W. Patrick Rushing, P.E. 103 Geneva Road New Bern, NC 28562 252-634-4153(h) 252-222-0673 (o) patrushing@cox.net

PROFESSIONAL SUMMARY

Extensive experience on a variety of civil engineering projects including water treatment plant design, water treatment plant design, groundwater pump and treat system design, water line design, gravity sewer design, stormwater modeling & stormwater conveyance design, water distribution system hydraulic modeling and design, multi-port effluent diffuser modeling and design, site development, grading plans, and any number of related activities. Projects have included include typical residential developments, industrial park master planning, municipal annexations, municipal utility projects, industrial treatment systems and commercial site developments.

TYPICAL PROJECT EXPERIENCE

PlanningWashington, NC& Site DevelopmentCivil Group Leader and Project Manager responsible for master
planning and design of 150+acre, 360+ lot residential subdivision,
sewage lift station, and four-mile force main. Project included

approximately three miles of municipal water and sewer extensions.

Greenville, NC

Civil Group Leader and Project Manager responsible for master planning and design of 66-acre, 85-lot residential subdivision. Project includes several thousand feet of gravity sewer, potable water, and storm drainage.

Cape Carteret, NC

Civil Group Leader and Project Manager responsible for master planning and design of 43+acre, 40+ lot residential subdivision.

Utilities

Cape Carteret, NC

Project Manager responsible for construction of groundwater treatment facility expansion, 750,000 gallon elevated storage tank, and groundwater well and pump.

Fayetteville, NC

Project Manager responsible for the design of over \$12M of utility upgrades including over three miles of extensive sewer installation and water line replacement as well as significant storm drainage modifications resulting from City of Fayetteville annexations.

Fayetteville, NC

Project Manager responsible for the design of a 2-mile sanitary sewer outfall through an environmentally sensitive area to serve the College Lakes Area. Project included several stream crossings and extensive coordination with state environmental officials.

Fayetteville, NC

Project Manager responsible for the design and construction administration of extensive stormwater improvements for a 1.1 square mile, highly urbanized area. Project included the design of a triple 36" culvert and headwalls, a 72" culvert and headwall, a 4' x 4'6" box culvert and wing walls, and related appurtenances.

Fayetteville, NC

Project Manager and design engineer of a 700-gpm stormwater pumping facility requiring an emergency generator and automatic transfer switch.

Fayetteville, NC

Project Manager responsible for the design of a wetland mitigation project in accordance with DENR 401 Water Quality Certification requirements and Corps of Engineers Section 404 Permit.

Cherokee County, SC

Project Manager responsible for an existing water distribution system model and proposed system expansion design.

Long View, NC

Project Manager responsible for the design of a sewer system expansion and force main design.

Sumter, SC

Project Manager responsible for the design of a 27.0 mgd wastewater treatment facility upgrade.

Beumont, VA

Project Engineer for the design of a 0.05 mgd wastewater treatment facility at a correctional facility.

Wagram, NC

Project Engineer for the design of 2 mgd industrial wastewater treatment upgrades required by strict discharge limitations.

Society Hill, NC

Project Engineer for the design of a 6.0 mgd industrial wastewater treatment facility that included equalization, jet aeration, headworks, and flocculation facilities.

Kenyon, RI

Project Manger for converting an extended aeration 0.5 mgd wastewater treatment facility to a fully-mixed activated sludge system for a high strength industrial discharge.

Aiken County, SC

Project Manager responsible for industrial park wastewater treatment facility design.

Hopewell, VA

Project Engineer for the design of a 4 mgd Bardenpho wastewater treatment facility for a tobacco processing facility.

Yemassee, SC

Project Manager for the conversion of a 0.05 mgd multi-cellular lagoon treatment facility to a fully-mixed conventional system.

La Grange, GA

Project Engineer for the design of industrial wastewater treatment facility modifications.

Fayetteville, NC

Project Manager responsible for a \$4M sewer outfall project through an environmentally sensitive area.

Falcon, NC

Project Manager for a regional stormwater management plan for the Town. Performed modeling of the contributing watershed, prepared budgetary estimates for proposed improvements.

Newport, NC

Project Manager/Design Engineer for conversion of municipal water treatment facility to chloramine disinfection.

Work History

2002 – 2003: Carolantic Engineering, Inc. Morehead City, NC

<u>Office Manager</u> – Responsible for all activities leading to the completion of civil design efforts, marketing, staff development, state and federal funding applications, and related activities.

1998 – 2001: The East Group, P.A. Greenville, NC

<u>Civil Engineering Group Leader</u> – Responsible for all activities leading to the completion of civil design efforts.

1996 - 1998: The Rose Group. Fayetteville/New Bern, NC

<u>Office Manager</u> – Responsible for numerous design efforts, client management, staff training, and hydraulic modeling for the firm.

1995 - 1996: Hayes, Seay, Mattern & Mattern. Spartanburg, SC

<u>Civil Engineer II</u> – Responsible for various design projects such as wastewater treatment facility design, utility design, site design, and various modeling efforts.

1989- 1995: Hydroscience. St. Helena Island, SC

<u>Project Manager / Project Engineer</u> – Responsible for various industrial wastewater treatment facility design projects. Extensive wastewater process evaluations of textile, pharmaceutical, pulp and paper, chemical, and municipal treatment systems. Responsible for surface water quality modeling as well as multi-port effluent diffuser modeling.

Education	Master of Engineering, Civil/Environmental Engineering, 1994 University of South Carolina
	Bachelor of Science, Civil Engineering, 1989 Clemson University
Professional Registration	Registered Professional Engineer in North and South Carolina Active National Council of Examiners for Engineers and Surveyors (NCEES) Record