

# Gary G. Simmons, P.E.

## Structural Engineer

### Education:

University of Illinois,  
B.S. Civil Engineering, 1972  
M.S. Civil Engineering, 1973  
PhD Student University of  
Kansas 2005 to present

### Registration:

Civil Engineer, AK

### Professional Associations:

Member, ASCE  
Member, Earthquake  
Engineering Research Institute

### Publications:

*Earthquake Monitoring System  
for the Trans Alaska Pipeline,*  
Alaska American Society of Civil  
Engineers (ASCE) Journal

*Repair at Mile Post 200.6,* ASCE  
Proceedings

*Polynomial Curve Fitting  
Techniques used for  
Determining Curvature on  
Pipeline Monitoring Rods,* ASCE  
Proceedings

Contributor to *Guidelines for the  
Seismic Design of Oil and Gas  
Pipeline Systems,* book  
published by ASCE

### Military Career:

~32 years of Army active duty,  
reserves, and national guard  
service. Joined as a private and  
retired as Colonel of Infantry.  
Service schools include Airborne,  
Ranger, Special Forces Officers  
Course, Jumpmaster, Command  
and General Staff College and  
Army War College. Commanded  
all tactical units in the Alaska  
Army National Guard, a brigade-  
level command with ~1800  
soldiers in 76 locations spread  
across Alaska. Annual operating  
budget of ~\$10 million, annual  
salaries ~ \$5 million and with  
assigned equipment worth ~\$75  
million.

### General Qualifications:

Mr. Simmons has extensive engineering experience on design, construction, and operations of crude oil pipelines in the Arctic. Mr. Simmons worked for 22 years with Alyeska Pipeline Service Company (APSC) starting as a stress analyst during initial design and continuing on in positions of increasing engineering and management responsibility. He was project engineer / engineering supervisor responsible for the design of pipeline repairs from 1982 to 1987; these repairs were required at about 10 different location and included replacing a 3200-ft section of the mainline pipe at Mile Post 200. As supervisor of civil design, he was responsible for the design of all new facilities and buildings and all building modifications on the Trans Alaska Pipeline from 1984 to 1989. His project engineering experience included work on several \$20-\$40 million large-scale, fast-tracked rehabilitation projects. His last assignment with APSC was managing a state-of-the-art effort to develop simplified techniques to accurately determine the remaining strength of severely corroded pipe. Since leaving APSC, he has supported the State of Alaska performing pipe stress and structural engineering review of the North Star Pipeline project and the Horizontally Directional Drilled (HDD) portion of the Alpine Pipeline project. He worked as part of a team evaluating concepts for burying hot-oil pipelines on the North Slope and performed the structural design for the extension of a natural gas pipeline near Kenai, Ak, that included several HDD sections.

### Experience:

#### **Alyeska Pipeline Service Company, 1973-1995**

Positions included Stress Analyst, Senior Engineer, Supervisor of Special Projects, Supervisor of Civil Design, Project Engineer, District Engineer, and Engineering Advisor.

#### **Simmons & Associates, Anchorage, AK 1995-May 2005**

Principal and sole proprietor of Simmons & Associates, a structural engineering firm providing specialized structural engineering services to the pipeline industry in Alaska and other Northern Regions. Worked on repairs to 43 workpad bridges, and inspection of major pipeline bridges for APSC. Heavily involved in the last few year in seismic qualification of equipment at APSC for a new fiber optic communications systems and Strategic Re-Configuration Project. Performed the duties of Seismic Coordinator for APSC for several years. Developed new maintenance and repair criteria for laterally loaded VSM to reduce maintenance costs for APSC. Worked on preventing wind-induced vortex shedding on three long-span, box-girder pipeline bridges on the Alpine Extension on the North Slope.

#### **Michael Baker Jr., Inc., Anchorage, AK 1995 – May 2005**

Contract engineer performing pipe stress and earthquake engineering. Performed design analysis on Ardlin Pipeline in Northeast Russia. Designed repairs to pipeline spring hangers for the Tazlina Pipeline Bridge for APSC.