Company Overview

QEI, a MBE/DBE engineering consulting firm.

Quigg Engineering Inc. (QEI) is a Disadvantaged Business Enterprise (DBE) that has been successfully serving clients in the private and public sectors since 2006. We specialize in transportation engineering and surveying, providing planning, design, surveying, and construction inspection in the infrastructure market. Since 2006, QEI has been able to expand to offer transportation and structural engineering, construction inspection, environmental studies and land surveying services. Our downtown St. Louis office was opened in 2016 and has grown to ten people, with three professional engineers.

QEI serves state DOTs, Toll Authorities and municipal markets. Our diverse background and depth of experience allows us to provide our clients with practical solutions during all phases including planning, preliminary and final design, permitting and construction. QEI's staff are professionally trained on many software packages, including: MicroStation SS4/Power Geopak SS4; AutoCAD; STAAD; MDX; MathCad; LEAP Bridge Concrete / LEAP CONSYS; and HEC-RAS. We put our clients' needs first by providing the highest quality services while meeting project budgets and schedules.

CERTIFICATIONS / AWARDS
MoDOT LPA Certified
Missouri DBE
Professional Engineering Corporation: Missouri License No. 2012025261
Illinois DOT Engineering Firm of the Year: 2011, 2018, and 2021

LICENSES / REGISTRATIONS	
Professional Engineers	31
Professional Structural Engineers	5
Professional Land Surveyors	5
Professional Traffic Operations Engineers	4
Professional Landscape Architect	1

Services

Roadway Design

QEI's experience includes the planning and design of rural and urban state and local highways, freeways, expressways, intersections, interchanges, and ADA compliant pedestrian and bicycle facilities. Our roadway group staff is experienced and capable of designing a wide variety of different roadway types including two lane, multi-lane undivided, multi-lane divided, expressways, freeways, and local roads and streets, utilizing the appropriate design guidelines/standards required for the roadway type, functional classification, and funding sources. We also have experience in the design of roundabouts, complex intersections, and interchanges.

Bridge Design

QEI's experience includes the planning, design and inspection of highway, pedestrian, and railroad bridges. This includes the design of new and replacement grade separation and stream crossing structures for interstate highways, expressways, state highways, and local roadways. We have experience working on design-build projects as well as design-bid-build. We have held the role of prime designer and as a sub-consultant. Our recent experience includes on-call, task order contracts, and we pride ourselves on the ability to be flexible and responsive to our client's needs.

Our planning experience includes the development of bridge hydraulic studies, the sizing of bridge openings, and evaluation of structure options. We have prepared structure type studies for larger structures which included the development of multiple bridge alternates, geometric studies, cost estimates, evaluation of advantages and disadvantages, and recommendations for the final structure type and size.

Survey

QEI's Survey staff has the experience and capabilities to address any type of projects our client encounter. QEI Survey staff has experience with Lidar, topographic, boundary, route of way and hydraulic surveys. We have worked on several on call service contracts both with IDOT and the Illinois Tollway. Our work on these contracts included, topographic surveys, boundary and right of way surveys and development of plats and legal descriptions. We are experienced working with and on railroad and understand the stringent safety requirements required by railroad companies.

Construction Inspection

QEI provides services necessary for inspection, management and completion of rail, utility, roadway, structural, environmental and aviation projects. We verify that our work and that of the contractors is properly executed, completed in a timely fashion, and conforms to the plans, specifications, and requirements of the construction contract. We have been providing construction inspection services since our company's inception in 2006. This experience includes both Illinois and Iowa DOTs, along with Illinois Tollway and several municipalities.

We provide the following services: Construction Documentation, PCC/HMA Inspection, ADA Design Compliance, Nuclear Density Testing, Subgrade/Subbase testing, Stormwater Pollution Prevention Plans (SWPPPs), NBIS Bridge Inspection, Evaluation and Reporting, Bridge/Culvert Construction Inspection, Construction/Stake-out Layout Services, Materials Inspection, Site Engineering/Permitting, and Inspection of Utility, Grading & Drainage Construction.

Environmental

QEI's Environmental Team has the technical expertise and ability to respond quickly to requests for National Environmental Policy Act (NEPA) assistance requests. QEI understands the critical timing of key milestones of the NEPA process including Purpose and Need, Alternatives to be Carried Forward, and the selection of the Preferred Alternative.

QEI has completed several environmental assessments and categorical exclusions for multiple agencies and has also led public communications for environmental assessments and categorical exclusions in accordance with the FAST Act. QEI staff has NEPA experience working with state departments of transportation in Illinois, Missouri, and Kansas and with the Illinois DOT Bureau of Railroads and the Illinois Division of Aeronautics.

Projects

Route 79, Ralls and Pike Counties, MODOT, NE District

This $8.7M project involved shoulder widening, adding a new guard rail, and resurfacing along approximately 24 miles of Route 79 in Ralls and Pike Counties. The scope also included sidewalk and ADA improvements at multiple crossing along Route 79 and Route 54 in the City of Louisiana. The design addressed drainage issues associated with these improvements along with examining each intersection for perpendicular pedestrian access routes (PAR) slope criteria.

Route 394 Bridges over Smith and Lost Creeks, MODOT, Warren County, NE District

The $1.3M project included two bridge replacements over tributaries located within the Missouri River flood plan. Lost Bridge was replaced with a 187-foot 3-span NU grider structure and Smith Creek was replaceed with a 128-foot 2-span NU girder structure. Both projects included stream hydraulics and design of the approach roadways.

Business Loop 44, St. Louis County, MODOT, SL District

The $1.5M project included resurfacing and safety updates for approximately 4.5 miles of BL-44 Pacific, MO. The work included LIDAR survey of existing sidewalks for to check for ADA compliance and preparation on of design plans to correct ADA deficiencies. The design involved milling and overaly of asphalt surface course and shoulders, guardrail upgrades to meet MASH standards, widening of sidewalks and entrance slope correction to meet ADA requirements.

Projects

Route 340 (Olive Boulevard) Widening, City of Creve Coeur, MODOT, SL District

The $1.2M project included pavement widening located on the south side of the corridor to provide full length storage for left turns between Spoede and Old Olive Street Road. Project included new traffic signals and interconnect at Spoede and Old Olive Street Road and new underground drainage system. QEI was also responsible for the utility coordination, supplemental topo surveys and right-of-way plats and easements.

Route 100 Bridge, Osage County, MODOT, CD District

The $700K project included replacing the existing bridge with a 119-foot 2-span NU girder structure over Shawnee Creek located within the flood plain of the Missouri River. The roadway profile was raised to the top of the agriculture levees to help minimize flooding. The project included stream hydraulics, and the design of the bridge and approach roadways. QEI also preformed topographic, hydraulic and boundary surveys and preparing right-way plats.

Route B over Ten Mile Creek, Butler County, MODOT, SE District

The $1M project included replacing the existing bridge with a 144-foot 3-span spread box beam structure over Ten Mile Creek. The roadway elevation was adjusted to provide a safer design speed without the need to take additional right of way. QEI's scope included preparing the hydraulic report and the design of the bridge and approach roadways. QEI also preformed topographic, hydraulic and boundary surveys.

I-70 Cave Springs to Fairgrounds (Design-Build), St. Charles County, MODOT, SL District

QEI is part of the design build team that is designing $62M improvement along I-70. QEI's scope includes designing the bridge carrying Veterans Memorial Parkway over Cave Springs Road, developing the plans for the North Outer Road from Route 94 to Fairgrounds and preparing the pavement marking plans for the Cave Springs and Zumbehl interchanges.

McKelvey Road Resurfacing, Bridgeton, MO, St. Louis County DOT

The $3.0M LPA project includes preparation of contract plans, specifications, and estimates (PS&E) for the rehabilitation of 1.5 miles of McKelvey Road from I-270 to Natural Bridge Road. The project also included providing ADA complaint curb ramps and new curb ramps, a new traffic signal, signal upgrades for pedestrians and bus stop pads. QEI's scope included preparation of the preliminary plans, design new ADA compliant curb ramps, upgrading the sidewalk ramps and driveway cross slopes to meet ADA standards, providing ADA compliant pads at bus stops, revisions to intersection geometry and developing a project strip map.

Route 79, Ralls & Pike County, MoDOT, NE District:

QEI prepared preliminary and final ROW plans, preliminary and final design plans 24 miles of shoulder widening, new guard rail and resurfacing along approximately 24 miles of Route 79 in Ralls and Pike Counties. The project included ADA improvements at multiple crossings along Route 79 in Louisiana, MO from Noyes Street to South Carolina Street and along Route 54 from 4th Street to Dougherty Pike. These ADA plans also include addressing drainage issues associated with these improvements and examining each intersection for perpendicular pedestrian access routes (PAR) slope criteria. The design of the ADA ramps and sidewalk improvements were in accordance with the MoDOT EPG and PROWAG.

IL 47/I-88 Interchange Improvements Environmental Assessment, Sugar Grove, IL, IDOT District 1

QEI led an EA for the widening of Illinois Route 47 from two lanes to four lanes for approximately two miles and the completion of the partial interchange between Illinois Route 47 and I-88. QEI prepared the entire EA and participated in NEPA/404 merger meetings with Illinois regulatory agencies. QEI also assisted in preparing for and attending public open house meetings.

IL 97/125 & IL 97 from West of IL 4, Sangamon County, IL, IDOT District 6

QEI developed the final plans, specifications and estimates for the new $68M IL 97 expressway west of Springfield, IL between IL 125, and IL 4. The proposed improvements include the construction of 5 miles of four lane, divided, partial access-controlled highway. The intersections of IL 125/IL 97 and IL 97/Bradforton Road will both be signalized. QEI prepared the TS&L and final bridge design plans for replacement of the IL 97 over Prairie Creek and the Sangamon Valley Trail Bridge over IL 97 including the hydraulic report and modeling of the Prairie Creek re-alignment. QEI assisted the District with the EA Re-evaluation for this project and the development of the Combined Report. QEI also performed all field and boundary surveys and prepared 63 right-of-way plats for land acquisition.

Key Personnel

Todd Welz, PE

- Transportation planning
- Roadway design
- Airport planning
- Construction management
- Design-build project delivery

Mike Cima, PE, SE

- Bridge planning & design
- Structural analysis
- Retaining wall design
- NBIS team leader

Tammy Neff-Smith

- Roadway design
- Structural plans
- Civil and structural CADD
- MicroStation and AutoCAD

David Booher, PE, SE

- Trail structure design
- Bridge planning & design
- Structural analysis
- Retaining wall design

Alex Sharypov

- Maintenance of traffic
- ADA Design
- Drainage design

William Kenter, PLS

- Topographic surveys
- Boundary surveys
- LIDAR surveys
- Hydraulic surveys
- Construction layout

Tim Redel

- Certified Missouri Master Naturalist
- NEPA documentation
- Wetland studies
- Endangered species studies

CJ Stokes, EIT

- Structural design
- Structural CADD
- NBIS Inspection

August Gremaud

- Preparing permit applications
- Erosion and sediment control
- SWPP
- Inspections

Eldon Fritz, LSIT

- Topographic surveys
- LIDAR surveys
- 3D terrain modeling
- Construction Inspection
- Material Testing

David Cuppet

- Construction inspection
- Material testing
- Nuclear Density Tester
- SWPP
- Inspections

Caden Milles

- Topographic surveys
- Boundary surveys
- Research boundary points

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