

Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

BRENT R. LEISENRING, P.E.
Civil Engineer

PROFESSIONAL EXPERIENCE

2006 to present **Robson Forensic, Inc.**
Associate

Provide technical investigations, analysis, reports, and testimony towards the resolution of commercial and personal injury litigation involving construction practices, safety, complex engineered systems, heavy rigging, structural design, construction management and failure analysis in the commercial, heavy, highway and residential construction industries:

Construction solutions to complex heavy lifting projects

- Heavy rigging work, including work in power, oil refineries, and heavy construction
- Barge roll-on and roll off operations
- Vessel upending and erecting
- Heavy structure, equipment, and vessel transport
- Structure analysis and design
- Falsework engineering
- Crane layout
- Critical crane lifts
- Multiple crane lifts

Construction and construction management

- Residential, high-rise, hotel, office, industrial, heavy, and highway/bridge construction
- Experience as construction manager, general contractor, subcontractor, and material supplier
- Construction claims analysis
- CPM scheduling & analysis
- Construction safety
- Construction defect analysis
- Highway/bridge construction including:
 - Earthwork (excavations, embankment, compaction)
 - Drainage
 - Concrete and asphalt pavements
 - Bridge foundation
 - Bridge substructures
 - Bridge superstructures
 - Bridge decks and deck overlays
 - Erection and falsework
- Building construction including:
 - Sitework (earthwork, paving, landscaping)
 - Concrete (precast, cast-in-place)

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- Masonry
- Metals (structural steel, joists, decking, ornamental metals)
- Wood (rough carpentry, finish carpentry, framing)
- Thermal and moisture protection (damproofing, waterproofing, insulation, shingles, roofing, siding, flashing, sealants)
- Doors and windows (doors, windows, storefront entrances, skylights, hardware)
- Finishes (gypsum drywall, tile, ceilings, flooring, paint, wallcovering)
- Specialties
- Equipment
- Conveying systems (dumbwaiters, elevators, escalators)
- Mechanical
- Electrical

Complex hydraulic jacking and falsework engineering

- Highway/bridge, heavy industrial, and commercial projects
- Complex systems for transferring stresses in long-span roof truss systems
- Custom designed linear winch systems to raise, position, and move heavy loads
- Complete packages for performing pile load tests according to ASTM standards

Custom engineered and manufactured unique heavy construction equipment

- Custom rail cars used in tunnel construction
- Elevating platform as part of airliner mockup used for hostage rescue training
- Variety of custom underground equipment supplied under numerous contracts for New York City Department of Environmental Protection's Third Water Tunnel Project
- Temporary operating system for drawbridge spans while the mechanical system was being replaced
- Open-face, soft-ground tunnel shields for use in constructing large diameter tunnels in soil substrates
- High-pressure hydraulic systems: tensioning pre-stressing strands for a pre-cast concrete bridge beam manufacturer; lifting bronze submarine screw castings out of the casting beds
- Custom concrete pile cutting and disposal tool for the construction of new ship dock

2006 to present **Fournier Robson & Associates, LLC**
Associate

Provide technical assistance and support to contractors and owners involving structural engineering, construction management and construction safety.

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3/2004 to **Barnhart Crane & Rigging Company**, Memphis, TN / Philadelphia, PA
3/2005 *Senior Engineer*
and Provided engineered construction solutions to complex heavy rigging projects
7/2005 to including pre-event rigging and safety design, pre-planning, safe work practices and
12/2005 on-site execution. Projects performed in power (nuclear, fossil and wind), oil refineries, and heavy construction industries. Types of projects include:

- Lifting, lowering, sliding and erecting heavy equipment and vessels utilizing hydraulic gantry systems, Modular Lift Towers and custom slide systems.
- Transporting heavy equipment and vessels utilizing Goldhofer hydraulic transporters and custom dolly systems.
- Barge transport and barge roll-on/roll-off (RO-RO) work.
- Heavy lift crane layout and implementation, including complex two-crane pick operations. Prepared Critical Lift engineering packages.

3/2005 to **Johnson, Mirmiran & Thompson**, York, PA
7/2005 *Director of Pennsylvania Construction Management Operations*
Responsible for all construction management work in Pennsylvania. Ongoing projects included contracts with the Pennsylvania Turnpike Commission and the Pennsylvania Department of Transportation.

1994 to **Elgood Mayo Co.**, Lancaster, PA
2005 Supplier of engineered complex heavy lift rental systems and a manufacturer of customized heavy construction equipment. Elgood Mayo was a subsidiary of Gannett Fleming, Inc. from 1993 through 2002.

President 1999-2005
Responsible for all management, engineering and safety.

Project Engineer 1994-1999
Technical support and oversight for major heavy lifts performed around the country including numerous bridge roll-in/roll-out projects, the jacking and cable tensioning for the Gregorian upgrade for the Arecibo Radio Observatory in Arecibo, Puerto Rico, the jacking of major sports stadium roofs including the twin 1,200 ton trusses on the Bank One Ballpark stadium roof in Phoenix, Arizona, the 500 ton roof lift for the Apollo of Temple in Philadelphia, Pennsylvania, and the complex 15,000 ton retractable roof structure for Miller Park Baseball Stadium in Milwaukee, Wisconsin.

Design and manufacture of specialized, heavy construction equipment for large national contractors on major projects throughout the country, such as the Metro Subway in Washington, D.C., the multi-billion dollar Third Water Tunnel Project in New York City, and the nuclear waste repository project in Yucca Mountain, NV. Designed and supplied heavy lift systems for large national contractors on major projects such as the FBI in Quantico, Virginia, U.S. Navy at the Philadelphia Ship

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Yards in Philadelphia, Pennsylvania, and Brookhaven National Laboratory in Upton, New York.

- 1988 to 1994 **Gannett Fleming, Inc.**, Harrisburg, PA
Project Manager on Construction Management Oversight Contracts
Supervised the work of the Resident Engineer and inspectors. Served as liaison between owners, contractors, inspectors, and designers on bid phase services, project scheduling, technical support, contract document interpretation, change order negotiation and preparation, shop drawing reviews, jobsite safety, and administration services. Involved in building and transportation projects across the northeast for a variety of clients including the Pennsylvania Turnpike Commission, the Pennsylvania Department of Transportation, the Port Authority of Allegheny County, Southeastern Pennsylvania Transportation Authority, the New Jersey Department of Transportation, and the Delaware Department of Transportation.
- 1986 to 1988 **Donohoe Construction Co.**, Washington, D.C.
Project Engineer
Construction of a variety of commercial building projects in the Washington D.C. metropolitan region including the National Research Council/National Academy of Sciences Research Headquarters, the American Healthcare Association headquarters, and the new Embassy of Japan.
- 1984 to 1985 **D.P. Raffensperger, Assoc.**, Harrisburg, PA
Engineering Assistant
Assisted engineering staff in site development and plans, and erosion & sedimentation control plans for residential and light commercial projects. Also performed field surveying duties.
- 1973 to 1983 **Leisenring Associates**, Harrisburg, PA
Mason Tender/Brick Mason/Tradesman
Construction experience in the building trades. Experienced in all aspects of Residential and Light Commercial construction. Nine summers plus three years full time working “with the tools” in all phases of construction, including: site work, concrete work, rough & finish carpentry, insulation & drywall, painting, roofing, siding, and masonry.

PROFESSIONAL CREDENTIALS

Registered Professional Engineer: NCEES, Pennsylvania, Maryland, Virginia, Delaware and New Jersey

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EDUCATION

B.S., Civil Engineering (concentration in Construction Management and Structural Engineering), Pennsylvania State University, 1985

A.A., Engineering, Harrisburg Area Community College, 1983

CONTINUING EDUCATION

ASTM Workshop on Conducting Periodic Facade Inspections, 2011
Commercial Roof Inspection and Evaluation, Haag Engineering, 2011
Residential Roof Inspection and Evaluation, Haag Engineering, 2011
OSHA #500 Course – Trainer course for the Construction Industry, 2007
OSHA #510 Course – Occupational Safety and Health Standards for the Construction Industry, 2006 (latest)
OSHA 10-hour Course, 2006 (latest)
Goldhofer training, 2005
Colorado School of Mines – Soft Ground Tunneling course, 1996
Colorado School of Mines – Microtunneling course, 1994
Value Engineering Techniques training, 1992
PennDOT Bridge Inspector Training Course, 1990
Lehigh University – Fracture Critical Bridge Design, 1989

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
Chi Epsilon Civil Engineering Honor Fraternity
The Moles (an association of individuals engaged in Heavy Construction in the New York metropolitan area)

PRESENTATIONS

Update on Residential Building Codes in Pennsylvania, Lorman Education Services: Teleconference (2010)
Building Codes in Delaware, Lorman Education Services: Wilmington, DE (2009)
Building Codes in Pennsylvania, Lorman Education Services: Lancaster, PA (2007, 2008), Scranton, PA (2008), Harrisburg (2008, 2009)
OSHA 10-hour Construction Safety Training: Lancaster, PA (2007)