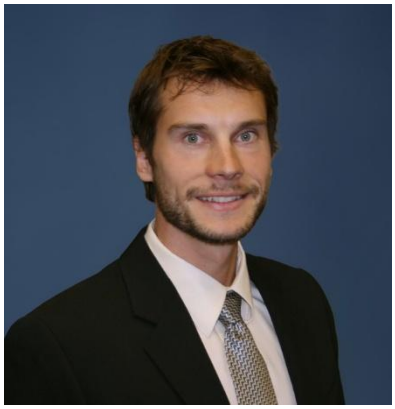
PERSONNEL QUALIFICATIONS

# Jarkko T. Simonen | Senior Associate



## EDUCATION

- Auburn University
  - Bachelor of Science, Civil Engineering, 2002
- University of Texas at Austin
  - Master of Science, Civil Engineering, 2004

## PRACTICE AREAS

- Concrete Repair and Rehabilitation
- Corrosion Protection
- Nondestructive Testing
- Structural Performance Evaluation
- Facade Assessment

## REGISTRATIONS

- Civil Engineer in AZ
- NACE Certified Cathodic Protection Technician
- NACE Certified Corrosion Technician
- NHI 130055 - Safety Inspection of In-Service Bridges
- NHI 130078 - Fracture Critical Inspection Techniques for Steel Bridges
- Professional (Civil) Engineer in HI
- Professional Engineer in MN, OR, TX, and WA
- Society of Professional Rope Access Technician - Level III

## CONTACT

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## EXPERIENCE

Jarkko Simonen evaluates existing structures, troubleshoots construction and material problems, and develops repair and rehabilitation programs. He investigates bridges, parking garages, slabs-on-grade, single and multistory buildings, and industrial facilities. These investigations involve masonry, precast and cast-in-place concrete, steel and other metals, floor coverings, coatings, and timber. Mr. Simonen routinely uses nondestructive testing techniques such as ground penetrating radar, impact echo, and ultrasonic pulse velocity, and applies laboratory testing to solve complex problems and develop appropriate solutions.

Mr. Simonen has extensive experience mitigating corrosion in reinforced concrete and other building systems and materials. He uses petrographic, chemical, and analytical diagnostic methods to evaluate concrete material properties associated with strength deficiencies, environmental and chemical deterioration, and serviceability.

## REPRESENTATIVE PROJECTS

### Concrete Repair and Rehabilitation

- APS Palo Verde Water Reclamation Facility - Tonopah, AZ: Evaluation and repair design of various concrete tanks and structures
- Grain Silos - Kalama, WA: Investigation of concrete consolidation voids
- Fort Bliss, Helicopter Maintenance Hangar - El Paso, TX: Evaluation and repair recommendation of concrete slab-on-grade
- University of Texas at Austin, Lyndon B. Johnson Presidential Library: Evaluation and repair design of corrosion distress at post-tensioned roof girders
- Potash Lanigan - Saskatchewan, Canada: Evaluation of cracking, scaling, and corrosion distress of slab-on-grade at potash ore refining facility
- University of Houston - TX: Analysis and rehabilitation of cast-in-place concrete using carbon fiber reinforced polymer

### Corrosion Protection

- Alcatraz Cellhouse - San Francisco, CA: Evaluation and restoration design for mitigating corrosion distress of the concrete facade and structural framing of cellhouse
- Queen Isabella Causeway - South Padre Island, TX: Evaluation of the substructure cathodic protection system and condition assessment of cast-in-place concrete
- Summit Condominiums - South Padre Island, TX: Restoration of corrosion distress at concrete balconies

### Nondestructive Testing

- Portland Community College, College Services Building - OR: Investigation of structural defects of elevated concrete slabs
- Rainier CP Mill Gear Box - Rainer, OR: Vibration and cracking evaluation
- Silver Spring Transit Center - Washington, D.C.: Concrete and post-tensioning assessment

### Structural Performance Evaluation

- Camp Mabry Building 6 - Austin, TX: Evaluation and analysis of existing historic wood trusses to assess structural adequacy
- Courthouse Square - Salem, OR: Investigation of slab deflection and structural capacity
- I-205 Glenn Jackson Bridge - Portland, OR: Evaluation of grouted post-tensioning cables
- SR 520 Pontoons - Auburn, WA: Investigation of post-tensioning anchorage failures
- Trinity Episcopal Church - Bend, OR: Building code evaluation for repairs of fire-damaged structure

### Facade Assessment

- 210 West 70th Street - New York, NY: Masonry curtain wall evaluation and repair design
- Pedernales Condominiums - Austin, TX: Evaluation of stucco building envelope

## PROFESSIONAL AFFILIATIONS

- International Concrete Repair Institute
- National Association of Corrosion Engineers
- Structural Engineers Association of Oregon