DEPARTMENT OF CIVIL ENGINEERING AND GEOLOGICAL SCIENCES

Spring 2011 Seminar Series

CHALLENGES AND INNOVATION IN CIVIL AND ENVIRONMENTAL ENGINEERING

Bud Ahearn

Retired Senior Executive, CH2M HILL Ltd.

The Engineering Profession - Leadership in Motion

Thursday, January 27, 2011, 3:30pm
129 DeBartolo

Today's engineers confront a world of finite natural resources, opposing stakeholder interests, financial limitations, social disparities, and competing economic and environmental pressures that demand civic leadership skills beyond formal engineering schooling. More and more often, the expertise demanded of engineers today includes a capacity not just for technological problem solving, but also for a holistic understanding of how things work in a much broader context; a context that:

- Contemplates the greater needs and constraints of modern society
- Takes into consideration things like resource depletion, financial viability, social equity, risk analysis, total life cycle consequences, supply chain reliability, city operations and maintenance, and economic development
- Promotes progressive decision making in a world of competing interests, and
- Delivers a sustainable, improved world to future generations

This presentation addresses the engineers' leadership imperative with special emphasis on the dynamic of "**Building, Teaching, Learning, and Rebuilding a Leadership Culture**". The presentation includes models and systems thinking developed by notable scholars and practitioners. These models and systems are presented as methods to form the core values and operating principles often seen in progressive public and private sector engineering agencies.

These core values create the systems of control essential to producing consistently reliable quality, the creativity and unconventional thinking that fuels competitiveness and moves organizations through incremental to breakthrough change, and the collaborative environment and caring for people that creates high performing, best-in-industry teams. In short, core values, attitudes, and practical citizenry create the "culture" of the engineering profession.

Joseph A. "Bud" Ahearn is a recently retired senior executive of CH2M HILL, where he was an executive leader in the engineering business lines of transportation, environment, water, industrial design, and related infrastructure. During his 18-year career at CH2M HILL he served as Vice Chairman of the Board with responsibilities for strategic planning, governmental affairs, strategic communications, and leadership development, and also served in several other capacities including Transportation Business Group President, Eastern Region Manager, Senior Vice President, Federal Programs Director, and Principal-In-Charge for two major transportation corridor projects in California.

Prior to joining CH2M HILL, Mr. Ahearn had a distinguished military career spanning three decades, where he achieved the rank of Major General in the U.S. Air Force. During his 34 years with the Department of Defense, General Ahearn was responsible for shaping financial strategy, developing budgets, and executing infrastructure programs totaling more than $7 billion annually. As the Senior Civil Engineer for the U.S. Air Force, he directed the operational readiness and natural disaster response of U.S. Air Force combat engineers and the development and operations of all U.S. air bases around the world.

Dedicated to advancing engineering education and providing sustainable systems and services in the developing countries, he is a founding sponsor and governing board director of Engineers Without Borders U.S.A. Committed to strengthening the engineering profession, he is an active member of the National Academy of Construction (NAC), a Distinguished Member of the American Society of Civil Engineers (ASCE), ASCE's Industry Leaders Council (ILC), past national president of the Society of American Military Engineers (SAME), and was most recently inducted as a member of the National Academy of Engineers (NAE).

In addition to numerous military awards, General Ahearn received the Air Force Order of the Sword, the highest honor the Noncommissioned Officer Corps of the U.S. Air Force can bestow, the University of Notre Dame College of Engineering Honor Award for professional achievement, the Newman Medal from the Society of American Military Engineers (SAME) for outstanding military engineering achievement in Europe. He was named an Honorary Member of the American Institute of Architects, received the SAME Golden Eagle award for lifetime achievement, and is the recipient of the 2010 ASCE Opal Award for lifetime achievement.