



Richard Dethlefs PE, SE

President

Department
Engineering

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Locations
Seattle, WA

Biography

Richard is a licensed professional and structural engineer with over twenty-five years of experience performing structural damage investigations, collapse cause investigations, repair and rehabilitation designs, and code upgrade analyses. His experience includes the analysis and conceptual design of seismic upgrades to a historic steel frame high-rise, detailed modeling and load testing of post-tensioned concrete beams at the Miami Airport parking garage, and over 100 condominium construction defect and progressive rot claims. Richard is an experienced expert witness who has provided litigation support services and witness testimony on over 100 projects, many of which have included trial testimony, testimony at arbitrations and presentations to dispute review boards. In addition to teaching a course on special inspections of wood-framed lateral force resisting systems, Richard has presented publications at numerous professional conferences and has taught courses on forensic evaluation of structural failures to graduate-level students at the University of Washington.

Education

- University of Washington | Seattle, WA
M.S. - Structural and Geotechnical Engineering Mechanics
- University of Washington | Seattle, WA
B.S. - Civil Engineering

Professional Experience

- 2017 - Current | Executive Partner | YOUNG & Associates
- 1995 - 2017 | Principal | Wiss Janney Elstner Associates Inc.
- 1994 - 1994 | Engineer | Arvid Grant Associates Inc.

Areas of Practice

- Building Code Upgrade Review
- Damage Assessment
- Failure Analysis
- Litigation Support
- Repair and Rehabilitation Design
- Structural Analysis

Representative Consulting Assignments

- Seattle Sea Wall Builder's Risk Claim
Seattle, WA | Review of claim documents and determination of extent of related damage.
- Korean High-Speed Rail System
South Korea | Non-destructive testing of reinforced concrete bridge piers.
- Hurricane Katrina
Southern States, USA | Inspection and reporting of over 400 damaged structures following Hurricane Katrina.
- Tower Crane Collapse

- Bellevue, WA | Investigation of cause and litigation support services.
- SODO Center
Seattle, WA | Investigation of earthquake damage following 2001 Nisqually Earthquake.
- Clatskanie Ethanol Plant
Clatskanie, OR | Investigation of cause of movement and foundation damage of two dozen large industrial storage tanks.
- McGuire Building
Seattle, WA | Investigation of construction defect issues and corrosion of post-tensioning tendons at 25-story high rise.
- Robinson Road Bridge
Nampa, ID | Investigation of cause of collapse and testimony at dispute review board.

Licenses

- Alabama | 38805-E | Professional Engineer
- Alaska | AELC10515 | Civil Engineer
- Arizona | 68916 | Professional Structural Engineer
- California | C57213 | Civil Engineer
- Colorado | 0055346 | Professional Engineer
- Connecticut | 34227 | Professional Engineer
- Delaware | 24508 | Professional Engineer (Structural)
- Florida | 86907 | Professional Engineer
- Idaho | 18320 | Professional Engineer
- Illinois | 081.008301 | Structural Engineer
- Kansas | 27275 | Professional Engineer
- Minnesota | 56968 | Civil Engineer
- Montana | 16016 | Professional Engineer
- Nebraska | E-17566 | Professional Structural Engineer
- New York | 102052 | Professional Engineer
- North Carolina | 050535 | Professional Engineer
- Oklahoma | 31233 | Professional Engineer
- Oregon | 71134PE | Professional Engineer (Civil and Structural)
- Rhode Island | 13524 | Professional Engineer (Structural)
- Tennessee | 123355 | Professional Engineer
- Texas | 128253 | Professional Engineer (Structural)
- Utah | 11521265-2203 | Professional Structural Engineer
- Vermont | 018.0134678 | Professional Engineer
- Washington | 35487 | Professional Engineer (Civil and Structural)
- Wyoming | PE17954 | Professional Engineer (Civil and Structural)

Publications

- Dethlefs, R.A., Searer, G.R., Mahaney, J.A., & Gatto, K.S., 2006, San Francisco, CA, A Rational Approach to Evaluation of Shearwall Nail Spacing and Recommended Spacing Tolerances, 8th US Conference on Earthquake Engineering
- Larson, R.A., Dethlefs, R.A., & Searer, G.R., April, 2014, Boston, MA, Case Studies and Practical Examples Related to Facade Access Equipment, ASCE Structures Congress
- Dethlefs, R.A. & Martin, Z., November, 2009, Washington, D.C., Collapse of the Wimer Covered Timber Bridge, ASCE 5th Forensic Engineering Congress
- Searer, G.R., Mahaney, J.A. & Dethlefs, R.A., 2004, A Rational Approach to Investigation, Evaluation, and Seismic Retrofit of Modern Residential Wood-Framed Structures, 13th World Conference on Earthquake Engineering

- Dethlefs, R.A., Searer, G.R., & Gatto, K.S., 2004, Seismic Analysis/Upgrade Design for a Historic Steel-Framed Highrise, ASCE Structures Conference
- Hill, H.S., Searer, G.R., Dethlefs, R.A., Paret, T.F., & Lewis, J., August, 2010, Certifying that Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, Practice Periodical on Structural Design and Construction ASCE, Vol. 15, No. 3, pp 194-200
- Dethlefs, R.A. & Bustamente, A., February, 2009, Design and Testing of Davit Supports for Powered Platforms on Buildings, Structural Engineer, pp 18-21
- Dethlefs, R.A. & Martin, Z., 2012, San Francisco, CA, Collapse of Robinson Road Bridge Falsework, ASCE 6th Congress on Forensic Engineering
- ASCE Task Committee on Facade Access Design Guidelines, 2015, Facade Access Equipment - Structural Design, Evaluation, and Testing, ASCE publications
- Dethlefs, R.A. & Searer, G.R., 2003, Interpreting Model Building Code Requirements for Repairs to Existing Structures, ASCE 3rd Forensic Conference Proceedings
- Hill, H.S., Searer, G.R., Dethlefs, R.A., Paret, T.F., & Lewis, J., August, 2010, Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, Practice Periodical on Structural Design and Construction ASCE, Vol. 15, No. 3, pp 186-193
- Gatto, K.S., Martin, Z. & Dethlefs, R.A., 2012, San Francisco, CA, Practical Evaluation of Two-Way Slabs with Distressed PT Strands, ASCE 6th Congress on Forensic Engineering
- Searer, G.R., Dethlefs, R.A., & Paret, T.F., April, 2014, Boston, MA, Engineers Above the Law, ASCE Structures Congress
- Dethlefs, R.A., Martin Z. & Sterns, A.J., April, 2011, Las Vegas, NV, Metal Liquid Storage Tanks on Sloped Foundations... What Could Possibly Go Wrong?, ASCE Structures Congress