden, MO





Ingram Road over US60

## Qualifications of Personnel



**David Johnson, PE, PTOE**  
Traffic Engineer

David is a registered PE with over 10 years of experience in transportation engineering and holds an engineering degree from Southern Illinois University – Carbondale. David has been involved in all types of projects including transportation, facilities management and civil/site design projects. His range of experience includes the following: operational analysis; safety analysis; interchange analysis (TS&O); traffic impact studies; microsimulation; signal design; roundabout design; road safety audit; access control analysis; 3D traffic modeling; and all road users.



**Kevin Crider, PE, PTOE**  
Lead Roadway Engineer

Kevin has 24 years of experience in roadway intersection design projects in the states of Missouri, Kentucky, Tennessee, Illinois, Alabama, and Mississippi. He has also provided services for a wide variety of clients, including state and local government agencies. He has significant experience in rural and urban roadway design and is well versed in highway capacity analysis and development of level of service.



**Greg Smothers, PE**  
Roadway and Traffic Engineer

Greg served as the IDOT District 9 Geometrics Engineer for many years in his tenure with the Department. This position coordinated and completed all geometric and traffic investigations within the southern IDOT D9 counties. The work involved completion of many Intersection Design Studies, Interchange Design studies, economic growth site development assistance and coordination along with traffic investigations, along with geometric consultation and review on all District Project Development Reports and Local Roads project development.



**Barry Horst, PE**  
Project Manager

Barry has 35 years of experience in transportation engineering field. He came to work for BFW after a career with MoDOT and subsequently serving as Executive Director of the Southeast Missouri Regional Planning and Economic Development Commission. During his time with MoDOT, he received experience in construction inspection and contract administration. He also served as design team leader, District Chief Designer and ultimately Southeast District Design department manager.

## Accessibility

Being able to respond to the Traffic Departments needs for data collection and analysis is where the BFW team stands above others. Our current workload allows us to immediately begin operations upon issuance of a work order. All field data collection and analysis activities will be performed under the supervision of a licensed PE/PTOE. We can provide timely service out of our Cape Girardeau, Jefferson City, or St. Louis offices.

## Flexibility & Innovation

BFW continually strives to meet the needs of its clients by remaining available and adaptable to changing project requirements throughout each project's life. Most recently, we became aware of significant vulnerable road users, including people using wheelchairs, on Business Route 25 in Malden. We rapidly deployed video detection equipment to identify and quantify crossing movements to recommend ideal mid-block crossings and collect pedestrian data for signal warrant analysis.

Mark Workman  
Chief Executive Officer



LPA On-Call  
Engineering Services





Bacon Farmer Workman Engineering & Testing (BFW) is a multi-disciplinary engineering firm with office locations throughout MoDOT's geographic footprint. We provide a comprehensive suite of engineering services, addressing every project need with precision and expertise. At BFW, we are committed to delivering exceptional solutions. By leveraging the expertise of our highly skilled and knowledgeable team, we uphold a standard of excellence and a dedication to outstanding service on every project. Our client-centered approach is rooted in utilizing the latest technologies, building strong relationships with clients and communities, and ensuring full accessibility for both customers and end users.

Capabilities

- Asset & Infrastructure Management
Aviation
Civil Engineering & Site Development
Cultural Resources
Electrical Engineering
Environmental
Geospatial Technologies
Geophysical

- Geotechnical Engineering
Grant Coordination
Industrial
Landscape Architecture & Urban Planning
Maritime
Mechanical Engineering
Parks & Recreation
Renewable Energy
Strategic Energy

- Structural Engineering
Surveying
Technology
Testing & Inspections
Transportation Engineering
Stormwater & Wastewater Resources

Professionals

- Archaeologist
Aviation Engineers
Aviation Planner
Civil/Site Engineers
Ecologists
Electrical Engineers
Environmental Managers
Geologists
Geophysicists
Geotechnical Engineers

- Grants Administrator Specialist
Historic Preservation
Land Surveyors
Landscape Architect/Arborist
LEED Accredited
Legal Counsel/ Attorney at Law
Mechanical Engineers
OSHA Authorized Construction Trainer

- Park Specialist
Professional Wetland Scientist (PWS)
Project Management Professionals (PMP)
Professional Transportation Operations Engineer (PTOE)
Safety Professional (CSP)
Structural Engineers
Transportation Engineers
Water Distribution Operator

Support Professionals

- Accounting Staff
Administrative Staff
Construction Administrators

- Construction Inspectors
Geotechnical Drilling Staff
Mobile LiDAR Operators
Survey Field Staff

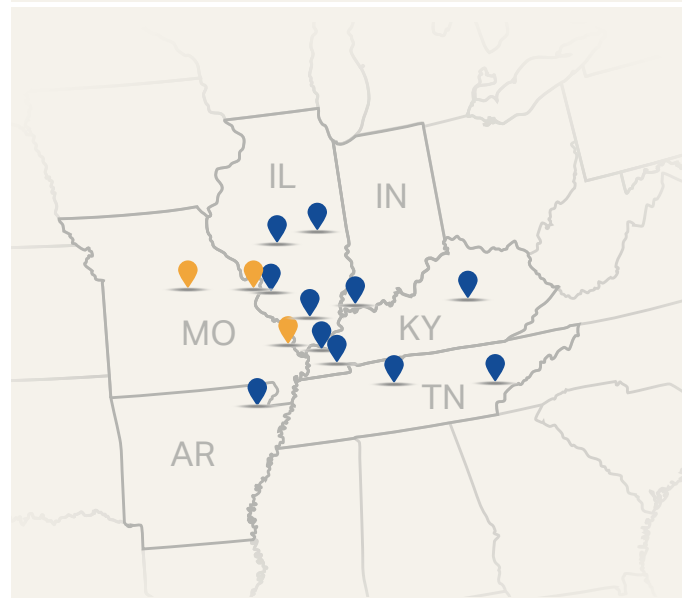
- Technical Writers
Technical Staff



Certificate of Commendation for Excellent Safety Record 2023 & 2024, National Award

MO Chapter Safety Award 2023 & 2024

W-KY Chapter Safety Award 2023



Locations

- Paducah, KY
BFW / 270-443-1995
Marcum / 270-444-9274
Lexington, KY
859-537-0112
Murray, KY
270-753-7307
Paragould, AR
573-625-1776
Belleville, IL
618-771-5774
Champaign, IL
217-530-4283
Marion, IL
618-997-9190

- Springfield, IL
217-679-6254
Evansville, IN
812-470-0273
Cape Girardeau, MO
573-222-5632
Jefferson City, MO
573-680-6160
St. Louis, MO
636-779-9420
Brentwood, TN
615-693-2744
Knoxville, TN
865-806-1539

# Transportation Engineering

**Bacon Farmer Workman Engineering & Testing, Inc. (BFW)** has built a solid reputation as a “go-to” firm in the transportation engineering field. BFW emphasizes attention to details, project milestones, and budgets, as reflected by our current ratings from our transportation clients.

Our broad background and expertise enable us to provide all required design services encompassing rural, urban, and limited access highway facilities. Our Transportation Division utilizes the latest state-of-the-art advancements in design and equipment technology to accomplish project requirements and client satisfaction.

## Our Transportation Capabilities

### Roadway Engineering

- Interstate, rural, and urban roadway design
- Phase I, II, III engineering
- Sidewalks, ADA upgrades, and multi-use trail design
- Corridor studies & safety improvements
- Complete Streets / multimodal design
- Drainage & stormwater analysis

### Bridge & Structural Engineering

- New bridge design & replacement
- Rehabilitation, widening, & preservation
- Culverts, walls, foundations, hydraulic structures
- Load ratings & NBIS inspections
- Design-build alternative delivery

### Traffic & Safety

- Traffic operations & modeling
- Signal design & ITS
- MOT/maintenance of traffic plans
- Speed, crash, and safety studies
- Access management & intersection improvements

## Service Details

As a full-service firm, BFW can handle every phase of highway projects from route / corridor studies including environmental coordination / approvals through the final design and on to the contract bid letting and award process. We can also provide contract administration, inspection, and testing for any size or complexity of project.

### Environmental & Geotechnical

- NEPA documentation
- ESA, cultural resources, ecological reviews
- 401/404 permitting & floodplain compliance
- Geotechnical drilling & lab testing
- Pavement/embankment/foundation recommendations

### Survey, Lidar & Mapping

- Boundary & topo surveying
- UAV/drone mapping
- Mobile & Terrestrial LIDAR
- SUE coordination
- ROW plan development

### Construction Inspection & Support

- CEI & materials testing
- QA/QC oversight
- Utility coordination
- As-built documentation
- Contractor support & field reviews

### Specialized Transportation Facilities

- Port & riverport access roads and circulation
- Bulk yard, conveyor, and loading infrastructure support
- Runway, taxiway, and apron design
- Airfield grading, drainage & lighting systems
- Airport access roads and parking improvements
- Pavement evaluation and airfield improvements
- Site development for industrial and logistics users





Cape Special Road District County Road Bridge over Juden Creek



Rte 61 Cape Girardeau Kingshighway

**Jackson East Main Street Pedestrian Facilities**

Jackson, MO

City of Jackson & MoDOT TAP

- Surveying
- Roadway Design incl. ADA compliance
- Environmental, NEPA
- Construction Admin. and Inspection

**Sikeston North West Street Pedestrian Facilities**

Sikeston, MO

City of Sikeston & MoDOT

- Surveying
- Roadway Design incl. ADA compliance
- Utility Coordination
- Environmental, NEPA
- Construction Admin. and Inspection

**Route 61 Signals & Geometric Improvements**

Sikeston, MO

City of Sikeston & MoDOT

Cost Share

- Roadway Design
- Traffic Safety & Operations
- Surveying
- Utility Coordination
- Construction Materials Testing & Inspection

ACEC  
2026

**Cape Special Road District County Road Bridge over Juden Creek**

Cape Girardeau, MO

- Bridge Design
- Roadway Design
- Geotechnical
- Utility Coordination
- Environmental, Hydrology/Floodplain
- Construction Admin. and Inspection

**US 412 Corridor Study**

Kennett, MO / Arkansas State Line

Dunklin County Commission and MoDOT Cost Share

- Environmental, NEPA
- Environmental, Threatened & Endangered
- Traffic Safety & Operations
- Surveying
- Roadway Design (Planning/ Alternatives)

ACEC  
2026

**Rte 61 Kingshighway Cape Rock Drive Intersection Improvements**

Cape Girardeau County, MO

City of Cape Girardeau & MoDOT Cost Share

- Roadway Design
- Traffic Safety & Operations
- ADA/Pedestrian Facilities
- Environmental, NEPA
- Utility Coordination

**Dexter Safe Streets for All (SS4A) Intersection Study**

Dexter, MO

City of Dexter & MoDOT

- Traffic Safety and Operations
- Surveying
- Roadway Design (Alternatives)
- Public Involvement

**Route 51 Traffic Study**

Perryville, MO

City of Perryville & MoDOT Cost Share

- Traffic Safety & Operations
- Roadway Design (Alternatives)
- Surveying / Data Collection
- Environmental – NEPA considerations

**US 67 Upgrades / Future I-57 Corridor Projects**

Butler County, MO

City of Poplar Bluff & MoDOT Cost Share

- Roadway Design
- Geotechnical
- Bridge Design

