

November 14, 2014

MaryAnn.Jacobs@modot.mo.gov

Subject: Local Program (LPA) On-Call Professional Services - Structures

Dear Ms. Jacobs:

The Missouri Department of Transportation (MoDOT) and CDM Smith currently enjoy a strong partnership in transportation structural plans and production, and we are eager to continue expanding that relationship through the LPA structures engineering on-call services contract.

GENERAL EXPERIENCE OF THE FIRM

CDM Smith has been providing structural engineering services for more than 60 years. We consistently rank among the *Engineering News-Record's* top 20 engineering firms in the country for both transportation and environmental services. We offer a range of services including hydraulic studies, geotechnical engineering, environmental clearances, and right of way.

PAST PERFORMANCE

CDM Smith staff has completed projects that are relevant both to the task at hand and to the assigned staff. Offering comprehensive services such as feasibility studies and in-service inspections to new and rehabilitative design, contract documents, and construction phase support. CDM Smith provides proven leadership in hydraulic studies, including data management, modeling and systems analyses, best management practices, and floodplain management and mapping. Environmental clearances services include NEPA assessments, Environmental Impact Statements (EIS), Categorical Exclusions, and Planning & Environmental Linkage (PEL). Brief descriptions of these projects include:



Lewis and Clark Expressway – Sterling Avenue and Cement City Road ROW Design and Final Design, Kansas City and Sugar Creek, Missouri. This

project consisted of new horizontal and vertical alignments for two miles of urban collectors with three

bridges over Sugar Creek and one bridge over the BNSF railroad through an environmentally sensitive brownfield site with petroleum contamination. The site is also within the Missouri River Floodplain. An EIS was completed and approved for this project as well.

Lewis and Clark Expressway – Expressway and Front Street Preliminary Design and ROW Plans, Kansas City and Sugar Creek, Missouri. This project consisted of new horizontal and vertical alignments for a new two miles industrial collector with bridges over the Blue River, a bridge over Rock Creek, and a bridge over the KCS railroad and Hawthorn Road through an environmentally sensitive brownfield site with heavy metal and lead contamination. The site is also within the Missouri River Floodplain. An EIS was completed and approved for this project as well.

I-70 First Tier and Second Tier EIS, Kansas City, Missouri. CDM Smith worked with the Missouri DOT to prepare a First Tier EIS for 18 miles of I-70 in the Kansas City area. Several strategies were developed and submitted for addressing transportation needs in the urban corridor and draft and final EIS documents were written and approved. CDM Smith was then contracted to complete the Second Tier EIS for seven miles of the project covering two sections of independent utility. CDM Smith led a multidisciplinary team, including six subconsultants. CDM Smith coordinated the analysis and documentation delivery for all project phases, and was responsible for all client and stakeholder coordination, project communication, scheduling, and budgeting.

I-470 Purpose and Need Study. CDM Smith was retained by MoDOT to conduct a Purpose and Need Study in Jackson County, Missouri. The aim of the I-470 Purpose and Need Study was to develop the purpose of and determine need for improvements to I-470 along a 15-mile corridor from 39th Street to Blue Ridge Boulevard in Jackson County. Among other items, the study included a safety data analysis and evaluated engineering features such as horizontal and vertical alignment, merge and diverge functionality, and intersection improvement opportunities at I-470 ramp terminals to determine the root causes of existing and future needs of the I-470 corridor. The study also developed short-term, non-capacity improvements unrelated to the purpose and need that could be implemented. The study is a cooperative effort

involving the MoDOT, Mid-America Regional Council, cities of Lee's Summit, Independence, and Kansas City.



Milton-Madison Bridge Replacement and Rehabilitation, Milton, Kentucky and Madison, Indiana. CDM Smith, coordinating a joint effort between the

Kentucky Transportation Cabinet, the Indiana DOT, and the FHWA, has undertaken an environmental assessment and preliminary design project for the historic US 421 bridge between Milton, Kentucky, and Madison, Indiana. As part of the NEPA process, this project included a number of tasks, including development of the purpose and need statement; development and screening of alternative locations for a new bridge, including the do-nothing alternative, superstructure replacement on existing piers, and new bridge locations; assessment of potential environmental impacts, including socioeconomic, historic structures, archaeological sites, noise, vibration, air quality, ecological resources, and river navigation; traffic modeling and forecasting to determine volumes for various bridge location alternatives; a bridge tolling study to determine the feasibility of cross-river tolling for a new bridge; a ferry study to consider potential dock locations, vessel sizes, trip capacities, and queuing facilities; economic analysis to consider the benefits of construction dollars, as well as regional impacts due to a temporary bridge closure during construction; public involvement activities, including coordination with a local Project Advisory Group made up of local citizens, website updates, newsletters, and coordination with the local media. During project development phases, CDM Smith was able to incorporate innovative measures to accelerate construction schedule, to compete for grant funding, and minimize impacts to the communities.

Blue River FEMA Flood Hydraulics, Kansas City, Missouri. CDM Smith was selected to provide a hydraulic study for the Blue River Watershed. The Johnson County Stormwater Management Program representing the cities of Johnson County, including Overland Park, and unincorporated Johnson County, developed detailed hydraulic models of the Blue River as part of a FEMA floodplain physical map replacement. The new FEMA floodplain maps and supporting

hydrology and hydraulic models become effective in 2009. These FEMA floodplain maps, water surface profiles, and flow rates are the current effective conditions that must be used for all stormwater design projects in Johnson County as well as to meet FEMA regulatory standards. These FEMA effective maps and models will form the base for developing bridge design alternatives.



Target Green Marlborough West, Kansas City, Missouri. CDM Smith was hired to design Green Infrastructure (GI) solutions within the Middle Blue River Basin, as the primary CSO control technology to comply with the Federal Consent Decree requirements. Major components of the project include:

- **Green Infrastructure Solutions.** The final product will be a vision that connects selected solutions with long-term community enhancements to establish the framework for revitalizing the neighborhood and spur economic growth.
- **Hydrologic and Hydraulic Modeling.** The XP-SWMM model is being applied to simulate individual and basin-wide GI performance.
- **Public Participation.** A key objective of the project is to gather input from the neighborhood community and to promote a common understanding of the project goals.
- **Preliminary and Final Design Services.** The preliminary final design services include the development of construction drawings and specifications for the GI solutions, landscape architecture, traditional stormwater infrastructure, civil/site work, construction sequencing, easement plan, utility relocations and a maintenance plan.

QUALIFICATIONS OF PERSONNEL



Barbara Wells, PE: Ms. has more than 19 years of experience in highway design, including horizontal and vertical geometry, drainage, traffic control and inspection, plus more than 10 years of planning studies including preparing Access Justification Reports and providing quality control for NEPA documents. Her relevant

projects include managing the Bella Vista project in southwest Missouri, managing the M-150/Botts Road DDI in south Kansas City, and serving as quality manager for the I-70 Second Tier EIS in Kansas City.



Andy Sauer, PE: Mr. Sauer is a water resources group leader and senior project manager specializing in water resources projects, including watershed studies, hydraulic and hydrologic (H&H) modeling, flood mitigation

projects, FEMA floodplain mapping, and stormwater BMPs. Mr. Sauer has significant technical experience in stormwater/floodplain management, stormwater design, surface water quality, combined sewer overflow (CSO) basin studies, wetland design, computer modeling, GIS analyses and database development.



Allan Zafft: Mr. Zafft has more than 13 years of experience in environmental and transportation planning, including all levels of NEPA analysis and processes, and developing and administering programs, policies, and projects

in compliance with state and federal regulations. His experience includes seven years of leading teams of engineers, planners, and environmental specialists in preparation of complex environmental documents and corridors studies. His relevant projects include US 69 Bridges over the Missouri River Environmental Assessment; I-70 First and Second Tier EISs, I-470 Purpose and Need Study; and Route 45 Location Study.



Brenda Macke, PE: With 14 years of civil engineering experience, Ms. Macke offers strong project management skills and proficiency in the following scheduling, design, and modeling software: Microsoft Project;

AutoCAD 2004, 2007; ESRI ArcView 9.1; MWH Soft Products; GBA Masterseries; InfoWorks and HEC-RAS. She has extension experience in stormwater management analysis and serving as project manager for multiple municipal hydraulic studies.



Greg Sanders: Mr. Sanders has 12 years of experience in the area of geotechnical and tunnel engineering. Much of his experience includes participating and directing the inspection of existing engineering project,

recommending studies and improvement, preparing calculations, reports, drawings, specifications and performing finite element analysis for complex project with tunnels, dams, levees, retention walls, shallow foundations, piles, piers, and pipelines. He served as lead geotechnical engineer for the Lewis and Clark Expressway ROW Plans Phase, specifically for the preliminary geotechnical exploration for a 3-mile segment of a new roadway, which included three new bridge structures and a bicycle trail.

FAMILIARITY/CAPABILITY

As described previously, CDM Smith team members are experienced in hydraulic engineering, geotechnical engineering, and environmental assessments. We are familiar with MoDOT policies and procedures, and have been/are currently involved in various design and study projects studies throughout the state, including the MoDOT State Freight Plan and I-70 STEIS.

ACCESSIBILITY

We have structured the team such to provide redundancy of personnel, enabling MoDOT to have access to the appropriate engineering specialists. Team members hail from CDM Smith's Kansas City office and are capable of working on site, as required by each project. Each person will be accessible via e-mail and cell phone/landline when not working on site at a MoDOT project.

CDM Smith is committed to work with MoDOT in a flexible manner to ensure the consistent quality delivery of our work. Please feel free to contact me at 816.444.8270 if you have any questions concerning this letter of interest.

Respectfully Submitted,

Barbara L. Wells, PE
Client Service Manager
CDM Smith Inc.



Transportation Services for Public Agencies

Planning and Policy

CDM Smith brings a comprehensive, multi-disciplined problem-solving approach to every client. We embrace and foster a team approach, which is especially important in transportation planning, as no study or project has a single focus. Planning is about integrating infrastructure and quality of life elements to enhance our lifestyles and the environment. CDM Smith offers a full range of transportation planning services including:

- Customer focused program evaluation
- Evacuation planning
- Freight, modal, and intermodal plans
- Geospatial technologies
- Guidebook and guidance manual development and training
- Modeling
- Multimodal planning
- Multi-state corridor studies
- Policy studies
- Stakeholder outreach and involvement

Trade and Transportation Studies and Corridor Studies

More than 40 "priority" corridors have been designated by the U.S. Congress since the passage of the ISTEA transportation bill. Many have a trade and even international trade orientation, most are oriented toward economic development. CDM Smith has worked on more than 14 of these designated corridors to analyze multimodal conditions and recommend projects, technology improvements, and improve access, mobility, and trade competitiveness.

Freight Planning

Integrated freight systems are important to the economy and safety of the motoring public. CDM Smith recognizes that a systems approach to transportation planning and engineering is fundamental to the development of effective transportation delivery and services. CDM Smith has successfully integrated multi-disciplinary teams to develop some of the world's most innovative freight plans.

Geospatial Technologies and GIS

The demand for processing and understanding information in a spatial context has grown rapidly during the last two decades. In response to this, CDM Smith has established itself as a leader in planning, developing, implementing, and maintaining geographic information systems in support of complex transportation projects.

Travel Demand Modeling

Travel demand modeling and forecasting have been mainstays of CDM Smith for over 50 years. We have been responsible for developing computer-based models and supporting databases that provide a rational basis for evaluating proposed transportation system improvements in hundreds of urbanized areas, multi-jurisdiction transportation corridors, regions, and states.

State DOT and MPO Planning

CDM Smith's state DOT and MPO Planning practice focuses on the development of multimodal transportation plans that help prioritize transportation needs against available funding. We help developed state and metropolitan federally-mandated long-range transportation planning, corridor and sub-area planning, congestion management, thoroughfare, and strategic planning.



I-70 Dedicated Truck Lanes Feasibility Study: CDM Smith assisted the I-70 Corridor Coalition to evaluate the feasibility of creating an 800-mile dedicated truck only lanes corridor. This project was the most comprehensive business case evaluation of dedicated truck lanes ever conducted; thereby advancing the understanding of this innovative design concept.



Statewide Corridor Planning Guidebook: CDM Smith conducted a research study to provide guidance on developing corridor plans that can effectively link long-range transportation plans to shorter-term state transportation improvement programs (STIPs).



Airport Cooperative Research Program (ACRP) 02-10: Practical Greenhouse Gas Emission Reduction Strategies for Airports: CDM Smith developed a handbook, interactive decision-support tool, and awareness training materials focused on reducing greenhouse gas emissions. 125 greenhouse gas reduction strategies were identified. A unique, interactive decision-support tool called AirportGEAR (Airport Greenhouse Gas Emission Assessment and Reduction) was created to assist users with the evaluation of technical data and select strategies.

Environmental Services

NEPA and Permitting

CDM Smith provides “one stop shopping” for National Environmental Policy Act studies and documentation. We know the regulations, design and implement successful public outreach, prepare reader friendly documents, and have developed award winning tools, techniques, and processes to streamline the NEPA process. CDM Smith can also help secure federal, state, and local environmental permits during construction and operation.

Greenhouse Gas and Sustainability

CDM Smith is a recognized leader in sustainability planning, greenhouse gas accounting and mitigation, and climate change adaptation for all modes of transportation. As a full service firm with interdisciplinary expertise our capabilities are based in real-world experience and our knowledge of cutting-edge developments in these growing fields.

Water Resource Capabilities for Transportation Projects

CDM Smith is a recognized leader for storm water management in the transportation industry. CDM Smith provides a full range of services including program management with implementation, reporting, BMP design, and TMDL water quality services to address permit compliance requirements associated with discharging storm water run-off from DOT rights-of-way. In addition, CDM Smith has experience with the construction aspect of project delivery with experience in storm water pollution plan design, on-site inspection capability, training and certification in the area of erosion and sediment control, and with traditional highway drainage system design and post-construction water quality control design.

Hazardous Materials

CDM Smith’s experience includes thousands of assignments encompassing all facets of hazardous, toxic, and radioactive waste remediation services from preliminary investigations through remedial action implementation and long-term operations and monitoring. Complementing our focus on practical applications, CDM Smith’s research and development activities have led to innovative technologies and cost-effective solutions.



Environmental Remediation and Decommissioning Services:

CDM Smith performed hazardous waste remediation, transportation, disposal, site restoration, and regulatory reporting in support of The John A Volpe National Transportation Systems Center and their sponsor FAA at Very High Frequency Omnidirectional Range (VOR) radar sites.



Milton-Madison Bridge: CDM Smith coordinated a joint effort between the Kentucky Transportation Cabinet, the Indiana Department of Transportation, and the Federal Highway Administration, to prepare the NEPA documents for the bridge replacement/rehabilitation project for the historic U.S. 421 bridge between Milton, KY and Madison, IN.



Louisiana 1 Improvements: CDM Smith handled all aspects of this improvement project including route planning, environmental permitting, navigational channel permitting, right-of-way acquisition, roadway design, structural design, toll studies and design, and construction assistance.



General Engineering Consultant – Interstate 95, Section 100: As part of a joint venture, CDM Smith provided total program management for the design and construction of one of the most congested sections of I-95 in Maryland. The scope of the project includes the widening of I-95 and the construction of four Express Toll Lanes.

Engineering, Construction, and Program Management

Engineering and Design: Roadway, Structures and Bridges, Geotechnical

CDM Smith provides a full range of services for all types of roadways, such as roadway and interchange design, roadway surfacing, and rehabilitation; hydrology and hydraulics; right of way; utility coordination; survey; streetscaping and landscaping; and value engineering. We are a leader in contemporary bridge technology, involving nearly every bridge configuration and type of transportation structure. We also integrate geotechnical engineering, pavement design, and foundation/site-related construction services into the design of our transportation projects.

Construction Management/Construction Engineering and Inspection

For nearly 30 years, CDM Smith has been providing not only CEI services, but overall management of the construction process. Our services have expanded into airport and marine terminal construction, industrial facilities, and parking structures, and this work is supported by claims review and analysis, construction scheduling, and work zone safety and education.

Design/Build

CDM Smith has earned a reputation as a national leader in design/build projects emphasizing innovation and fast track delivery, with dozens of completed projects throughout the U.S. On transportation design/build projects, we have provided design project management, engineering and design services, QA/QC, and CEI.

Program Management

We provide total program management for transportation projects; services include development of design criteria, plan and bid reviews, QA procedures review, value engineering, procurement, conducting partnering sessions, invoice review, and construction management. Our approach includes providing personnel with compatible experience and relationships to be able to serve as an extension of the client's staff.

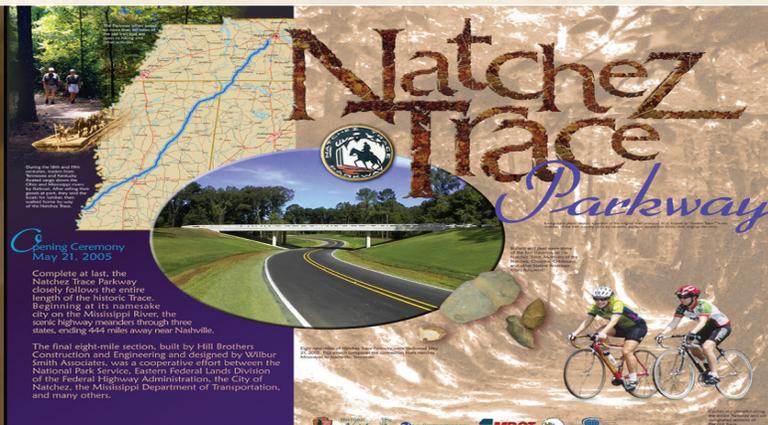
Parking Services

CDM Smith's parking services offers comprehensive planning, studies, traffic analysis, design, inspection, and rehabilitation of parking structures and facilities (both surface and garage). We also serve parking clients in the privatization of parking facilities.

Signage and Wayfinding

The effective movement of visitors in unfamiliar environments requires well-conceived wayfinding systems and signage programs that guide users along the journey to their destinations. For decades, we have provided comprehensive services for the planning, design, and implementation of functional and attractive wayfinding systems.

Natchez Trace Parkway Design/Build National Park Service: CDM Smith provided design and construction documents including geotechnical engineering, roadway design, hydraulics and hydrology, and bridge design for this historical national treasure.



Lewis and Clark Expressway - Sterling Avenue and Cement City Road Final Design: This project consisted of new horizontal and vertical alignments for 2 miles of urban collectors with 3 bridges over Sugar Creek and one bridge over the BNSF railroad through an environmentally sensitive brownfield site with petroleum contamination. CDM Smith also provided design for a new Jack C. O'Renck Park location.





Operations and Maintenance Business Information Link (OMBIL): Since 1993, CDM Smith has supported the U.S. Army Corps of Engineers with a performance-based management system that ensures efficient investment in its vast inventory of nationwide services including waterborne navigation, hydro-power, and recreation facilities.

Asset Management, Economics, and Economic Development

Asset Management

CDM Smith has been a national leader implementing asset management programs in transportation for over five decades. Our expert staff views asset management as a business model applying AASHTO and TRB principles to guide clients on best practices and make informed resource allocation decisions across the lifecycles of entire asset portfolios. Asset management services include:

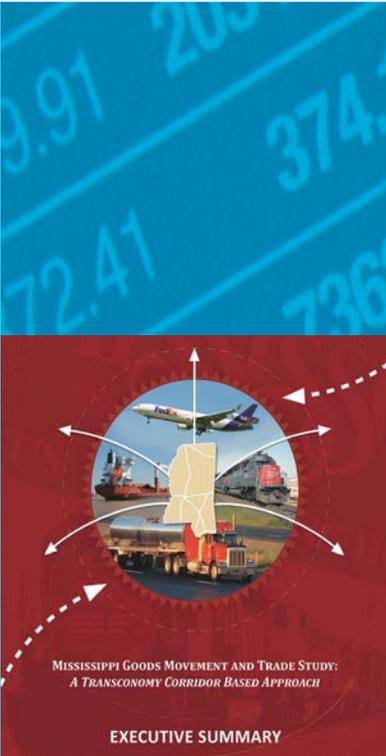
- Developing policy and doctrine to better align and advance organizational goals and regulatory compliance
- Incorporating and establishing service standards
- Establishing procedures to streamline data management and IT utilization
- Developing and deploying performance-based metrics, measures, and analysis techniques to standardize and support objective decision making
- Developing structured, yet interactive, data-driven business case analysis methodologies
- Implementing performance monitoring procedures and plans
- Purposing and implementing integrated information systems including GIS, maintenance management, financial, personnel, and inventory management systems.
- Implementing and complying with GASB and other reporting objectives

Economics and Economic Development

Our new economy will be export-driven and innovation focused. Globalization has created new market opportunities around the world and businesses compete on the basis of accessibility and reliability of multimodal transportation networks.

CDM Smith is a leading provider of economic development and market analysis consulting services. We combine extensive industry knowledge, distinguished professionals, and innovative analysis to help our clients create innovative solutions. Our range of services include:

- Agriculture and rural development
- Benefit-cost analyses
- Economic development studies
- Economic evaluations
- Economic feasibility studies
- Economic impact studies
- Economic modeling
- Fiscal/cost of growth studies



The Mississippi Statewide Goods Movement and Trade Study: CDM Smith profiled existing economic, trade and transportation conditions in the state to create a comprehensive knowledge base about its multimodal transportation network.

Site selection Matrix- Major Industrial Facilities - The Delta Regional Authority: CDM Smith was selected to develop a multi-state site evaluation matrix to identify potential sites for a very complex industrial facility.

