

Mark C. Jablin, P.E.

Professional Registration:

- **Structural Engineering, Wyoming Registration Number: 8890**

Education:

- **B.S. Civil Engineering** (Structural Emphasis) 5/93
University of Wyoming, Laramie, Wyoming
- **M.S. Civil Engineering** (Structural Emphasis) 8/95
University of Wyoming, Laramie, Wyoming

Experience:

BridgeTech, Inc., Laramie, Wyoming (5/98 – present)
Co-Owner, Programming Engineer

- Developing/maintaining/enhancing bridge engineering software for the Wyoming Department of Transportation.
 - BRASS-PIER(LRFD)[™] (Fortran and C++) - Modified the existing software to meet the *AASHTO LRFD Bridge Design Specifications*. Development of a graphical, interactive post-processor based on a Microsoft Access database. An XML-based report writer was implemented.
 - BRASS-PIER[™] (Fortran) - Program maintenance and enhancement.
 - BRASS-CULVERT[™] (Fortran) - Program maintenance and enhancement.
 - BRASS-GIRDER[™] and BRASS-GIRDER(LRFD)[™] – Testing the computational engines for each release, including regression testing and unit testing. Use and modification of BRASS-GIRDER(LRFD)[™] for the NCHRP 12-62. Testing of the LRFR module of BRASS-GIRDER(LRFD).
 - BRASS-GIRDER[™] User Interface (C++ and Managed C++)– Development of a next-generation user interface for the BRASS-GIRDER[™] and BRASS-GIRDER(LRFD)[™] programs.
- NCHRP 12-50 - Bridge Software Validation Guidelines and Examples.
 - Development of an automated procedure for comparison of two bridge engineering software products.

- Extensive spreadsheet and database development using Microsoft Visual Basic for Applications (VBA).
- Thorough testing of software outside of the automated procedure for verification.
- XML development as an alternative results format.
- NCHRP 12-62 - Simplified Live Load Distribution Factor Equations
 - Implementation of various simplified live load distribution methods within BRASS-GIRDER(LRFD)[™].
 - Microsoft Access, Excel, and Word development using VBA for results processing, including sorting of data, plotting of results, and automated plot generation.
 - XML and XSLT development for simplified calculation viewing.
 - Finite element model generation (including live load positioning) for computation of rigorous distribution factors.
 - Record keeping for billing and submission of monthly and quarterly reports.
- NCHRP 10-80 - New Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals
 - Design examples for demonstration of new SLTS design methods.
 - Review and editing of specifications language.
 - Record keeping for billing and submission of monthly and quarterly reports.
- Portland Cement Association - Microsoft Access development using VBA to create reports based on the National Bridge Inventory database of bridges.
- Instructing bridge engineers (from state DOTs, federal agencies, and consulting firms) on the use of AASHTO Virtis[®]/Opis[®] and WYDOT's BRASS-PIER(LRFD)[™], BRASS-GIRDER[™], and BRASS-CULVERT[™].
- Software testing for AASHTO Virtis[®]/Opis[®].
- Developing and presenting the philosophy and progress of the BRASS-PIER(LRFD)[™] and BRASS-CULVERT[™] programs as annual BRASS[™] Users' Group meetings.

Neujahr and Gorman, Inc., Denver, Colorado (7/95 – 4/98)

Project Engineer

Design of a wide variety of commercial and residential structures, including schools, retail buildings, hotels, and private residences. Responsibilities included ground-up structural system design and construction management of the structural engineering portion of construction projects, including foundation inspection.

Engineering, Inc., Billings, Montana (5/91 – 8/92)

Construction Surveyor

Construction and land surveying for a Civil Engineering consulting firm (summers only).

Skills:

- C++/Fortran/Visual Basic for Applications Programming
- C++ programming for Microsoft Windows applications in MFC and .NET
- Database management and programming use Microsoft Access and SQLite
- Webserver implementation for a software incident tracking system.

Continuing Education (Instructor):

“Introduction to AASHTOWare Virtis/Opis – A Two-day Short Course,” Los Angeles County, Los Angeles, CA, February 2003.

“Introduction to AASHTOWare Virtis/Opis – A Two-day Short Course,” Colorado DOT, Denver, CO, August 2001.

“Introduction to the use of the BRASS™ Suite of Programs,” US Forest Service, Online Seminar, April-May 2021.

“BRASS™ Training,” U.S. Department of the Interior - Bureau of Indian Affairs, Bloomington, MN, January 9-12, 2023.

Publications:

Puckett, J.A., Mark Mlynarski, Jablin, M., Clancy, C, “Bridge Software Validation Guidelines,” Fifth International Bridge Engineering Conference, Tampa, FL, April 2000. (TRB Review)

Puckett, J.A., Goodrich, B.L, and Jablin, M.C, “Validation of Specification Modification via NCHRP 12-50 Process,” International Bridge Engineering Conference, TRB review, July 2005.

Patrick, M.D., Huo, X.S., Puckett, J.A., and Jablin, M.C., “Review of literature in Lateral Live Load Distribution”, International Bridge Engineering Conference, TRB review, July 2005.

Non-Refereed Publications and Presentations (Conferences, Workshops, Specification Committees, etc):

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *LFD and LRFR Methods for Bridges*, AASHTO Virtis/Opis/BRASS Users Group Meeting, Orange Beach, AL, August 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, Comparisons of LFD and LRFR methods for Bridges, AASHTO Subcommittee on Bridges and Structures, T-18, Albuquerque, NM, June 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Comparisons of LFD and LRFR Methods for Bridges*, AASHTO Subcommittee on Bridges and Structures, T-18, Albuquerque, NM, June 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Implementation of AASHTO LRFD 6.10 Revisions – Commentary Regarding Adoption*, AASHTO Subcommittee on Bridges and Structures, Main Session, Albuquerque, NM, June 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Implementation of AASHTO LRFD 6.10 Revisions*, AASHTO Subcommittee on Bridges and Structures, T-14, Albuquerque, NM, June 2003.

Puckett, J.A., Mlynarski, M., Jablin, M., Clancy, C.,” Implementation of NCHRP 12-50 and Its Extension for LRFR”, Annual Meeting of the Subcommittee on Bridges and Structures, T-19, Seattle, WA, May 2001.

L.R. Reasch, Puckett, J.A., Mark Mlynarski, M. Jablin, Clancy, C.,” Update and Implementation of NCHRP 12-50”, Main Session Annual Meeting of the Subcommittee on Bridges and Structures, Seattle, WA, May 2001.

Jablin, M. and Puckett, J.A., “Prestressed Girder Analysis and Rating Verifications and Ongoing NCHRP Testing Efforts”, AASHTO Virtis/Opis Users’ Group Annual Meeting, Minneapolis, MN, July 2000.

Jablin, M., Goodrich, B.G. and Puckett, J.A., “BRASS-Pier (LFD and LRFD) Maintenance and Development Efforts”, BRASS Users’ Group Annual Meeting, Minneapolis, MN, July 2000.

Puckett, J.A., Mark Mlynarski, Jablin, Clancy, C, “Bridge Software Validation Guidelines,” International Bridge Engineering Conference, Tampa, FL, April 2000. (TRB Refereed Review and presentation)

Puckett, J.A., Mlynarski, M., Jablin, M., C. Clancy, and Wilson, K., "NCHRP 12-50 Bridge Software Validation Guidelines and Examples," Western Bridge Engineers Seminar, Seattle, WA, Oct. 1999.

Jablin, M. and Puckett, J.A., "Update on Developments within BRASS-Pier (LRFD)," BRASS and AASHTO Opis/Virtis Users Group Meeting, Annual Meeting, Nashville, TN, July 1999.

Puckett, J.A. and Jablin, Mark, "Overview of NCHRP 12-50, Software Validation," BRASS and AASHTO Opis/Virtis Users Group Meeting, Annual Meeting, Nashville, TN, July 1999.

Invited Presentations:

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *LFD and LRFR Methods for Bridges*, AASHTO Virtis/Opis/BRASS Users Group Meeting, Orange Beach, AL, August 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Comparisons of LFD and LRFR Methods for Bridges*, AASHTO Subcommittee on Bridges and Structures, T-18, Albuquerque, NM, June 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Implementation of AASHTO LRFD 6.10 Revisions – Commentary Regarding Adoption*, AASHTO Subcommittee on Bridges and Structures, Main Session, Albuquerque, NM, June 2003.

Goodrich, B.L., Puckett, J.A., and Jablin, M.C, *Implementation of AASHTO LRFD 6.10 Revisions*, AASHTO Subcommittee on Bridges and Structures, T-14, Albuquerque, NM, June 2003.