
Scot A. Morehouse, P.E.

Principal

Registration:

Professional Engineer, Michigan and Ohio (First Registered: 1987)

Education:

Bachelor of Science in Civil Engineering, University of Toledo, 1983

General Qualifications:

Mr. Morehouse serves as DGL Consulting Engineers' Chief Bridge Engineer. Mr. Morehouse has been with DGL Consulting Engineers, LLC since 1983 with his area of expertise being the design of highway structures. Specific expertise includes: preliminary and final structural design; hydraulic analysis and design; non-destructive testing and inspection of structural conditions; steel bridge design; pre-stressed concrete box beam; AASHTO I-beam; and the rating and rehabilitation of reinforced concrete and steel bridges.

Scot also directs DGL's Information Technology operations. In this capacity, he is responsible for the deployment and maintenance of DGL's computer infrastructure as well as the security of the company's project and business data. Scot also manages our software verification program, which insures that each software package that is used by DGL design staff has received a confirmation of its accuracy by verification with manual calculations.

Bridge Experience:

Oregon Road over CSX Railroad, ODOT- District 2, Wood County, Ohio

Served as project manager and bridge designer on the design of a three span AASHTO I-beam structure on Oregon Road over the CSX railroad adjacent to Owens Community College. The structure has a total length of 207' and is supported by semi-integral abutments and T-type piers. The rear abutment is supported on a mechanically stabilized earth (MSE) wall to avoid placing fill over existing utilities running parallel to the railroad.

U.S. 20/S.R. 420 Interchange, ODOT - District 2, WOO-20-11.95, Wood County Ohio

Managed the design of all structural engineering for the project consisting of a pair bridges on SR-420 over US-20, a single structure on Pemberville Road over US-20 and four mechanically stabilized earth (MSE) walls. Both bridge locations were two span bridges on reinforced concrete cap and column piers and semi-integral abutments supported on the MSE walls. The SR-420 pair were AASHTO I-Beam structures with a total length of 154 feet. The Pemberville Road bridge was a steel girder structure with a total length of 221 feet.

S.R. 25 over I-475/U.S. 23, ODOT- District 2, Perrysburg, Ohio

Served as Project Manager for this bridge deck overlay project. Project included the replacement of bridge bearings, conversion of abutments to a semi-integral design, replacement of concrete barrier and the installation of vandal protection fencing. The project also required details to join the existing two superstructures together, as well as the resurfacing of approach roadway and the four ramps within the interchange.

Stickney Avenue over the Ottawa River, City of Toledo, Toledo, Ohio

Served as lead bridge engineer on the design of a three span prestressed concrete box beam structure over the Ottawa River. The proposed 177 foot overall length structure is supported on reinforced concrete stub abutments and cap and column piers. The foundations for all substructures units were drilled shafts.

Gate 59 Ramp Bridge over the Ohio Turnpike, Ohio Turnpike Commission, Lucas County, Ohio

Served as the lead bridge engineer on the replacement of a four span steel beam bridge on cap and column piers and spill through abutments at MP 59.5. This structure needed to be replaced to prepare for a third lane widening project due to the existing structure's center pier not being on the centerline of the turnpike. The proposed structure was designed to be replaced part width on an aggressive design schedule required by the client.

LUC - Summit Street over the Ottawa River, Lucas County Engineer, Lucas County (Washington Township), Ohio

Served as the lead bridge engineer in the design/rehabilitation of this six span structure over the Ottawa River. The superstructure was replaced with a new steel beam structure with an overall length of 418 feet. The existing abutments were replaced with new semi-integral abutments placed on fill in front of the existing. The existing wall piers were rehabilitated by removing the top 2 feet and providing a new reinforced concrete cap to the required elevation. The design also contained new ornamental railing on the sidewalks and navigational lights on the piers and over the middle two spans.

I-280 over Seaman Street, ODOT - District 2, Toledo, Ohio

Served as lead bridge engineer on the design of a single span steel girder structure over Seaman Road that was part of the Maumee River Crossing project in Toledo, Ohio. The proposed 61 foot overall length structure is supported on wall type abutments. The geometry for this structure was very complex with variable span lengths due to a deflection in one of the abutments to help with sight distance on an adjacent street and due to ramps entering and leaving I-280 on the structure. The deck geometry was further complicated by the varying ramp superelevation along with a gore area from each ramp extending onto the deck.

U.S. 23 Ramp to I-475 WB over U.S. 23 NB & I-475 SB, ODOT - District 2, Lucas County, Ohio

Served as lead bridge engineer on the deck replacement of this curved steel girder structure. The existing structure was rehabilitated by replacing the existing deck with a new composite reinforced concrete deck. The existing three span, 225' long girder structure was analyzed and brought up to HS20-44 capacity by the new composite deck. The existing bearings were replaced with elastomeric bearings and the abutment backwalls, end crossframes and superstructure joints were replaced as well.

Professional Affiliations:

National Society of Professional Engineers
Ohio Society of Professional Engineers
Toledo Society of Professional Engineers

Continuing Professional Development:

Bridge Inspection Seminar, ODOT, 1983
Application of HEC-RAS to Bridge Sites, LTAP, 2001
Load Rating and Bars - PC Seminar, ODOT, 2001
The Engineer as a Leader, Engineers Foundation of Ohio, 2006