



November 15, 2013

Mr. Kenny Voss, P.E.
105 West Capitol Avenue
Jefferson City, Missouri 65101

RE: Letter of Interest for LPA On-Call – Trails and Sidewalks

Prime Consultant: TERRA Engineering, Ltd.
Prime Contact: M. Chris Hutchinson, P.E., PTOE Senior Transportation Engineer
314/395-9899 (Phone) 314/432-8630 (Fax)
1804 Borman Circle Dr, Suite 2, St. Louis, MO 63146
E-mail: chutchinson@terraengineering.com

Response to Request for Statement of Interest: TERRA Engineering, Inc. (TERRA) is submitting our Letter of Interest to MoDOT for the Missouri Local Program on-call services for **Trails and Sidewalks**.

The TERRA team has helped numerous local agencies including counties, cities and other entities with the design of trails and sidewalks. TERRA Engineering places a focus on the pedestrian and bicycle environment and has championed the inclusion of these modes from the data collection process through design and implementation. Our team of engineers and landscape architects has completed all of the types of work requested in this category including engineered trail and pedestrian facilities, environmental clearances, right of way plan design and acquisition, signal and lighting upgrades for pedestrians and landscape beautification with plantings and hardscapes.

TERRA has over 20 years of experience with projects assisting local agencies of all sizes from Chicago to small rural towns. TERRA has an experienced staff and the availability to complete the project on time and on budget and can be available to mobilize quickly to meet each community's needs. TERRA has worked on federal funded projects including TIGER grant projects and is familiar with the requirements and laws which govern the implementation of these projects.

TERRA has recently completed and been selected for another project in the City of Chicago for design of arterial street ramp improvement projects. These projects require field evaluation of the existing sidewalk and ADA ramp as well as landing areas around pushbuttons and other pedestrian based facilities and consisted of over 1,500 locations. Our work insuring that designs were in full compliance with the standards and requirements has led to TERRA's designation as "highly qualified" to provide sidewalk and ramp design.

TERRA's experience also includes numerous streetscape projects involving new sidewalks, pedestrian focused lighting decorative planters and other beautification. TERRA has recently completed the Roosevelt Road Project in Oak Park, Downtown Streetscape in Elmwood, TIGER II/Warehouse District in Peoria, and S. Marion Street in Oak Park, IL just to name a few. TERRA also authored the City of Milwaukee's Streetscape Guidelines. Some of these downtown streetscapes have provided the additional challenge of provided access to buildings which were previously accessible only by stairs from street to building and ensuring that ADA compliance was achieved between curb line and finished floor of building.

TERRA has designed numerous streetscape projects which created a sense of place and helped beautify communities throughout the Midwest. Our team will work with the local agencies in the selection of construction materials, plantings and other landscaping elements which will either continue existing themes felt throughout the City or create a new design that stands out. TERRA's engineers and landscape architects have extensive experience creating safe and attractive environments for pedestrians and vehicles. TERRA will partner with the local agency and MoDOT staff to develop designs that meets the City's safety, functionality and aesthetic goals for the project within the established budget and timeframe.



TERRA's experience on all types of trail, sidewalk and streetscape projects provide a well-rounded team which can provide an array of services to meet whatever the needs of each local agency might be. Some examples of TERRA's trail and sidewalk related project experience with references provided for verifying the quality of our performance are provided below:

Client

City of Elmwood, IL

Client Contact

Richard Taylor
201 W Main St.
Elmwood, IL 61529
(309) 742-2351
richard.taylor4@mchsi.com

Date of Services

2011-Present

Staff Involved and Role

George Ghareeb, P.E.
Principal
Bill Schmidt, ASLA, Landscape
Architect
Julie Schmidt, P.E. Project Engineer
Chris Hutchinson, P.E., PTOE
Lighting

Downtown Streetscape – City of Elmwood, IL

TERRA Engineering, Ltd. Is currently working with the City of Elmwood, Illinois to design improvements to the downtown area streetscaping as part of the City's continued redevelopment following a devastating tornado in 2010. The project proposes an entirely new streetscape, extending from the face of curb to the property line, for six primary streets within the downtown business district.

The proposed improvements will provide more efficient, comfortable and attractive transportation routes for pedestrians, as well as beautifying the downtown area with unit paver sidewalks and ramps designed to meet current PROWAG accessibility standards, new decorative street lights and raised landscape planters. Challenged with an existing two-level sidewalk system, TERRA's design proposes raised landscape planters to resolve some of the existing accessibility issues by making up grade differences between the street level and finish floor elevations of the existing buildings. Stairs and ADA ramps will be provided within the raised landscape planter module to provide convenient access to downtown businesses from the existing street parking. Ornamental guardrail fencing and handrails will be used between the raised landscape planters in areas where grade differences would create safety hazards. The project will improve pedestrian safety and mobility for visitors and shoppers in the business district while increasing the attractiveness of both local streets and state routes running through downtown Elmwood.

Client

City of Peoria, IL

Client Contact

Scott Reese, P.E.
City Engineer
3505 N. Dries Lane
Peoria, IL 61604
309-494-8808

Date of Services

2010-2013

Staff Involved and Role

George Ghareeb, P.E., Principal
Curtis Laster, P.E.,
Project Manager
Julie Schmidt, P.E., Project Engineer

Harrison Impact Zone – City of Peoria, IL

TERRA Engineering, Ltd. (TERRA) was selected by the City of Peoria to design infrastructure improvements within the Harrison Impact Zone (HIZ). The HIZ is an area designated by the City for targeted improvements within a two-block radius of the new Harrison K-8 Learning Center. The Impact Zone is comprised of a 2 square mile area with 445 property parcels, which includes single-family homes, a public housing project, businesses and the K-8 school. Typical infrastructure projects include street reconstruction, sidewalk and ADA ramp improvements. All projects are built to IDOT and ADA standards utilizing Public Rights of Way Accessibility Guidelines (PROWAG) standards.

Projects designed or completed thus far include, 42,000 SF sidewalk, 12 intersections requiring ADA ramp improvements and 40 driveways and spot curb improvements. The work concentrated on the area adjacent to the old Harrison Homes Housing Project in the southeastern corner of the Impact Zone. An additional 30,000 SF of sidewalk, 10 intersections and 55 driveways are proposed for TERRA's next phase of work on this project.

Client

City of St. Charles, IL

Benesch

Client Contact

Hossam Abdou, P.E.
Benesch Consulting Engineers
205 N. Michigan Ave.
Suite 2400
Chicago, IL 60601
312-565-0450

Date of Services

2011-2013

Staff Involved and Role

Jamil Bou-Saab, P.E., Principal
Bill Schmidt ASLA, LEED AP,
Landscape Architect

Red Gate Bridge, City of St. Charles, Illinois

TERRA Engineering, Ltd. was hired as the design architect for a new \$30,000,000 bridge across the Fox River for the City of St. Charles, Illinois. TERRA Landscape Architects were responsible for designing the architectural bridge piers, railings and the pedestrian bridge suspended from the overhead vehicular bridge deck that will link the Fox River Bicycle Trail on the east side of the river to the forest preserve on the west. In addition to the bridge design, TERRA was also responsible for designing 1,200 linear feet of boardwalk from the pedestrian bridge that transitions up the river bank to the forest preserve land on either side of the bridge. The boardwalk was designed to minimize disturbance to the existing wooded bank. TERRA was responsible for restoration and naturalized landscaping to blend in with the existing forest preserve on each side of the river as well as to mitigate the removal of existing trees resulting from construction.

The American Public Works Association named Red Gate Bridge National "Project of the Year" for its category and scope in 2013.

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Staff Involved and Role
George Ghareeb, P.E., Principal
M. Chris Hutchinson, P.E., PTOE,
Project Manager

TIGER II Warehouse District/Washington Street, City of Peoria, Illinois

This project in downtown Peoria involved redesign and reconstruction of the streets, intersections, utilities and sidewalks within the Warehouse District in order to create a livable and walkable public infrastructure that is appropriate for the development of a mixed-use neighborhood. Chris served as TERRA's Project Manager on this project and was responsible for the traffic data collection throughout the neighborhood and the traffic modeling of the streets throughout the district including preparation of a 3-dimensional traffic model using VISSIM software. Chris' work also included authoring a Traffic Impact Study for the project and an Origin Destination study for heavy truck movement, roadway design of three streets within the district including sidewalk modifications to bring the sidewalks into compliance with ADA and PROWAG standards and improve crossing safety.

Proposed Personnel:

- M. Chris Hutchinson P.E., PTOE – Project Manager
- Bill Schmidt, ASLA, LEED AP – Landscape Architecture
- George Ghareeb, P.E. – Project Principal
- Julie Schmidt, P.E. – Project Engineer
- Curtis Laster, P.E. – Project Engineer

M. Chris Hutchinson, P.E., PTOE will be the Project Manager for any on-call trail or sidewalk project. Chris is based in our St. Louis office and has:

- Over 15 years of experience as a traffic engineer, project manager, and geometrics engineer on transportation projects including traffic signal design, lighting, pavement marking and signage.
- Chris was recently the featured speaker for an international webinar discussing multi-modal data collection and innovative traffic engineering utilizing video data.

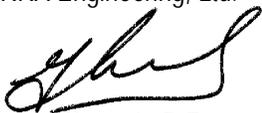
His experience includes serving as the design engineer on numerous roadway projects from planning through construction for both public and private clients. Chris has recently worked on several projects for Great Rivers Greenway in the St. Louis area on trail and sidewalk projects and bicycle lane additions. Additionally he is working with the city of Champaign implementing pedestrian safety upgrades and bicycle lane additions.

TERRA's lead Landscape Architect **Bill Schmidt, ASLA, LEED AP** has:

- Over 17 years of experience in landscape architecture applying sustainable design approach and principles.
- Experience leading all phase of the design process, including planning and programming, schematic design, design development, construction documentation and construction administration.
- Experience managing residential developments, commercial real estate, and streetscapes.

TERRA is proud to submit this LOI and looks forward to partnering with MoDOT and local agencies throughout the State of Missouri on providing trails and sidewalks that promote safety for the pedestrian and bicycle users and fit seamlessly into the built environment.

Sincerely,
TERRA Engineering, Ltd.



George Ghareeb, P.E.
Vice President



QUICK FACTS:

Mission Statement

Our mission is to become the professional service firm of choice by empowering our employees to be innovative and socially responsible while achieving sustainable and profitable growth.

Principals

Karen Steingraber, P.E.

President
B.S. and M.S. in Civil Engineering
Active Registrations: IL, WI, IA, OH
Inactive Registrations: TX, MN, CO

Jamil Bou-Saab, P.E.

Executive Vice President
B.S. and M.S. in Civil Engineering
Active Registrations: IL, WI

George Ghareeb, P.E.

Vice President
B.S. and M.S. in Civil Engineering
Active Registrations: IL, MO

WBE Certifications

- City of Chicago
- Illinois Department of Transportation Capital Development Board
- Chicago Transit Authority (CTA)
- Metra
- Metropolitan Water Reclamation District of Greater Chicago (MWRD)
- Cook County
- State of Missouri
- Illinois State Toll Highway Authority

TERRA Engineering, Ltd. (TERRA) is a woman-owned, full-service, multi-disciplinary firm that brings over 40 years of professional experience to its projects. Since 1992, TERRA has endeavored to fully understand our clients' needs on each project to achieve desired results. TERRA's primary goals are to serve the client and to provide a quality product within the project scope, budget and schedule. TERRA possesses extensive project experience, with a portfolio including local, national, and international projects ranging in both type and scale. Working with architects, other engineering disciplines, developers, and local and state governments, TERRA is well versed in code requirements for site development, transportation and utility construction. The firm provides its clients with an accomplished group of experienced and innovative professionals. The various practices within TERRA Engineering collaborate to complement each other's expertise in order to achieve all of the project objectives in a streamlined, socially responsible and aesthetically pleasing manner.

Service Sectors

- | | |
|---|---|
|  Site Development |  Traffic Engineering/Studies |
|  Municipal Engineering |  Land Acquisition |
|  Landscape Architecture |  Construction Engineering |
|  Structural Engineering/Bridge Inspections |  Land Use Planning |
|  Geographic Information Systems (GIS) |  Transportation Engineering |
|  Surveying | |

Staff Breakdown

TERRA is an Equal Opportunity Employer with a staff of over 60 employees of diverse ethnicities and backgrounds, including Professional Engineers, licensed in Illinois, Wisconsin, and/or Missouri, a Professional Traffic Operations Engineer, Structural Engineers, Professional Land Surveyors, and Landscape Architects.



TERRA ENGINEERING, LTD. provides structural engineering services for steel and concrete structures including bridges, buildings, earth-retaining structures and various structural components. TERRA's experts have knowledge in highway and railroad structures, buildings, pedestrian bridges and utility towers.

The TERRA structural team has more than 40 years of experience in designing and inspecting various types and sizes of bridges. Inspections are completed using National Bridge Inspection Standards (NBIS) certified program managers and team leaders. Bridge inspections include condition ratings, reports and options for maintenance and rehabilitation. Illinois Structure Information Systems (ISIS) reports are prepared for every structure inspected to ensure all critical information is recorded.

Services

- Feasibility studies
- Hydraulic reports
- Bridge design
- Bridge condition reports
- Geotechnical analysis
- Bridge inspections

Project Experience

The previous project experiences listed below further demonstrate why TERRA Engineering is qualified to help you achieve your project goals.

QUICK FACTS:

Principals

Karen Steingraber, P.E.
President
B.S. and M.S. in Civil Engineering
Registrations: IL, WI, MI, IA, TX, OH

Jamil Bou-Saab, P.E.
Executive Vice President
B.S. and M.S. in Civil Engineering
Registrations: IL, WI

George Ghareeb, P.E.
Vice President
B.S. and M.S. in Civil Engineering
Registrations: IL, MO

Contact

Don Bell
Structural Engineering Department
Phone: 312.467.0123
Email: dbell@terraengineering.com

- Ten Mile Creek Bridge Tazewell County, Illinois
- Mud Creek Bridge Tazewell County, Illinois
- Gately Stadium Oak Park, Illinois
- Retaining Walls for the Park District of Oak Park Oak Park, Illinois
- Adams Street Bridge Chicago, Illinois
- Downtown Bike Path Matteson, Illinois
- Wildlife Bridge Chicago, Illinois
- Light Fixture Footings, Marion Street Oak Park, Illinois
- I-355 Tollway Bridge Inspection Veterans Memorial Highway, Illinois
- Mills Park Fence Restoration Oak Park, Illinois
- Water Street Bridge Chicago, Illinois
- Broadway Bridge Chicago, Illinois
- Longfellow Park Oak Park, Illinois
- Brookfield Zoo ADA Ramps Brookfield, Illinois
- Preservation Path Matteson, Illinois
- 2350 W Ogden Avenue Chicago, Illinois
- Northwestern University Recreational Facilities Master Plan Evanston, Illinois
- Marsh School Chicago, Illinois
- University of Chicago 58th Street Chicago, Illinois
- Fox Park Oak Park, Illinois



TERRA ENGINEERING, LTD. has experience with traffic engineering projects and studies of all sizes, ranging from small local projects to larger projects of regional importance. Highlights include work for federal, state, county and local governments in both rural and complex urban environments.

TERRA provides professional traffic survey and data collection to public and private clients. With an inventory of twenty Miovision video collection units, over 250 Hi-Star magnetic Counters and over 200 road tube counters, in addition to numerous handheld counting devices and GPS equipment, our team of qualified technicians is prepared to collect traffic count data on projects of all sizes.

TERRA conducts a wide array of traffic engineering and safety studies to assist our clients in determining the potential impact of a project on the surrounding roadway network. Our traffic engineering staff is well versed in the procedures, standards and technology required to determine the appropriate solutions for each project.

TERRA provides a wide array of traffic signal services from traffic signal warrant studies to signal coordination and timing for existing signal corridors. Our traffic engineers have experience designing a wide array of traffic signals including emergency preemption, railroad coordination and Flashing Yellow Arrow (FYA) treatments.

Services

Our traffic engineering services and comprehensive traffic studies typically include

- Traffic data collection
- Corridor studies
- Intersection and roadway capacity analysis
- Intersection design studies (IDS)
- Parking lot analysis and studies, including site circulation
- Speed delay studies
- Traffic modeling (utilizing VISSIM, Synchro, HCS, Sidra, TruTraffic, etc.)
- Traffic impact analysis
- Traffic signal and stop sign warrant analysis
- Traffic signal design and interconnect
- Transit studies
- Vehicle and pedestrian inventories
- Highway Safety Manual - Safety studies and economic analysis

Project Experience

Previous project experience includes:

- IDOT Traffic Data Collection Central and Southern Illinois
- Great Rivers Greenway Bicycle Masterplan St. Louis, Missouri
- I-74/I-155 Interchange Morton, Illinois
- Warehouse District Tiger II Complete Streets Peoria, Illinois
- Eastern Bypass Study Metropolitan Peoria, Illinois
- ISTHA Speed Delay Studies Various Locations, Illinois
- City of Champaign On-Call Traffic Services Champaign, Illinois
- 330 North Wabash Chicago, Illinois
- Washington Street Improvements Peoria, Illinois
- Intrinsic Charter School Study Chicago, Illinois

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Registrations: IL, WI

George Ghareeb, P.E.

Vice President

B.S. and M.S. in Civil Engineering
Registrations: IL, MO

Contact

Chris Hutchinson, P.E., PTOE

Senior Transportation Engineer

Phone: 314.395.9899

Email: chutchinson@terraengineering.com

Registrations: MO, IL, WI, KS



TERRA ENGINEERING, LTD. has experience with transportation engineering projects of all sizes, ranging from small local projects to larger projects of regional importance. Highlights include work for federal, state, county and local governments in both rural and complex urban environments.

Attention to cost, historical significance, public input and aesthetics have been important factors in reducing environmental objections and obtaining public acceptance and approval. TERRA uses nationally recognized Context Sensitive Solutions (CSS) processes that are also used by the Illinois Department of Transportation (IDOT).

TERRA conducts a wide array of traffic engineering studies to assist our clients in determining the potential impact of a project on the surrounding roadway network. Our traffic engineering staff is well versed in the procedures, standards and technology required to determine the best solution for each project.

Services

- Traffic data collection and traffic studies
- Roadway planning and design
- Feasibility studies
- Roadway drainage
- Urban and rural interstate/freeway design
- Simple and complex interchange planning and design
- Roadside safety and barrier warrant analysis
- Preparation of grant applications
- Construction staging and traffic maintenance planning
- Cost estimating and value engineering
- Corridor studies
- Vehicle and pedestrian inventories
- Traffic signal and stop sign warrant analysis

Project Experience

The previous project experiences listed below further demonstrate why TERRA Engineering is qualified to help you achieve your project goals.

- Milwaukee Streetcar Milwaukee, Wisconsin
- Eastern Bypass Study Metropolitan Peoria, Illinois
- Downtown Streetscape Revitalization Elmwood, Illinois
- South Marion Streetscape Oak Park, Illinois
- Roosevelt Road Streetscape Improvements Berwyn/Cicero/Oak Park, Illinois
- Washington Street Improvements Peoria, Illinois
- IL Route 6/29 Extension Mossville, Illinois
- Mud Creek Morton, Illinois
- Oak Park Streets and Alleys Oak Park, Illinois
- Warehouse District TIGER II Complete Streets Peoria, Illinois
- IDOT Traffic Data Collection Central and Southern Illinois
- Elmhurst Road Intersection Improvements Chicago, Illinois
- Interstate 74 Reconstruction Peoria and East Peoria, Illinois

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George Ghareeb, P.E.

Vice President

B.S. and M.S. in Civil Engineering

Registrations: IL, MO

Contact

Lou Arrigoni, P.E.

Transportation Department Manager

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Email: larrigoni@terraengineering.com