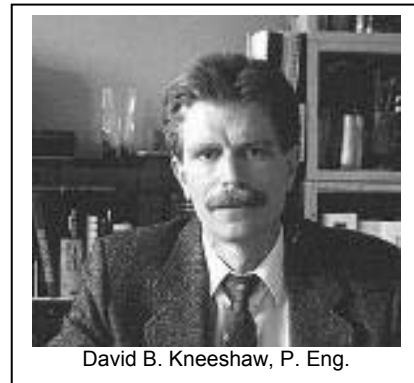


David B. Kneeshaw, Professional Engineer

Resume

- ❖ Professional Engineer, registered with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) since 1990.
- ❖ Bachelor of Science in Civil Engineering, University of Saskatchewan, 1979
- ❖ President and founder of Kneeshaw Engineering Ltd., Kamloops, BC (1998)
- ❖ Professional Engineering experience in Alberta, Saskatchewan, and British Columbia
- ❖ Employment History:
 - Kamloops Indian Band (2005-current)
 - Kneeshaw Engineering Ltd. (1998-current)
 - Urban Systems Ltd. (1993-998)
 - British Columbia Ministry of Transportation (1989-1993)
 - Reid Crowther and Partners Ltd. (1986-1993)
 - DeLCan, Deleuw Cather Western Ltd. (1981-1986)
 - Reid Crowther and Partners Ltd. (1978-1981)



David B. Kneeshaw, P. Eng.

Expertise

- ❖ **Municipal Planning, Design & Construction**
 - Municipal services design and construction, including
 - water distribution and sewer extensions
 - collection extensions
 - storm water management systems
 - Land Use Planning
 - Sewer servicing planning and associated business-case planning
 - Construction survey, layout and contract management
- ❖ **Engineering & Management**
 - Project Management, Contract Administration
 - Policy Development
 - Staff Supervision
 - Communication
 - Project Management

❖ **Highway Planning, Design & Construction**

- Corridor Management Planning, Street Network Planning
- Value Analysis and Value Engineering – facilitator and team member
- Traffic Impact Assessment
 - Highway Capacity Manual (HCM) and Highway Capacity Software (HCS) analysis for various developments.
 - Traffic management plans for highway contractors & designers
- Highway Benefit / Cost Analysis
 - Extensive use of the MicroBENCOST software, familiar with input requirements and assessment of results for a wide range of problem types.
- Highway Design
 - Varying levels of design for freeways, highways, and local streets, with practical application of standards for safety, design consistency, and constructability.
- Highway Construction
 - Several years of hands-on highway construction experience, including overseeing large-scale earthmoving, paving and bridge construction with associated ancillary features and utilities.

❖ **Systems/Software development**

- **Highway Statistics Database:** R2DA, a database for the BC Transportation Ministry's Southern Interior Region, is used to retrieve highway statistical data in various formats for planning analysis. This program also analyzes the data to identify areas with deficient performance.
- **Benefit / cost software:** B C Auditor™, an independent program designed to work as a companion MicroBENCOST™. This software is currently marketed through McTrans, University of Florida.
- **Cost Estimating System:** A Planning-level cost estimating system developed for the Ministry of Transportation. The manual, which includes the estimating philosophy in this system is posted on the Kneeshaw Engineering Website at www.Kneeshaw-Eng.com
- **Data Conversion:** The "Hot Rod" application that converts the Ministry's Photolog information into formats for input to the TRARR™ and MicroBENCOST™ software programs. This also provides information to plot horizontal and vertical geometry of existing highways.
- **Survey Data:** An application for converting Autocad contour drawing data into point files for use in digital terrain modeling (a feature that is now automated into design software). Also a number of spreadsheet routines to reduce survey information into coordinate data, and produce layout information for construction.

Qualifications

Land Development and Municipal Services

As Department Head for the Planning, Engineering and Public Works Department at KIB, there is a wide range of Municipal Engineering initiatives:

- ❖ Operational: Water Treatment Plant, water distribution system, public sewer system including pumping stations, septic sewage disposal systems, dam operation and maintenance, land development.

- ❖ Administrative: Land use planning, sewer system planning, asset and maintenance management, policy development and business planning.

- ❖ Engineering & Project Management: land development, road network development, planning and design projects, planning study and design plan reviews, development approvals reviews, developing work programs and managing the various aspects of project delivery.

Highway Design and Planning, Traffic Analysis

As Design Manager in both the Urban Systems and Reid Crowther highway design groups, David was responsible to direct the design process, ensure design requirements were met, and carry out project management and quality control functions. He also remained active doing hands-on engineering design throughout. Projects included the Trans-Canada Highway freeway sections east of Kamloops, and the Westview Drive / Trans-Canada (Upper Levels) Highway Interchange in North Vancouver, as well as smaller rural highways and urban roads.

David has used advanced computer design techniques for the various facets of highway design work since 1986, beginning with the then-prevalent McAuto Roads program. This was a batch process, utilizing a dial-up communication link between the design office and remote mainframe computers. By 1989, design software was available for the personal computer. David currently uses the “EMXS for AutoCAD” software package for this work.

Working through the issues, constraints, parameters, and specialized techniques of highway planning work was practiced through employment with the Ministry of Transportation and Highways (Senior Transportation Planning Engineer) in the Kamloops Region. Building on this, more recent highway planning work includes the development of Corridor Management Plans, Investment Strategies, Access Management projects, and Functional Assessments of highway improvement options, in various areas of British Columbia.

David has successfully completed a number of traffic impact studies using both spreadsheet and Highway Capacity Software (HCS), in Merritt, Kamloops, Shuswap

Lake Estates (Sorrento), Little Fort, Rossland, and others.

Value Management and Financial Analysis

Many of the projects mentioned above included financial (benefit/cost) analysis. Also, David has facilitated a number Value Analysis and Value Engineering workshops, and he has also served on value management teams.

These Value Management and financial analysis projects have been completed for highway projects in the Kootenay, Okanagan, Lower Mainland, and Cariboo areas of British Columbia, as well as several on the Trans-Canada Highway. The result of these is hundreds of thousands of dollars saved through improved efficiencies and innovation.

Construction

David has served in various roles in municipal and highway construction projects, including:

- Surveyor – layout and quantity measurements
- Inspector
- Resident Engineer
- Contract Manager
- Project Manager

Constructing a project is the best test of its design and site conditions often create the need to make design modifications in the field. Dave played an important role as Field Design Engineer on the Westview Interchange design/build project in North Vancouver – a successful project that was completed under-budget and ahead of schedule. Continuity of personnel throughout a project's successive development stages is always beneficial from a professional development standpoint.