

### Robert McPherson | Associate Principal



#### EDUCATION

- New Jersey Inst. of Technology
  - Bachelor of Science, Electrical Engineering, 1992
- Polytechnic Institute of New York University
  - Master of Science, Electrical Engineering, 2000

#### PRACTICE AREAS

- Movable Bridge/Structure Engineering
- Rail Systems Engineering
- Corrosion Control
- Power Plant Engineering
- Industrial/Municipal Engineering
- Construction Observation and Troubleshooting
- Electrical Testing
- Constructability Review
- Emergency Response
- Inspections

#### REGISTRATIONS

- Professional Engineer in AB, AZ, CA, CO, CT, FL, GA, MD, NJ, NL, NY, PA, and WA

#### PROFESSIONAL AFFILIATIONS

- Heavy Movable Structures
- Institute of Electrical and Electronics Engineers

#### CONTACT

rmcpherson@wje.com  
215.340.5830  
www.wje.com

#### EXPERIENCE

Robert McPherson has more than thirty years of experience in the field of electrical engineering. He has been responsible for the design and construction of all aspects of movable structures, rail transit systems, roadways and bridges, power plants, wastewater treatment facilities, and other electrical engineering applications.

Mr. McPherson has leveraged his experience to develop overall project-level expertise to see beyond the general scope of the electrical trade. He has a multifaceted perspective of project delivery, having participated in the design and construction process on behalf of the owner, as the design engineer, construction manager, and contractor. Mr. McPherson has worked with various project delivery systems, such as design-build, design-bid-build, construction manager-at-risk, and force account construction. This broad exposure to all facets of the construction process has allowed him to develop a unique set of skills that helps him anticipate potential problems or conflicts and resolve them before they impact the project.

#### REPRESENTATIVE PROJECTS

- Kirkfield Lift Lock - Kirkfield, ON: Evaluation of existing power and control system for vertical lift lock structure to develop recovery plan to bring structure back into operation after critical structural malfunction left half of structure inoperative; analysis of existing linked dual-chamber, relay-based control system; design for new digital, PLC-based control system to work with existing control system and allow operation of the lock structure; collaboration of control system manufacturer to install and commission the system in time for navigation season opening
- Rumson Seagirt Bridge Replacement - Monmouth County, NJ: Assistance to contractor and electrical subcontractor; evaluation of product submission, procedures, shop drawings, and construction-related issues and evaluation; development of shop and field electrical testing plans; documentation

- Shippagan Lift Bridge Rehabilitation - Shippagan, NB: Design document development for the rehabilitation of electrical and control elements of lift bridge and roadway approach lighting and traffic control; key factor was evaluation of equipment lead times to ensure rehabilitation work could be performed during client's winter outage
- Amtrak East and North River Tunnel - New York, NY: Assistance with full evaluation and conceptual planning exercise for rehabilitation of Amtrak's tunnels under the East River and Hudson River; condition evaluation and evaluation of possible construction methods and staging of electrical and traction power elements
- Port Authority of NY and NJ (PANYNJ), PATH Substation No. 14 - Harrison, NJ: Traction power lead engineer; evaluation of design documents for compliance with PANYNJ standards and operational requirements; alignment with standard practices in transit industry and overall constructability
- California High-Speed Rail Authority: Current and corrosion control design direction and traction power coordination to design team for design-build project
- Ottawa Light Rail Project (Confederation Line) - ON: Manager for systems elements for development of design-build procurement documents; conversion of 7-1/2-mile-long, existing surface bus rapid transit system to a light rail transit system with 1-1/4-mile-long tunnel section and new yard and shop facility
- Denver C70 Construction Claims Project - CO: Lead electrical engineer; evaluations of electrical construction claims and development of responses to each claim; presentation to overall claims team and assistance in coordinating electrical claims effort with claims from other disciplines