

# Technical Services

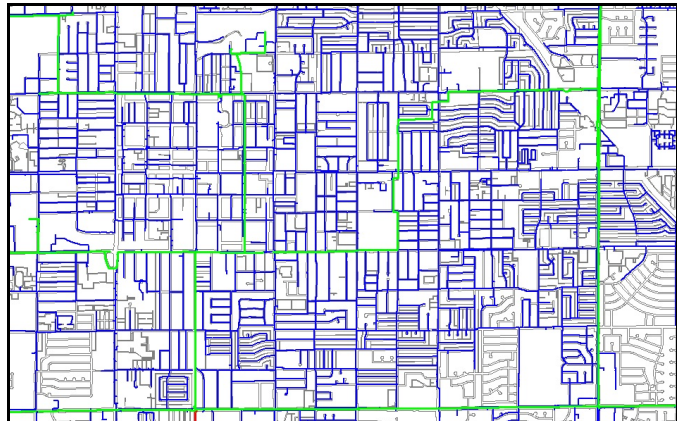
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In addition to offering our specialized software products, Bradley B Bean PE also offers a range of technical services. Our speciality is in design and analysis of piping systems conveying natural gas including fuel piping, gathering, distribution, and transmission systems.

We can provide services in the form of consulting only, to complete beginning-to-end project management. We can assist your personal, or subcontract with your prime contractor, or serve as the sole contractor to ensure that your projects are completed successfully. Our small size allows us to provide very personal and focused attention to our clients and their specific needs. For larger projects we subcontract with other professionals as required to ensure success.

Some of the services we offer are highlighted below...

**System Modeling** - Using our computer modeling techniques we can identify potential problem areas, establish well-planned replacement programs, develop "master" growth plans, establish operating criteria, troubleshoot system performance problems, and model the affect of proposed changes, alterations, and additions to a system.



Past projects have included: Master Plan Studies for City of Mesa Arizona and Los Alamos New Mexico. System replacement plans for Ignacio Colorado, Falls City Nebraska and Winfield Kansas. Model development for City of Austin Minnesota, various systems for Kinder-Morgan Inc (now Source Gas), and various military base systems including Peterson Air Force base in Colorado Springs Colorado. Developed models for various fuel piping, distribution, gathering, and transmission systems.

**System Design** - We provide design services ranging from review only, to complete project designs. Using our sophisticated computer design tools, we can provide efficient, reliable, and cost-effective design solutions for new extension or renewal projects.

Past projects have included: System replacement and regulator station design for the Town of Ignacio Colorado. Pipeline, gate station, and regulator design for the Southern Ute Indian Tribe. New subdivision design for the Mountain Division of Kinder-Morgan Inc (now Source Gas). Design of various new housing projects for Fort Carson Colorado. New regulator station design for the City of Las Vegas New Mexico. Projects included system modeling, preparation of construction drawings and documents, preparation of bill-of-materials, preparation of as-built drawings, project management and inspection.

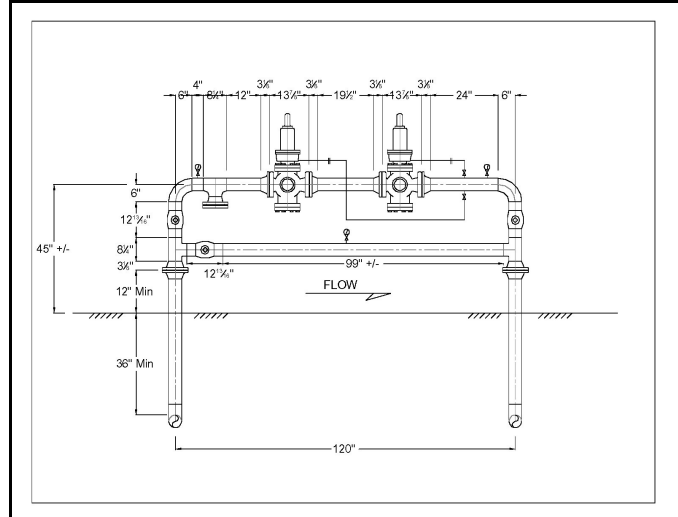


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Bradley B Bean PE • 419 East Columbia Street • Colorado Springs, CO • 80907 • USA  
Telephone: (719) 578-9391 • Fax: (719) 578-9394 • [www.b3pe.com](http://www.b3pe.com)

**Specialized Crossing Designs** - We can provide design services for your specialized crossing needs. Past projects have included: 18" DIP Wastewater utility crossing for KR Swerdfeger Construction. Various support structures for 24", 30", 34" pipelines for El Paso and Terrasen Pipelines. Temporary support structures for large fiber and cable conduit runs for Qwest Communications.

**Specialized Analysis** - We can provide specialized analytical services in the fields of stress analysis, pipe support, gas properties and pipe and equipment hydraulics. Past projects have included development of pipe sizing tables for specialized fuel piping installations for Florida Public Utilities. Development of gas compressibility tables for Citizens Gas billing system. Temperature calculations for a specialized products line. Various crossing, regulator, relief valve, and meter station calculations. Feasibility analysis for system growth in the Fairbanks Alaska Area for the Alaskan Gas Pipeline Authority.



**Expert Witness Testimony and Incident Review**

- We can provide Expert Witness assistance when things go wrong. Past projects have included: Full incident analysis for a natural gas fueled fire for a Large Poultry operation in Canada. Various gas loss calculations.

**Custom Software** - We can provide custom designed application and utility software to meet your specific needs. Past projects have included: Custom design software for Transco/Fulcrums Connections (United Kingdom) - allowing automated work flow from customer request, to design, to costing, to work management for new connections and subdivision projects. Developed CSST fuel pipe sizing application for Titeflex. Developed custom network modeling solution engine for use by Cook/Hurlbert in their SmallWorld based gas design application. Developed GIS/CAD submittal processing software for Colorado Springs Utilities.

**Other Services** - We can provide a variety of other services including: Due diligence studies when considering system or project purchases or financing. New project estimates. Compliance audits and review. Pipeline routing review. Crossing permitting. Training in design and analysis topics.

Please feel free to contact us if we can help you *succeed* in your project..



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