

Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

JAMES C. SHULTZ, P.E. Civil and Highway Engineer

Thirty-three years of office and field experience in highway and land development including roadway design, hydrology and hydraulics, and utility design.

PROFESSIONAL EXPERIENCE

2008 to **Robson Forensic, Inc.**

present *Associate*

Provide technical investigations, analysis, reports, and testimony towards the resolution of commercial and personal injury litigation involving civil engineering, highway design, land development and failure analysis.

2004 to **Lake Roeder Hillard & Associates, Lancaster, PA**

2008 *Senior Project Engineer*

Design of highway improvements for submission to PennDOT for Highway Occupancy Permits (HOPs) associated with land development projects. Prepare plans and documentation in accordance with 67 PA Code, Chapter 441 and 459; and compliance with PennDOT design criteria, methods and procedures. Perform geometric calculations, roadway and stormwater facilities design, traffic control and erosion & sediment control plans. Coordinate roadway design with traffic signal design. Review and submit traffic impact/assessment studies for PennDOT/municipal approval. Prepare right-of-way plans and legal documentation.

Design tasks include horizontal and vertical roadway geometry, storm drainage design; hydrology analysis and hydraulic and stormwater management design using Rational Method, SCS and PennDOT procedures, TR-20, TR-55 and HEC-RAS computer methods; sanitary sewer and water system design; PADEP planning modules; DER/COE permits; PennDOT Occupancy Permits for utilities and highway access. Land development projects ranged in size from 1 acre to 200 acres.

2004 **Remington Vernick & Beach Engineers, Conshohocken, PA**

Project Engineer/Project Manager

Design of highway/bridge projects for PennDOT and PA Turnpike Commission. Supervised plan preparation, specification and estimate packages. Performed geometric calculations, preparation of roadway, traffic control and E&S plans. Prepared hydraulic and hydrologic reports and COE/DEP permits.

Designed industrial and commercial land development and subdivision projects.

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2003 to **Stackhouse Bensinger Inc.**, Sinking Spring, PA

2004 *Project Engineer*

Design of residential, industrial and commercial land development and subdivision projects.

Design tasks included horizontal and vertical roadway geometry, storm drainage design; hydrology analysis and hydraulic and stormwater management design using Rational Method, SCS, VT/PSUHM and PennDOT procedures, TR-20, TR-55, HEC-1, HEC-2 computer methods; sanitary sewer and water system design; PADEP planning modules; DER/COE permits; PennDOT Occupancy Permits for utilities and highway access. Land development projects ranged in size from 1 acre to 200 acres.

2000 to **Herbert, Rowland & Grubic, Inc.**, Harrisburg, PA and State College, PA

2003 *Regional Group Manager*

2001-2003

Group Manager of Transportation Group in State College office. Design of highway and bridge projects for PennDOT.

Project Engineer

2000-2001

Design of highway and bridge projects for PennDOT and municipalities.

Project tasks included design of complex highway geometrics, drainage and stormwater management, utility relocations, signing and pavement marking, and multi-stage traffic control plans. Prepared construction proposals, technical provisions and detailed construction cost estimates (i.e., PS&E packages).

1991 to **Alfred Benesch & Company**, Pottsville, PA

2000 *Project Manager*

1999-2000

Design of highway and bridge projects for PennDOT. Consultant Engineer for municipalities and planning commissions in Schuylkill and Chester Counties providing bridge and roadway design services and subdivision plan reviews.

Project Engineer

1991-1999

Design of highway and bridge projects for PennDOT.

Project tasks included design of complex highway geometrics, drainage and stormwater management, utility relocations, signing and pavement marking, and multi-stage traffic control. Prepared construction proposals, technical provisions and detailed construction cost estimates. Highway projects were up to seven miles in length.

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1986 to 1991 **PSC Engineers & Consultants, Inc.** (formerly Huth Engineers, Inc., now ACER Engineers and Consultants, Inc.), Lancaster and Allentown, PA
Project Engineer
Designed numerous residential and industrial/commercial subdivisions and highway/bridge projects.

Design tasks included horizontal and vertical geometry, storm drainage design, and platting for right-of-way acquisitions; hydrology analysis and hydraulic design using Rational Method, SCS, PSU-IV and PennDOT procedures, TR-20, TR-55, HEC-1, HEC-2 computer programs; stormwater management design using HydroPlusIII computer methods; sanitary sewer and water system design; PADEP planning modules; DER/COE permits; PennDOT Occupancy Permits. Land development projects ranged in size from 2 acres to 160 acres.

1974 to 1986 **Gannett Fleming Transportation Engineers, Inc.**, Camp Hill, PA
Designer 1983-1986
Designed various highway and bridge projects for PennDOT District 6-0 and District 8-0. Tasks included highway geometric design, roadway drainage design, supervision and checking of drafting of roadway plans preparation.

Chief Inspector 1981-1983
Inspector for roadway construction for PennDOT, water and sewer line installation for various authorities, and computerized fare collection system for the Pennsylvania Turnpike Commission (PTC).

Specific tasks included checking construction for conformance with plans and specifications, reviewing and approving monthly payment estimates, and supervising the inspection work of up to twelve other inspectors.

Designer/Draftsman 1975-1980
Various highway, light rail and FEMA projects. Tasks included preparation of drawing layouts, horizontal and vertical geometry, quality control, and development of drafting standards.

PROFESSIONAL CREDENTIALS

Professional Engineer: Pennsylvania, 1988

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Civil and Highway Engineer

EDUCATION

Civil engineering course work, Drexel University, Philadelphia, PA, 1972-1974

Continuing Education:

Road Safety Audits/Assessments, Federal Highway Administration, 2009

Safety and Operational Effects of Geometric Design Features for Multi-Lane Highways, Federal Highway Administration, 2009

Safety Effects of Geometric Design Features for Two-Lane Rural Highways, Federal Highway Administration, 2009

Confined Space Safety Training, Certificate No. 10945, 2009

Professional Traffic Operations Engineer Seminar, Institute of Transportation Engineers, 2009

Transportation Engineering and Safety Conference, Penn State Conference Center, 2000, 2001, 2008 and 2009

Welcom Open Plan Basics, Project Management Seminar, Productivity Point International, 1999

Contract Administration: Processes and Procedures for Construction, American Institute for Professional Training and Development, 1997

Value Engineering Workshop, Module II, Alfred Benesch & Company, 1996

HEC-2 Seminar, The Pennsylvania State University, 1994

Value Engineering Workshop, Module I, Alfred Benesch & Company, 1992

HEC-1 and TR-20 Seminar, The Pennsylvania State University, 1989

AASHTO Policy on Geometric Design of Highways and Streets, Short Course, The Pennsylvania State University, 1989

Bituminous Pavement Design and Rehabilitation Workshop, The Asphalt Institute, 1988

Concrete Pavement Design/Construction Workshop, Portland Cement Association, 1986

Bituminous Pavement Management Workshop, The Asphalt Institute, 1981

PROFESSIONAL MEMBERSHIP

Institute of Transportation Engineers

PRESENTATIONS/PUBLICATIONS

"The Expert Witness in Roadway Defect Cases," Pennsylvania Bar Institute, Philadelphia, PA, 2009