

### Luis Burgos | Associate III



#### EDUCATION

- Temple University
  - Bachelor of Science, Mechanical Engineering, 2009

#### PRACTICE AREAS

- Mechanical Engineering
- Bridge Engineering
- Heavy Movable Structures
- Design
- Construction Observation and Troubleshooting
- Balance Testing and Analysis
- Precision Survey and Measurement
- Gear Assessment/Design
- Inspections
- Wire Rope Inspections

#### REGISTRATIONS

- Professional Engineer in ME, MD, and PA

#### PROFESSIONAL AFFILIATIONS

- Heavy Movable Structures

#### CONTACT

lburos@wje.com  
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#### EXPERIENCE

Luis Burgos has more than nine years of experience engaging in the design and inspection of machinery for railroad and highway movable bridges. Mr. Burgos' engineering experience comprises construction engineering inspection, construction support services for contractors, field and source inspection of machinery, strain gage bridge balancing, and design of machinery up to and including preparation of contract plans and specifications.

#### REPRESENTATIVE PROJECTS

- Emergency Contract for Restoration of Electrical and Mechanical Systems of Twelve Movable Bridges - Brooklyn, Queens, Manhattan, and Bronx, NY: Mechanical inspector throughout the duration of the rehabilitation of the mechanical and electrical systems for several bridges consisting of rim-bearing swing, single- and double-leaf rolling lift bascule, and retractable type movable bridges; shop inspection and testing of rehabilitated components; oversight of several site operations, including bridge balance testing, alignment, installation of machinery, and electrical systems
- Columbus Road Lift Bridge - Cleveland, OH: Rehabilitation of a span-drive vertical lift bridge; shop drawing review for conformance to plans and specifications; shop inspection of machinery; oversight of machinery installation
- Court Street Swing Span - Hackensack, NJ: Replacement of machinery on center-bearing swing span bridge; troubleshooting of machinery installation, including strain gage load testing, span balance work, and center bearing disassembly and inspection
- Governors Island Ferry Slip - New York, NY: Rehabilitation of four historic ferry slips; shop inspection of span drive machinery for conformance to plans and specifications
- Hines Bridge - Amesbury, MA: Construction of new center-bearing swing span bridge; installation of strain gages; analysis of strain gage data
- Florida Department of Transportation Asset Management Inspection Districts 4, 5, and 6: Mechanical inspections of sixty-one movable bridges; hands-on inspection of mechanical components, including trunnions, trunnion bearings, live load supports, gears, bearings, couplings, brakes, speed reducers, span and tail lock systems, hydraulic cylinders, hydraulic motors, hydraulic power units, traffic control machinery, and machinery supports and connections
- Houghton-Hancock Lift Bridge - Houghton-Hancock, MI: Rehabilitation of double-deck vertical lift bridge; field measurement of main pinion teeth for fabrication of custom replacement pinions
- Massachusetts Department of Transportation (MassDOT) Inspections: Condition assessment of machinery on movable bridges; measurements of gear tooth wear, bearing wear, and component alignment
- MassDOT, Oak Bluff Inspections: Inspection of mechanical components and field alignment for bridge rehabilitation
- Passyunk Avenue Bridge - Philadelphia, PA: Inspection of mechanical systems of double-leaf trunnion bascule bridge; gear tooth thickness measurements, bearing clearance measurements, and coupling alignment measurements
- South Park Bridge - King County, WA: Replacement of twin double-leaf bascule bridge; inspection of field work to ensure that all components were installed and aligned in conformance with contract requirements; oversight during start-up and functional testing of the bridge machinery; strain gage balance testing throughout the project to ensure that balance was maintained within permissible limits during construction
- Seaford Bridge Rehabilitation - Seaford, DE: Scoping inspection and design of primary support components on center-bearing swing span rail bridge; construction inspection throughout rehabilitation, including on-site inspection of construction activities and shop inspection of the new and rehabilitated components