



ENGINEERING  
PLANNING  
SURVEYING

November 14, 2013

Mr. Kenny Voss P.E.  
Local Program Administrator  
Missouri Department of Transportation Central Office  
c/o Ms. MaryAnn Jacobs  
MaryAnn.Jacobs@modot.mo.gov

RE: Trails & Sidewalks On-Call LPA Professional Services  
Bax Reference No. 13-16014

Dear Mr. Voss:

Thank you for the opportunity to submit our letter of interest to perform on-call professional services for Missouri's Local Program (LPA). Bax is current on prequalification requirements and is very interested in providing LPA professional design services for the category of Trails & Sidewalks. Bax Engineering has worked on multiple LPA projects in the past, and is currently preparing plans for the Blackhurst-Hardin Safe Routes to school project for the City of St. Charles. We therefore understand the various aspects and expectations associated with an LPA project and would welcome the opportunity to provide such services on an on-call basis. The following is a sample listing of past projects, previously completed by our team.

**PROJECT NAME**

**CLIENT**

Guthrie Road Realignment -STP 7302 (617)	City of O'Fallon
Veteran's Memorial Parkway at Woodlawn Avenue -CMAQ 5401 (646)	City of O'Fallon
New Town Boulevard Widening and Reconstruction -STP 7303 (614)	St. Charles County
Thoele Road Widening and Reconstruction -STP 7303 (608)	St. Charles County
Elm Street Widening -STP 7303 (613)	City of St. Charles
Laural Hill-Feise Road -CMAQ 5407 (610)	City of O'Fallon

A sample listing of recent sidewalk and trail projects which did not include LPA funding include:

Hawthorne Avenue Sidewalk	City of St. Charles
Ridgeview Sidewalk	City of St. Charles
St. Charles Rock Road ADA Sidewalk Improvements	City of St. John
Highway 94 & Route 370 Bike Trail Study	City of St. Charles

**PERSONNEL QUALIFICATIONS**

Scott Kolkmeier, P.E. serves as Director of Municipal Design for Bax Engineering and therefore will be the person responsible for the overall management of the projects, technical decisions, liaison with the local agency and personnel management. He has worked on projects with numerous local, state and federal agencies. Scott holds a B.S. in Civil Engineering from the University of Missouri-Rolla (now known as Missouri University of Science and Technology) and has been with Bax for 27 years. Scott's experience include sidewalk and trails extensions to design of new and reconstructed multilane major arterials incorporating pedestrian facilities. He is familiar with all aspects of design and project management. Working with Scott is a team of engineers and design technicians which continually work on municipal infrastructure projects. The primary project design team members that will be assigned to work on these types of projects include Jeff Simmons, P.E., and Gene Boillot. Other employees will be used as support staff for the team.

BAX ENGINEERING CO.  
221 Point West Blvd.  
St. Charles, MO 63301  
636-928-5552 FAX 928-1718



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Jeff Simmons serves as Senior Project Manager for Bax Engineering, primarily working on roadway, sidewalk and sewer infrastructure improvement projects. Jeff has managed a variety of improvement projects for various agencies. Jeff holds a Bachelor of Civil Engineering and Master of Science in Civil Engineering both from Georgia Institute of Technology. He has been with Bax Engineering for 7 years and has 16 years of industry experience. Jeff's experience includes trail feasibility studies and design for new sidewalk and trail facilities.

Gene Boillot serves as a Designer in Bax Engineering's municipal department. Gene received an Associate of Technology in Design Drafting from Linn Technical College – Linn MO. Gene has worked on various sidewalk and trail projects throughout the area and is currently working on a Safe Routes To School project. Gene has been with Bax a total of 15 years.

Survey services for design will be provided in-house under the direction of Darrel Oakley P.L.S., Director of Survey, with day to day support provided by Mark Collins, P.L.S. Assisting Darrel and Mark is Jessica Hargrave, L.S.I.T. Darrel has been with Bax for 28 years while Mark has been with the company a total of 18 years. To help ensure the accuracy of all work performed by Bax, we have established a QA/QC system. A part of our QA/QC program includes independent review by Dale Bax, Vice President, to ensure that our product is of the highest quality and accuracy. To assist in preparation of our plans and in our field work, we utilize the most current field equipment and computer software. The latest equipment and service added at Bax is High Definition Surveying (3D Laser Scanning). This mode of surveying provides another option in collecting detailed survey data under difficult or complex field conditions.

### **PAST PERFORMANCE**

Bax continually completes projects on time and responds promptly to our clients. Bax is familiar with and adheres to the various checklists and requirements associated with the design and construction of federally funded projects. Understanding the time sensitive schedule of the project, Bax completes all phases of design on time or ahead of schedule. Bax Engineering maintains project cost information to assist in developing cost estimates for our projects and maintains contact with our clients throughout the project to ensure the project is completed within budget. Below is a sample of recent projects with a description of the project, a comparison of Engineer's estimates to construction bid information, along with client contact information.

#### **VETERAN'S MEMORIAL PARKWAY AT WOODLAWN AVENUE (CMAQ 5401 (646))**

CLIENT: City of O'Fallon – Dan Buesse, P.E. (636) 379-5492

SERVICES: Project included survey and road design services for intersection improvements to Veteran's Memorial Parkway at Woodlawn Ave. Improvements consisted of the addition of turn lanes in all quadrants and widening to improve traffic circulation. Preparation of right of way plans and exhibits were also prepared. Improvements were made to over 1,300 L.F. of roadway.

BIDS: Engineer's Estimate: \$381,285.00 Low Bid: \$352,870.00 High Bid: \$395,092.00



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**ST. CHARLES ROCK ROAD ADA SIDEWALK IMPROVEMENTS PROJECT (No LPA Funding)**

CLIENT: City of St. John – Jim Phillips (314)427-8700  
SERVICES: Surveying, engineering and construction administration services for reconstruction as necessary to bring approximately 7,400 L.F. of sidewalk into compliance with ADA standards. Ramps were upgraded at all intersecting streets and driveways along the project. Portions of the sidewalk were reconstructed to comply with ADA requirements. Project encompassed both sides of the MoDOT right of way from Orlando Ave. to the eastern limits of the City of St. John.  
BIDS: Engineer's Estimate: \$722,108.00 Low Bid: \$632,110.91 High Bid: \$1,033,123.25

**THOELE ROAD RECONSTRUCTION ( STP 7303 (608))**

CLIENT: St. Charles County—Chris Bostic, P.E. (636) 949-7900  
SERVICES: Design of approximately 3,600 lineal feet of road reconstruction and widening. Widening from 2 lane to 3 lane section with curb and gutter. Included addition of retaining walls, sidewalks on both sides of roadway, school entrance relocation and improvements.  
BIDS: Engineer's Estimate: \$2,128,952.00 Low Bid: \$1,617,038.00 High Bid: \$1,963,674.00

**ELM STREET WIDENING ( STP 7303 (613))**

CLIENT: City of Charles – Kevin Corwin, P.E. (636) 949-3237  
SERVICES: Survey and design of approximately 1,700 of roadway widening and intersection improvements. Project included the addition of sidewalks, storm sewer improvements and traffic signal modifications.  
BIDS: Engineer's Estimate: \$ 1,010,676.00 Low Bid: \$865,220.00 High Bid: \$1,184,586.00

Bax Engineering has the expertise and experience to design roadways which may fall under this type of contract. We have assembled a highly qualified team of engineers and designers to perform this work and look forward to working with the local agency on future projects. Please feel free to contact me if you have any questions regarding the information or if additional information is desired.

Sincerely,

Clifford L. Heitmann, P.E.  
President

# Bax Engineering Company Overview

## INTRODUCTION

Bax Engineering Company, established in 1981 specializes in civil engineering, land planning and surveying for private and public entities. Bax Engineering's in-house resources include over 30 years of project files as well as the survey records of two previous St. Charles County firms. These two firms, St. Charles County Engineering acquired by Bax in 1981, and Kerr Surveying Company of Wentzville acquired by Bax in 1987 provide an extensive basis of records, plats, and surveys from which Bax Engineering grew.

Through this growth, the focus of Bax Engineering has always been to provide the highest quality service, quality in design and survey, as well as a high level of response to our clients. As a way to implement such service, departments were established within the framework of the firm based on particular areas of expertise. Services we provide are:

- Roadway Design
- Land Planning
- Land Surveying
- Construction Surveying
- Civil Engineering
- Construction Monitoring
- 3D Scanning/High Definition Surveying

## **PRINCIPALS:**

Clifford L. Heitmann, P.E., President  
Dale J. Bax, Vice-President

## **SERVICE AREAS:**

Bax Engineering prefers to work within the St. Louis, Northeast, Southeast, and Central MoDOT Districts.



## **LOCATION:**

221 Point West Blvd.  
St. Charles, MO 63301  
Phone (636) 928-5552  
Fax (636) 928-1718

## **CONTACT:**

Scott Kolkmeier, P.E.  
skolkmeier@baxengineering.com

Corporate Professional Licensure (State of Missouri):  
Professional Engineering Corp. 655  
Professional Land Surveying Corp. 144

## **PERSONNEL:**

Engineering 12  
Surveying 8  
Administration 4  
Total Staff: 24

## **REGISTERED PROFESSIONALS:**

Bax Engineering employs engineering and surveying professionals registered in the states of Missouri and Illinois.  
Professional Engineers 5  
Professional Land Surveyors 2

## **REFERENCES:**

Mr. John Greifzu, R.G., P.E.  
Director of Transportation,  
St. Charles County Government  
(636) 949-7305

Ms. Debra Aylsworth, P.E.  
Director of Public Works  
City of St. Charles  
(636)- 949-3237

Mr. Derek B. Koestel, P.E.  
Director of Public Works  
City of Lake Saint Louis  
(636) 695-4221

Mr. Steve Bender, P.E.  
Public Works Director  
City of O'Fallon  
(636) 379-5560

Mr. Robert Schaffer, P.E.  
City Engineer  
City of Sullivan  
(573) 468-8965



# Bax Engineering Company Overview

## PRIMARY ENGINEERING CAPABILITIES

Site Planning  
Preliminary Plans  
Improvement Plans:  
Roadway and Intersection Design  
Detention and Retention Facilities  
Potable Water Mains  
Low Pressure Sewer Systems  
ADA Improvements  
Parking Lots  
Flood Plain Studies  
Construction Cost Estimates  
Coordination, through review process, with governmental agencies and utility companies  
Assistance with zoning, rezoning, conditional use permits and zoning variances  
FEMA Letters of Map Amendment (LOMA) and Revision (LOMR)

Sanitary Sewers, Force Main and Lift Station Design  
Storm Sewers  
Water Distribution Modeling  
Lake Design  
Trail Design  
Grading  
Specifications and Job Special Provisions  
Construction Administration and Observation

## PRIMARY SURVEYING CAPABILITIES

Boundary, Right-of-Way and Easement Surveys  
ALTA/ACSM Land Title Surveys  
Topographic and Profile Surveys  
Construction Stakeout:  
Buildings      Parking Lots  
Sewers      Water Mains  
Grading      Land Development Improvements  
Road      Cut Sheet Preparation  
3D Scanning/High Definition Surveying  
Boundary Adjustments, Re-Subdivision and Lot Consolidation Platting  
FEMA Letters of Map Amendment (LOMA) and Revision (LOMR)

## CURRENT EQUIPMENT & COMPUTER CAPABILITIES

Bax Engineering Co., Inc. utilizes state-of-the-art hardware and software –including:  
Hewlett Packard Design Jet 1050 C Color Plotter  
Kip 9000 Engineering Plotter/Scanner/Copier

Trimble TSC3 Data Collectors using Trimble Software with:  
- Trimble R-8 GPS Survey Instruments    - Geodimeter Survpro Robotic Total Stations  
- Geodimeter Survpro Robotic Total    - Stations Honda ATV with GPS Configuration  
- Trimble 5600 Robotic Total Stations

Leica ScanStation C10 LIDAR Scanner (3D Scanner/High Definition Surveying):  
Cyclone 7.3 Software  
Cloudworx for AutoCAD Software

To aid our engineering and surveying staff with design and drafting of our projects, we use:

- AutoCad Civil 3D 2013 Software
- Trimble Geomatics Office
- HEC-1 Flood Hydrograph Software

“Knowledge from our past; insight for the future.”



# Past Projects

## *Veteran's Memorial parkway at Woodlawn Avenue (CMAQ Funding)*

Project include survey and road design services for intersection improvements to Veteran's Memorial Parkway at Woodlawn Ave. in the City of O'Fallon. Improvements consisted of the addition of turn lanes in all quadrants and widening to improve traffic circulation. Preparation of right of way plans and exhibits was included in the contract. Improvements were made to over 1,300 L.F. of roadway. Utility coordination during design helped to minimize utility relocations during construction.



## *Elm Street Widening (STP Funding)*



Services included topographic survey and design of approximately 1700 L.F. of roadway widening and intersection improvements in the City of St. Charles. Project included modifications to signals at intersection of Elm Street at Millstone Corporate Drive and Elm Street at Elm Point Road with sidewalk improvements meeting ADA requirements. Additionally storm sewer modification were included to improve drainage in this relatively flat low lying area. As commercial businesses lined both sides of the road, access management both during and after construction was a consideration during planning stages of the project.

## *I-70/Fifth Street Corridor—City of St. Charles*



Services included survey and design for the widening and ramp improvements for the I-70/Fifth Street Corridor along the North side of the interchange. The project consisted of nearly 3,000 linear feet of roadway improvements, including widening, ramp realignment and reconstruction and intersection improvements to improve traffic flow at this heavily travelled interchange. Improvements were made to allow for easier and safer access to the Mark Twain shopping center (Bass Pro), as well as to Ameristar Boulevard. Medians and overhead directional signage, as well as signal modifications were made to provide dedicated dual lanes from the Westbound exit ramp to dual left turn lanes into the Mark Twain Mall. To accommodate this, the ramp was widened to add additional lanes. Also, the left turn from Northbound Fifth Street to I-70 Westbound was improved with the relocation of the westbound ramp and turn lane modifications. Fifth Street was widened to the East to provide a longer right turn lane to Ameristar Boulevard.



## *St. Charles Rock Road ADA Sidewalk Improvements*



Surveying, engineering and construction administration services for reconstruction as necessary to bring approximately 7,400 L.F. of sidewalk into compliance with ADA standards. Ramps were upgraded at all intersecting streets and driveways along the project. Portions of the sidewalk were reconstructed to comply with ADA requirements. Project encompassed both sides of the state right of way from Orlando Ave. to the eastern limits of the City of St. John.

## *Ridgeview Sidewalk & Hawthorne Sidewalk*



*Ridgeview Sidewalk*



*Hawthorne Sidewalk*

Bax prepared a topographic survey and construction plans for a sidewalk extension 2800 L.F. in length along Ridgeview Avenue (from West Randolph to its terminus) and 1600 L.F. in length along Hawthorne Avenue (from Park Avenue to West Randolph) in the City of St. Charles. Project included new sidewalk ramps and new driveway approaches as necessary to meet ADA requirements. Impacts to adjacent yards and trees were minimized through the use of small retaining walls. During design consideration was made to minimize utility adjustments and relocations.

## *Current Sidewalk and Trail Projects*

### *Highway 94 & 370 Bike Trail*

Bax recently completed a Feasibility Study with conceptual plan for a new on and off road bicycle trail connecting the Katy Trail at Dusable Park to the Boschert Greenway in the City of St. Charles. The study also included a future phase of the project which will provide connection to the City's new 110 acre park at Hawning Road. Funding sources are currently being identified for final plan preparation and construction of the project.

### *Blackhurst and Hardin Sidewalk (SRTS)*

Bax is currently preparing final plans for the Blackhurst-Hardin Safe Routes to School Sidewalk project in the City of St. Charles. The length of the project is 4,680 feet with 3,830 feet along streets that currently do not have a sidewalk on either side. An additional 830 feet will extend along the entry drive and parking areas within the Blackhurst Elementary School and Hardin Middle School complex. The proposed sidewalks, curb ramps, and crosswalks along such streets will be constructed in accordance with ADA Standard.

