

Cris-Hawk Farrin | Senior Forensic Engineer, P.E.

165 Ledge Street, Suite 7, Nashua, NH 03060

603-732-9119
cris.farrin@efiglobal.com

Professional Summary:

Mr. Farrin possesses a broad structural engineering and project management skill set with practiced written and verbal communication skills. He is experienced in residential and commercial structural design with reinforced concrete, masonry, steel, and timber. He also has full project implementation experience from initial planning and design through construction administration. Mr. Farrin has an extensive knowledge and understanding of national and regional building codes, including the International Building Code (IBC), Minimum Design Loads for Buildings and Other Structures (ASCE-7), and the Massachusetts State Building Code (780 CMR).

- Structural Design
- Structural Analysis
- Construction Administration
- Code Review
- Damage Origin & Cause Investigation

Licenses and Certifications:

Professional Engineer, New Hampshire, License #15096

Professional Engineer, Massachusetts, License #53556

Professional Engineer, Maine, License #15213

Professional Engineer, Vermont, License #132581

Professional Engineer, Connecticut, License #32603

Professional Engineer, Rhode Island, License #12341

Professional Engineer, New York, License #98546

Professional Engineer, Texas, License #128378

Professional Engineer, Florida, License #83796

Project Experience:

EFI Global, Cranberry Isles, Maine Vegetative Green Roof Investigation

Coordinated removal of existing green roof to expose liquid-applied resin roofing membrane. Assignment included developing a protocol to expose the roofing without causing additional damages, determining cause of leaks, review of construction drawings and documents, and overseeing destructive testing.

EFI Global, Laconia, New Hampshire Exterior Wall Tile Failure Investigation

Reviewed partial failure of exterior tile façade assembly to determine the cause of tile detachment. Extensive review of building envelope design and construction. Observed demolition to verify as-built conditions and compared to construction drawings and documents.

**EFI Global, Dracut, Massachusetts
Construction Vibration Investigation**

Reviewed cracked and deflected structures to determine whether the damage was caused by nearby construction blasting. Obtained and reviewed seismographic data in the form of blast logs. Literature review of studies comparing particle velocity and frequency to structural damage thresholds.

**EFI Global, Milton, Massachusetts
Tree Strike Damage Assessment**

Reviewed structural damage caused by a tree impact to a residence constructed in the 1800s. Distinguished between existing age-related conditions versus damage due to the impact. Correspondence with the local building official regarding proposed repair measures. Building code review to compare code-mandated repairs with proposed corrective actions. Opine on reparability versus reconstruction of the structure.

**EFI Global, Millis, Massachusetts
Moisture Infiltration Assessment**

Lead forensic engineer for a 75,000 square-foot residential investigation involving determination of moisture ingress. Oversee removal of photovoltaic roof panels, removal of existing roof coverings, review of roof and attic ventilation systems, and installation of a new roof coverings. Evaluate loads applied to the original roof structure by the addition of photovoltaic roof panels. Consider deflection caused by said loads and reviewed structural reinforcement calculations and drawings. Review town meeting minutes to determine first documented instances of moisture ingress at the property.

**EFI Global, Florida & Texas
Hurricanes Harvey, Ian, and Irma**

Inspected over 50 residential and commercial structures following Hurricane Harvey in 2017, Hurricane Ian in 2022, and Hurricane Irma in 2023 (storm damage occurred in 2017, evaluations occurred in 2023). Inspections included wind versus flood related damage, cause and extent of damage to foundation systems following flooding events, and building envelope failures.

Professional Experience:

EFI Global, Senior Forensic Engineer, 2017 – 2023; Team Lead, 2023 – Present
Summit Engineering, Structural Engineer, 2016 – 2017; Project Engineer, 2011 – 2016
University of New Hampshire, Assistant Engineer & Graduate Researcher, 2009 – 2010

Specialized Education:

The Financial Dynamics of Designing with Mass Timber, WoodWorks – April 2024
Slip, Trip, and Fall Certification, EFI Global et al – March 2024
Wood Diaphragm Deflections and Flexibility, WoodWorks – March 2024
Guidance and Recommendations for the Seismic Evaluation and Retrofit of Multi-unit Wood-frame Buildings with Weak First Stories, FEMA – February 2024
The Hidden Cost of “Copy & Paste” Engineering, National Council of Structural Engineers Associations (NCSEA) – February 2024
Coastal Construction – Designing the Building Envelope, CED Engineering – January 2024
Managing Risks in Adjacent Demolition, National Council of Structural Engineers Associations (NCSEA) – December 2023
Post-Disaster Building Safety Assessment Training, Structural Engineers Association of Massachusetts (SEAM) – October 2023



Designing Durable Balconies: Weather, Fire, Structure, WoodWorks – October 2023
Building Science Fundamentals, Building Science Corporation – November 2021
Level I “Authorized Person” Certification, Association for Certified Rope Accessed Building
Assessment Technicians – October 2021
Additional specialized education available on request.

Education:

Master of Science, Civil Engineering, University of New Hampshire, 2010
Bachelor of Science, Civil Engineering, University of New Hampshire, 2009

Affiliations:

Structural Engineers of New Hampshire (SENH)