
M. Steve Cavanaugh, Jr., P.E.

President & Chief Innovation Officer | Cavanaugh & Associates, P.A.

SC PE/PLS #15784 | NC PE #19245

www.cavanaugholutions.com

Professional Profile

A creative visionary and executive leader with over **40 years of experience** bridging the gap between traditional land surveying and modern civil engineering. Expert in water resources, bioenergy, and international resource stewardship, recognized for leading the "water loss movement" in North America. Proven track record of managing multi-site professional firms and delivering award-winning technical assistance programs at the state and national levels.

Professional Experience

Cavanaugh & Associates, P.A. | *President/CEO & CIO* | 1995 – 2026

- **Executive Leadership:** Directed a multi-state firm for nearly 31 years, overseeing all phases of engineering and surveying projects for public, private, military, and industrial sectors.
- **Engineer of Record:** Held ultimate responsibility for the accuracy and adequacy of high-stakes engineering designs, including the **Town of Harmony Sanitary Sewer System** and the **Spartanburg Septic and Grease Receiving Station**.
- **Innovation & Global Impact:** Led the **International Water Association (IWA)** Leakage Emissions Initiative and facilitated **USAID grants** for leak detection programs in Romania, Poland, and Moldova.
- **Surveying Operations:** Served as the primary technical representative for intricate boundary and topographic surveys, utilizing advanced **GNSS/RTK** (Emlid RS3/4Pro) and **Robotic Total Stations**.
- **Recognized Excellence:** Recipient of back-to-back national awards (2013-2014) from the **American Council of Engineering Companies (ACEC)** for ground-breaking water loss training programs.

Hobbs Upchurch & Associates, P.A. | *Division Manager / PE in Responsible Charge* | 1989 – 1995

- **Division Management:** Oversaw the **Wastewater and Dams Division**, managing multiple project teams for wastewater treatment plants, pump stations, and dam rehabilitations.
- **Technical Oversight:** Served as PE in Responsible Charge for a regional office, directing all engineering and surveying activities while maintaining quality control and professional standards.

- **Notable Projects:** Managed the design and construction of the **Siler City WWTP**, **Hutaff Lake Dam**, and the **Pembroke WWTP**.

J. Fred Davis, Jr. Engineering and Surveying | *Survey Technician* | 1985 – 1989

- **Comprehensive Surveying:** Balanced field data collection as a Rodman/Instrument Man with office-based drafting and layout design.
- **Technical Analysis:** Specialized as a **Floodway Analyst**, determining critical floodway boundaries and flood fringe areas for land development projects.
- **Subdivision Design:** Developed layout plot plans for expansive residential projects, including the **300+ lot High Meadows Subdivision** in Raleigh.

Marvin S. Cavanaugh & Associates, Inc. | *Party Chief in Training* | 1979 – 1985

- **Foundational Training:** Progressed through every field role, from **Back Rodman** to **Party Chief in Training**, mastering historical methods including manual chaining and dumpy levels.
- **Precision Fieldwork:** Participated in the **150-acre Linda Hardin Boundary Survey** and the **Mount Airy Dike Project**, ensuring accuracy through rigorous calculations and field control.

Education & Academic Honors

- **B.S. in Civil Engineering** | North Carolina State University | 1984 – 1989
- **Survey Law Coursework (Non-degree)** | East Tennessee State University | 2025
 - *Academic Achievement:* **98.3%** final grade; mastery of boundary evidence and retracement methodology.
- **GNSS Surveying (Non-degree)** | East Tennessee State University | 2025

Professional Affiliations & Public Service

- **AWWA:** Chair of the Water Loss Control Outreach Subcommittee; North American Water Loss Conference Planning Committee.
- **State Leadership:** Former Member of the **North Carolina Governor's State Water Infrastructure Commission** (2006–2012).
- **Community Leadership:** F3 Charleston "Nantan" (Regional Leader).
- **Professional Bodies:** Past President, American Council of Engineering Companies (ACEC) North Carolina.

Technical Expertise Summary

Field Mastery	Office & Software
Instruments: Robotic Total Stations, GNSS/RTK, GPR, Transits, Chaining	Design: AutoCAD, Carlson, Softdesk, DCA
Surveying: Boundary Law, Topographic, Construction Staking, Coastal Lines	Analysis: HEC-2, HEC-1, Hydraulic Modeling
Management: Resource Allocation, Risk Assessment, Client Strategy	Instruction: National Technical Training, Public Workshops