



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
 - Adv. Masters in Structural Analysis of Monuments and Historical Constructions, 2017

PRACTICE AREAS

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

REGISTRATIONS

- Professional Engineer in OR and WA

PROFESSIONAL AFFILIATIONS

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

TECHNICAL COMMITTEES

- SEAO Seismic Committee

CONTACT

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EXPERIENCE

Jonathan Knudtsen specializes in the assessment, evaluation, and rehabilitation of bridges and buildings of all material types. His work includes structural analysis, bridge inspection and load rating, and failure/damage investigations. He also designs temporary shoring and structural repairs for damaged and deteriorated structures. Prior to joining WJE, Mr. Knudtsen worked as a structural engineer at an engineering consulting firm, specializing in steel building design and seismic design.

REPRESENTATIVE PROJECTS

Bridges and Civil Infrastructure

- I-235 Bridge - Oklahoma City, OK: Corrosion inspection of bridge post-tensioned strands
- Load Rating Refinements - Various Locations, OR: Detailed modeling and analysis to refine load ratings for steel and reinforced concrete bridges
- Chicago Skyway High Bridge - Chicago, IL: Load rating of through-truss steel bridge
- Dicky Road Bridge - East Chicago, IN: Load rating of bascule bridge
- Kankakee St. Bridge - Wilmington, IL: Structural analysis of masonry arch bridge
- Complex Truss Bridge - IA: 3D finite element analysis of bridge
- South Yamhill River Bridge - Willamina, OR: Design of temporary bridge girder shoring for pin and hanger replacement
- Louisville and Indiana Clagg Bridge - Louisville, KY: Evaluation of temporary shoring for replacement of sheaves supporting lift span and counterweight
- Boone Bridge - Wilsonville, OR: Investigation of modular bridge joint fatigue failures and design of repairs
- 2400 NW Front Avenue - Portland, OR: Pre-purchase inspection of timber wharf

Failure/Damage Investigations

- Washington Square Mall Parking Garage - Tigard, OR: Investigation of failed corbel and repair design
- Green Acre Farms Baling Building - Wapato, WA: Fire damage investigation
- Nippon Dynawave Maintenance Building - Longview, WA: Fire damage investigation
- Delta Logistics - Sherwood, OR: Investigation of slab-on-grade cracking and delamination

- 5317 NE St Johns Road - Vancouver, WA: Vehicle impact investigation and repair design
- Private Residence - Portland, OR: Tree impact investigation
- Fort Stevens Guardhouse - Warrenton, OR: Structural investigation and repair design of damaged built-up timber trusses *

Seismic

- Bridge Seismic Evaluations - Various Locations, IL: Seismic evaluation of bridges of various types using a risk-targeted assessment framework
- North Valley Complex - Wilsonville, OR: Design of ASCE 41 seismic retrofit of existing warehouse for use as Immediate Occupancy emergency operations facility *
- Portland General Electric Integrated Operations Facility - Tualatin, OR: Design of Immediate Occupancy operations center for Portland electric utility *
- Benson High School - Portland, OR: Analysis and design of lateral force-resisting system for three new academic buildings *
- Portland Art Museum - Portland, OR: Analysis and design of new reinforced concrete shear walls for renovation of four-story existing museum building *

* Indicates work with previous employer