# WJE

#### PERSONNEL QUALIFICATIONS

# Sam Keske | Senior Associate



#### **EDUCATION**

- Auburn University
  - Bachelor of Civil Engineering, 2008
  - Master of Science,
    Civil Engineering, 2011
  - Doctor of Philosophy, Civil Engineering, 2014

# **PRACTICE AREAS**

- Bridges and Civil Infrastructure
- Structural Evaluation/Analysis
- Repair and Rehabilitation
- Failure/Damage Investigation

#### REGISTRATIONS

- ACI Certified Concrete Field Testing Technician - Grade 1
- NHI 130055 (Safety Inspection/Inservice Bridges)
- NHI 130078 (Fracture Critical Inspection/Steel Bridges)
- PCI QC Inspector Level III
- Professional Engineer in AL, AR, FL, GA, LA, MS, OK, and TX

#### **PROFESSIONAL AFFILIATIONS**

- American Concrete Institute (ACI) - Central Texas Chapter
- Precast/Prestressed Concrete Institute (PCI)

#### **CONTACT**

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#### **EXPERIENCE**

Sam Keske joined WJE in 2014 and is engaged in the investigation, assessment, and rehabilitation of various new and existing structures, with a focus on the early-age and long-term performance of concrete structures. His experience includes comprehensive investigation and rehabilitation of bridges and civil infrastructure facilities; physical testing, analysis, and mitigation of building construction/design defects; and repair and strengthening design with on-site support. Dr. Keske is frequently involved with assessing the performance and compatibility of historic and modern materials and elements, including mass masonry, cindercrete, aged timbers, unclassified steel, CPVC and HDPE piping, structural epoxies, concrete and steel coatings, and/or self-consolidating concrete.

Prior to joining WJE, Dr. Keske researched highperformance concrete material and structural behaviors through destructive and nondestructive material and structural testing; long-term evaluation of precast, prestressed girders; and live-load testing of in-service bridges.

# REPRESENTATIVE PROJECTS

# **Bridges and Civil Infrastructure**

- Liquefied Natural Gas Storage Tanks Sabine Pass, TX/LA: Large-scale mobilization and condition assessment of tank concrete substructure elements
- Industrial Smelting Plant Corpus Christi, TX: Comprehensive investigations and sampling of concrete wharf and clarifier basins for construction and design defects
- Queen Isabella Causeway South Padre Island, TX: Condition assessment, nondestructive testing, and comprehensive repair plans
- Bay County Water Treatment Plant Panama City, FL: Condition assessment and repair design for concrete clarifiers more than fifty years old, filters, and sedimentation basins
- Port of Corpus Christi TX: Condition assessment, structural evaluation, and repair and rehabilitation design of port facility bridges and culverts
- Austin Avenue Bridges Georgetown, TX:
  Structural and materials investigation of twin historic seventy-five-year-old bridges

# Structural Evaluation/Analysis

- Highway Sound Wall Panels Austin, TX:
  Structural investigation of precast wall panel distress and systematic retrofit design
- University Steel Observation Deck San Marcos, TX: Comprehensive steel, timber, and geotechnical evaluation, analysis, and proof load testing
- Downtown Apartment Complex Austin, TX: Wood-framed balcony moisture and structural investigation, guardrail load testing, repair design, and on-site oversight

# Repair and Rehabilitation

- Foundry Austin, TX: Concrete retaining wall nondestructive testing, sampling, and repair design
- End-Region Cracking of Prestressed Girders -Oklahoma City, OK: Material and structural testing, plant and bridge investigation, analysis, and mitigation and repair design for statewide implementation
- Sunshine Bridge Donaldsonville, LA: Instrumentation and construction administration for repair of damaged bottom chord of truss bridge

#### Failure/Damage Investigation

- Port of Los Angeles CA: Damage assessment of timber and concrete wharf structures following prolonged fire
- Army Barracks San Antonio, TX:
  Comprehensive fire suppressant steel piping failure investigation, laboratory mock-up testing, and litigation consulting
- Hotel and Residence Dallas, TX: Comprehensive CPVC fire suppressant construction investigation, material sampling/testing, and litigation consulting

# **TECHNICAL COMMITTEES**

- ACI 237 Self-Consolidating Concrete
- ACI 342 Evaluation of Concrete Bridges and Bridge Elements
- ACI 345 Concrete Bridge Construction and Preservation, chair
- PCI Bridges Committee
- PCI Concrete Materials Technology Committee

