Construction of underground structures is a highly competitive business where winning a bid is more often attributed to the Contractor’s Means and Methods combined with the Management of Labor and Schedule Risk. The contractor’s Means and Methods are procedures used to construct the project according to the performance requirements given in the contract documents. In most cases, the selection of these methods is left to the contractor’s expertise. Most often, this selection is based on the management of labor and schedule risk. In construction, it is an adage that projects that finish or are ahead of schedule make their margins (profit). This talk will focus on several underground construction case histories as a framework for understanding the success and unsuccessful strategies for managing labor and schedule risk.

Vincent Tirolo, Jr., PE, is an academic practitioner and an owner of a consulting firm. He completed his B.E and ME in civil engineering in 1966 and 71 from City College of New York, respectively. He served as Captain in United States Army for four years, from 1966 to 68. Vincent has 50 years of experience in tunneling and geotechnical engineering. Vincent is a registered Professional Engineering (PE) in the district of Columbia, New Jersey, New York, Florida and Commonwealths of Massachusetts and Virginia. He has published over 25 peer-reviewed professional publications. Vincent owns Vince Tirolo Consulting and currently working as Senior Engineer at STV. Besides that, he is an adjunct professor of civil engineering at Columbia and New York University since 2004 and 2017, respectively. Vincent Tirol remained affiliated with a professional organization including ASCE as a chairman of the committee on Tunneling and underground construction and as president of the Metropolitan section.