

# 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 40 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
- Construction Monitoring
- 3D Scanning/High Definition Surveying
- Drone Aerial Topographic Survey
- Civil Engineering & Site Design

## **LOCATION:**

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

## **CONTACT:**

Scott Kolkmeyer, P.E.  
skolkmeyer@baxengineering.com

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

## **PRINCIPALS:**

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

## **PERSONNEL:**

Engineering	18
Surveying	15
Administration	3
Total Staff:	36

## **REGISTERED PROFESSIONALS:**

Bax Engineering employs engineering and surveying professionals registered in the states of Missouri and Illinois.

Professional Engineers	5
Professional Land Surveyors	5

## **REFERENCES:**

Ms. Liane Sargent P.E.  
City Engineer  
City of St. Peters  
(636) 477-6600 ext. 1307  
LSargent@stpetersmo.net

Mr. Brad Temme, P.E.  
Director of Engineering  
City of St. Charles  
(636) 940-4617  
Brad.Temme@Stcharlescitemo.gov

Mr. Jim Phillips  
Public Works Director  
City of St. John  
(314) 427-8700  
Jphillips@cityofstjohn.org

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

Mr. Chris Bostic, P.E., PTOE  
Engineering Manager  
St. Charles County Highway  
(636) 949-7305  
cbostic@sccmo.org

## **WORKFORCE DIVERSITY**

Bax Engineering embraces diversity in the workforce and does not discriminate in any way. Bax has an Affirmative Action Program Coordinator who is appointed to advise top management of our corporation of progress under our Affirmative Action Plan. Our Affirmative Action Plan is distributed to all employees as part of the personnel manual. Bax is active within the community and when opportunity exists Bax participates in programs in the community such as career day at local schools, with a goal of sharing and discussing opportunities for all students within the field of engineering.



# 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
  - Sewers
  - Grading
  - Road
  - Parking Lots
  - Water Mains
  - Land Development Improvements
  - 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)
- Plats:
  - Calculation
  - Record
  - Easement
- Flood Insurance Elevation Certificates
- As-Built Surveys

## CURRENT EQUIPMENT & COMPUTER CAPABILITIES

Bax Engineering Co., Inc. utilizes state-of-the-art hardware and software –including:

Hewlett Packard XL5000 HPGL2 Engineering Plotter/Scanner/Copier

Trimble TSC3 Data Collectors using Trimble Software with:

Trimble R-12 GPS Survey Instruments  
Trimble S-6 Robotic Total Stations  
Honda ATV with GPS Configuration

Leica ScanStation C10 LIDAR Scanner (3D Scanner/High Definition Surveying):

Cyclone 7.3 Software  
Cloudworx for AutoCAD Software

Unmanned Aerial Vehicle Surveys (drone based)

Topographic aerial mapping  
Orthogrametic photos for CAD underlays

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

- AutoCAD Civil 3D 2022 Software
- PowerGeoPack Select Series 4
- MicroStation-Open Roads Design
- Trimble Geomatics Office
- HEC-1 Flood Hydrograph Software
- HEC-2 Water Surface Profile Software
- HECRAS Water Surface Profile Software
- Pond Pack Storm Routing
- Hydraflow Storm Sewer
- WaterCAD by Bentley



## Highway N and Weiss Road– (STP 5664(606)) - St. Charles County

Contact: Chris Bostic 636-949-7305

Bax Engineering prepared plans for this intersection realignment and roadway improvement project. Due to changing traffic patterns and the St. Charles County long range plan, this intersection was redesigned to change the primary traffic movement from East/West along Route N to North/South along Route N and Weiss Road. At the request of the County and working with Great Rivers Greenway, a trail was added to the project and accommodations made at the signalized intersection for trail users. The new 1,550 foot long trail along the Eastern edge of the project was designed to connect the trail built with the adjacent Route N project to the Warren Cottle Trail in Cottleville. Multiple agencies were involved in the review process including St. Charles County Highway, MoDOT, Great Rivers Greenway and the City of Cottleville. This project included federal funding, County Road Board funding and Great Rivers Greenway participated in funding the trail portion.



## First Capitol Drive Enhancement Project

(TAP 7302(661)) City of St Charles Contact: Brad Temme, P.E.  
(636) 940-4617

Bax Engineering led a team for design of the First Capitol Drive Enhancement project. The limits of the project extended from just west of Main Street to Fifth Street. It also extended along the east side of Fifth Street from First Capitol to Madison Street. The enhancement project includes pedestrian improvements providing wider sidewalks, lighting, bench walls and planter boxes. Additional amenities of the project include:

- A mid block crossing to serve hospital visitors near the City's bus stop.
- Planter boxes and bio-filtration areas to treat stormwater runoff.
- Stormwater improvements to address ongoing concerns at area business entrances.
- Incorporating bus stops with shelters for patrons of the St. Charles Area Transit (SCAT). Shelters were established along First Capitol and along Fifth Street near the hospital.
- Bicycle lane markings





## **South Point Prairie at Jackson Road (STP-5414(628))— St. Charles County**

Contact: Chris Bostic 636-949-7305

Survey and Design of intersection improvements for existing rural roadway. Improvements included realignment of existing intersection with significant profile revisions to improve sight visibility and street grade of intersecting side street (Jackson Rd.). The improvements included approx. 500 feet of reconstruction with revised profile for Jackson Rd. and 1,060 feet along S. Point Prairie. Due to significant elevation changes, a construction phasing plan was developed which included an adjacent temporary road, necessary for placement of fill for the new S. Point Prairie pavement. Traffic was maintained along S. Point Prairie however a detour was developed to serve Jackson Rd.



## **Other Projects**

Boschert Phase 3  
Trail Extension  
Olive & Lawrence  
Street  
City of St Charles  
Parks Dept.



Elaine Drive  
Reconstruction  
City of  
O'Fallon



Gilbert Street Reconstruction  
City of Kirkwood



Geyer Road Resurfacing  
Phase 1  
(STP5502 (608))  
City of Kirkwood