Richard Dethlefs

SE, PE

President

Department
Engineering Services

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Locations
Phoenix, AZ

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.

Credentials

- SE | Structural Engineer
- PE | Professional Engineer

Representative Consulting Assignments

- Seattle Sea Wall Builder's Risk Claim | Seattle, WA | Review of claim documents and determination of extent of related damage.
- Tower Crane Collapse | Bellevue, WA | Investigation of cause and litigation support services.
- 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.
- SODO Center | Seattle, WA | Investigation of earthquake damage following 2001 Nisqually Earthquake.
- McGuire Building | Seattle, WA | Investigation of construction defect issues and corrosion of post-tensioning tendons at 25-story high rise.
- Clatskanie Ethanol Plant | Clatskanie, OR | Investigation of cause of movement and foundation damage of two dozen large industrial storage tanks.
- Robinson Road Bridge | Nampa, ID | Investigation of cause of collapse and testimony at dispute review board.

Professional Experience

- 2019 - Current | President | YA Engineering Services
- 2017 - 2021 | Executive Partner | YA Group

- 1995 - 2017 | Principal | Wiss Janney Elstner Associates Inc.
- 1994 - 1994 | Engineer | Arvid Grant Associates Inc.

Area of Practice

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

Publications and Presentations

- Dethlefs, R.A. & Bustamente, A., Design and Testing of Davit Supports for Powered Platforms on Buildings, Structural Engineer, pp 18-21
- ASCE Task Committee on Facade Access Design Guidelines, Facade Access Equipment - Structural Design, Evaluation, and Testing, ASCE publications
- Dethlefs, R.A. & Martin, Z., San Francisco, CA, Collapse of Robinson Road Bridge Falsework, ASCE 6th Congress on Forensic Engineering
- Dethlefs, R.A., Martin Z. & Sterns, A.J., Las Vegas, NV, Metal Liquid Storage Tanks on Sloped Foundations… What Could Possibly Go Wrong?, ASCE Structures Congress
- Larson, R.A., Dethlefs, R.A., & Searer, G.R., Boston, MA, Case Studies and Practical Examples Related to Facade Access Equipment, ASCE Structures Congress
- Dethlefs, R.A., Searer, G.R., Mahaney, J.A., & Gatto, K.S., San Francisco, CA, A Rational Approach to Evaluation of Shearwall Nail Spacing and Recommended Spacing Tolerances, 8th US Conference on Earthquake Engineering
- Hill, H.S., Searer, G.R., Dethlefs, R.A., Paret, T.F., & Lewis, J., 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
- Hill, H.S., Searer, G.R., Dethlefs, R.A., Paret, T.F., & Lewis, J., 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., Searer, G.R, & Gatto, K.S., Seismic Analysis/Upgrade Design for a Historic Steel-Framed Highrise, ASCE Structures Conference
- Gatto, K.S., Martin, Z. & Dethlefs, R.A., San Francisco, CA, Practical Evaluation of Two-Way Slabs with Distressed PT Strands, ASCE 6th Congress on Forensic Engineering
- Dethlefs, R.A. & Martin, Z., Washington, D.C., Collapse of the Wimer Covered Timber Bridge, ASCE 5th Forensic Engineering Congress
- Dethlefs, R.A. & Searer, G.R., Interpreting Model Building Code Requirements for Repairs to Existing Structures, ASCE 3rd Forensic Conference Proceedings
- Searer, G.R., Dethlefs, R.A., & Paret, T.F., Boston, MA, Engineers Above the Law, ASCE Structures Congress
- Searer, G.R., Mahaney, J.A. & Dethlefs, R.A., A Rational Approach to Investigation, Evaluation, and Seismic Retrofit of Modern Residential Wood-Framed Structures, 13th World Conference on Earthquake Engineering

Education

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

Affiliations

- American Society of Civil Engineers (ASCE)

Licenses

- 38805-E - Alabama - Professional Engineer
- AELC10515 - Alaska - Civil Engineer
- 68916 - Arizona - Professional Structural Engineer
- C57213 - California - Civil Engineer
- 55346 - Colorado - Professional Engineer
- 34227 - Connecticut - Professional Engineer
- 24508 - Delaware - Professional Engineer (Structural)
- 86907 - Florida - Professional Engineer
- 18320 - Idaho - Professional Engineer
- 81.008301 - Illinois - Structural Engineer
- 27275 - Kansas - Professional Engineer
- 56968 - Minnesota - Civil Engineer
- 16016 - Montana - Professional Engineer
- E-17566 - Nebraska - Professional Structural Engineer
- 102052 - New York - Professional Engineer
- 50535 - North Carolina - Professional Engineer
- 31233 - Oklahoma - Professional Engineer
- 71134PE - Oregon - Professional Engineer (Civil and Structural)
- 13524 - Rhode Island - Professional Engineer (Structural)
- 123355 - Tennessee - Professional Engineer
- 128253 - Texas - Professional Engineer (Structural)
- 11521265-2203 - Utah - Professional Structural Engineer
- 18.0134678 - Vermont - Professional Engineer
- 35487 - Washington - Professional Engineer (Civil and Structural)
- PE17954 - Wyoming - Professional Engineer (Civil and Structural)