Purpose and Background

The United States earth retaining structure market exceeds 170 million square feet annually and there are over 50 different retaining systems to select from which are unique in design and construction. Unit costs vary from less than $20 to in excess of $250 per square foot. Selecting the most technically appropriate and cost-effective system is often critical to project cost and schedule. Selection of an inappropriate system unfortunately can result in time consuming and costly construction disputes. Many engineers, contractors and project managers do not have the needed knowledge and skills to select, design and construct these systems.

The instructors combine to present the critical knowledge and skills you need in order to take advantage of the cost effective use of earth retaining structures in urban construction for transportation, commercial and industrial development. From start to finish - from design to construction and general site development - the instructors will lead you through the myriad of more than 50 different retaining wall systems from which you can choose.

During this two-day program the instructors present a logical sequence of topics and activities to allow participants to demonstrate their knowledge and skills. These activities include: lecture, student exercises, instructor lead example problems and lively discussion periods. All participants will receive a copy of the newly released publication from the Federal Highway Administration (June 2008) on the selection, design and construction of Earth Retaining Structures. This publication is the third edition of the subject document and has been totally been rewritten with expanded and updated sections in many topics including subsurface drainage, selection of soil and rock properties and detailed design examples.

The most significant course manual and lesson change is the adoption of the limit states design platform of Load and Resistance Factor Design (LRFD). The new publication closely follows the current AASHTO specifications for Bridges and Structures but has direct standard of practice guidance for all Civil Engineering applications requiring temporary and permanent retaining structures.

To register your group, call John Wyrick at 703.295.6184
Summary Outline

DAY ONE
- Introductions, Learning Objectives and Course Overview
- History/Classification/Selection of Earth Retaining Systems
- Soil and Rock Properties (tests and design property selection)
- Lateral Earth Pressures
- Cast-in-Place and Semi-Gravity Wall
- Modular Gravity Walls
- Mechanically Stabilized Earth Walls
- Intro and Concepts

DAY TWO
- MSE Walls Design and Construction Externally Stabilized Walls (e.g., Sheet Pile, Soldier Pile and Lagging, Slurry Walls) Intro
- Externally Stabilized Wall Design
- Ground Anchor Walls
- Soil Nail Walls and Micropile Walls Course Summary and Closure

Seminar Benefits
- Recognize potential applications for retention structures used in civil engineering applications
- Select the most technically appropriate and cost-effective earth retaining system for your application
- Examine and select appropriate material properties, soil/rock design parameters and earth pressure diagrams
- Prepare conceptual and basic designs using appropriate design methods, factors of safety, earth pressure diagrams and field verification methods
- Understand and apply load and resistance factor design principles to the design of temporary and permanent earth retaining structures
- Evaluate and review contractor submitted designs
- Select appropriate specification/contracting method(s) and prepare contract documents
- Demonstrate a clear understanding of retaining wall construction and maintenance

Seminar Instructor

Jerry A. DiMaggio, P.E., D.GE, M.ASCE, is a principal at Jerry A. DiMaggio Consulting, LLC a small specialized consulting firm serving the civil engineering and construction communities related to strategic planning, innovation deployment and acceptance, and business development plans. He is also internationally recognized for his work on design, construction, evaluation, forensic assessment and disputes resolution of structural foundations, earth retaining structures, ground improvement techniques and earthworks. Mr. DiMaggio has served on a number of projects related to limit state design (LRFD), risk management assessment and management, innovative contracting and accelerated construction. He is the retired Principal Bridge Engineer, and Geotechnical and National Program Manager with the U.S. DOT, FHWA in Washington D.C. Jerry serves on several national committees and task forces for the development of technical guidelines, specifications and testing standards.

Mr. DiMaggio is an experienced meeting and workshop facilitator for business and technology deployment activities and is recognized for written and oral communication skills and experience. He has provided consulting services on over 1000 civil construction projects in all 50 states, throughout the Americas, several Middle Eastern countries and Australia. He has presented hundreds of seminars and workshops on the geotechnical and foundation features of bridges, buildings, energy facilities, retaining structures and engineered earthworks. He has been a member of the adjunct faculty at the University of Delaware, Johns Hopkins University, the University of Akron and Columbia University and an invited Keynote speaker at over 35 national meetings and conferences. Mr. DiMaggio has authored numerous technical papers and edited three civil engineering books.

CEUs/PDHs: ASCE has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102. In addition, ASCE follows NCEES guidelines on continuing professional competency. Since continuing education requirements for P.E. license renewal vary from state to state, ASCE strongly recommends that individuals regularly check with their state registration board(s) on their specific continuing education requirements that affect P.E. licensure and the ability to renew licensure. For details on your state’s requirements, please go to: http://www.ncees.org/licensure/licensing_boards/.

ASCE seminars are available for On-Site Training. For details regarding On-Site Training and/or needs-based training opportunities, please contact:

John Wyrick, Senior Manager
On-Site Training Worldwide
ASCE Continuing Education
Tel.: 703-295-6184
Email: jwyrick@asce.org