

November 14, 2014

MaryAnn.Jacobs@modot.mo.gov

**Subject:** Local Program (LPA) On-Call Professional Services - Trails and Sidewalks

Dear Ms. Jacobs:

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

### GENERAL EXPERIENCE OF THE FIRM

CDM Smith has been providing traffic engineering services for over 60 years. We offer a range of services including roadway planning and design, rail planning and design, civil engineering, drainage, geotechnical, traffic engineering, water, sewer, and utility planning and design, structural design, urban and regional planning, transportation planning, environmental, economic and financial analyses—all supported by citizen and stakeholder participation activities.

### PAST PERFORMANCE

CDM Smith consistently ranks among the *Engineering News-Record's* top 20 engineering firms in the country for both transportation and highways. Pedestrian design is a niche specialty within CDM Smith, and we have worked for many public clients to address their unique needs. For decades, CDM Smith has performed design services for all aspects of these distinctive projects, taking into consideration safety, utilities, right-of-way coordination, traffic signals and other associated infrastructure. Brief descriptions of these projects include:



Source: *The Kansas City Star*

**Platte Landing Park Design, Parkville, Missouri.** CDM Smith was selected to provide engineering services for this new city park in Parkville, Missouri including access road

design, parking lot design, trail layout, sidewalk design, and new boat ramp design for access into the Missouri River. The project also included wetland mitigation, utility relocations, and a new waterline for a proposed dog park.

**350 Highway Economic Development, Raytown, Missouri.** CDM Smith completed a corridor study for MoDOT for 350 Highway in the City of Raytown that specifically examined the link between transportation improvements and economic development. The study considered the economic development effects of a different road configuration by looking at the potential land use changes and development that could occur under different scenarios that would change 350 Highway from one-way roadway pairs to a unified two-way stretch of road. CDM Smith then used these development forecasts to identify the benefits to the state and local community as part of a return on investment analysis for the proposed improvements. The team also coordinated with the city's trail & sidewalk plan to provide the right access along the corridor.

**Lewis and Clark Expressway – Expressway and Front Street Preliminary Design and ROW Plans, Kansas City and Sugar Creek, Missouri.** CDM Smith was selected for this LPA project to provide preliminary engineering for a new expressway for the City of Sugar Creek. The City of Kansas City is also a participating partner. CDM Smith is providing environmental assessment, geotechnical investigation, roadway design, bridge design, hydraulic analysis and trail/sidewalk coordination. 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.

**Ping Tom Park Design, Chicago, Illinois.** Following a 2002 Framework Plan, the Chicago Park District sought to refine its development plans for Ping Tom Memorial Park, located in the city's Chinatown neighborhood. CDM Smith was selected to lead the urban development and design efforts of the nearly 6-mile park area. Major activities of the project included refining the



original Framework Plan; designing a riverfront trail that passes through the site, linking future neighborhood development to the north and south;

developing approximately six acres and 875 linear feet of shoreline on the South Branch of the Chicago River; installing a boardwalk over the river, sheetpile wall, vehicle bridges, a concrete terrace to the water's edge, and landscaping; environmental remediation; feasibility studies, investigations, infrastructure analysis and design for an athletic field; and construction oversight.



**Downtown Accessibility, Streetscaping and Traffic Calming, Cambridge, Massachusetts.**

CDM Smith pro-

vided professional engineering for traffic and roadway improvements on 11 streets in downtown Cambridge, Massachusetts. The goal of the project was to improve accessibility to sidewalks and provide pedestrian facilities such as bump outs and raised crosswalks at intersections. The pedestrian improvements resulted in traffic calming measures on busy city streets. CDM Smith's services included detailed wheelchair ramp designs at all intersections and driveway openings, bump outs, raised crosswalks, grading plans, drainage improvements, sidewalk and pavement designs, and the development of construction bid documents. The grading plans required a level of detail typically not provided on construction documents. The plans showed proposed wheelchair ramps with numerous topographic shots that were required by the city for delivery to the successful bidder. CDM Smith developed more than 5,000 spot grades on this project. The end result was a detailed engineering document that met all Americans with Disability Acts (ADA) and Architectural Access Board (AAB) requirements.

#### **Texas City Trails Phases I and II, Texas City, Texas.**

CDM Smith was selected by the City of Texas City to design Phase I of their Texas City Trails which consisted

of four miles of hike and bike trails development to connect the city to two high activity centers, from the central activity complex to the park and school area near the Bay Street lagoon. The facility used hurricane levees, canals, and utility/right-of-way and incorporated the existing scenic city streets in developing a system of multi-use and specialized bike routes unique to the city neighborhoods. This plan included functional classification, operational guidelines, construction standards, design criteria, estimated costs, and implementation plans. After CDM Smith successfully completed Phase I, we were selected for Phase II of this project which consisted of 8.7 miles of hike and bike trails and on-street bicycle facilities, providing a more complete bicycle and pedestrian access route to most major activity centers in Texas City. Phase II of this project was aimed at providing alternate transportation options and amenities to the predominant minority and lower income areas of the city. A secondary purpose was to assist large employers in providing optional bike and pedestrian access to meet voluntary Employer Trip Reduction programs. This project helped to provide a safe and convenient route for school children to the seven connecting schools. The trails were constructed parallel with state highways and city streets in landscaped corridors. Amenities such as bench rest stations, two timber bridges, bicycle racks, water fountains, and lighting were involved. Ninety percent of the land for the corridor was owned or controlled by the City. The remaining 10 percent was owned by the Texas City

#### *Innovative design approaches incorporated into the Texas City Trails projects included:*

- Conversion of two-way ally to one-way with bike lanes
- Closure of one city street block to create "bicycle boulevard"
- Closure of one travel lane to install trail connector along five-lane roadway to cross at signal
- Incorporation of trail crossing signal phase into TxDOT controlled intersection
- Creation of trail connector along seawall to traverse pump station and connect to park
- Incorporation of areas for public art and construction by local boy scout troop

Independent School District, LaMarque Independent School District, and the County of Galveston. These entities indicated intent to donate, at no cost, the required right-of-way or easements necessary to cross school property, access the school entrances, and access the hurricane protection levee. Eighty percent of the trails were constructed within city or state road right-of-ways and the remainder traverse city parks, school grounds, or drainage easements. Portions of streets were widened and marked for pedestrian and bicycle use. All trails meet state and AASHTO design criteria and are 10 feet in width.

### QUALIFICATIONS OF PERSONNEL



**Barbara Wells, PE:** Ms. Wells 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 Platte Landing Park design project.



**Nathan Hladky, PE:** Mr. Hladky brings nine years of experience in roadway design specializing in intersection and traffic signal design. Mr. Hladky has experience in all roadway design aspects including horizontal and vertical alignments, storm drainage design, pavement markings and signage, traffic signal design and roadway lighting. His project experience includes the design of I-435 and Route 210 Diverging Diamond Interchange, design of the I-35 and Pleasant Valley Road Interchange, and served as project engineer for the Platte Landing Park design project in Parkville, Missouri and Route 350 Corridor Study in Raytown, Missouri.



**Dana Frishman, PE:** Mr. Frishman is a design engineer with 18 years of experience designing transportation projects, including roadways, interchanges, intersections, roundabouts, as well as drainage. His relevant projects include design of Route 7 Improvements,

Southwest Ridgeview Dr. to Colbern Road, Blue Springs, MO; design of Red Bridge Road reconstruction, Kansas City, MO; and design of North Brighton Avenue reconstruction, Kansas City, MO.

### FAMILIARITY/CAPABILITY

As described previously, CDM Smith team members are experienced in engineering services including trails and sidewalks. 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 Route 350 corridor plan.

### ACCESSIBILITY

We have structured the team such to provide redundancy of personnel, enabling MoDOT to have access to the appropriate specialists on roadway design assignments. Team members are based in CDM Smith's Kansas City office and 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

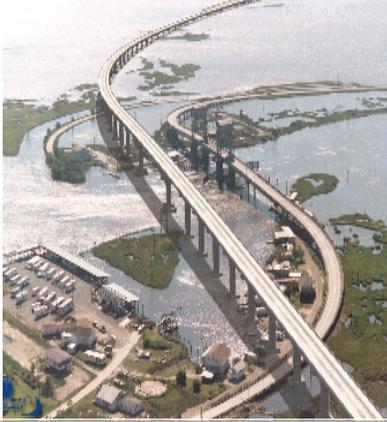
CDM Smith’s experience includes thousands of assignments encompassing all facets of hazardous, toxic, and radioactive waste remediation services from preliminary investigations through remedial action implementation and long-term operations and monitoring. Complementing our focus on practical applications, 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.

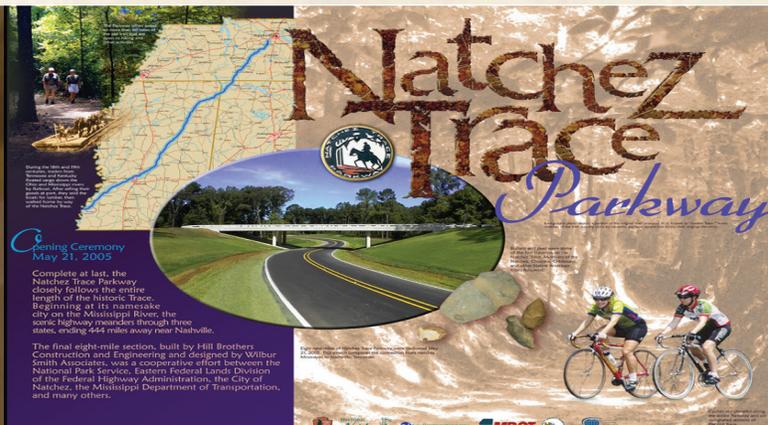
### Parking Services

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:

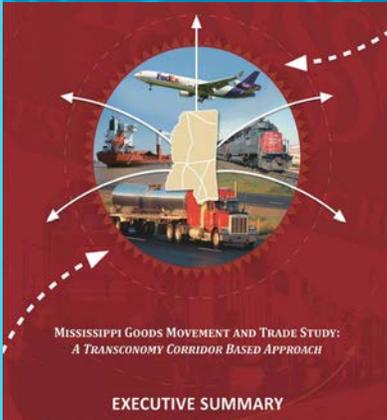
- Developing policy and doctrine to better align and advance organizational goals and regulatory compliance
- Incorporating and establishing service standards
- Establishing procedures to streamline data management and IT utilization
- Developing and deploying performance-based metrics, measures, and 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.

