

# ROBERT EARL BOOKWALTER: Civil/Structural/Architectural Engineer

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## SUMMARY

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Broad experience in commercial, residential, and government design and construction, including budgets of up to \$100 million, and coordination of teams of up to four dozen people. Specializing in creative solutions to unique civil, structural, and architectural engineering challenges with efficient design that is innovative but not over-built, and effective project management for on-time, within-budget delivery.

## SKILLS

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- Proposal development and budgeting
- Project management, quality assurance and quality control
- Operational analysis
- Drafting
- 3D Modeling for spatial and structural analysis
- Civil: grading and drainage for residential and commercial properties, bridge design based on AASHTO design standards, roadway design for rural and private access roads, and water harvesting design
- Civil engineering
- Structural engineering
- Architectural engineering
- Building inspection
- Construction oversight
- Structural: designs for structures up to five stories high, foundation, pre and post tensioned concrete, timber frame, steel frame, and cold-formed steel

## EXPERIENCE

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### Principle and Lead Engineer REBel Engineering & Design

May 2013 to the present  
Santa Fe, New Mexico

An engineering firm focusing on small commercial and custom home construction in northern New Mexico.

- Structural design for a contemporary, 5,000 square foot multi-million dollar home in the Angel Fire ski resort area of northern New Mexico
- Structural and civil design for dozens of homes of all styles and sizes in the Santa Fe, NM area
- Currently completing structural and civil design for the renovation and upgrading of a unique log cabin next to the Brazos river and cliffs in northern New Mexico, including expansion and regrading of the site

### Lead Project Manager and Principle Partner Armstrong Group, Inc.

June 2012 to January 2017  
Albuquerque, New Mexico

A specialty engineering firm addressing the performance of building envelopes, including structural and civil design for commercial, institutional, government, residential, and historic buildings.

- All structural engineering for remodeling the Albuquerque Public Schools warehouse into a conference center/administrative office including a new 50,000 warehouse – budget approximately \$2 million
- Structural and civil design for the \$1.2 million, 8,000 square foot, Albuquerque, NM Lim residence, including raising the existing building site above the flood plain and gaining county approval for the re-designation
- Structural design for the creation of two new buildings and remodeling of the old milking barn into a state-of-the-art restaurant and bar for Los Poblanos, Albuquerque, NM – budget approximately \$2 million
- Structural and civil design for the new Bobcat restaurant and bar on the site of the old Bobcat restaurant south of Santa Fe, NM – project budget \$1 million
- Structural and civil design for the renovation of the historic El Vado Hotel on Route 66 in Albuquerque
- Oversight of a 6-person design/engineering department including calculations and drawing preparation

**Project Manager and Engineer of Record  
URS Corporation**

**December 2002 to May 2012  
Los Alamos, New Mexico**

A full-service, global engineering, design, and construction firm which served Los Alamos National Laboratory.

- Lead engineer for the Los Alamos office responsible for the ten-year design and construction of the \$100 million Los Alamos Laboratory Nuclear Materials Safety Storage Upgrade Project required by Congress
- Lead engineer for the Santa Fe, NM Railyard Park and Plaza – approximately \$5 million – civil and structural design for this Santa Fe civic centerpiece including the internationally recognized Railyard Tank
- Structural design for half a dozen roadway bridges for the NM Department of Transportation

**Chief Engineer and Vice-President  
Chama Valley Manufacturing, Inc.**

**April 1998 to present  
Chama, New Mexico**

A manufacturing company producing rock fall control structures, wire, rope/cable, rigging hardware and other slope stabilization systems for North American roadways and other infrastructure uses.

- Responsible for the initial design of the building and equipment layout for the production facility
- Design and construction management oversight for all product development and production processes
- Collaboratively manage strategic direction and organizational finances with company partners

**Project Manager and Civil/Structural Engineer  
Louis Berger Group**

**August 1998 to November 2002  
Santa Fe, New Mexico**

A \$1 billion/year global engineering firm ranked in the top 20 worldwide by Engineering News Record.

- Structural design of numerous post-tension concrete, steel, and AASHTO girder bridges in NM and NV including the Corn Maiden Bridge north of Santa Fe, NM
- Structural design for a variety of commercial and residential architectural projects in Santa Fe, NM and Las Vegas, NV including post-tension slabs and steel frames

**Chief Engineer, Civil Surveying & Civil Engineering  
Surveying & Engineering Services**

**April 1996 to August 1998  
Santa Fe, NM**

Surveying and engineering services for road layout design, and diverse civil construction projects.

- Interpolated and created drawings from surveying field data using AutoCad R14 and Softdesk R 8 for a roadway and GPS projects

**Chief Engineer  
Brugg Cable Products, Inc.**

**April 1992 to April 1996  
Santa Fe, New Mexico**

Manufacturer of steel-mesh rock-slope protection and avalanche control systems for North America.

- Site evaluation, design, fabrication, and construction of rockfall slope stabilization and avalanche control systems throughout North and Central America
- Wrote/implemented ISO 9001 procedures with the Swiss Association of Quality & Management

**President and General Manager  
Catchment Erectors Company**

**December 1993 to December 1994  
Santa Fe, New Mexico**

Construction company specializing in the erection of rock fall control structures.

- Setup the corporation, and managed day-to-day operations
- Preparation of all bids and estimation of viability for all projects
- Coordination of project implementation in collaboration with the project foreman and General Contractors.

**Civil/Structural Engineer  
Merrick and Company**

**July 1991 to March 1992  
Los Alamos, New Mexico**

An international design/engineering firm serving government/industry in the energy and life sciences sectors.

- Structural design and drawings for the Bradbury Science Museum in Los Alamos
- Structural proposals and seismic analysis for the Los Alamos Weapons Subsystems Laboratory
- Site planning and construction management for diverse projects

**Project Engineer**  
**Lyons Engineering Associates**

**January 1985 to August 1990**  
**Santa Fe, New Mexico**

Responsible for the design of structures at the Taos Ski Valley including:

- A new ski lift with safety devices to prevent slippage of the lift cable
- A system of wind fences to divert the wind over existing lifts
- A pump house for snowmaking operations.

**Project Engineer**  
**Pneumatic Turbine Partnership**

**January 1985 to July 1989**  
**Santa Fe, New Mexico**

Startup company for the design and manufacturing of pneumatic turbine drilling machines.

- Mechanical design, fabrication, and testing of a prototype pneumatic turbine drilling machine
- Design of a testing tower used to simulate loads encountered during drilling in the field
- Performance of theoretical predictions and stress analysis of the pneumatic turbine using microcomputers

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## **EDUCATION and PROFESSIONAL TRAINING**

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**Project Management**

Los Alamos, New Mexico

URS Corporation

**Project Quality Control**

Los Alamos, New Mexico

Los Alamos National Laboratory

**Graduate Studies in Engineering Mechanics**

**1990 - 1991**

University of Newcastle-Upon-Tyne

Newcastle-Upon-Tyne, England

**Bachelor of Science, Architectural Engineering**

**1984**

University of Colorado

Boulder, Colorado

**Architectural Design Studies**

**January 1979 to June 1980**

University of New Mexico

Albuquerque, New Mexico

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### **AFFILIATIONS**

National Society of Architectural Engineers  
American Society of Civil Engineers

### **AWARDS**

Rotary International, Graduate Scholar Recipient, 1990  
Department of Energy, Award for Engineering Excellence, Pneumatic Turbine Partnership, 1988

### **PUBLICATIONS**

**“Field Testing of a Downhole Pneumatic Turbine Drilling Motor,”** at the Geothermal Energy Symposium, Jan 10-13, 1988. Published by the American Society of Mechanical Engineers/Geothermal Resources Council.

**“The Testing of Various Rock Fall Control Systems,”** This paper was presented with Los Alamos National Laboratory and the Colorado Department of Transportation.

### **SOFTWARE COMPETENCIES**

- AutoCAD Releases 2016 – R11
- AutoCAD Civil 3D 2008 – 2016
- REVIT Architectural/Structural Modeling with the ROBOT Finite Element Program 2009 – 2016
- DesignCAD 2D & 3D
- Conspan Bridge Design Modules
- Microsoft Office with extensive use of Excel spreadsheets for structural design
- STAAD III Structural Analysis
- Corel Draw
- Aldus PageMaker

### **LICENSING**

Registered Professional Civil, Structural and Architectural Engineer, New Mexico License No. 13847

*References Available Upon Request*