

Trent Hembree, PE | Forensic Engineer

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Professional Summary:

Mr. Hembree is a licensed professional engineer with over 10 years of structural engineering experience. Two years of that experience pertains to forensic engineering investigations that have involved structural and building envelope damage and/or failures. His experience includes investigations related to moisture intrusion, foundation settlement and heaving, damage assessment related to fire and storm events (hail, wind, hurricane, snow and ice). As a forensic engineer with EFI Global he performs structural failures and construction defect investigations, assesses and provides forensic analysis of wind/hail damage related incidents.

Prior experience included design of mining facilities, oil/gas stations and wastewater treatment plants. He has experience with analysis, design and detailing of gravity and lateral force resisting members, utilizing concrete masonry, steel and concrete structural elements. Mr. Hembree has extensive experience in using and knowledge of the International Building Code, ASCE-7 and various structural design codes. His responsibilities have included designing various foundation systems to resist gravity and lateral forces from heavy industrial equipment as well as the use of finite element analysis programs to design complex steel structures and deep foundation systems.

Key strengths Include the following:

- Construction Defect
- Structural Failure Investigations
- Wind Damage Assessment
- Wind/Hail Damage Analysis
- Wind and Windborne Debris Damage Assessment
- Concrete
- Steel

Licenses and Certifications:

Professional Engineer, CO, #54326

Professional Engineer, NE, #E-19436

Professional Engineer, KS, #29217

Project Experience:

Envista Forensics, Montrose, CO Construction Defect

Lead structural expert for the defense of steel fabricator and installer for commercial/light industrial building. Conducted onsite inspection of the building during destructive testing,

reviewed construction documents, communications and interviewed steel fabricator on extent of work to determine what responsibilities they were involved with.

Envista Forensics, Golden, CO
Wind Damage Assessment

Evaluated roof wind damage and prescribed scope of repair for a 225,000 square feet multi-use commercial warehouse.

Envista Forensics, Parker, CO
Fire Damage Assessment

Evaluated the fire damage and prescribed scope of repair for a 18,000 square feet light industrial manufacturing pre-engineered metal building.

Carollo Engineers, Omaha, NE
Riverview Lift Station Replacement Project

Created STAAD model of building foundation/water channels for accurate design of foundation walls and determine the minimum number of deep pile foundations required. Worked with senior engineers with experience in designing structures within the critical zone of a levee to determine additional design considerations and working with Army Corps of Engineers.

Carollo Engineers, Commerce City, CO
South Adams Pellet Softening/Disinfection Improvements Design

Lead structural designer for project, in charge of designing masonry chemical building, water holding stabilization basin and the main process building foundations, slab and equipment platforms. Worked with client and contractor to keep expedited construction schedule, resolving design changes due to construction constraints as they arose.

Kahuna Design, Proctor, WV
Natrium Frac 2 and Cryo 3 Facilities

Structural designer for major equipment foundations and steel pipe racks through majority of project site. Worked with structural design department to develop standard steel connection details to reduce time to check drawings. Coordinated with client and field engineers to design pipe rack that would need to accurately navigate an existing facility, avoiding equipment, foundations, underground utilities and utilize existing steel structures for support.

Professional Experience:

EFI Global, Forensic Engineer, 2023
Envista Forensics, Project Engineer, 2020 – 2023
Carollo Engineers, Structural Engineer, 2016 – 2020
Kahuna Design, Civil/Structural Project Specialist, 20013-2016
Lyntek Incorporated, Engineer, Structural Department, 2009-2013

Education:

Bachelor of Science, Civil Engineering, Colorado State University, Fort Collins, Colorado, 2007

Affiliations:

The American Institute of Steel Construction