

# WEBINAR TALK ON

## “CHALLENGES OF BORED TUNNELS AND PIPE BOX TUNNEL FOR CIRCLE LINE MRT SINGAPORE”

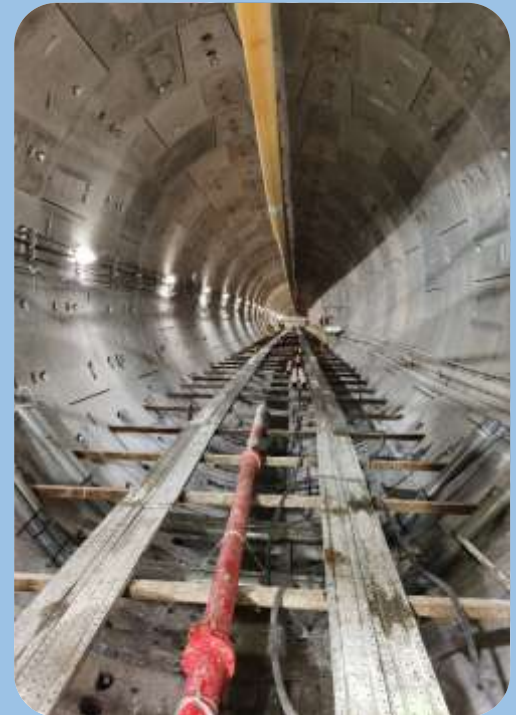
**24<sup>th</sup> April 2024 (Wednesday)**  
**4.00 pm – 6.00 pm**



### SYNOPSIS

Prince Edward Road Station (PES) and Tunnels for Circle Line 6 (C885) is a fully underground Mass Rapid Transit (MRT). The location of the MRT station and tunnels are in close proximity to historical temple, mosque, commercial buildings and road viaducts in the densely built-up Central Business District. The overview of the scopes, construction method and challenges will be discussed. This presentation will focus on the tunnelling works including the bored tunnelling works running beneath the former Tanjong Pagar Railway Stations (TPRS) – a gazetted National Monument and construction of underpass below a heavily trafficked road using a trenchless method.

For the bored tunnelling works underneath the TPRS, extensive of additional foundation and geological investigation were carried out. The performance of the tunnelling works, instrumentation monitoring and additional mitigation measures that were implemented will be included. For the construction of the underpass, pipe roof method was selected due to the site conditions which prevented closure of road and the presence of utilities. The presentation will describe the basic design of the Pipe Roof excavation, while detailing the process of selected horizontal jet grouting method. Upon commencement of excavation, the quality of the grouted soil was able to be seen. The difficulties of using horizontal grouting for such excavation and the possible solutions will be discussed with the performance of the excavation using installed soil instruments.



### SPEAKER

**Mr. Pan How Yen**

Associate of WSP – Transport and Infrastructure, a highly accomplished engineer with more than 12 years of experience in deep excavation, earth retaining and stabilising system (ERSS) and tunnelling works in Singapore. Pan How Yen graduated with a master's degree, major in geotechnical engineering from Universiti Teknologi Malaysia.

How Yen has been mainly engaged in the ERSS design and construction of Prince Edward Road Station and Tunnels for Circle Line 6 (C885), one of the awarded the Tunnelling and Underground Construction Society (Singapore) Project of the Year Finalist 2022. Other major projects include the Construction of Polder Dike at Tekong Area A and C, Sentosa Gateway Tunnel (ER296) and The Arc (NTU – Learning Hub). How Yen is also familiar with the local design guideline and authorities' requirement in Singapore.



### Registration Fees

**IEM Members : RM 15.00**  
**IEM Non-Members : RM 70.00**

**CPD HOURS : 2.0**  
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