



ANDREW SCHRADER, PE, SI, CGC

Founder

Florida Board Recognized Structural Engineer (FRSE)

EDUCATION

**UNIVERSITY OF
SOUTH FLORIDA**

*Master's Degree (M.S.C.E.),
Civil Engineering*

*Bachelor's Degree (B.S.C.E),
Civil - Structural
Engineering,*

Graduated cum laude

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

Member

*International Concrete Repair
Institute (ICRI)*

Member / Special Inspector,
*International Code Council
(ICC)*

Member

*Association for Materials
Protection and Performance
(AMPP, formerly the National
Association of Corrosion
Engineers—NACE)*

➤ SUMMARY OF EXPERIENCE

Mr. Schrader's background encompasses working as a consulting engineer on building envelope, construction defect, and forensic engineering projects. He also serves as a first responder and lead engineer for the State of Florida's Urban Search and Rescue Task Force.

He has designed and managed projects on commercial and residential buildings composed of structural steel, reinforced concrete, masonry, stucco/EIFS over wood frame and re-roofing.

His responsibilities have included production of structural surveys, project manuals, bid documents, permit documents, and shop drawing review.

He currently serves on the Board of Directors for the International Concrete Repair Institute and the Building Arts Advisory Committee at St. Petersburg College.

Florida Professional Engineering License - 2010

FL Certified General Contractor License - 2013

FL Licensed Asbestos Consultant - 2018

FL Engineering Special Inspector License - 2019

FL Board-Recognized Structural Engineer - 2023

Professional Credentials



PE #72231

State of Florida, Licensed
Professional Engineer

FRSE

Florida Board Recognized
Structural Engineer

SI #72231

State of Florida, Special
Inspector of Threshold
Buildings

CGC #1521910

State of Florida, Certified
General Contractor

AX #104

State of Florida, Licensed
Asbestos Consultant

StS-1

- U.S. Army Corps of Engineers
- Urban Search and Rescue
Structures Specialist

ICC Inspector #8910200

- International Code Council (ICC)
Certified Inspector Accredited in:
- Structural Steel and Bolting
Special Inspector
- Soils (Geotechnical) Special Inspector
- Structural Masonry Special Inspector
- Residential Plumbing
- Residential Mechanical
- Residential Electrical
- Property Maintenance and Housing
- ADA Accessibility / Plans Examiner

Concrete Construction Special Inspector

American Concrete Institute (ACI)

Concrete Field Testing Technician

Grade I, American Concrete Institute (ACI)

Infrared Thermographer

Certified Level 1—Teledyne FLIR Systems

OSHA 10

Basic Job-Related Construction Safety and
Health Hazards

OSHA 30

Supervisory Construction Safety
Responsibilities (U.S. Department of Labor)

Commercial Pilot (Instrument-Rated) #4122450

Remote Pilot

(Small Unmanned Aircraft Systems)

- U.S. Department of Transportation
- Federal Aviation Administration (FAA)

Certified Continuing Education Instructor

Florida Department of Business and
Professional Regulation (DBPR)

Certified Continuing Education Instructor

Florida Division of State Fire Marshal

Basic Coatings Inspector/CIP Level 1

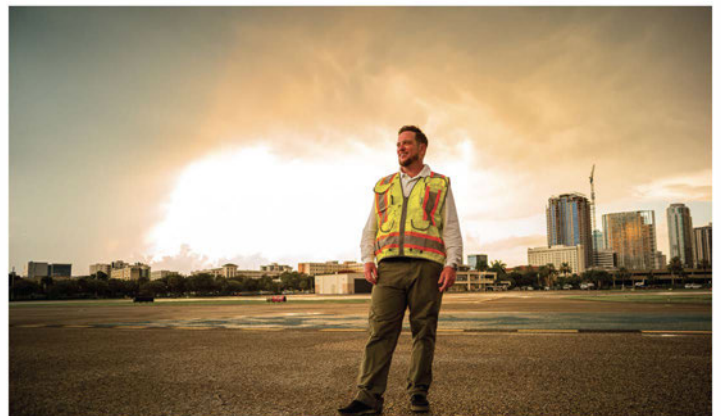
Association for Materials Protection and
Performance (AMPP, formerly the National
Association of Corrosion Engineers—NACE)
Certification No.108901

Awards & Recognition

- Deployed by State of Florida for Search and Rescue Operations for Hurricanes Hermine (2016), Irma (2017), Michael (2018), Dorian (2019), Champlain Towers (Surfside) building collapse (2021), Hurricanes Debby and Helene (2024)
- Working Group Chair, Structures Specialist Group, Division of State Fire Marshal / State of Florida – 2019 – Present
- Board of Directors, International Concrete Repair Institute 2009 - 2010, 2023 - Present
- Guest Lecturer, New York State Homeland Security and Emergency Services – 2017, 2019, 2025
- Guest Lecturer, FDIC International (Fire Department Instructor's Conference) – 2019, 2022
- Guest Lecturer, College of Engineering, University of South Florida 2014 through 2024
- Subject Matter Expert Contributor, U.S. Department of State (Italian Consulate) – 2017
- Guest Lecturer, Florida Fire Chief's Association Annual Conference – 2017



- Humanitarian Service Award (Services Rendered Following Hurricane Hermine and Hurricane Irma), Board of County Commissioners, Marion County FL – 2017 - 2018
- Official Roofing Consultant, Pinellas County Housing Authority 2012 through 2015
- Keynote Speaker, Community Associations Institute Annual Meeting – 2013
- Parking Structure Restoration of the Year, International Concrete Repair Institute - 2009



Research Background - Education

While earning his Master's Degree at the University of South Florida, Mr. Schrader performed research on enhanced application methods for fiber-reinforced polymer (FRP) repairs on damaged and deteriorated concrete. This research involved the use of composite building materials including carbon fiber reinforcing polymers (CFRP).

As part of this research he studied alternate scanning systems for infrared thermography testing. Besides non-destructive testing he also utilized destructive tests in accordance with ASTM C1583, "Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength of Concrete Repair Materials." This work contributed to a publication in the American Society of Civil Engineer's Journal of Composites for Construction.

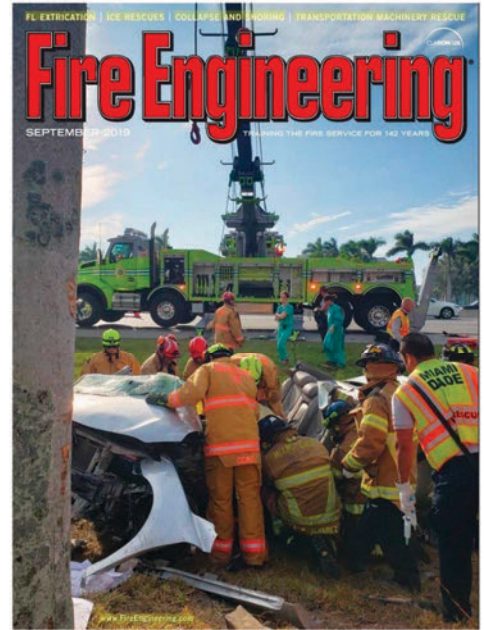
Also during his time with the Structural Research Group at the University of South Florida, Mr. Schrader aided in the design, construction and testing of a portable, pressurized enclosure system for flight deck repairs to U.S. Navy warships. This work culminated in the real-world application and testing of the system in order to repair the amphibious transport ship USS Nashville (LPD-13) while docked at Portsmouth, VA. He earned his bachelors degree in Civil Engineering in 2005 and his masters degree in Civil-Structural Engineering in 2007. He has guest-lectured at the University of South Florida College of Engineering since 2014, and currently serves on the Advisory Board for Building Arts at St. Petersburg College.

Professional Experience History

- **Founder**
Recon Response Engineering, LLC—St. Petersburg FL. 2015 – Present
- **Senior Consultant**
Koning Construction Consultants, Inc.—Hudson, FL. 2022 – 2025
- **Special Projects Manager**
Munyan Restoration, Painting & Waterproofing—Clearwater, FL. 2010 – 2022
- **Project Engineer**
Karins Engineering Group, Inc. –St. Petersburg, FL. 2005 – 2010
- **Research Assistant**
University of South Florida – Tampa, FL. 2005 – 2007

Publications

- Schrader, Andrew B., “Surfside Condominium Collapse: Pride, Pain, and the Burden of Moving On,” Firefighternation.com / Clarion Fire & Rescue Group, April 2022
- Schrader, Andrew B., “Urban Search and Rescue and Structural Collapse: It’s Everyone’s Job to Know,” Fire Engineering Magazine, September 2019, pp. 57-61
- Schrader, Andrew B., “Preparedness Lessons Learned from Hurricane Irma Responders,” RECOIL OFFGRID Magazine, June 2018, pp. 51-57
- Schrader, Andrew B., “Trapped: How to Survive a Structural Collapse,” RECOIL OFFGRID Magazine, January 2016, pp. 60-65
- Schrader, Andrew B., “Hurricane Preparation for Structures,” Florida Community Association Journal, July 2015, pp. 36
- Schrader, Andrew B., “Nuts and Bolts of Moisture Intrusion,” Common Ground, CAI’S Magazine for Community Association Leaders, May-June 2014, pp. 55-56
- Schrader, Andrew B., “Exterior Maintenance and Moisture Intrusion: Common Causes and Precautions,” Facilities Today Magazine, February 2013
- Schrader, Andrew B., “Using Non-Destructive Testing to Regain the Client’s Trust,” Sealant Waterproofing and Restoration Institute (SWRI) Applicator Magazine, Spring 2009, pp. 20-24
- Schrader, Andrew B. et al., “Half-Cell Potential Corrosion Survey Aids Repair Design,” International Concrete Repair Institute (ICRI) Magazine, September/October 2008, pp. 2-5
- Danny Winters, PhD, PE Gray Mullins, PhD, PE, Rajan Sen, PhD, PE, and Andy Schrader, PE, “Bond Enhancement for FRP Pile Repair in Tidal Waters,” American Society of Civil Engineers (ASCE) Journal of Composites for Construction, Vol. 12, No. 3, May/June 2008 pp. 334-343
- Schrader, Andrew B., “Methods to Improve Bond on FRP Wrapped Piles,” Graduate Thesis, University of South Florida, 2007



Training & Classes Taught

- “**Structural Collapse for First Responders,**” Taught to Federal Emergency Management Agency/Minnesota Urban Search and Rescue Task Force 1, February 2023
- “**Surfside Structural Collapse,**” Presented to the American Society of Civil Engineers, Student Chapter for the University of South Florida College of Engineering, Tampa, FL, February 2024
- “**Disaster Engineering,**” Introduction to Urban Search and Rescue Engineering, University of South Florida College of Engineering, guest lecture for Dr. Gray Mullins, December 2022
- “**Fail Falling: Structural Collapse and the Impossible Diagnosis,**” FDIC International (Fire Department Instructor’s Conference), Indianapolis, Indiana, 2022
- “**Liquid Applied Roof Coatings and Roof Inspections,**” online Continuing Education instructor for Florida Department of Business and Professional Regulation (FL DBPR) approved course, July 2020.
- “**An Engineer’s Guide to Structural Collapse**”, New York State Homeland Security and Emergency Services, New York State Technical Rescue Conference, Oriskany, NY 2017, 2019, 2025
- “**An Engineer’s Guide to Structural Collapse**”, FDIC International (Fire Department Instructor’s Conference), Indianapolis, Indiana, 2019
- “**Community Association Manager’s Guide to Moisture Intrusion,**” Innisbrook Management Conference, Oct. 2017, Palm Harbor, FL
- “**US&R Structural Collapse Refresher,**” Marion County (FL) Technical Rescue Teams August 2016, Ocala, FL



- “**US&R Structural Collapse Refresher,**” Pinellas County (FL) Technical Rescue Team, Manatee County (FL) Technical Rescue Team, Florida USAR Task Force 3, May 2016, St. Petersburg, FL
- “**US&R Structural Collapse Refresher,**” Pinellas County (FL) Technical Rescue Team, Manatee County (FL) Technical Rescue Team, Florida USAR Task Force 3, May 2016, St. Petersburg, FL
- “**US&R Structural Collapse Refresher,**” City of Gainesville (FL) Fire Rescue April 2016, January 2017 Gainesville, FL
- “**Moisture Intrusion and Repair Methods on Structures,**” Structural Rehabilitation Course, University of South Florida College of Engineering, guest lecture for Dr. Rajan Sen, January 2016

Training & Classes Taught (continued)

- **“Disaster Engineering: Structural Specialist Responders,”** Florida Structural Engineers Association, Tampa, FL February 2025 (course accredited by Florida Board of Professional Engineers, 1.0 Professional Development Hours, Area of Practice)
- **“Disaster Engineering: Structural Specialist Responders,”** American Society of Civil Engineers Florida Section, Ft. Lauderdale FL July 2021



- **“Ethics of Condominium Repairs,”** Engineering Ethics Course, University of South Florida College of Engineering, guest lecture for Dr. Gray Mullins, Tampa FL, February 2014
- **“Detecting Moisture Intrusion Vulnerabilities through Structural Inspections,”** Graduate Course on Structural Repair and Rehabilitation, University of South Florida College of Engineering, guest lecture for Dr. Rajan Sen, Tampa FL, January 2014



Urban Search & Rescue (US&R) Qualifications/Deployments

- **Lead Structures Specialist (StS) for State US&R Assets**
(FL US&R TF-3, TF-4, TF-5, TF-6, TF-7, TF-8) respectively based in Tampa Bay, Orlando, Tallahassee, Ft. Myers, Jacksonville, and Ocala
StS Working Group Chair
State of Florida Urban Search and Rescue Task Force
Florida State Fire Marshal's Office
April 2019 -- Present
- **Structures Specialist**
City of Orlando, FL
July 2021 -- Present
- **Urban Search and Rescue Structures Specialist (StS-1)**
U.S. Army Corps of Engineers,
October 2014 – Present
- **Marion County (FL) Technical Rescue Team, Volunteer Support Firefighter, November 2015 – Present**

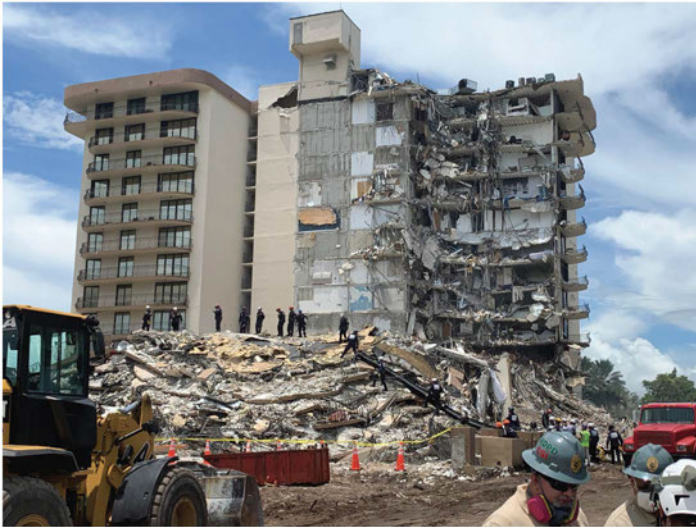


- **Champlain Towers South Condominium, US&R Deployment with Florida Task Force 3**
Surfside FL, June-July 2021. Worked as Structures Specialist (StS).
- **Statewide Drone Mapping Exercise, St. Petersburg FL January 2021**
Florida State University Emergency Management and Homeland Security Program



- **Hurricane Dorian, US&R Deployment with Florida Task Force 8**
Ocala, FL. September 2019. Worked as Structures Specialist (StS).
- **Hurricane Michael, US&R Deployment with Florida Task Force 3**
Florida Panhandle, October 2018. Worked as Structures Specialist (StS).
- **Hurricane Irma, US&R Deployment with Florida Task Force 8**
Palatka, FL September 2017. Worked as lead Structures Specialist (StS).
- **Hurricane Hermine, US&R Deployment with Florida Task Force 8,**
Steinhatchee, FL, September 2016. Worked as lead Structures Specialist (StS).
- **Florida Task Force 8 Operation Integration VII, Camp Blanding, FL September 2015.**
Helicopter / Night Operations Training. Worked as Lead StS.
- **Florida Task Force 8 Structural Collapse Disaster Response Exercise, Florida State Fire College, Ocala, FL July 2015.** Worked as Lead StS.
- **South Florida Hurricane Exercise (SoFLEx) 2015, Florida Task Force 4, Structural Collapse Disaster Response Exercise, Florida State Fire College, Ocala, FL March 2015.** Worked as assistant StS.

Urban Search and Rescue Qualifications / Deployments (continued)



- Hazardous Materials Training, Marion County Fire Rescue Training Group, Recertified Annually,
- Infection Control Training, Marion County Fire Rescue Training Group, Recertified Annually
- CPR, AED, and Basic First Aid, American Red Cross, Recertified Bi-Annually

- Hurricane Debby, Urban Search and Rescue (US&R) deployment with Florida Task Force 8 Lake City FL, August 2024. Worked as Lead StS.
- Hurricane Helene, Urban Search and Rescue (US&R) deployment with Florida Task Force 3 St. Petersburg - Bradenton Beach FL , August 2024. Worked as Lead StS.



FEMA



Legal Services, Court Appearances, Testimony & Arbitration

(partial listing)

Mr. Schrader's expertise includes moisture intrusion, building exterior envelopes, and construction. His work includes assisting council and serving as expert witness.

- **Hyde Park Place II Condominium Association Inc. . Munyan Restoration, Waterproofing & Painting Service of Tampa Bay, Inc., Case No. 19-CA009106-CA**
Construction Contract Dispute
Client: Defendant
Circuit Court of Hillsborough County,
- **Philippe Abrahami vs ER Construction In.**
Crawlspace Ventilation Construction Defect Investigation
Client: Defendant
Jurisdiction: In the Circuit Court of the 11th Judicial Circuit, Miami-Dade County, FL
Activity: Provided document review and commentary regarding design oversight and construction errors.
- **Frank & Stein LLC vs. Underwriters at Lloyd's, London**
Hurricane Irma Wind Damage and Moisture Intrusion Investigation
Client: Plaintiff
Judiciary: In the Circuit Court of the 7th Judicial Circuit in and for Volusia County, Florida
Activity: Provided onsite existing conditions review, document review, and commentary on probable causes of damage to structure.
- **Lindsey Carriera vs. Stirling Ridge Properties**
Moisture Intrusion (window and door leak) Exploration and Analysis
Client: Defendant
Activity: Provided oversight of water testing and existing condition analysis, as well as door redesign to accommodate flashing installation.
- **Waterside at Coquina Key vs. ZMG Construction, Inc.**
Wood Truss and Wood Framing Repair Review, Exploration and Analysis
Client: Defendant
Activity: Provided onsite existing conditions review, analysis of as-built conditions versus as specified shown on drawings, and provided professional opinion on repair methodology.
- **Mary Ann and Martin Schaffel vs. EWI Construction, Inc.**
Metal Roof Review, Exploration, and Analysis
Client: Defendant
Activity: Issued Condition Assessment Reports, Document Review, Performed onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Oversaw uplift resistance testing including UL 580 laboratory testing.

- **Robert Jaffe vs. M.B. Enterprises Roofing & Sheet Metal Inc.**
 Metal Roof Review and Analysis
 Client: Defendant
 Activity: Issued Condition Assessment Reports, Document Review, Issued Supplementary Findings and Opinions Report to Certify Roof as Code-Compliant
- **Catanzarite and Caicedo Families vs. CalAtlantic Homes**
 Residential Foundation/Soils Inspection, Review and Analysis
 Client: Defendant
 Activity: Onsite Inspection, Analysis of Existing Conditions, Document Review
- **Robert Homan vs. Complete Property Services, Inc., Case no. 14-005854-CI**
 Plaza Deck Expansion Joint Installation Inspection, Trip and Fall Complication
 Judiciary: In the Circuit Court of the Sixth Judicial Circuit in and for Pinellas County, Florida
 Client: Defendant
 Activity: Provided Document Review
- **Manatee Association of Realtors® Inc. vs. Manasota Commercial Construction Co**
 Exterior Tile Installation and Waterproofing Failure
 Negotiation and Settlement, Wesley Chapel, FL
 Client: Plaintiff
 Activity: Issued Condition Assessment Reports, Document Review, Performed onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Produced Project Manual and oversaw Bid Process
- **Patrick L. Jinks and Kristen N. Scott vs. Parkcrest Harbour Island LLC, a Florida limited liability company, CKT-Parkcrest at Harbour Island, LLC, a Florida limited liability company, and Cindy Knott Taylor, Case No.: 08-0008184**
 Moisture Intrusion and Stucco Installation Investigation
 Judiciary: In the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, Florida Civil Division
 Client: Plaintiff
 Activity: Issued Condition Assessment and Document Review Report, Issued Supplementary Findings and Opinions Report; Issued Remediation Cost Estimates,
- **Grand Key Condominium Association, Inc., vs. Dale Mabry Development,**
 Moisture Intrusion, Waterproofing and Stucco Installation Investigation
 Judiciary: In the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, Florida
 Client: Plaintiff
 Activity: Performed Document Review, Condition Assessment, Designed and Oversaw Exploratory On-Site testing, Issued Stucco Repair Estimates, Issued Findings and Opinion Report
- **The Promenade at West Meadows HOA vs. Rottlund Homes of Florida**
 Exterior Stucco and Waterproofing Investigation
 Arbitration under American Arbitration Association, Tampa, FL
 Client: Plaintiff
 Activity: Issued Multiple Condition Assessment Reports, Document Review, Oversaw onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Provided Testimony

- **Straiton at Ballentrae HOA vs. M/I Homes**
 Roofing, Exterior Stucco and Waterproofing Investigation
 Negotiation and Settlement, Wesley Chapel, FL
 Client: Plaintiff
 Activity: Performed Structural Assessment and Issued Subsequent Report, Oversaw Onsite Exploratory Testing of Roofs and Walls, Issued Findings and Opinions Report, Issued Opinion of Probable Cost for Remediation
- **Tides at Pelican Landing Condominium Association Inc. vs. Pelican Landings**
 Exterior Stucco and Waterproofing Investigation
 Judiciary: In the Circuit Court of the Twentieth Judicial Circuit, Lee County, Florida
 Client: Plaintiff
 Activity: Performed Structural Assessment and Issued Subsequent Report, Issued Findings and Opinions Report, Issued Opinion of Probable Cost for Remediation
- **George Ciporkin vs. 475 LLC, Clemmons Architecture Inc., Irwin Contracting Inc**
 Judiciary: In the Circuit Court of the Sixth Judicial Circuit, Pinellas County, Florida
 Client: Plaintiff
 Activity: Performed Moisture Intrusion Assessment and onsite testing, Oversaw Onsite Exploratory Testing, Issued Findings and Opinions Report
- **Allstate Business Centers Inc vs. CWI Holdings**
 Hillsborough County
 Client: Defendant
 Activity: Evaluation of light gauge steel warehouse, existing condition survey
- **Reisinger vs. Kaplan DDS**
 Sarasota County
 Client: Defendant
 Activity: Dentist office. Mechanical room is in the closed-in portion of the attic. The attic access hatch/ladder gave way when being used by A/C service technician.
- **Wilhelm Miller, Connie vs. Barrow Construction**
 Pinellas County
 Client: Plaintiff
 Activity: Check structural shipping container house. Existing Condition Survey, shipping container Conex Structure.
- **4010 S. Ocean Condo Hollywood vs John Moriarty**
 Miami County
 Client: Defendant
 Activity: Construction defects -- stucco, concrete, guardrails, post-tension reinforcement.
- **Gulf Wind Owners Association**
 Escambia County
 Client: Defendant
 Activity: Mid-rise condo stucco and maintenance of exterior envelope investigation following storm damage. Existing condition survey.

- **Rollins-Kadver v Upperdeck**
Broward County
Client: Plaintiff
Activity: Slip and fall investigation.

Post-Graduate Seminars and Training Attended (partial listing)

Waterproof Deck Membranes for Vehicular & Pedestrian Traffic Applications, Hands-on Training and Application, Sika Corporation, April 2025, Largo FL

Exterior Envelope Caulking & Sealants, Hands-on Training and Application, Sika Corporation, March 2025, Largo FL

Suspended Scaffolding (swing stage) Safe Operation - Competent Person Training, November 2024, Tampa FL

International Code Council (ICC) 25-hour Special Inspection Training Structural Steel and Bolting, February 2019

International Code Council (ICC) 30-hour Special Inspection Training Soils (Geotechnical) Inspection, August 2018

OSHA 30-hour Construction Safety and Health Training, Clearwater, FL March 2017

Geotechnical Awareness in US&R Operations, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 25 2016, Tampa FL

Assessment of Damage and Hazards in Structures, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 24 2016, Tampa FL

OSHA 10-hour Construction Safety and Health Training, Oct. 27-28 2016, Clearwater, FL

Building Design for Homeland Security for Continuity of Operations, FEMA Emergency Management Institute, February 2016

Safe Rooms and Shelters: Protecting People Against Terrorist Attacks, Feb. 4
2016, PDHlibrary.com

Evaluation and Repair of Concrete Structures, Pt. 3, Feb. 8 2016,
PDHlibrary.com

Tunnel and Bridge Awareness and Damage Assessment, US Army Corps of Engineers Regional Training Meeting, Nov. 15 2014, Tampa FL

Structural Repair and Strengthening Techniques, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 15 2014, Tampa FL

Residential Construction in High-Wind Regions Using the Florida Building Code and ICC 600, Contractor's Institute, July 1-3 2014, Hudson, FL