

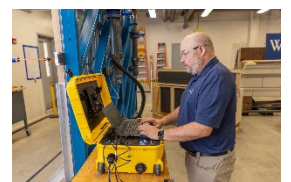
Materials Evaluation and Testing



- Comprehensive construction materials testing and analysis
- Failure investigation
- Materials preservation and conservation
- Materials research
- New product evaluation
- Inorganic/organic chemistry
- Analytical chemistry
- Petrographic evaluation
- Metallurgy and applied mechanics
- Durability testing of materials
- Strength testing
- Testing of assembled systems
- Fracture mechanics assessment and fitness for service

When materials fail, structures can fail or become damaged. WJE's materials scientists and engineers provide comprehensive consulting services for the evaluation and testing of construction materials—both new and old, in-service, and under development. A full range of services in petrography, metallurgy, microscopy, analytical chemistry, organic and inorganic chemistry, structural mechanics, and physical testing of materials are offered in our Janney Technical Center in Northbrook, Illinois, and in branch office laboratory facilities in Austin, Texas, and Cleveland, Ohio.

The combination of comprehensive materials science expertise with engineering and architectural capabilities uniquely positions and qualifies us to deliver innovative yet sound solutions to construction materials problems. Using state-of-the-art evaluation methods, many of which were pioneered at WJE, our materials scientists and engineers have a long history of performing foundational materials-related research and have solved thousands of construction materials problems. Our expertise in chemical analysis, microscopy, petrography, metallurgy, fracture mechanics, structural evaluation, durability engineering, and physical and structural testing allows us to answer such questions as "Why did it fail?" and "How long will it last?" and "How can it be fixed?"





SERVICE PROFILE

Materials Evaluation and Testing

REPRESENTATIVE PROJECTS

- Aloha Stadium - Honolulu, HI: Planning study and rehabilitation recommendations for weathering steel
- Continuum Parking Garage - Austin, TX: Deterioration investigation and repair materials specification
- Federal Highway Administration - Savoy, IL: Evaluation of treatments for mitigating alkali-silica reaction in concrete pavements
- Georgia State Capitol - Atlanta, GA: Cleaning and material studies for building facade
- I-10 Bridge over Lake Pontchartrain - New Orleans, LA, and Slidell, LA: AASHTO T277 chloride ion resistance testing
- Palo Verde Nuclear Generating Station - Tonopah, AZ: Mechanical draft cooling towers condition assessment
- Soldier Field - Chicago, IL: Corrosion mitigation testing for historic concrete elements
- Ascension Saint Clare's Hospital - Weston, WI: Condensation investigation and repair design
- Texas Governor's Mansion - Austin, TX: Materials assessment of load-bearing masonry walls
- Wacker Drive - Chicago, IL: Development of high-performance concrete and validation testing of durability performance for bridge reconstruction

