

EDUCATION

- 1994 **Master of Engineering in Civil Engineering**
Clemson University, Clemson, South Carolina
- 1985 **Bachelor of Science in Civil Engineering**
North Carolina State University, Raleigh, North Carolina

EXPERIENCE

- July 1993
to Present **Engineering Design & Testing Corp.**
Columbia, South Carolina
Consulting Engineer
Columbia District Engineering Manager (1996 – 2003)
Columbia and Charleston Districts Engineering Manager (2016 – 2018)
SE Regional Engineering Manager-Associate Chief Engineer (2018 – 2022)
Investigation of cause of structural damage, including collapsed and sagging roofs, cracked walls, twisted members, cracked pavements and damaged foundations. Analysis to the affects of construction vibration, high winds, consolidating soils, moisture exposure, inadequate designs, heavy snows and construction deficiencies. Investigation of accidents involving cranes and rigging. Development of cost estimates for structural repairs; including buildings, retaining walls, bridges, and storage tanks. Development of repair estimates for structural repairs; including buildings, retaining walls, bridges and storage tanks. Evaluation of structures for building code conformance; including methods of construction, construction materials, compliance to safety requirements and structural design. Evaluation of building sites. Load testing and analysis of structural components. Evaluation of the integrity of damaged structures and development of scope of damage assessments. Evaluation and testing of fluid system components including pumps and tanks. Investigation of the origin and causes of structural fires.
- August 1985
to July 1993 **Charleston Naval Shipyard**
Charleston, South Carolina
Nuclear (Civil) Engineer
Design and issue plans and specifications for the fabrication, modification and maintenance of industrial facilities. Engineering of structural and fluid system projects. Structural projects requiring knowledge of analysis, design, metal construction techniques and construction codes. Fluid system projects include the design of supply and waste water systems and require knowledge of pump sizing, head loss determination, motor starter sizing, as well as stainless steel fabrication and machining techniques. Responsible for the engineering and design of hundreds of lifts made by various types of cranes utilizing various types of rigging arrangements. Supervise shipyard's effort on assigned projects to accomplish facility improvements and maintenance involving breathing air, supply and waste water systems, clean area requirements, radiological controls, HEPA filtered ventilation, hazardous material work controls, architectural, load lifting equipment and rigging, OSHA worker safety requirements and construction management. Development of schedules, costs estimates and preliminary design presentations. Development of

long-range budgets for performance of complex engineering projects. Verification of satisfactory in-progress and completion status of projects. Analyze structural systems utilizing finite element-based software.

May 1982
to August 1985

Charleston Naval Shipyard
Charleston, South Carolina

Civil Engineering Cooperative Education

Drafting of mechanical and structural drawings, design basic industrial type equipment, and conferring with production shops during fabrication.

REGISTRATIONS and CERTIFICATIONS

National Council for Engineering and Surveying (#18-622-62)

Registered Professional Engineer in Alabama (#26203-E)

Registered Professional Engineer in Florida (#55633)

Registered Professional Engineer in Georgia (#PE23265)

Registered Professional Engineer in Louisiana (#32033)

Registered Professional Engineer in Mississippi (#17322)

Registered Professional Engineer in North Carolina (#021799)

Registered Professional Engineer in Ohio (#69430)

Registered Professional Engineer in South Carolina (#13962)

Registered Professional Engineer in Tennessee (#112671)

Registered Professional Engineer in Virginia (#0402 037802)

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers

PUBLICATIONS

Cracking Open Construction Vibrations, Journal of Failure Analysis and Prevention, June 2007

Fracture Analysis of a Tumbler Mechanism, Proceeding from International Mechanical Engineering Conference & Exposition, November 1995 (co-authored R. Dean Harris, Joseph C. Jur)

Snow Load Building Code Requirements, Proceeding from a Design Project Presented to the College of Engineering of Clemson University, August 1994

Structural Steel and Fire Damage Assessment, ASM, Materials Science & Technology 2010 Proceedings; Failure Analysis and Prevention (co-authored R. Dean Harris), October 2010

CONTINUING EDUCATION

2018 *Introduction to Wood Connection Analysis* (Presenter) – EDT, Orlando, Florida

2015 *Drilled Displacement Pile Performance* – SC Engineering Conference

Ethics for Professional Engineers – SC Engineering Conference

NCMA SRW Design & Construction Best Practices Guide – SC Engineering Conference

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- PCI–Special Inspection of Precast Concrete Structures* – SC Engineering Conference
Soil Stabilization Through Structural Resin Injection – SC Engineering Conference
- 2014 *Asphalt Pavement Design Guide* – SC Asphalt Pavement Association
- 2011 *Construction of Residential Buildings in Coastal Areas* – Decatur Professional Development
Earthquakes–Key Components to Aid in Damage Evaluation – EDT Seminar
Engineering Ethics Seminar – EDT Seminar
Maintenance of Concrete – Decatur Professional Development
Rotating Equipment and Predictive Maintenance – EDT Seminar
Warnings vs. Instructions – EDT Seminar
- 2010 *ADA Guidelines: Accessible Routes* – RedVector, Inc.
ADA Guidelines: General Site and Building Elements – RedVector, Inc.
Assessment and Repair of 155 Year–Old Heavy Timber Trusses In Historic Building – SEA of South Carolina–Columbia, Chapter
Basement Foundation Walls – EDT Seminar
HVAC Design and Components – EDT Seminar
Structural Steel and Fire Damage Assessment (Presenter) – SEA of South Carolina–Columbia Chapter
The Engineer’s Role in Loss Valuation – EDT Seminar
- 2009 *Alternate Means and Methods as Provided by the ICC* – EDT Seminar
Asphalt Pavement – Design Basics – RedVector, Inc.
Concrete 3: Methods, Materials, and Maintenance – RedVector, Inc.
Interior Codes 4: Means of Egress – RedVector, Inc.
The Intention of LEED – EDT Seminar
You Can Judge a Roof by Its Cover – EDT Seminar
- 2008 *Confined Space Training* – South Carolina National Safety Council
Hot–Dip Galvanizing: Corrosion Protection – RedVector, Inc.
Pyrolyzed by Spontaneous Combustion – EDT Seminar
- 2007 *Design and Application of Sheet Pile Walls* – ASCE
Simplified Design of Two–Way Slabs – ASCE
Slab–on–Grade Reinforcing Design – PDH Center
Soil Reinforcement Solutions – ASCE
Subgrade Improvement & Base Reinforcement Utilizing Geogrid – ASCE
The Analysis of Open Web Steel Joists in Existing Buildings – PDH Center
The New Orleans Levees: The Worst Engineering Catastrophe in US History–What Went Wrong and Why – ASCE
Understanding Firewall Basics – PDH Center

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- 2006 *Contractors' Pricing Methods* – PLRB/LIRB Claims Conference
 Earthquake Damage Assessment & Repair – PLRB/LIRB Claims Conference
 Hail Testing of Residential Roofing Materials – EDT Seminar
 Hurricane Damage Evaluation Procedures – EDT Seminar
 Legal Aspects of Product Liability Claims – EDT Seminar
 Making Weather Work for You – EDT Seminar
 South Carolina Business & Law – American Contractors Exam Services
 South Carolina General Contractor Unlimited – American Contractors Exam Services
- 2004 *Concrete Distress and Deterioration – Symptoms and Causes* – Decatur Professional Development LLC
 Confined Space Compliance – Safety and Health Council of North Carolina
 Metal Roofing Systems–Damage Assessment – EDT Seminar
 Reinforced Modular Block Walls – EDT Seminar
- 2003 *Exterior Insulation and Finish System Panel Discussion* – EDT Seminar
- 2002 *Examination and Evaluation of Wood Roofs* – EDT Seminar
 Structural Condition Assessment – ASCE
- 1999 *Analysis of Fatigue Fractures* – EDT Seminar
 Structural Fires – Evaluating Damage as a Result of Fire – EDT Seminar
- 1998 *How to Predict and Control Floods* – ASCE
 Residential Construction Materials – EDT Seminar
- 1997 *Exterior Insulation Finish System (EIFS) Presentation* – EDT Seminar
 Hurricane Resistant Residential Construction Course – ASCE
- 1996 *The New American Concrete Institute 318 Building Code* – ACI Seminar
- 1995 *Basic Cause and Origin* – International Training Association
 Residential Electrical Inspection Course –SBCCI
- 1993 *Radiological Controls for Engineers, Non-destructive Testing for Engineers, Quality Control, Nuclear*
- 1982 *Reactor Principals, and Total Quality Management* – Provided by Charleston Naval Shipyard, Charleston, South Carolina