Great People. Proven Results.

STATEMENT OF QUALIFICATIONS

Ohio Department of Transportation

Design-Build Services
BEL-70-9.35
PID 120547
Project (25)3000

November 22, 2024

November 22, 2024

Ohio Department of Transportation, Office of Consultant Services
1980 W. Broad Street, Mail Stop 4100
Columbus, OH 43223
Attn: Susan Stehle

Re: Project (25)3000, BEL-70-9.35 Interchange Improvement
PID 120547 Statement of Qualifications

Plan the Work / Work the Plan - will be an important mantra to our approach for the BEL-70-9.35 Interchange Improvement project. The Design-Build Team (DBT) of The Ruhlin Company and our designer, ms consultants, inc. understands the critical Project challenges including completing the project within 48 months from award, provide a design that minimizes delays to the construction completion and a solution allows local stakeholders continuous access during construction.

The DBT will approach the project with best in class delivery and is uniquely qualified given the following factors:

- Ruhlin has constructed 6 ODOT DB projects worth $459M. We bring lessons learned from these projects to build this grade separated crossing.
- Our DBT Project Manager Marty Fritz, recently completed the SR209-08.56 Guernsey County DB project. He brings an excellent understanding of the ODOT DB process and lessons learned from direct project experience.
- Marty's design counterpart, Jonathan Hren, PE has managed dozens of DB and DBB projects, including several recent projects for ODOT Districts 3, 11 and 12, with an average score of 83% (Very Good)
- We have established relationships with local subcontractors.
- ms consultants, inc. has a deep portfolio of intersection reconfiguration designs that they completed on-time and within the owner's budget.
- Ruhlin and ms have been working together since 2001 and have a long-established history on ODOT projects. We know each other's strengths and we will work as a unified team to the betterment of the project. We are currently working together on the highly technical State Route 8 Bridge Replacement project, which Marty is providing Project Management

OFFEROR POINT OF CONTACT

Don Rife, AIA,NCARB, LEED AP, Vice President
The Ruhlin Company
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Sharon Center, OH 44274
Phone: 330-239-2800
Email: drife@ruhlin.com

LEAD CONTRACTOR LEGAL NAME

The Ruhlin Company
6931 Ridge Road
PO Box 190
Sharon Center, OH 44274
Phone: 330-239-2800

The Ruhlin Company is a corporation.

LEAD DESIGNER LEGAL NAME

ms consultants, inc.
2221 Schrock Road
Columbus, OH 43229

Lead Designer POC
Jonathan Hren, PE
jhren@msconsultants.com
330-744-5321

ms consultants, inc. is authorized to provide engineering services in the state of Ohio.

Certificate of Authorization: No. 02114

support. Marty and Jonathan worked together to solve a complicated MOT project on SR2 in Lorain.

- Our team will be focused on providing a design solution that allows the project to be built while maintaining access for the traveling public and local private businesses.
- Ruhlin has extensive project experience working with a project that involves multiple stakeholders. Our experience coordinating and cooperating with landowners adjacent to the project was exemplified in our work on the 4 mile long Buckeye Lake Dam. Homeowners were within 25 feet proximity to the work zone along the entire project.
- Ruhlin/ms has extensive experience creating and managing successful MOT plans that keep the traveling public and our workers safe while allowing the construction to proceed in a timely manner.
- From the largest interstate systems to local township roads, ms consultants develops transportation solutions of all types and sizes. Their experts understand the importance of working closely with government regulatory agencies to create a seamless and successful project. By collaborating throughout the project, our internal highway, structural, traffic, and environmental engineers deliver innovative, cost-effective, and long-term transportation solutions.

Our DBT understands the critical sequence of work. We will work to solve ODOT's concerns with the schedule, MOT plan, and allowing unimpeded access to the local business owners. No other team is as well positioned as Ruhlin to arrive at the optimal solution necessary to build the project within ODOT's schedule and budget goals. We look forward to working alongside ODOT on the next steps that will allow us to deliver the BEL-70.35 project.

Sincerely,

Don Rife, AIA, NCARB, LEED AP, Vice President
The Ruhlin Company

cc: Eric Kalig - eric.kahlig@dot.ohio.gov

STATEMENTS

Lead Contractor The Ruhlin Company is prequalified with ODOT in accordance with the requirements of the Department.

Lead Designer ms consultants, inc. is an ODOT prequalified engineering firm in accordance with the requirements of the Department.

The Key Personnel identified in this RFQ are fully committed to the project to the extent necessary to meet ODOT's quality and project duration expectations.

We warrant that no member of the Offeror has a personal conflict of interest or an organizational conflict of interest for the project in accordance with the requirements of section 2.5.2.7 of the Request for Qualifications.

2.5.3 - Project Management, Understanding and Approach

The Ruhlin Design Build Team (DBT) includes expert engineers and contractors with successful experience on similar projects. This DB project will reconstruct the I-70 mainline structures to enable the widening of SR-149, reconstruct and widen ramps to and from I-70, reconstruct and widen SR-149 from two-lanes to five lanes. The project challenges include complex MOT, utility relocation, and coordinating with adjacent active construction projects. Our DBT understands ODOT's project expectations to produce a cost-effective solution to reduce long-term traffic congestion. Our team's approach includes partnering and integration of the DBT, ODOT, and local stakeholders.

The DBT will develop a draft Project Management Plan (PMP) during pre-bid procurement and will finalize the PMP after award. The PMP will consist of best practices in DB and will serve as the play book for successfully delivering this project. The DBT is led by our DBT Project Manager, Marty Fritz, who is responsible for overall management of the project. Marty has full operational oversight of all aspects of the job and will rely on our PMP for completing the project on budget and schedule.

DBT PMP KEY PLAN COMPONENTS

- Contract and Budget Management
- Safety
- Design and Construction Execution
- Baseline Schedule
- Risk Management
- Quality Management
- Document Control
- Training and Orientation

a. Describe the Offeror's anticipated approach to engagement with the Department during Phase III of the procurement process in a manner that will achieve ODOT's goals related to schedule, including approach to designated meetings/discussions and development of the Technical and Price Proposal.

3.2 Commercial Approach One-on-One

Our team has read and understands the benefits of the Section 3.2 which outlines the Commercial Approach One-on-One Meeting and will prepare for the meeting with a collaborative approach.

• Project Scope and Appendices

Our team will thoroughly review the Project Scope and its appendices as part of our preparation for this meeting. Ruhlin/ms will apply our understanding to our initial approach and sequencing. Focused effort will be put on the contractual appendices at this early stage of procurement, and we will be prepared with an organized list of applicable questions and concerns. Any concerns or potential gaps will be tabulated along with discussion points and possible resolutions.

• ROW Status

It is understood that ODOT is still in the process of ROW plan development and acquisition. The draft scope indicates that a comprehensive parcel availability schedule with estimated clearance dates will be provided by the RFP date. This information and associated time frames will be considered when finalizing our design and BU schedule, as well as our overall approach to access/limits and sequencing.

• NEPA and Environmental

It is understood that environmental documentation is currently on-going by ODOT. Our team will confirm that the Project is designed and constructed in accordance with all environmental commitments. ms consultants team includes environmental experts that will help guide necessary permitting, as well as design and construction decisions in accordance with all requirements. All construction activities will be performed in strict accordance with the environmental commitments. Our crews will maintain all BMP's and proactively plan activities to minimize dust and noise pollution. These topics will be discussed in further detail once noise and other restrictions are specified.

• **Potential ATCs**

Our DBT will be prepared to discuss early ATC ideas at the Commercial Approach One-on-One Meeting. Since this meeting is anticipated to be held 3 weeks after the RFP release, these ATC proposals will be in the development phase. Our team views this as a great opportunity to discuss our ideas and obtain early feedback from ODOT. Any feedback regarding ATCs from ODOT will be applied to our formal ATC submissions.

• **High-Level Project Phasing**

Our team will present our intended project schedule and phasing. This will be at a conceptual level and provide ODOT with our overall design and construction phasing. Our goal is to verify how it aligns with ODOT's goals and the anticipated timing of any on-going utility relocation, permitting, and local stakeholder project coordination.

3.3 Alternative Technical Concepts

• **ATC Submittal Preparation**

Our DBT project staff are very familiar with the ATC process. Similar to our previous DB projects, we will carefully develop our ATC proposals so they provide a benefit to The Project. Our submittal will include easily identifiable information and documentation for each ATC. Each ATC will include a ATC description, location of where the ATC is intended to be implemented, how it relates and/or differs from the existing scope language, and any betterments associated with the ATC. This submittal will be developed with feedback received at the Commercial Approach One-on-One Meeting and the overall project scope. Our DBT's goal will be to make the conversation at the scheduled ATC Meeting as transparent and open as possible.

• **ATC Meeting**

Our DBT will be prepared to explain our proposed ATC's and describe how they benefit the design, construction, and the Project. Meeting minutes will be prepared by our DBT and submitted to ODOT for record of our understanding of the status of each ATC.

3.4 Proprietary Technical Information (PTI) Discussion

The PTI meeting is our DBT's opportunity to discuss a more developed design solution. We will provide ODOT with adequate information to understand our approach in greater detail.

• **General Overall Description of the Project Approach and Schedule**

A detailed narrative will be provided to explain our Team's design and construction approach. This will include tentative Buildable Unit breakdown, construction phasing, and anticipated major material procurement. A bar chart schedule will also be provided illustrating our plan and further defining critical lead times and project items.

• **Preliminary Designs and Schematics**

Anticipated MOT, roadway, and structure designs will be provided. They will continue to be refined through plan development and integrate any feedback received from The Department through the Commercial Approach One-on-One Meeting and the ATC Process. The various plan elements will be compiled into a logical preliminary plan set to allow for organized conversation and understanding of our proposal.

• **Anticipated Open Ended Outreach Plan**

The Ruhlin DBT is committed to meeting The Department's DBE Utilization Goal. We will create an open-ended plan that maximizes opportunities to bring DBE's to the project.

All comments from The Department during the PTI meeting will be noted and documented by our DBT. These comments will be incorporated into our final Technical and Price Proposal.

3.5 Technical Proposal and Price Proposal

Discussions, meeting minutes, and all documentation from the procurement process will be used to assemble our final technical

and price proposals. We will update plans, project approach, and schedule so our final proposal adheres to ODOT's requirements. We will have detailed conversations with all subconsultants, as well as major subcontractors and suppliers as our proposal is finalized. All documents submitted for the earlier PTI discussion will be refined and provided as part of our Technical Proposal. Our Price Proposal will be finalized with all practical efficiencies from our DBT and synergies from subcontractors and suppliers.

b. Describe how utility relocation, traffic operations, access to existing businesses, and limitations presented by ROW and NEPA may impact sequencing of design and construction. Describe the DBT's approach to managing these issues and mitigating associated risks.

As part of our PMP, the Risk Management Plan (RMP) addresses both design and construction risks. Our RMP is a living process integrated into each phase of project development requiring participation from the DBT and ODOT. The DBT has already started the development of a RMP based on our understanding of the project and DB best practices using the strategy below:

RISK MANAGEMENT PLAN WILL:

- **IDENTIFY** potential risks
- **EVALUATE** potential outcomes
- **ASSESS** probability of impacts
- **SPECIFY** actions to avoid, mitigate, and manage risks
- **ASSIGN** responsibility

The DBT will identify potential risks and develop a Risk Register early during the proposal phase. Pre-Bid Questions for ODOT will be developed from this register to further define the risk and help our DBT prepare proper mitigation measures. During the final development and construction phase we will continue to review and update this register and, most importantly, "act" on it.

• Utility Coordination

The key to effective utility coordination is simple: early, often and detailed communications. As lead designer, ms consultants will perform the design phase utility coordination including any required utility design, in coordination with Ruhlin during the construction phase of the project.

We understand The Department's goal of "successfully coordinate…utility relocations… during construction" so utility relocation will be a primary focus during the design and planning process. As stated above, our DBT understands the requirements to coordinate with utility owners, third parties, and stakeholders to resolve all conflicts and necessary relocations to facilitate the project. Potential conflicts will be identified early in the design process, and the owner will be notified quickly to open a line of communication to enable coordination meetings and a collaborative approach to resolutions that are in the best interest of all parties.

After review of the project scope, utilities will pose a challenge on this project, and will be integrated into the DBT's schedule to ensure a constructible project. The successful process for utility coordination will include the following procedures:

- Identify locations, type and size of utilities
- Identify possible conflicts and relocations
- Perform necessary SUL
- Meet with utility owners to review scope, discuss conflicts and schedule requirements
- Develop necessary relocation design for public utility owners and submit for review
- Submit preliminary project design to utility owners to facilitate design and relocation efforts by others
- Finalize relocation requirements and meet with utility owners to resolve comments
- Prepare detailed schedule for relocation in cooperation with utility owners
- Obtain necessary permits
- Meet weekly with utility owners as construction progresses

Clearing utilities will be an ongoing process as some utilities will be relocated before construction and others during and/or after construction. Anticipated conflicts include sanitary sewer force main, waterlines, gas lines, telecom/fiber optic, and electric to name a few. The confirmation of the utility relocations, their construction durations, and the sequence of construction is critical to allow the design and construction project to proceed. We will reduce the risks on this project by tracking and providing solutions for anticipated risks, identify impacts to schedule, and anticipate the risk levels.

• Traffic Operations/Business Access

Traffic Operations and Business Access, collectively MOT, are crucial for this project and will be a focus during design. The project's goal is to enhance the interchange's capacity for future development and truck traffic. The DBT will ensure ODOT's objective to maintain unimpeded access to existing facilities during construction is met.

The DBT will prioritize MOT and public safety during construction. We will maintain open communication with ODOT, local authorities, businesses, and property owners. Required notices will be given when MOT phases start or change. Our MOT plan ensures access to local businesses throughout all construction phases.

Our DBT will follow the Draft Scope of Services sequence of construction. First, we will develop the Conceptual Maintenance of Traffic Plan. Once approved, this plan will guide early design and detail the MOT needed for bridge removal and roadway widening work.

UTILITY RISK	SCHEDULE	DESIGN	CONSTRUCTION	RISK LEVEL	MITIGATIONS
Inaccurate/Missing Utility Information		■	■	High	SUL/SUE investigations to supplement existing data; early meetings with utility owners' thorough review of record drawings
Utility Owner Performance	■	■	■	High	Early meetings to define expectations; Prioritize sequence of work for utilities; Understanding of design/construction to be performed by DBT or by private utilities; Understand outage constraints; Task Force meetings
Sanitary Force Main (Relocated by Oct 2025 by others)	■	■	■	Medium	Obtain proposed relocation plans early; Confirm relocation schedule; Early meeting with utility owners
Water Lines (Relocated by July 2027 by others)	■	■	■	Medium	Obtain proposed relocation plans early; Confirm relocation schedule; Early meeting with utility owners
Gas Lines (Relocated by Oct 2025 by others)	■	■	■	Medium	Obtain proposed relocation plans early; Confirm relocation schedule; Early meeting with utility owners
Telecomm/Fiber Optic Lines (Relocated by July 2027 by others)	■	■	■	Medium	Obtain proposed relocation plans early; Confirm relocation schedule; Early meeting with utility owners
Electric Lines (Relocated by July 2027 by others)	■	■	■	Medium	Obtain proposed relocation plans early; Confirm relocation schedule; Early meeting with utility owners
CCTV ITS Camera	■			Low	Coordination with ODOT to ensure acceptable relocation schedule
Highway Lighting	■			Low	Lighting Design and Construction will be integrated into project schedule to ensure scope is met

Access and turning movements will be designed for WB-62 trucks. Maintaining access for large trucks to businesses is crucial. Solutions include closing and reconstructing access points using temporary or alternate drives, and overbuilding access points for phased construction. We will assess on-property truck movements to ensure internal circulation and access with alternate points.

The interchange ramp closures are limited to 21 days each and must not overlap. This short duration may be insufficient for full reconstruction. Our DBT will plan construction activities, including phased construction, when necessary, for efficiency and cost-effectiveness under full closure. We will monitor and adjust signal timings during construction, especially when ramps are closed, and adjust stop line locations to ensure sufficient turning radii for trucks, avoiding blocked intersections. Providing advance warning of construction congestion and alternate routes via US-40 and nearby interchanges will be beneficial.

Sequencing will allow access to adjacent properties. New access points will be built before closing existing ones. We'll identify activities that minimally impact traffic and property access, and those that can be constructed concurrent with I-70 construction before starting full SR-149 construction.

We have identified preliminary risks and potential mitigation factors for Traffic Operations and Business Access, summarized in the Table below.

- **NEPA Compliance**

The DBT has reviewed the available NEPA information from ODOT's EnviroNet, and we understand that this is pending approval. We note that there is nothing unusual in the ODOT NEPA files for this project. We realize that ecological coordination with USFWS, ODNR, etc is not complete, but we do not expect any unusual commitments to come from those agencies. The final environmental commitments from the approved CE are anticipated to be available on 1/1/2025 from ODOT's Ellis schedule.

The construction schedule will incorporate all environmental commitments. Due to the

MOT RISK	SCHEDULE	DESIGN	CONSTRUCTION	RISK LEVEL	MITIGATIONS
Maintaining access to properties during construction	■	■	■	High	Identify off-alignment and early construction activities that will have little impact on traffic or property access; Sequence to construct concurrently with the I-70 activities prior to full SR-149 construction
WB-62 Design vehicle has large turning radius, challenge to maintain access and turning movements		■	■	Medium	Completely close and reconstruct access points by using alternate access points; Construct temporary drives and alternate access points; Modify or overbuild access points; Analyze on-property movements of trucks to ensure that internal circulation and access can be maintained.
Interchange ramp closures shall not exceed 21 days each and shall not be concurrent	■		■	High	Refine sequence of ramp construction; Utilize phased ramp construction for longer duration activities; Utilize 21 day closure to perform shorter duration activities
Increased congestion during construction due to reduced lane and shoulder widths, loss of existing turn lanes, and construction vehicles.			■	Medium	Monitor and adjust signal timings during construction; Adjust stop line locations to allow sufficient turning radii for trucks; Provide advance warning signs concerning congestion and notify of alternate routes

duration of the project, we do not anticipate these commitments affecting the schedule.

- **Right-of-Way Limitations**

The preliminary documents show that the proposed R/W for the project is under development. The conceptual plans provide construction limits and show the existing R/W. We do not foresee any identifiable risks associated with R/W at this time. The DBT will work within the existing and proposed R/W limits when complete.

c. Describe the DBT anticipated approach to ensure acceptable quality of the Work (Design and Construction).

The DBT is committed to meeting ODOT's expectations of achieving a high-quality project. We will work with ODOT to develop and follow a project specific Quality Management Plan (QMP) to monitor the quality of our design and construction. As a significant component of our overarching PMP, the QMP will provide our DBT with the proper guidelines to help achieve our goal of "Doing it right the first time". The most effective way to accomplish this is by focusing on proactive quality control strategies that minimize nonconforming work.

The QMP is comprised of both Design (DQMP) and Construction (CQMP). Highlights for each plan are outlined in Figure B-1. The DBT Project Manager, Marty Fritz, will have ultimate responsibility for design and construction quality. Mandatory pre-activity meetings will be held with crews to ensure that clear expectations are set out prior to beginning the work. All project staff will have stop work authority regarding safety and quality on the job.

The QMP will define design and construction quality control, verification, and assurance procedures to be performed according to the project provisions and standards.

During the Final Design Phase, our DQMP will be enhanced to include the option of Over the Shoulder Reviews by ODOT. In addition, a comment resolution process including a "living" comment tracking spreadsheet will be incorporated to ensure all comments have been resolved as the project develops from preliminary design phase through Released for Construction documents.

The CQMP will outline project requirements including all applicable provisions of ODOT's C&MS, Proposal Notes, and Supplemental Specification. The project work force will be trained and regularly evaluated on performance. The CQMP will outline the process to collect, maintain, evaluate, and submit to the ODOT Engineer all required work plans, materials certification, and testing documentation on a regular basis. Quality check points and proper documentation will be a routine topic reviewed at both DBT project meetings and ODOT progress meetings.

FIGURE B-1: QUALITY MANAGEMENT

QUALITY MANAGEMENT PLAN	
DESIGN QUALITY MANAGEMENT PLAN	CONSTRUCTION QUALITY MANAGEMENT PLAN
• Defines processes and procedures for design quality management consistent with ISO 9001:2015 and ms consultants standards and procedures • Provides comprehensive discipline checklists • Specifies level, frequency, and method for checking design • Defines roles of the designer, contractor and ODOT in the QC process	• Outlines expectations for each specific Work Plan • Outlines ODOTs applicable C&MS, Proposal Notes and Supplemental Specifications • Defines internal auditing, training, and management review processes • Provides Corrective Action Plans • Outlines requirements for material testing, certifications, and reporting

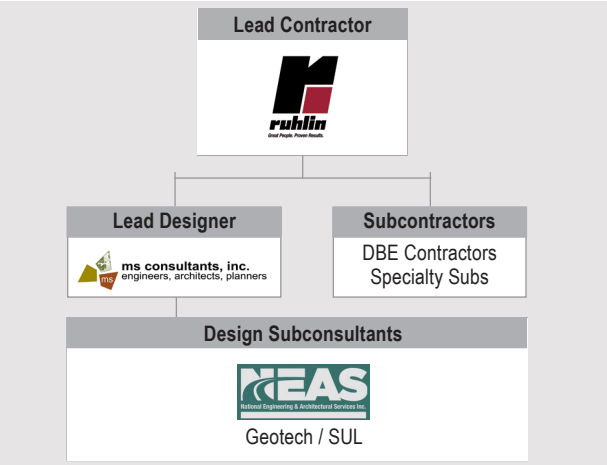
2.5.4.1 - Organization Chart and Narrative

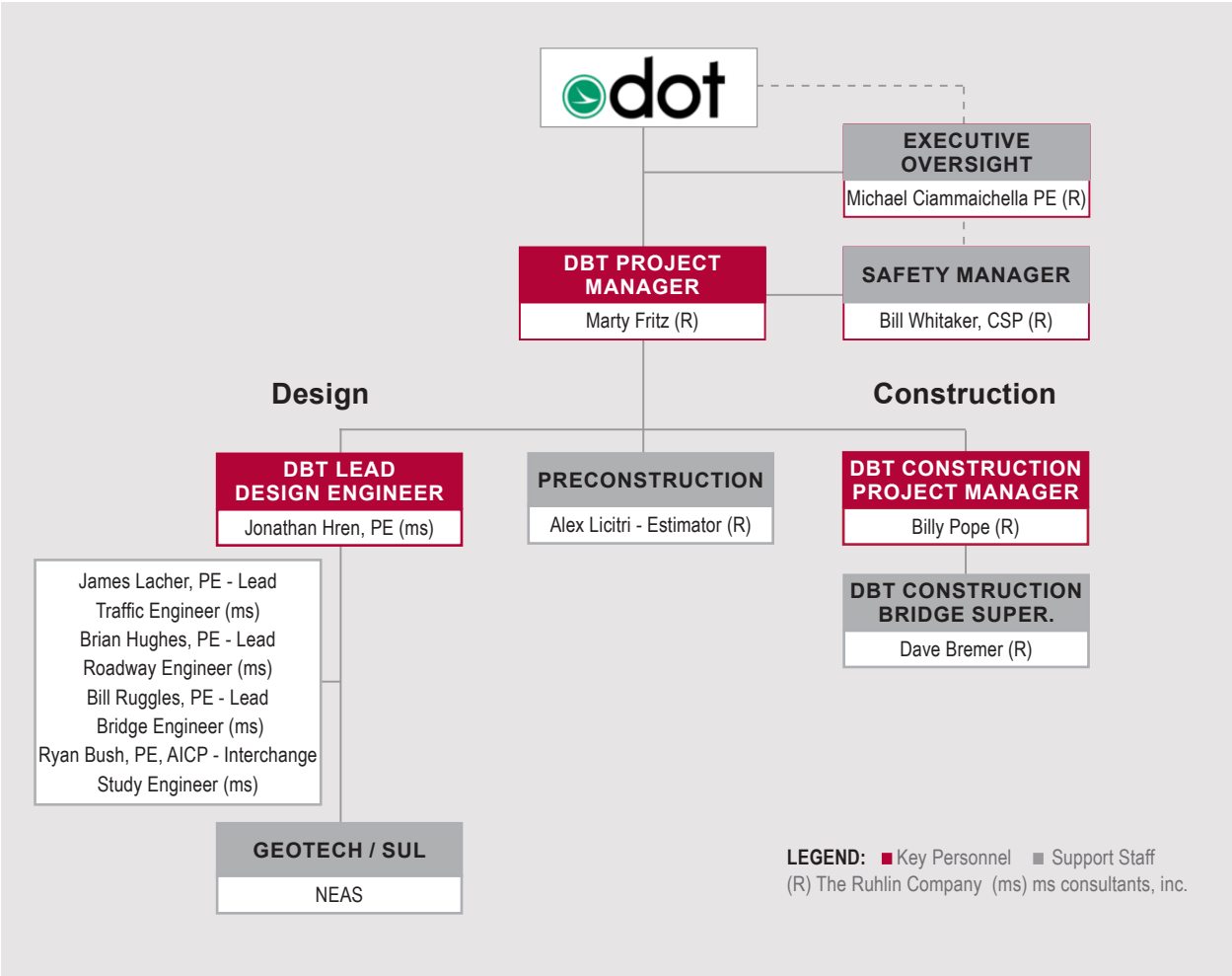
Legal Organization

The Ruhlin Company will be the Lead Contractor and hold the contract with ODOT. ms consultants, inc. will serve as the Lead Designer and be in contract privately to Ruhlin. Barr Engineering, dba National Engineering & Architectural Services Inc. (NEAS) will be a design partner and will serve as a subconsultant to ms consultants, inc.

Our organizational chart delineates the interrelationship of our Corporate Team members, Key Personnel, and an integral portion of our support staff responsible for the success of the Project.

Marty Fritz, DBT Project Manager, will be the direct team contact for ODOT. He has the required experience and authority to ensure all design and construction staff and resources are available for the successful completion of the project.





Marty will handle all contractual matters. For the duration of the Project all other Key Personnel and staff will report as indicated in the chart to Marty. Jonathan Hren, PE, DBT Lead Design Engineer, will report directly to Marty to ensure timely communication of all design and construction submissions, reviews, approvals, invoicing, reporting and recording of field changes into the project's as-built drawings. Jonathan will also oversee all roadway, maintenance of traffic, traffic control, signals, lighting, structures, and drainage tasks, including design subconsultants. James Lacher, PE, as lead traffic design engineer, will report to Jonathan, and will manage the maintenance of traffic, traffic control, signals and lighting design for the project. Bill Ruggles, PE, as lead bridge design engineer, will report to Jonathan, and will manage the bridge and structures design for the project. Brian Hughes, PE, as lead roadway engineer, will report to Jonathan, and will manage the roadway and drainage design for the project. Billy Pope, DBT Construction Project Manager, is employed by Ruhlin and is responsible to manage the on-site construction on the project on a full-time basis from the field office during construction.

We will maintain active Executive Oversight by Mike Ciammaichella, PE who will be accessible directly to ODOT to address any questions, comments, or concerns.

Additional information regarding our team members, their education, experience, roles, responsibilities, authority, and unique qualifications can be found throughout our SOQ submittal.

Techniques for an Integrated DB Team

Success of our DBT Team began by assembling our design and construction team members who have a successful work history together. An example of this past success is when Marty Fritz and Jonathan Hren, PE teamed together on the SR2 Lorain bridge reconstruction project. They collaboratively created an alternate MOT solution that decreased the width of the final bridge by utilizing single lane cross overs.

Our teams will meet in-person and utilize Teams technology on a frequent basis to provide solutions to the project final design. Such an environment fosters effective communication within and between various work disciplines, efficient vetting of ideas and promotes buy-in and accountability to the project goals established by the Owner.

Task Forces will be assembled with careful consideration to Subject Matter Experts and inclusion of design and construction disciplines to ensure safe and efficient design and constructability. Task Forces will include MOT, Utilities, Roadway and Structures.

2.5.4.2 - General Offeror Experiences

Firm Experience

The Ruhlin Company joined forces with ms consultants, inc. to leverage our collective Design-Build (DB) experience, extensive ODOT experience, resources, and project knowledge together into a single entity. Our companies have worked together on projects including ODOT District 12's LAK-271-01.27/01.45 Ramp C Bridge Replacements and the Ohio Turnpike's 43-20-03 Bridge Widenings at MP 222.7 (Turner Road) and MP 222.8 (Kirk Road). We are currently working together on the State Route 8 Bridge Widening project in Akron. We have also prepared a two-step Design Build Proposal for the CCG6B project in Cleveland. Our DBT members have expertise that is specific to the BEL-70-9.35 Project. Ruhlin brings experience building structures and leverages our in-house construction engineering to accelerate and sequence the new bridge construction, work with utility owners during relocations, and ability to construct a project and maintain access in close proximity to commercial neighbors. We have created a team that will successfully complete all aspects of this project.

We have partnered with ms consultants, inc., a well-established & reputable multi-disciplined engineering consultant headquartered in Central Ohio. ms consultants' deep bench of Ohio-based bridge and transportation engineers coupled with its familiarity with ODOT standards and its experience delivering DB projects will serve this project well. Project Traffic Design Lead James Lacher, PE, has extensive traffic-focused experience in performing maintenance of traffic concepts, studies and construction plans. His similar experiences include the I-70/I-71 Downtown Ramp Up projects: a series of urban freeway, interchange, and ramp projects in downtown Columbus with highly complex MOT phasing and access requirements; the Southern Ohio Veterans Memorial Highway: a 26-mile limited-access highway contracted as a design-build-operate-maintain delivery; LAK-271-01.27/01.45 Ramp C Bridge Replacements: an urban interstate to interstate interchange project with challenging maintenance of access.

b. Notable Experience

- ***Ruhlin***, headquartered in Sharon Center, Ohio and has a branch office in Gahanna, Ohio.
- Dedicated safety team who works with our Heavy Civil Division every day that has produced a recent 7 years of no lost time injury safety record
- Employee owned - the company began an Employee Stock Ownership Plan (ESOP) in 1977. Because of this, Ruhlin employees have a vested interest in the success of every project
- Delivered 83 projects valued at more than $682 million to ODOT in the past ten years
- Expertise in construction of roadways, bridges, other structures, steel repairs, heavy civil projects, and railroads
- Experienced in-house staff of schedulers, estimators, and Professional Engineers
- Marty Fritz, DBT Project Manager, and Billy Pope, DBT Construction Project Manager have successfully delivered recent ODOT projects
- Recent recipient of the 2017 ODOT Conaway Partnering Award
- 2021 recipient of the ODOT Prime Contractor of the Year at the Annual Civil Rights Transportation Symposium
- Ruhlin's current experience with the Utilities and MOT management at the ODOT Akron Innerbelt project provides valuable experience and lessons learned.

- ***ms consultants, inc. (ms)*** is a nationally recognized engineering, architecture and planning firm founded in 1963
- Headquarters is in Columbus, Ohio
- Employs approximately 250 engineers, architects, planners, environmental professionals, surveyors, construction managers/inspectors and right-of-way specialists
- Has offices in 6 states
- Has completed more than 5,500 projects in the past decade, equaling approximately $5.6 billion in construction costs
- Extensive design-build experience
- National expertise in transportation, utility infrastructure, architecture, environmental planning and more
- Transportation related expertise includes Bridge Design and Inspection; Highway and Street Design; Planning; Traffic Engineering
- 34 transportation related engineers reside and work in Ohio, including a dedicated 8-person traffic engineering team located in Columbus
- Extensive experience developing and working with ODOT design policy and standards
- Annually ranked by Engineering News Record as a Top 500 Design Firm in the US
- In-house virtual desktop interface allowing employees to work remotely

2.5.4.3 - Key Personnel

Our Key Personnel will provide ODOT with staff who have relevant experience delivering complex urban rehabilitation projects. Additional information, including similar project information, is provided in Part E - Resumes. Our team members provide the following benefits:

Marty Fritz
DBT Project Manager

Marty is a proven leader, having experience with all facets of heavy highway/structure construction and DB projects. His experience working from both a contractor's perspective as well as an owner's perspective makes him uniquely qualified. He has held key roles on projects in heavily traveled and congested areas. His extensive scheduling experience and history of managing stakeholder relationships is a value-add to this project.
Similar Projects:

- Construction QC Manager - ODOT 173000 DB, $151M
- Chief Field Engineer - ODOT 140002, Lorain Co. $10.1M
- Chief Field Engineer - ODOT 138033 IR-271 Summit Co. $46.5M
- DB Project Manager - 223000 SR 209, Guernsey Co. $13.4M

Billy Pope
DBT Construction Project Manager

Billy has 28 years directing ODOT projects using his organizational skills to oversee all construction activities for the project. Billy has experience leading the complicated Phasing roadway, bridge and utility construction throughout the State of Ohio. He has worked on projects that encompass bridge and roadway reconstruction in congested environments. He is also on the recent ODOT Hawethorne creek/SR 43 22-0571 bridge replacement project.

Similar Projects:

- Superintendent - ODOT I-77/Miller rd. $32M
- Superintendent - ODOT 173000 OC3 $7.6M
- Superintendent - ODOT 22-3002 SR-151 $6M
- Superintendent - PENNDOT I-80 Canoe Creek $450M

Jonathan Hren, PE
DBT Lead Design Engineer

Jonathan has 28 years transportation design and over 12 years of project management experience serving as project manager, senior design engineer, and utility coordinator, and provides quality assurance on multi-discipline projects throughout Ohio. As project manager he has managed dozens of projects for several ODOT Districts, including interchange modifications, capacity improvements and bridge rehabilitations and replacements. He has worked with several contractors on successful design-build projects. Several of his projects have been recognized for awards from ASHE, ACEC and ABCD.

Similar Projects:

- Project Manager - LAK-271-01.27/01.45 Ramp C Reconstruction
- Lead Structural Engineer - SCI-823-0.00 Portsmouth Bypass
- Structural Engineer - FRA-70/71 Columbus Crossroads Project
- Project Manager - MAH-224-13.64 US-224/SR-11 Interchange

ODOT 21-300, AKRON BELTWAY IR 76/IR 77 & SR 8 | DB | Akron, OH

Lead Contractor

Representative Firm
The Ruhlin Company

Firm Responsibility
Joint Venture - Ruhlin/Shelly & Sands Akron Beltway JV

Dates of Construction
3/2021 - 7/2025 (ongoing)

Completion Deadlines
Original Completion: 7/2025
Actual Completion: Ongoing
Reason for Difference: On Schedule
Liquidated Damages: ODOT CMS 108.07.E. $3,100/DAY

Contract Value
$160,924,290

Firm Contract Value
$160,924,290, 80%

Percentage Subcontracted
29.5%

Similar Scope/Complexity
- *Roadwork / Reconfiguration*
- *Drainage / MOT / Concrete*
- *Design-Build*

Key Personnel:
Mark Myers and Tom Hill - Project Manager; Jon Sarkissian, Mike Simmons - Superintendents

Project Contact
Raymond Fridley - ODOT D4 - TE3
Raymond.Fridley@dot.ohio.gov
330-907-4044

Project Description

Ruhlin, as part of a joint venture, is currently in the process of completing the $161 million DB project reconstructing the Akron Beltway in Summit County. The project is split into 2 parts and 4 major phases. Part 1 consists of work to the roadway, drainage and pavement, both asphalt and concrete being replaced on I-77 from Waterloo Rd. to Lovers Lane, SR-8 from Beacon St. to Perkins St. overpass, and between Princeton St. on I-76/77 and Vernon Odom Blvd./ SR 261 on I-77. Within the limits of these areas, the scope requires minor maintenance and repairs of a multitude structures as well as major reconstruction to three mainline structures: I-76/77 over Manchester Rd., over Bowery St./ Ohio Canal and over Lakeshore Blvd. Also included is the reconstruction of all entrance and exit ramps requiring concrete pavement. To help traffic flow, the project scope adds an additional lane on I-77 northbound and southbound between the Central Interchange and Waterloo Rd. and on SR 8 southbound between Carroll St. and the Central Interchange. The Carroll St. exit ramp on SR 8 northbound is widened from one lane to two lanes to improve traffic flow during and after construction.

Part 2 of the project consist of the system interchange ramps within the Central Interchange, from I-76 west to I-77 south, I-76 west to SR 8 north and I-76/I-77 east to SR 8 north being reconfigured using improved geometry to allow higher speeds resulting in less traffic congestion and increased safety. The existing ramps were short with sharp curvature and contributed to traffic congestion and accidents. A focal point of the project replaced these ramps with 2 new interchange flyover structures. To accommodate the reconfigured ramps, the Lafollette St. bridge over I-77 is to be replaced with a new pedestrian/ bicycle structure over I-77. Coventry St. will be removed between Kipling St. and Lafollette Street and converted to a multipurpose trail. The bridges over Brown St. and Inman St. will be widened and other bridges will be repaired and maintained. The I-76 west exit ramp to Inman Street/ Johnston Street and the I-77 south Lovers Lane exit ramp will be permanently removed to improve traffic flow and allow construction of the proposed improvements.

Project Challenges

What made this project unique was the magnitude of work volume, quantity of work types, quantity of maintenance

of traffic phases, tight work areas within the R/W, divided workspaces and schedule durations. Most locations within the project limits required a minimum of 3 roadway phases to traverse the width of the highway. Many others required 4 phases, and one location required 7 to construct the roadway transversely across the highway.

The project required constant communication for efficiency of crews and progression of the work given the multitude of phases, divided work areas, material delivery and equipment logistics. The phasing required initiating construction of structures, pipe runs, painting, walls, pavement, etc. over many years.

High volume traffic routes presented continuous challenges as we provided a safe means of travel for the public, and safe access for the construction materials and crews in and out of the workspaces. The overall project depended on the high level of coordination between The Department and the DBT for the project to be a success due to the high level of communication with the traveling public.

Significant volumes of work types attributed to the need for continuous project communication which allowed us to advance and properly sequence the work. Often times, multiple work activity crews shared spaces to complete the work necessary to stay on schedule before moving onto subsequent phases.

Project Similarities

Similarities include:

- Design-Build Project
- Traffic phasing with public interaction and a large number of phases
- Roadway construction includes asphalt and concrete pavement, storm drainage and underdrain, stabilizing, and bases
- Structure construction consist of efficient phasing and minimizing construction joints
- Subcontractor coordination and contacts
- Company resources to complete the work required
- Commitment to reliable coordination with local property owners
- Commitment to thorough communication with all stakeholders

ODOT 133000, CLEVELAND INNERBELT CCG2 | DB | Cuyahoga Cty, OH

Lead Contractor

Representative Firm
The Ruhlin Company

Firm Responsibility
Prime Contractor, part of tri-venture

Dates of Construction
12/2013 - 6/2017

Completion Deadlines
Original Completion: 6/2017
Actual Completion: 12/2018
Reason for Difference: Paint quality issues
Liquidated Damages: N/A

Contract Value
$274,960,000

Firm Contract Value
$138,663,000, 50.4%

Similar Scope/Complexity
- *Demolition*
- *Bridge Work*
- *Minimize Impact of Traffic/MOT*
- *Design-Build*

Key Personnel:
Mark Myers - Project Manager
Tom Hill & Scott Cooper - Superintendents; Jackie Cooper - Project Engineer

Project Contact
Kirk Gegick, PE - ODOT D12
kirk.gegick@dot.ohio.gov
216-584-4032

Project Description

Ruhlin, as part of the TGR true joint venture, completed the $274 million DB project consisting of the construction of the eastbound Innerbelt bridge. The nearly 4,000-foot-long, six-lane main viaduct structure includes over 36 million pounds of structural steel supported by abutments and 16 large piers. Mass concrete techniques were utilized for the large substructure elements that are founded on driven piling and drilled shafts. The project includes removal of the existing Innerbelt bridge, extensive river dock wall sheeting, approach roadway bridge structures, retaining walls, city street improvements, a bicycle trail, landscaping, and aesthetic enhancements. The approaches include nine other bridges, three of which are heavily skewed. Due to the urban nature of the project, there was complex MOT and alternate route planning that was coordinated through ODOT and the City of Cleveland to minimize impacts to local and through traffic on I90 and I77.

A major benefit for this project was the use of a co-located office, which helped create a good working relationship between the ODOT and TGR during construction. Additionally, the joint venture used integrated Task Forces to expedite the project design and construction. Task Forces included designers, construction management, estimators, and superintendents, as well as key subcontractors and suppliers for design assist. As a partnering approach ODOT was encouraged to attend Task Force meetings, to help facilitate different design and construction hurdles that might come about.

The design process utilized a total of 7 innovative Alternate Technical Concepts (ATC) to contain project costs. Our team developed an ATC to incorporate major revisions to the structural steel design of the main viaduct structure, which significantly simplified the fabrication and erection of the bridge, saving the project time and money. Another ATC was developed to reconfigure West 14th Street, eliminating two spans of the main viaduct structure, and increasing the size of the side yard park space.

Project Challenges

The west bank of the Cuyahoga River had a deep slope failure with ground water issues that were addressed during construction. The instability of the slope required minimizing construction vibrations and construction

equipment loading. The approach to solving constructability issues required engineering analysis and design of an equipment pad to operate large cranes on. Constant vibration monitoring and monitoring of adjacent piezometers was performed to be assured the slope did not fail during construction.

One of the major viaduct pier locations was near to an existing underground utility tunnel and Canal Road. The line and grade of the work required an extensive support of excavation structure for which the tunnel location proved challenging. The design team's solution was to raise the elevation of the foundation to avoid the need of temporary support of earth. This required a design of a permanent support wall and deep foundation adjacent to the pier to contain soils around the pier foundation. The solution eliminated the risk of damaging the utility tunnel as the original scope of work had originally specified the design. Through this change we coordinated with the utility company and proved that this was a better solution for all parties.

The structural steel had its own challenges. There were multiple complex highly coordinated picks, including ones over a NS Bridge and over the GCRTA. Additionally, some pieces were set with a crane on the barge under river outages and coordination with the Coast Guard.

Project Similarities

The CCG2 project was a large complex Design Build project. The footprint of the CCG2 project included working over two railroad lines, the Cuyahoga River, and numerous active businesses. Coordination with the local businesses was imperative to the success of the project as was the environmental concerns of work in and adjacent to the Cuyahoga River. Close attention to coordination and phasing of the project helped maintain local traffic under the bridge. We worked with local stakeholders to design parks on the west and east side of the bridge that incorporated local cultural elements.

One of the key similarities was the innovation the DBT team brought to the project. The Delta Girder design was improved from its initial concept stage to allow the team to build it faster and for less money.

Project Coordination

The design, demolition and construction of the project required coordination with the City of Cleveland, municipal/private utilities, Norfolk Southern, CXS, Coast Guard and the Greater Cleveland Regional Transit Authority while keeping the project on schedule. The DB team had regular interval meetings and communications with third parties to help allow for complex issues to be discussed and solved in advance of them hindering the project. A traffic incident management plan was developed and implemented to limit the time impact to the traveling public in the event of an accident for vehicular breakdown.

Continual coordination for local special events such as the Cleveland Cavaliers, Browns, and Indians, to limit work which took lane closures to accomplish. Two significant event coordination's included the Cavaliers Championship parade and the 2016 Republican National Convention. The DB team worked closely with all parties in these events to help facilitate any needs specific to the events, such as additional parking in the project footprint.

ODOT 090496, I75 | DBB | Montgomery County, OH

Lead Contractor

Representative Firm
The Ruhlin Company

Firm Responsibility
Prime Contractor

Dates of Construction
3/2010 - 9/2013

Completion Deadlines
Original Completion: 9/2013
Actual Completion: 9/2013
Reason for Difference: N/A
Liquidated Damages: N/A

Contract Value
$62,000,000

Firm Contract Value
$49,600,000, 80%

Similar Scope/Complexity
- *Bridge Construction*
- *Roadway*
- *Complex MOT*
- *Utility Coordination/Relocation*

Key Personnel:
Mark Myers - Project Manager
Tom Hill - Superintendent

Project Contact
Scott Leblanc, PE
scott.leblanc@dot.ohio.gov
937-497-6742

Project Description

The Ruhlin Company performed a 1.3-mile, third lane widening of I75 at the US-35 interchange for the overall improvement of this section of highway. The project consisted of the complete replacement of the existing mainline pavement, and structures along with many new MSE retaining walls. Twenty structures were either completely replaced or required major rehabilitation. Additional significant work included the construction of 117,000 SF of MSE walls in eleven different locations, structure foundation work utilizing over 77,000 feet of driven piling and miles of permanent barrier wall. A big piece to this work that often cannot be described in words would be the complexity of the work due to limited work areas requiring the use of significant sheeting and temporary retaining systems.

A major step in advancing the complex MOT design, required a pre-phase temporary lane widening of six existing structures. The structure widening included additional foundation substructure and an additional beam line.

As with all The Ruhlin Company's contracts, professional, problem solving interactions with the design team were developed and carried out successfully on this project as well.

The contract entailed a very aggressive construction schedule and included three major interim completion dates. Ruhlin achieved all three interim completion dates. The final competition date was met while scope was increased by ODOT by the addition of widening of an additional bridge.

Project Challenges

An early utility conflict delay with fiber optics lines that were to be relocated for the project work, threatened the schedule with an additional construction season. Knowing the financial impacts and complications that would arise with an extension to the project schedule and the sale of a future major widening project to the North, the Department and The Ruhlin Company worked to create an additional, part b phase of construction that would perform critical path work out of sequence and early. By working through this challenge, the project team kept the work progress in check, eliminating the threat of a schedule extension. The Department and Ruhlin negotiated a change to resequence the work and mitigate any delay.

This project required numerous stages, phases, and

sub-phases to maintain service to 125,000 vehicles per day. Proper coordination with local municipalities, and the performance of reputable subcontractors The Ruhlin Company enlisted, allowed for very challenging and often constant changes to traffic patterns. These changes though challenging, were executed safety and effectively for the traveling public on a major interstate North and South thoroughfare.

The project included several highly skewed bridges that required pre-pour planning with the Department. The project had to develop alternative placement methods due to tight MOT zones not providing the room to perform the skewed finishing expectations. Structure MOT-75-1208, included highly skewed angles that reversed throughout the length of the bridge requiring a special deck placement plan. This plan required gathering information to show "time of set" testing for the superstructure concrete and placement of deck concrete parallel to the proportional skew angle while running the finishing machine normal to the baseline. Multiple concrete pumps were utilized to deploy concrete by preloading to remove cambers while maintaining the concrete workable to a finish that the Department requires.

The middle section of the project involved work over a twin Norfolk Southern, CSX Railroad lines. Demolition and complete construction of the proposed mainline I-75 structures and ramps were expected over these heavily used tracks. Often a project deals with the challenges of one Railroad entity, but this required working relationships with both. The structure set just North of this location described, then crossed yet another CSX spur line.

Access challenges driven by the inability to approach the work from mainline I-75, drove nearly all the structure work and materials to be performed from the city street and local private properties.

Project Similarities

The I-75 and US-35 Interchange Project consisted of multiple ramp reconfigurations and reconstruction in high level traffic areas. An urban interstate project with a complex maintenance of traffic plan with short ramp construction durations. Attention requirements to access as the project had considerable interaction daily with the local public and property owners. A constant need to attend to the traveling public's safety through proper MOT management and execution. We can respond and reevaluate complicated engineered plans utilizing in-house engineering and experience.

Project Coordination

Development of a local workforce was an important piece to this project's success. The schedule required an extensive number of employees and resources managed throughout the project's limits and duration.

Late in the project, Ruhlin was enlisted to help the Department advance a pertinent pre-phase widening of a structure for an up-coming project that would allow that project to begin in a better suited phase assisting in project schedule and advancement. This was negotiated and performed without adding any additional time to the I75/35 project.

In the last season of this project, the Department sold the next phase of the I75 corridor to the North. Coordination with the Department and the awarded contractor was a necessity. Planning and communication were imperative to help transition the projects MOT needs and the completion of work on one project to another. Causeway access materials were stored from the I75/US35 project and utilized on the newly beginning I75 project.

The Ruhlin Company effectively communicated and coordinated work with the local and adjacent stakeholders including Sinclair Community College, City of Dayton Police Department for project access and material storage areas.

ODOT 190199 IR-76 INTERCHANGE | GC | Akron & Barberton, OH

Lead Contractor

Representative Firm
The Ruhlin Company

Firm Responsibility
Prime Contractor

Dates of Construction
6/2019 - 7/2022

Completion Deadlines
Original Completion: 7/2022
Actual Completion: 7/2022
Reason for Difference: N/A
Liquidated Damages: N/A

Contract Value
$26,284,594

Firm Contract Value
$26,284,594, 62.4%

Percentage Subcontracted
37.6%

Similar Scope/Complexity
- *Road Work and Reconfiguration*
- *Lane Widening*
- *Utility Work*
- *Phased Construction*

Key Personnel:
Jim Ruhlin Jr. - Project Manager
Jon Sarkissian - Superintendent
Mike Sedlak - Project Engineer

Project Contact
Tony Pamer- ODOT D4
Tony.Pamer@dot.ohio.gov
330-786-3100

Project Description

The Ruhlin Company worked to improve various sections on IR-76 in the cities of Akron and Barberton, Ohio. This 3-part project involved widening IR-76 by constructing two additional lanes westbound, and one additional lane eastbound. Reconstruction and reconfiguration of the IR-76/Wooster Road, East Avenue, and State Street Interchanges as well as the reconstruction of several structures including the removal of the bridge over Central Avenue, construction of a new bridge over SR-619, and a new culvert and extension of existing culvert on Mud Run. The Ruhlin Company installed a new drainage system throughout the project. This included New Sanitary Sewers, New Storm Sewers and reconstruction of existing utilities. Location and concrete protection of twin 30" High pressure gas mains that ran under the proposed ramps. The New interchange included over 12,000 square yards of Non- Reinforced Concrete pavement. 5,000 LF of New concrete barrier (B1, C1, and D walls). New Full depth Asphalt pavement on I76. SR619 and various local roadways resurfaced. Mass Excavation and Embankment constructed to widen the roadways and construct the new ramps. Part 1 of the Project was built in three phases over three years. Part 2 involved Maintenance of traffic, Asphalt resurfacing, structure rehabilitation of 5 structures and various work. Part 3 was Major rehab of a structure on I76 over a major CSX railroad. The Ruhlin Company worked closely with the Ohio Department of Transportation, The City of Barberton and CSX railroad throughout the project to advise of all possible impacts.

Project Challenges

This project was a multi-phased job with city street work within urban and residential areas. The project required extensive coordination with residents and businesses. IR-76 is a heavily traveled truck route as well. The project included existing structure demolition, new structural steel erection, and new bridge construction that involved safety and maintenance of traffic planning with ODOT, ODOT PIO, The City of Barberton, Barberton Police/Fire and Akron Metro Bus service. The project included in stream construction building an extension and new wing walls for the existing box culvert conveying Mud Run under I-76. The project also included constructing a new conspan structure and footers for the new on ramp to cross over Mud Run.

Project Similarities

All work types shown for the BEL-70 project were included in the ODOT 190199 project. A few project similarities include:

- Phased construction of an existing interchange and surface street
- Phased Bridge work
- Concrete Pavement
- Rigid Paving: 12,000+ SY
- Level 2 Bridge: Levels 1, 2 and 3 included on this project
- Maintenance of Traffic
- Soil Stabilization: 16,000 CY MSE wall backfill installed
- SWPPP: Followed SWPPP, added new BMPs when needed, temp seed and general upkeep on all disturbed areas with no NOI of 26.4 acres
- Aggregate Base: 8,000+ CY installed
- Structural Removal: Removed two bridges, 108’ of culvert
- Reinforcing Steel: 370,000 pounds of steel
- Structural Steel: 1.1M pounds, 17 plate grinders, spans 128’-6”
- Drainage: 4,300 LF pipe runs, 20,000 LF underdrain runs, 12 new catch basins
- Guardrail, attenuators: 3400 LF GR, 1 Type 3 Impact Attenuators
- Highway lighting: 29 light poles
- Traffic Signals: 24 signal heads
- Pavement Markings: Over 100 miles of pavement markings installed

ODOT 402(13) US ROUTE 23/ I-270 | GC | Franklin County, OH

Lead Contractor

Representative Firm
The Ruhlin Company

Firm Responsibility
Prime Contractor, Joint Venture - Igel/Ruhlin

Dates of Construction
8/2013 - 10/2016

Completion Deadlines
Original Completion: 8/2016
Actual Completion: 10/2016
Reason for Difference: Project delayed 8 months by due to Utility relocation delays.
Liquidated Damages: N/A

Contract Value
$78,900,000

Firm Contract Value
$77,549,143, 51%

Percentage Subcontracted
24%

Similar Scope/Complexity
- *Road Work and Reconfiguration*
- *Bridge Construction*
- *MOT*

Key Personnel:
Jeremy Angel - Project Manager
Mike Hurless - Superintendent

Project Contact
Greg Channel- ODOT D6
Greg.Channel@dot.state.oh.us
740-815-6052

Project Description

The Ruhlin Company was the lead contractor of the Joint Venture team constructing US 23/IR 270 interchange reconstruction and trench express lane in Columbus. The project consisted of the reconstruction of the interchange at !R 270 & US 23. Work included addition of lanes, storm sewer work, reconstruction and widening of the US 23 bridge over 270, construction of additional structures throughout the project, reconstruction of ramps onto IR 270, utility work and the separation of local and thru traffic on US 23 NB with the construction of a depressed express lanes.

This is the first project of its kind to be built in the state of Ohio. The 25 ft deep, 4,000 ft long, 40 ft wide trench carries two northbound express lanes that bypass traffic lights at Campus View and Flint Road, bringing vehicles out near North Woods Boulevard. Lanes are about 12 feet wide with shoulders on both sides - 4 feet on the left and 10 feet on the right. A storm sewer runs beneath the trench.

The US 23 bridge over IR 270 was constructed in three separate phases to maintain traffic flow throughout the project. The phased construction consists of driving steel H pile for the bridge foundations and installing a mechanically stabilized earth wall at each abutment. The structure was widened to allow reconstruction of the existing ramps to IR 270. The bridge supports 6 lanes of traffic that flows efficiently now that the project is complete.

Project Challenges

The project faced many challenges during construction. A utility relocation delay at the start of construction delayed the project over 8 months. ODOT authorized the team to accelerate construction to bring the project back close to the completion date. Multiple phasing during construction also was a challenge due to the high volume of traffic at this interchange. Top-down construction for the trench and structures on US 23 while maintaining traffic was difficult. Multiple stakeholders in and around the area required considerable coordination efforts.

Project Similarities

The project is similar to the DB project in that it will require the reconstruction and widening of existing roadway, ramps and structure. This will be performed under multiple phases of traffic in a high volume traffic area. Utilities will be required to be relocated. As well as coordination with multiple businesses and stakeholders will be required during construction.

LAK-271-01.27/01.45 RAMP C REPLACEMENT | DBB | Lake County, OH

Lead Designer

Representative Firm
ms consultants, inc.

Firm Responsibility
Prime Consultant

Dates of Design
8/2016 - 9/2019

Completion Deadlines
Original Completion: 09/2019
Actual Completion: 09/2019
Reason for Difference: N/A
Liquidated Damages: None

Contract Value (Construction)
$11,901,717

Firm Contract Value
$1,185,938, 9.9%

Percentage Subcontracted
11%

Similar Scope/Complexity
- *Bridge Design*
- *Phased Construction*
- *Construction Engineering*
- *Highway Lighting*
- *Maintenance of Traffic*
- *Interchange Reconstruction*

Key Personnel:
Jonathan Hren, PE - Project Manager
James Lacher, PE - Lead Traffic Engineer
Ryan Bush, PE, AICP - PIAC/MOTEC Support

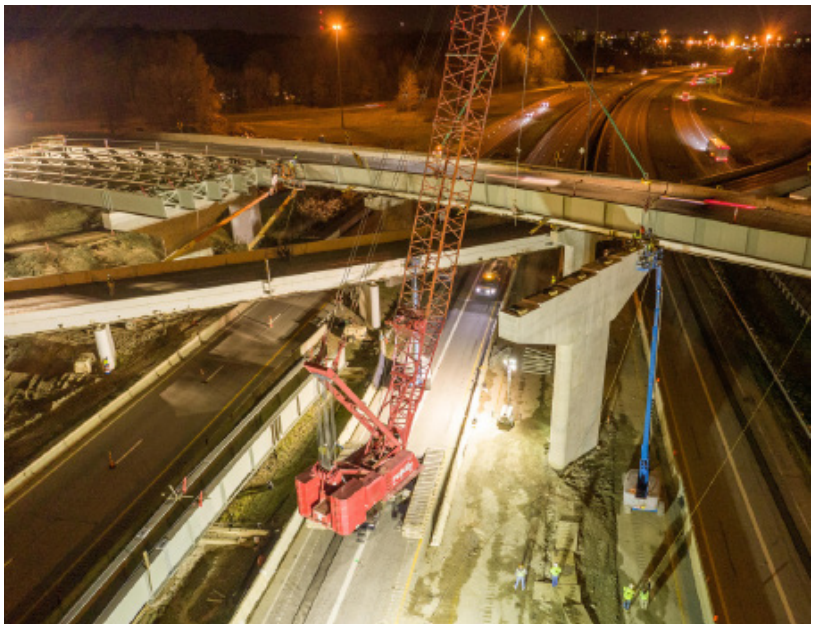
Project Contact
Kevin Rohde, PE
Ohio Department of Transportation, District 12
kevin.rohde@dot.ohio.gov
216-584-2140

Project Description

In 2016 ms consultants was hired by the Ohio Department of Transportation (ODOT) District 12 to perform a Feasibility Study for the redecking of two 1960s-era bridges. The structures carry Ramp C and provide two lanes of high-speed connection from IR-271 northbound to IR-90 westbound. ms analyzed the bridges, LAK-271-0127 over Eddy Road and LAK-271-0145 over IR-271 and Ramp B, on their ability to maintain traffic during redecking.

From the Feasibility study, the least expensive alternatives allowed only one lane of traffic to be maintained due to the existing bridge widths. Keeping two lanes of traffic during construction would have required the existing Ramp C bridges to undergo significant reconstruction by widening substructures and adding beamlines in three construction phases. Bridge replacements on new alignment while maintaining two lanes of traffic was recommended based on these conditions and the structure's ages. These replacements and the necessary realignment of Ramp C helped the District to meet the project goals of providing a long-life improvement, thereby minimizing future maintenance costs. Due to the increased scope and costs, ms assisted District 12 in presenting to ODOT's Project Impact Advisory Council (PIAC), which resulted in additional $3.5M funding.

ms studied the horizontal and vertical changes needed for clearances over Eddy Road, IR-271, the Ramp B structure, and a future Ramp B replacement bridge. The resulting Alternative Evaluation Report recommended that the new LAK-271-0127 bridge over Eddy Road be a three-span beam structure that could be widened in the future for deck replacement (saving costs), and the new LAK-271-0145 bridge over Ramp B and IR-271 be a four-span, curved-plate girder bridge, constructed wide enough to allow future deck replacement while maintaining two lanes of traffic.



The project is important to the traveling public as Ramp C carries significant traffic volumes, especially during peak evening hours. The 2021 Average Daily Traffic (ADT) is 26,200, and the 2041 ADT is projected to increase to 28,200. Further, based on our MOT analysis, it was determined that maintaining only one lane of traffic during construction would cause significant backups onto IR-271, with a high likelihood of rear-end crashes. For these reasons, the team recommended a replacement on a new alignment. The existing Ramp B underneath the new curved girder bridge posed challenges during design, especially considering that the Ramp B bridge would need to be replaced in the future while maintaining traffic. A new offset alignment was designed for Ramp B and considered the anticipated superstructure depth and pier placements. Additional challenges included the construction of the complex curved girder bridge adjacent to the existing bridge. ms provided an erection sequence to verify constructability. The Ruhlin Company's actual erection sequence allowed them to set all steel over the roadways utilizing nighttime closures and without temporary towers.

Project Challenges

- Design of a 2-lane offset ramp while allowing existing traffic to be maintained
- Complex Bridge Construction and Demolition over a very active interstate

Project Similarities

Similarities include:

- Bridge design
- Geotechnical Services
- Interchange modification
- Maintenance of Traffic
- Lighting Design

I-70/I-71 PROJECT 6A / 6R | DBB | Columbus, OH

Lead Designer

Representative Firm
ms consultants, inc.

Firm Responsibility
Prime Consultant

Dates of Design
1/2014 - 5/2023

Completion Deadlines
Original Completion: 10/2026
Actual Completion: Ongoing
Reason for Difference: N/A
Liquidated Damages: None

Contract Value (Construction)
$200,000,000

Firm Contract Value
$13,765,000, 6.8%

Percentage Subcontracted
25%

Similar Scope/Complexity
- *Bridge Design*
- *Complex MOT*
- *Access Management*
- *Highway and Drainage Design*
- *Signals and Lighting*
- *Right-of-Way*
- *Environmental Services*

Key Personnel:
James Lacher, PE - Lead Traffic Design
Jonathan Hren, PE - Bridge Design
Ryan Bush, PE, AICP - Transportation Planning

Project Contact
Steve Fellenger, PE
Ohio Department of Transportation, District 6
steven.fellenger@dot.ohio.gov
740-833-8272

Project Description

The overlap of two interstates, I-70 and I-71, runs through the central business district of Ohio's largest city and is identified as one of the state's highest crash locations. The two-mile stretch where I-70 and I-71 combine and then separate is also characterized by congestion for many hours of the day. The volume of traffic, combined with numerous freeway ramps, contributes to these operational characteristics. To develop short- and long-term solutions for this persistent problem, the Ohio Department of Transportation (ODOT) retained ms consultants as the lead consultant on the I-70/I-71 South Innerbelt Study. Upon completion of this study and a final environmental Finding of No Significant Impact, ODOT selected ms consultants to prepare the final design for the I-70/I-71 East and West Interchanges, as well as various other phases of the I-70/I-71 South Innerbelt.

The West Interchange project consisted of Phases 6A and 6R (PID 89464) which reconstructs I-70 westbound, I-71 southbound, and five ramps starting in Downtown Columbus near Front Street, going over the Scioto River, and through the I-70/I-71/S.R. 315 interchange. Preliminary through Stage 2 design plans were accelerated to advance this project far enough to obtain a combined waterway and Section 408 permit with an adjacent project that started over a year earlier.

The project included six bridges built within the confines of urban constraints. Three of the bridges are over the Scioto River, including two steel plate girder bridges over 1,000 feet long and a curved, 23 span, steel plate girder bridge that stretches over 4,600 feet.

Project Challenges

Challenges included bridge design over railroad crossings, maintenance of traffic, utility impacts, proximity to electrical lines, and maintenance of the Scioto Greenways Trail. The project also included twelve retaining walls with complex geometry and phasing on challenging geotechnical conditions.

Hydrology and hydraulics, floodplain coordination, and Section 408 permitting were all project challenges since the waterway and floodplain impacts had to be coordinated with adjacent projects. Section 408 permitting was complex due to construction being close to a flood control pump station and temporary construction impacting the floodwalls.

ms worked with ODOT and stakeholders to develop project aesthetics for the Scioto Greenways Trail under the bridges and designed aesthetic screening to conceal the freeway and an electrical substation from the view of residents at the Miranova and Waterford condominium complexes.

All phases of the I-70/I-71 projects have followed the Design-Bid-Build procurement method.

PORTSMOUTH BYPASS | DB | Scioto County, OH

Lead Designer

Representative Firm
ms consultants, inc.

Firm Responsibility
Prime Consultant

Dates of Design
1/2015 - 12/2018

Completion Deadlines
Original Completion: 12/2018
Actual Completion: 12/2018
Reason for Difference: N/A
Liquidated Damages: None

Contract Value (Construction)
$430,000,000

Firm Contract Value
$29,758,937, 6.9%

Percentage Subcontracted
40%

Similar Scope/Complexity
- *Bridge Design*
- *Traffic Design*
- *Lighting*
- *Roadway Design*
- *Maintenance of Traffic*
- *Design Build*
- *Utility Design and Coordination*
- *SWPPP Design*

Key Personnel:
Jonathan Hren, PE - Structures Design Manager
James Lacher, PE - Traffic Design Manager

Project Contact
Tom Barnitz, PE
Ohio Department of Transportation, District 9
740-774-8877
tom.barnitz@dot.ohio.gov

Project Description

The first-ever Public/Private Partnership (P3) project for ODOT involved the design, construction, and long-term maintenance of a new 16-mile, four-lane divided, limited-access highway around the City of Portsmouth, Ohio. It bypasses approximately 26 miles of US-52 and US-23 and is designated as State Route 823, the Southern Ohio Veterans Memorial Highway.

The project, which included the construction of five new interchanges and 23 new bridges, had a delivery method of Design-Build-Finance-Operate-Maintain (DBFOM).

This roadway completes the Appalachian Highway System in Ohio, and provides the following benefits: decreases congestion and transit times; reduces traffic, noise, and transit costs; and increases air quality. Economic development was also a large part of the project's purpose. This new highway, along with the three interior interchanges, opens up land previously inaccessible and under-developed.

During the bidding and design phase of the project, all parties worked closely to develop the complex design and construction schedule. The project was broken down into four major segments, and then approximately 50 constructible buildable units (BUs). ms consultants, as lead designer, performed the majority of design work, as well as managing the deliverables for each BU.

Coordination and communication between organizations was critical for the timely completion of this project. In addition to ODOT, the Portsmouth Gateway Group, and the consultant teams, the following other entities were also involved the Scioto County Engineer, Norfolk Southern and CSX, AEP, and other utility companies, including water, gas, fiber, telephone, and sanitary.

ms services included highway and bridge design; traffic engineering; retaining wall design; traffic control; lighting design; landscaping; and alternative delivery.

Design of the project started in January 2015 and the highway opened to traffic in December 2018. The project benefits the public as it connects people to jobs, alleviates congestion, enhances safety, and improves the traffic movement around the city.

Project Challenges

- Ending Isolation For an Under-Served Area: Travelers can now take a more direct route, as the new highway bypasses approximately 26 miles of US-52 and US-2. This benefits the local community and surrounding areas by reducing congestion, enhancing regional mobility, and increasing economic development opportunities in the region.
- Aggressive Schedule: Use of the Design-Build-Finance-Operate-Maintain (DBFOM) delivery method allowed for construction to be completed in four years, which was 10 years faster when compared to traditional delivery using a single-phase to complete construction

MAH-680-14.37 DBB INTERCHANGE & MAH-527-05.27 DB BRIDGE |
Mahoning County, OH

Lead Designer

Representative Firm
ms consultants, inc.

Firm Responsibility
Prime Consultant

Dates of Design
5/2007 - 6/2017

Completion Deadlines
Original Completion: 6/2017
Actual Completion: 6/2017
Reason for Difference: N/A
Liquidated Damages: None

Contract Value (Construction)
$8,622.823

Firm Contract Value
$1,128,227, 13%

Percentage Subcontracted
3%

Similar Scope/Complexity
- *Bridge Design*
- *Design Build*
- *New Interchange*
- *Highway Lighting*
- *Utility Coordination*
- *Maintenance of Traffic*
- *Roadway Widening*

Key Personnel:
Brian Hughes, PE - Project Manager
Jonathan Hren, PE - Bridge Design
Ryan Bush, PE, AICP - Interchange Study and Design

Project Contact
Gery Noirot, PE
Ohio Department of Transportation, District 4
Gery.Noirot@dot.ohio.gov
330-786-2208

Project Description

Southern Mahoning County has experienced significant residential and commercial growth, placing high-traffic demands on inadequate local roadways. This caused increased traffic congestion and crashes where the I-680 interchange connects with Western Reserve Road/SR-164. Concurrently, the portion of I-680 between Western Reserve Road and the Ohio Turnpike was significantly under-used, essentially functioning as a long ramp to/from the Turnpike Toll Plaza. This led Eastgate to explore adding a new interchange at the SR-164 overpass—two miles farther south—thereby encouraging more local traffic to use I-680, relieving congestion at Western Reserve Road.

Eastgate, in cooperation with the ODOT, first hired ms consultants, inc. in 2007 to study and evaluate the traffic congestion and safety problems within the southern I-680 corridor. The corridor limits included I-680 from just north of the Western Reserve Road interchange to south of the Ohio Turnpike (I-76) interchange.

ms completed the study, which involved assessing the feasibility of constructing a new interchange at SR-164 and I-680 to help alleviate the traffic demands on Western Reserve Road by encouraging more vehicles to stay on I-680. ms also identified alternatives to improve commuter safety, which included modifying the Western Reserve Road interchange and improving sight distance at the SR-626 intersection. ms assessed the existing roadway geometric and site conditions relative to any proposed improvements. The traffic studies evaluated current and future traffic

volumes, accident rates and locations, and the existing roadway network's capacity.

Preliminary and Final Design

The project was broken up into three smaller projects, including:

- MAH-164-05.27 DB, which included the replacement of the SR-164 bridge over I-680. This design build project was completed by ms consultants as the lead designer, and was completed in 2016.
- MAH-680/164 Interchange Part 1, which included the interchange ramps from I-680 to SR-164. This design bid build project was completed by ms consultants. This project was completed in 2020 and was combined with the Part 2 project below.
- MAH-680/164 Interchange Part 2, which included the roundabout at SR-164 and SR-626, as well as a bridge replacement carrying SR-164 over the Turnpike. This project was designed by others.

MAH-164-05.27 Bridge Replacement Design Build:

The ms consultants' team provided construction plans for the MAH-164-5.27 Design Build Project which included removal and replacement of the SR-164 Bridge over I-680, with a new 4-span continuous steel beam bridge with dog-legged framing. The plans included details for a new widened superstructure with a reinforced concrete composite deck on new galvanized rolled steel beams and elastomeric bearings. The Design Build Team (DBT) utilized the existing piles along with a few new piles at the median pier to save time and construction cost. The project also included new approach pavement, drainage, pavement markings, signing and maintenance of traffic. The profile of SR-164 was raised by over two feet to increase the vertical clearance over I-680 and future interchange ramps. The DBT was able to reduce construction costs by submitting a VECP to detour SR-164 traffic during bridge construction, in lieu of performing part-width construction.

MAH-680/164 Interchange (Part 1) Design Bid Build:

The ms team designed and prepared the construction plans for the new interchange, which included adding a new I-680 interchange at SR-164, including full-access ramps, adding a southbound lane on SR-164 between I-680 and SR-626, and adding a northbound, left-turn lane on SR-164 between I-680 and the northbound on-ramp. ms provided management and oversight, including coordinating the work with the Ohio Turnpike and other consultants, roadway and traffic plans, drainage design and interchange grading, BMP design, culvert design, interchange lighting, and survey and right of way plans. Additionally, the project required avoiding impacts to the adjacent Ohio Turnpike Toll Plaza and an existing pond and consideration of abandoned mines.

Project Challenges

- Designing a bridge replacement for future ramp geometry
- Northbound and Southbound I-680 Ramps required 70 mph design speed
- Southbound Off-ramp tight geometrics
- Coordinating three projects, one as design build, the other as two parts and with another consultant designing the second part.

MAH-224-13.64 INTERCHANGE | DBB | Mahoning County, OH

Lead Designer

Representative Firm
ms consultants, inc.

Firm Responsibility
Prime Consultant

Dates of Design
10/2011 - 4/2014

Completion Deadlines
Original Completion: 10/2013
Actual Completion: 4/2014
Reason for Difference: AT&T Relocations on new beams
Liquidated Damages: None

Contract Value (Construction)
$5,412,000

Firm Contract Value
$822,028, 15.2%

Percentage Subcontracted
15.4%

Similar Scope/Complexity

- *Interchange Improvement*
- *Roadway Widening*
- *Phase Construction*
- *MOT and Access Management*
- *Utility Planning and Coordination*
- *Bridge Design*
- *Signals and Lighting*

Key Personnel:
Brian Hughes, PE - Roadway Design
Jonathan Hren, PE - Bridge Design and Project Management
Ryan Bush, PE, AICP - Interchange Study and Design

Project Contact
Gery Noirot, PE
ODOT, District 4
Gery.Noirot@dot.ohio.gov
330-786-2201

Project Description

ms consultants prepared construction plans for a major upgrade project along the heavily traveled and commercialized U.S. 224 corridor at the S.R. 11 Interchange in Canfield Township. The MAH-224-13.64 project improved traffic flow and safety by adding additional turn lanes, widening the bridge over S.R. 11, and installing new signalization at the interchange ramps and Raccoon Road. Specific improvements included the addition of a third westbound through lane from east of Raccoon Road to the S.R. 11 northbound entrance ramp and right turn lanes at all four approaches at the U.S. 224 / Raccoon Road intersection. The left turns on Raccoon Road at U.S. 224 were also lengthened with this project. An additional lane was also constructed for the S.R. 11 southbound exit ramp at U.S. 224 to better separate traffic heading to Fairground Boulevard, Canfield center or Boardman center with the lane assignment configurations, including dual left turns for eastbound vehicles.

The U.S. 224 Bridge over S.R. 11 is a four-span structure, which was upgraded with a new, widened superstructure and widened substructure units. The existing substructure units were salvaged, rehabilitated and widened with new piles driven to bedrock at the abutments and new drilled shafts supporting the new outside columns at the piers. The existing pier columns and footings were salvaged, but the existing pier caps were removed and replaced with longer

and deeper caps. The existing abutment seats and backwalls were removed and replaced with new semi-integral abutment diaphragms to minimize future maintenance costs. The new continuous galvanized steel beams were made composite with the new reinforced concrete deck and designed to be shallower than the existing beams to improve vertical clearance over S.R. 11 while minimizing the profile grade adjustment on U.S. 224. The existing bearings were replaced with new low-maintenance elastomeric bearings. The abutment drainage system and approach slabs were also removed and replaced. ms also inspected the existing concrete substructures, field marked any delaminated areas and provided the location and quantity of patching on the project plans.

In addition to improving the vertical clearance, the U.S. 224 profile adjustments also corrected a deficient sag curve by raising the grade within the eastern portion of the project to meet the design speed. Pavement not affected by grade changes was milled and resurfaced. New curb and gutter and extensive drainage improvement were made over the entire project limits. The existing traffic signals at U.S. 224 / Raccoon Road and U.S. 224 / S.R. 11 southbound exit ramp / Fairgrounds Boulevard intersection were replaced and coordinated with the signal at the adjacent Talsman Drive T-intersection.

With an ADT of 30,000 through this highly commercialized corridor linking Boardman Township and City of Canfield traffic between I-680 and S.R. 11, maintaining safe, two-way traffic operation was paramount. The project locale is also adjacent to Ohio's largest county fair (Canfield Fair). Therefore, special notes and key construction milestones were included in the plans to ensure the corridor would operate effectively during Canfield Fair week. All roadways were kept open to traffic and driveway access to all commercial properties were maintained at all times. Part-width construction procedures were used to facilitate the construction and minimize traffic disruption.

The overall project planning required close coordination with the many utilities affected by the construction. This included the relocation of ten AT&T duct banks occupying the bridge - many of which contained fiber optic cables. Relocation of several large power poles, as well as water and gas line adjustments were also required. New signing and roadway striping plans were also provided to account for the new lane assignments. Right of Way plans were also developed to address the property takes that resulted from widening the roadway.

Project Challenges

- Designing a bridge replacement for future ramp geometry
- Maintaining two-way traffic using phased construction within high ADT area, and providing business access at all times.
- Utility coordination for aerial wires in conflict with the bridge widening and buried AT&T duct banks carried by the bridge beams.

MARTY FRITZ | DBT Project Manager

Marty Fritz, as DBT Project Manager, is responsible for the Offeror's overall performance of design and construction, including oversight of all safety, quality, and diversity goals. Marty will ensure that personnel and other resources are made available when required to keep the project on schedule and safety and quality standards are met. He will establish and foster a culture of partnering within our team and with all stakeholders, including ODOT and third parties. Marty's varied experience with all facets of heavy highway/structure construction makes him thoroughly equipped to deliver a successful project. Marty has gained valuable experience from prior Design-Build project delivery. Marty will be authorized to handle all contractual matters and communication with ODOT throughout the duration of the project.

Years of Experience
Total: 16 years
Current Firm: 3 years

Education
MBA, Operations Mgmt.;
BS, Surveying & Mapping;
AAS, Surveying Engineering Technology - The University of Akron

Unique Qualifications
Surveyor-In-Training (S.I.T)

OSHA 30-hour Training

CPR Training

OSHA Trenching & Excavation Training

Fall Protection Safety Training

Previous experience working for a Project Owner (SCDOT)

Anticipated Time Commitment
Design: 30%
Construction: 30%

Currently Employed by The Ruhlin Company

Project Experience

ODOT 223000, Southgate Parkway (SR 209) Bridge Replacement, DB, Guernsey County, OH

DB Project Manager for the removal and replacement of the SR 209 bridge over Wills Creek and Genesee & Wyoming Railroad. The project includes complicated demolition of the existing curved, hinged structure and full design and replacement with an approximately 850' structure in an approximate 1-year duration full closure. The project is within a constricting footprint, within a floodplain, adjacent to residential neighborhoods, and is a primary route into downtown Cambridge, Ohio. Effective use of Buildable Units and comprehensive design conversations between the DBT and ODOT soon after award to enabled long lead time materials to be fabricated within the demanding constraints of the construction schedule. Frequent meetings and comment resolution sessions were also held with stakeholders including The City of Cambridge to effectively incorporate their desired features. Marty successfully managed relationships with all stakeholders and fostered a positive attitude around the project and within the local community. The project was a success and is a source of pride for the DBT, ODOT, and The City of Cambridge. The project has also been featured at recent industry meetings and conferences. $13.4 million

ODOT 140002, DBB, Lorain County, OH

Chief Field Engineer for the replacement of State Route 2 over Lakeshore Railroad and Murray Ridge Road. This design-bid-build project consisted of the replacement of 2 pairs of bridges on mainline route 2. As originally designed, the early phases included full traffic crossovers which required the bridge structures to be over-built to accommodate MOT patterns in the subsequent construction phases. Responsible

for site engineering, scheduling, and material procurement. A major role during this project was working with **ms consultants** on a maintenance of traffic Value Engineering Change Proposal to introduce greater efficiency into the MOT scheme. Our teamwork and ingenuity resulted in an approved VECP to construct part-width crossovers, which eliminated the need for the over-widening of the bridge structures. This plan proved successful and ultimately saved the Project a substantial amount of money, as well as limit future inspection and maintenance responsibilities. The safety of the traveling public was maintained throughout construction and the project was successfully delivered. $10.1 million

ODOT 173000, Opportunity Corridor Phase 3, DB, Cuyahoga County, OH

Lead Structures Engineer and Construction QC Manager for the final phase of the Opportunity Corridor Project extending a 5 lane boulevard from Interstate 490 to East 105th in the University Circle area on the East side of Cleveland. The project also included the construction of 7 new bridge structures-4 vehicle bridges, 1 rail bridge (NSRR), 2 pedestrian bridges, as well as the removal of 2 structures. Three of the new vehicle structures were curved structures. Both of the mainline structures over GCRTA Blue/Green lines included skewed substructures and curved girders. Maintenance of Traffic and utility relocations were considered during design and were a focal point of this project. **Role included constant collaboration with the DBT's utility coordinator to ensure utility relocations/modifications were on schedule and in line with the overall project sequence. The project team worked with multiple utility owners including Cleveland Public Power, First Energy, Cleveland Water Department, Dominion, The Northeast Ohio Regional Sewer District, AT&T, and others.** Duties also included management and financial oversight, oversight of construction engineering processes, management of major schedule elements, constant collaboration with the design team and IQF, constructability reviews, and overall responsibility for construction quality control and required documentation. Coordinated critical material procurement and worked with necessary crews and suppliers to plan complex deliveries and tasks. The design and construction of this project presented several challenges and have been featured at recent industry conferences. $ 151million

ODOT 138033, Village of Richfield and Townships of Richfield & Boston, DBB, Summit County, OH

Chief Field Engineer for structure work. Project involved the full depth pavement removal and replacement with asphalt concrete on both the northbound and southbound lanes of Interstate 271. In addition, all ramps located within the project limits of I-271 were reconstructed. Other routes which included State Route 303, County Road 17, State Route 176, and parts of Interstate Route 77 were also reconstructed. Bridge rehabilitation and reconstruction was performed at State Route 303, County Road 17, State Route 176, and all Interstate Route 77 structures within the corridor. Was employed by the subcontractor that performed the structure work on the project. The project included multiple phases and MOT phases within a heavily traveled interchange which necessitated careful planning and scheduling. Responsible for the planning and development of phased construction work plans, administration of construction engineering and surveying, constructability reviews, and major equipment scheduling. Also served as the company safety representative.

BILLY POPE | DBT Construction Project Manager

Billy Pope, as DBT Construction Project Manager, will be responsible for meeting the overall construction requirements of the project and ensuring work is completed according to the design and specifications for all structures, structural elements, and roadway items. Billy will be involved with constructability reviews during design and will ensure that all safety, quality, and workforce diversity goals are met. He will oversee the development and updates of the construction CPM schedule and coordinate the work of all construction superintendents and subcontractors. Billy will be authorized to provide and direct project staff and resources to build the work according to the design specification and schedule.

Years of Experience
Total: 28 years
Current Firm: 1 years

Unique Qualifications
OSHA 30-hour training

HAZWOPER 40-hour training

ATSSA Certified

ODOT and PENNDOT WTS

Fall Protection Training

Trench and Deep excavation

LEAD Training

Silica Training

Signaling & Rigging Training

Asbestos Training

ACI Certified

Confined Space

NFPA Certified

Anticipated Time Commitment
Design: 5%
Construction: 100%

Currently Employed by The Ruhlin Company

Project Experience

ODOT 104983 I-77/Miller Road Interchange, DBB, Cuyahoga County, OH
Superintendent for construction of on/off ramps for north and southbound to Miller rd. to I-77, Sanitary relocation, storm sewer installation with water quality and all structures associated, and reconstruction of Miller rd. This Project was multi-phased for minimal impact to surrounding residential, commercial, and highway traffic. The sanitary installation consisted of bypass pumping to allow no interruption in service, with installation depths of over 30' along I-77 and Miller rd. and connections being coordinated with no interruptions in service. Being multi-phased and with such an extensive upgrade to the storm sewer to accommodate a newly established industrial park proved to be challenging, however with the partnership of ODOT and years of established relationships with neighboring contractors and resources, we successfully accomplished a great product within my allotted time.
$32 million

PENNDOT I-80 Canoe Creek, CM, Beaver County, PA
Superintendent for the roadway/ utility construction on Unique P3 funded project partnered with Bridging Pennsylvania to replace two dual multi-spanned bridges on I-80 going over Canoe Creek and Tippecanoe rd. Working closely with Fish and Game, EPA, and PennDOT to protect wildlife, national historical site, and sensitive tributaries and un-named tributaries, while efficiently clearing and removing over 450,000 cy of overburden to allow construction of the bridge replacement. We were able to successfully install temporary roadways over multiple gas transmission lines, tributaries, and through protected historical sites without incident. Navigating the dangerous stretch of highway for MOT and traffic switches throughout phasing was a great opportunity to adapt to a new perspective while working with PennDOT and Bridging Pennsylvania, as with this I

gained valuable experience and knowledge regarding the importance of MOT and E&S balance. This project offered a great opportunity to show off the importance of crisis management and stellar BMP practices. Another great aspect to this project was not only mitigating the impact to surrounding natural resources and wildlife, rather the resolve to inherited challenges upon excavation in the form of APR (acid producing rock), shale, and changing water table. The cooperation and partnerships from all parties involved was invaluable when utilized for the value giving a quality product. $450 million

ODOT 173000 Opportunity Corridor Phase 3, DB, Cuyahoga County, OH

Superintendent managing and overseeing the installation of all electrical, traffic, and data infrastructure installation for phase 3 of the Opportunity Corridor Project extending a five-lane boulevard from I-490 to East 105th Street. We successfully and efficiently installed over 200,000 LF of electrical conduit ranging from 6”-2”. Navigating the installation through and around a multitude of new infrastructure, bridges, and many contractors. I successfully coordinated all installations in tandem with surrounding work and entities. Every LF of conduit was separated, encased, and documented above and beyond spec to ensure a quality product. We installed over 50 electrical vaults for Cleveland Public Power, connecting all to existing grid, and ensuring a watertight seal, along with proofing each line to conform to owner specs flawlessly. Everything was completed meticulously in phases to ensure the punch list process was minimal. We installed over 200,00 LF of traffic/ data conduit along with over 250 pull box structures, all of which were proofed, encased, and proper locations established prior to completed roadways, all while protecting the integrity of our work to limit any issues with installation and punch list issues. This project was a great example of teamwork amongst trades, contractors, designers, owners, and all involved. $7.6 million

JONATHAN HREN, PE | DBT Lead Design Engineer

Jonathan Hren, as the DBT Lead Design Engineer, will actively manage and be responsible for the overall design of the project. Mr. Hren will ensure that the design is produced in accordance with the project scope of work and our Quality Management Plan. He will be responsible for the design technical quality, design coordination, scheduling, and will supervise the Lead Roadway Engineer, Lead Structural Engineer, Lead Utility Coordinator, and other members of the design team. In this capacity, Mr. Hren will oversee the services provided by ms consultants and all design subconsultants. During construction, he will ensure that any design related questions are addressed in a timely manner and will review and approve any necessary field changes to the original design. Over his 28-year career, Mr. Hren has successfully managed many large transportation, infrastructure, and bridge projects for the Ohio Department of Transportation, and for county, municipal and other entities.

Years of Experience
Total: 28 years
Current Firm: 12 years

Education
North Carolina State University, B.S.C.E., 1994;

University of Florida, M.E. Structural Engineering, 1996

Professional Registrations
Professional Engineer - Ohio (65502), OH, IN, CA, KY, WV

Unique Qualifications
Project Manager on dozens of ODOT highway projects

Design Build Project Management Experience

ODOT PDP Training

NHI Utility Coordinator for Highway Bridges Certificate

Anticipated Time Commitment
Design: 80%
Construction: As Needed

Currently Employed by ms consultants, inc.

Project Experience

SCI-823-0.00 Portsmouth Bypass, DB, Scioto County, OH
Mr. Hren served as co-located, Lead Structural Engineer and Quality Assurance Engineer for the first substantive design-build P3 project administered by ODOT, working for the Portsmouth Joint Venture (contractor). Mr. Hren was in charge of the design and coordination for twenty-three (23) bridges on the $430M project, and numerous retaining walls. During design, Mr. Hren coordinated with three (3) major subconsultants and ms' five (5) design teams to ensure that plans were delivered on time, and scope and quality were adhered to. Mr. Hren was engineer-of-record for several bridges on the project, including prestressed I-beam and plate girder structures.

MAH-224-13.64 US-224/SR-11 Interchange Reconstruction, DBB, Mahoning County, OH
Mr. Hren was the Project Manager and engineer of record for this ODOT District 4 major upgrade project along the heavily traveled and commercialized US-224 corridor at the limited access SR-11 Interchange in Canfield Township. Mr. Hren managed the project and plan development including coordinating with ODOT District 4, the City of Canfield, and the Village of Canfield for this important US-422 capacity improvement project with bridge widening, intersection turn lane additions and signals. Mr. Hren also served as quality assurance manager for the project. The $5.4M project had a very comprehensive maintenance of traffic plan to ensure all movements were accommodated as well as access provided to all businesses during construction.

TRU-80-4.70 Bridge Widenings, DB, Trumbull County, OH
Mr. Hren served as Project Manager for the widening of two (2) 3-span rolled beam bridge pairs carrying I-80 over local

streets and 4-miles of resurfacing, barrier and guardrail improvements for ODOT District 4, in Liberty Township, Ohio. Mr. Hren managed all design development aspects of this $9.7M design build project, including bidding and technical concepts, preliminary design including buildable unit determinations, and Stage 3 and final construction plans for this low bid design build project, coordinating directly with the contractor. The project was built using phased construction, maintaining two lanes of I-80 traffic, and local road traffic with temporary signals.

LAK-271-01.27/01.45 Interchange Modification and Bridge Replacements, DBB, Lake County, OH

Mr. Hren was the Project Manager and engineer-of-record in charge of all project development activities for the realignment and replacement of Ramp C carrying IR-271 NB to IR-90 EB, including the replacement of two bridges, including a 3-span rolled beam bridge and a 4-span curved plate girder bridge, in Willoughby Hills, Ohio. Due to the need to maintain the two lanes of ramp traffic, Ramp C was realigned and rebuilt offline so that traffic could be maintained. As part of the project Mr. Hren managed the Feasibility Study, PIAC committee presentation for additional funding, AER, MOTEC coordination and comprehensive MOT plans, and subsequent Stage 1 through Final Plans. The project also included high mast lighting and sign structures. The construction cost was $11.9M and was constructed by the Ruhlin Company. The project won an ACEC/ODOT Partnering Award.

MAH-164-05.27 Bridge Replacement, DB, Mahoning County, OH

Mr. Hren served as quality manager for the $3.5M design build project including the SR-164 bridge replacement over I-680 in Beaver Township, Ohio. The bridge was replaced using a design build procurement to accelerate construction and provide a low-cost solution. The new bridge is a 4-span dog legged structure, and included a 2’ profile adjustment to accommodate the new ramps below.

FRA-270-2.60 Interstate Widening, DBB, Franklin County, OH

Mr. Hren served as bridge team leader/engineer-of-record responsible for the final design/ widening of seven mainline steel beam/girder bridge structures (four-twin and three-single structures) carrying I-270 over local roads and Norfolk Southern Railroad, in Columbus, Ohio. The project's goal was to improve safety and drivability on a 7.02 mile-section of I-270 in Columbus, Ohio. As part of the project, the median and outside shoulders, including bridges, were widened to 12 feet, with vertical clearance increased by raising the structures over all local roads. Mr. Hren coordinated with the design team including subconsultants, NS railroad, and ODOT District 6 on this project.

MOT-75-12.00 Interstate Widening and Bridge Replacement, DBB, Montgomery County, OH

As major subconsultant, Mr. Hren served as Project Manager and bridge team leader responsible for providing the final design for the drainage, maintenance of traffic, traffic control, retaining walls and the replacement of the +1,400 foot North Bridge, crossing over the Great Miami River, for ODOT District 7 in the City of Dayton. The 3-year long central interchange project was phased to be constructed within active traffic, subject to the active confines of the downtown area, and to reduce conflict points and relieve congestion along this heavily traveled interstate corridor. Mr. Hren was in charge of his team’s work for the aforementioned tasks. This main focus of the project is the large bridge, a twin prestressed beam structure on wall type piers, that carries I-75 over the Great Miami River for a length of 1,500 feet. The total construction project cost sold for $125M.

i. Addenda

There is no addenda to date on this project.

ii. Conflict of Interest Waivers

The Ruhlin Company has confirmed that no members of our DBT have a conflict of interest.

iii. Prequalification

Tables F.1 and F.2 outline our Lead Designer and Lead Contractor prequalification expertise to complete the project.

Table F.1 - Prequalification - Lead Designer

Prequalification Category	Firm
Lead Designer Prequalification Categories	
Roadway: Complex Roadway Design	ms consultants, inc.
Level 2 Bridge Design	ms consultants, inc.
Lead Designer or Subconsultant Prequalification Categories	
Bridge: Level 2 Bridge Design	ms consultants, inc.
Roadway: Complex Roadway Design	ms consultants, inc.
Complex Lighting Design	ms consultants, inc.
Traffic Signal System Design	ms consultants, inc.
Interchange Operations/Modification/Justification Study	ms consultants, inc.

Table F.2 - Prequalification - Lead Contractor

Work Type Code	Work Type Description	Firm
Lead Contractor Prequalification		
04	**Roadway Excavation and Embankment**	**The Ruhlin Company**
12	**Rigid Paving**	**The Ruhlin Company**
21	**Level 2 Bridge**	**The Ruhlin Company**
39	**Maintenance of Traffic**	**The Ruhlin Company**
Other Prequalification Categories		
7	**Soil Stabilization**	**The Ruhlin Company**
8	Temporary Soil Erosion & Sediment Control	The Ruhlin Company
9	Aggregate Base	The Ruhlin Company
10	Flexible Paving	The Ruhlin Company
19	Structure Removal	The Ruhlin Company
23	Reinforcing Steel	The Ruhlin Company
24	**Structural Steel Erection**	**The Ruhlin Company**
35	Drainage (Culverts, Misc.)	**The Ruhlin Company**
36	Guardrail/Attenuators	Subcontractor
43	Highway Lighting	The Ruhlin Company
44	Traffic Signals - Standard	The Ruhlin Company
45	Pavement Markings	Subcontractor

2.5.8 - Evaluation Forms

All Ruhlin projects used as Technical Experience in Section D were performed for ODOT.

All projects completed by our design partner, ms consultants, inc., were ODOT projects.