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Engineering & Scientific Consulting

Paul Bennett, P.E., CBIE

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Professional Profile

Mr. Bennett is a licensed civil engineer in 19 states and a licensed general contractor who has 20 years of experience in the design and construction industry. Mr. Bennett has a diverse background in Civil, Mechanical, and Architectural Engineering as those disciplines apply to buildings and infrastructure.

Mr. Bennett has hands-on construction experience working in the construction trades, including framing, excavation, concrete, adhered masonry veneer, construction of water resistive building envelopes, flooring, roofing, plumbing, mechanical, and finish carpentry. As an engineer, he has experience in the structural and architectural design of new buildings and the repair design of damaged structures. He has experience in the building code development process and has expertise in interpreting and applying building codes.

Mr. Bennett has investigated structural and architectural damage induced by expansive soils, hail, wind, tornadoes, seismic events, fires and explosions, rain, progressive ponding, construction vibrations, and snow events, as well as failures caused by design or construction defects. He has investigated building envelope failures caused by defects in flashing, stucco, exterior insulating finish systems (EIFSs), windows/doors, cladding, roofing, water-resistive barriers, and plaza deck failures. Mr. Bennett has conducted hundreds of investigations of both steep and low-slope roofing systems for damage caused by snow, hail, wind, and construction errors.

Mr. Bennett has performed building product research on engineered wood products (such as OSB and plywood) and the effects moisture has on the strength and moisture transmission properties of those materials. He has experience in investigating building product failures for such products, spray foam insulation (SPF), engineered wood, roofing products, and fiber cement siding.

Mr. Bennett has experience in investigating window and door performance and manufacturing problems. He has investigated window wall, curtain wall, and storefront glass systems in high rise and commercial buildings as well as typical residential windows. He is a member of the ASTM E06.51 Subcommittee on Performance of Windows, Doors, Skylights and Curtain Walls.

Mr. Bennett has an understanding of building physics, hygrothermal analysis, and diagnosing moisture and condensation problems in buildings. He has investigated HVAC system problems and their impact on the indoor environment as well as occupant thermal comfort complaints.

With experience as a General Contractor, expertise in the building codes, and having designed architectural and structural repairs for structures, Mr. Bennett has evaluated and performed damage cost estimates and cost allocation reports for damaged structures. Mr. Bennett has offered opinions regarding the Standard of Care of the General Contractor and the Engineer of Record.

As a civil engineer Mr. Bennett has experience in design of grading, drainage, transportation, and utility

system infrastructure. He has experience in site design for commercial, industrial, mixed-use, single family, and multi-family projects.

Mr. Bennett has investigated several personal injury cases that occurred in and around structures including slip, trip, and fall incidents. With his hands on experience in construction job site safety and an OSHA 30 certificate, he has investigated numerous incidents with construction related injuries.

Academic Credentials & Professional Honors

M.S., Civil Engineering, University of Colorado, Denver, 2012

B.S., Mechanical Engineering, University of Nevada, Reno, 2000

2008 Larimer County Outstanding Professional of the Year

Licenses and Certifications

Asbestos Awareness Certification

Certified Building Inspection Engineer (CBIE)

Crane Signaling and Rigging Certification

Licensed General Contractor

OSHA #511 Occupational Safety and Health Standards for General Industry

OSHA 30 Hour Outreach Training Program - General Industry

Safety Assessment Evaluator

Prior Experience

Director of Civil and Structural Engineering, Knott Laboratory, LLC, 2009-2013

Owner and Founder of Alpine Engineering, LLC, 2006-2009

Owner and Founder of Alpine Building and Development, LLC, 2005-2009

Project Manager, DMW Civil Engineering, 2004-2005

Project Manager, VanHorn Engineering and Surveying, 2002-2004

Project Engineer, Tait and Associates, 2001-2002

Project Engineer, Dowing Thorpe and James Architects, 2001-2001

Engineer Intern, Lumos and Associates, 1999-2000

Engineer Intern, Grinnell Fire Protection, 1998-1999

Professional Affiliations

American Society of Civil Engineers—ASCE

American Society of Heating, Refrigeration, and Air Conditioning Engineers—ASHRAE

National Academy of Building Inspection Engineers—NABIE

Record Holder National Council of Examiners for Engineers & Surveyors—NCEES

International Code Council —ICC

International Code Council, Colorado Chapter (Code Change & Disaster Mitigation Committees)—COICC

Technical Council on Forensic Engineering (Steering Committee for 7th Congress and Failure Investigation Committee)—TCFE

ASTM International

ASTM E06 Committee on Performance of Buildings, Member

ASTM E06.51 Subcommittee on Performance of Windows, Doors, Skylights and Curtain Walls, Member

Board of Directors, Bear Paw Lodge Homeowners Association, Secretary, Avon, Colorado

Publications

Bennett P., Vose R. Analysis and Testing of Reset Finned Windows. Proceedings, 9th ASCE Forensics Congress, November 2022.

Mayercsik N., Bennett P.. Assessing Hail Damage to Concrete Tile Shingles, an Analytical Method and a Case Study. Proceedings, 9th ASCE Forensics Congress, November 2022.

R. Williams, R. Daniel, P. Bennett. When Home is a Masterpiece: Analyzing and Defending Claims Involving Large Single-Family Homes. Construction Claims: a Publication of CLM, Vol. 5, Issue 3, pp. 12-13, September 2020.

P. Bennett. COVID-19 Pandemic: Implications for Indoor Air Quality and HVAC Systems. The Critical Path: The Newsletter of the Construction Law Committee of DRI, Vol. 24, Issue 2, April 2020

Bennett P. Spray foam problems. Fine Homebuilding, October 2016.

Stoll S, Bennett P. Assessing wind damaged masonite shingles. Proceedings, ASCE Forensics Congress, November 2015.

Bennett P, Staebler J, Stoll S. Hail impact testing of masonite shingles. Proceedings, ASCE Forensics Congress, November 2015.

Bennett P. Can a girder connect to ledgers or rim joists? - Question and answer. Professional Deck Builder, April 2015.

Bennett P, Fernandez P. Precast double tee roof collapse investigation—A case study. Proceedings, PCI Convention and National Bridge Conference, September 2014.

Bennett P, Peterka J, Harris J. A case study in drifting snow behavior. Proceedings, ASCE Structures Congress, April 2014.

Bennett P. Connecting Post to Shallow Joists - Question and Answer. Professional Deck Builder, March 2014.

Bennett P. Structural testing, issues and advances related to structural testing. Structure Magazine, October 2013.

Bennett P. Vibration monitoring and live load test of civil infrastructure with interferometric radar. Proceedings, 9th International Workshop of Structural Health Monitoring, September 2013.

Bennett P. Structural health monitoring of a cable stayed pedestrian bridge with interferometric radar. University of Colorado, December 2012.

Bennett P. The building code and repairs to damaged structures. Proceedings, ASCE 6th Congress on Forensic Engineering, November 2012.

Bennett P, Rutz F. Structural health monitoring with interferometric radar. Proceedings, ASCE 6th Congress on Forensic Engineering, November 2012.

Bennett P, Liu R. Utilization of vibrational techniques in bridge health monitoring. 2012 IEEE International Conference on Prognostics and Health Management, June 2012.

Bennett P. 2009 Edition of the International Building Code. Colorado Claims Magazine 2011 April; 9(1).

Presentations

Bennett P, Griffith M. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 4, 2015.

Bennett P, Ojala D. Structural building analysis. Colorado Chapter of the International Code Council, Denver, CO, March 3, 2015

Bennett P. Construction defects and failures. Finger Lakes Building Officials Association, Rochester, NY, March 18, 2014.

Bennett P, Fernandez P. Wind provisions of ASCE 7-10. Colorado Chapter of the International Code Council, Denver, CO, March 7, 2014.

Bennett P, Griffith M. Wall bracing provisions of the 2012 International Residential Code. Colorado Chapter of the International Code Council, Denver, CO, March 5, 2014.

Bennett P, Griffith M. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 6, 2014.

Bennett P, Ojala D. Structural building analysis. Colorado Chapter of the International Code Council, Denver, CO, March 4, 2014.

Bennett P, Transue D, Doroudian M. Flood impacts: tracing responsibility upstream. Exponent Webinar, January 29, 2014.

Bennett P, Poynter J. Betterment in property claims. NASP Webinar, January 21, 2014.

Bennett P. Building codes and CD litigation. Colorado Defense Lawyers Association (CDLA), Greenwood Village, CO, December 5, 2013.

Bennett P. Wildfire resistant construction. Chartered Property Casualty Underwriters (CPCU) Colorado Chapter, Arvada, CO, November 15, 2013.

Bennett P. Construction defects, failures, and repairs. International Code Council, Atlantic City, NJ, October 1&2, 2013.

Bennett P, Fernandez P. Wind provisions of ASCE 7-10. Colorado Chapter of the International Code Council, Denver, CO, March 8, 2013.

Bennett P. Wall bracing provisions of the 2012 International Residential Code. Colorado Chapter of the International Code Council, Denver, CO, March 7, 2013.

Bennett P. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 6, 2013.

Bennett P. Structural building analysis. Colorado Chapter of the International Code Council, Denver, CO, March 5, 2013.

Bennett P. The Building Code and repairs to damaged structures. ASCE 6th Congress on Forensic Engineering, San Francisco, CA, November 3, 2012.

Bennett P, Rutz FR. Structural health monitoring with interferometric radar. ASCE 6th Congress on Forensic Engineering, San Francisco, CA, November 1, 2012.

Bennett P. Building envelope failures. Knott Laboratory Continuing Education Seminar, Centennial, CO, September 26, 2012.

Bennett P. Building envelope failures. Zurich Insurance, Schaumburg, IL, August, 21, 2012.

Bennett P. Introduction to soils and foundations. Zurich Insurance, Schaumburg, IL, August, 21, 2012.

Bennett P. Plumbing and mechanical system failures and fraud. Rocky Mountain Chapter of the International Association of Special Investigative Units, Englewood, CO, May 4, 2012.

Bennett P. Code requirements for repairs to existing structures. Interstate Restoration, Denver, CO, April 13, 2012.

Bennett P. Wall bracing provisions of the 2012 International Residential Code. Colorado Chapter of the International Code Council, Denver, CO, March 9, 2012.

Bennett P. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 8, 2012.

Bennett P, Fernandez P. Wind provisions of ASCE 7-10. Colorado Chapter of the International Code Council, Denver, CO, March 7, 2012.

Bennett P. Ethics and the expert engineer: Why doesn't my guy agree with your guy? Colorado Chartered Property Casualty Underwriters, Arvada, CO, November 1, 2011.

Bennett P. The turnkey construction process for single and multi-family homes. Knott Laboratory Continuing Education Seminar, Centennial, CO, September 23, 2011.

Bennett P. Residential cracks, what causes them? Knott Laboratory Continuing Education Seminar, Centennial, CO, September 23, 2011.

Bennett P. Ethics and the expert engineer: Why doesn't my guy agree with your guy? Bar of Nevada Construction Law Section, Reno, NV, September 14, 2011.

Bennett P. Ethics and the expert engineer: Why doesn't my guy agree with your guy? State Bar of Nevada Construction Law Section, Las Vegas, NV, September 13, 2011.

Bennett P. Chapter 34 and the IEBC. Northern Colorado Code Professionals Association, Loveland, CO, September 8, 2011.

Bennett P. Plumbing and mechanical system failures. Rocky Mountain Chapter of the International Association of Special Investigative Units, Englewood, CO, May 6, 2011.

Bennett P, Fernandez P. Wind and seismic provisions of the ASCE 7-05. Washington Association of Building Officials, Seattle, WA, March 29, 2011.

Bennett P. Construction defects, failures, and repairs. Washington Association of Building Officials, Seattle, WA, March 28, 2011.

Bennett P. Colorado construction law and the ethical expert witness. All Phase Continuing Education, All Phase Restoration, Windsor, CO, March 11, 2011.

Bennett P, Fernandez P. Wind and seismic provisions of the ASCE 7-05. Colorado Chapter of the International Code Council, Denver, CO, March 4, 2011.

Bennett P. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 3, 2011.

Bennett P. Wall bracing provisions of the 2009 International Residential Code. Colorado Chapter of the International Code Council, Denver, CO, March 2, 2011.

Bennett P. Masonite roofing. Shelter Insurance Company, Highlands Ranch, CO, November 18, 2010.

Bennett P. Masonite roofing. Knott Laboratory Continuing Education Seminar, Centennial, CO, September 24, 2010.

Bennett P. Contractor fraud. All Phase Continuing Education, All Phase Restoration, Windsor, CO, May 19, 2010.

Bennett P. Plumbing and mechanical system failures. All Phase Continuing Education, All Phase Restoration, Windsor, CO, May 19, 2010.

Bennett P. Evaluation of commercial roofing damage. Colorado Defense Lawyer's Association (CDLA), Denver, CO, April 7, 2010.

Bennett P. Wall bracing provisions of the 2009 International Residential Code. Colorado Chapter of the International Code Council, Denver, CO, March 5, 2010.

Bennett P. Construction defects, failures, and repairs. Colorado Chapter of the International Code Council, Denver, CO, March 2, 2010.

Bennett P. Code requirements for repairs to existing structures. All Phase Continuing Education, All Phase Restoration, Windsor, CO, February 24, 2010.

Bennett P. Evaluation of commercial roofing damage. Knott Laboratory Continuing Education Seminar, Centennial, CO, January 29, 2010.

Bennett P. Evaluation of roofing damage. All Phase Continuing Education, All Phase Restoration, Windsor, CO, November 19, 2009.

Bennett P. Contractor fraud. All Phase Continuing Education, All Phase Restoration, Windsor, CO, November 19, 2009.

Bennett P. Contractor fraud. All Phase Continuing Education, All Phase Restoration, Windsor, CO, November 12, 2009.

Bennett P. Contractor fraud. Colorado Chartered Property Casualty Underwriters, Englewood, CO, October 20, 2009.

Bennett P. Code requirements for repairs to existing structures. All Phase Continuing Education, All Phase Restoration, Windsor, CO, October 8, 2009.

Bennett P. Code requirements for repairs to existing structures. All Phase Continuing Education, All Phase Restoration, Windsor, CO, August 20, 2009.

Bennett P. Contractor fraud. Rocky Mountain Chapter of the International Association of Special Investigative Units, Englewood, CO, July 21, 2009.

Bennett P. The International Existing Building Code. Northern Colorado Code Professionals Association, Loveland, CO, July 9, 2009.

Bennett P. Wood frame construction manual. Colorado Chapter of the International Code Council, Denver, CO, March 3-4, 2009.

Bennett P. Wall bracing provisions of the 2006 International Residential Code. Northern Colorado Code Professionals Association, Loveland, CO, 2008.

Peer Reviews

Journal of Performance of Constructed Facilities - Reviewer