

# Edward J. Tuczak

## MSE, PE

### Senior Consultant



Mr. Edward Tuczak is a Senior Consultant for ESI with over 25 years of experience in the planning, design, construction, maintenance, and investigation of various buildings, structures, and facilities. His professional practice areas include construction defects, structural failures, premises liability, construction accidents, and water intrusions through the building envelope.

Mr. Tuczak conducts property damage assessments in relation to windstorm events, floods, fires, vehicle impacts, foundation movement/distress, and water releases from plumbing, HVAC, and fire protection systems. His client services include expert witness testimony, damage evaluation and causation reports, construction repair services, and fall protection consultation.

Prior to working in the forensic field, Mr. Tuczak performed structural, architectural, and site design for numerous buildings and structures. This included the assessment, repair, and reinforcement of existing structures for new occupancy and usage demands required by facility owners. Mr. Tuczak has designed temporary and permanent fall protection systems for large industrial and power generation facilities.

## Education

Graduate Certificate, Occupational Safety & Health. Columbia Southern University.

MBA, Management. Cleary University.

Certificate, Facilities Management Administration. Washtenaw Community College.

MSE, Civil Engineering. University of Michigan.

BS, Architecture. University of Michigan.

## Contact Information

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## ESi Ann Arbor

1174 Oak Valley Drive  
Ann Arbor, MI 48108

## Areas of Specialization

- Structural Systems & Foundations
- Construction Safety & OSHA Compliance
- Water & Moisture Damage
- Code Compliance & ADA Accessibility
- Building Envelope & Roofing
- Exterior Site Features & Utilities
- Crane Rigging & Fall Protection
- Damage Evaluation & Repair Design

## Licenses & Certifications

- State of Florida P.E. License 88056
- State of Illinois P.E. License 062-060661
- State of Indiana P.E. License PE10910465
- State of Michigan P.E. License 6201045603

- State of New York P.E. License 092225
- State of New Jersey P.E. License 2577163
- State of Ohio P.E. License 71674
- State of Pennsylvania P.E. License PE075561
- State of West Virginia P.E. License 27786
- State of Wisconsin P.E. License 42865- 6
- National Floor Safety Institute, Walkway Auditor Certificate

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## Positions Held

### **Engineering Systems Inc., Ann Arbor, Michigan**

- Senior Consultant

### **Packer Engineering, Ann Arbor, Michigan**

- Director
- Senior Staff Engineer

### **Cummins & Barnard, Inc., Ann Arbor, Michigan**

- Structural/Architectural/Civil Engineer

### **Ghafari Associates, Inc., Dearborn, Michigan**

- Structural Engineer

### **Smith, Hinchman & Grylls, Detroit, Michigan**

- Graduate Engineer

### **Indianapolis Airport Authority, Indianapolis, Indiana**

- Construction Management Intern

### **City of Ann Arbor Engineering Department, Ann Arbor, Michigan**

- Engineering Intern

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## Continuing Education

- “Mind the Gap: Waterproofing Considerations in Property Line Construction,” “Changes to the Wind Load Provisions” “ How to Implement Strategies in a Re-Roofing Project Design,” “A Longitudinal Review of Energy Efficiency”, “Evaluation of Vapor Retarder in Roof Decks by Hygrothermal Simulation,” “Design Implications of Enclosure Backstops in Energy Codes,” “Decks,” “Fenestration Replacement: Identifying Design Solutions for Existing Buildings,”

“Railings,” “A Deep Dive into Hail-Caused Dents,” “Metal Roofs, Hail Impact, and Long-Term Performance” and “Mind the Gap” – IIBEC, 2025

- **Bridges: Upkeep and Repairs for Professional Engineers** – McKissock, 2024
- **“Leak Investigation- Methods, Assessment, and Strategies”** – IIBEC, 2024
- **“EPA Guidelines for Construction & Demolition Debris,” “ADA Accessibility Standards,” “Personal Protective Equipment in Construction,” “Drywall Repair,” “Decks,” “Ethics for Engineers as Expert Witnesses,” “Railings,” and “Fall Prevention in Industry”**  
– Titan, 2023
- **“Guardrail Systems,” “Historic Preservation,” and “Ethics for Engineers,”** – PDHengineer.com, 2023
- **“Construction Cautions” and “Top 10 Concerns with Enclosures”** – Tremco, 2021
- **“Infrastructure Planning,” “Foundations,” “Culverts,” “Pavement Design,” “Roller Compacted Concrete,” “Internal Curing of Concrete Pavement,” “Deterioration of Concrete,” and “Fasteners”** – EZ-PDH.com, 2021
- **“ADA Accessible Routes and Building Blocks,” “Green Building Design,” and “Storm Shelters”** – EZ-PDH.com, 2021
- **“Design for Construction Safety,” “Noise Hazards,” and “Administering Construction Projects”** – EZ-PDH.com, 2021
- **Building Acoustics: Making Architects Visions a Reality** – Hanleywood University, 2020
- **Plaza Deck Waterproofing** – Keene Building Products, 2020
- **Roof Design with Special Profile Joists** – Steel Joist Institute, 2020
- **“Design Fundamentals of Heavy Timber and Sawn Wood Construction,” “The Simplified Design and Practical Use of Engineered Wood Products,” and “How Things Break: Thermal Effects”** – PDH Engineer.com, 2018
- **Condition Assessment of Concrete Structures Prior to Rehabilitation** – ACI, 2018
- **“Mold Basics,” “The Science of Mold,” “Health Effects Caused by Mold,” “Understanding Moisture Intrusion and Its Impact on Mold Growth,” and “Preventing Mold Growth”** – RCI, 2018
- **“Ethics for the Practicing Engineer,” “Mold Remediation,” “Setup of Engineering Controls for Mold Remediation Projects,” “Mold Remediation Equipment,” and “Personal Protective Equipment for Mold Remediation Contractors and Consultants”** – Red Vector.com, 2018
- **Architectural Sheet Metal Flashing Design** – RCI, 2018
- **Dropped Objects: The Other Fall Protection** – American Society of Safety Engineers (ASSE), 2016
- **“Facilities Management,” “Forensic Structural Inspections,” “Geotechnical Exploration,” “Asbestos and Lead Paint,” and “Subsurface Utilities”** – PDH Engineer, 2016

- **HVAC Systems** – PDH Online, 2016
- **Temporary Worker Initiative Symposium** – Michigan Occupational Health & Safety Administration (MIOSHA), 2016
- **Construction Safety Symposium** – ASSE, 2015
- **“Excavation Safety,” and “Job Hazard Analysis”** – MIOSHA, 2015
- **Construction Safety Leadership Conference** – Construction Association of Michigan, 2014
- **Ladder Safety Training** – American Ladder Institute, 2014
- **Wood-Destroying Organism Inspection** – International Association of Certified Home Inspectors, 2014
- **Asbestos and Lead Awareness** – MIOSHA, 2014
- **Construction Safety Leadership Conference** – Construction Association of Michigan, 2013
- **Building Envelope Investigations: Standards & Methodology for Investigating Roofing, Waterproofing & Exterior Walls in Residential & Commercial Buildings** – The Building Envelope Institute, 2013
- **Construction Safety Leadership Conference** – Construction Association of Michigan, 2012
- **“Scaffold Competent Person Hands-on” and “Design/Loading Classes”** – Scaffold Training Institute, 2012
- **C3 Contractor’s Safety and Health Program** – Clicksafety, 2012
- **Fire Protection Engineering, Coatings and Paints** – PDHDirect.com, 2012
- **ADA Basics** – Syracuse University, 2011
- **“Concrete Evaluation and Repair,” “Window Installation,” “Roof Leak Detection,” “Asphalt Shingles,” and “Flexible Roofing Edge Design”** – RedVector.com, 2011
- **Segmental Retaining Wall Design** – PDHEngineer.com, 2010
- **Construction Safety Symposium** – ASSE, 2010
- **Wind Loads for Buildings and Structures** – American Society of Civil Engineers (ASCE), 2009
- **Fall Protection Competent Person Course** – MIOSHA, 2009
- **Masonry Day** – International Masonry Institute, 2008
- **Masonry Design and Construction** – University of Wisconsin, 2008
- **30-Hour Outreach Trainer Course: Construction Safety** – Occupational Health & Safety Administration (OSHA), 2007
- **30-Hour Construction Safety** – OSHA, 2007
- **General Construction Safety: Residential Fall Protection** – MIOSHA, 2007

- **Water and Moisture in Buildings: Basic and Advanced** – University of Illinois, 2006
- **Water Entry Prevention and Moisture Control in Buildings** – University of Wisconsin, 2005
- **Scaffolds and Swing Stages** – OSHA, 2005
- **Engineered Wood Products** – American Plywood Association, 2005
- **General Roofing Knowledge** – Tremco Corp, 2004
- **Reinforced Concrete Design** – Concrete Reinforcement Steel Institute, 2002
- **Design of Blast-Resistant Buildings** – ASCE, 2003
- **Curtain Wall Systems** – ASCE, 2003
- **Design of Industrial Buildings** – Education Programs Innovations Center, 2002
- **Foundation Design** – University of Wisconsin, 2001
- **Masonry Codes** – The Masonry Society, 2000
- **Various Steel Design Seminars** – American Institute of Steel Construction, 1995–1999

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## Project Experience

### Investigations

#### Construction Defects

- Established the cause of claimed water leakage and air infiltration for over 500 replacement windows that were installed during the adaptive reuse of a historic high school building.
- Determined if the uplift of an adhered roofing membrane at a hotel facility was the result of an extreme weather event or a deficient installation of the roofing materials.
- Identified the sources of widespread water intrusion at various locations throughout the building envelope and roof of a multistory office building with a brick veneer façade, aluminum-framed windows and sliding glass doors, balcony terraces, rooftop penthouse, and below-grade parking garage.
- Evaluated the performance of coating materials for industrial slabs on grade.

#### Premises Liability

- Established the applicable codes and standards with respect to a claimed stumble down a curb at a local branch of a commercial bank.
- Determined the cause of a reportedly collapsed guardrail at a residential patio deck.
- Identified the applicable building codes and standards with regards walkway surfaces and the required means of egress.
- Evaluated the construction and closing forces associated with a swinging door at a retail shopping center.

### Construction Accidents

- Evaluated the feasibility of a reported collapse of a covered opening under pedestrian foot traffic.
- Identified the safety obligations of various contractors with regards to a worker who fell from an extension ladder that was not properly erected.
- Determined the cause of the collapse of a temporary guardrail while being leaned upon by a worker.
- Established the applicable violations of safety regulations regarding a worker who fell from height while walking on top of the wall of a building under construction.

### Structural Collapse

- Determined the cause of collapse of a reinforced concrete parking garage.
- Identified the maintenance/operation factors leading to the collapse of an industrial storage rack structure.
- Evaluated the global collapse of the sidewall of large grain storage structure.
- Established the cause of progressive collapse of wood roof trusses for a government office building.

### **Consulting and Repair Design**

#### Site Design & Repair

- Provided recommended modifications to a retail shopping center site design to achieve accessible routes.
- Prepared drawings and specifications for the repair of a large residential structure that sustained a significant fire event.
- Prepared drawings and specifications for the temporary shoring of a commercial office building that sustained significant damage to a load-bearing wall from a vehicle strike.
- Provided recommendations for the engineered reinforcement of wood trusses damaged by fire at a light industrial building.

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### **Presentations**

"Who's the Boss? Understanding Key Relationships Among Employers and Employees on Construction Jobsites," **E.J. Tuczak** and T.J. Whaling, Ohio Association of Civil Trial Attorneys Webinar, Virtual, October 29, 2025.

"How and When to Effectively Utilize Technology to Your Advantage," J.M. Roberts and **E.J. Tuczak**, Property and Liability Resource Bureau Central Regional Adjusters Conference, St. Louis, MO, August 27–28, 2024.

"Human Factors & Premise Liability," J.L. Auflick and **E.J. Tuczak**, Ohio Association of Civil Trial Attorneys Webinar, Virtual, December 3, 2020.

"Temporary Roof Repairs and Harvesting Roof Tiles," W. Johnson and **E.J. Tuczak**, 21st Annual Windstorm Insurance Conference, Orlando, FL, January 26–30, 2020.

"When Old Buildings Violate New Codes," **E.J. Tuczak**, ESi Michigan Office Open House, Ann Arbor, MI, September 26, 2019.

"Building Damage from Vehicle Impacts," **E.J. Tuczak** and J.R. Roberts, International Association of Special Investigation Units: Michigan Chapter, Livonia, MI, October 18, 2018.

"How to Involve an Expert in a Case from Start to Finish," **E.J. Tuczak**, R.A. Mink, and T.J. Bajzek, DTCI Summer Combined Committee CLE Event, Indianapolis, IN, August 17, 2017.

"Who's in Control and What's at Stake?" M.T. Jane and **E.J. Tuczak**, Associated General Contractors of Michigan, Livonia, MI, May 17, 2017.

"Material Handling & Storage," **E.J. Tuczak** and C. Lindros, CAM Safety Leadership Conference, Livonia, MI, December 7, 2016.

"Human Factors & Premise Liability," J.L. Auflick and **E.J. Tuczak**, Michigan Defense Trial Counsel: Live Classroom and Webcast, Ann Arbor, MI, June 9, 2016.

"Challenges in Demolition of Existing Buildings," C. Lindros and **E.J. Tuczak**, Construction Association of Michigan Safety Leadership Conference, Livonia, MI, September 9, 2015.

"When Old Buildings Violate New Codes," **E.J. Tuczak**, Toledo Insurance Association, Toledo, OH, February 12, 2015.

"When Old Buildings Violate New Codes," **E.J. Tuczak**, Fort Wayne Insurance Adjusters Association, Fort Wayne, IN, February 5, 2015.

"Utilizing the Forensic Engineer," R.T. Kaczkowski and **E.J. Tuczak**, Defense Research Institute Construction Law Seminar, Las Vegas, NV, 2007.

"Math and Structural Engineering," **E.J. Tuczak**, Oakland Community College, Royal Oak, 1996.