



#### EDUCATION

- Colorado School of Mines
  - Bachelor of Science, Engineering with Civil Specialty, 2009
- Purdue University
  - Master of Science, Civil Engineering, 2012
  - Doctor of Philosophy, Civil Engineering, 2014

#### PRACTICE AREAS

- Concrete Structures
- Structural Metals
- Bridges and Civil Infrastructure
- Structural Analysis/Computer Applications
- Repair and Rehabilitation
- Structural Testing

#### PROFESSIONAL AFFILIATIONS

- Structural Engineers Association of Illinois (SEAOI)

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2014, Kristi Selden has been involved with the evaluation, analysis, and strengthening of existing structures, including commercial and residential buildings, parking garages, and bridges. Her project work has included onsite investigations, structural analyses for a variety of loading conditions, repair design, preparation of construction documents, and construction observations. Dr. Selden also has experience with structural analysis computer software.

While attending Purdue University, Dr. Selden completed her dissertation on the structural fire behavior of steel-concrete composite floor beams. She conducted large-scale experimental structural testing at elevated temperatures and is experienced in the design, instrumentation, and implementation of load testing. As part of her academic research, Dr. Selden also developed 2D and 3D modeling approaches for the design and analysis of composite beams in fire conditions.

#### REPRESENTATIVE PROJECTS

##### Concrete Structures

- Federal Reserve Bank of Chicago - IL: Investigation, development of repair documents, and construction observations for vaulted sidewalk repairs
- Talcott Resurrection Parking Garage, Chicago, IL: Condition assessment of prestressed concrete parking garage
- Cityfront Place - Chicago, IL: Construction administration services for repair of multilevel reinforced concrete parking garage

##### Structural Metals

- Loyola University - Chicago, IL: Assessment of steel roof framing for green roof addition
- University of Nebraska Lincoln Football Stadium - Lincoln, NE: Analysis of stadium framing for football team banner
- Marquette Building - Chicago, IL - Analysis of existing steel framing for new equipment room

##### Bridges and Civil Infrastructure

- North Avenue Pedestrian Bridge - Chicago, IL: Investigation, structural analysis, and design for concrete deck replacement and steel superstructure repairs
- 606 Milwaukee Avenue Bridge - Chicago, IL: Erection procedure for converting abandoned four-span railroad bridge to single-span tied-arch bridge

##### Structural Analysis/Computer Applications

- U.S. Air Force Academy Cadet Chapel - Colorado Springs, CO: Analysis of steel framing for wind loads
- I-55 and Lake Shore Drive Interchange - Chicago, IL: Analysis of erection procedure for long-span curved steel girders

##### Repair and Rehabilitation

- Morton Salt Warehouse - Chicago, IL: Investigation, analysis, and repair design following wall collapse
- CNA Center - Chicago, IL: Repair and coating of roof steel framing to support house rig
- Cook County Hospital, Chicago, IL: Investigation and repair design for steel framing to support rooftop HVAC unit

##### Structural Testing

- 333 West Wacker - Chicago, IL: Load testing of floor slab for installation of new chiller
- Underwriters Laboratories - Northbrook, IL: Load rating of test frames