

## *2003 State of Practice Lecture*

# **Role of the Laboratory in Modern Geotechnical Practice**

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### **Abstract**

Laboratory tests, field observations and theories of mechanics provided the cornerstones for the development of modern geotechnical practice. However, during the past decade, the role of the laboratory has declined in engineering education and practice. This presentation will examine ways in which the laboratory can and should play a central role in future geotechnical practice.

### **Biographical Sketch**

Dr. Allen Marr is a geotechnical engineer with specialized expertise in design of large earthwork facilities, ground improvement and performance monitoring. He currently leads the team that makes all geotechnical measurements during construction of the \$14B Central Artery/Tunnel project in Boston. He received his PhD from MIT in geotechnical engineering. After teaching at MIT for 10 years, he worked as a geotechnical consultant with Prof. T.W. Lambe on many international projects, including the unprecedented Oosterschelde storm-surge barrier in Holland. In 1982, he founded GEOCOMP Corporation, a firm that makes automated testing equipment and remote monitoring systems for civil engineering applications. In 1990, he founded GeoTesting Express, Inc., an independent testing laboratory, that provides rapid materials testing and consulting services to the civil engineering and construction industries. GTX is now the largest independent geotechnical testing firm in the US with labs in Massachusetts, Georgia and Texas. Dr. Marr is active in several professional organizations. He chairs the ASTM subcommittee on Soil and Rock Instrumentation and is past chair of the subcommittee on Data Automation Practices in Soil and Rock. He is a member of the Executive Committee for ASTM D35 on Geosynthetics. He received ASCE's Wellington prize for a paper on differential settlement criteria for storage tanks and has received several awards from ASTM for his standards development activities.