

Curriculum Vitae
12/5/2023



DON C. BAILEY, P.E.
Mechanical Engineer
8 Laurelcrest Lane, Travelers Rest, SC 29690
Mobile: 407-234-8915 Email: doncbailey@gmail.com

I. MAIN AREA OF EXPERTISE: HVAC Systems Investigations/Case Research and Analysis

Mr. Bailey has over 45 years of experience in the design and analysis of complex HVAC and Plumbing systems in large and complex facilities, including Building Indoor Air Quality investigations and remediation projects. Mr. Bailey has worked on a wide variety of commercial and institutional facilities, including medical centers, hospitals and other healthcare facilities.

As a Graduate Mechanical Engineer of Stanford University, Mr. Bailey has complemented and expanded his engineering education with extensive experience in the design, construction and commissioning of a variety of large HVAC systems in large commercial and institutional facilities.

Mr. Bailey has completed legal investigations and remediation design for attorneys, architects, insurance companies, and facility owners ranging from hospitals, ambulatory surgery centers, condominiums, office buildings, theme parks, university campuses and secondary educational facilities. With an extensive background in the design of complex HVAC design, construction and operations, including digital control systems, Mr. Bailey brings a unique understanding of complex HVAC systems to lend to investigations and remediation of problems associated with improper design and construction of HVAC systems.

Since 2015, Mr. Bailey has served as the lead mechanical engineer for a healthcare architectural/engineering firm in the Southeast US specializing in healthcare design, completing and overseeing the design and construction of millions of dollars of HVAC, Plumbing and Fire Protection systems.

From 2001-2014, Mr. Bailey served as the senior mechanical engineer and principal for a large MEP engineering firm in Florida, specializing in healthcare design, completing and overseeing the design and construction of hundreds of millions of dollars of HVAC, Plumbing and Fire Protection systems construction.

From 1993 to 2001, Don was senior mechanical engineer for HVAC design projects, including design of a \$1 Million Outpatient Surgery Center addition, University campus central plant heating system modifications, investigation and remediation of moisture intrusion problems in a public health clinic and Master Utilities Planning on University campuses. Don managed the master planning of the \$3.5 Million Building Management System for Universal's Islands of Adventure theme park, energy conservation studies on 1.2 Million GSF in 20 federal facilities at Pensacola NAS and for 250,000 GSF in 16 buildings at the Illinois Air National Guard, and redesign of Class 100,000 Clean Room HVAC systems at KSC's PHSF facility, and numerous other energy conservation studies and design for commercial projects.

Mr. Bailey's specialized experience in Design and Commissioning of HVAC systems include:

HVAC Systems

DON C. BAILEY, PE
Curriculum Vitae
12/5/2023

Design, Construction and Commissioning
System Operations and Controls
Building Air Quality Investigation and Remedial Design
Energy Conservation Studies and Design

Central Plant Experience

Central Chilled Water Systems
Central Hot Water Systems and Steam Systems
Compressed Air Systems
Centralized and Distributed Energy Management and Control Systems

Mr. Bailey has performed these services on a wide range of facilities, including:

Hospitals
Ambulatory Surgery Centers
Medical Office Buildings
Office Buildings
High-Rise Corporate Facilities
Hotels
Colleges and Universities
Airports
Theme Parks
Aerospace Payload Processing Facilities

II. PROFESSIONAL QUALIFICATIONS

Education

Bachelor of Science, Mechanical Engineering
STANFORD UNIVERSITY, Palo Alto, CA -1977

Associate of Arts, Pre-Engineering
FLORIDA COLLEGE, Temple Terrace, FL -1975

Continuing Education:

Update on Florida Building Code, 2002
Florida Engineering Rules and Regulations, 2002
Situational Sales Negotiation, Baygroup International, 2001
Performance Contracting: Measuring and Verifying Energy Savings, ASHRAE, 2001
Commissioning of HVAC Systems, 1999, University of Wisconsin Madison
Total Building Commissioning, 1999, University of Wisconsin Madison
Controlling Moisture in Buildings, Mid Atlantic Env Hygiene Resource Center, 1998

Biological Contamination of Indoor Environments, Mid Atlantic Env. Hygiene Resource Ctr, 1997
Design of Cool Storage Systems, University of Madison Wisconsin, 1992.
Energy Conservation Control & Automatic Temperature Controls
Johnson Controls - 1978

ASSOCIATIONS/MEMBERSHIP:

Life Member, American Society of Heating Refrigerating & Air Conditioning Engineers (ASHRAE)
Member, National Fire Protection Association
Chapter Chair, Technical and Governmental Affairs 1997-2000
Chapter Chair, Research Promotion 2000-2001
Corresponding Member, Technical Committee, TC 5.6 Fire and Smoke Control
Corresponding Member, Technical Committee, TC 1.4 Control Theory
Guideline Project Committee GPC-5P “Smoke Control Commissioning Guideline”
Senior Member, Certified Energy Manager, Association of Energy Engineers
Member, Southern Building Code Congress International

Public Speaking:

Commissioning of HVAC Systems, presented at several ASHRAE meetings and FPL Business Expo, 1996
Blending HVAC Design with Architecture, Design Strategies, April 2017, Greenville, SC.
Building Information Modeling, April 2018, Greenville Technical College, Greenville, SC.

Writing Articles:

“IAQ 911”, Engineered Systems, May, 2001;
Co-authored ASHRAE Guideline 5-1994 – “Commissioning of Smoke Management Systems”, 1994

Registrations

South Carolina PE#23210
North Carolina PE#42755
Florida PE#35067
Tennessee PE (inactive)
California PE# M-30858 (inactive)
Kentucky PE #21587 (inactive)
New York PE (inactive)
Pennsylvania PE (inactive)
NCEES File #19075

Certifications

Certified Energy Manager #5275 (inactive)

Professional Activities

Member ASHRAE (corresponding member of TC5.6 Fire and Smoke Control)
Senior Member Association of Energy Engineers
Member American Society of Mechanical Engineers

Professional Career Development and History

10/77 to 11/81 Johnson Controls, Inc. - Orlando, FL
Service Manager, Central Florida office
Project Engineer/Asst. Project Manager - OIA
12/81 to 11/83 WED Enterprises - Lake Buena Vista, FL
Sr. Mechanical Engineer, EPCOT Resident Engineering

11/83 to 10/89	Tilden, Lobnitz & Cooper, Inc., Orlando, FL Associate Principal & Manager, Energy Management Dept.
10/89 to 5/93	Don Bailey & Associates, Winter Park, FL Owner and Principal Engineer
5/93 to 3/94	GRG-Vanderweil Engineers, Inc., Maitland, FL Project Manager
3/94 to 3/97	Ralph Hahn & Associates, Inc., Orlando, FL Associate & Project Manager
3/97 to 8/02	Halliwell Engineering Associates, Inc., Orlando, FL Senior Mechanical Engineer
9/02 to 1/15	TLC Engineering for Architecture, Orlando, FL /Healthcare Div. Principal/Senior Mechanical Engineer
2/15 to 12/23	Design Strategies, LLC, Greenville, SC Lead Mechanical Engineer

III. PROFESSIONAL EXPERIENCE:

A. PROJECTS

1. HVAC, PLUMBING and Fire Protection System Design

- **McLeod Carolina Forest – Hospital, Myrtle Beach, SC – 2023**
- **McLeod Carolina Forest – ED, MOB and ASC, Myrtle Beach, SC – 2017-2023**
- **McLeod Health – HVAC Equipment Upgrades for COVID-19 - 2021**
- **McLeod Regional Med. Center, Emergency Dept, Florence SC - 2018**
- **McLeod Health Seacoast Bed Tower, Little River, SC - 2017**
- **McLeod Health Seacoast OR Addition, Little River, SC - 2016**
- **McLeod Health Seacoast Central Energy Plant, Little River, SC - 2016**
- **Mission Health, McDowell Hospital, Marion, NC - 2017**
- **Mission Health, Highlands Cashiers Hosp ED Addition, Highlands, NC -2017**
- **MRMC Cooling Tower Replacement, Florence, SC - 2017**
- **GHS Patewood Hospital, OB and OR Upfit, Greenville, SC - 2017**
- **Martin Army Community Replacement Hospital, Fort Benning, GA - 2014**
- **Baptist Health S. Florida, Tower Bldg HVAC Replacement, Miami, FL 2014**
- **BHSF Doctor’s Hospital Renovations, Coral Gables, FL - 2013**
- **West Kendall Baptist Hospital, West Kendall, FL – 2010**
- **Florida Hospital East Bed Tower, Orlando, FL - 2007**
- **Florida Hospital Bed Tower, Orlando, FL - 2006**
- **All Children’s Hospital, St Petersburg, FL – 2006**
- **Viera Hospital, Viera, FL – 2010**

B. LEGAL INVESTIGATIONS

Selected examples of Legal cases and IAQ Investigations and Remediation of malfunctioning or failed building and mechanical systems.

Shalanda Smith v Winn-Dixie Stores, Inc. d/b/a Harvey's Supermarket, Duval County, FL
Provided site investigations and research for a negligence case involving condensation from reach-in-coolers.

Donna Gruny v FA Blanding, Clay County, FL
Provided site investigation of a restaurant for negligent maintenance and operations of the HVAC systems in a family restaurant.

Ocean Dunes Condos At Aquarina v. Brown Mechanical, et al., Melbourne Beach, FL
Provided site investigations, case research and reports on alleged mechanical system installation deficiencies for residential condominiums.

High School, Vero Beach, FL
Provided survey and design of additional ventilation ductwork from preconditioned outside air units to classroom air conditioners to ensure adequate ventilation.

Public Health Clinic, Ocala, FL
Provided IAQ investigation and field survey of new 58,000 GSF public health clinic facility experiencing extensive moisture intrusion. After recommendations were approved, Mr. Bailey was responsible for implementing the remedial design of the HVAC system and building envelope modifications, including a 100-ton preconditioned outside air unit with enthalpy wheel heat exchanger and a complete redesign of the return air system and DDC control system.

C. RELEVANT PROFESSIONAL EXPERIENCE

Responsible for project management, design of major projects included master planning of Building Management System for Universal's Islands of Adventure theme park, energy conservation studies on 1.2 Million GSF in 20 facilities at Pensacola NAS and on 250,000 GSF at Illinois Air National Guard, the redesign of a NASA Class 100,000 Clean Room HVAC system at Kennedy Space Center, and other energy conservation studies and mechanical design for government and commercial projects.

HVAC design projects include Outpatient Surgery Center addition, central plant heating system modifications at University of Central Florida, investigation and remediation of moisture intrusion problems in a public health clinic and Master Utilities Planning on University campuses.

Energy analysis and design projects completed successfully include energy conservation measures for NECPA

DON C. BAILEY, PE
Curriculum Vitae
12/5/2023

Energy Grants for Schools and Hospitals. Many projects involved chiller plant modifications and EMS systems for energy optimization. Successful projects include Cape Coral Hospital, University Medical Center, Wuesthoff Hospital, Fish Memorial Hospital and Naples Community Hospital.

Responsible for analysis and design of energy conservation projects at large multi-disciplined engineering firm, including Technical Assistance Program Reports for NECPA Grant Program and subsequent design of funded Energy Conservation Measures. Also provided design of automated controls for HVAC systems on all commercial/institutional projects, including Team Disney Office Building, Grand Floridian Hotel, Coral Springs Medical Center, University of Florida ESLCF and UCF CEBA I/II.

Responsible for design coordination for WED of 15 design firms and subsequent commissioning of the \$5 million Central Energy Management System (CEMS) at EPCOT Center, one of the first large scale direct digital control projects in country.

Responsible for project engineering/project management of \$3.0 Million EMCS installation at OIA, consisting of a 1500-point automation system and pneumatic control system.

As a Graduate Mechanical Engineer from Stanford University School of Mechanical Engineering, with a special emphasis in the fields of Thermodynamics and Heat Transfer, Don has a superior education in for providing engineering services in the HVAC field. In addition to the exceptional Education received at Stanford, Mr. Bailey has developed a unique expertise in the field of Automated Temperature Controls and Energy Conservation in large Commercial and Institutional Facilities. After working for 2 years as a Service Manager in the late '70's for a major controls manufacturer, Don engineered and coordinated the installation of the \$3 Million Automated Controls System contract at the Orlando International Airport in 1980-1981.

Mr. Bailey was also instrumental in completing the design and commissioning of the \$10 Million Central Energy Management System (CEMS) at Walt Disney World's EPCOT Center, one of the first systems in the country to use direct digital control techniques in a large campus setting. Mr. Bailey's experience and commitment to quality were instrumental in successfully completing the futuristic CEMS at EPCOT. With over 14 buildings and 3500 points initially, the CEMS was also one of the largest and most elaborate Direct Digital Control systems in the country at the time. During the 80's, Don continued to work on the expansion of the CEMS at Disney World for several years, designing the complex control systems for the \$60 Million Living Seas Pavilion, the \$80 Million Grand Floridian Beach Resort Hotel, the Disney Casting Center and the \$45 Million, 450,000 square-foot Team Disney Office Building in 1990.

During the 80's, Mr. Bailey gained extensive experience as the manager of the Energy Management Department and Associate Principal at a large multi-disciplined consulting engineering firm in Central Florida in the design, installation and commissioning of automated control systems in commercial and institutional facilities. Don developed a reputation for quality and excellence in providing services for a wide variety of commercial and institutional projects.

DON C. BAILEY, PE
Curriculum Vitae
12/5/2023

Projects for which Don designed control systems were as diverse as the \$30 Million Coral Springs Medical Center to the \$100 Million Grand Floridian Beach Resort Hotel at Walt Disney World. Other automated control systems designed by Don were the \$4 Million Universal Studios Energy Management & Control System, an integrated HVAC Control/Fire/Security system for over 100 buildings at Universal Studios/Florida and the \$40 Million Team Disney World Office Building. Don also provided control system design for numerous University projects throughout Florida, including University of Florida's Engineering/Science Library Computer Facility and Nematology/Entomology projects, FSU's School of Engineering and Natatorium and the CEBA complex at UCF. Renovation control projects designed by Don included University Medical Center in Jacksonville, Westinghouse Materials Research Laboratory, Lee County Schools (3 schools), Lee Memorial Hospital, Weil Hall Chiller Plant at Gainesville and Martin Memorial Hospital.

Mr. Bailey was also involved in numerous projects which required the design and commissioning of Smoke Control Systems, including Coral Springs Medical Center, Grand Floridian Beach Resort Hotel, Orange County Civic Center Phase IIA Expansion and the \$40 Million Disney World Office Building. Mr. Bailey served on ASHRAE's Guideline Project Committee GPC-5P to develop ASHRAE's Guideline 5-1994 on Commissioning of Smoke Control Systems.

Don's extensive experience in building systems includes the commissioning of large automated control systems, energy management systems with direct digital control, integrated smoke control systems and control systems for HVAC systems. Don managed construction-related activities for most of the control system projects that he designed. Other functions included providing technical support for projects to maximize energy savings potential utilizing the latest computer-assisted building energy analysis of various HVAC control strategies and mechanical systems.

As a Certified Energy Manager and Certified Technical Assistance Analyst, Don was personally responsible for preparing numerous ICP Technical Assistance Program Reports for many Schools and Hospitals to qualify for the National Energy Conservation Policy Act Energy Matching Grants Program. Don has been personally responsible for assisting clients in being awarded over \$6.2 Million of Federal Energy Grants, most of which were implemented with Mr. Bailey's design of the funded Energy Conservation Measures. Mr. Bailey has provided design for the implementation of numerous hospital Energy Conservation Measures, involving projects from 1500-ton chiller replacements to large, complex EMS retrofits in existing facilities. Notable Energy Grant projects that Don was personally responsible for include ECM Grants for University Medical Center, Jackson Memorial Hospital, Lee Memorial Hospital, Martin Memorial Hospital, Wuesthoff Memorial Hospital and Polk General Hospital. Mr. Bailey's design and analysis engineering expertise further enhanced with Don's experience in construction administration and commissioning of complex HVAC systems in large facilities.

**Summary of Legal Support, Depositions and Expert Testimony
of Don C. Bailey, P.E.**

Listed below is the prior experience of Don C. Bailey, P.E., providing expert witness and legal support in the following cases:

<u>Case</u>	<u>Claim No.</u>	<u>Date</u>	<u>Casework</u>
Smith v Winn-Dixie dba Harvey's Duval County, FL	16-2021-CA-002860	1/2023	Site Inv, Deposition
Gruny v Famous Amos Blanding Clay County, FL	16-CA-961	12/17 4/18	Site Investigation
Ocean Dunes Condominium Assoc. at Aquarina Development v. PAVCO		5/15 to 2/17	Case Research and Report
Osceola County School Board v. Williams Company Williams Company of Orlando, Inc. vs		2/01 to 5/02	Case Research and Mediation Support
IMPAC v. Carter-Burgess & Stiles Construction Corp.	Mediation	3/99 to 6/00	Case Research and Mediation Support
St. Catherine Laboure Manor v. Turknett Engineers Jacksonville, FL	Mediation	8/97	Presentation Preparation & Support
School Board of Orange Co. v. Sovran Construction Co., et al Orlando, FL	CI94-005399	7/97	Case Research & Deposition
Mr. & Mrs. Jaime Carillon v. ADP Architects Sarasota, FL		3/92	Case Research
Trammel Crow v. Carrier Corp. Dallas, TX	Arbitration	6/89	Case Research & Expert Test.