

PRINCIPAL CIVIL-STRUCTURAL ENGINEER

Craig K. Jensen, P.E.

Jensen Engineering & Construction Services, LLC (JEC Services)

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EDUCATION:

2005 Bachelor of Science, Civil Engineering: Structural Emphasis – With Honors
Washington State University, Pullman, Washington

EXPERIENCE:

2015-Present **JEC Services**
Seattle-Tacoma, Washington

Principal Engineer. Forensic engineering investigations to determine cause of failure, scope of damage, repair recommendations, repair cost and repair schedules. Engineering expert consultation, depositions and expert testimony for property owners, insurance claims and litigation. Civil-structural engineered designs for buildings, structures, mechanical attachments, fall arrest anchors, highways, stormwater and retaining walls. Non-destructive testing utilizing ground penetrating radar systems and x-ray to conduct evaluations of concrete and masonry structures. Scanning to locate mild reinforcement, post-tensioned steel, conduit, live electrical wires, grouted/ungouted masonry cells and slab/component thickness. Infrared thermal inspection, vibration analysis and acoustic emissions for leak detection and damage evaluation. Floor friction slip resistance testing. Incidents have involved foundation cracks and settlement, wall cracks and excessive bulging, code compliance, water intrusion and wood rot, manufacturing, design and construction defects, excessive deflection, retaining walls, storm damage, ground slope failures and slip and falls, etc.

2013-2015 **Engineering Design & Testing Corp.**
Seattle-Tacoma, Washington

Consulting Engineer. Forensic engineering failure investigations to determine cause, scope of damage, repair recommendations, repair cost and schedules. Engineering expert consultation for insurance claims and litigation. Incidents involved personal injury, code compliance, structure collapse, construction site accidents, wood rot, wall cracks and excessive bulging, storm, wind, hail, seismic, building materials, foundation settlement and cracks, retaining walls, roof collapse, ceiling collapse, fire sprinkler systems, zip lines, sewer systems, ground slope failure, water intrusion, excessive deflection, sagging, vibrations, fallen trees, slip and falls, fires and explosions. Building code and safety standards compliance review and assessments.

2017-Present **Keystone Experts and Engineers**
Seattle-Tacoma, Washington

Consulting Engineer. Responsible for structural and architectural forensic consultation and investigation to determine the cause and origin of various site issues, including design and construction defects, and weather-related damage to residential, commercial and industrial properties. Capable of performing site evaluations, field analysis, and assessments of structural and architectural systems, low/steep-slope roofing systems, and foundation systems. Provide evaluations for failures as a result of hail damage, wind damage, moisture intrusion, flooding, building envelope failures, and general construction failures, as well as providing general recommendations for remediation and repair. Performs structural failure analysis, and evaluation of damage from hurricanes, tornados, ice/wind/snow, fires, explosions, blasting, construction vibrations, and differential foundation movement. Completes forensic investigations and professional damage assessment reports for properties affected by storm events. This includes damage from Flood, Wind, Hail, etc.

2012-13 **Steeler, Inc.**
Seattle, Washington

Civil Engineer – Structural. Analysis, design, plan development and material selection of building frames and systems for commercial, retail, institutional, industrial, mixed-use, multi-family, and residential buildings and structures. Building and construction code compliance including wind, seismic and gravity loads. Evaluation of existing buildings, structures and materials including damage assessment, review of structural designs, repair options, schedules and cost estimation. Development of testing programs for new building products. Review and development of manufacturing processes, quality assurance and control programs and cost evaluation for production of sheet steel products.

2012 **Richmond Engineering**
Olympia, Washington

Civil Engineer – Structural and Hydraulic. Analysis, design, construction administration, project management and material selection for domestic water and sewer systems including water quality and pressure, pump capacity and code compliance.

2010-12 **Washington State Department of Transportation**
Tumwater, Washington

Civil Engineer – Geotechnical and Project Manager. Geotechnical analysis, design, reports and recommendations for transportation structures, including bridge foundations, retaining walls, engineered slope and stability, ground settlement and load-bearing capacity. Determination of soil parameters for project elements including roads, bridges, sign structures and culverts. Development of field exploration programs and laboratory testing of soils. Constructability and feasibility analysis, code compliance, planning, value engineering, scheduling, cost estimates, design and construction budgets, workforce projections and project controls.

2007-09 **Coughlin Porter Lundeen**
Seattle, Washington

Civil Engineer - Structural. Design, analysis, plan development and material selection of building structural systems for commercial, institutional, educational, residential, parking, storage, and tower cranes. Designs consisted of mild reinforced and pre-stressed concrete, hot-rolled steel, cold-formed steel, wood, and masonry. Evaluation of existing structures for repairs, additions and renovations. Code compliance and determination of wind, seismic and gravity load distributions. Construction administration for multiple buildings, including structural observation, review and approval of post-tensioned stressing reports, shop drawings and submittals, structural sketches, evaluation of contract compliance, evaluation reports, and solutions to construction obstacles.

2005-07 **Washington State Department of Transportation**
Bellingham, Washington

Civil Engineer – Highway and Hydraulics. Design, analysis, plan preparation, planning and material selection for roadway improvement projects, including culvert replacements, roadway widening and realignments, roadway geometry, and sight distance. Projects included stormwater and hydraulic systems, hydrology, flooding, drainage, culverts, open channel flow, foundations, retaining walls, headwalls, wingwalls, superelevations, acceleration lanes, erosion and sediment control best management practices, grading, digital terrain modeling, surveying and staking reports, earthwork cross-sections and quantification, roundabouts, mining site reclamation and permitting. Project management, constructability and feasibility analysis, design and construction schedules, and cost estimates and value engineering. Code compliance and Americans with Disability Act requirements.

PRESENTATIONS:

Americans with Disabilities Act and Accessibility Standards,
2015, Nashville, Tennessee. Engineering Design & Testing Corp. – Fellowship Conference

Modern Day Building Codes,
2014, Lenexa, Kansas. Engineering Design & Testing Corp. – Employee Training Program

Design and Code Compliance of Cold-Formed Steel Framing and Assemblies,
2013, Seattle, Washington. Steeler, Inc. – Employee Training Program

Design and Analysis of Rigid, Semi-Rigid, and Flexible Building Diaphragms,
2009, Seattle, Washington. Coughlin Porter Lundeen – Professional Development Program

NON PEER-REVIEWED PUBLICATIONS:

Jensen, C.K., “From Sketch to Space Needle”, *The Stress Point*, Volume 28, Number 2,
Engineering Design & Testing Corp., Columbia, South Carolina, June 2015

Jensen, C.K., “Seismic Retrofit: Aging in a Seismic Space”, *The Stress Point*, Volume 28,
Number 1, Engineering Design & Testing Corp., Columbia, South Carolina, March 2015

PROFESSIONAL ORGANIZATIONS:

Structural Engineers Association of Washington (SEAW)
Claims and Litigation Management Alliance (CLM)

REGISTRATIONS:

Registered Professional Engineer in Arizona (#58899)
Registered Professional Engineer in California (#83759)
Registered Professional Engineer in Florida (#88272)
Registered Professional Engineer in Hawaii (#18299)
Registered Professional Engineer in Idaho (#15875)
Registered Professional Engineer in Louisiana (#0046106)
Registered Professional Engineer in Nevada (#022959)
Registered Professional Engineer in Oregon (#88920)
Registered Professional Engineer in Texas (#118002)
Registered Professional Engineer in Washington (#48179)
National Council of Examiners for Engineering and Surveying (# 55828)
Haag Certified Inspector – Residential Roofs (# 201401117), Inactive
Haag Certified Inspector – Commercial Roofs (# 201401117), Inactive
Registered WAsafe Type 1 Volunteer Engineer for Post-Disaster Building Safety Structural
Evaluations Including Multi-Family/Commercial Over 5 Stories & Complex Structures
Registered Volunteer Engineer with Cal OES for Post-Disaster Building Safety Evaluations

PARTIAL PROJECT LIST:

Nintendo of America, Parking Garage

Gravity engineering calculations and plans preparation for a four-story post-tensioned concrete parking garage in Redmond Washington. This included concrete slabs on grade, elevated post-tensioned & mild reinforced concrete slabs and beams, isolated, strip, elevator and construction crane footings, basement walls, interior masonry walls, steel canopies and stair framing.



**King Co. Fire District,
Fire Station
Headquarters**

Lateral engineering calculations and plans preparation for a two-story fire station in Kenmore Washington. The building consisted of truck bays, a two story living quarters, and lobby. The lateral system

was a combination of steel concentric braced frames, special reinforced concrete shear walls, and wood structural panel shear walls. The design also included wood struts, diaphragms, chords, studs, concrete combined footings, plinths, steel canopies, masonry veneer, and wind and seismic loading.

Microsoft, Office Buildings

Construction administration of two four-story post-tensioned office buildings located in Redmond Washington. The buildings were flat plate post-tensioned concrete slabs with special reinforced concrete shear walls and round concrete columns. Duties included liaison to the architect and contractor, attending meetings,



site visits and reports, maintaining organized records, review and approval of post-tensioned stressing reports, shop drawings, and submittals, and providing solutions to construction obstacles by providing responses to RFI's and structural sketches.

**Seattle Public Schools,
Nathan Hale HS**

Gravity and lateral engineering calculations and plans preparation for the addition and renovation of two school buildings in Seattle Washington. Duties included mild reinforced concrete beams and slabs, special reinforced shear walls, diaphragms, steel

struts, and seismic loads. This also included construction administration tasks such as liaison to the architect and contractor, attending meetings, site visits and reports, answers to RFI's, and review and approval of shop drawings and submittals.

Construction Admin., Microsoft Office Building 94 in Redmond, WA

Construction Admin., Nathan Hale High School Library Renovation in Seattle, WA

Construction Admin., South Medford High School Classrooms in Medford, OR

Structural Design, Microsoft Office Building 244 in Redmond, WA

Structural Design, Microsoft Office Building 245 in Redmond, WA

Structural Design, MS Office Bldg. & Underground Parking Garage in Redmond, WA

Structural Design, Omak High School Concession Stand in Omak, WA

Structural Design, Issaquah High School Multi-Use Building in Issaquah, WA
Structural Design, Nathan Hale High School Weight Room Addition in Seattle, WA
Structural Design, Nathan Hale High School Library Renovation in Seattle, WA
Structural Design, Lone Pine Elementary Gymnasium in Medford, OR
Structural Design, Lone Pine Elementary Classrooms in Medford OR
Structural Design, Talus Corporate Center Parking Garage in Issaquah, WA
Structural Design, Steel Frame for Ice Machine, Dillingham, AK
Structural Design, Antennae Tower Foundation, Unalaska, AK
Structural Design, Steel Hoisting Platform, Port, AK
Structural Design, Forklift Ramps, Port, AK
Structural Design, Concrete Firestops on Dock Piers, Whidbey Island, WA
Structural Design, Residential Elevated Deck Addition, Issaquah, WA
Structural Design, Concrete Retaining Wall and Fence in La Conner, WA
Structural Evaluation, Steel Support Frames for Condensers, Dillingham, AK
Structural Evaluation, Duplex on Hillside in Seattle, WA
Structural Evaluation, Residence on a Hillside in Puyallup, WA
Structural Evaluation, Tilted Residence in Buckley, WA
Structural Evaluation, Fire Damage in Port Orchard, WA
Condition Assessment, Apartment Building near Construction Site in Seattle, WA
Hwy. Design, State Route 548 Terrell Creek Culvert Replacement in Blaine, WA
Hwy. Design, State Route 20 Safety & Preservation in Burlington, WA
Hwy. Design, State Route 11 Chuckanut Safety & Preservation in Burlington, WA
Hwy. Design, State Route 20 Barrier Creek Slope Stabilization in WA
Hwy. Design, State Route 20 Red Cabin Creek Bridge Replacement in Burlington, WA
Hwy. Design, State Route 9 Roundabout in Burlington, WA
Hwy. Design, State Route 546 Badger Road Paving in Lynden, WA
Hwy. Design, State Route 542 Baptist Creek Fish Passage in Deming, WA
Hwy. Design, State Route 542 High & Hedrick Creek Fish Passage in Bellingham, WA
Hwy. Design, State Route 9 Realignment and Widening in Sumas, WA
Hwy. Design, State Route 539 Guide Meridian Widening in Bellingham, WA
Hwy. Design, State Route 539 Guide Meridian Widening in Lynden, WA
Hwy. Design, Interstate Route 5 On/Off Ramps through Bellingham, WA
Hwy. Design, Interstate Route 5 Joe Leary to Nulle Road Paving in Burlington, WA
Hwy. Design, Interstate Route 5 Seattle Sign Structures in Seattle, WA
Geotech. Design, Interstate Route 5 Mellen Sign Structures in Centralia, WA
Geotech. Design, Interstate Route 5 Columbia River Crossing on border of OR and WA
Geotech. Design, US Route 97 Butler Bridge/Slope Replacement in Goldendale, WA
Feasibility Analysis, Utilizing Ground Penetrating Radar for Pavement Depths at an Intersection in Blaine, WA
Investigation-Safety Evaluation, Slip and Fall in Rochester, WA
Investigation-Cause of Failure, Mobile Zip Line in Puyallup, WA
Investigation-Cause of Failure, Freezer Door in Seattle, WA
Investigation-Cause of Failure, Sitting Chair Leg Fracture in Tukwila, WA
Investigation-Cause of Failure, Asphalt Batch Plant Collapse in Las Vegas, NV

Investigation-Collapse Evaluation, Residence in Point Roberts, WA
Investigation-Repair Recommendations, Fire at Concrete Batch Plant in Flagstaff, AZ
Investigation-Repair Recommendations, Mobile Home in Nespelem, WA
Investigation-Scope of Storm Damage, Condominium Complex in Scottsdale, AZ
Investigation-Scope of Storm Damage, Residence in Redmond, WA
Investigation-Cause of Damage, Mobile Home Roof in Yakima, WA
Investigation-Cause of Damage, Residence Roof in Puyallup, WA
Investigation-Cause of Damage, Residence Roof in Belfair, WA
Investigation-Cause of Damage, Residence Wall in Harrisonville, MO
Investigation-Cause of Damage, Warehouse Roof in Lakewood, WA
Investigation-Cause of Damage, Low-E Windows in Tacoma, WA
Investigation-Scope of Moisture Damage, Commercial Bldg. in Everett, WA
Investigation-Cause of Moisture Damage, Apartment Complex in Hillsboro, OR
Investigation-Cause of Moisture Damage, Church in Bellingham, WA
Investigation-Cause of Moisture Damage, Apartment Bldg. in Lynnwood, WA
Investigation-Cause of Water Intrusion, Residence in Olympia, WA
Investigation-Cause and Scope of Damage, Residence Vinyl Siding in Olympia, WA
Investigation-Cause of Sewer System Backup, Commercial Bldg. in Puyallup, WA
Investigation-Cause of Wall Cracking, Residence in Oak Harbor, WA
Investigation-Assessment of Foundation Cracking, Residence in Puyallup, WA
Investigation-Cause of Tile Floor Damage, Residence in Pasco, WA
Investigation-Cause of Ground Slope Failure, Residence in Olympia, WA
Investigation-Cause of Cracking, Earth Retaining Structure in Springfield, MO
Investigation-Cause of Failure and Repair Estimate, Swimming Pool in Spokane, WA
Investigation-Cause of Fire Suppression System Failure, Comm. Bldg. in Seattle, WA
Investigation-Fire Cleanup Protocol, Warehouse in Seattle, WA
Investigation-Scope of Blast Damage, Residence in Bellingham, WA
Investigation-Cause of Explosion, Mix Use Building in Houston, TX
***Investigation-Accessibility & Code Evaluation, Medical Facility in Albany, OR**
***Investigation-Collapse Consulting, Commercial Bldg. in Fremont, NE**
***Investigation-Cause of Roof Collapse, Commercial Bldgs in Shawnee, KS**
***Investigation-Cause of Ceiling Collapse, Hotel in Rogers, AR**
***Investigation-Cause of Collapse, Steel Frame in Kansas City, KS**
***Investigation-Scope of Storm Damage, Commercial Bldgs. in Woodward, OK**
***Investigation-Scope of Fire Damage, Residence in Shawnee, KS**
***Investigation-Scope of Damage, Fallen Tree at Residence in Overland Park, KS**
***Investigation-Scope of Storm Damage, Airplane Hangers in Kearney, NE**
***Investigation-Scope of Fire Damage, Industrial Building in Kansas City, MO**
***Investigation-Scope of Flood Damage, Apartment Complex in Overland Park, KS**
***Investigation-Scope of Fire Damage, Apartment Building in Kansas City, MO**
***Investigation-Cause of Roof Damage, Residence in Kansas City, MO**
***Investigation-Cause of Tile Roof Damage, Residence in Overland Park, KS**

* Projects marked with an asterisk were completed as part of a training program

***Investigation-Cause of Wall and Floor Cracks, Warehouse in Lenexa, KS**
***Investigation-Cause of Floor Damage, Warehouse in Riverside, MO**
***Investigation-Cause and Scope of Damage, Industrial Buildings in Dallas, TX**
***Investigation-Cause of Wall Failure, Commercial Bldg. in San Francisco, CA**
***Investigation-Cause of Damage, Office Building in Omaha, NE**
***Investigation-Cause of Collapse, Fertilizer Storage Structures in Overland Park, KS**
***Investigation-Cause of Damage, Event Center in Hobbs, NM**
***Investigation-Scope of Damage, Wood Bridge in Clark County, KS**
***Investigation-Cause of Failure, Earth Retaining Structure in Belleville, IL**
***Investigation-Cause of Collapse, Earth Retaining Structure in Fort Leavenworth, KS**
***Investigation-Cause and Scope of Damage, Grain Silos in Watson, MO**
***Investigation-Cause of Floor Damage, Animal Shelter in Jefferson, MO**
***Investigation-Cause of Basement Wall Cracking, Residence in Overland Park, KS**
Investigation-Scope of Damage, Food Processing Facility in Wallula, WA
Investigation-Floor Friction Test Slip and Fall in Tacoma, WA
Investigation-Cause of Roof Leak/Condensation in Olympia, WA
Investigation-Structural Evaluation, Building Collapse in White Swan, WA
Investigation-Cause of Damage, Snow and Ice Storm in Yakima, WA
Investigation-Cause of Wall and Ceiling Cracks. Residence in Seattle, WA
Investigation-Scope of Flood Damage, Condos on Coastal Pier in Seattle, WA
Investigation-Repair Recommendations, Vehicle Impact Brick Bldg. in Centralia, WA
Investigation-Cause of Roof and Wall Leaks in Brick Masonry Bldg. in Spokane, WA
Investigation-Code Compliance Evaluation, Residence Roof in Olympia, WA
Investigation-Repair Recommendations, Equip. Impact to Building in Seattle, WA
Investigation-Cause of Damage, Concrete Retaining Wall on Mercer Island, WA
Investigation-Cause of Flooring Failure, University Facility in Seattle, WA
Investigation-Cause of Wood Siding Failure, Residence in Seattle, WA
Investigation-Cause of Cracks, 7.1 Magnitude EQ near Residence in Anchorage, AK
Investigation-Repair Recommendations, Chimney Fire at Residence in Sherwood, OR
Investigation-Cause of Roof Leak/Condensation, Apartment Building in Westport, WA
Investigation-Cause of Water Intrusion, Residence Crawlspace in Shelton, WA
Investigation- Repair Recommendations and Cost of Repair, Equipment Impact to Concrete Clinker Silo in Seattle, WA
Investigation-Scope of Damage and Repair Recommendations, Residence Fire in McCleary, WA
Investigation-Scope of Damage and Repair Recommendations, Equipment Impact at a Residence in Seattle, WA
Investigation-Cause of Cracks and Loud Booms, Residence in Longview, WA
Investigation-Cause of Moisture Intrusion, Condominiums in Kirkland, WA
Investigations-Cause and Scope of Damage for Over 250+ Flood and Wind Damage Claims Resulting from Hurricane Harvey, Hurricane Irma, Winter Storm Skylar, and Other 2017/ 2018 Weather Events in TX, FL, MA, HI, IN, CA and WA
Investigations-Hundreds of Files not Listed, but Available Upon Request

CONTINUING EDUCATION:

Forensic Engineering, Failure Analysis and Professional Liability Claim Process
PDH Direct, 2019, Online

Geo Sinkholes, Geotechnical Soil Compaction, Guide to Bearing capacity of Soils
PDH Direct, 2019, Online

Soil Settlement Analysis, Guide to Slope Stability, High Rise Engineering
PDH Direct, 2019, Online

Stormwater Management, Groundwater Modeling
PDH Direct, 2019, Online

Post-Disaster Building Safety Evaluation-WA & CA Emergency Volunteer Engineer Support
Structural Engineers Association of Washington, 2018, Seattle, Washington

Seismic Compression of As-Compacted Fill Soils (2005), CUREE
JEC Services, 2018, Des Moines, Washington

Guidelines for the Evaluation and Repair of Residential Foundations, TX ASCE
PDH Direct, 2018, Online

Biodeterioration of Wood, Wood Preservation, Moisture Barrier Systems, Housewrap
PDH Direct, 2018, Online

Concrete and Clay Roof Tile Installation Manual, Tile Roofing Institute
JEC Services, 2018, Des Moines, Washington

Coastal Foundations and Best Practices, FEMA
JEC Services, 2017, Des Moines, Washington

Flood Damage-Resistant Materials Requirements for Buildings, FEMA Technical Bulletin 2
JEC Services, 2017, Des Moines, Washington

Texas Minimum Construction Standards (2015), Dept. of Housing & Community Affairs
JEC Services, 2017, Des Moines, Washington

Moisture Control Guidance for Building Design, Construction and Maintenance, USEPA
JEC Services LLC, 2016, Des Moines, Washington

Buyer's Guide to Slab-On-Ground Foundations, Gray and Gray (2004)
JEC Services LLC, 2016, Des Moines, Washington

Slab-On-Ground El. Measurements in Residential Fndn. Eng. Performance Evaluations
JEC Services LLC, 2016, Des Moines, Washington

September 2019

Rebar Locating for Pinned Precast Traffic Barriers Utilizing GPR and Magnetic Reluctance
JEC Services LLC, 2015, Des Moines, Washington

Radar Inspection of Concrete, The Handbook
JEC Services LLC, 2015, Des Moines, Washington

Ground Penetrating Radar for Structural Applications Utilizing Hilti X-Scan PS 1000 System
Hilti, 2015, Seattle, Washington

Ground Penetrating Radar, Inverse Scattering and Data Processing
JEC Service LLC, 2015, Des Moines, Washington

Depositions 101 and Successfully Defending Construction Site Accidents
Claims and Litigation Management Alliance, 2015, Seattle, Washington

Hurricane Sandy, Lessons Learned
Claims and Litigation Management Alliance, 2015, Seattle, Washington

Investigation and Discovery of a Construction Defect Claim
Claims and Litigation Management Alliance, 2015, Seattle, Washington

Key Concepts to Aid in Evaluation of Earthquake Damage
Engineering Design & Testing Corp., 2015, Nashville, Tennessee

Building Failures During Winter – On Thin Ice
Engineering Design & Testing Corp., 2015, Nashville, Tennessee

Federal Rules of Civil Procedure, Rule 26 – Expert Reports
Engineering Design & Testing Corp., 2015, Nashville, Tennessee

Structural Analysis Methods for Buildings and Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Bridge Design and Code Requirements
Structural Engineers Association of Illinois, 2015, Chicago, Illinois

Wind and Seismic Analysis and Design of Buildings and Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Reinforced and Prestressed Concrete Design for Buildings and Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Masonry and Wood Design for Buildings and Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Structural Steel Design for Buildings and Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Design of Foundations and Earth Retaining Structures
Structural Engineers Association of Washington, 2015, Seattle, Washington

Bridge Design
Structural Engineers Association of Washington, 2015, Seattle, Washington

Building Science and Infrared Thermal Imaging
International Association of Certified Home Inspectors, 2014, Online

Structural Issues for Home Inspectors
International Association of Certified Home Inspectors, 2014, Online

25 Standards Every Inspector Should Know
International Association of Certified Home Inspectors, 2014, Online

Inspection for Moisture Intrusion
International Association of Certified Home Inspectors, 2014, Online

Design and Renovation of Wood Structures
American Society of Civil Engineers, 2014, San Mateo, California

Professional Report Writing
Engineering Design & Testing Corp., 2014, Lenexa, Kansas

The Construction Site and Conflicts
Engineering Design & Testing Corp., 2014, Salt Lake City, Utah

Credentials in Litigation
Engineering Design & Testing Corp., 2014, Salt Lake City, Utah

A Guide to the Investigation of Imminent Collapse
Engineering Design & Testing Corp., 2014, Salt Lake City, Utah

Steel Connection Design and Failure Analysis
Engineering Design and Testing Corp., 2014, Salt Lake City, Utah

Certified Inspector Program – Commercial and Residential Roofs
Haag Engineering Company, 2014, Minneapolis, Minnesota

Concrete Distress and Deterioration: Symptoms and Causes
PDHengineer, 2013, Online

Equivalent Coatings: Codes, Standards, and Corrosion Protection
Steel Framing Industry Association, 2013, Webinar

Cold-Formed Steel, Mid-Rise Construction and Sustainability
Steel Framing Industry Association, 2013, Webinar

Approving or Selecting Building Products with Confidence
International Code Council, 2013, Webinar

A Guide to High Performance Cold-Formed Steel Assemblies
Steel Framing Industry Association, 2013, Webinar

Rehabilitation of Existing Structures
Coughlin Porter Lundeen, 2009, Seattle, Washington

Post-Tension Building Design and Construction
American Society of Civil Engineers, 2008, Seatac, Washington

The Transportation Design Academy
Washington State Department of Transportation, 2007, Seattle, Washington

Introduction to Project Inspecting
Washington State Department of Transportation, 2007, Seattle, Washington

Project Scheduling Methods and Software
Washington State Department of Transportation, 2007, Seattle, Washington

Contract Plans & Estimate Preparation
Washington State Department of Transportation, 2006, Seattle, Washington

Certification in Construction Site Erosion & Sediment Control
Washington State Department of Transportation, 2006, Seattle, Washington

Roundabout Design
Michael Baker International, 2006, Seattle, Washington

Design Documentation
Washington State Department of Transportation, 2006, Seattle, Washington

Highway Drainage and MGSFlood Software
Washington State Department of Transportation, 2005, Seattle, Washington

Basic Highway Capacity and Roadway Geometric Design
Transpeed, 2005, Seattle, Washington