



MICHEL JOSEPH SHAHID, JR, PE, RRC

Joe Shahid has a broad range of experience as a civil and structural engineering consultant and roofing consultant. He has conducted facility condition inspections, failure analyses, damage assessments, roof surveys, accident reconstruction, and engineering investigations of all types of structures. He has conducted numerous investigations of structural damage resulting from both wind and flood from numerous hurricanes and windstorms throughout the Southeast beginning in 2003. Mr. Shahid provides engineering support services to many major insurance and adjusting companies and law firms throughout the mid-Atlantic region. This effort is related to structural failures and deficiencies, faulty construction, code violations, and life-safety issues. A large percentage of Mr. Shahid's work focuses on the evaluation of building envelope problems related to roofing, foundation, synthetic stucco, and conventional stucco systems. Mr. Shahid's work also includes the evaluation of structural defects and failures attributable to catastrophic events such as hurricanes, wind storms, and earthquakes. Mr. Shahid is also an accomplished military and commercial pilot of large multi-engine aircraft.

Education

- Bachelor of Science in Civil Engineering, The U.S. Air Force Academy, 1990
- Master of Science, The University of Arkansas, 2000
- Numerous roofing and building envelope seminars
- Air Force Life Support Officer Course, Kadena AB, Okinawa, Japan, 1996
- Air Force Mishap Investigation Course, Kirtland AFB, NM, 2002

Registration

- National Council of Examiners for Engineering and Surveying (NCEES)
- Registered Professional Engineer in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia and West Virginia.
- Registered Roof Observer, 2009
- Registered Roof Consultant, 2010
- Airline Transport Pilot (ATP)
- Certified Flight Instructor Instrument (CFII)

Previous Experience

- Applied Building Sciences, Inc. October, 2004 - Present
- U.S. Air Force Reserve, December, 1999 - Present
- Delta air Lines, 2000 - 2004
- U.S. Air Force, 1990 – 1999

Professional Organizations

- American Society of Civil Engineers
- Roof Consultant Institute

PRINCIPAL AREAS OF PRACTICE

- Building Envelope Failures
- Roofing/Coating Failures
- Hurricane/Catastrophe Assessments
- Structural Inspections
- Facility Condition Assessments
- Historic Structures
- Moisture Migration/Mold Investigation
- Life Safety
- Accident Reconstruction

Building Envelope Failures

- Water intrusion and exterior cladding investigation, Tanglewood Mall, Elizabeth City, NC
- Waterproofing and exterior cladding investigation, multi-story, multi-family condominium complex, North Myrtle Beach, SC
- Conventional three coat stucco failure investigations, various residential and commercial structures, Charleston, SC
- Exterior Insulation and Finish System (EIFS) failure investigations, various residential and commercial structures, Hilton Head Island, SC
- Exterior Insulation and Finish System (EIFS) failure investigations, various residential structures, Savannah, GA
- Exterior Insulation and Finish System (EIFS) failure investigations, commercial office buildings, North and South Carolina
- Preparation of repair recommendations (synthetic and conventional stucco), various locations, North and South Carolina
- Window failure investigations, various commercial office buildings, South Carolina and Florida
- Window ASTM standard testing, various residential and commercial structures, North and South Carolina
- Fluid Applied membrane failures, various residential and commercial structures

Roofing/Coating Failures

- Roof assessment and new roof specification, National HealthCare assisted living facility, Myrtle Beach, SC
- Roof assessment and wind load analysis, Cheraw Intermediate School, Chesterfield County School District, Cheraw, SC
- Built-up roof leak investigation, Outback Plaza, Charleston, SC
- Metal panel roof leak investigation, commercial strip mall, Mt. Pleasant, SC
- Cedar shake failure investigation, residential structure, Columbia, MS
- Roof assessment and new roof specification for warehouse facility, Hurricane Ike damage, Houston, TX
- Roof assessment for 400 unit Valencia condominium building, Hurricane Ike damage, Houston, TX
- Roof assessment and repair specification of over 120 multi-story condominium buildings, Sunrise Lakes Condominiums, Sunrise, FL
- Steeple attachment assessment, Jamestown Baptist Church, Myrtle Beach, SC
- Cement tile roof investigations for storm damage and defective construction, various locations, Florida
- Investigation of numerous single ply, modified bitumen, and built-up roof systems on low, mid, and high-rise structures, various locations, North and South Carolina, Florida, Louisiana, and Mississippi
- Cement tile roof investigations for storm damage and defective construction, various locations, Florida
- Puncture of loose laid, ballasted EPDM membrane, 11 story high-rise, Myrtle Beach, SC
- Evaluation of numerous wind damaged standing seam metal roof systems, North and South Carolina, Florida
- Evaluation of structural standing seam roof systems, South Carolina
- Hypalon roof failure, Arizona Tea Bottling Warehouse, Pompano Beach, FL

- EPDM failure, Coronet Paper Facility, Ft. Lauderdale, FL
- Roof sheathing buckling failure, Twin Lakes Retirement Facility, Cincinnati, OH

Hurricane/Catastrophe Assessments

- EPDM roof membrane failure assessment, Max Fisher Building, Detroit, MI
- Hurricane Wilma damage assessment, numerous multi-family complexes, South Florida
- Fire damage inspection, commercial light gage steel frame building, Florence, SC
- Fire damage inspection, wood frame residential structure, James Island, SC
- Tornado damage inspection, church / community structure, Huger, SC, New Ellenton Middle School, Ellenton, SC
- Office building roof collapse during a rain storm, Shreveport, LA
- Hurricane Katrina Wind / Flood damage determination Hard Rock Café Hotel and Casino, Biloxi, MS, 2005 – 2006 and Triumph Food Store IGA, Buras, LA, 2008
- Inspection of wind and flood related structural, marine and roof damage to commercial and residential structures after Hurricane Katrina, Rita, and Wilma, various locations, Louisiana, Mississippi, and Florida, 2005
- Fire damage inspection, multi-story multi-family apartment building, North Charleston, SC
- Storm water intrusion investigation, multi-story, multi-family apartment complex, Wilmington, NC
- Inspection of wind and flood related structural, marine, and roof damage to commercial and residential structures following Hurricanes Charlie, Frances, Gaston, and Ivan, Florida and South Carolina Coasts, 2004
- Analysis of failed plastic plumbing components resulting in major water damage in Florida and South Carolina

Structural Inspections

- Roof truss inspection, analysis, and repair recommendation for multi-story, multi-family condominium complexes, Charleston, SC
- Kitchen floor assembly deflection, Commercial Clubhouse building, North Charleston, SC
- Foundation inspection, residential structure, Bald Head Island, NC
- Distressed wall inspection and repair drawing, CMU multi-use structure, Folly Beach, SC
- Truss collapse during erection inspection, commercial structure, Goose Creek, SC
- Truss collapse during erection inspection, church building, Shreveport, LA
- Truss collapse during erection inspection, commercial structure, Loris, SC
- Truss collapse investigation, Union Grove Baptist Church, Memphis, TN
- Numerous foundation and structural inspections of various residential structures, South Carolina, Georgia
- Vibration related structural inspection of St. Peter's Basilica, Charlotte, NC
- Renovation designs on several historic King Street commercial and multi-story structures, circa 1900, Charleston, SC

Facility Condition Assessments

- Structural, Mechanical, and Electrical inspection of University of South Carolina buildings, Columbia, SC
- Roof and building envelope inspection of new multi-level, multiple roof system structure, Daniel Island, SC
- Structural, Mechanical, and Electrical inspection of Sunbelt Rental Facility, Bluffton, SC

Historic Structures

- Analysis, design, and repair of collapsed stone ledge and granite arch of the Southend Brewery, Charleston, SC

- Analysis, design, and repair of Portico plaster on First Baptist Church, Church Street, Charleston, SC
- Analysis, design, and repair of historic timber floor and trusses, King Street, Charleston, SC

Moisture Migration / Mold / Asbestos Investigation

- Richwood Community Medical Center, Richwood, WV
- Multi-family, multi-building, condominium projects, Sunrise, FL
- Single family residential structures, Coastal South Carolina
- Multiple storefront commercial building, Foley, AL

Life Safety

- Balcony collapse with injury, Beaufort, SC
- Deck collapse with injury, Fripp Island, SC
- Stair investigation, Myrtle Beach, SC
- Wall panel fall with injury, Greenville, SC
- Slip and fall investigation with lighting analysis, Hilton Head Island, SC
- Code interpretations for fire ratings, geometry, and proper construction, various locations; residential and commercial applications

Publications and Presentations

- The Exchange Club of Charleston – Case Studies on Forensic Engineering, March 2007
- Wando High School – Case Studies on Forensic Engineering, October 2009