

Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

BRIAN VANDAL, P.E.
Electrical Engineer

PROFESSIONAL EXPERIENCE

2009 to **Robson Forensic, Inc.**
present *Associate*

Provide technical investigations, analysis, reports, and testimony toward the resolution of commercial and personal injury litigation involving the design, construction, and operation and maintenance of electrical systems, equipment and devices. Areas of expertise include:

National Electric Code: National Electric Safety Code, OSHA, industry safety practices, electrical design, operation and maintenance

Mine Safety and Health (MSHA): Trained for underground longwall & continuous mining locations – electro hydraulic shields, mining equipment, conveyor belt systems

Underground and Overhead Electrical Transmission and Distribution: Power lines, 4-345 kV, substations, 1 and 3 phase, transformers, circuit breakers, contactors, short circuit analysis, grounding, lightning protection, metering, circuit protection and coordination, conduit, wiring, receptacles, power panels, knob & tube wiring, energy management systems, data center design & installation requirements, cell tower AC & DC electrical design & installation, new construction and remodel electrical installation, harmonic distortion

Electrocution, Shock & Lightning Activity: Electrical faults, electrical explosions, arc flashes, lightning damage, over-current protection, ground fault interrupt, shunt trip devices, workplace safety, and electrical safety tools and equipment, light level verification

Fire Alarm & Detection: Fire detection and alarm systems, UV, smoke detectors, heat detectors, flow switches, pressure switches, pull stations, horn & horn and strobes

Devices Serviced & Installed include: Motors, drives, circuit boards, batteries, uninterruptible power supplies, emergency generator, energy management systems, power conditioners, isolated ground systems, power monitors, heaters, rectifiers, switches, relays, contactors, multiplexers, and power supplies, switches, limit switches, temperature limits, proximity sensors, fuses relays, reclosers, circuit breakers, motor starters, motors, power supplies, timers, connectors, splices, strain relief, terminals, terminations, cables, cords, conductors, receptacles, plugs, bus bars

Electronic Devices: Semiconductors, capacitors, metal oxide varistors, voltage regulators, potentiometers, rheostats, silicon controlled rectifiers, analog transmitters, photo-electric devices

Equipment & Activities: Rigging, electrical demolition, hammer drills, wet saws, partner saws, hydraulic knockout and compression tools, construction, estimating,

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carpentry, band saws, circular saws, table saws, drill presses, stamping equipment and dies, concrete saws and drills, lathe equipment, electric tugger (wire puller), equipment mounting, concrete support for equipment, pipe threader, reciprocating saw, jig saw, back hoe, auger equipment, ground trenching equipment, lull & manlift equipment

2002 to present **Titan Power Solutions** *President*

- Provide electrical engineering design and installation services to small and mid size commercial/industrial customers with critical data systems by implementing generator and uninterruptible power supply solutions.
- Provide commercial electrical design and contracting services to general contractors in central Ohio.
- Monitor and evaluate profit/loss, cash flow, balance sheet, and income statements to ensure we are on target with projections and respond appropriately where adjustments are necessary.

2000 to 2002 **Qwest Communications** *Senior Manager*

- Managed team of program managers and engineers with the responsibility of determining power critical communication sites, and coordinating installation and upgrade of AC and DC power systems.
- Refined business process and developed tools to monitor business cycle in order to streamline overall process.

1995 to 2000 **Delphi Automotive Systems** (Packard Electric Systems) *Program Manager/Application Engineer*

- Responsible for cross-matrix team of engineering and manufacturing personnel to re-design the oxygen sensor product
- Managed development of integrated electrical/electronic system, which was a flagship project relating to Delphi Automotive Systems' strategic business direction.
- Product support liaison functions for customer sites in Singapore, Japan, England, and Germany – including extensive international travel.

1992 to 1995 **Ohio Edison Company – First Energy** *Distribution Engineer & Account Representative*

- Facilitated the process of providing power to new customers by determining service requirements and communicating with various departments.
- Powered quality coordinator and technical support advisor.

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- Designed overhead and underground projects for distribution, transmission, system protection, and capacitor equipment.

1990 to **AEP Fuel Supply**
1992 *Electrical Maintenance*

- Supported maintenance activities for longwall mining activities.
- Received extensive training on mine operations as well as safety procedures.

1986 to **United States Army**
1991 *Personnel Services*

Honorable discharge from US Army Reserve upon completion of six year term.

PROFESSIONAL CREDENTIALS

Professional Engineer: Ohio
Master Electrician and Licensed Electrical Contractor, Ohio and West Virginia
Certified Fire Alarm Installer: Ohio

EDUCATION

M.B.A., Systems Management, Baldwin Wallace College, 1997

B.S., Electrical Engineering, Ohio University, 1992

Training:

Certified in solar photovoltaic and solar thermal design and installation through Hocking Technical College program, 2008.

National Electric Code Update & Training, 10-Hours, 2003-2009

Power Generation Equipment for Emergency & Prime Power Applications, 2007

Instructor-National Electric Code for Central Ohio Builders Exchange, 2005

Solutions for Extreme Heat and Power Density, 2002

Application Standards for Surge Protection Devices, 2002

Fault Tolerant Power Protection Solutions-Network & Server, 2002

Fundamental Grounding & Wiring Practices for High Availability Facilities, 2002

Power quality identification, measurement, and correction (BMI), 1993

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronic Engineers (IEEE)