

November 15, 2013

Mary Ann Jacobs
105 W. Capitol, P.O. Box 270
Jefferson City, MO 65102

Re: LPA On-Call Professional Services - Structures

Dear Selection Committee:

Bartlett & West is excited about the opportunity to provide on-call professional engineering services in the **LPA - Structures** category. Bartlett & West has extensive experience in providing bridge design services to Local Public Agencies in Missouri. Another benefit Bartlett & West provides is that our primary bridge team is conveniently located in Jefferson City. Bartlett & West also has support staff in 12 other offices throughout the Midwest including Lee's Summit, Des Moines and Topeka. We believe that Bartlett & West's experienced personnel and familiarity with all phases of bridge design, particularly with MoDOT and their LPA partners, make our team an ideal candidate for on-call projects.



Single Span Steel Plate Girders were the cost effective choice for the High Point Lane project in Boone County.

Preliminary Bridge Design Expertise

Bartlett & West's Jefferson City office is well known for its hydraulic design expertise. Our location manager, **Bob Gilbert, PE**, has spent the majority of his career working with hydraulic models, especially on complex bridge designs. He brings his vast knowledge of complex situations, such as roadway overtopping, split flow analysis, and multiple opening analysis, to oversee the team and provide QA/QC on the hydraulic and hydrologic models. **Todd Kempker, PE** leads the hydraulic modeling on many of our projects. Todd also has significant experience on complex bridge and culvert models. **Austin Johnson, EI** is a newer member to our hydraulics team and has worked on many different hydraulic models over the last two years with Bartlett & West including the Gasconade Co. Route H bridges, the Clay Co. Route 10 bridges in Excelsior Springs and several other models in the Kansas City area. **Mike Nelson, PE** and **Tim Leaf, PE** round out our hydraulics team. As a previous Assistant State Bridge Engineer, Mike continues to bring his hydraulic and preliminary bridge design experience to Bartlett & West and is involved in the hydraulic QA/QC and creation of our more complex hydraulic models.

In addition to our hydraulics team, former Structural Liaison Engineer **Ron Temme, PE** and former Senior Structural Engineer **David Straatmann, PE** both previously with the MoDOT Bridge Division, play key roles in our preliminary design team. **Ron Temme** and **Mike Nelson** bring years of bridge experience to our team and a wealth of knowledge in regard to bridge life expectancy and maintenance issues. **Tim Leaf** and **Dave Straatmann** bring new and innovative practices to the table with their familiarity of new girder types. **Bob Gilbert** and **Todd Kempker** lead the team with their eye for detail and utilize their knowledge of roadway design to provide Local Public Agencies with a complete and coordinated preliminary design.

Our preliminary bridge team is adept at analyzing multiple options to provide the best solutions for each project. On our recent award-winning Callaway Co. Business 54 LPA project in Fulton, Bartlett & West replaced two bridges, one for MoDOT on Business 54 and a city bridge on 2nd Street. Bartlett & West evaluated multiple options for the replacement of the structures and different intersection types. Our hydraulics team studied the stream and determined that a 3-cell box culvert would suffice and could be located to replace both bridges and a signalized intersection using a roundabout over the box culvert. This innovative solution saved the city over half a million dollars (30%) in construction expense as compared to all other alternatives. This type of thorough, yet efficient, evaluation helps ensure that our client receives the best solution for the project.

Final Bridge Design Expertise

Dave Straatmann and **Tim Leaf** serve as our primary final bridge design staff. Dave and Tim bring their extensive experience in MoDOT's Bridge Division to the team. This abundant knowledge of MoDOT design practices and details allows our team to meet MoDOT's guidelines and expectations which is so vital for LPA projects. **Todd Kempker**, **Austin Johnson** and **John Reitingner** also serve as final bridge design staff to provide additional resources and the ability to handle projects with short notice as is often required for on-call projects.

At Bartlett & West we pride ourselves on our QA/QC and providing a high quality set of bridge plans. We use the same design check process that is used at MoDOT with an initial design and an independent design check. **Mike Nelson** and **Ron Temme** also serve as final QA/QC and will review deliverables to ensure that our clients are receiving a top quality product.



A roundabout and triple box culvert was used to replace two bridges and a signalized intersection in Fulton and saved over half a million dollars.

Bridge Evaluations and Rehabilitations

Bartlett & West has a history of serving MoDOT and their LPA partners in evaluating bridges and providing recommendations and plans for rehabilitations. Bartlett & West is one of the pre-approved consulting firms that MoDOT has contracted with to perform Bridge Engineering Assistance Program (BEAP) evaluations for local public agencies having operational or functional problems with their transportation facilities.

Again Bartlett & West's diverse team and experience lends itself well to evaluating existing bridges. **Tim Leaf** serves as primary inspector on bridge evaluations. While at MoDOT, Tim spent over a year in the MoDOT Structural Services section evaluating bridges for condition and load rating. He also trained to serve as an inspector for county bridges in the Central District. **Dave Straatmann** worked on many special projects in MoDOT's Bridge Division, which often included unique bridge rehabilitation designs. Finally, **Mike Nelson** and **Ron Temme** serve our team well in this area with their immense knowledge and experience of different structure types and rehabilitation efforts that MoDOT has used through the years.

Full Design Services

Bartlett & West can provide the full range of services for a bridge replacement project as we have on many projects for MoDOT and their LPA partners throughout the years. **Austin Johnson, Kevin Wittman,** and **Tim Leaf** provide roadway design and **Bob Gilbert** and **Todd Kempker** serve as our roadway QA/QC team on LPA projects. They have provided roadway design and checks on many bridge replacement projects including our Lee's Summit culverts and the Boone and Cole County LPA bridge projects.

In addition to our roadway design, we also have conventional and LiDAR surveying available at Bartlett & West. We have provided surveying on many different hydraulic and bridge replacement projects for Local Public Agencies.

Construction Observation and Administration

Bartlett & West has performed construction observation and administration on many of our design projects throughout the years, including our previous Safe Routes to School project in Russellville and the Transportation Enhancement projects to build sidewalks in California and Stockton. Our primary inspector, **Kyle Eggen**, has been fully certified for all concrete and asphalt testing associated with bridge construction. Bartlett & West also partners with local consultants in Jefferson City for the breaking of any cylinders needed for the concrete testing. Through experience on previous projects, Kyle is very familiar with the number of material tests needed and the general documentation required on LPA projects to meet FHWA guidelines.

LPA Process

Our staff frequently works on both MoDOT and LPA projects administered by MoDOT. This experience of working for MoDOT and on their LPA projects, such as Safe Routes to School and various county bridge projects, allows Bartlett & West to be able to stay on schedule in this complex environment by knowing what submittals MoDOT requires and what their staff expects on each deliverable. We also have a familiarity with the administrative paperwork that is required to help the LPA meet MoDOT requirements and complete the project. Three of our engineers, **Bob Gilbert, Todd Kempker** and **Herb Bailey**, have attended the MoDOT/FHWA Basic Training for LPA Projects and are certified to serve as a Person in Responsible Charge.

Meeting Schedules and Being Accessible

Bartlett & West is aware that on-call projects often have short schedules and require a quick turnaround on the deliverables, and we believe that fits us well. We have been consistent in getting projects under way quickly and we pride ourselves on our capability to stay on schedule and meet project deadlines. We are also aware that the scheduled deadlines set by MoDOT for LPA projects are critical to keep the project moving along and not jeopardize funding. We make these deadlines a key priority on all of our projects.

Part of meeting schedules and keeping the project moving is being accessible and responsive to client needs. This is truly a focus for the employee-owners at Bartlett & West. We work closely with our clients to keep their projects moving toward construction and respond quickly when issues arise. For instance, we worked closely with the City of Russellville on an easement for the Safe Routes to School project that put the project schedule and entire construction in jeopardy. One property owner would not sign a very minor easement due to past issues with the City. Bartlett & West responded by working through several requests from the property owner and multiple on-site meetings, and we finally were able to obtain an easement that allowed the project to move forward and have the work in front of the school constructed prior to the start of classes.

Summary

At Bartlett & West, we are proud of providing on-time performance and high quality. We also pride ourselves on understanding clients' needs, being accessible and responsive, displaying integrity and providing proactive communication. We will provide MoDOT and its LPA partners with a quality product, on-time and on-budget.

Sincerely,



Bob Gilbert, PE
Location Manager/Vice President



Herb Bailey, PE
Project Manager

Relevant Projects



J5S0927-Business 54 & 2nd Street Bridges in Fulton

Project to replace two deficient structures on Business 54 and 2nd Street with one multi-cell box culvert and roundabout intersection, including trail, park impacts, sewer upgrades. This award-winning project resulted in significant savings over conventional solutions (\$500k or 30% less) and resulted in less ongoing maintenance because of no signal and only one structure.

Contact

Jason Vanderfeltz, PE
District Project Manager
(now Central Office Design)
573.522.9731

Role Performed by Key Personnel

Bob Gilbert, PE Project Manager	Todd Kempker, PE Hydraulics & Bridge	Mike Nelson, PE Bridge QA/QC
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J8S2396 & J8S2407- Route B and Route N over Route I-44 in Greene County

Two similar projects to replace existing bridges with substandard vertical clearance over I-44. Eleven alternatives were evaluated with the final layout consisting of 2-84' spans using NU 35 concrete girders with MSE walls. Each project required a raise in profile grade. The survey was conducted with our LiDAR scanner during daytime hours under heavy traffic without having to reduce lanes or slow traffic.

Contact

Sean Matlock, PE
District Project Manager
417.621.6310

Role Performed by Key Personnel

Herb Bailey, PE Project Manager	Mike Nelson, PE Bridge	Bob Gilbert, PE QA/QC	Justin Collier, PE Roadway	Todd Kempker, PE Roadway QA/QC
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City of Lee's Summit - Murray Road

This project involved survey and design on a culvert replacement on Murray Road. A double 11'x10' box culvert was selected to meet all no-rise and APWA requirements. To comply with new requirements by the Corps of Engineers to have a natural bottom, the bottom of the culvert had to be constructed 12" below the channel flowline. The new roadway grade also brought the vertical alignment up to current design standards and moved the low point off of the box culvert to allow for the construction of standard inlets.

Contact

Scott Ward, PE
Staff Engineer
816.969.1849

Role Performed by Key Personnel

Herb Bailey, PE Project Manager	Bob Gilbert, PE QA/QC	Todd Kempker, PE Project Engineer	Austin Johnson, EI Hydraulics Engineer
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Boone County Resource Management - High Point Lane Bridge Replacement

This project replaced a 3-span bridge in Boone County which had structural and hydraulic issues. The existing bridge had piers located in the stream which collected drift and caused issues with scour. The solution that was chosen was to put in a single span bridge using steel girders. This solution was not only the best one economically, it also eliminated the drift problems by eliminating of the piers in the stream.

Contact

Derin Campbell, PE
County Engineer
573.886.4480

Role Performed by Key Personnel

Bob Gilbert, PE Project Manager	Todd Kempker, PE Preliminary/Final Design	Matt Backstrom Lead Technician
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Boone County Resource Management - Rustic Road over the North Fork Grindstone Creek

This project will replace a badly deteriorated bridge on a dead end road in Columbia, Missouri. The project is utilizing an innovative solution which will minimize the time the road is closed. The abutments are to be a Geosynthetic Reinforced Soil (GRS) system that uses layers of geotextile and granular backfill that produces a stable and quick to construct substructure. Once constructed this will be the first bridge in the State of Missouri that uses a GRS type of abutment.

Contact

Derin Campbell, PE
County Engineer
573.886.4480

Role Performed by Key Personnel

Bob Gilbert, PE Project Manager	Tim Leaf, PE Preliminary/Final Design	Todd Kempker, PE QA/QC	Tracy Ash Lead Technician
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Cole County Public Works - Vaughn Ford Road Low Water Crossing Replacement

This project involves the replacement of a low water crossing with a bridge. Cole County requested that a poor performing low water crossing be replaced to allow for a better level of service for local residents (i.e less road closures). This request was to be balanced with finding an economical bridge solution that would not be a maintenance issue due to drift collection. The economical solution was found with a single span bridge using precast reinforced concrete beams.

Contact

Eric Landwehr, PE
Cole County Public Works
573.636.3614

Role Performed by Key Personnel

Bob Gilbert, PE Project Manager	Tim Leaf, PE Preliminary/Final Design	Todd Kempker, PE Project Engineer	Tracy Ash Lead Technician
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Bartlett & West

PURSUING INNOVATION, DEVELOPING ENGINEERING AND TECHNOLOGY SOLUTIONS, AND STRENGTHENING OUR COMMUNITIES TOGETHER.



Our employee-owners deliver

engineering and technology solutions to a wide range of public and private clients and have since we opened our doors in 1951. How can Bartlett & West and you solve your challenges together?

With a portfolio of professional solutions—from engineering to landscape architecture, from GIS to information management, from field services to sustainable development—our people bring a total perspective to our clients' challenges.

Everyone at Bartlett & West is committed to giving our clients world-class service and work to deliver our clients' service *and* solutions. We know what our clients want. We asked them. They're looking for clear understanding of their needs. They value accessibility and responsiveness, integrity, quality and proactive communication from their professional services partners. These are values our employee-owners practice every day.

Our firm has grown steadily from a small two-person partnership in 1951 into the current multi-disciplined firm of over 350. A rich mix of professional, technical, administrative and support staff provides professional services to governmental agencies, municipalities, private industry and individual clients. Year after year, Bartlett & West is ranked among the top design firms by industry trade publication ENR (Engineering News-Record).

Our Purpose

To lead our communities to a better tomorrow.

Our Values

Earning Trust—through doing what is right even when doing so is difficult.

Delivering Quality—through pride in our work and an attitude of continuous improvement.

Serving Others—through caring for our clients, our community, and each other.

Crafting
engineering
and
technology
solutions
together

Our clients access the full range of Bartlett & West services through our fully-integrated network of offices. Through this network of resources, each office is empowered to deliver engineering and technology solutions to meet our clients' needs.

Topeka, Kansas

(Corporate Headquarters)
1200 SW Executive Drive
Topeka, KS 66615-3850
888.200.6464 - 785.272.2252
Contact: Keith Warta, PE

Pagosa Springs, Colorado

190 Talisman Drive, Unit D-1
Pagosa Springs, CO 81147
888.200.6464 - 970.306.0924
Contact: Art Dilione, PE

Des Moines, Iowa

2700 Westown Parkway, Suite 110
West Des Moines, IA 50266
866.869.8032 - 515.440.2856
Contact: Casey Patton, PE

Manhattan, Kansas

230 Poyntz Avenue
Manhattan, KS 66502.0102
866.867.2785 - 785.537.8467
Contact: Nathan Bergman, PE, PTOE

Lawrence, Kansas

544 Columbia Drive
Lawrence, KS 66044-2252
866.869.8033 - 785.749.9452
Contact: Joe Caldwell, PE

Kansas City, Kansas

1333 Meadowlark Lane, #104
Kansas City, KS 66102
888.200.6464
Contact: Mike Flynn

Jefferson City, Missouri

1719 Southridge Drive, Suite 100
Jefferson City, MO 65109
866.869.8031 - 573.634.3181
Contact: Bob Gilbert, PE

Lee's Summit, Missouri

228 NW Executive Way
Lee's Summit, MO 64063
866.869.8030 - 816.525.3562
Contact: Casey Patton, PE

Bartlesville, Oklahoma

117 W 5th Street, Suite 210
Bartlesville, OK 74003
888.200.6464
Contact: Neil Dobler, PE

Bismarck, North Dakota

3456 E. Century Avenue
Bismarck, ND 58503-0737
800.474.4117 - 701.258.1110
Contact: Jame Todd, PE

Billings, Montana

3470 Gabel Road, Suite 1
Billings, MT 59102
406.200.6920 - 888.200.6464
Contact: Bruce Hattig, PE

Sioux Falls, South Dakota

5900 S Western Avenue, Suite 101
Sioux Falls, SD 57108
888.200.6464 - 605.274.7415
Contact: Brian Hoellein, PE

Ft. Worth, Texas

4500 Mercantile Plaza, Suite 301
Ft. Worth, TX 76137
866.869.8035 - 817.306.1980
Contact: Allan Pickering

Energy Industry

Bartlett & West professionals serve the energy industry with a deep toolbox of solutions.

- Pipeline routing and design
- Facility & site design and planning
- Topographic, property, and legal surveys
- As-built surveying and recordation
- Easement and land acquisition services
- Water intake, distribution, and storage design
- Water treatment plants and pump station design
- Waste water disposal
- Construction observation & inspection/testing
- GIS based data management
- Regulatory and permitting services
- Environmental compliance

GIS & Information Management

Our information specialists deliver a full range of spatial technology services to exacting standards.

- Geographic Information Systems (GIS) needs assessment, development & implementation
- Web hosting
- Application development
- Map, data and document integration
- Map plotting & production
- Document imaging
- Data loading and reconciliation

Landscape Architecture

Bartlett & West landscape architects enhance the built environment.

- Land use master planning
- Parks, trails & greenways
- Environmentally sensitive design
- Streetscapes and plazas
- Healing gardens & rain gardens
- Planting selection and irrigation design
- 3-D color renderings and animation
- LEED Accredited Professionals
- Public information programs
- Design charrettes & group consensus building

Mechanical, Electrical & Plumbing Design

The MEP professionals at Bartlett & West deliver a broad spectrum of building services. .

- Plumbing design: waste, vent, water compressed air piping
- HVAC design
- Lighting design: building, roadway, parking lot, landscape lighting

- Power distribution design
- Emergency power generation
- Uninterrupted power systems
- Utility power design
- LEED Accredited Professionals

Rail Services

Bartlett & West rail experts provide a wide range of services to their clients.

- Full-service engineering
- Design/Build
- Positive Train Control data/change management
- Track chart automation
- Enterprise GIS/application development
- Real estate GIS implementation
- Property acquisition
- LiDAR for design, as-builts, and clearances
- Mobile application development
- Construction management

Right-of-Way

Bartlett & West provides support to all our client sectors with sophisticated, proprietary technology and systems to manage survey permissions, easements, land acquisitions, permitting, and records management.

- GIS database of projects
- Existing right-of-way, plat and title research
- Environmental impact studies
- Easement negotiation
- Lease/option agreements negotiation
- Land purchase negotiation
- Land owner research and meetings
- Acquisition documents
- Strip maps
- Construction staking
- Project/exhibit map preparation
- Site locations
- Taxation records
- Vesting deeds
- Survey permissions

Roads & Highways

Our transportation engineers provide safety and efficiency for the motoring public.

- Corridor studies
- Road and highway design
- Interchanges and roundabouts
- Traffic signal improvements
- Stormwater management
- Bridge structural analysis and design
- Hydraulic and hydrologic modeling
- Traffic control analysis
- Right-of-way and legal descriptions
- Landscape architectural design and erosion control
- Pedestrian and bicycle path design

- Lighting
- Construction sequencing
- Public information programs

Site Planning

Our site specialists support developers, architects, businesses, and institutions in navigating planning, zoning, permitting, drainage, paving, and building considerations of a particular location.

- Land use planning
- Platting
- Zoning and permitting
- Feasibility studies
- Drainage studies
- Site plans
- Grading design
- Utilities design and coordination
- Traffic impact analysis
- Construction administration
- LEED Accredited Professionals

Stormwater Management

We work with the natural environment to reduce erosion and maintain water quality.

- Watershed studies
- Drainage design
- Hydraulic and hydrologic modeling
- Flood control
- Channel stabilization
- Environmentally sensitive solutions
- LEED Accredited Professionals

Strategic Planning

Bartlett & West planning professionals use a unique strategic planning process to help clients identify and achieve their future vision.

- Proprietary electronic planning tool
- Detailed SWOT analysis
- Success driver orientation
- Focused gap analysis
- Proven visioning process
- Fully engaged planning team
- Practical, actionable plan

Structural Engineering

Providing the necessary analysis and design to support their client's vision is the goal of our structural experts.

- Structural investigations and reports
- Commercial/industrial/educational/institutional design
- Specialty structures and historical renovations
- Concrete, steel, wood, and aluminum structures

Survey & Construction Observation

Field professionals supply their clients with critical survey data and construction observation services.

- Surveys
- Geographic Information Systems (GIS) and Global Positioning System (GPS) services
- Platting and Construction staking
- Field construction observation and coordination
- Materials testing
- Construction administration
- Utilities coordination
- Construction quality control services

Sustainable Design

Bartlett & West LEED Accredited Professionals are meeting today's needs while conserving for tomorrow.

- LEED Accredited Professionals
- Livable communities planning
- Lifecycle analysis
- Energy-efficient design
- Green infrastructure design
- Sustainability reporting
- Public information programs

Wastewater Collection & Treatment

Bartlett & West wastewater experts help communities as well as industries protect the environment and manage their water quality.

- Wastewater studies
- System planning and facilities design
- Sewers and pump stations
- Treatment plants
- Residuals management
- Regulatory compliance strategies and Permitting
- Public information programs

Water Supply, Treatment & Distribution

Bartlett & West water specialists help communities provide the basic building block of life.

- Municipal, regional, rural and wholesale systems
- Preliminary, feasibility, and design reports
- Rate analysis, studies, reports and funding application aid
- Short- and long-range system planning
- Regulatory compliance strategies and planning
- Water source—well, intake, purchase contracts
- Water treatment design and operational analysis
- System analysis, design, and modeling including piping, pump stations, controls, and storage
- Construction phase engineering services
- Federal, state and local permitting