



#### EDUCATION

- Colorado School of Mines
  - Bachelor of Science, Structural Engineering, 2013
- Oregon State University
  - Master of Science, Structural Engineering, 2016
- University of Padua and Czech Technical University
  - Advanced master's degree in Structural Analysis of Monuments and Historical Constructions, 2017

#### PRACTICE AREAS

- Bridges and Civil Infrastructure
- Structural Analysis
- Failure/Damage Investigations
- Seismic

#### REGISTRATIONS

- Professional Engineer in OR

#### PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- Structural Engineers Association of Oregon (SEAO)

#### TECHNICAL COMMITTEES

- NCSEA - Seismic Committee
- SEAO - Seismic Committee, chair

#### CONTACT

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#### EXPERIENCE

Jonathan Knudtsen is involved in the assessment, evaluation, and rehabilitation of bridges and buildings of all material types. His projects have included structural analysis, load ratings, bridge inspections, and design and detailing of structural repairs. He has also participated in the design and evaluation of temporary works and construction sequencing. Before joining WJE in 2023, Mr. Knudtsen worked as a structural engineer at an engineering consulting firm, specializing in steel building design and seismic design for various structure types and lateral force-resisting systems.

#### REPRESENTATIVE PROJECTS

##### Bridges and Civil Infrastructure

- Martin Luther King, Jr. Avenue Bridge - Portland, OR: Bridge load rating refinement and design of strengthening for deficient steel stringers and connections
- Kankakee Street Bridge - Wilmington, IL: Structural analysis of masonry arch bridge
- Boone Bridge - Wilsonville, OR: Investigation of fatigue failures at modular bridge joint
- I-235 Bridge - Oklahoma City, OK: Detailed inspection of bridge post-tensioned strands

##### Structural Analysis

- Pudding River Bridge - Aurora, OR: Stability analysis of steel truss bridge
- Portland Art Museum - Portland, OR: Design and finite element analysis of new concrete shear walls and feature stair to replace existing concrete core in four-story building \*
- Atkinson Hall - Ithaca, NY: Vibration analysis of vibration-sensitive lab facility using finite element modeling \*

##### Failure/Damage Investigations

- Washington Square Mall Parking Garage - Tigard, OR: Structural evaluation of precast corbels following failure and design of repair and strengthening details
- Macy's Mechanical Penthouse - Salem, OR: Structural investigation of cracking and corrosion in commercial building
- Fort Stevens Guardhouse - Warrenton, OR: Structural investigation of damaged, built-up timber trusses and development of repair recommendations and details \*

##### Seismic

- Benson High School Campus - Portland, OR: Design of lateral force resisting system—consisting of buckling-restrained braces—for three new academic buildings \*
- North Valley Complex - Wilsonville, OR: ASCE-41 Immediate occupancy seismic retrofit of existing warehouse for use as an emergency operations facility \*

\* Indicates with previous firms