2017-2020 ON-CALL SERVICES

Client Manager: J.R. Landeck, P.E., P.L.S.
314.241.6300 | jlandeck@twm-inc.com
Thouvenot, Wade & Moerchen, Inc. (TWM) is a 100% employee-owned firm providing Civil & Structural Engineering, Land Surveying, and Planning Services to the St. Louis metropolitan area, as well as throughout Missouri, Illinois, and the Midwest. Over the last 70 years TWM has diversified into five primary disciplines – Transportation, Structures, Land Development, Water / Wastewater, and Geospatial Services. Within each of those disciplines, our expertise can assist you with a broad range of design projects, including:

- roadways, highways, and rail
- streetscape and pedestrian facilities (trails, sidewalks, and curb ramps)
- traffic analysis, traffic studies, and signal design
- bridges, retaining walls, large structures, and buildings
- municipal engineering / consulting
- recreational, commercial, industrial, institutional, and residential sites
- water distribution, water systems, and treatment
- wastewater collection and treatment systems
- storm water management
- land surveying, 3D scanning, mapping, and GIS

ENGINEERING FOR ROADS & BRIDGES

When it comes to a system of streets, highways, and bridges, safety and efficiency are undeniably top priorities. And in today’s economy, the solutions to transportation challenges also need to be affordable.

At TWM, we understand the challenges our clients face. Years of experience working for municipalities, counties, and the DOTs in Missouri and Illinois have made us experts in the practices and procedures of transportation engineering. Our staff is proficient not only in design, but also in related planning and pre-design activities including NEPA requirements, project development reports, bridge hydraulic analysis reports, scour analysis, land acquisition, environmental cause of action documents (ECAD), traffic and intersection design studies, as well as grant writing, regulatory coordination, public involvement, and construction phase engineering.

TWM’s expertise includes street improvements, roadway preservation, roundabouts, bike trails/sidewalks, pavement management, rural bridges over small creeks, and massive, multi-span structures over rivers, railroads and roadways. These kinds of critical designs require a trusted partner like TWM.
WHAT WE DO

EXCEPTIONAL SERVICE. NOTHING LESS.

ENGINEERING FOR TRAILS, SIDEWALKS, & OTHER ADA-COMPLIANT FACILITIES

With planning and design of more than 50 miles of trail over the past 10 years, TWM has become the go-to team for bike trail design services. Our experience includes all stages in the trail development process, from corridor studies and conceptual plans, through trail and bridge design, public involvement, bidding, and construction observation. We have even successfully stepped into projects that stalled after other consultants started them and were able to resolve challenges to get the projects back on track.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and subsequent federal transportation bills—TEA-21 (1998), SAFETEA-LU) (2005), MAP-21 (2012), and FAST Act (2015)—allocate a certain percentage of federal transportation funds to pedestrian and bicycle facilities. TWM is experienced in handling federally-funded projects and addressing deficiencies with pedestrian facilities.

ENGINEERING FOR SITE CIVIL DESIGN

Developing a site—converting the land from one use to another—takes careful planning if the site is to effectively serve its users. Attention to detail is important. So is experience. And few can match TWM’s experience.

Our engineers understand how to smoothly transition traffic into, out of, and within a recreational site. They know how to collect and efficiently manage storm water. They recognize that a residential subdivision needs to be more than streets and lots. The layout requires insight and visualization in order to integrate the infrastructure and homes into the natural landscape while creating a neighborhood where people want to live and raise their families.

TWM’s typical site civil design might include grading and erosion control plans; hydraulic analysis, drainage, and detention design; roadways, pedestrian facilities, amenities, parking lots, and ingress/egress design; sanitary sewer and water distribution design; and utility coordination. We also work with you on pre-project due-diligence, concept / master planning, annexation, Planning and Zoning Board assistance, preliminary / final platting, and construction phase engineering.
WHAT WE DO

GEOSPATIAL SERVICES | LAND SURVEYING | 3D SCANNING | GIS

TWM’s land surveying expertise includes innumerable boundary, ALTA, right-of-way, topographic, construction, and engineering surveys. While TWM has used conventional methods, today the firm relies on state-of-the-art equipment, including robotic total stations and GPS technology, to provide fast, accurate data.

We also offer 3D laser scanning services—allowing us to collect millions of data points in a short amount of time. The resulting output is a detailed 3D model of the survey area that can be exported to traditional CAD software for analysis and rendering—further proof of our commitment to the latest technology.

As an added benefit to our clients, TWM provides underground utility locating with the same quality and attention to detail as our aboveground surveying services.

Our field surveying is supported by TWM’s technical staff, using high-end computer work stations running AutoCAD Land Desktop, AutoCAD Civil 3D, and MicroStation / Geopak to process, calculate, and prepare boundary and topographic survey plats and descriptions, or to establish the basis for a design project. We have the capability to provide up to 9 fully-equipped survey crews.

Geographic Information Systems (GIS) services are a natural extension of the municipal engineering and mapping services we’ve been providing since 1946. We offer this primarily through a multiplatform cloud-based system so that users can access data anywhere there’s an internet connection. Desktops, laptops, and smart devices can both view and edit data. Additionally, mobile devices such as GPS handhelds, tablets, and smartphones can create and update data points with onsite geographic coordinates.

Our GIS team can help you make your data more accurate, more accessible, and more useful with projects like these:

**Short-Term / Individual Projects**
- Data conversion to GIS (e.g. paper maps, PDFs, MicroStation, AutoCAD, etc)
- Large document scanning and indexing
- Field data collection
- GIS database development
- Modeling and analysis

**Long-Term / Continuing Services**
- GIS database hosting
- GIS database updates and maintenance
- Cloud-based GIS utility / asset mapping and management
- GIS mobile application implementation