

### Tanner Swenson | Senior Associate



#### EDUCATION

- University of Minnesota
  - Bachelor of Science, Civil Engineering, 2013
  - Master of Science, Structural Engineering, 2015

#### PRACTICE AREAS

- Repair and Rehabilitation
- Structural Analysis
- Difficult Access Inspection
- Failure/Damage Investigations
- Concrete Structures
- Steel Structures
- Facade Access Equipment and Fall Protection

#### REGISTRATIONS

- Professional Engineer in MN, ND, and WI

#### CONTACT

tswenson@wje.com  
763.544.1170  
www.wje.com

#### EXPERIENCE

Tanner Swenson joined WJE in 2015 and has since been involved in various structural investigations, including field condition assessments, structural analysis, design of repairs and modifications, and construction phase observations. Mr. Swenson's experience includes cast-in-place, precast, and post-tensioned concrete; steel; masonry; and wood structures.

While a graduate student at the University of Minnesota, Mr. Swenson conducted research to determine the effects of temperature on strand stress and camber in precast, prestressed concrete bridge girders. Instrumentation was installed on prestressing strand during fabrication of bridge girders in various weather conditions to monitor strand stress. In addition, a unique test was developed to determine the amount of time it takes for the concrete to bond to the prestressing strands after it is cast.

#### REPRESENTATIVE PROJECTS

##### Repair and Rehabilitation

- 3rd Avenue Bridge - Minneapolis, MN: In-depth inspection and testing, rehabilitation design, construction assistance for historic concrete arch bridge over Mississippi River
- Ala Wai Golf Course - Honolulu, HI: Design and load rating of new concrete slab on existing concrete culvert
- North Dakota State University - Fargo: Condition assessment, structural analysis, and design of new concrete steam tunnel encasement
- Sentry Insurance - Stevens Point, WI: Condition assessment, structural analysis, and repair of multilevel, concrete parking garage
- Community Center - Kauai, HI: Design of retrofits to wood structure for hurricane wind loads

##### Structural Analysis

- Washington Avenue Bridge - Minneapolis, MN: Load rating of steel bridge structure
- Manufacturing Facility - Omaha, NE: Structural analysis of collapse of steel storage structure

##### Difficult Access Inspection

- 3rd Avenue Bridge - Minneapolis, MN: Inspection and measurement of steel section loss
- Mining Facility: Interior condition survey of large concrete bins
- Fabric Buildings - College Station, TX: Nondestructive evaluation of internal steel structure
- Various Buildings - Philadelphia, PA: Facade ordinance inspections

##### Failure/Damage Investigations

- Madden's Resort - Brainerd, MN: Investigation and structural analysis of wind damage
- La Quinta Inn & Suites - Bloomington, MN: Investigation of stucco failure
- The Marshall - Minneapolis, MN: Investigation of fiber-cement panel cladding distress
- Manufacturing Facility - Warren, MN: Investigation of fire damage to metal building
- Private Residence - St. Paul, MN: Investigation of fire damage to wood structure
- Railroad Bridge - Minneapolis, MN: Investigation and structural analysis of steel girder damaged by vehicle impact
- Women's Shelter - Minneapolis, MN: Investigation of distress of multilevel wood structure
- Dairy Farm - Emerald, WI: Investigation of precast plank failure

##### Facade Access Equipment and Fall Protection

- Nationwide Insurance - Des Moines, IA: Design and load testing of facade access anchorages
- Federal Office Building - Minneapolis, MN: Design of fall protection anchorages