



consistently high-quality professional and technical services.

URS is pleased to present the specialized experience and technical competence of the team on the following pages. Our local project manager, Paul Slone, PE, has worked closely with many local stakeholders. Supporting Paul on this project, Dr. Ming-Shiun Lee, our proposed technical lead, is the URS ITS architecture expert and has led more than 30 ITS architecture and deployment planning projects.

This project will be led from our Cincinnati office with assistance from our Indianapolis and Minneapolis offices. The Minneapolis Office is one of our hubs for our ITS Architecture work with staff readily available to perform the necessary services described in this proposal. The traffic / ITS engineers have the experience and skills to perform all types of traffic engineering projects within the Commonwealth of Kentucky. One page resumes are included for the staff later in the submittal.

Project Manager – Paul A. Slone, PE, PTOE (URS)

Mr. Slone has over 22 years of experience in Traffic Engineering and Planning. He currently is Transportation Group Manager of the URS Cincinnati office. In this position he managed the Lexington Traffic signal study for LFUCG; is currently managing the CMAQ project US 42 / Weaver Road Improvement project for KYTC District 6; and is the Principal in Charge for the KYTC District 7 Traffic Engineering Support Services Contract and the KYTC statewide traffic engineering contract. The US 27 Access Management Plan was developed under the District 7 Traffic Contract. He is well versed in the requirements of public involvement and stakeholder meetings, and will lead this project, allocating the resources required and delivering the finished update on schedule.

ITS Architecture Design and Reporting Lead – Ming-Shiun Lee, PhD, PE

As the lead project engineer of URS Minneapolis office, Dr. Lee is primarily involved with engineering projects in the Intelligent Transportation Systems (ITS) and Traffic Engineering areas. He has over 19 years of experience in the areas of program management, ITS planning and architecture, design and implementation, systems engineering, advanced traffic management systems (ATMS), active traffic management (ATM), transportation systems evaluation, traffic modeling and simulation, and signal design and analysis. He is URS' technical leader in the field, and has completed designs across the Midwest including Minnesota, Iowa, Michigan, Indiana and Illinois .

Investigation Lead – Vanessa Fritsch, PE, PTOE (URS)

Ms. Fritsch has been recently promoted as the Traffic Department Manager. She gained significant experience over the last 8 years on other traffic signal retiming projects in Louisville, Lexington, Knoxville, and some small communities in Ohio. Her experience also includes transportation analysis, traffic signal design and Blue Tooth data collection technology. Vanessa is a certified URS Project Manager, and leads a team of three traffic engineers.

Technical Reviewer – Daniel E. Shamo, PE (URS)

Mr. Shamo has an extensive background in transportation engineering and project management. His areas of expertise include Intelligent Transportation Systems (ITS) and Traffic Operations. His experience includes establishing the current Intelligent Transportation System (ITS) initiatives for the Indiana Department of Transportation. His work with the Gary-



Chicago-Milwaukee Priority Corridor (GCM) program significantly influenced the ITS planning efforts across Wisconsin, Illinois and Indiana. While at INDOT, Dan was one of the founders of the GCM Corridor program. Along with promoting a significant number of ITS initiatives, part of this work established the development of several regional and statewide ITS Architectures for the three states involved. After leaving INDOT and joining URS Corporation, he continued his involvement with the GCM Corridor as the Executive Director.

SUBCONSULTANT

URS will be supported locally by Integrated Engineering, PLLC (IE). They are a KYTC Certified DBE and are located in Lexington at 166 Prosperous Place, Suite 220.

IE was founded by Harsha Wijesiri in August of 2006. They are an emerging professional civil engineering, landscape architecture, and surveying company with experience in diverse disciplines. Having worked on various public works projects IE has successfully completed numerous municipal projects in the region. They have worked with governmental agencies in various cities across Kentucky. Some of their valuable clients include the Kentucky Transportation Cabinet, Lexington-Fayette Urban County Government, the Northern Kentucky Sanitation District 1, City of Richmond, and the City of Frankfort. The staff has earned a reputation for completing projects in a responsive manner while meeting and exceeding the client's needs and expectations. This is accomplished by providing functional, economically feasible, and aesthetically pleasing designs in a timely manner.

Public Involvement Assistance — Eddie Mesta, PE (IE)

Eddie Mesta, PE will be providing assistance with the public involvement component of this project. As Vice President of Integrated Engineering he has gained a significant amount of utility coordination and community involvement experience over the last 15 years in working with public infrastructure projects.

—ooOoo—

URS agrees to perform the services in accordance with the industry standard of care based on the circumstances. Any obligation to "ensure" "insure" or "assure" will not require URS perform above the industry standard of care. With regard to the insurance coverage: (i) URS will provide 30 day advance notice of a canceled policy, unless the cancellation is caused by non-payment of the premium; (ii) The General Liability policy can provide professional liability coverage, but not an endorsement; (iii) subsections (b), (c), (d) and (e) under the Deductibles and Self-Insured Programs do not apply; and (iv) the verification of coverage may be executed by the URS insurance broker.

PROJECT EXPERIENCE

The section that follows details the areas of experience that URS brings to LAMPO to aid in your evaluation of our qualifications. These projects are examples of our traffic signal experience, our experience in the LAMPO, our public meeting experience and our ITS Architecture experience regionally and nationally.



Lexington Signal Retiming Project

This project involved the retiming of 35 intersections on four of Lexington's major arterial routes: Newtown Pike, Versailles Road, Georgetown Road and North Broadway. The project scope included extensive traffic data collection, before and after travel time studies, developing a minimum of 12 timing plans for each intersection and the consultant providing on-site staff to program as well as field adjust the timing. In all, 810 hours of traffic count data was collected during weekdays, Saturdays and Sundays.

Synchro 8 was used to optimize the signal timing. Six plans were developed for weekday operation, three for Saturday and three for Sunday. All of these plans are activated by a time of day scheduler. Additional timing plans were developed on some routes. As an example, Newtown Pike had additional timing plans developed to accommodate the intense traffic demand during the AM and PM peak periods. Multiple timing plans operate with different offset patterns that adjust to the slowing speeds cause by congestion at predictable times within the peak periods.

All of these intersections utilize by 2070 traffic signal controllers connected to a centralized signal system (Centracs). URS personnel were onsite to program the Centracs database, perform the downloading to each intersection and provide field support to adjust the timing.

At the conclusion of the project, a benefit/cost analysis was performed. Based upon estimate fuel and delay savings over the lifespan of the timing plans (2 years), benefit/cost ratios of 30:1 to 65:1

URS Project Staff

Paul Slone, PE, PTOE, Project Manager

William Madden, PE, PTOE, Traffic Engineer

Vanessa Fritsch, PE, PTOE, Traffic Engineer

Amanda Beiting, EIT, Graduate Traffic Engineer

Location

Lexington, KY

Services

Traffic Operations

Client

Steve Cummings,
Project Manager,
Lexington Fayette
County Urban
Government

(859) 258-3491

Project Duration

2013 – 2014



KYTC District 7 Traffic Engineering Services

US 27 Access Management Plan

The elected leadership for the City of Nicholasville and Jessamine County realized that an Access Management Plan was needed for US 27 between Nicholasville and Lexington. While economic development has slowed, there is still considerable development potential remaining in the corridor. The leadership recognized that the time to act and implement a plan was upon them.

URS was commissioned by the KYTC District 7 office to study the area from Man o' War Boulevard southward to the northern access control line of the proposed East Nicholasville Bypass. This plan will be enacted through a Memorandum of Understanding (MOU).

The memorandum is a multi-agency agreement that outlines the roles and responsibilities of the Kentucky Transportation Cabinet and local planning agencies, establishing a commitment to the vision and purpose of this plan.

Local access spacing and design requirements are often different from KYTC's requirements, and this has created confusion with respect to which set of requirements should take precedence in a particular situation. The primary goal of this plan is to establish a unique set of access permitting guidelines to be accepted and enforced by multiple agencies that have funding or land use decision making power in the corridor. This establishes both a common vision for the future and the desire to follow through with that vision for these agencies. This was achieved through multiple meetings with local stakeholders.

This plan established both spacing requirements and defined short and long term projects for implementation with additional strategies for sustaining the current four-lane US 27.

URS Project Staff

Paul Slone, PE, PTOE, Project Manager

William Madden, PE, PTOE, Traffic Engineer

Vanessa Fritsch, PE, PTOE, Traffic Engineer

Amanda Beiting, CAD Technician

Location

Nicholasville and
Lexington, KY

Services

Preliminary Design
Access Management

Client

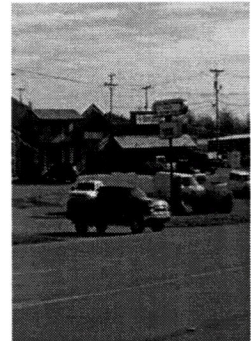
Logan Baker, PE,
Project Manager

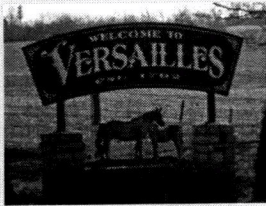
Kelly Baker, PE,
Engineering
Support Branch
Manager

(859) 246-2355

Project Duration

Oct. 2011 through
July 2012





Location

Lexington, Kentucky

Services

Data Collection

Client

Lexington MPO

Project Duration

June 2012

Versailles Road Bluetooth Data Collection

URS is a regular participant in the Lexington MPO's Congestion Management Committee (CMC). In June of 2012, URS offered to provide a pro-bono pilot project for transportation uses of Bluetooth data capture. At the time, the Urban County Government was in the process of procuring some Bluetooth data capture devices and the Transportation Center at University of Kentucky was also conducting an evaluation of Bluetooth technologies and probe based speed data provided by third parties.

Our offer was to collect Bluetooth data on one corridor in the Lexington area that would be of value to the committee. The CMC selected Versailles from Man o' War Boulevard to Pine Street. This was beneficial to the CMC on a number of fronts. First there was the evaluation of type and quantity of data that can be collected by Bluetooth data capture. Second was the application of that data for congestion management metrics. Finally, it interfaced with other projects at the UK Transportation Center, acting as an independent measure of travel speeds on Versailles Road.

This project exemplifies our commitment to our friends at the LFUCG, the Lexington MPO, and the UK Transportation Center.

URS Project Staff

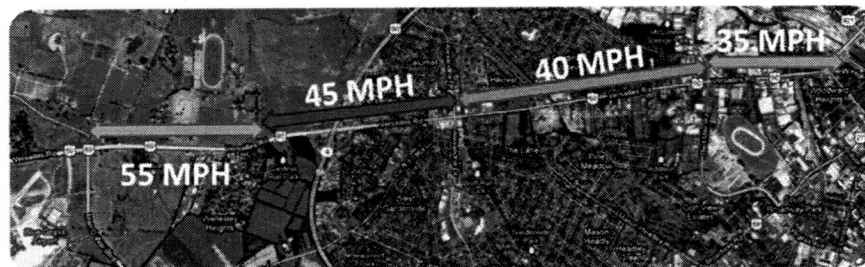
Paul Slone, PE, PTOE

Vanessa Fritsch, PE, PTOE

Bill Madden, PE, PTOE

Amanda Beiting, EIT

Versailles Road (US 60) Bluetooth Base Speed and Travel Time Demonstration Project



Segment	AM	NOON	PM	Sat/Sun	Overnite
MOW-Parkers Mill	50/52	51/51	50/48	52/51	51/53
Parkers Mill – Alexandria	23/27	27/32	18/28	25/31	27/36
Alexandria – Mason Headley	37/36	31/28	29/18	33/30	36/37
Mason Headley – Red Mile	32/35	32/35	30/31	36/36	35/40
Red Mile – Newtown Ext.	36/33	33/29	31/27	35/30	40/36

Speeds presented in MPH (rounded) and listed Eastbound/Westbound



Location

Lexington, KY

Services

Traffic Signal
Retiming

Client

Steven Cummins, PE

Traffic Signal
Systems Manager

(859) 258-3491

Project Duration

July through
November 2006

Traffic Signal Retiming: Downtown Lexington, Kentucky

URS developed three new traffic signal timing plans for **89 intersections** in the Downtown area of Lexington, Kentucky. This area included the downtown grid and portions of these arterials:

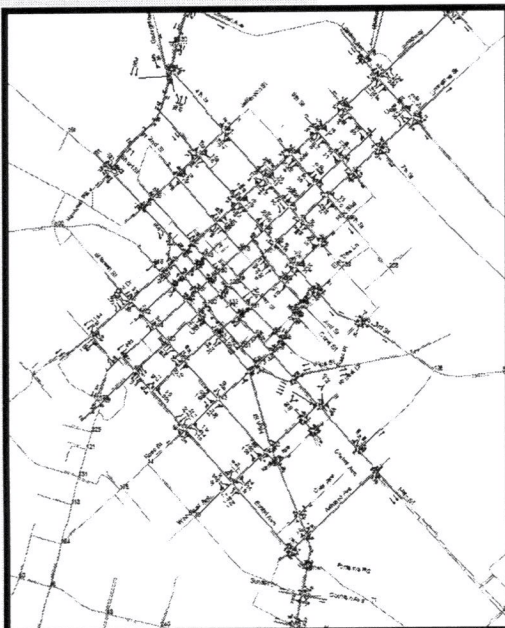
- East Main Street
- North Broadway
- High Street
- Loudon Avenue
- Newtown Pike
- Euclid Avenue

Signal timing plans are being developed using Synchro for the AM, midday and PM peak periods. Timing plans will be optimized and adjusted within the models and converted to Wapiti W4-IKS (traffic signal programming). Several advanced programming techniques utilizing Command Box were recommended and utilized.

Following delivery of the timing plans, URS assisted the LFUCG Division of Traffic Engineering entering the timing parameters into their centralized signal system, downloading to the field, and performing on-site adjustments.

An extensive calibration effort accompanied simulation model development.

- URS performed many field checks including:
- Verifying roadway and intersection geometry,
- Verifying existing signal timing and phasing,
- Measuring saturation flow rates
- Collecting speed and travel time information on specified routes using a GPS unit.



URS Project Staff

Paul Slone, PE, PTOE, Project Manager

Vanessa Fritsch, PE, PTOE, Traffic Engineer

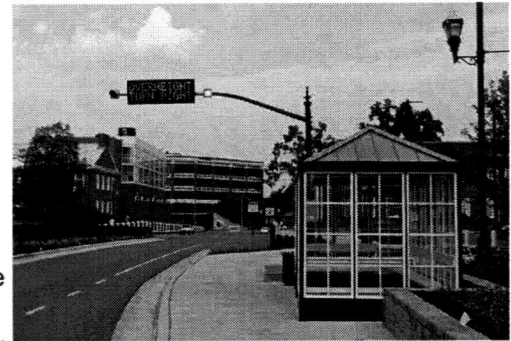


Specialty ITS

URS Corporation has provided services to the KYTC District 5 office involving specialty, low level ITS applications on two projects in Louisville. These project features were developed to address non-reoccurring congestion.

Specifically, the first locations involved the design and implementation of an over height vehicle detection system to warn trucks of a low height railroad bridge on Eastern Parkway at South Third Street.

The Eastern Parkway OVH system was an adaptation of the same technology used at Kentucky weight stations to check truck height. The application alerts and diverts trucks from the South Third Street railroad viaducts. Listed at 11- feet and 8 inches, the Norfolk Southern bridge was regularly struck three to four weeks on average. Some collisions involved closing the street for hours. The detection and alert system has reduced the average to one or two times per year.



Location

Multiple Sites, KY

Services

Lighting and signal design

Collaboration with other stakeholders (TRIMARC and CSX)

Client

KYTC District 5

The second location involved alerting traffic on I-265 approaching LaGrange Road of a crossing train. The train crossing notification sign at I-265 and LaGrange Road was performed at the request of the Ford Assembly Plant on Chamberlain Lane. The CSX crossing at Chamberlain Lane and LaGrange Road (the track runs parallel to LaGrange Road) has over 20 trains per day including service to the plant. Ford officials offered the idea to notify their employees when the crossing was blocked so that they may access the plant via the next interchange, Westport Road.

Also designed for local motorists, the sign was placed in an attempt to reduce the amount of traffic exiting to LaGrange Road when a train is crossing. The typical train crossing lasts several minutes and causes certain movements to queue and block through traffic on LaGrange Road.

The sign was designed as a warning sign with solar powered flashers that are activated by a wireless contact closure from the Chamberlain Lane traffic signal. This is signal is preempted by the railroad. The same preemption signal activates the signs.

This was also a collaborative project with TRIMARC, who provided a 50-foot pole that was installed by the project and later utilized by the TRIMARC system. The pole was used as a relay point for the wireless contact closure.

URS Project Staff

Paul Slone, PE, PTOE, Project Manager

Vanessa Fritsch, PE, PTOE, Traffic Engineer





Minnesota ITS Planning & Statewide Architecture Update

Location

Minnesota

Services

ITS planning

ITS Architecture

Client

Minnesota
Department of
Transportation

Rashmi Brewer,
MnDOT ITS
Project Engineer
(651) 234-7063

Project Duration

2007-Present

URS has assisted the Minnesota Department of Transportation (MnDOT) with updating the Statewide ITS Architecture for the state of Minnesota through two work orders since 2007. The first work order updated the 2001 Minnesota Statewide ITS Architecture to reflect the ITS visions and investments as well as ITS needs as of 2008. The updated architecture meets requirements of the U.S. DOT's National ITS Architecture and allows MnDOT to enhance transportation operations which increases safety and efficiency. By identifying and adhering to National ITS standards, MnDOT can maintain an open environment for ITS development. The updated Statewide ITS Architecture helps MnDOT leverage system effectiveness and provides enhanced service to users by integrating systems using these common standards.

In this first work order effort, URS assisted MnDOT with the following tasks:

- Performed an overview of the existing Minnesota Regional ITS Architecture to identify gaps and new data that needed to be gathered
 - Identified applicable National ITS standards
 - Developed goals, objectives and performance measures and documented Needs and Service for each of the service package areas (i.e. maintenance and construction management, advanced public transportation systems, advanced traveler information systems, advanced traffic management systems, commercial vehicle operations, emergency management, archived data management, and advanced vehicle safety systems)
 - Documented the updated Regional ITS Architecture and Turbo Architecture
 - Developed an implementation strategy that identified dependencies among projects as well as an overall sequencing plan to show how the implemented projects can be deployed over time.
- Developed a detailed description for each project to help guide future implementation. Each project description included a description of the project concept, participating stakeholders and their roles and responsibility, technology assessment, project level architecture, goals and objectives addressed, estimated costs, and benefits.

The first work order for the Minnesota Statewide ITS Architecture Update was completed in 2009. The Architecture is one of the best practices highlighted in the FHWA Primer: [*Applying Regional ITS Architectures to Support Planning for Operations*](#).

Under a subsequent work order, MnDOT retained URS in 2011 to provide professional services to update the Statewide ITS Architecture through 2014. Under this current work order contract, URS assists MnDOT with refining the ITS vision, goals, objectives and performance measures, developing a refined, robust process for stakeholders to apply for ITS projects, updating the architecture to be consistent with National ITS Architecture Version 7.0, and updating the ITS projects implementation plan.

As part of this update process, URS applies FHWA guidance on the use of an objectives-driven, performance-based approach to incorporating the ITS Architecture update in planning for operations. URS works closely with MnDOT on incorporating S.M.A.R.T. objectives and performance measures into the ITS Architecture as recommended by a series of FHWA publications on planning for operations. URS is also updating the ITS Architecture Maintenance Plan and a checklist for ITS projects for use by MnDOT staff in the future to keep the Statewide Regional ITS Architecture and Implementation Projects update to date. This current work order is over 80% complete.



Location

Augusta, Georgia

Services

ITS planning

ITS Architecture

Client

City of Augusta,
Metropolitan
Planning
Organization

Project Duration

2007– Present

Augusta Regional Transportation Study ATMS Master Plan Update

URS was selected by the Augusta Region Transportation Study (ARTS), the regional Metropolitan Planning Organization (MPO) which is a division of the City of Augusta, to develop an Advanced Transportation Management System (ATMS) Master Plan for the ARTS region. The purpose of the Master Plan project is to update the original ATMS Master Plan completed in 2002. The ARTS region includes a number of unique transportation needs, include mobility related to the Savannah River Site (an industrial complex) and Ft. Gordon (a large military base). The Master's PGA golf tournament held in Augusta each April uses a number of temporary intelligent transportation system (ITS) components to successfully monitor and manage traffic and pedestrians. The recent completion of the I-520 freeway bypass, the deployment of adaptive traffic signal technology on several major arterials, and interest in a traffic control center for Richmond County were several other reasons why the ATMS Master Plan Update was commissioned. In addition, the counties within Georgia had recently approved a transportation-specific funding source that included earmarked money for ITS deployments within the next three years.

URS facilitated meetings with stakeholders to solicit input about their transportation needs. Three large stakeholder events were used to provide the opportunity for stakeholders to provide input, learn, and review during the project process. Topics included:

- ITS challenges/issues, needs, and goals
- ITS infrastructure
- TCC staffing and responsibilities
- ITS maintenance staffing and responsibilities
- ITS funding

The input provided was used to develop the ITS architecture, prepare an operational concept for the region, and to develop an ITS project list that addresses the needs of the region. The project list was prioritized by the stakeholders and divided into short-term, mid-term and long-term deployment periods.



Location

Kansas

Services

ITS planning

ITS Architecture

Client

Shari Hilliard
Kansas DOT
700 S.W.
Harrison Street
Topeka, KS 66603-
3754
(785) 296-6356

Project Duration

2007– Present

Kansas Statewide ITS Architecture

URS worked closely with the Kansas DOT to develop a statewide intelligent transportation systems (ITS) architecture. The Statewide ITS Architecture reflects the current state of the ITS elements deployed and planned as well as provides a strategic approach to all future Kansas DOT's ITS investment throughout the state. URS brought together State DOT planners, engineers and maintenance personnel; city and county planning, engineering, maintenance and public safety personnel; State Patrol; Turnpike Authority; various other state agencies; and representatives of the urban areas throughout the state to develop the Statewide ITS Architecture. Education, outreach, and interagency coordination efforts included a series of stakeholder workshops throughout the state.

As part of the Statewide ITS Architecture, URS developed an architecture integration and implementation plan to guide KDOT and participating stakeholders to effectively use the architecture in the planning, design, implementation, and operation stages of ITS systems and projects. An approach for mainstreaming ITS into the transportation planning and project development process was also identified. URS also investigated and identified opportunities to further integrate various ITS systems at local, regional and statewide levels.



Location

Iowa

Services

ITS planning

ITS Architecture

Client

Willy Sorenson, P.E.
Iowa DOT
800 Lincoln Way
Ames, IA 50010
(515) 239-1212

Project Duration

2007- Present

Iowa Statewide ITS Architecture Update

URS is working closely with the Iowa DOT to perform a comprehensive update of the statewide ITS architecture. The URS team completed a Statewide Multimodal, Integrated ITS Deployment Plan and Statewide ITS Architecture for the Iowa DOT in 2000. URS performed an update to the Statewide ITS Architecture in 2004. URS continues to provide support and services to the Iowa DOT to maintain the updated Statewide ITS Architecture. The updated Architecture reflects the current state of the ITS elements deployed and planned as well as provides a strategic approach to all future Iowa DOT's ITS investment throughout the state. As part of the Statewide ITS Architecture Update, URS has developed a statewide DMS architecture based on the Iowa DOT Statewide DMS Plan. URS assisted the Iowa DOT with procuring the DMS, defining concept of operations, developing the DMS control policy and procedures, and integrating the DMS project architectures into the Statewide ITS Architecture.

Ames Area MPO Regional ITS Architecture

URS supported the Iowa DOT and Ames Area MPO with developing a regional ITS architecture for the Ames Area. This regional ITS architecture supports existing and future ITS projects within the region and enhances the compatibility with emerging national ITS architectures. URS performed comprehensive outreach and extensive coalition building as they were elements absolutely critical to the ultimate success of the development of the ITS architecture. The completed architecture ultimately provides a comprehensive framework for communication among agencies, as well as technologies.

Reference: John Joiner, P.E.
City of Ames Public Works Department
515 Clark Ave
Ames, IA 50010
Phone: 515-239-5165

Dubuque MPO Regional ITS Architecture

Through a contract with Iowa DOT, URS assisted the Dubuque MPO with developing a regional ITS architecture for a six-county area. This regional ITS architecture supports existing and future ITS projects within the region and enhances the compatibility with emerging national ITS architectures. URS performed comprehensive outreach and extensive coalition building as they were elements absolutely critical to the ultimate success of the development of the ITS architecture. The completed architecture provides a comprehensive framework for communication among agencies, as well as technologies.

References: Kelley Deutmeyer
East Central Intergovernmental Association
3999 Pennsylvania Ave., Suite 200
Dubuque, IA 52002
Phone: 563-556-4166



Regional experience

Columbus County (Indiana) Regional ITS Architecture

URS worked closely with representatives from Columbus, IN and Bartholomew County agencies to develop their Regional ITS architecture. The work product reflects the current state of the ITS elements both deployed and planned. It also provides a strategic approach to all future ITS investment throughout the County. URS brought together planners, engineers and maintenance personnel; City and County planning, engineering, maintenance and public safety personnel; State Police; various other state agencies; and key representatives of the urban area to develop the Regional ITS Architecture. Education, outreach, and interagency coordination efforts included a series of workshops with key personnel.

Southwest Michigan Regional ITS Architecture and Deployment Plan

URS assisted the Michigan DOT with developing a regional ITS architecture and ITS deployment plan for the Southwest Region and a portion of the University Region (Shiawassee and Jackson counties). This project involved developing a training class on the National ITS Architecture, a regional ITS architecture, and a deployment plan that included a project listing, developed through the stakeholder meeting process, planning level project costs, project prioritization and detailed benefits of the project in terms of improved safety, mobility and air quality. URS completed a Regional ITS Architecture and an ITS Deployment Plan for the Southwest Region in Michigan in 2008.

Wisconsin DOT District 8 ITS Architecture

The WisDOT District 8 ITS Strategic Deployment Plan was developed with the Wisconsin Department of Transportation to guide deployment of ITS applications throughout the eighth district, a rural region in northwestern Wisconsin. This region faces a growing number of challenges as traffic demand continues to increase. URS successfully brought together State DOT District planners and engineers, county maintenance personnel, state patrol, and representatives of the urban areas throughout the region to develop a strategic plan to address this rural area's needs. Education and outreach efforts included a project newsletter sent to stakeholders throughout the corridor. The URS Team conducted a stakeholder survey, a system inventory, and a technology assessment and developed a regional architecture.

Illinois Statewide ITS Strategic Plan

As a subconsultant, URS assisted in the development of a statewide strategic plan to deploy and integrate ITS technologies in Illinois to improve traffic system performance and operations. This strategic plan will guide Illinois DOT in deploying resources in a comprehensive manner to address transportation issues around the state. The plan outlined the high priority transportation needs in the state and recommended how to deploy projects to address these needs in a manner that best uses available resources. URS assisted in the technical review outreach workshops and development of the ITS Strategic Plan.



Lexington Congestion Management System

Personal Experience of Paul Slone

While working with his previous employer, Mr. Slone was the Project Manager for developing the Lexington MPO's Congestion Management System (CMS). A report published by the Lexington MPO in 2002 revealed that many routes through the Lexington area experienced high levels of congestion. This report was the beginning of the CMS for the Lexington area.

A CMS is a systematic process that provides information on transportation system performance and alternative strategies to alleviate congestion and enhance the mobility of persons and goods to levels that meet state and local needs. It is a tool to improve the planning and programming process and integrate with other programs that are part of an existing Transportation Management System.

Key tools used for this CMS include:

- Access Management
- Reversible Traffic Lanes
- Traffic Signal Improvements
- Intersection Improvements
- Increased Multimodalism

Phase I of the CMS process involved recommending policy framework and analytical methodologies through a decision matrix. In phase II of the process, an initial round of analysis on seven of the region's most congested routes was performed.

A study work group has been formed to provide direction and guidance during the CMS development process. Phase II of the CMS process identified conceptual projects to improve congested conditions and prioritized these projects based upon benefit/cost ratio, future funding availability, anticipated lifespan of project benefits, as well as geographical balance of projects.

Project recommendations included a list of numerous, small operational improvement projects as well as project concepts for consideration in the Transportation Improvement Program. Also as part of this project, one CMAQ grant was submitted and approved by the Kentucky Transportation Cabinet and one Six Year Plan project was revised saving millions of dollars. Analysis included interchanges along New Circle Road and Interstate 75.

Location

Louisville, KY

Services

Traffic Data
Collection

Trip Generation
Study

Access Improvement

Client

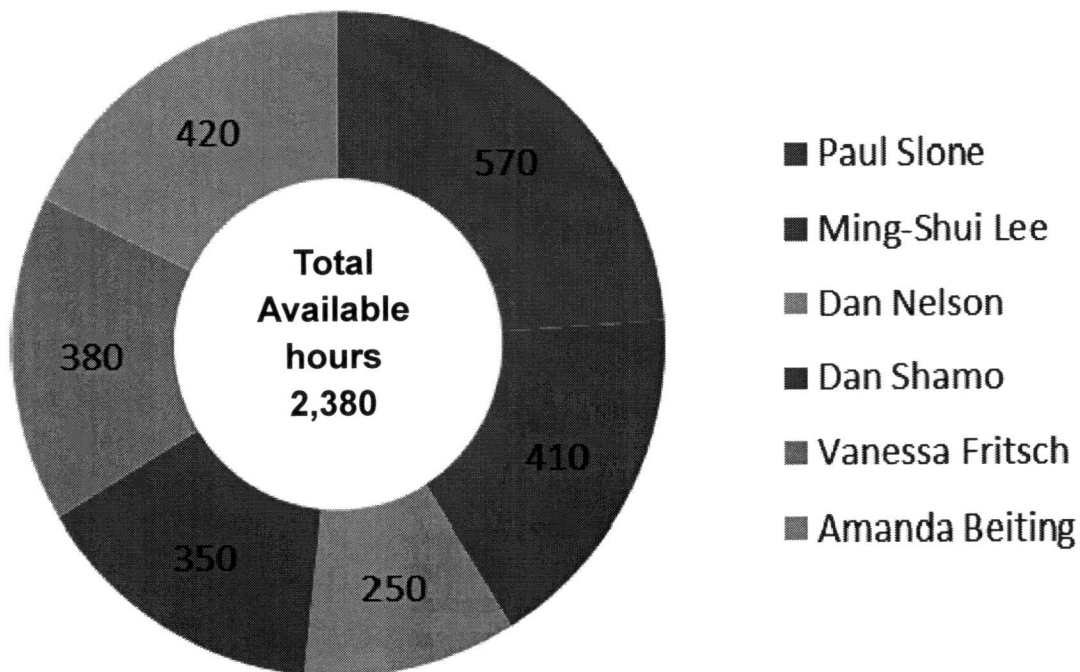
Max Conyers,
Director Division of
Planning

(859) 258-3167



WORKLOAD CAPACITY AND AVAILABILITY

Hours Available by Staff Member



URS has evaluated our availability to work on this project from **September 2014 until February 2015**, allowing for holidays and projected personal time off. We have preliminarily estimated the effort required for this project to be between **600 and 800** personnel hours. The availability above demonstrates that we will be more than able to meet this expectation with projected project workloads.



PROJECT UNDERSTANDING

URS understands that one of the first challenges of this project is the limited timeframe with which LAMPO is confined. We have learned from attendance at the Congestion Management Committee Meetings, that the FHWA is requiring the LAMPO to update the 2004 BITS memorandum and adopt an updated ITS Architecture structure. Failure to do so in a timely fashion could result in the interruption of funding for certain projects.

We are strongly positioned to address the schedule challenge. We are beginning this project with a thorough understanding of the existing ITS elements and their operation within the region. We are also aware of new ITS elements such as the InSync adaptive signal system and BlueToad travel time reporting equipment currently being deployed around Lexington. Also we have an excellent working relationship with many of the stakeholders. This was exemplified on the US 27 Access Management Study performed for the KYTC District 7 office. Many of the stakeholders for that project will also be stakeholders for the updated architecture. Our local team of engineers brought various groups together including the KYTC, LFUCG, LAMPO, Bluegrass ADD, City of Nicholasville, Jessamine County and other local citizen based transportation groups to gain consensus for the project.

URS has also utilized an approach to developing ITS Architecture while minimizing stakeholder effort as much as possible. We can develop draft system information flows using material already collected and our in-depth knowledge of projects in the area. We will provide diagrams for users to comment on and respond to; instead of having stakeholders provide the information from scratch. We will provide the information to stakeholders electronically and follow up with phone calls when needed to explain project material or ask questions.

As the project product is an updated ITS Architecture, we will immediately begin the project by working on the draft framework to present during our initial stakeholder contact. This will eliminate the need for one round of meetings by combining the project introduction/kickoff and the initial draft presentation into one meeting with the stakeholders.

This initial draft of the Architecture update will be based upon our in-depth knowledge of the existing equipment and upcoming plans of the two operating stakeholders: The KYTC and LFUCG.

The current ITS system is comprised of freeway devices operated and maintained by the KYTC in Fayette County. They include:

- Surveillance cameras
- RWIS or Road Weather Information System
- Dynamic message signs outside of, but approaching to, Fayette County
- Homeland Security surveillance system of the Clays Ferry Bridge
- TransLink, an internally developed Bluetooth travel time collection system
- TransPhat, an internally developed traffic signal management software
- The primary communications in use are cellular hubs with wireless communications to individual devices.

The KYTC also maintains closed loop traffic signal systems in Jessamine County remotely accessible through IP (Ethernet) radios.