

Donald B. Snell, P.E.
**Vice President/ Senior Forensic Engineer/ HVAC &
Moisture Intrusion Expert**

Education

- B.S., Mechanical Engineering Technology (Minor: Mechanical Power Engineering Technology), Wentworth Institute of Technology (1986)

Professional Registrations

- Professional Engineer: Pennsylvania (PE56078--E)
- Professional Engineer: Georgia (PE032389)
- Professional Engineer: Virginia (PE0402048290)
- Professional Engineer: South Carolina (PE34331)
- Certified Mechanical Contractor – Florida (CMC1249861)
- Certified Mold Assessor - Florida (MRSA 2445)
- National Council of Examiners for Engineering and Surveying (NCEES) (32495)
- Certified Indoor Environmental Consultant (CIEC): American Council for Accredited Certification (#1506013)
- Certified Indoor Air Quality Professional™ (CIAQP) (262): Association of Energy Engineers
- Apprentice Plumber: Massachusetts Plumbers & Gasfitters Licensing Board (11874) (Expired)

Distinguishing Qualifications

- Nearly 80 percent of all moisture related projects led or supported have been construction litigation
- Nearly 20 percent of all moisture related projects led or supported have been property and casualty
- Defended 3 manufacturers of 80,000 Hurricane Katrina FEMA trailers in Bellwether trials against formaldehyde and moisture claims
- Defended a general contractor in a Fusarium claim by plaintiffs family at a south central United States hospital
- Led or co--led air leakage performance testing (Blower Door, Tracer Gas) in more than 50 buildings and FEMA trailers in the United States including Hawaii
- Modeled and analyzed over 25 wall system simulations using WUFI--ORNL Transient
- Heat and Moisture and Dew--Point Methods
- Evaluated condensation potential in more than 10 miles of chilled water pipe insulation in buildings and sports stadiums (several projects) throughout the warm humid climate zones of the United States
- Represented the owner of an art gallery for an HVAC related claim of a
- Volatile Organic Compound (VOC) indoor air quality problem
- Wrote "Moisture Building Assessments: A Retrospective Look at Building Design, Operation, Building Symptoms, Tenant Reactions and What Is Often Overlooked in Minimizing Moisture Problems"
- Wrote "Owner Caution! Why is it that designers are not aware of CPVC failures"
- Co--Presenter at ASHRAE 2013 Winter Conference in Dallas on Providing Moisture Control Solutions in Building Commissioning
- Co-Presenter at ASHRAE 2013 Summer Conference in Denver on Preventing
- Moisture Problems in High Performance Green Buildings
- Design, fabrication and installation of a shell and tube heat exchanger - 1986
- Seminar Presentation: "The Predictability of Moisture Control and Air Tightness in High -Performance Buildings," AIA Conference on Architecture, Orlando, FL. April 2017
- Seminar Presentation: "Years to Build, Seconds To Fail, Deconstructing Major Building Mechanical System Failures", NASP Annual Conference, Orlando, November 2014
- Seminar Presentation: "Air Barrier at Risk When Codes Collide – High Performance and Innovation", ABAA Conference, Orlando, Florida, March 2014

Relevant Experience

Mr. Snell is a heating, ventilation, and air conditioning (HVAC) consulting and building systems professional with over 25 years of experience in forensic building investigations related to moisture control, indoor air quality (IAQ), building science and construction management.

Mr. Snell is a Forensic Consultant on projects requiring litigation support, moisture and related issue assessment, evaluation, remedial HVAC concepts, and life-cycle cost analysis.

This experience includes both forensic and non-forensic projects:

Forensic Related Experience

- Central Florida Apartments: Led the forensic investigation related to CPVC condensate drain piping failures
- Central Florida Hotel: Supported the investigation of CPVC domestic potable water pipe failures
- North Florida Condominiums: Led the forensic investigation related to HVAC and moisture allegations
- A South Florida College: Performed desktop analysis and forensics related to HVAC performance and moisture issues
- Atlanta Mid-Rise Condominium Pipe Break: Led the forensic investigation of an HVAC pipe break and resultant damage to condominium units
- Off Campus Student Housing Near a Central Florida University: Led the forensic investigation related to HVAC and moisture allegations
- A South Florida University: Project Manager, that led an initial evaluation of moisture issues in the gymnasium of the Health and Sports Center. These moisture issues resulted in the damage and deformation of the gymnasium floor.
- Florida Atlantic University: Co-led an effort of providing problem avoidance for a building seeking platinum certification in a warm, humid climate. Provided design and construction services to adapt building design to climate.
- A Louisiana University: Led the forensic investigation of hot water piping leaks and ductwork leaks in the library building
- Mid-Atlantic University: Forensic consultant on a Liberty based team that investigated the extent of damage and cause of ductwork moisture problems in a "Green" designed building
- Miami Area Middle School: Co-led a forensic investigation of HVAC equipment

- failures and control problems that contributed to poor moisture control
- Central Florida Hospital Hospitality Pavilion: Project Manager, that led the HVAC and moisture intrusion investigation related to design and construction deficiencies and an irrigation pipe break that flooded the first floor of this two story pavilion that is connected to the hospital. Assisted in the mediation of a favorable settlement for the owner.
- South Florida Hospital: Led the HVAC and moisture intrusion investigation of a multi-disciplinary effort to determine pathways and mechanical effects of building air infiltration and moisture problems.
- Lyndon Wright v. Forest River: Project Manager and HVAC and moisture intrusion expert witness in the 2009/2010 Lyndon Wright v. Forest River Formaldehyde case in Louisiana. LBF's key role contributed to a unanimous verdict for our client.
- South Florida Skilled Nursing and Assisted Living Facility: Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions on the failure solutions for the building system fix. Failed HVAC systems included chilled water pipe insulation. Performed condensation control limit analysis. Managed infrared thermal imaging validation testing.
- Southwest Florida Skilled Nursing Facility: Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions for the possible causes and solutions for the building system fix.
- Central Florida Walk-in Healthcare Clinic: Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions for the possible causes and solutions for the building system fix.
- South Florida Financial District High-Rise: Led the validation and acceptance phases for re-insulation of approximately 20,000 LF of chilled water piping. Managed infrared thermal imaging validation testing. Performed condensation control limit analysis.
- South Florida Multi-Use High-Rise: Led the investigation into the causes and extent of moisture related damage.
- South Florida Multi-Use High-Rise: Led the investigation into the potential causes and extent of recommended replacement of flexible hoses that serve several hundred water-source heat pumps.
- South Florida Multi-Use High-Rise: Co-led the investigation and analysis into

- the causes of a failed plastic fire suppression piping system.
- South Florida Multi--Story Condominium: Led the moisture intrusion investigation into the causes and extent of moisture and related damage of building materials and provided recommendations for corrective actions.
 - Central Florida Office Building: Performed an expert moisture intrusion investigation and developed opinions (pre--mediation) on a bodily injury case.
 - South Florida Condominium: Performed a moisture intrusion investigation into the causes of moisture related damage and developed opinions.
 - North Florida Condominiums: Performed a winter condensation investigation; reported observations and findings; developed conclusions and recommendations.
 - North Florida Condominiums: Performed moisture intrusion investigations and investigations for mechanical code compliance in multiple buildings; developed and issued report.
 - North Florida Condominium: Performed a moisture intrusion investigation into the causes and extent of moisture related damage; performed remedial solutions and performed quality assurance services during the build-back.
 - Multiple Office Buildings in Warm, Humid Climates: Performed development problem avoidance peer reviews related to moisture control.
 - Hong Kong Hotel and Convention Center: Performed a moisture intrusion investigation into the causes of moisture related damage and developed conclusions and recommendations.
 - Central Florida Hotel & Convention Center: Led the investigation into the causes of wet insulation on chilled water piping and provided recommendations for short and long--term corrective actions.
 - Seminole County Public Safety Complex: Led in HVAC system and support to Bailey Engineering & Associates, Inc.
 - Alachua County Chiller Replacement: Led in selection and alternative equipment options.
 - Animal Kingdom Lodge (Walt Disney World) Building Envelope: Assisted in Building Envelope Assessment.
 - Paragon Casino Hotel: Assisted in IAQ Building Assessment.
 - "B" Toll Plaza Administration Building: Led the HVAC and Moisture Intrusion Investigation.
 - Public Storage Building: Assisted in the HVAC and Moisture Intrusion Investigation.
 - Via Tuscan Apartments: Led Investigation.

- Gainesville, Florida Hotel: Investigated functions of the HVAC System related to moisture control--pressurization, dehumidification and ventilation and provided recommendations for short and long term corrective actions.
- Ocala Hotel & Convention Center: Investigated sources of moisture intrusion and related issues in this two--story, six building hotel.
- Los Angeles, CA Hotel: Led the investigation into the extent of moisture related issues in hotel guest rooms. Project tasks included sampling and the development of a remediation plan.
- San Diego Hotel and Convention Center: Led the investigation into sources of moisture intrusion and related issues. Project tasks included sampling and building envelope and HVAC system evaluations. Provided recommendations for short and long term corrective actions.
- Tampa Hotel: Investigated functions of the HVAC system related to moisture control--pressurization, dehumidification, and ventilation and provided recommendations for short and long term corrective actions.
- Central Florida Hotel: Investigated pathways of rainwater intrusion, sources of moisture intrusion and extent of related damage.
- Central Florida Hotel: Investigated functions of the HVAC system related to moisture control--pressurization, dehumidification, and ventilation and provided recommendations for short and long term corrective actions.
- Central Florida Resort: Moisture mapping investigation to determine the extent of flood damage from a pipe leak.
- Additional related experience available upon request.

Non-Forensic Related Experience

- Washington DC Area Hotel: Performed an HVAC and moisture investigation
- Central Florida Cancer Center: Performed HVAC consulting and project management
- New Jersey Hospital Cancer Center: Performed HVAC consulting on the renovation
- Four--story hospital HVAC renovation project in Pennsylvania: Performed a peer review
- Central Florida medical center: Performed HVAC design
- Central Florida medical center: Consulted on a new cooling tower and condenser water piping system for an existing 5000--ton chilled water plant
- 470--bed, 811,000 sf design/build medical center in Central Florida: Produced HVAC design development drawings and life--cycle cost analysis

- Performed HVAC construction administration responsibilities on two large courthouse projects in Jacksonville, Florida and Wilmington, Delaware from January 2000 through March 2002. These projects total more than 980,000 square feet (sf) of gross building area with connected cooling capacities of more than 2740 tons.
- One 1,000--bed design/build county jail in Florida and five 50--bed design/build juvenile detention facilities in Florida: Led HVAC design
- Investigated automatic temperature control systems that provide effective active forms of dehumidification control using direct expansion equipment in hot, humid climates.
- Performed, or managed, the development of cooling load calculations, development of air and waterside calculations, equipment selection, energy code compliance, life--cycle cost.

Professional Societies

- American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE)
- National Society of Professional Engineers (NSPE)
- Florida Society of Professional Engineers (FES)
- National Institute of Building Science (NIBS)
- Building Enclosure Technology and Environment Council (BETEC)
- National Association of Subrogation Professionals (NASP) (Past Member)
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- National Academy of Forensic Engineers (NAFE) (Past Correspondent Member)
- Association of Energy Engineers (AEE) (Past Member)

Seminars and Publications

- Seminar Presentation: "The Predictability of Moisture Control and Air Tightness in High-Performance Buildings," AIA Conference on Architecture, Orlando, FL. April 2017
- Seminar Presentation: "Years to Build, Seconds To Fail, Deconstructing Major Building Mechanical System Failures", NASP Florida Chapter Meeting, Jacksonville, June 2015
- Seminar Presentation: "Years to Build, Seconds To Fail, Deconstructing Major Building Mechanical System Failures", NASP Annual Conference, Orlando,

November 2014

- Seminar Presentation: Building High Performance Buildings – Not High Risk Buildings, How to Avoid Design and Construction Defects in Today’s Project, Half Moon Education Seminar, Orlando, September 2014
- Seminar Presentation: “Air Barrier at Risk When Codes Collide – High Performance and Innovation,” ABAA Conference, Orlando, Florida, March 2014
- Seminar Presentation: “Preventing Moisture Problems in High Performance Green Buildings” ASHRAE Summer Meeting Denver, Colorado, June 2013
- Seminar Presentation: “Providing Moisture Control Solutions in Building Commissioning” ASHRAE Central Florida Chapter, February 2013
- Seminar Presentation: “Moisture Control in Commissioning of New and Existing Buildings” ASHRAE Winter Meeting Dallas, Texas, January 2013
- Seminar Presentation: “Indoor Environmental Quality: Balance Indoor Quality Strategies with Energy Efficiency.” 2nd Annual Green Lodging and Hospitality Conference; Orlando, FL, December 2009.
- Seminar Presentation: “The Importance of Indoor Air Quality in Environmentally Conscious Hotels.” Orlando, FL, September 2007.
- Co-Authored: Air Barriers: Expectations vs. Reality, Part 1 and Part 2, Environmental Design + Construction (edc) May 2014, July 2014
- Co-Authored: The New Green, New Codes + New Products = New Problems, The Construction Specifier, November 2013
- Authored: The Role of Moisture and Airflow in Building Design, Construction & Commissioning, AEC Forensics, August 2013
- Co-Authored: Minimizing Moisture Problems While Adopting the New Green Code, Healthcare Construction + Operations, June 2013
- Authored: Healthcare Facility Services, a bulletin published by CH2MHILL. This bulletin is an overview of the revised risk assessment guidelines for construction-related work and an explanation of the requirements in an infection control risk assessment (ICRA).

Honors and Awards

- Young Engineer of the Year – Central Florida, ASHRAE Award, National Engineers Week Banquet, 1998

Licenses and Certifications

- Professional Engineer: Pennsylvania (PE056078E)
- Professional Engineer: Georgia (PE032389)
- Professional Engineer: Virginia (PE0402048290)
- Professional Engineer: South Carolina (PE34331)
- Certified Indoor Environmental Consultant (CIEC): American Council for Accredited Certification (#1506013)
- Certified Indoor Air Quality Professional™ (CIAQP): Association of Energy Engineers (since 1999)
- Florida Certified Mechanical Contractor (CMC1249861)
- National Council of Examiners for Engineering and Surveying (NCEES) 2007 (32495)