

## Sarah G. Byer | Senior Structural Engineer, P.E.

11 Commerce Way, Suite A, Totowa, NJ 07512

732-629-7930

[sarah.byer@efiglobal.com](mailto:sarah.byer@efiglobal.com)

### Professional Summary:

Mrs. Byer has 23 years of experience in the structural engineering field, including 14 years performing forensic investigations and analysis of foundation movement and cracking, building envelope failures, structural failures, tree and vehicle impact structural assessments, code compliance and evaluation, and roof condition inspections. She has gained design experience ranging from analyzing large steel trusses in automotive plants to designing numerous single-story commercial buildings to assisting in the computer aided design of high-rise casinos. Mrs. Byer has inspected over two thousand damaged commercial and residential structures to determine causation and extent of structural damage, fatigue and analysis. In addition, she has extensive knowledge providing QA/QC Senior Reviews and peer reviews of structural forensic engineering reports for various types of damage assessments.

Her structural design knowledge of various buildings types including steel, concrete, and masonry, as well as repairs and renovations to existing buildings, has aided her in preparation of expert reports and testimony regarding design, analysis, code compliance, review of installed construction and construction project management activities.

### Licenses and Certifications:

Professional Engineer, NYS Office of the Professions, New York, 080530

Professional Engineer, State Board of Professional Engineers and Land Surveyors, New Jersey, GE49716

Professional Engineer, State Registration Board for Professional Engineers, Land Surveyors & Geologists, Pennsylvania, PE075232

Licensed Mold Assessor, NYS Office of the Professions, New York, MA01202

Licensed Asbestos Inspector, NYS Office of the Professions, New York, 20-07213

### Project Experience:

#### **R.E. Warner, Marysville, OH**

##### **International Automotive Manufacturing Plant Roof Truss Inspection & Analysis**

Analyzed and designed reinforcement for existing steel roof trusses for ~250,000 sf industrial assembly facility. Responsibilities included field work to determine current roof loading conditions, analysis of existing trusses with new loading conditions, design of required truss reinforcement, and field inspections during reinforcement installation.

#### **Parker Bay Engineering, Mays Landing, NJ**

##### **Multi-Million Dollar Shopping Complex Design**

Lead Project and Structural Engineer for design of over 150,000 sf of retail space at retail center near the eastern coast of NJ. Design included both free standing single-story buildings and single-

story buildings adjacent to existing structures. Highlights included hurricane zone wind loading, eccentrically loaded column footings along existing wall foundations, and intricate canopy supports.

**EFI Global, Brooklyn, NY**

**Sudden Building Settlement in New York City Borough**

Reviewed residence damages in order to determine cause of abnormal building settlement. Assignment included investigation of damages, NYS building department drawing and document review, and subsurface examination of existing foundation conditions.

**EFI Global, Madrid, NY**

**Dairy Barn Collapse**

Reviewed a partial roof collapse at a dairy pole barn structure to determine the cause of the collapse. Analyzed existing design drawings for New York building code compliance and provided suggestions for rebuild repair.

**EFI Global, Western NY**

**November 2014 record snowstorm**

Following a record breaking, back-to-back, lake-effect snowstorm, inspected over 100 residential and commercial structures for snow related damage, including roof framing failure and movement, interior finish cracking, ice-damming and code compliance of framing systems for design snow loading.

**EFI Global, New York and New Jersey**

**Hurricanes Irene and Sandy**

Inspected over 300 residential and commercial structures following Hurricane Irene in 2011 and Hurricane Sandy in 2012 and acted as Lead Peer Reviewing Engineer for another 200+ losses immediately following Hurricane Sandy. Inspections included wind vs. flood related damage, cause and extent of damage to foundation systems following flooding events, building envelope failure and compliance of buildings with FEMA requirements. Serviced as expert witness in court proceedings.

**Court Qualifications/ Depositions:**

Litigation CV available upon request.

**Professional Experience:**

EFI Global, Inc., Senior Structural Engineer, 2007-Present

Wendel Duchscherer, Staff Structural Engineer, 2004-2006

Parker Bay Engineering, Lead Structural Engineer, 2001-2004

R.E. Warner & Associates, Staff Structural Engineer, 1998-2001

**Specialized Education:**

Fire Safety of Wood Construction, PDHengineer.com- February 2021

Design Fundamentals of Heavy Timber and Sawn Wood Construction, PDHengineer.com- February 2021

Determination of Live & Roof Live Loads Per ASCE-7, PDHengineer.com- January 2021

Evaluation of Existing Structures, PDHengineer.com- January 2021

Forensic Structural Inspections: Examination, Diagnosis, and Remedy for Building Structures, PDHengineer.com- January 2020  
Influence of Moisture Content on the Physical and Mechanical Properties of Wood, PDHengineer.com- January 2020  
Ice Forces on Structures, PDHengineer.com – January 2020  
NYS Mold/IAQ Refresher Course – September 2019  
Foundation Damage and Repair, HalfMoon Education – March 2018  
Mold Assessor Training Course, NYS Department of Labor approved training provider- October 2017  
Introduction to Roofing Systems, Titan - March 2014  
Evaluation & Repair of Concrete Structures, Titan – March 2014  
Professional Ethics or Engineers, Titan – March 2014  
Excavation for Structures, Titan – March 2014  
Basics of Groundwater Protection, Titan – March 2014  
Moisture Infiltration, Titan – March 2014  
Forensic Engineering & Expert Witness Services, Institute for Design Professionals – May 2012  
Physical Properties and Moisture Relations of Wood, Decatur – April 2012  
Structural Design Criteria for Raised Floor Systems, Decatur – March 2012  
Failure Appraisalment, Decatur – March 2012  
Mechanical Properties of Wood, Decatur – March 2012  
Concrete Distress and Deterioration-Symptoms and Causes, Decatur – March 2012  
Structural Framing & Damage Assessment, HAAG – February 2007  
Commercial Roofs Damage Assessment, HAAG – February 2007

#### **Education:**

Bachelor of Science, Civil Engineering, Ohio Northern University, Ada, Ohio 1998

#### **Affiliations:**

American Society of Civil Engineers (ASCE)

#### **Publications and Presentations:**

Byer, Sarah and Amori, David. "Structural Deficiencies in Roof Collapses Can Lead to Subrogation Opportunities." Claims Journal. October, 2014.