PERSONNEL QUALIFICATIONS

Kaitlin M. Forke | Associate III

EDUCATION

- Valparaiso University
  - Bachelor of Science, Civil Engineering, 2013
- The University of Texas at Austin
  - Master of Science, Civil Engineering, 2014

PRACTICE AREAS

- Structural Analysis
- Repair and Rehabilitation
- Nondestructive Evaluation
- Facade Assessment
- Failure/Damage Investigations
- Historic Preservation
- Facade Access
- Instrumentation/Monitoring/ Load Testing

PROFESSIONAL AFFILIATIONS

- Structural Engineers Association of Texas (SEAoT), Younger Member Chair, 2017–2018

CONTACT

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EXPERIENCE

Kaitlin Forke contributes to a broad range of projects within the structural engineering and construction industries. Ms. Forke's projects primarily focus on structural analysis of steel, concrete and masonry structures, failure/damage investigations, and design of structural repairs and specifications. She has been involved in the structural condition assessments for parking garages, building facades, commercial buildings, and other structures. While at WJE, Ms. Forke has gained valuable experience in a variety of nondestructive and destructive evaluation techniques, structural analysis software programs, and construction observation and administration services.

Prior to joining WJE, Ms. Forke completed her graduate degree at the University of Texas at Austin with an emphasis in structural engineering. While enrolled at UT Austin, she worked as a structural design intern at Walter P Moore.

REPRESENTATIVE PROJECTS

Structural Analysis

- International Airport: Analysis and evaluation of elevated concrete guideway structure supporting an automated people mover
- Multiple Pre-Engineered Metal Building Collapses - TX: Modeling and evaluation of the structure at time of collapse using structural analysis software

Repair and Rehabilitation

- University of Texas Southwestern - Dallas, TX: Condition assessment and concrete repair design for multiple parking garages
- Roma ISD - Roma, TX: Repair design for connections between masonry walls and pre-engineered metal buildings in a performing arts center
- Major Department Store - Arlington, TX: Repair design for a failing loading dock retaining wall

Nondestructive Evaluation

- Industrial Nitrogen Plant - OK: Ultrasonic pulse velocity testing to identify cold joints and voids in concrete columns.
- Dallas/Fort Worth International Airport, Terminal E Garage - TX: Shear wave ultrasonic testing on concrete slabs and beams to identify voids

Facade Assessment

- Fourteen-story Office Building - Houston, TX: Investigation of alkali silica reaction and delayed ettringite formation damage to precast concrete panels
- First National Center - Oklahoma City, OK: Investigation of historic limestone and brick masonry cladding
- Dillard's, NorthPark Center - Dallas, TX: Investigation of distressed cast stone facade elements

Failure/Damage Investigations

- Princess Juliana International Airport - Sint Maarten: Investigation of hurricane damage to airport terminal and ancillary buildings
- Pre-Engineered Metal Building - Henrietta, TX: Investigation of collapse of partially erected structure during construction

Cleburne High School - Cleburne, TX: Per current practice area list

- Investigation of brick facade collapse, design of repair details, and construction observation services

Historic Preservation

- Highland Park Pedestrian Bridge - Dallas, TX: Structural condition assessment, structural analysis, and repair design of bridge constructed in the 1940s
- Old Dallas High School - Dallas, TX: Investigation and classification of structural systems from the early 1900s
- Abandoned Commercial Buildings - Lubbock, TX: Identification of structural systems and condition assessment of multiple structures constructed in the 1950s–1960s

Instrumentation/Monitoring/Load Testing

- Texas Tech University - Lubbock, Texas: Design and load testing of facade access anchorages
- IH345 Bridge - Dallas, TX: Installation and monitoring of strain gauges and linear displacement sensors on steel bridge girders and bents