Method Statement Change and Review Template

Date:	11/06/2024
Work activity:	Trial trench excavation works at West Wash Plant Road near AB25 (Rev. A)
Approved MS (ACC)	1701-W-000-CSC-760-000241 (v2)
Initiated by:	Sam Tsang, Kingsley Zhao
Evaluate change:	☐ The MS is followed on site. ☑ Minor change, any change which would not render the safe system of work nor the original safe guard / control ineffective ☐ Major change, any change other than minor change
Review and approve change:	☑ Minor change ☑ (1) without railway implication ☐ (2) with railway implication (accepted by HKTS) Description: **Proposed trench width and location of trial trenchs have been updated due to site condition.** Report Introduction The proposed trench width is change from approx. 0.44m since the steel plate on site with the length of 2.44m. Section 8.2 Trench Excavation The trial trench shall be approx. 440mm wide and up to 1m in depth. Figure 8.1 Typical Section Width shall be revised with approx. 0.44m from previous approved MS with 0.3m in width. Appendix A Proposed Trial trench Location, Layout of TT1 to TT4 have been revised as attached in this revised method statement. ☐ (3) Major change > follow the normal method statement approval process Description: Agreed by Senior engineer: Alex Yiu, SCE Senior inspector: Safety team: HKTS team:
Communication: (internal)	☐ Approved minor change and briefing to operatives is carried out on ☐ Major change > follow the normal method statement approval process
Communication: (external)	☐ Summarized and discussed in weekly RP/HKTS meeting. ☐ RP ☐ RSMD ☐ PP&DO ☐ IMD

MS Reference Number:	CSHK	CET	MS	C	2024	000124
ACC Reference Number:	1701	W	000	CSC	760	000241

METHOD STATEMENT TITLE	Rev. B
Trial trench excavation works at West Wash Plant Road near AB25	

	Prepared by:	Checked by:	Reviewed by:	Reviewed by:
Signature:				
Name:	Sam Tsang	Vincent Li	Leung Kwok Fung /~~Hui Wai Kwan~~	MH Isa / ~~WH Lam~~
Position:	Engineer	Construction Manager	SM/~~SO~~	QM/~~QE~~
Date:	12.06.2024	12.06.2024.	12.06.2024	12.06.2024
	Reviewed by:	Reviewed by:	Reviewed by:	Approved by:
Signature:				
Name:	James Ma / ~~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:	12.06.2024	12.06.2024	13.06.2024.	13.06.2024

CONTENT

1. Introduction

To facilitate the UU diversion at Works Area W12, it is intended to divert the existing UU located at W12 to the existing EVA. To verify the feasibility of the scheme, trial trenches shall be excavated to determine if there is sufficient space within the existing EVA to accommodate the diverted UU's. The proposed trench is approx. 0.44m wide, 3m in length and up to 1m in depth and local trimming may be required to expose the existing utilities up to 1.4m depth. Trench details as attached in **Appendix G** for depth with 1.2m to 1.5m. The works will be carried out section by section in order to maintain waiting space for vehicles to pass through the west level crossing to W11. TTMs will be implemented section by section with a length of 10m, which shall be removed daily after completion of each works shift as agreed in the EDoC meeting with MTRC and HKTS on 21 March 2024 as shown in **Figure 7.1 & Appendix A** to facilitate the works.

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

The excavated trial trench shall be temporarily covered with 40mm thick steel plates with dimensions of 1.22m x 2.44m to allow removal of the TTM. The trial trenches shall be reinstated with sand backfill until the bottom of the existing concrete slab and Grade 40/20 concrete shall be casted with thickness matched with existing condition when all the as-built information for the UU diversion at W12 are confirmed.

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 (M&W)

3. Details of Sub-Contractor/Specialist Sub-Contractor

The works will be carried out by our subcontractor and supervised by our front-line staff such as foreman and engineer. We will also provide the full time CP(T) (Railway Safety Rules and Requirements) on site with 1 CP(T) appointed for 20 workers at the same work area. All workers should possess the qualification Railway Safety Training (RSI). In addition, a WPIC will be assigned to supervise the construction works at each work site.

4. Responsibilities for Activities described within Method Statement

CSHK is responsible to inspect, supervise and carry out the construction works. The persons listed below shall be responsible for the works:

Company	Name	Position
CSHK	Vincent Li	Construction Manager
	Nana Chung	Assistant Construction Manager
	Lewis Ng	Assistant Section Agent
	David Lam	Senior Engineer
	Johnson Chung	Senior Engineer
	Sam Tsang	Engineer

	Edmond Man	Engineer
	Li Wenguang	Engineer
	Kinsley Zhao	Assistant Engineer
	Li Man Hin	Graduate Engineer
	Cheung Siu Kei	Superintendent (WPIC)
	Benny Yeung	General Foreman
	Jacky To	Foreman
	TBC	CP(T)

(a) Construction Manager
Responsible for the 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 the condition of each work areas with regard to safety. To prepare a risk assessment before the commencement of works, enforce a safe works practice and environment in the workplace and work site.

(d) Worksite Person In Charge (WPIC)
WPIC is in charge of a specific construction activity within the works areas across the site. The Site Supervisor is also responsible for implementing the works control checklist.

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

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

(g) Competent Person (CP(T)/CP(NT))
The CP shall provide pre-work briefing to all workers and anyone work within the Railway Operational Area (Siu Ho Wan Depot). Briefing attendance records shall be kept on site for inspection. The CP shall report to the depot before works can commence.

The Emergency Team contact list is enclosed in the event of any unforeseen occurrence that may be deemed an Emergency. Please refer to **Appendix E**.

5. Programme and Working Hours

This method statement is applicable for the trial trench excavation at the West Wash Plant Road near AB25 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. CSHK shall ensure compliance with all Construction Noise Permit Requirements.

All works shall be supervised by a CP(T) during the general working period. A Competent Person for Underground Utilities Survey shall be assigned and be present during the works. In addition, a WPIC will be on site to supervise the works.

6. Plant, Equipment & Material

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

- Hand tool for excavation.
- Excavator (Backhoe mounted with breaker/bucket) or equivalent mechanical plant with plywood board placed to protect the road surface.
- Permanent magnetic lifter (Safe Working Load = 2 tonnes)

1 no. Workfront

Plant / Equipment	Quantity
Excavator (Backhoe mounted with breaker/bucket) or equivalent mechanical plant for general lifting	1
Hand tool for excavation (Saw-cut machine)	3
Permanent magnetic lifter	1

Manpower	Quantity
General Labour	3

Lifting Arrangement

No part of the mobile crane/crane lorry will work beyond the water filled barrier and the maximum lifting load shall be <80% of SWL.

Load of lifting gears must be counted as part of the lifting load.

For any lifting operation by crane lorry, the mobile crane / crane lorry outriggers must be fully extended and the unsafe zone will be fenced off under the approved TTM in **Section 7** & **Appendix A**.

7. Traffic and Security Management

Contractor Vehicle Arrangement

The access to the site shall be as follows:

Temporary Traffic Arrangement

To facilitate the trial excavation, TTMs will be implemented section by section in order to maintain the waiting area for vehicles passing through the west level crossing to W11. TTM will be set up and removed after the completion of works daily. The trench will be temporarily covered with steel plates to allow for the resumption of vehicle traffic.

The works will be fenced off by traffic cones and signage with traffic controllers deployed to control the traffic. Details for the section-by-section procedure are attached in **Appendix A.**

The TTM arrangement for the works was presented in the EDoC and Method Statement meeting on 21 March 2024. In principle, no adverse comments were received and this method was approved in principle in the meeting. The approved TTA arrangement will be submitted to MTR separately.

Figure 7.1 shows the general master TTM plan of the Works. If the TTA is required to have minor amendment, CSCE shall inform the depot under the TTA meeting on every Thursday.
To ensure effective communication between the CP(T) for controlling the West Level Crossing access and the traffic controllers of TTMs, the 2 traffic controllers and the CP(T) shall communicate via walkie-talkie to ensure smooth traffic crossing of the West Level Crossing. When the CP(T) receives approval of entry/crossing from the depot, CP(T) should repeat and confirm the message, then instruct the traffic controllers to release the number of vehicles approved by the depot. CSCE required to have a briefing on every TTM shift and supervise this implementation diligently.

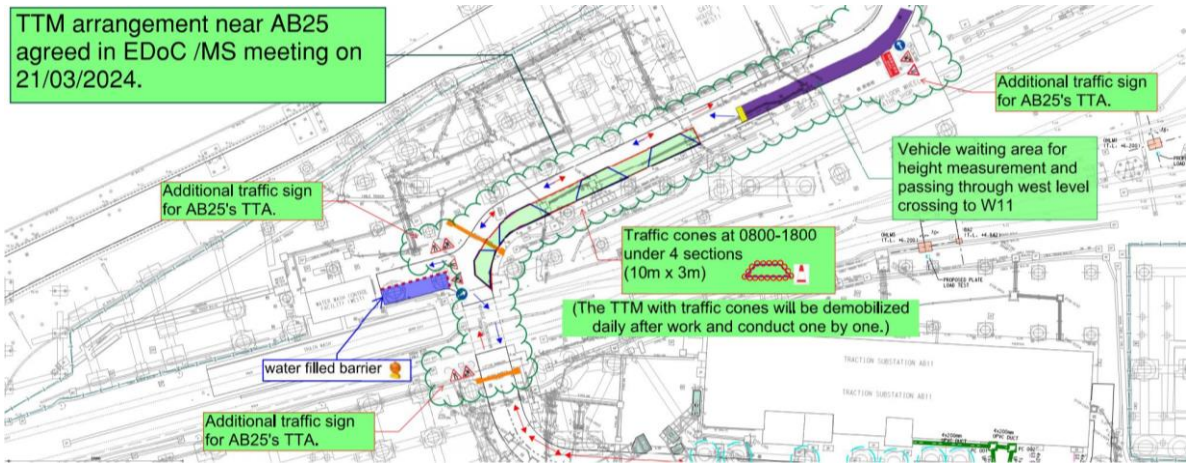


Figure 7.1 – Overview of the TTM master plan under 21 March 2024 meeting

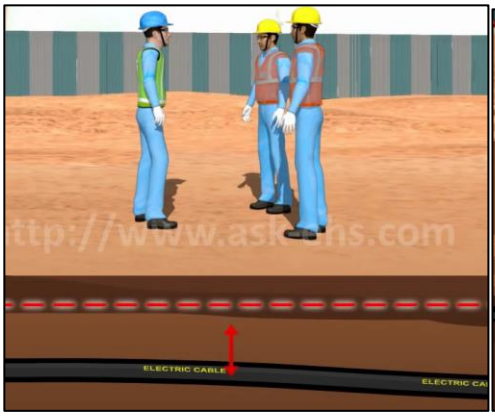
8. Works Methodology

8.1 Preparation Works

- Before carrying out the excavation works, UU detection is to be carried out by a CP. (Under separate submission)
- A pre-job briefing is required to be given prior to the commencement of works between the CP workers and Site Engineer for the UU detection.

- Set out the location of the trial trench. Please refer to the **Appendix A** for the proposed location of the trial trenches.
- Fence off the works area by traffic cones and set up warning signs.
- Exact trial trench locations shall be further verified and agreed with the CSCE engineer before commencement.
- Conduct cable detection by a competent person CP with reference to the latest underground

utilities plan. Before commencement of any digging works, the underground utilities detection report shall be certified and a signed **Permit-To-Dig** form shall be in place.



8.2 Trench Excavation

- No vehicle driving pass and no material shall be stockpiled within the 45 degree failure zone of the trail trench. Hence The traffic cone shall be placed at 0.5m -1m away from the edge of the trail trench.
- The concrete / bitumen surface shall be saw-cut before concrete breaking by hand tools.

- The Trial trench shall be approx. 440mm wide and up to 1m in depth. If necessary, the excavator or other plant and equipment will be deployed to remove the existing concrete and hard material for removal of the road paving or any obstruction to pit excavation.
- The plan in Appendix A shows the detail of the trench and section by section layout.

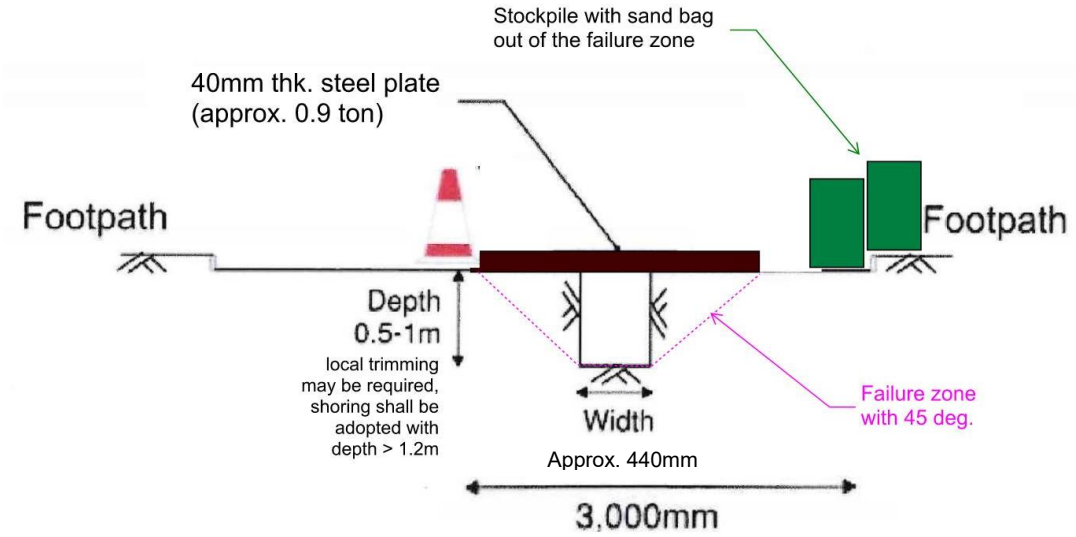


Figure 8.1 Typical Section for Trial Trench

- The width of temporary 40mm thick steel plate to cover up the excavated trial trench shall be at least 2 times the depth of the trail trench + width of the trial trench. : For 440mm wide trial trench, if the depth of trial trench is 0.5m, width of the steel plate shall be 1.44m; if the depth of trial trench is 1m, width of the steel plate shall be 2.44m.
- For local trimming where exceeded 1.2m in depth, shoring detail please refer to **Appendix G** as approved under separate method statement for trial pit works.
- The trial trench will be carried out by hand digging only. No mechanical plant shall be used for digging and can be only used as a bucket for assistance in spoil removal or stockpiling.
- Excavated materials from the trial trench shall be temporarily stockpiled at designated areas as shown in **Appendix A** with minimum dimension of 0.8m x 4.5m / sand bags and covered by tarpaulin sheets to avoid the generation of dust under strong wind condition and avoid rainwater seepage.
- For the existing underground utilities found, the type, location, dimension and nature shall be recorded. All exposed UU should be labelled and protected on site.
- If groundwater is encountered before reaching the trial trench tentative depth, the work shall be stopped and the trench backfilled. Refer to current site GI log, the groundwater level is +1.97mPD as attached in **Appendix F**, which our final excavation level shall be +4.5mPD (+6mPD for existing ground -1.5m), 2.53m higher than the highest existing ground level. No dewatering is required.
- The trial trench shall be covered by 40mm thick steel plate at the end of the day and discharge the TTM during the non-construction period.
- To ensure the worker carrying out the trial trench excavation works are fully informed of the risks and they are aware of the measures to control those risks, the Pre-job Briefing will be provided between the Site Engineer, CP and the labour for excavation before operation commences.

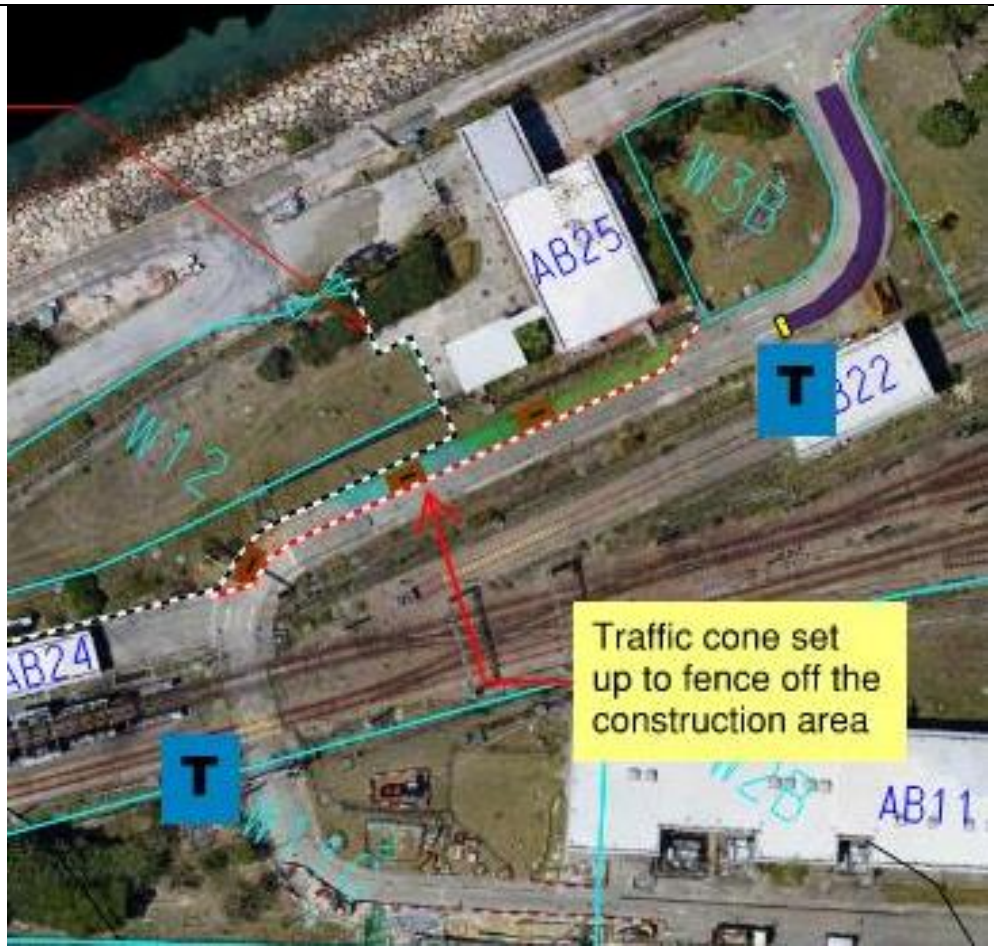


Figure 8.2 Concreting plan and logistics for EVA reinstatement

- The trial trench shall be backfilled by the sand bag backfill until the bottom of the existing concrete slab and reinstated with the 40/20D grade of concrete under separate material submission and thickness shall matched with the existing condition after all as-built information has been recorded. The concrete truck shall access from the West Gate and reinstate all trial trenches under the approved TTA in the same working shift.
- For concreting work, we shall adopt the traffic cone set up as shown in **Figure 8.2** with same TTA arrangement. The concrete pour shall be conducted within the fence off area. One traffic lane shall be provided during the concrete pour which demonstrate no obstruction of traffic.

9. 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 C**.
- To ensure the workers carrying out the trial trench 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 the operation commences.

	● 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. ● The trial trench shall be inspected on weekly basis by a Competent Person and a 'Form 4 – Excavation of Earthworks' inspection form shall be filled in to ensure the trial trench are in safe condition. ● A Permit-to-Dig system shall be implemented and strictly followed to mitigate the risk of damage to existing underground utilities. Relevant valid underground utilities plans shall be obtained and cable detection shall be conducted by competent person before commencement of works. A briefing shall be conducted to the workers to inform them of 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 Trench. 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 has been assessed and the Risk Assessment Analysis is shown in **Appendix C**.
10.	**Environmental**
	The following mitigation measures will be followed: - General works shall be carried out during normal working hours (08:00 to 18:00). No works using PME will be carried out after 07:00pm on Sunday and public holiday without a valid construction noise permit. - Excavated soil shall be stocked pile at the designated area and covered properly by tarpaulin or other accepted means to avoid being blown away under strong wind condition to prevent dust generation and reused on site prior to disposal. - ULSD Diesel will be used in all PME. - Plant with QPME label will be deployed if available. - Only regulated NRMM with approved NRMM label to be used on site. - All chemicals will be placed on drip tray. - Any wastewater produced during the work will be treated prior to disposal. - The works shall follow relevant mitigation measures as required under the Environmental Permit (EP) / EP submission and *Contractor*'s Environmental Management Plan (EMP).
11.	**Quality Control**
	Refer to **Appendix B** for Inspection and Test Plan. ● Construction works shall be fully complied with Quality Plan.

	For a 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.
12.	**Appendices**
	A. Proposed Trial trench location, layout and temporary traffic arrangement B. Inspection and Test Plan (ITP) C. Risk Assessment D. Technical Specification for Equipment and Plants E. Emergency Contact List F. GI log for surrounding area G. Typical Shoring System for Trail Trench Excavation