



The 2020 Northeastern University Engineers Week

DISTINGUISHED SEMINAR

Hosted by the Department of Civil and Environmental Engineering

Anticipating The Future Built Environment



Gerald E. Buckwalter

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Thursday
February 20,
2020

102 ISEC
3PM - 4PM

A reception will follow this event from 4pm-5pm in 655 ISEC

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ABSTRACT: From climate change to autonomous vehicles, engineers are confronting a variety of environmental challenges, demographic shifts and technological changes that will require a drastic rethinking of how we build, operate, and maintain our infrastructure systems. Planning for the future is difficult for nearly every organization. ASCE decided to launch the Future World Vision project to help meet this challenge. We compiled and winnowed more than 100 global macro trends to examine six important sociopolitical, economic, environmental, and technological trends as key drivers of change for future built infrastructure. Our desire is that the Future World Vision project will establish ASCE and civil engineers as bold thought leaders, provide a platform to envision the future built environment and ultimately optimize future system performance and the benefit to society, and be a next-generation tool that interacts and resonates with those who will create the future built environment—the next generation of civil engineers. The Future World Vision platform is an immersive computer model, using gaming engines, that will create virtual future worlds with evocative visuals, multiple characters and rich narratives that explore holistic city, community and neighborhood systems, including the cultural, social, economic, political, ethical and environmental aspects at different scales. This platform will enable engineers to ask the right questions about

a future built environment that doesn't exist yet, contemplate solutions, postulate the resulting benefit to society – well in advance of starting to design those solutions. This will enable us to better prepare engineers today for possible future needs and challenges.

BIO: Gerald (Jerry) E. Buckwalter has more than 35 years of varied executive leadership in general management, business development, strategy and innovation, program operations and policy development spanning military, government, international, and commercial domains. He is the Chief Operating and Strategy Officer of ASCE, overseeing all aspects of internal operations including Finance, Administration, Engineering, Lifelong Learning and Human Resources. Prior to joining ASCE, Mr. Buckwalter was a Northrop Grumman Corporate Director of Strategy. His responsibilities included reshaping the company's business portfolio, mergers and acquisitions, long-term strategies, innovation initiatives and professional development. Among many distinguished service positions, Mr. Buckwalter was a member for the National Infrastructure Advisory Council reporting to the White House from 2008 to 2012. Mr. Buckwalter earned a degree in Physics from Monmouth University and has extensive continuing education at George Washington University and the Massachusetts Institute of Technology.