WJE

PERSONNEL QUALIFICATIONS

Robert J. Firman III | Senior Associate



EDUCATION

- Bucknell University
 - Bachelor of Science, Civil Engineering, 2010
 - Bachelor of Management for Engineers, 2010
- Purdue University
 - Master of Science, Civil Engineering, 2011

PRACTICE AREAS

- Failure/Damage Investigations
- Concrete Structures
- Nondestructive Evaluation
- Instrumentation/Monitoring/ Load Testing
- Bridges

REGISTRATIONS

- AWS Certified Welding Inspector
- FAA Licensed Remote pilot
- NHI Course 130056 Safety Insp./In-Service Bridges for Pes
- NHI Course 130078 Fracture Critical Insp./Steel Bridges
- PE in CO, DC, FL, IA, LA, MD, MT, NJ, NY, PA, RI, TX, and VA

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Inst. of Steel Constr.
- American Society of Civil Engineers

CONTACT

rfirman@wje.com 703.641.4601 www.wje.com

EXPERIENCE

Since joining WJE in 2012, Robert Firman has gained experience working on a broad range of projects, including condition assessments; instrumentation; materials testing; and structural analysis of structural steel buildings, light-gauge metal structures, and prestressed and post-tensioned concrete buildings and bridges. Prior to joining WJE, Mr. Firman gained work experience in structural dynamics, engineering, construction, steel fabrication, and erection.

REPRESENTATIVE PROJECTS

Failure/Damage Investigations

- Precast Parking Garage Fairfax, VA: Investigation of spandrel cracking
- Wood Subfloor Assessment Washington, D.C.: Investigation and materials testing of wood subfloor exposed to moisture during construction
- Glass Breakage Washington, D.C.: Investigation of glass breakage during construction of curtain wall
- Springfield Town Center Springfield, VA: Investigation of partial collapse of elevated concrete slab during construction
- Underground Parking Garage Washington,
 D.C.: Investigation of concrete structure collapse during construction
- File Storage Warehouse Landover, MD: Structural analysis and investigation of warehouse progressive collapse

Concrete Structures

- Airport Roadway Tunnels Buffalo, NY: Condition assessment and materials testing of tunnels located beneath airport runway
- Multistory Building Denver, CO: Condition assessment, analysis, and repair design of precast concrete column connections
- Silver Spring Transit Center MD: Field investigation and structural analysis related to the performance of post-tensioned concrete structure

Nondestructive Evaluation

- Metrorail Station Platforms Washington, D.C.: Ground penetrating radar and specialized inspections
- Elevated Structures Washington, D.C.: Visual inspection, magnetic particle testing, and ultrasonic testing of fracture critical steel transverse box girders

Instrumentation/Monitoring/Load Testing

- Garage Monitoring Tysons, VA: Installation and monitoring of environmental sensors at precast parking garage
- Balcony Railing Load Testing Alexandria, VA: Assessment and load testing of balcony railings at apartment building
- Overhead Lift Anchor Testing Washington, D.C.: Load testing of overhead anchors used for moving equipment within hospital
- Fall Protection Anchor Testing Raleigh, NC: Load testing of roof fall protection anchors
- USS Maine Memorial Arlington, VA: Installation of temperature and humidity monitoring equipment at Arlington National Cemetery
- Miller-Coors Brewery Elkton, VA: Installation of tiltmeters on fermenting tanks in response to steel column failures
- Embassy Building Washington, D.C.: Crack monitoring at concrete beams and columns

Bridges

- Multiple Timber Bridges MS: Condition assessment of multiple timber pile bridges
- Nottoway Reservoir Bridge Nottoway County, VA: Condition assessment, instrumentation, materials testing, and service life modeling of concrete substructure and steel superstructure
- Route 15/Interstate 66 Overpass Haymarket, VA: Fire damage assessment of steel and concrete bridge components
- Commodore Barry Bridge Bridgeport, NJ: Concrete materials testing of bridge piers to determine the potential for alkali-silica reaction

