

GENERAL EXPERIENCE

Olsson Associates has a proven record of successfully completing transportation projects for Local Public Agencies (LPAs) throughout the state of Missouri, and elsewhere. These projects have been wide-ranging in size, scope, and client type. We believe our project diversity and flexibility is one of our key strengths. Our extensive experience with roadway design projects makes us a perfect partner for LPAs across the state. This experience includes traffic engineering, roadway widening and resurfacing projects, intersection geometrics, preliminary design and scoping studies, bridge designs, and complete roadway designs. Over the last three years we have completed projects in 6 of the 7 MoDOT Districts.

Olsson Associates was established in 1956 and has been serving Missouri since the mid-1990s. We currently employ over 700 professional engineers, engineers-in-training, planners, scientists, surveyors, technicians, and support staff across a platform of 24 offices including offices in Kansas City, Springfield, and Joplin. Within these local offices we have more than 30 transportation engineers, planners, and designers immediately available to work on your projects. In total, Olsson's Transportation Engineering Practice consists of more than 95 staff members dedicated to transportation projects, and the Practice is supported by additional experts in storm water, geotechnical analysis, surveying, environmental analysis, public involvement, and more. We can provide all of the services needed to complete any roadway design project.

Olsson has been fortunate to develop strong relationships with communities and LPAs over the years. These trusted relationships have provided the opportunity to provide engineering services on many LPA projects, and be selected to provide engineering services under several current On-Call Contracts. We have held On-Call Contracts with MoDOT in several categories over the last 3 years, and completed many MOUs under these contracts. We also hold more than 20 On-Call Contracts with municipalities and agencies for general engineering and transportation engineering services.

PAST PERFORMANCE

TEAP STUDIES | MoDOT - Olsson provided traffic engineering services under MoDOT's Traffic Engineering Assistance Program from 2004 - 2010. Olsson staff have provided services including pavement marking analysis, alignment problems, school signing, sight distance difficulties, intersection related safety problems, parking problems, speed surveys, signal warrants, traffic calming, and traffic counts. Projects were completed in cities of Riverside, Savannah, Prathersville, Ava, and the Village of Indian Point; and Boone and Platte County.

SIGNAL SYSTEM STUDIES | Joplin, Missouri - Olsson Associates was retained to help the City of Joplin,

Missouri, take steps to upgrade its signal system to improve traffic flow in the city. Olsson's scope of work included a geographical information systems (GIS) inventory, report, and photo log; system equipment update; a report detailing specific communication and intersection video equipment; and cost estimates and recommendations; a 10-year master plan that prioritizes projects; a report identifying available state and federal grant funds, as well as other possible funding; design of new and upgraded signals; and inspection, construction management, and field support provided, as needed.

I-470 STUDY | MoDOT - The Missouri Department of Transportation retained Olsson Associates to complete an assessment of the current traffic conditions of Interstate 470 in Kansas City, Missouri. Olsson collected daily traffic counts, peak period traffic counts, peak hour traffic counts, travel speed, vehicle classification, and vehicle occupancy data. The data provides information about travel characteristics on I-470, but was collected primarily to provide baseline data in which to build and calibrate a traffic simulation model of the I-470 corridor. The information was used to produce a daily traffic count map and more detailed traffic operational information such as traffic volumes at 15-minute intervals, travel speeds at 15-minute intervals, and ramp intersection level of service.

ROAD SAFETY AUDITS | Kansas Department of Transportation (KDOT) - Conducted Road Safety Audits (RSA) for the Kansas Department of Transportation for several counties throughout the state, including Decatur, Graham, Thomas, Logan, Smith, Lincoln, Dickinson, Clay, Geary, Brown, and Doniphan.

LIGHTING/LED STUDY | Olathe On-Call Traffic - Olathe, Kansas Olsson Associates was selected by the City of Olathe to complete on-call traffic engineering projects. In 2011, Olsson reviewed and updated the city's street lighting standard, including a review of LED lamps. Olsson provided recommendations on LED retrofit as part of the project.

MoDOT MOU US-71/BRUCE R. WATKINS SAFETY ANALYSIS | Kansas City, Missouri This project MOU was completed to address a request from the Missouri Department of Transportation (MoDOT) to review the crash data along US-71 Highway (Bruce R. Watkins) from Swope Parkway to 75th Street. The study area includes the at grade signalized intersections at 55th Street, 59th Street, and Gregory Boulevard and the grade separated interchanges at 63rd Street and Meyer Boulevard. In addition, each section separating the intersections was evaluated. Crash data for a three year period from 2009 through 2011 was reviewed which provided insight into overall corridor crash trends and calculation of crash rates that could be used to compare with MoDOT statewide average crash rates. **CMFs from the HSM were used to**

predict the effect proposed roadway improvements would have on future crash rates throughout the corridor, and these rates were compared to the expected crash rates if the improvements were not completed.

JAMES RIVER FREEWAY AND CAMPBELL AVE. CORRIDOR IMPROVEMENTS | Springfield, Missouri The purpose of this project is to ultimately to improve traffic safety and capacity along the James River Freeway (JRF) and Campbell Avenue corridor. Olsson’s responsibility is to conduct a study to develop a series of alternatives for future construction that will provide **safety** and capacity benefits to the corridor. The study will evaluate and recommend alternatives for reconfiguration of the JRF and Campbell Avenue interchange area, in order to address current and future traffic congestion and close signal spacing. A second focus of the study will be to evaluate and recommend alternatives for access management along Campbell Avenue.

NOLAND ROAD AT ROUTE 350 | Kansas City, Missouri The City of Kansas City, Missouri, secured a federal construction grant to improve Noland Road and its intersection with Missouri Route 350. Olsson was selected to evaluate the projected traffic volumes in the area and provide a traffic report outlining the requirements of the intersection of Noland Road and Route 350. After the survey, environmental due diligence, and a traffic report are completed, Olsson will develop three alternates for the intersection that will compare operations and identify the impacts of the following options:

- Removing the Rock Island Railroad (RIRR) bridge and upgrading the intersection in place
- Leaving the RIRR bridge in place and upgrading the intersection in place
- Leaving the RIRR bridge in place and relocating Noland Road to the east

After a preferred alternative is selected, the contract may be amended to include additional services to complete the design, which may include but not be limited to preparing preliminary plans, preparing final plans and specifications, and providing construction services or preparing design-build contracting documentation.

CENTRAL BUSINESS DISTRICT (CBD) | Kansas City, Missouri - Olsson completed traffic signal optimized timing plans for 119 intersections in the CBD area using Synchro and SimTraffic.

SPRINT CENTER SIGNAL TIMING | Kansas City, Missouri - As part of the KCMO on-call traffic engineering contract, this project included the development of event traffic signal timings for most of the intersections within the central business district of Kansas City, Missouri, on an as-needed basis. Project included coordination of on-demand field implementation adjustments with city and MoDOT

staff during actual events. Timings were developed for multiple events, including the Big XII tournament.



KANSAS AVENUE SIGNAL TIMING | Liberty, Missouri - Completed the design and field implementation of three traffic signal timing plans for several intersections along Route 210 and Kansas Avenue for the City of Liberty and MoDOT.

ROUTE 58 SIGNAL COORDINATION | Raymore, Missouri - As part of the on call traffic engineering contract for MoDOT, this project involved providing wireless communication and optimized timings on Route 58 for 16 traffic signals during various times of day. Olsson staff members will work with MoDOT staff to field implement and fine-tune each plan. Olsson staff is using MoDOT’s ACTRA software to input and download the signal timing plans.

Results in Numbers For Raymore

Eastbound

- A.M. (7:00 - 9:00)
 - » 44 percent decrease in stops and 19 percent fewer delays
- Midday (noon - 1)
 - » 63 percent fewer stops and a 47 percent reduced delays
- P.M. (4:00 - 6:00)
 - » 64 percent fewer delays and stops reduced by 71 percent.

Westbound

- A.M. (7:00 - 9:00)
 - » 44 percent decrease in stops and 19 percent fewer delays
- Midday (noon - 1)
 - » 63 percent fewer stops and 47 percent reduced delays
- P.M. (4:00 - 6:00)
 - » 10 percent fewer delays

KDOT REGIONAL TRANSPORTATION STUDY | Kansas Department of Transportation - Olsson Associates completed a Transportation Needs Assessment in Douglas, Johnson, Leavenworth, Miami, and Wyandotte counties in Kansas. The study was a collaborative effort done for the Kansas Department of Transportation, the Mid-America Regional Council, and the Lawrence-Douglas County Metropolitan Planning Organization.

PERSONNEL

Tom Fulton - Project Manager | Tom has more than 28 years of experience in the field of traffic engineering, including 12 years with MoDOT. Tom will be providing project management assistance for the Missouri Local Program TEAP projects. Tom has previous responsibilities with both the MoDOT and KDOT TEAP projects included project management, signal system optimization, and safety, school, intersection, and signal warrant studies.

Todd Fredericksen, PE, PTOE - Quality Assurance Quality Control | Todd has experience in the areas of safety and operational studies and operational analysis. Todd will be actively involved in this project by providing quality assurance/quality control assistance.

Kelly Turner, PE - Traffic Engineering | Kelly leads the Springfield, Missouri, Transportation team. He has over six years of transportation and traffic engineering experience. Kelly brings experience in project management, roadway design, traffic signal design, traffic studies, intersection improvements, ITS engineering, and trail design for both public and private clients.

Robbie Gastineau, PE, PTOE – Traffic Engineering | Robbie has over five years of experience in traffic engineering. His project experience includes signal timing design and implementation, temporary traffic control design, traffic impact studies, corridor studies, operational capacity analysis, and review of traffic studies and traffic plans for public agencies.

Jessica Sturgess – Traffic Engineering | Jessica has project experience assisting with transit improvements, roadway and geometric improvements, Intelligent Transportation Systems (ITS), and traffic signal timing and design.

“...Tom Fulton and Robbie Gastineau demonstrated strong expertise in the real-time traffic signal timing and operations. They also provided extensive on-site support to the event...”

- Stanley Harris, Public Works
Kansas City, Missouri



Jared Clemence and Brian McKain – Traffic Technicians | Jared and Brian assist with data collection, traffic impact studies, and CAD work for traffic signal design, signing, pavement marking, and traffic control. Software skills include AutoCAD, AutoCAD Civil 3D, Microstation V8, Microstation V8 XM, Synchro, Highway Capacity Software, Petra Pro, and HDM.

FAMILIARITY/CAPABILITY

Olsson has successfully provided traffic and roadway engineering design services in Missouri from new interchanges to rural roadway widening and realignment projects. This has presented opportunities to work on projects with all kinds of funding vehicles. We are fluent in the requirements presented by each funding mechanism and the processes required for each such as to ensure compliance with federal law and ensure retention of federal funds.

We understand the importance of a common-sense approach to engineering design, and selecting the appropriate application for each project element. We strive to implement Practical Design throughout development of our projects with the intent of minimizing the need for value engineering during construction. We believe this allows our clients and partners do make their dollars go farther, and provide better value to their customers.

ACCESSIBILITY

Olsson Associates has 24 offices across the Midwest, including offices in Kansas, Missouri, Oklahoma, Iowa, Nebraska, Colorado, and Arizona. These offices include all of our disciplines. Our team will plan accordingly for the future if awarded this project. We want this contract and will see to it that MoDOT's needs come first, to ensure a continued positive working relationship for years to come. We have been responsive to MoDOT's needs in the past and will continue to do so on any future projects.

FIRM OVERVIEW

John Olsson started Olsson Associates in 1956 on the ideals of passion, innovation, and creativity. But he realized he couldn't do it alone. Working with others was critical to his success and today, that collaborative spirit is still at the core of Olsson Associates.

We know that how we work together makes the difference in the solutions we deliver. We're more than a company of individuals; we're a team of problem solvers. We see problems as opportunities for creativity. The process of finding the right answer is different for every client and every project. This idea of collaboration affects how we think, act, and work as a team. It means we're able to uncover what works best, balancing each client's unique needs along the way.

Ideal collaboration means communicating what works, what doesn't, and what might. Combining our fresh approach with our technical expertise, we're able to look at projects and our clients' needs from all angles. And, in coming up with collaborative solutions, everyone comes out ahead. We challenge ourselves to continually solve problems in new ways and, in doing so, our clients become a part of a unique process in which they've been able to realize more from their budgets and other resources.

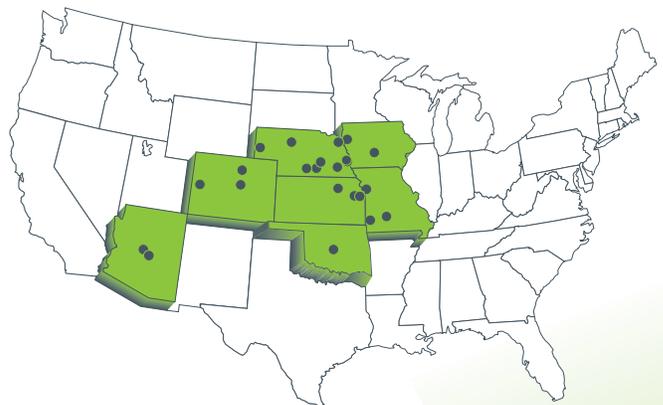
Olsson Associates offers airport consulting, automation and technology, civil engineering, community consulting, construction observation, environmental, GIS, intelligent transportation systems, land development, landscape architecture, mapping, mechanical/electrical/fire protection, power electrical, specialty lighting, structural, surveying, traffic, transportation, urban planning and design, water resources, geotechnical/materials testing, water/wastewater services.

Our firm employs more than 700 staff members, including professional engineers, engineers-in-training, registered landscape architects, registered land surveyors, professional planners and designers, scientists, and support staff made up of highly trained technical personnel with broad experience in all phases of engineering design and construction phase services.

Engineering News Record ranks Olsson Associates as one of the top 500 design firms in the United States. We attribute this to our emphasis on ideal collaboration, and we strive to see that these values become evident when you work with any of our staff. We work hard to provide excellent engineering, surveying, and sciences work to clients of all sizes throughout the United States.



Olsson Associates has 24 offices across the Midwest, including offices in Missouri, Oklahoma, Iowa, Nebraska, Colorado, and Arizona.



Our traffic engineers and transportation planners are constantly thinking about new solutions and finding new ways to improve traffic flow. Our traffic and transportation experts provide clients with a single resource for such traditional services as traffic operations, pedestrian circulation studies, and intersection improvement/design projects. They also are proficient in more complex projects, including conducting citywide safety studies, improving signal systems, and evaluating and designing Intelligent Transportation Systems (ITS).

Olsson Associates maintains large-scale data collection capabilities, as well as state-of-the-art traffic engineering and transportation planning software. Our staff is also involved in transportation research projects that contribute to the advancement of the profession. We can serve your needs from study and planning phase services through conceptual and final design.

- Intelligent Transportation Systems (ITS)
- Traffic Signal System Studies
- Signal Timing Plan and Implementation
- Microsimulation and 3-D Visualizations
- Travel Demand Modeling
- Transportation Planning/Corridor Studies
- Roundabout Analysis and Design
- Traffic Signal Design
- Pavement Marking and Signing Design
- Traffic Operations Analysis
- Traffic Safety Studies
- Traffic Impact Analysis

- Accessible Pedestrian Signals (APS)
- Intersection/Geometric Design
- Parking Studies
- Traffic Control Plans
- Noise Assessments
- Access Management Review and Design
- Pedestrian Circulation Studies/ADA Compliance Reviews
- Traffic Calming
- Transportation Research/Training
- Public Involvement
- Data Collection

Hard work, effective communication, and technical expertise form the basis of every traffic engineering project at Olsson Associates. We strive to understand the client's needs and find solutions that meet those specific needs while also addressing project constraints.



Intelligent Transportation Systems (ITS) offer new ways to address transportation problems, such as incident management, weather delays, and safety issues. With the expansion of federal ITS and Homeland Security funding for transportation and emergency services technologies and systems, Olsson Associates expects ITS to be a significant focus of state and local transportation agencies well into the future.

- Regional and Project Architecture
- Needs and Feasibility Studies
- Stakeholder and Public Involvement and Outreach
- Signal System Feasibility Studies and Design
- Fiber and Wireless Communications Studies and Design
(Center to Center, Center to Roadside, Center to Vehicle,
Vehicle to Roadside)
- Arterial Transportation Management Systems (ATMS) Design
- Dynamic Message Sign (DMS) System Design
- Closed-Circuit Television (CCTV) System Design
- Freeway Management Systems Studies and Design

- Traffic Operations Center (TOC) Studies and Design
- Systems Engineering, Technical Integration, and Testing
- ITS Software
- Development, Evaluation, and Testing
- Project Management
- Benefit/Cost Evaluation
- Construction Oversight and System Performance Testing and
Validation
- Data Network Planning, Design, Implementation, and Testing
- Railroad Advanced Detection and Warning Systems, Studies,
and Design
- ITS Operations and Maintenance
- ITS Design-Build Services

Olsson Associates offers complete planning, design, and implementation services for ITS projects using a client-focused systems engineering process. Our staff combines expertise in planning and design with electrical, technology, and computer systems engineers, traffic engineers, stakeholder outreach experts, and talented technical support staff. This allows ITS projects to be executed from conception through ongoing operations.



Olsson works with clients to identify transportation solutions that address liveability, sustainability, and community goals. We offer traffic circulation studies for downtown areas and other activity centers, as well as transportation corridor studies. These studies include land-use planning, access management, major investment studies, and alternatives analysis. We also provide assistance with environmental assessments and compliance.

We specialize in travel demand modeling and traffic simulation, and have developed simulation models to analyze freeway operations and test corridor improvement strategies, such as interchange modifications, new lanes, high-occupancy lanes, and ramp metering.

transportation planning services

- Long-Range Transportation Plans
- Major Thoroughfare Plans
- Corridor Studies
- Bicycle and Pedestrian Plans
- Transit Plans
- Parking Studies
- Smart Growth Planning
- Transit-Oriented Development

additional services

- Travel Demand Modeling
- Traffic Simulation
- GIS Analysis
- Transit Ridership Forecasting
- Environmental Services
- Landscape/Streetscape Services

Olsson specializes in providing transportation planning, transit planning, and traffic engineering services to public and private clients. We bring a collaborative approach to planning as we work with our clients to provide innovative and cost-effective solutions.

