

RANDALL P. BERNHARDT, P.E., S.E.

Forensic Civil/Structural Engineer

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636-485-3457

Mr. Bernhardt's qualifications have been gained through education, 33 years of design and construction experience, and 10 years of forensic engineering experience involving litigation or insurance claims regarding:

- Building Structures and Building Envelopes
- Bridge and Industrial Structures
- Design Defects
- Construction Defects
- Building Code Requirements
- Damage from High Winds, Subsidence, Vehicle Impact, Fire Damage

Education

M.S., Civil Engineering, Kansas State University, 1986

B.S., Engineering, Southern Illinois University, 1980

Licensed Professional Engineer (P.E.)

Arkansas, Colorado, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Nebraska, Ohio, Oklahoma, Oregon, South Carolina, Wyoming

Licensed Structural Engineer (S.E.)

Illinois and Oregon

Professional Affiliations/Honors Structural Engineering Institute (ASCE), Fellow

2020 W. Gene Corley Award
Past Treasurer, Board of Governors
Past Chair, BPAD Executive Com.
Chair, Design Practices Committee
Past Chair, Prof. Activities Com.

National Council of Structural Engineering Associations

Member, Committee on Licensing

Mr. Bernhardt provides professional forensic engineering consulting for insurance and litigation cases related to civil/structural engineering.

Since 2013, Mr. Bernhardt has been active in investigations involving claims of structural damage and/or collapse from high winds and tornados; snow, hail, or rain; ponding on low-sloped roofs; explosions and fires; vehicle impact; vibrations; water intrusion through building envelopes; settlement and subsidence; and non-compliance with building code requirements. Additionally, he has investigated allegations of design and construction defects in traditional design-bid-build projects as well as design-build projects. His assignments have included investigations and repair design of structures constructed of wood, steel, masonry, and concrete.

Before 2013, Mr. Bernhardt worked for 33 years gaining broad experience in the structural engineering investigation, design, and construction of a wide assortment of buildings and bridges. His project experience included the design and analysis of buildings, multi-span bridges, and other structures constructed of wood, pre-stressed concrete, reinforced concrete, masonry, and structural steel. Additionally, he has experience in the design of wastewater and water treatment facilities consisting of tanks, buildings, foundations, and chambers.

**Professional Affiliations/Honors
(Cont'd)**

American Society of Civil Engineers,
Fellow

Member, Forensic Engineering
Investigations Committee

Member, Forensic Engineering Division
Executive Committee

**Structural Engineers Association of
Kansas and Missouri, Member**

Greater St. Louis Claims Association
Board Member

Southern Illinois University

2011 Outstanding Alumni Award, Civil
Engineering Department
Past Chair, Civil Engineering
Professional Advisory Board

**National Council of Examiners for
Engineering and Surveying**

Member, Structural Exam Committee

**Structural Engineering Licensing
Coalition**

Member, Past Chair – Steering
Committee

International Code Council, Building

Safety Professional Member
Member, IBC-S Code Committee

American Concrete Institute, Member

Fenestration and Glazing Industry

Alliance, Member, Certified Fenestration
Associate Professional

The Masonry Society, Member Veneer
Committee

American Institute of Steel

Construction, Member

National Roofing Contractors

Associations, Member

Positions Held

Bernhardt Forensic Engineering LLC

Founder, Manager, March 2020 to Present

Engineering Systems Inc., O'Fallon, MO

Senior Consultant, 2013 to 2020

OCCI, Fulton, MO

Chief Structural Engineer, 2012 to 2013

Burns & McDonnell Engineering Co., St. Louis, MO

Department Manager/Technical Lead and Chief Regional
Structural Engineer, 2001 to 2012

Hurst-Rosche Engineers, Inc., Marion, IL

Lead Structural and Civil Engineer, 1998 to 2001

Bernhardt Structural Engineering, Inc., Carbondale, IL

Founder, Chief Executive Officer, 1993 to 1998

**Bucher, Willis & Ratliff Consulting Engineering, Kansas
City, MO**

Project Engineer and Project Manager, 1980 to 1993

Areas of Specialization

Investigations:

Building and Bridge Collapse and Structural Failure
Structural Damage from Tornados, High Winds, Explosions,
Rain, Snow, and Fires

Collision Damage of Buildings and Bridges

Construction and Demolition Defects

Design Defects in Structural Projects involving Steel,
Concrete, Masonry or Wood

Fire Damage of Structures

Vibration Damage

Building Code Investigations

Evaluation of Deteriorated Concrete

Evaluation of Corroded Structural Steel

Building Envelope, Building Veneers, Water Intrusion

Slips, Trips, and Falls related to stairs or sidewalks

Design:

Building Rehabilitation Investigation and Design

Evaluation, Analysis, and Design of Steel, Concrete, Wood,
and Masonry Structures

Reinforced Concrete Foundation Analysis and Design

Bridge Analysis and Design

Seismic Analysis

“Hyatt Regency Skywalk Collapse Remembered”, **R.P. Bernhardt**, presented at Geo-Structures Confluence, November 2016, Structural Engineers Association of Idaho, Boise, May 2017; Central Fabricators Association, October 2017; ASCE Forensic Congress, November 2019

“Examining the Role of the Forensic Structural Engineer”, **R.P. Bernhardt**, presented at Shelter Insurance, January 2018

“Understanding the Causes of Structural Failures”, **R.P. Bernhardt**, presented at Shelter Insurance, January 2018; presented at Sandberg- Phoenix, September 2019; presented at Indiana Defense Council, November 2019

“Understanding the Structural Forensic Engineering Process”, **R. P. Bernhardt**, presented at Shelter Insurance, January 2018

“Failure of Three Retaining Walls”, **R.P. Bernhardt**, presented at ASCE Forensic Congress, November 2019

“Analysis of Design Standards and Recommended Practices for Agricultural Storage Bins”, **R.P. Bernhardt**, Co-Author and Co-Presented at 7th ASCE Forensic Engineering Congress, November 2015

“Task Management Tools for the Structural Engineer”, **R.P. Bernhardt**, presented at ASCE/SEI, 2014

“Investigations and Recommendations based on the May 22, 2011, Joplin, Missouri Tornado”, **R.P. Bernhardt**, as Contributor, Structural Engineers Association of Kansas and Missouri, May 2012

“Hyatt Regency Skywalk Collapse Remembered”, **R.P. Bernhardt**, Structure Magazine, August 2016

“Structural Damage and Repair Requirements and their Effect on Claims and Litigation”, **R.P. Bernhardt**, presented at Western Loss Association, April, 2015

“Investigations and Recommendations based on the May 22, 2011, Joplin, Missouri Tornado”, **R.P. Bernhardt**, Co-Presented at the National Council of Structural Engineers Association, Annual Conference in St. Louis, October 2012. Also, presented at the Structural Engineering Institute Day in St. Louis, October 2012

Professional Engineers’ Refresher Course: Missouri Society of Professional Engineers, **R.P. Bernhardt**, presented at St. Charles Community College, St. Peters, MO 2007-2018

Structural Basics Seminar, **R.P. Bernhardt**, presented at OCCI Engineering and Construction, Fulton, MO, June – August, 2012

“Silver Lake Dam Retaining Wall Failure and Repair”, **R.P. Bernhardt**, Burns & McDonnell, Chesterfield, MO 2011

“Introduction to Concrete Repair”, **R.P. Bernhardt**, presented at Southern Illinois University, Carbondale, IL, 2011

“Guidelines for Failure Investigations”, Second Edition, **R.P. Bernhardt**, Chapter Author, American Society of Civil Engineers, 2018

“Vision for the Future of SE Licensure”, **R.P. Bernhardt**, contributor, Structural Engineering Licensure Coalition, 2020

“Recommendations from the FIU Bridge Collapse”, **R.P. Bernhardt**, committee member, ASCE Task Committee on the Investigation of the Florida International University Bridge Collapse, 2020

Presentation on the Guidelines for Failure Investigation, Second Edition, Volume 2, **R.P. Bernhardt**, chapter author, editor. Presented at the 2022 Structures Congress in Atlanta, April 2022.