



Jason D. Gregorie, PE, CFM

Civil & Structural Engineer

Jason Gregorie practices engineering in the civil and structural disciplines. His work often involves existing structures, pavements, building envelopes, civil site work, and construction materials. He has also worked with design professionals beyond the civil discipline, such as architects and mechanical engineers, for condition assessments and building envelope evaluations.

While a graduate student, he was granted a research assistantship to conduct pavement and materials research at Asphalt Rubber Technology Service (ARTS) at Clemson University. Through ARTS, Mr. Gregorie conducted research and assisted in teaching numerous transportation certification courses to contractors, engineers, technicians, and DOT personnel.

Education

- Master of Science in Civil Engineering, Clemson University, 2006
- Bachelor of Science in Civil Engineering, Clemson University, 2004

Registration

- Professional Engineer (PE) in South Carolina, North Carolina, and Georgia
- National Council of Examiners for Engineering and Surveying, Record 38728
- Certified Floodplain Manager (CFM) by the Association of State Floodplain Managers

Principal Areas of Practice

- Construction Materials
- Pavements
- Existing Structures
- Building Envelope
- Site Work

Professional Organizations

- Transportation Research Board (TRB)
- American Society of Civil Engineers (ASCE)
- Civil Engineers Club of Charleston

Technical Committees

- *Communications Coordinator, Young Member, Low Volume Roads Committee (AFB30), Transportation Research Board of The National Academies*

Professional Experience

- Engineer, Applied Building Sciences, Inc. – May 2006 to Present

Related Experience

- Graduate and Undergraduate Research Assistant, Asphalt Rubber Technology Service – May 2004 to May 2006
- Survey Crewman, GAZ Johnson, Inc. – Winter 2003/2004
- Laborer, Residential Construction – 1999 to 2003

Representative Projects:

Pavement:

- **Berwick Subdivision, Savannah, GA:** Premature asphalt pavement distress investigation
- **Americo Vespuccio Norte Highway, Santiago, Chile:** Asphalt pavement distress investigation for urban highway
- **SC State Ports Authority, Wando Welch Terminal, Charleston, SC:** Investigation of bad concrete batch for shipping terminal pavement
- **Pavement Condition Assessment** of asphalt and concrete pavements for numerous residential, commercial, and industrial facilities in SC and GA
- **Wilco-Hess, St. Mathews, SC:** Parking lot geometric analysis for litigation
- **Roadway Accident Reconstruction, Beaufort, SC:** Design and construction of re-created low-volume roadway test section for litigation exhibit
- **Truck stop / gas station** evaluation of asphalt pavement and site-work, several sites, SC, GA

Pavement Cont'd.

- **New Orleans Lakefront Executive Airport**, Pavement and site-work condition assessment for Odyssey hangar, parking lot, and runway apron
- **Laboratory analysis, and design of Superpave and Marshall asphalt mixes**, including testing for moisture susceptibility, density, binder content, gradation, rutting, tensile strength, and other parameters
- **Asphalt binder laboratory testing** of virgin, polymerized, and crumb-rubber modified binders, including Rotational Viscosity, Bending Beam Rheometer (BBR), and Dynamic Shear Rheometer (DSR) tests

Structural Design:

- **Zion United Methodist Church, Huger, SC**: Design of structural repairs after tornado damage to roof and reinforced masonry walls
- **Bethel United Methodist Church, circa 1854, National Register of Historic Places, Charleston, SC**: Heavy timber truss condition assessment, emergency shoring design, design of structural repairs to brick masonry and timber trusses, contract administration of repairs
- **Sportsman Island Marina, Daniel Island, SC**: Design of 70+ ft span heavy timber roof trusses
- **Cobblestone Park Amenities Center, Columbia, SC**: Design of 69+ ft span heavy timber roof trusses for gymnasium
- **Leggett & Platt Warehouse, N. Charleston, SC**: Roof and wall collapse investigation, design of repairs to masonry wall and steel roof framing
- **Seabrook Island Beach Club, Seabrook Island, SC**: Design of glued laminated timber trusses
- **Fort Stewart Access Control Building, Fort Stewart, GA**: Design of 37 ft span heavy timber trusses
- **High Hammock Condominiums, Seabrook Island, SC**: Structural design for renovation
- **Residential design**, including exterior, floor plan, and foundation design, two residences, Charleston, SC
- **Reinforced Concrete Retaining Wall, Florence, SC**: Design of new wall after failure

Retaining Walls / Slope Failures

- **Dart Container Warehouse, Atlanta, GA**: Investigation of retaining wall failure during construction.
- **Mountainside retaining wall, Traveler's Rest, SC**: Condition survey and analysis of residential retaining wall
- **Retaining Wall Failure, Florence, SC**: Investigation of residential retaining wall failure and design of repair
- **Slope Failure, Hemlock Bluff, Mountain Air, NC**: Assist with investigation of slope failure

Storm/Catastrophe Assessment:

- **Hard Rock Café & Casino, Biloxi, MS**: Wind vs. Flood damage analysis after Hurricane Katrina
- **Hurricane Katrina, New Orleans, LA**: Wind vs. Flood assessment after Hurricane Katrina for 10 single family residences
- **Fire Damage**: Structural design repairs to wood framing due to fire, numerous residences and apartment buildings, various locations, SC
- **Hurricane Isabel, Dare County, NC**: B&D and Bayliss Boatworks, wind damage evaluation of large bay doors after Hurricane Isabel

Piping and Drainage

- **City of Dillon Wastewater Improvements, Dillon, SC**: Investigation of buried pipe deformations
- **Winthrop Realty Apartments, Wilmington, NC**: Site drainage evaluation after flood
- **Berwick Subdivision, Savannah, GA**: Analysis of existing storm drainage system
- **Milford Park Subdivision, Irmo, SC**: Residential grading & drainage study
- **Colleton River Plantation, Bluffton, SC**: Investigation of pipe failure with embankment failure for golf course lagoon
- **Cedar Grove Apartments, N. Charleston, SC**: Piping failure and pavement repairs assessment
- **Belfair Residential and Golf Course Community, Bluffton, SC**: Drainage piping investigation
- **FEMA no-rise study** using HEC-RAS, Conway, SC

Existing Structures Analysis:

- **Redeemer Presbyterian Church (formerly St. Andrews Lutheran), circa 1840, Charleston, SC:** Structural condition assessment
- **Indian Springs Condominiums, Hilton Head Island, SC:** Assessment of wood framing damage due to termites
- **SPAWAR Atlantic, North Charleston, SC:** Structural analysis of reinforced concrete floor slab
- **Structural analysis/design** of wood framing and foundations for single-family residences, more than 20 residences, various locations, SC
- **129 Broad Street, Charleston, SC:** Structural condition assessment for pre-1890 building
- **Metalworx, Summerville, SC:** Evaluation of industrial concrete slab on-grade
- **State Farm Fire and Casualty Company, GA, NC, SC, VA, Washington, DC:** Evaluations of masonry wall, concrete slab on-grade, and foundation issues, 10 residences
- **98 King Street, Pre-1840, Charleston, SC:** Structural assessment of cracks in multiwythe brick walls
- **Analysis of autoclaved aerated concrete (AAC) walls** for residential townhouse, Beaufort, SC
- **Vibration Claims:** Investigation of vibration and/or sound damage claims of several single-family residences and commercial properties, SC

Materials:

- **Dart Container Warehouse, Atlanta, GA:** Mix design evaluation and assessment of cracks in composite concrete slab
- **Aggregate testing,** Numerous ASTM and AASHTO testing/evaluation of aggregates from various quarries throughout South Carolina
- **Shotcrete Pools, Bluffton, SC:** Distress survey of four shotcrete pools for The Hartford Company
- **Lower Berkeley County Waste Water Treatment Plant, SC:** Investigation of poor concrete batch
- **Numerous assessments** regarding bad concrete mixes, SC, GA

Building Envelope & Roofing:

- **Bethel United Methodist Church, circa 1854, National Register of Historic Places, Charleston, SC:** Investigation of leaking metal roof, design of new standing seam metal roof
- **SC Wind & Hail Underwriting Association, Coastal SC:** Cladding survey, over 70 high- and mid-rise buildings
- **Pulte Sun City, Bluffton, SC:** Stucco condition survey, over 3,000 homes
- **Hail Damage assessment** for insurance, several single-family residences, SC, NC
- **Conventional and synthetic stucco investigations** of over 50 residences and commercial buildings
- **Window evaluation** including testing per ASTM E1105, numerous buildings, FL, GA, SC
- **Riverwood Apartments, Myrtle Beach, SC:** Brick veneer investigation
- **68 Church Street, Charleston, SC:** Window flashing installation evaluation
- **Insulated Concrete Form (ICF), Mt. Pleasant, SC:** Moisture intrusion investigation for ICF residence
- **Factor's Walk, 8 Prioleau Street, Charleston, SC:** Exterior wall assessment of cracks in masonry & stucco

Life Safety:

- **Deck collapse** with major injuries, site investigation, Port Royal, SC
- **Rail failures** from impact and bodily force, site investigations and structural analysis for residential and commercial properties, numerous properties, SC
- **Bicycle accident** resulting in injury, site investigation and analysis, Columbia and Hilton Head Island, SC
- **Trip on parking wheel stop,** geometric analysis of parking lot and wheel stop, St. Mathews, SC
- **Fall on stairs and building egress,** site investigation and analysis of three commercial properties, SC

Continuing Education / Conferences

- South Carolina Association for Hazard Mitigation Conference, 2010, Myrtle Beach, SC
- Transportation Research Board Annual Meeting, 2010, Washington, DC

Continuing Ed. / Conferences Cont'd.:

- Haywood Baker Ground Modification Seminar, 2009, Charleston, SC
- Transportation Research Board Annual Meeting, 2009, Washington, DC
- Transportation Research Board Annual Meeting, 2008, Washington, DC
- International Conference on Low-Volume Roads, 2007, Austin, TX
- ADS Stormwater Seminar, 2007, Charleston, SC
- Renovation of Masonry Façade, ASCE Web Seminar, 2007, Charleston, SC
- Transportation Research Board Annual Meeting, 2007, Washington, DC
- Portland Cement Association / Georgia DOT Cement-Based Pavement Applications, 2006, Savannah, GA
- AASHTO/TRB Subcommittee on Pavement Maintenance Conference, 2006, Charleston, SC
- Residential Masonry Framing and Wind-Borne Debris Protection for Glazed Opening Seminar, 2006, Charleston, SC
- STAAD Structural Analysis and Design Software Seminar, 2006, Charlotte, NC
- Transportation Research Board Annual Meeting, 2006, Washington, DC
- Transportation Research Board Annual Meeting, 2005, Washington, DC