

Technical Talk on “The Application of Ground Improvement to Excavations in Various Urban Projects: Design Concepts and Numerical Simulations”

(Organised by Geotechnical Engineering Technical Division, IEM)

Ref Number: IEM19/HQ/069/T BEM Approved CPD/PDP Hours: 2

Date : 27th March 2019 (Wednesday)
Time : 5.30 pm – 7.30pm (Refreshments will be served at 4.45 pm)
Venue : Tan Sri Prof. Chin Fung Kee Auditorium,
3rd Floor, Wisma IEM, PJ
Speaker : Ir. SOO WAI YEE

SYNOPSIS

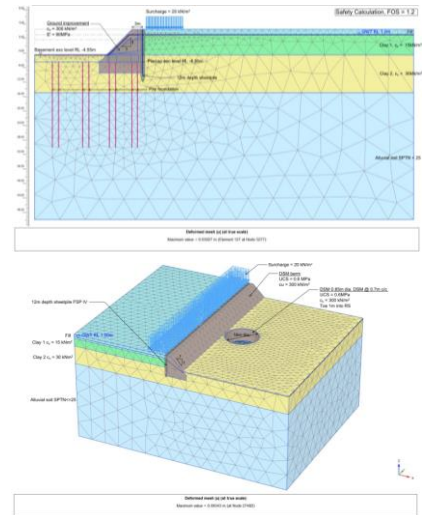
Recently the application of ground improvement (GI) using deep soil mixing (DSM) methods has been rapidly increased in urban infrastructure projects for the sake of groundwater control and/or improvement of soft soil strength. The Cutter-Soil-Mixing (CSM) method is a specialist ground improvement technique to form DSM retaining walls, which can offer a significant cost saving as well as a superior final finish and simple details for sealing slab / wall joints compared with many other traditional shoring methods.

This presentation will provide case studies for the application of DSM method to various projects in urban areas that facilitates time and cost saving with the requirement for the stability successfully met. The case studies address a temporary DSM retaining system without struts, so-called strut-free excavation, for pile cap construction in a railway project, and basement construction at a commercial building site. Also included is a deep excavation in the Kenny Hill Formation for a road tunnel connecting to a commercial basement in the Kuala Lumpur downtown, which employs the ground improved walls to provide for dry excavation. The purposes of GI using the CSM method and the design concept are presented for each case with the description of 2D and 3D numerical analyses undertaken to demonstrate the effectiveness of the GI scheme proposed. Discussions include the geological settings for the proposed site, and key considerations of temporary and permanent earth retaining support system (ERSS).

SPEAKER'S BIODATA

Wai Yee holds a BEng (Civil Engineering) from the University of Malaya in 2002. She obtained MSc in Geotechnical Engineering from the National University of Singapore in 2013. She has vast experience and exposure in design and project management, and construction supervision, specialised in geotechnical projects throughout all phases from site investigation planning and interpretation to detailed design of ERSS, tunnelling and land reclamation. She has worked with key clients and contractors, in Malaysia and Singapore in a broad range of major infrastructure projects including reclamation, construction of marine deck structures, temporary and permanent ERSS for construction of underground structures and associated tunnelling works, and impact assessment of underground excavation / groundwater control. She is currently an Associate Director at AECOM, Malaysia, and also supporting contractor as Lead Design Consultant (LDC) in the KVMRT Line 2 project supervising and coordinating the Detailed Design Consults for the geotechnical and tunnelling aspects.

Ir. LEE PEIR TIEN
Chairman,
Geotechnical Engineering Technical Division, IEM



FEE ANNOUNCEMENT (Effective: 1st October 2017)

Members:

- (i) Registration Fee: No Charge
- (ii) Administrative Fee:
 - (a) Online RM15
 - (b) Walk-In RM20

Non-Members:

- (i) Registration Fee: RM50
- (ii) Administrative Fee: RM20

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