

Ashley N. Solek

PE

Senior Consultant



Ms. Ashley Solek is a Senior Consultant in the Civil Engineering Practice Group at Engineering Systems, Inc. (ESi), with seven years of experience providing forensic and investigative consulting services to clients. Her work focuses on evaluating property damage, identifying causes of loss, and developing practical repair recommendations for both commercial and residential properties.

Ms. Solek has conducted investigations involving fire losses, storm-related damage, roofing failures, window and door assembly damage, and structural components such as trusses. She specializes in assessing roof damage caused by wind, hail, moisture intrusion, and fire. Through her work at ESi, she has experience with a wide range of roofing systems, including asphalt shingles, TPO, clay and concrete tile, metal panels, and built-up roofing systems.

Her services include determining cause and origin of damage, evaluating the extent of damage, defining appropriate scopes of repair, and assessing repairability. In addition to roofing evaluations, Ms. Solek has experience assessing damage to commercial and residential window and door assemblies resulting from environmental exposure, manufacturing defects, and installation issues.

Ms. Solek's approach emphasizes clear communication, thorough documentation, and practical solutions tailored to each client's needs.

Education

MS, Structural Engineering. Florida State University. 2018

BS, Civil Engineering. Florida State University. 2017

Licenses & Certifications

- State of Florida P.E. License 102959

Languages

- English

Contact Information

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ESi Tampa

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St. Petersburg, FL 33716

Areas of Specialization

- Cause & Origin Damage Assessments
- Damage / Failure Analysis
- Roof Damage Assessments (Hail & Wind)
- Window & Door Damage Assessments
- Water Leakage Investigations
- Building Envelope Investigations
- Building Code Analysis
- Retaining Wall Systems

Positions Held

Engineering Systems Inc., Tampa, Florida

- Senior Consultant 2025 – present
- Senior Staff Consultant 2023 – 2025
- Staff Consultant 2019 – 2023

Barkley Consulting Engineers, Inc., Tallahassee, Florida

- Structural Engineer in Training, 2016 – 2019

Professional Affiliations/Honors

Florida Engineering Society

American Society of Civil Engineers

Association of Professional Insurance Women (APIW)

Project Experience

Investigations

Hurricane Milton and Helene Damage Assessment Project

- Coordinated and conducted structural site inspections across coastal regions as part of a large-scale post-disaster damage assessment following Hurricanes Milton and Helene.
- Evaluated commercial properties to document and analyze structural failures, with emphasis on differentiating wind-related versus flood-related damage.
- Reviewed invoices and repair estimates, assessed building material conditions, and performed engineering calculations to determine design wind pressures on building components.
- Prepared detailed technical reports supporting insurance evaluations and structural repair recommendations.

Technical Analysis of Window Failure Mechanisms

- Authored a comprehensive technical analysis report investigating window system failure mechanisms.
- Applied standards and testing protocols from AAMA, ASTM, and major manufacturers including Kolbe and PGT.
- Evaluated the effects of design, installation, and maintenance on window performance.
- Reviewed manufacturing specifications, glazing systems, sealant applications, and building envelope waterproofing at windows and doors.

- Developed evidence-based conclusions identifying a manufacturing defect as the root cause of premature window component failure.

Post-Hurricane Ian Hotel Inspections – Sanibel Island

- Performed post-hurricane inspections of hotel properties following Hurricane Ian.
- Coordinated with mechanical, electrical, plumbing (MEP), and structural framing contractors to ensure compliance with local permitting requirements.
- Served as a third-party inspection provider, documenting field observations and verifying repairs against approved plans and applicable codes.
- Authored inspection reports submitted to Lee County officials, supporting occupancy approvals and reconstruction permits.
- Contributed to regulatory compliance and the safe, efficient reopening of hospitality facilities.

Seawall Failure Investigation – Hurricane Michael

- Investigated structural failure of a concrete panel seawall following Hurricane Michael.
- Conducted field inspections from landward and waterside perspectives and collected site-specific data.
- Reviewed comparable design drawings in the absence of original construction documents.
- Performed structural analyses evaluating overturning moments and lateral earth and hydrostatic pressures.
- Assessed tidal and storm surge data to correlate hydraulic loading with observed failure modes.
- Prepared a formal engineering report outlining causation, repair recommendations, and mitigation strategies for improved future performance.