MS Reference Number:	CSHK	CET	MS	C	2024	000050
ACC Reference Number:	1701	W	000	CSC	760	000115

METHOD STATEMENT TITLE	Rev. B
Method Statement for Trial Pit Excavation for Construction Area (CA)	

	Prepared by:	Checked by:	Reviewed by:	Reviewed by:
Signature:				
Name:	Nick Wang	Howard Siu	Leung Kwok Fung /Hui Wai Kwan	MH Isa / WH Lam
Position:	Site Agent	Construction Manager	SM/SO	QM/QE
Date:	18-Mar-2024	18-Mar-2024	18-Mar-2024	18-Mar-2024
	Reviewed by:	Reviewed by:	Reviewed by:	Approved by:
Signature:				
Name:	MH Isa / Iris Ho	Yeung Wai Lun	Paul Freeman/ Mark McGleenon	Eric Fong
Position:	EM/EO	A. Project Director	Sr. Project Director / A. Project Director	Project Director
Date:	18-Mar-2024	18-Mar-2024	18-Mar-2024	18-Mar-2024

Item	ACC Comment	Created By	Description	Response
1.	Issue #811 – 1.13.7	Devang Bulsara	For trial pit excavations greater than 1.2m in depth, shoring/ELS system will need to be implemented. Please revise this MS to illustrate this in the form of diagram and writing in the text. Open cut excavation will also need to be implemented for trail pit greater than 1.2m in depth.	Noted and updated in the MS.
2.	Issue #813 – 1.13.7	Devang Bulsara	The trial pit shown here is outside the CA area. Please clarify or reposition the trial pit.	The trial pit in blue colour is in OA area, the trial pit in pink colour is in CA area. This method statement only covers the trial pit excavation in CA area.
3.	Issue #814 – 1.13.7	Devang Bulsara	Please note the following points from RP:- 1. No plants and material including excavated material as well as barriers shall be stored within 2m plan distance from the adjacent Railway Fence. 2. No part of the plant including the KATO HD3408US shall be operated and infringed within 1m plan distance from the Existing railway fence. 3. The excavated pits shall be property backfilled as soon as possible. 4. At least 2 working days prior to the commencement of work, MTR HKTS/Railway Protection shall be notified.	1. Noted 2. Noted 3. Noted 4. Noted

CONTENT

1. Introduction

This Method Statement is a safety working method & procedures documents to describing the health, safety, environment & quality requirements for carrying out the trial pit excavation works for construction area (CA) under the Contract 1701. The methodologies of elimination, mitigation and control of risks shall be addressed.

The details of the procedures contained herewith shall be reviewed periodically and updated based on the actual site conditions. The principle methods as described in the following sections are subject to review during construction and may be amended if required.

2. Reference Documents

- General Specification for Civil Engineering Works (NEC4) (MTR Corporation Limited - 2022)
- Scope for Contract 1701.
- Materials and Workmanship Specification for Civil Engineering Works

3. Responsibilities for Activities described within Method Statement

CSHK is responsible to inspect and carry out the construction works. The responsible persons are listed below and be responsible for the activities:

Name	Position	Area
Howard Siu	Construction Manager	W2A5, W4, W5, W6A, W6B, W7, W8,W10
CF Chan	Construction Manager	
Anthony He	Assistant Construction Manager	
Nick Wang	Site Agent	
Kanson Woo	Engineer	
Andrew Lo	Graduate Engineer	
Vincent Li	Construction Manager	W3, W12, W11G, W11D, W11C, W2A1, W2B, W2A2, W2A3, W2A4
Nana Chung	Assistant Construction Manager	
Johnson Chun	Senior Engineer	
David Lam	Senior Engineer	
Man Hin Li	Assistant Engineer	
Ted Leung	Construction Manager	W11B3, W11A, W11B2, W11B1, W11E, W11F2, W11F3
Li Yuk Wa	Assistant Construction Manager	
Jack Wong	Senior Engineer	
Andy Lo	Engineer	
Edward Yang	Graduate Engineer	
Kyle Lai	Graduate Engineer	
Leung Kwok Fung	Safety Manager	All
Ernest Young	Assistant Safety Officer	
Lau Yu Tat	Senior Surveyor	
Cheung Siu Kei	Superintendent	

(a) Construction Manager
Responsible for overall administration, monitoring, controlling progress and quality of works in a safe manner.

(b) Site Engineer / Superintendent / Foreman
Responsible for developing works procedures, controlling progress and quality of works in a safe manner. They also have to implement safety at works area for workers via guidance from safety officers.

(c) Safety Manager/ Safety Officer
Responsible for assessing working conditions of work areas in safety means. To prepare risk assessment before works, enforce safety works practice and environment in the workplace and work site.

(d) Worksite Person In Charge (WPIC)
WPIC is in charge of the work in the works areas, which are located at various positions of site. Site Supervisor is also responsible in implementing works control checklist. WPIC/ Site supervisor shall attend pre-work briefing and deliver the work arrangement, included but not limited to proposed working area, sequence of works and safety precautions measures.

(e) Registered Electrical Workers (REW)
Workers who have valid certificate of registered electrical worker and completed MTR RSI training and obtain qualification.

(f) Workers
Workers who have completed RSI training and received a valid qualification.

(g) Competent Person CP for Underground Utilities Survey and Trial Pit
CP shall undertake the investigation for the purpose of ascertaining within the proposed works site and its vicinity the existence, alignment and depth of any cable and provision of a written report on the findings.

(h) Competent Person (CP(T)/CP(NT))
CP shall provide pre-work briefing to all workers and anyone work within the Railway Operation Area (Siu Ho Wan Depot). Pre-work briefing shall cover the regulation within the proposed working area and relevant work safety precaution measures. Briefing attendance records shall be kept on site for inspection. CP shall report to depot before works could commence. CP(T)/CP(NT) is to ensure works are within CA area and any opening of the existing Manhole shall notify Depot relevant parties such as IMD in advance.

Emergency Team contact list is enclosed so that work can be safely arranged to suspend for contingency/ reasons. Please refer to **Appendix E**.

4. Programme and Working Hours

The method statement is applicable for the trial pit excavation at Construction Area (CA) under Contract 1701. The general working hours will be from 08:00 – 18:00 daily, from Monday to Saturday and expected to be completed within a week. It may be required to carry out works from 19:00 to 23:00 and Sunday and Public Holidays in case of essential speeding up of the working process. CSHK would check internally to fulfil the Construction Noise Permit Requirement.

All the works shall be led by WPIC during the approved working period at different areas, details are summarised in the below table. Competent Person for Underground Utilities Survey shall be assigned and in the presence of works.

Location of Works	Allowed Working Period	Remarks
Mainline	Non-Traffic Hour (02:00 – 04:00)	3 days per week
Test Track	Night Shift (Exact time to be coordinated)	3 days per week
Depot Track Area	Non-Peak Hour (11:00 – 15:00) Night Shift (Exact time to be coordinated)	

5. Plant, Equipment & Material

All equipment will be inspected prior to the mobilization on site to ensure that they are in good working condition and comply with the current regulations. The major equipment will be deployed to carry out the works are as follow and the technical specification is attached in **Appendix D**:

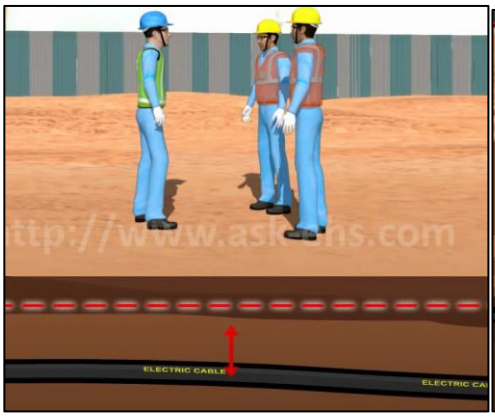
- Hand tool for excavation.
- Excavator (Backhoe mounted with beaker/bucket) or equivalent mechanical plant.

6. Works Methodology

5.1 Preparation Works

- Before carry out the excavation works, UU detection is to be carried out by CP.

- Set out the location of the trial pit. Please refer to the **Appendix A** for the proposed location trial pit.
- Fence off the works area by barriers and set up warning signs.
- Exact trial pit locations shall be further verified and agreed with the Engineer notified before commencement.
- Conduct cable detection by competent person CP with reference from updated underground utilities plan. Before commencement of any digging works, the underground utilities detection report shall be certified and signed **Permit-To-Dig** form shall be in place.



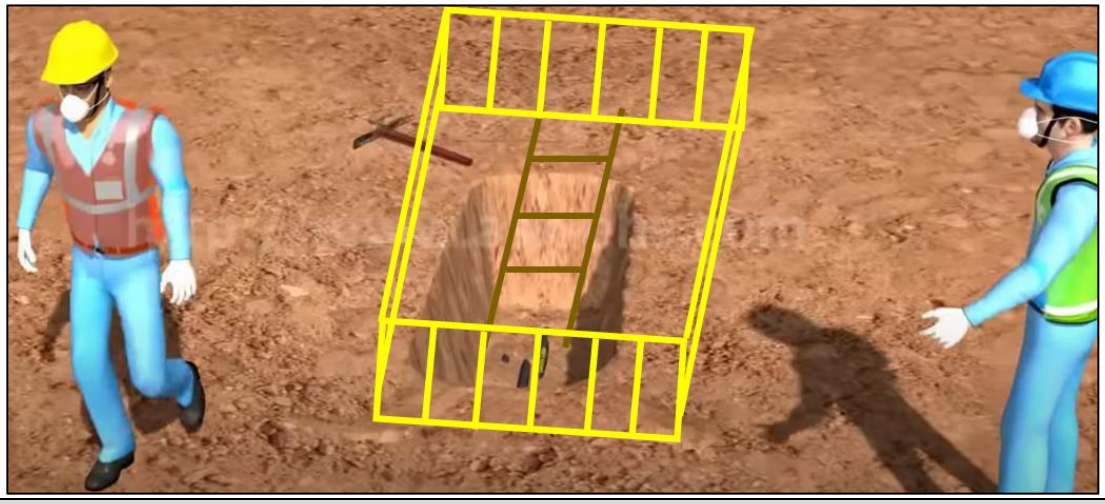
5.2 Pit Excavation

- The concrete / bitumen surface shall be broken by hand dig tool if necessary. Barriers and alert.

- Trial Pit shall be of size 1.5m x 1.5m and terminated at 1.5 m deep at most. If necessary, excavator or other plant and equipment will be deployed to remove the existing concrete and hard material for opening of road paving or any obstruction to pit excavation.
- For trial pit excavations greater than 1.2m in depth, open cut excavation with maximum 30^0 slope need to be implemented. If insufficient space for open cut method, shoring/ELS system will need to be implemented. The typical shoring system for trial pit excavation is attached in **Appendix F**.
- The proposed extent for trial pit is shown in the layout plans attached in **Appendix A**. The exact location and number of trial pit will be subjected to actual site conditions.
- For trial pit will be carried out by hand digging. No mechanical plant can be used for digging and can be only used as bucket for assistance.
- Excavated materials from the trial pit shall be temporarily stockpiled at designated

areas and covered by secured tarpaulin sheets to prevent rainwater seepage and suppress dust.

- For underground utilities encountered, the type, location, dimension and nature shall be recorded. Exposed UU should be labelled and protected on site.
- When groundwater is encountered before reaching the inspection pit tentative depth, the following procedures be followed:
  a. The location of the inspection pit should be set to identify target utilities in agreement with the MTR's representative.
  b. The excavation of the inspection pit should be stopped if the collapse of the inspection pit.
  c. MTR's agreement on the termination of the excavation will be sought.
- Trial pit shall be backfilled by the excavated granular soil material until the original ground level is restored.
- To ensure the worker carrying out the inspection pit excavation works are fully informed of the risks and they are aware of the measures to control those risks, the Briefing will be provided before operation commence.
- Trial pit shall be inspected on weekly basis by competent person and **Form 4** – Excavation of Earthworks shall be filled in to ensure the inspection pit is in safe conditions.
- Proper ladder access should be landed on firm and level base for workers excavation works /Supervisors inspection in the Trial Pit. The ladder should extend 1m higher than the landing place.



7.	**Safety**

- All workers shall be equipped with reflective vests and safety helmets during operation. All workers must go through a briefing by the Construction Manager / Engineer / Safety Officer / Safety Supervisor before commencement of any works.

- A pre-meeting will be arranged before commencement of the work among Survey Team, Construction Team and Safety Team to brief the nature of works, the safety aspects and the necessary safety requirements as identified in the Risk Assessment in **Appendix D**.

- To ensure the worker carrying out the inspection pit excavation works are fully informed of the risks and they are aware of the measures to control those risks, the Briefing will be provided before operation commence.

	● Safety helmets fitted with chin straps must be worn within the site, safety boots, hearing protectors (if needed), high visibility jackets / sashes, reflective vests, goggles, gloves and full body harnesses for work at height will be provided to all staff working on site. Plastic barriers and reflective traffic cones will be prepared prior to work commencement to demarcate the working area. ● Trial pit shall be inspected on weekly basis by competent person and Form 4 – Excavation of Earthworks shall be filled in to ensure the inspection pit is in safe conditions. ● Permit-to-Dig system shall be implemented and strictly followed to mitigate the risk of damages to underground utilities. Relevant valid underground utilities plans shall be obtained and cable detection shall be conducted by competent person before commencement of works. Briefing shall be conducted to workers to acknowledge them on the underground utility conditions at the works area and precautions required. The proposed working area should be marked physically on site by CP. ● Proper ladder access should be landed on firm and level base for workers excavation works /Supervisors inspection in the Trial Pit. The ladder should extend 1m higher than the landing place. ● Any emergency situation shall be reported to site supervisors (i.e. Construction Manager/ Engineer/ Foreman etc.) and Safety Department for prompt response. The emergency contact list is shown in **Appendix E.** The risk for the works shall be assessed and the Risk Assessment Analysis is shown in **Appendix C**.
8.	**Environmental**
	The works shall follow relevant mitigation measures as required under the Environmental Permit (EP) / EP submission and Contractor's Environmental Management Plan (EMP).
9.	**Quality Control**
	Refer to **Appendix B** for Inspection and Test Plan. ● Construction works shall be fully complied with Quality Plan. For work activity which is classified as "Quality Hold Point", no subsequent work can be started unless the former work activity was inspected and accepted by MTR's inspectorate.
10.	**Appendices**
	A. Proposed Trial Pit Layout B. Inspection and Test Plan (ITP) C. Risk Assessment D. Technical Specification for Equipment and Plants E. Emergency Contact List F. Typical Shoring System for Trial Pit Excavation