



Lee Dunham

PE, SE

Senior Managing Engineer

Department

Engineering Services

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Locations

Seattle, WA

Biography

Lee is a structural engineer specializing in the investigation and repair of existing buildings. With 22 years of industry experience, Lee has performed structural design and analysis for new buildings, as well as the structural investigation, repair, and seismic upgrade of existing buildings. Lee is a leading expert in building forensics. He regularly provides expert witness consulting on construction defect litigation cases and large-loss property insurance claims throughout the Pacific Northwest and beyond. As a writer and speaker, Lee has published articles and given presentations at the local, national, and international levels.

Credentials

- PE | Professional Engineer
- SE | Structural Engineer

Representative Consulting Assignments

- Concrete Bridge | Covington, WA | Forensic investigation & Structural Analysis - Performed destructive and non-destructive testing of precast concrete bridge as well as review of original design in order to determine capacity and vehicle rating.
- Reinforced Concrete Parking Garage | Mercer Island, WA | Forensic Investigation & Structural Analysis - Reviewed substantial cracking at post-tensioned slabs; provided repair design which included reinforcing slab transitions and waterproofing of courtyard over slab.
- Steel-framed Structure | Spokane, WA | Forensic investigation & Structural Analysis - Reviewed design of 3-story steel-framed call center leased by large wireless provider to determine cause of excessive floor vibrations; performed vibration study with accelerometers.
- Highrise Condos | Seattle, WA | Construction Defect Review - Reviewed breaches in construction tolerances for post-tensioned slabs.
- Reinforced Concrete Parking Garage | Seattle, WA | Forensic Investigation - Performed destructive and non-destructive testing of reinforced concrete structure to assess condition of reinforcing elements and strength of concrete.
- Apartment Building | Seattle, WA | Forensic Investigation - Assessed and evaluated water damage to 4-story wood-framed structure as part of large-loss insurance claim.

Professional Experience

- 2021 - Current | Senior Managing Engineer | YA Engineering Services
- 2020 - 2021 | Senior Regional Supervisor | YA Engineering Services
- 2003 - 2020 | Principal / Structural Engineer | OAC Services, Inc.
- 1998 - 2003 | Engineer | Robert Fossatti Associates

Area of Practice

- Building Envelope
- Condition Assessment
- Construction Administration
- Damage Assessment
- Earthquake Engineering
- Failure Analysis
- Litigation Support
- Marine Structures
- Non-Destructive Testing
- Repair and Rehabilitation Design
- Structural Analysis
- Sustainability
- Water Leakage Testing and Analysis

Publications and Presentations

- Dunham, L., Washington State Chapter Community Associations, Maintenance vs. Covered Loss: An Engineer's Perspective, WSCAI Journal
- Dunham, L., Historical Building Enclosure Performance Through the Lens of Forensic Investigations, International Institute of Building Enclosure Consultants, Interface Magazine
- Dunham, L., NCSEA / CASE / SEI, Decayed Wood Structures - Reconstructing a History of Impairment,, STRUCTURE Magazine
- Dunham, L., Understanding Building Skins Through Failures: Trends in Failure Mechanisms and their Costs, 13th Conference on Advanced Building Skins, Bern, Switzerland

Education

- University of New Brunswick - Masters of Engineering - Soil Structural Interaction - Fredericton
- University of New Brunswick - Bachelors of Engineering - Civil Engineering - Fredericton

Affiliations

- American Society of Civil Engineers (ASCE)
- Structural Engineers Association of Washington (SEAW)

Licenses

- 38319 - Washington - Professional Engineer (Civil and Structural)
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