

Curriculum Vitae of Matthew T. Blackmer, M.S., P.E.

Chief Operating Officer

EDUCATION

- Master of Science in Civil Engineering with emphasis in Structural Engineering. 2000, University of Colorado at Denver, Denver, Colorado
Thesis on *Failure Analysis Topics in Civil Engineering: Residential Home Basement Failures*.
- Bachelor of Science in Civil Engineering. 1996, Colorado School of Mines, Golden, Colorado

REGISTRATION

- Registered Professional Engineer - State of Colorado, No. 35196
- Registered Professional Engineer - State of Arizona, No. 42220
- Registered Professional Engineer - State of Florida, No. 70163
- Registered Professional Engineer - State of Kansas, No. 18054
- Registered Professional Engineer - State of New Mexico, No. 19262
- Registered Professional (Structural) Engineer - State of Utah, No. 5740067-2203
- Registered Professional Engineer - State of Texas, No. 97206
- Registered Professional Engineer - State of Wyoming, No. 10174
- Certified EIFS Third-Party Inspector and Moisture Analyst, September 2003
- The National Council of Examiners for Engineering and Surveying Record No. 21294

PROFESSIONAL AFFILIATIONS

- LEA – Loss Executives Association, Member
- SEAC - Structural Engineers Association of Colorado, Professional Member

EMPLOYMENT SYNOPSIS

Higgins & Associates, Inc., Littleton, Colorado

2020 to Present

Chief Operating Officer

Professional Engineer in the field of engineering forensics related structural, civil, building envelope, and geotechnical engineering systems. Testified and have been accepted as an expert in local and district court cases.

- Typical assignments include technical investigations of building collapses, structural damage, leaks, incidents, construction defects, engineering failures, code-deficient design, deterioration, and improper construction. Investigations have involved losses related to residential, commercial, industrial, and historic structures. Assignments frequently include analysis of defects and the associated standard of care analyses for design professionals, general contractors, and subcontractors.
- Characteristic investigations include evaluation, assessment, and determination of damage from fire, flooding, snow loads, hail, soil movements, wind, tornados, earthquakes, vehicle/equipment/tree impact, deterioration, construction defects, and design defects.
- Inspection services include various types of construction and materials including timber framing, masonry, steel, concrete. Inspections related to failure have included welds, earth retention structures, vehicles, machinery, construction equipment, shoring, site work/grading, utilities, and miscellaneous proprietary systems.
- Field work includes evaluations related to moisture intrusion, building envelope analysis, condensation, roof design and construction assessments, and cladding design and construction assessments.
- Responsibilities frequently include design, implementation, and inspection of repairs to damaged structures and engineering systems. Work also includes designs for the rehabilitation of structures.

Hayes Consulting Company, Inc., Greenwood Village, Colorado **2017 to 2020*****Vice President of Operations***

Forensic Engineering and litigation support involving Structural, Geotechnical, Civil, and Building Envelope projects. Litigation support including expert witnessing, file review and subrogation matters. Structural, geotechnical, civil and building envelope investigations of damaged structures for determination of cause, extent of damage, and repair option determination. Settlement-based structural, geotechnical, civil and building envelope repair designs for residential and commercial structures. Field exploration and site drilling to provide site-specific surface and subsurface conditions, soil characteristics and design parameters, including specific recommendations for foundation design and construction guidelines.

Pie Consulting and Engineering, Inc., Arvada, Colorado **2003 to 2017*****Principal/Vice President of Forensic Services***

Forensic Engineering involving structural, civil and building envelope claims. Clients included attorneys, insurance companies, homeowners, property management companies, and building owners. Structural engineering including forensic investigations of failures and performance. Civil engineering review regarding compliance, flood proofing, and soils interaction issues. Litigation support including expert witnessing, file review and subrogation matters. Structural, civil and building envelope investigations of damaged structures from water intrusion, fire, flood, snow, and expansive soils to determine structural safety issues and repair options. Structural, civil, and building envelope cause and origin observations/opinions as requested by insurance companies for determining coverage. Settlement-based structural, civil and building envelope repair designs for residential and commercial structures.

Professional Investigative Engineers, Inc., Arvada, Colorado **2000 to 2003*****Project Manager***

Duties included determination and evaluation of construction defects and the development of reports and supporting documents, which describe the civil and structural problems. Review of as-built construction to verify compliance with structural code requirements. Review of civil plans and on-site conditions to verify compliance of site drainage to project



specifications and building code requirements. Structural investigations of damaged structures from fire, flood, snow, and expansive soils to determine structural safety issues and repair options. Litigation support including expert witnessing and file review. Structural and civil damage cause and origin observations/opinions as requested by insurance companies for determining coverage. Settlement-based structural and civil repair designs for residential and commercial structures.

Gillans Incorporated, Westminster, Colorado

1996 to 2000

Engineering Technician / Project Engineer

Design of steel, wood, masonry, and concrete structures up to three stories in height for residential and light commercial structures. Analyze structural and civil details for residential and commercial properties. Design of repair for failed structural members in residential and industrial buildings. Forensic engineering for private clients, insurance clients, and lawyers. Investigations of structural safety for fire-damaged structures. Reserve studies for private HOA and housing authority clients. Structural investigations of residential properties including report preparation and repair designs for claims approved by National Home Insurance Company (NHIC). NHIC repair scopes included counterforts, re-leveling, stability improvements, drainage, and aesthetic repairs including construction observations of the repairs.

CONSTRUCTION/ FIELD EXPERIENCE

Park Construction, Denver, Colorado

1995

Laborer Foreman/Heavy Equipment Operator

Worked for Park Construction at the Rocky Flats site providing construction of a waste cleanup building. Work included direction of other laborers. Work included the construction of concrete walls, including rebar placement and concrete placement. Heavy equipment operation included site grading work for backfilling operations and rough grading.

Southwest Contracting, Cortez, Colorado

1992-1994

Laborer / Shop Assistant

Worked for Southwest Construction at various properties throughout Colorado. Work included installation of above-ground and below-ground pipeline components. Conducted metal work including welding of structural steel components. Additional superstructure work included normal laborer job requirements including assistance to construction professionals on site.

PUBLISHED WORKS

1. "Beams Bracing: Are your Beams Braced? Twisted Steel Beams, A Common Insurance Claim," Test Your Claims Knowledge, PLRB/LIRB Frontlines Newsletter, October 27, 2010
2. "Deflections in Deck and Balcony Railings" The Investigative Engineer, April 2009
3. "Determination of Hurricane Related Structural Damage and Review of the Code Requirements," Colorado Claims Magazine, First Quarter 2006, Vol. 4, No. 1
4. "Determination of Hurricane Related Structural Damage and Review of the Code Requirements," The I-ENG-A Report, January 2006
5. "Roof Damage Discoveries from March 2003 Blizzard," The Investigative Engineer, April 2004
6. "Statistics and Observations on the Colorado Blizzard of 2003," Claims Quarterly published by the CPCU Society, 2003 Issue
7. "Grading and Drainage Problems in Residential Construction," The Investigative Engineer, July 2001

PRESENTATIONS AS SPEAKER

Property Loss Research Bureau/Liability Insurance Research Bureau (PLRB/LIRB) 2012 Claims Conference, Orlando, Florida. Pre-Engineered Metal Buildings – Design, Installation and Claims, April 15-18, 2012

Moe & Nevin Insurance Adjusters Annual Meeting, Hinckley, Minnesota. Pre-Engineered Metal Buildings – Design, Installation and Claims, March 16, 2012

Worley Catastrophe Adjusters Claims Expo, Houston, Texas. Metal Building Systems / Issues With Pre-Engineered Metal Buildings, February 9-10, 2012

Property Loss Research Bureau/Liability Insurance Research Bureau (PLRB/LIRB) 2011 Claims Conference, Nashville, Tennessee. Pre-Engineered Metal Buildings – Design, Installation and Claims, April 3-6, 2011

EMC Insurance Companies, Denver, Colorado. Construction Liability: Insurance Issues Related to Defective Construction Work, November 4, 2010

White & Steele Wyoming Insurance Seminar, Aurora, Colorado. Insurance claims resulting from original construction defects, February 2004

Rocky Mountain Property Claims Association, Aurora, Colorado. Roof collapses and failures resulting from the Denver Metro Area March 2003 snowstorm event, April 10, 2003

Professional Investigative Engineers, Westminster, Colorado and Arvada, Colorado. Annual training seminars to the insurance and building industry on structural repairs and failures and vehicle accident reconstruction, 2002 to present

Denver Claims Association, Englewood, Colorado. Construction defects and the effects on future insurance claims, April 26, 2002

Trial Testimony

Rigid Construction, LLC, and Tyrone McKnight v. Tanya Price and Samuel Burton, Arapahoe County District Court, Case #2019CV031924, Division 15. Testimony regarding general contractor licensing and building department permitting requirements for restoration work in response to fire damage.

True West Construction Services, LLC v. Hayward Baker, Inc., Douglas County District Court, Case #16CV30104, Division 5. Testimony regarding compaction grouting and sanitary sewer line construction along Chambers Road in Douglas County, Colorado, January 25, 2017

Miller v. National Farmers Union Property & Casualty Company, Elbert County District Court, Case #2013CV30010. Testimony regarding extent of damage and repairability of building envelope components and specifically windows due to hail damage, February 4, 2015

Brandon D. Whitney, and Hartford Casualty Insurance Company v. Bouboulina, Inc. and Maria Christou, City and County of Denver District Court, Case #05-CV-1988. Testimony regarding damage resulting from the March 2003 snowstorm, June 7, 2006

Rudolfo and Maria Maldonado v. American Family Mutual Insurance Company, Boulder County District Court Case #03-CV-821. Testimony regarding structural damage due to a vehicular impact, May 27, 2004

Steve Zimmerman v. Lynn Gardner, Jefferson County District Court Case #03-CV-3325. Testimony of issues related to foundation wall movement, water infiltration and grading/drainage, May 13, 2004

Arbitration Testimony

Beacon Point Townhomes Homeowners Association, Inc. v. Century Communities, Inc.; Century at Beacon Pointe, LLC; CC Communities, LLC; Jeff Powles; and Ken Rabel, American Arbitration Association, Aurora, Colorado. Testimony regarding multifamily grading, drainage, flatwork, interior slab-on-grade floors, perimeter drains, interior

water intrusion, and gas line connections including the standard of care, extent of damages and required repairs, August 25-26, 2020

Boyd Ponds Master Association, Inc. v. Enclave at Boyd Ponds, LLC; Boyd Ponds, LLC; Century Communities, Inc.; Century Communities Colorado, LLC; CC Communities, LLC; BP LLC; Horizon Building Services, LLC; Century Land Holdings, LLC; Daro Ventures, LLC; Amy L. Anders; John Healy; and Ken Rabel, American Arbitration Association, Case No. 02-17-0004-5318-2-RZ, Arvada, Colorado. Testimony regarding multifamily grading, drainage, flatwork and privacy fence including the standard of care, extent of damages and required repairs, January 17-18, 2019

Timothy J. Lehman and Angela N. Lehman v. Colorado Shea Homes and Shea Homes Limited Partnership, Judicial Arbiter Group, No. 2008 – 505. Testimony regarding damage related to slab-on-grade movement, grading and construction issues, November 12, 2008

Mandell/Mallon/Simon versus Continental Homes on issues related to retaining walls, grading, drainage, foundation problems and crawlspace problems, September 2003

Deposition Testimony

Armstrong Commercial Services, LLC, Armstrong Capital Development, LLC, and Parker & Lincoln Development, LLC v. The Lund Partnership, Inc., District Court, Jefferson County, Colorado, Case No. 2019CV031018. Testimony regarding the standard of care of a civil engineer performing the civil engineering, grading, and drainage design of a new property under development, September 17, 2020

The Board of County Commissioners of the County of Clear Creek, Colorado v. Miguel Palafox aka Pineda Miguel Palafox and Sheridan Mountain Excavation, LLC, District Court, Clear Creek County, Colorado, Case No. 2019CV30017. Testimony regarding excavation and grading work including the standard of care, extent of damages and required repairs, July 17, 2020

Lewis Arthur Hutchinson, and individual; Kathy Hutchinson, an individual v. Acculine Construction, Mountain Engineering & Testing, Inc., Marv's Construction Company, Inc., Mario Vera Castillo d/b/a Remy Construction, and Gary Bolte d/b/a GT Structural

Engineering, District Court, Chafee County, Colorado, Case No. 2019CV30029. Testimony regarding building envelope conditions including the standard of care, extent of damages and required repairs, April 30, 2020

Beacon Point Townhomes Homeowners Association, Inc. v. Century Communities, Inc.; Century at Beacon Pointe, LLC.; CC Communities, LLC; Jeff Powles and Ken Rabel, American Arbitration Association, Aurora, Colorado. Testimony regarding multi-family grading and drainage conditions including the standard of care, extent of damages and required repairs, February 6, 2020

Camacho Roofing, et. al. v. Lallier Construction, Inc., et.al. v. Provincetown Landing II Association v. We Are Construction, Inc., et al., District Court, City and County of Denver, Colorado, Case No. 17CV32873. Testimony regarding installation of roofing and flashing during a reroofing project including the extent of damages and required repairs, November 1, 2019

The Edge at Stapleton Homeowners Association v. The Edge at Stapleton, LLC, et al., District Court, Denver County, Colorado, Case No. 2018CV30801. Testimony regarding multi-family grading, drainage, and flatwork including the standard of care, extent of damages and required repairs, March 6, 2019

Boyd Ponds Master Association, Inc. v. Enclave at Boyd Ponds, LLC; Boyd Ponds, LLC; Century Communities, Inc.; Century Communities Colorado, LLC; CC Communities, LLC; BP LLC; Horizon Building Services, LLC; Century Land Holdings, LLC; Daro Ventures, LLC; Amy L. Anders; John Healy; and Ken Rabel, American Arbitration Association, Case No. 02-17-0004-5318-2-RZ, Arvada, Colorado. Testimony regarding multi-family grading, drainage, flatwork, and privacy fence including the standard of care, extent of damages, and required repairs, November 20, 2018

Willow Creek CS Homeowners Association v. HT Services, LLC; Dirt Cheap Grading and Landscaping, Inc.; Westerra Development Company, LLC; Schooler & Associates, Inc. d/b/a Schooler & Associates Developments Consultants and Terry Schooler, El Paso County District Court, Case No. 2016CV30271. Testimony regarding grading, drainage, and retaining walls including the standard of care, extent of damages, and required repairs, September 27, 2018

Central Park Community Association, Inc. v. Central Park Rowhomes, LLC; Century Communities, Inc.; Century Communities Colorado, LLC; CC Communities, LLC; Horizon Building Services, LLC; DARO Ventures, LLC; Amy L. Anders; John Healy; Ken Rabel, Denver County District Court, Case No. 2015CV33740. Testimony regarding grading, drainage, flatwork and gas lines including the standard of care, extent of damages, and required repairs, February 21, 2018

AIG Property Casualty Company v. Edwards Excavating, Inc., and Shaeffer Hyde Construction Company, United States District Court for the District of Colorado, Case #15-CV-02661-CMA-CBS. Testimony regarding the standard of care regarding utility location and construction techniques as related to damage to a water line during construction, May 15, 2017

Derk Juhl and Michelle Del Turco-Juhl v. Advanced Building Concepts, LLC, et al, Douglas County District Court, Colorado, Case #2015CV30477, Division 1. Testimony regarding damage and standard of care related to, but not limited to, exterior finishes (stucco and stone veneer), concrete tile roofing, grading and drainage, retaining walls, windows and doors, slabs on grade, and structural components, including extent of and required repairs, December 22, 2016

Resource West, Inc. v. Industrial Systems, Inc., et al., Mesa County District Court, Colorado, Case #2014CV30681. Testimony regarding the standard of care and damage associated with the design of portable steel open air water tanks, July 12, 2016

The Heights at Cross Creek Townhome Association, Inc. v. Pulte Home Corporation, Judicial Arbiter Group, Inc., JAG File No. 2013-0751A. Testimony regarding damages related to retaining walls including adjacent grading and drainage as well as the standard of care, extent of damages, and required repairs, December 23, 2014

YMCA of Pueblo and YMCA Community Campus v. Secura Insurance Companies, United States District Court for the District of Colorado, Case #2014-CV-00931-MJW. Testimony regarding damage related to slab on grade movement and construction issues, November 18, 2014

American Family Mutual Insurance Company v. United Plumbing Services Company, Denver County District Court, Case #2012CV117. Testimony regarding the collapse of a

brick masonry bearing wall and United Plumbing Services Company's standard of care for the excavation of a water supply line, October 17, 2012

National Servicing and Administration, LLC v. Project Disbursement Group, Inc., et. al., Las Animas County District Court, Case #2010CV144. Testimony regarding Project Disbursement Group's standard of care for the project for inspection services, December 20, 2011

IASIS Healthcare Corporation v. E. K. Bailey Construction, Inc., et. al., United States District Court for the District of Utah, Northern Division, Case #2:07-cv-00638. Testimony regarding damage related to construction and design techniques including micropile installation damage to a hospital sewer line, July 15, 2009

Michael Lindsay and Ellen Lindsay v. Brannen Design & Construction, Inc. and Jay Brannen a/k/a Jere Brannen, Larimer County District Court, Case #2007CV43. Testimony regarding damage related to slab on grade movement, grading, and construction issues, February 4, 2009

Timothy J. Lehman and Angela N. Lehman v. Colorado Shea Homes and Shea Homes Limited Partnership, Judicial Arbiter Group, No. 2008 – 505. Testimony regarding damage related to slab on grade movement, grading, and construction issues, September 3, 2008

Bagley v. Palmer Custom Homes, et. al., Jefferson County District Court, Case #05-CV-4177. Testimony regarding damage related to expansive soils, foundation movement, grading, and construction issues, June 11, 2007

Vicki and Frank Arter v. Equinox Group, Apollo Builders, JR Osborne and Alan Hannasch, Adams County District Court. Testimony regarding damage related to expansive soils, slab on grade movement, foundation movement, grading, and construction issues, October 24, 2006

Allen Chappell and Mary Ann Chappell v. Apollo Builders, LLC, et. al., Adams County District Court, Case #05-CV-1279. Testimony regarding damage related to expansive soils, slab-on-grade movement, foundation movement, grading and construction issues, July 26, 2006

Colorado Seminary and University of Denver v. Davis Partnership, P.C., and Calcon Constructors, Inc., City and County of Denver District Court, Case #05-CV-2165. Testimony regarding structural damage resulting from the March 2003 snowstorm, June 19, 2006

Brandon D. Whitney, and Hartford Casualty Insurance Company v. Bouboulina, Inc. and Maria Christou, City and County of Denver District Court, Case #05-CV-1988. Testimony regarding damage resulting from the March 2003 snowstorm, April 25, 2006

Steve Zimmerman v. Lynn Gardner, Jefferson County District Court Case #03-CV-3325. Testimony of issues related to foundation wall movement, water infiltration, and grading/drainage, April 16, 2004

Robert & Marsha Holleran versus Golden Design Group Inc. and Peter V. Capra, Jefferson County District Court Case #03-CV-0036. Testimony of issues related to grading, drainage, foundation problems, and crawl space problems, October 17, 2003

John and Julie Leindecker versus Village Homes of Colorado, Arapahoe County District Court Case #02-CV-1392. Testimony of issues related to grading, drainage, foundation problems, and crawl space problems, October 1, 2003

Mediation Testimony

PERA v. Terracon, et al, Adams County District Court, Case No. 2003-CV-2869. Mediation testimony regarding structural, civil, grading/drainage and building envelope issues, April 19, 2006

Professional Courses and Seminars as an Attendee

Titan Continuing Education Course, Bridge Maintenance and Repair, December 2019

Titan Continuing Education Course, Basics of Groundwater Protection (AIA-TCEBGP), December 2019

Titan Continuing Education Course, Evaluation & Repair of Concrete Structures - Part III (AIA - TCEEC3), December 2019

Titan Continuing Education Course, Ethics for Engineers as Expert Witnesses, November 2019

Titan Continuing Education Course, An Introduction to Site Design Guidelines (AIA-TCESDG), December 2018

Titan Continuing Education Course, An Introduction to Excavation for Structures (AIA-TCEEXC), December 2018

Titan Continuing Education Course, Slope Stability (AIA-TCESLP), December 2018

Titan Continuing Education Course, Evaluation and Repair of Concrete Structures - Part I (AIA-TCEEC1), December 2018

Titan Continuing Education Course, An Introduction to Identification and Classification of Soil and Rock (AIA-TCEISR), December 2018

Titan Continuing Education Course, 2017 Advanced Florida Building Code (6th Edition) - Building (AIA-TCE17C), December 2018

Titan Continuing Education Course, Florida PE 2018-2019 - Laws & Rules, December 2018

Titan Continuing Education Course, Ethics, Professionalism, and Disciplinary Actions, December 2018

PDH Center Professional Development Course, Gravel Roads Design and Maintenance, August 2017

PDH Center Professional Development Course, Engineering Use of Geotextiles, March 2017

PDH Center Professional Development Course, Steel Beam Reinforcement, March 2017

PDH Center Professional Development Course, Ethics for Licensed Professionals, February 2017

SunCam Professional Development Course, Ethics for U.S. Engineers, November 2016

SunCam Professional Development Course, Florida Engineer Laws & Rules, November 22, 2016

PDH Center Professional Development Course, Wood as an Engineering Material Part II, June 17, 2016

PDH Center Professional Development Course, Roofing and Waterproofing, October 15, 2015

PDH Center Professional Development Course, Earthquakes: Basic Principles, August 7, 2015

PDH Center Professional Development Course, Florida Laws and Rules Course for Professional Engineers, February 24, 2015

PDH Center Professional Development Course, More Engineering Ethics Cases, December 9, 2014

PDH Center Professional Development Course, Building Insulation Basics, April 15, 2014

PDH Center Professional Development Course, Stairs & Stairways, April 14, 2014

PDH Center Professional Development Course, 2012 International Building Code, February 10, 2014

PDH Center Professional Development Course, Parking Structures, September 9, 2013

PDH Center Professional Development Course, Design of Commercial/Industrial Guardrail Systems for Fall Protection, September 6, 2013

PDH Center Professional Development Course, Basics on Forensic Engineering Part III, April 24, 2013

PDH Center Professional Development Course, Basics on Forensic Engineering Part II, April 23, 2013

PDH Center Professional Development Course, Basics on Forensic Engineering Part I, April 23, 2013

PDH Center Professional Development Course, Ethical Issues in ForenEngineering, December 13, 2012

National Council of Structural Engineers Associations Course, I-Codes Structural Provisions for Existing Buildings, November 11, 2012

Decatur Professional Development Course, Laws, Rules and Ethics for Florida Engineers, March 22, 2012

Decatur Professional Development Course, Ice Forces on Structures, February 23, 2012

Geographic Information Systems Professional Development Course, Bridge Inspection, Maintenance, and Repair, February 22, 2012

Geographic Information Systems Professional Development Course, Masonry Structural Design for Buildings, October 3, 2011

S.K. Ghosh Associates, Inc. Web Seminar, ASCE 7-10 Overview, April 2011

Titan Continuing Education Course and Test, Evaluation and Repair of Concrete Structures
– Part 2, April 2011

Titan Continuing Education Course and Test, Evaluation and Repair of Concrete Structures
– Part 1, April 2011

Titan Continuing Education Course and Test, Applied Ethics for Engineers Part II, February
2011

U.S. Department of Justice Civil Rights Division Web Seminar (Titan CE), ADA Course III:
Common Errors and Omissions, January 2011