John Bergeleen

PE, SE

Senior Consultant

Mr. John Bergeleen is a Senior Consultant with Engineering Systems Inc. (ESi) in the Civil and Structural Engineering Practice, based in Albuquerque, NM and connected to ESi's Irvine, CA office.

With more than 12 years of structural engineering experience, his previous design experience includes work in the healthcare, military, and industrial sectors, including high-seismic design, hurricane and coastal design, and design of structures in challenging mountainous conditions. He performs forensic investigations and engineering analyses of damaged or distressed structures and develops practical repair designs, plans, and specifications. His work includes structural repairs and renovations, construction defect and storm damage investigations, and condition and seismic evaluations of wood, steel, and concrete systems. Mr. Bergeleen also supports industrial and infrastructure clients with crane runway and equipment-support assessments, bridge-related inspections, and foundation movement evaluations.

Additionally, Mr. Bergeleen performs investigations in OSHA related fall protection and construction safety design, assessment, and incident investigations involving access, personal fall arrest systems, guardrails, and ladder safety. He also performs investigations into incidents involving recreational climbing and aerial adventure safety systems.

Education

BS, Civil Engineering. Washington State University (Summa Cum Laude). 2011

Licenses & Certifications

Licensed Structural Engineer (S.E.)

- State of Washington S.E. License 55544
- State of California S.E. License 7229

Licensed Professional Engineer (P.E.)

- State of Washington P.E. License 55544

Contact Information

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ESi Irvine

15235 Alton Parkway, Suite 120
Irvine, CA 92618

Areas of Specialization

- Structural Repairs and Renovations
- Construction Defects
- Cranes and Aerial Devices
- Storm Damage Investigation
- OSHA Compliance and Fall Protection
- Rock Climbing Safety Systems

- State of New Mexico P.E. License 28065
- State of California P.E. License 95014
- State of Colorado P.E. License 0065340

Languages

- Spanish (Intermediate)

Positions Held

Engineering Systems Inc., Irvine, CA (Currently based out of Albuquerque, NM)

- Senior Consultant, 2025 – Present
- Senior Staff Consultant, 2022 – 2024

Coffman Engineers Inc., Spokane, WA

- Senior Structural Engineer, 2013 – 2022

Spokane Mountaineers Mountaineering School, Spokane, WA

- Director, 2016 – 2021

Continuing Education

- **Certified SPRAT/IRATA Level 1 Rope Access Technician,** 2025
- **Fall Protection – Competent Person,** 2023
- **Aerial Lift Training –** ANSI A92, 2022
- **30 Hour Outreach Training Program – Construction –** OSHA, 2022
- **Confined Space Hazards,** 2019
- **Bridge Condition Inspection Training –** FHWA**,** 2019
- **Post-Disaster Building Safety Evaluation Training –** ACT 20/45, 2018

Professional Affiliations/Honors

Structural Engineers Association

- Member, Structural Engineers Association of Washington (SEAW), 2013 – Present
- Member, Structural Engineers Association of New Mexico (SEANM), 2022 – Present

American National Standards Institute (ANSI)

- Vice Chair, ANSI/ASSP A10 Committee Subgroup A10.18, Safety Requirements for Temporary Roof and Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges in Construction and Demolition Operations, 2024 – Present
- Member, ANSI/ASSP A10 Committee Subgroup A10.32, Personal Fall Protection Systems Used in Construction and Demolition Operations, 2023 – Present
- Member, ANSI Z359 Committee Subgroup Z359.16, Safety Requirements for Climbing Ladder Fall Arrest Systems, 2023 – Present

Washington State University

- Crimson Regent Scholar

Project Experience

Climbing Gym Fall Investigation (Recreational Fall Protection)

- Lead forensic engineer investigating a fall incident at an indoor climbing facility involving an automated belay system.
- Reviewed incident documentation, photographs, and available inspection materials and evaluated the configuration and use environment of the climbing wall and fall protection system.
- Performed laboratory testing and analysis using exemplar equipment to assess potential failure mechanisms, including abrasion, loading conditions, and device–environment interaction.
- Evaluated climbing system use, inspection practices, maintenance procedures, and compliance with manufacturer guidance and applicable safety standards.
- Assessed how installation geometry and positioning, wall shape, and user interaction could influence wear, performance, and fall protection effectiveness.

Construction Fall Protection Incident Investigation

- Lead investigator for a construction-related fall incident involving work near an unprotected edge and the use of fall protection systems.
- Conducted site inspections and reviewed incident reports, witness testimony, and available documentation related to work practices and equipment configuration.
- Evaluated fall hazard exposure, access methods, and work activities relative to OSHA regulations and applicable ANSI fall protection standards.
- Assessed the adequacy of fall protection planning, anchorage availability, equipment selection, and system configuration for the work being performed.
- Analyzed the interaction between material-handling operations and fall hazards present at the work area.

Pipeline Compressor Stations – Fall Protection Assessment

- Lead investigator for multi-state assessments of fall protection hazards at gas pipeline compressor stations.
- Performed on-site inspections of ladders, platforms, and elevated work areas for OSHA compliance.
- Documented non-compliant conditions and developed practical mitigation designs including guardrails, tie-off points, platforms, and access improvements.
- Coordinated with facility operators, manufacturers, and OSHA representatives.

Crane Runway Evaluations

- Lead investigator for condition assessment and structural evaluation of legacy crane runway systems in manufacturing plant.
- Identified overstressed members, cracked welds, and deteriorated connections.
- Performed analysis and developed reinforcement detailing consistent with CMAA and ASCE guidance.

U.S. Air Force Base Building Evaluation

- Engineering lead for structural safety evaluation of an existing facility proposed for change of use.
- Performed inspections, as-built documentation, and analysis under wind, snow, and seismic loading.
- Determined building was unsafe for occupancy; supported decision-making for demolition and replacement.

Cement Mixer Structure Inspection

- Lead investigator for inspection of deteriorating steel and concrete support structures at a concrete plant.
- Documented corrosion, section loss, and deteriorated concrete and its impacts on support stability.
- Developed targeted repair solutions to maintain short-term operational safety while planning large-scale replacement.

Waste-to-Energy Facility Ash House Inspection

- Lead investigator for inspection of severely deteriorated industrial equipment support structures in a corrosive environment.
- Assessed steel and concrete elements exhibiting section loss, spalling, and exposed reinforcement.
- Developed emergency stabilization measures and long-term remediation recommendations.

Hospital Retrofits and Additions

- Project manager and lead investigator for structural evaluation and retrofit design for phased additions and renovations to an existing hospital campus.
- Assessed complex existing structures consisting of wood, steel, concrete, and masonry constructed over multiple decades.

- Performed condition assessments, feasibility evaluations, and seismic and code-based analyses to support repairs, retrofits, and integration of new structural elements.

Sodium Chlorite Facility Silo Addition

- Project manager and lead investigator for evaluation and retrofit design associated with the installation of a new silo and process equipment in a highly corrosive industrial environment.
- Inspected existing structural systems to identify deterioration and assess load capacity and compatibility with new equipment.
- Designed targeted concrete and steel retrofits to safely integrate new loads while maintaining continuity with existing gravity and lateral systems.