PERSONNEL QUALIFICATIONS

Robert J. Tosolt | Principal

EDUCATION

- Lafayette College
  - Bachelor of Science, Mechanical Engineering, 1992

PRACTICE AREAS

- Heavy Movable Structures
- Mechanical Engineering
- Design
- Repair and Rehabilitation
- Construction Observation and Troubleshooting
- Emergency Response
- Failure/Damage Investigations
- Gear Assessment/Design
- Balance Testing and Analysis
- Wire Rope Inspections

REGISTRATIONS

- Professional Engineer in AL, DE, FL, LA, ME, NH, NJ, NY, OH, PA, VA, and WA

PROFESSIONAL AFFILIATIONS

- American Railway Engineering and Maintenance-of-Way Association (AREMA)
- American Society of Mechanical Engineers (ASME)
- Heavy Movable Structures (HMS)

TECHNICAL COMMITTEES

- AREMA Committee 10 - Structure Maintenance and Construction

CONTACT

rtosolt@wje.com
215.340.5830
www.wje.com

EXPERIENCE

Robert Tosolt has more than twenty-seven years of experience in the movable bridge field, where he has focused on movable bridge operating and support systems. Mr. Tosolt is familiar with both rail and vehicular bridges, where his work experience has covered the spectrum of movable bridge types and vintages. His experience encompasses all types of engineering related to movable bridge operating and support systems, including design of new machinery, load rating of existing machinery, preparation of plans, specifications, estimates (PS&E), bridge machinery safety inspections, and providing emergency call-out services to troubleshoot, identify, and resolve machinery failures and operational malfunctions. Mr. Tosolt also has extensive experience in strain gage drive testing and bridge balancing, and construction support engineering including review for constructability, yellow-line review of shop drawings, review of equipment installation procedures, shop inspection, machinery alignment verification, oversight of system commissioning, and serving as movable bridge project coordinator on multiple projects.

REPRESENTATIVE PROJECTS

- MCON Construct ASA Munitions Railhead - Livorno, Italy: Engineer-in-charge of the design and installation of all mechanical operating and support machinery on new bobtail center bearing swing bridge designed to carry munitions into the secured storage area at this military base via rail; scoping meetings and charrettes to develop mission directive with regard to intended function and site conditions; responsible for selection and design of operating and support systems, including development of PS&E; coordination with Italian liaison to ensure design conformed to Italian requirements in addition to AREMA requirements
- Columbus Road Vertical Lift Bridge - Cleveland, OH: Engineer-in-charge for complete replacement of all mechanical machinery, including preparation of PS&E; machinery design in accordance with the requirements of the *2007 AASHTO LRFD Movable Bridge Design Specifications;* construction support for oversight of installation and commissioning of bridge
- Eleventh Avenue Bascule Bridge over Hylebos Waterway - Tacoma, WA: Lead mechanical engineer for complete replacement of all machinery on double-leaf trunnion bascule bridge; responsible for scoping inspection, preliminary design report, development of PS&E, oversight of construction, and commissioning and acceptance
- NS System-wide Movable Bridge Inspections: Project manager and team leader for assessment of mechanical and electrical operating systems on twenty-eight movable bridges over a four-year period; field investigation of existing conditions, coordination with field personnel regarding maintenance practices, specialized testing including strain gage and/or hydraulic transducer operating load testing and electrical load testing, documentation of findings in detailed reports, prioritization of recommendations, and reparation of budgetary cost estimates for repairs
- Alford Street Bascule Bridge - Boston, MA: Movable Bridge Project Coordinator for urban twin double-leaf bascule bridge; inter-disciplinary coordination between subcontractors and main contractor; review of all shop drawings for fit-up and constructability; shop inspection of critical components; field oversight during construction for critical assemblies; verification of final alignment of machinery; strain gage operational testing to confirm satisfactory performance installation of newly installed systems
- Inspection and Testing: Extensive experience leading field inspection and assessment of machinery and operating systems on more than one hundred movable structures utilizing all types and vintages of machinery; responsible for charge of bridge balance and power requirement testing on more than fifty bascule bridges, four swing span bridges, and thirty vertical lift bridges; emergency call-out services on numerous projects