



西松建設

Nishimatsu Construction Co. Ltd.



MTR 港鐵

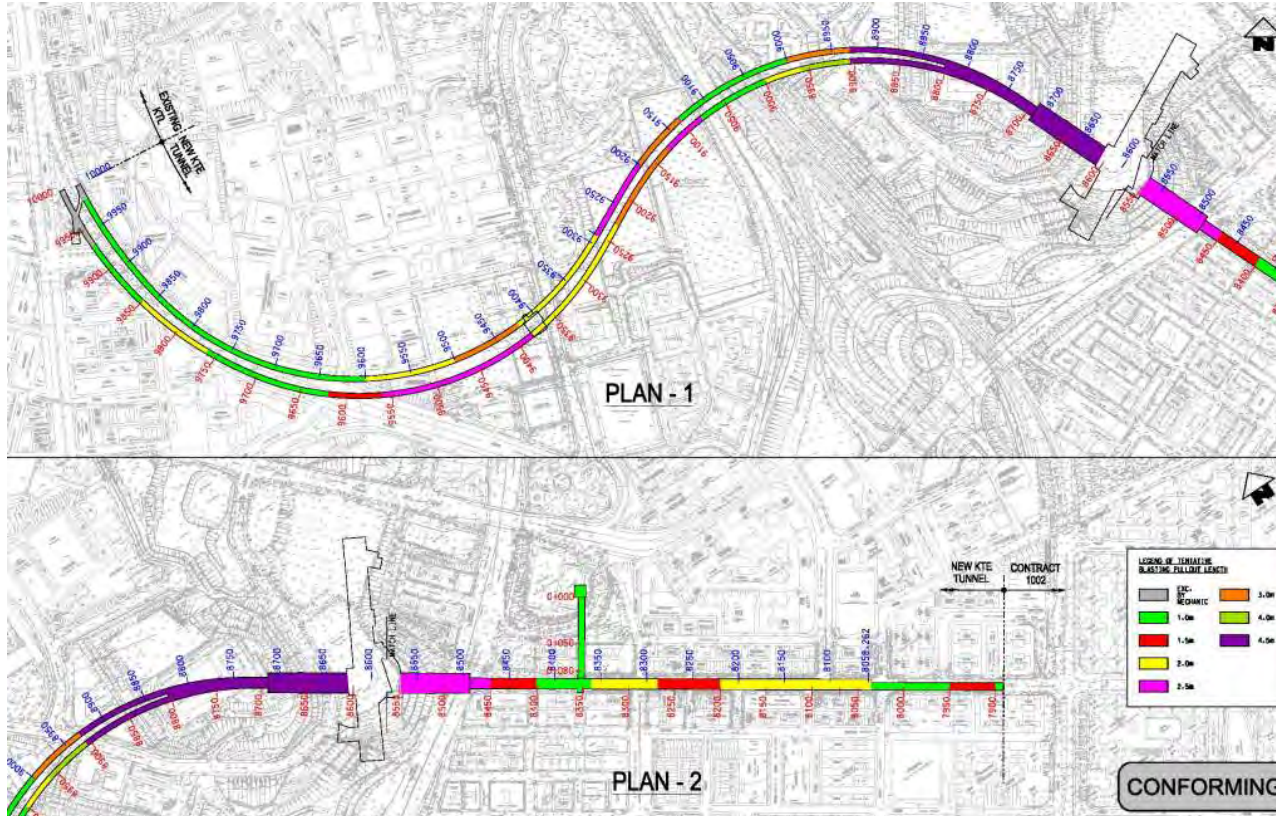
Kwun Tong Line Extension Contract No. 1001
Yau Ma Tei to Whampoa Tunnels and Ho Man Tin Station

Project Presentation

6 April 2013



Project



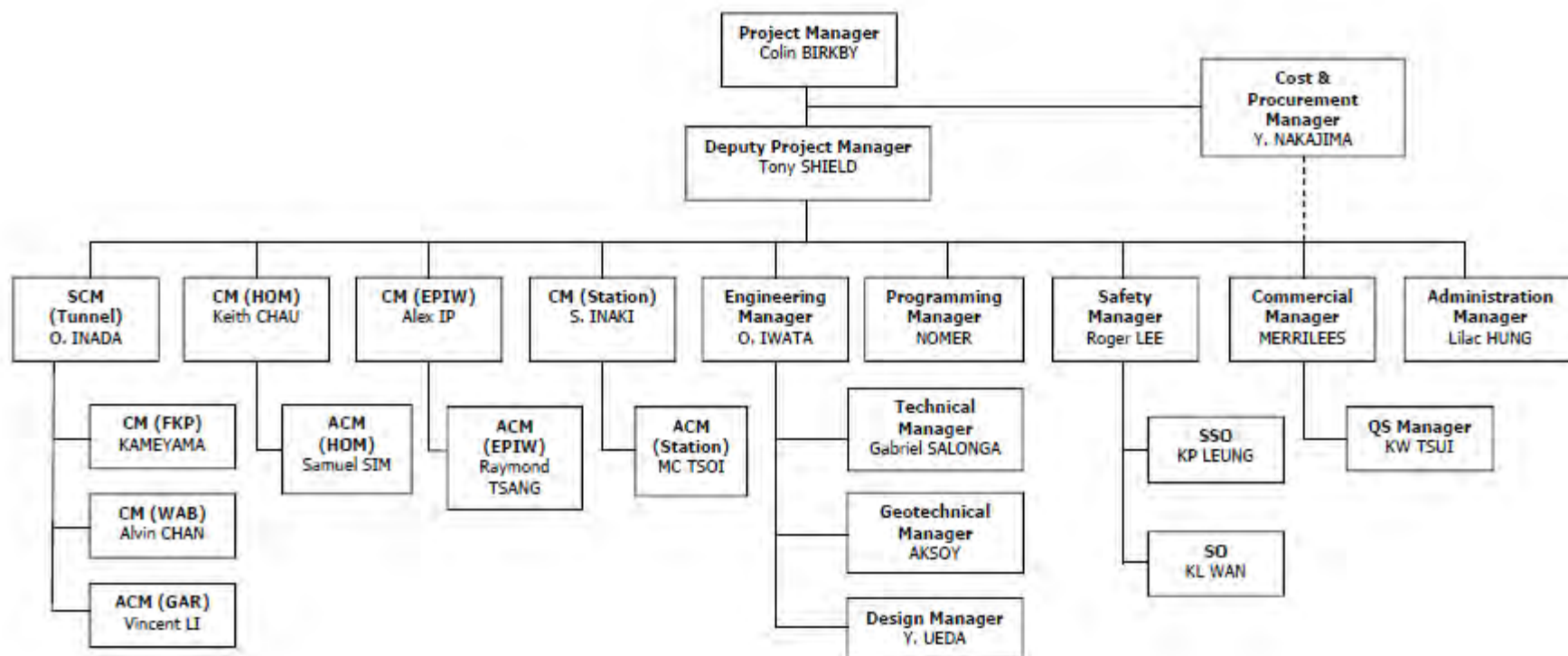
- KTE 1001: Design and Build Project
- Main Contractor: Nishimatsu Construction Co. Ltd.
- Designer: Jacobs China Ltd. & W.S. Atkins
- ICE: AECOM
- Project Duration: June 2011 to May 2015

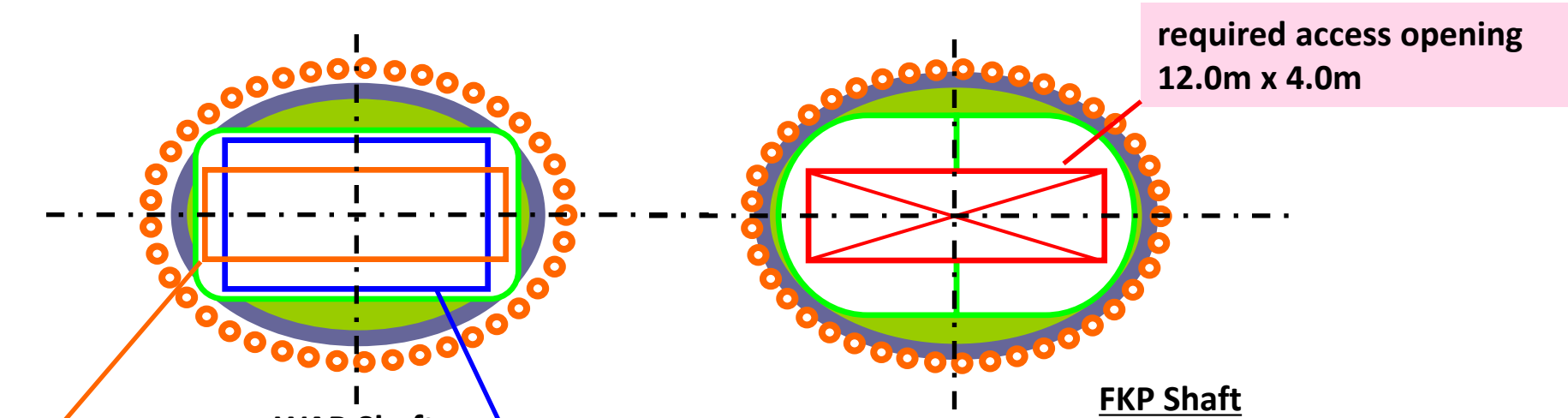
The KTE will extend the full Kwun Tong Line (KTL) service from YMT to WHA via HOM, adding approximately 2.6km underground route length to KTL.

Project

- HOM Interchange Station including both KTE & SCL
- Running tunnels between YMT and WHA including conversion of the existing YMT overrun tunnels, refuge sidings and cable tunnels into the KTE running tunnels
- Modifications to existing YMT, existing cable tunnel and GAR including provisions for cable diversions from YMT and HOM
- WAB comprising emergency access and egress provision and future ventilation provisions
- Upgrading and new formed slope works
- Tree felling, off site tree compensation, transplanting works and landscape works
- Provisions for designated and interfacing contracts
- Backfill and demolition of the Air Raid Precaution Tunnels for construction of HOM
- Essential Public Infrastructural Works
- A temporary explosive magazine at TKO
- A barging facility at HUH Finger Terminal
- Demolition of existing Kerosene Store and Refuse Collection Point at Chung Hau Street, existing driving test centre at Chung Yee Street, existing LCSD sheds at Wuhu Street, Temporary Playground at Ho Man Tin East Services Reservoir Playground
- Reinstatement and re-provision of affected LCSD and Government playgrounds, gardens, open spaces, etc.
- Enabling works for property development at HOM

Project Organization

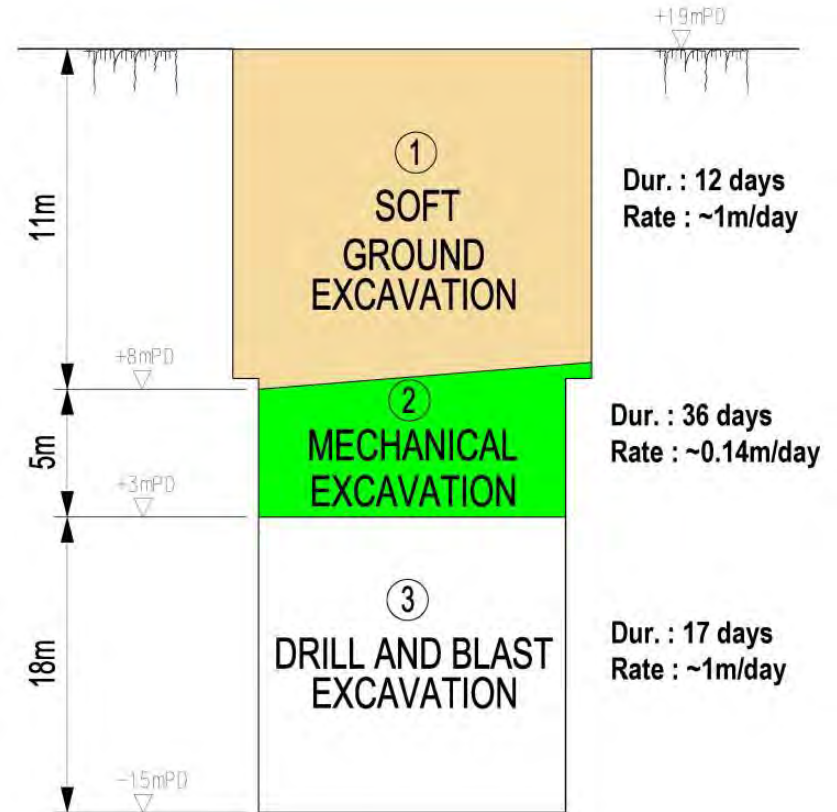
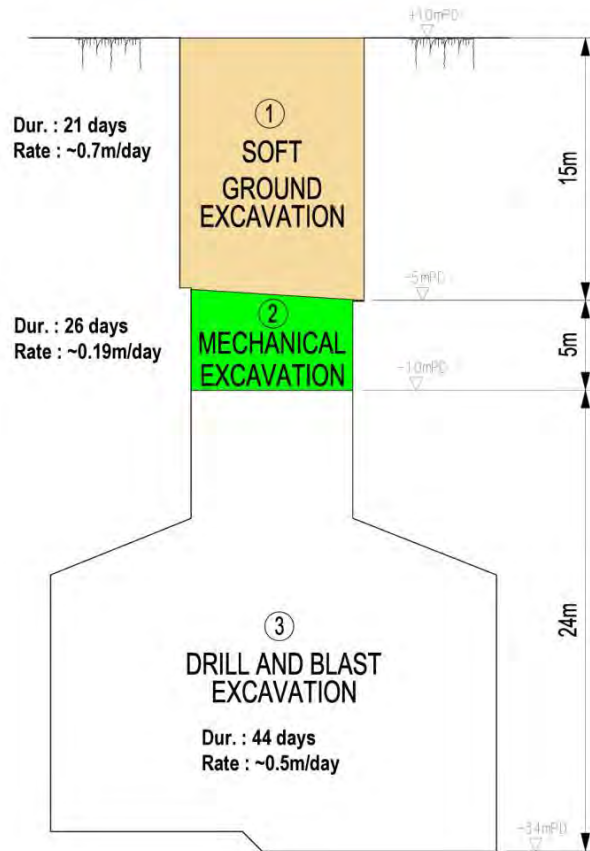




Drilling jumbo installation
 12.0m x 3.5m

WAB Shaft Structure
 10.6m x 8.2m

		WAB	FKP
Shape		17.2m x 12.6m Oval Shape	
Depth	Soil Excavation	approx. 15m	approx. 10m
	Rock Excavation	approx. 30m	approx. 25m
Pipe Pile Wall		610mm Dia. 12mm THK @ 1200	610mm Dia. 10mm THK @ 1200
RC Ring Beam		4 layer of B350mm x H1000m	2 layer of B350mm x H1000m
Grouting		Grout Curtain & Toe Grout	Toe Grout

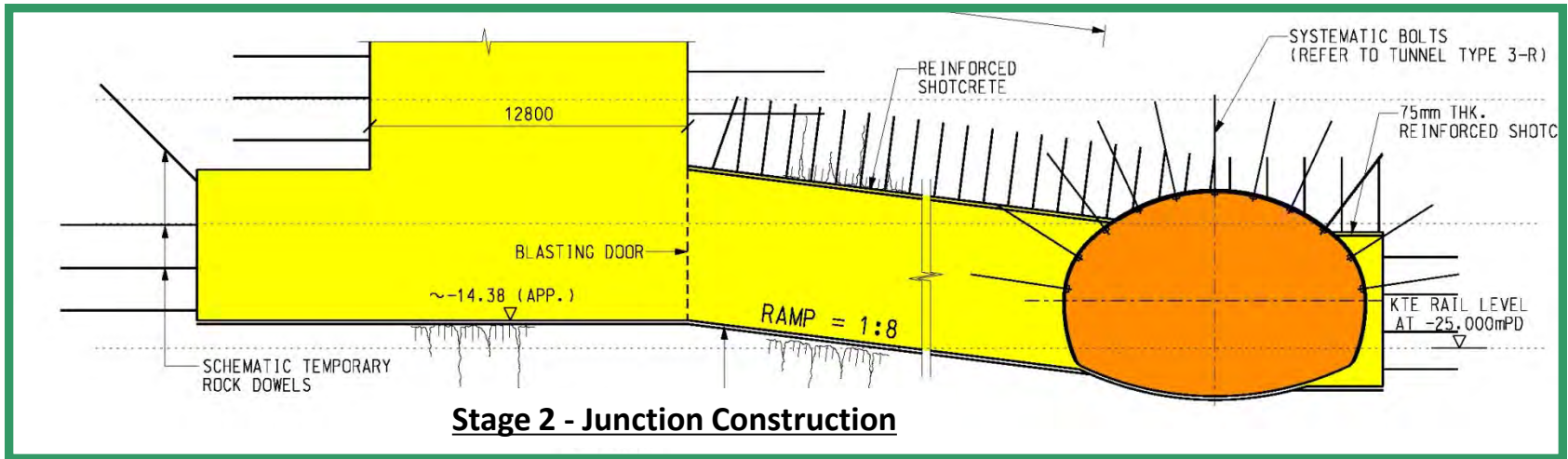
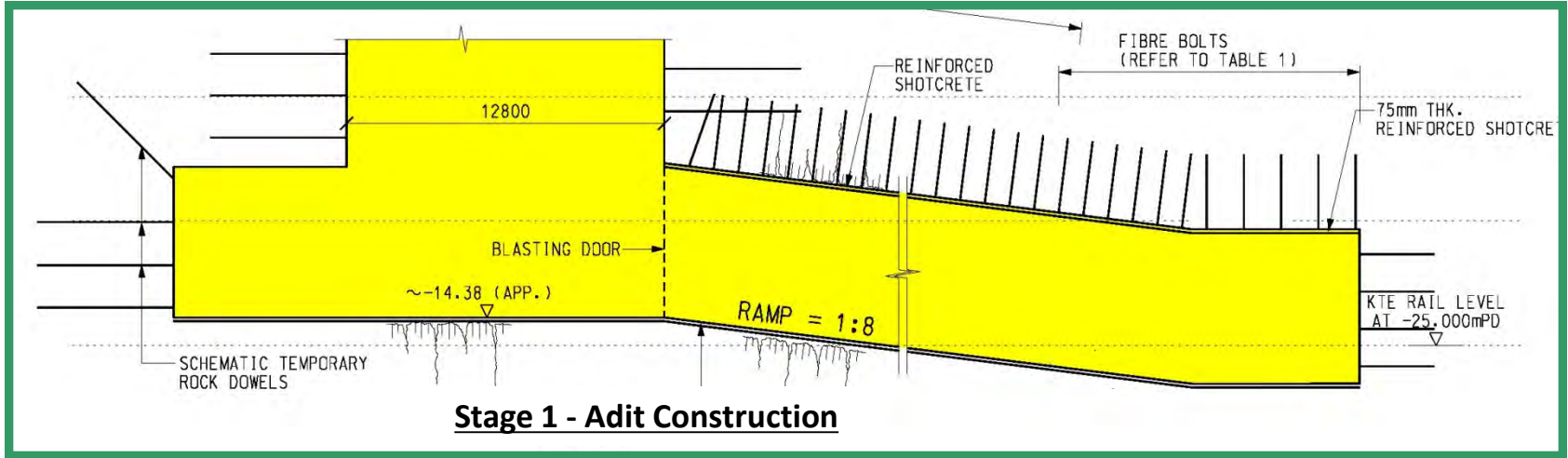


Methods

- Soft Ground Excavation to Rockhead
- Mechanical Excavation for 5m Non-Blasting Zone
- Drill-and-Blast method for remaining rock excavation

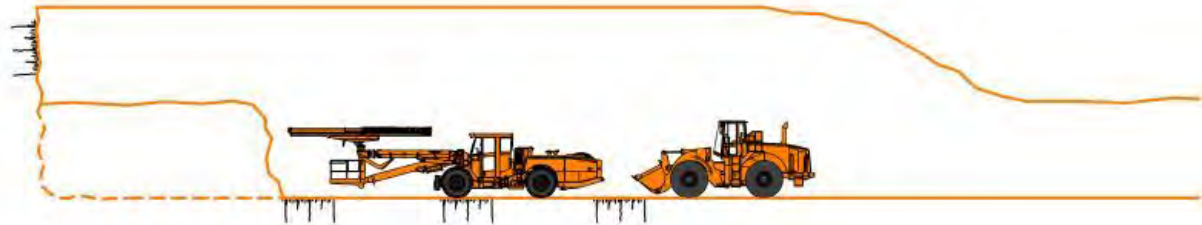
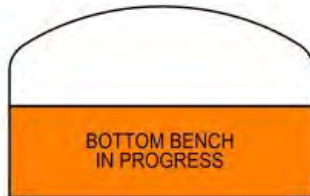


FKP 4th Blast 20120706.wmv





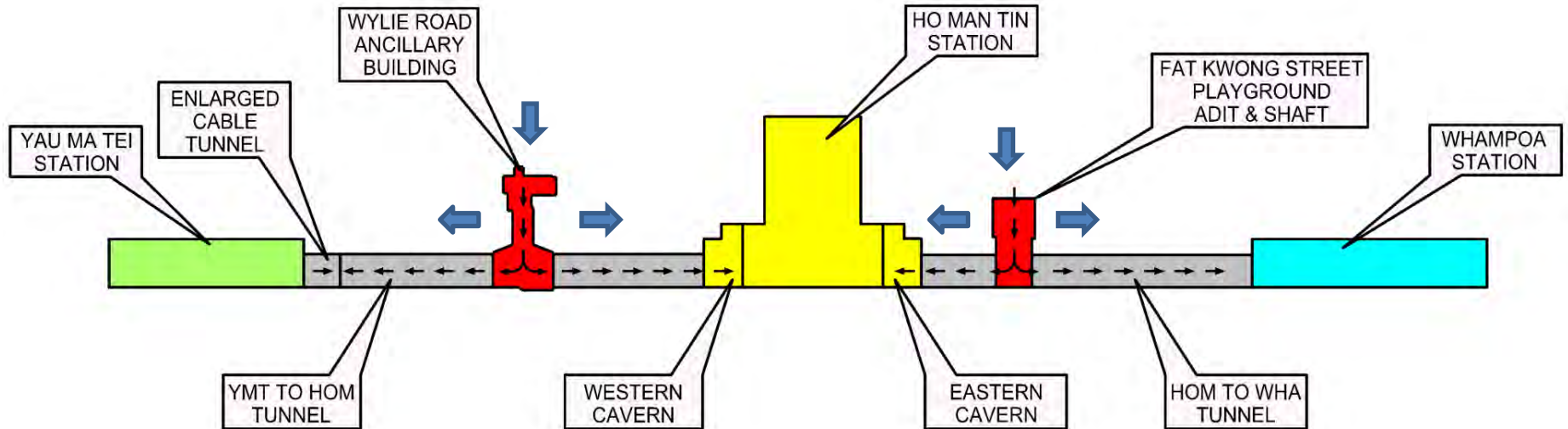
TOP HEADING IN PROGRESS



BOTTOM BENCH IN PROGRESS

Tunnel Excavation

1. Drill-and-Blast method to be applied along whole length of tunnels.
2. Full Face method – For Single Track Tunnel
3. Benching method – For Bifurcation & Caverns
4. Mini Bench method – For Twin Track Tunnel



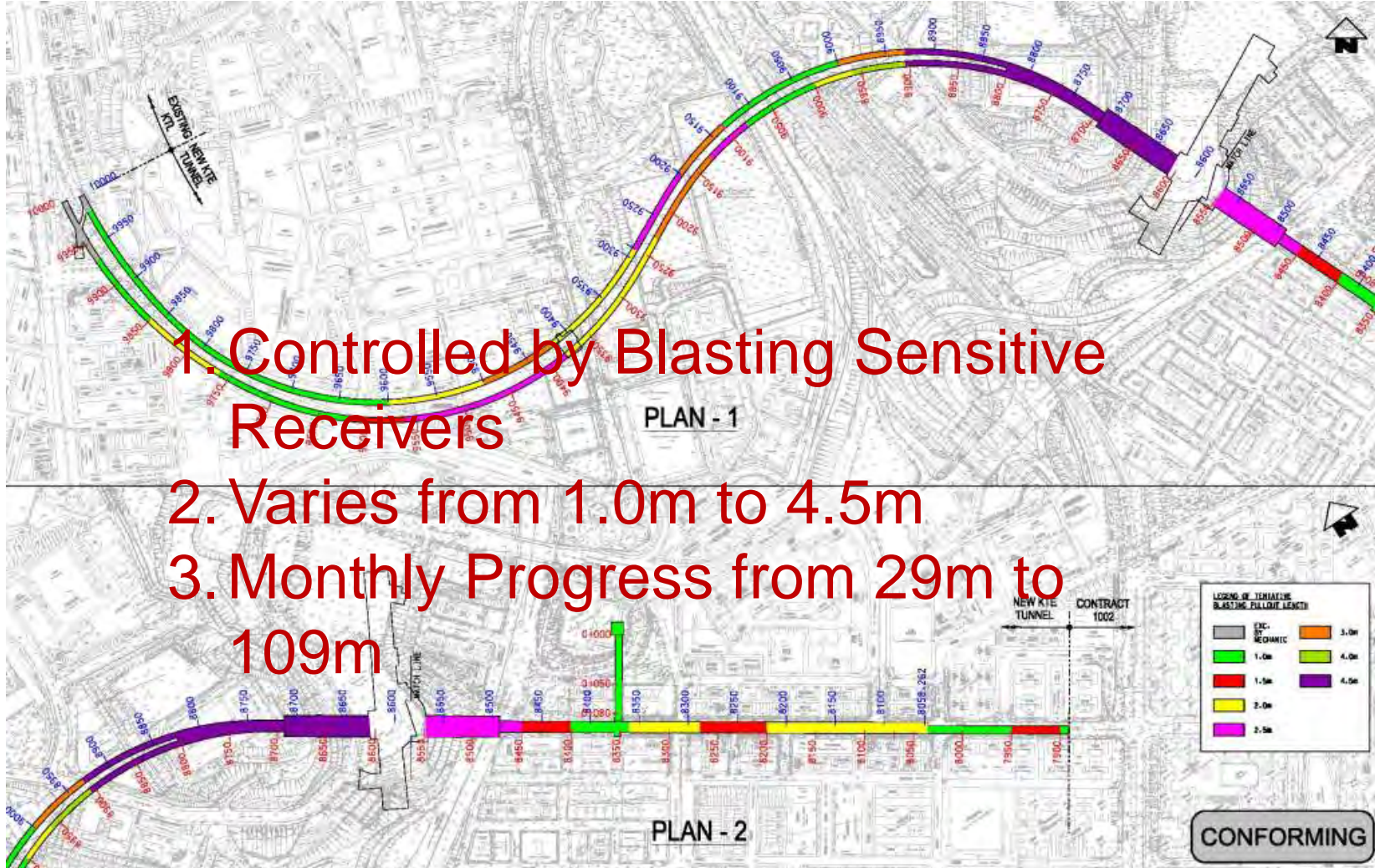
YMT to HOM Tunnels

- From WAB Shaft towards YMT end and Western Cavern

HOM to HWA Tunnels

- From FKP Shaft towards Eastern Cavern and WHA end

Pullout Length





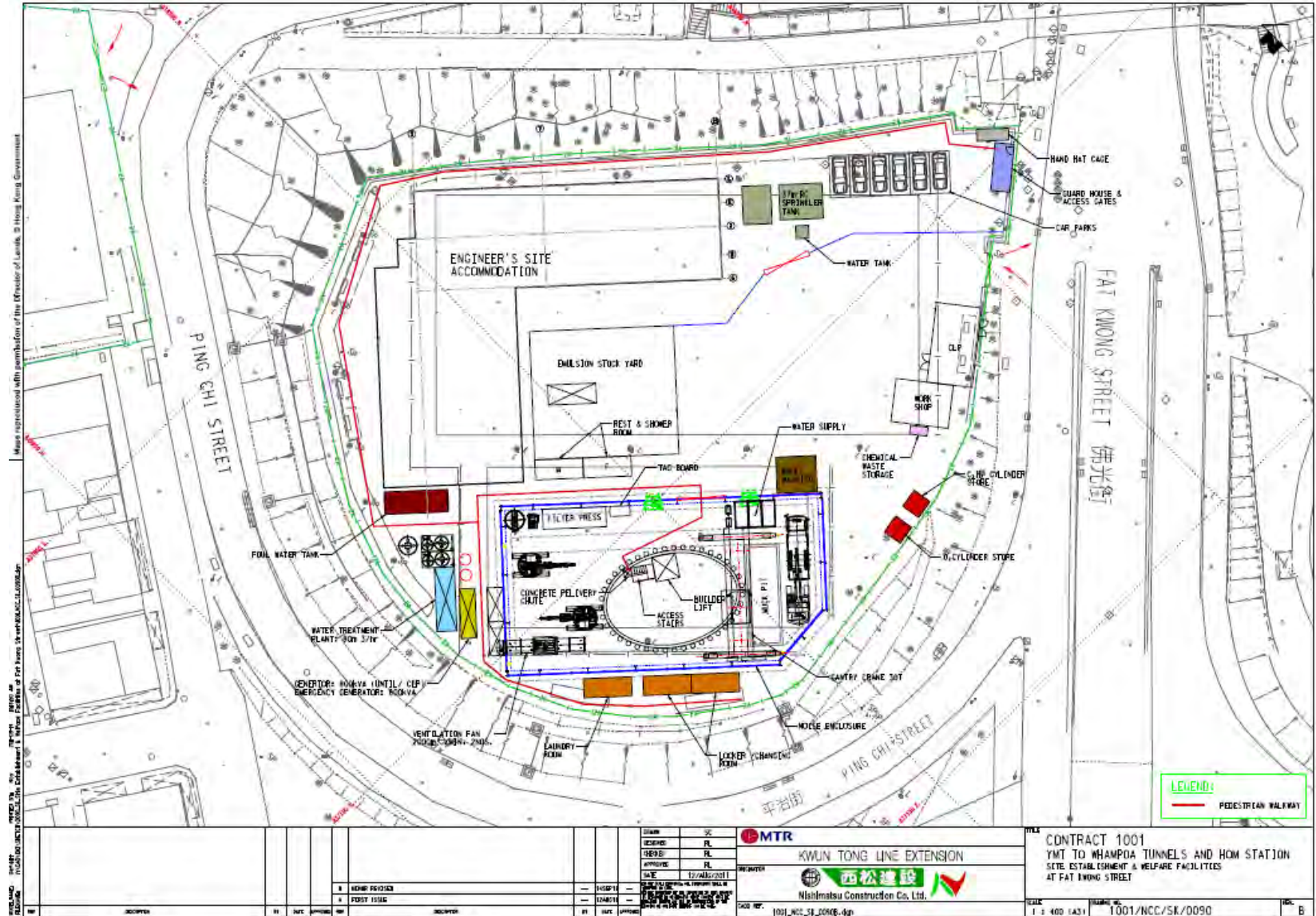
西松建設

Nishimatsu Construction Co. Ltd.



MTR 港鐵

Site Layout at FKP





西松建設

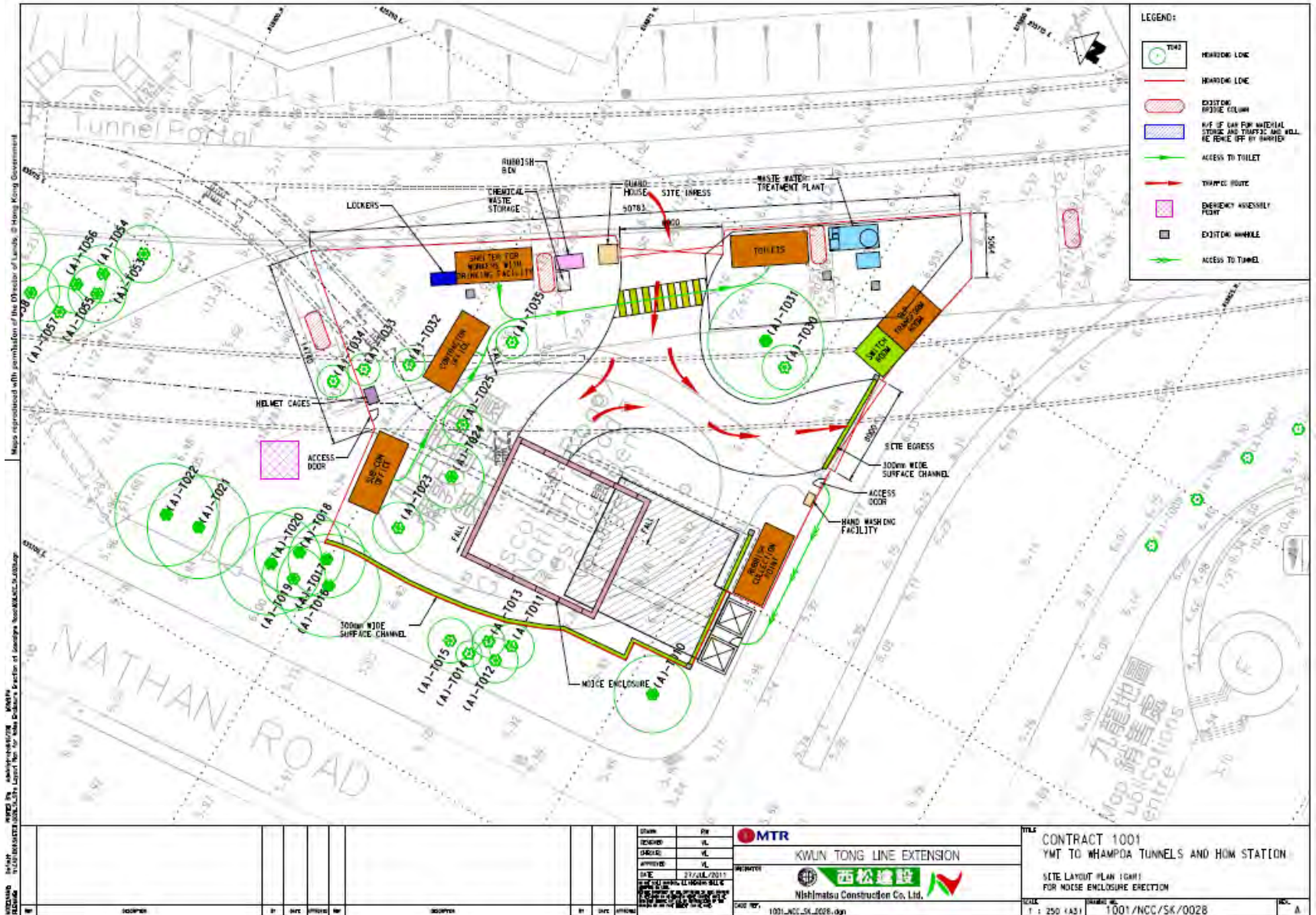
Nishimatsu Construction Co. Ltd.



Site Layout at GAR



MTR 港鐵



Map reproduced with permission of the Director of Lands, © Hong Kong Government

Map reproduced with permission of the Director of Lands, © Hong Kong Government

DRAWN BY: MTR CHECKED BY: MTR APPROVED BY: MTR DATE: 27/04/2015 SCALE: 1:250 (A3)		MTR KWUN TONG LINE EXTENSION Nishimatsu Construction Co. Ltd.		CONTRACT 1001 YMT TO WHAMPOA TUNNELS AND HOW STATION SITE LAYOUT PLAN (GAR) FOR NOISE ENCLOSURE ERECTION SCALE: 1:250 (A3) DRAWING NO: 1001/NCC/SK/0028	
--	--	--	--	---	--



2013/03/13

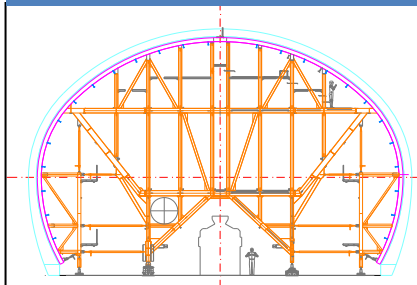


2013/03/16

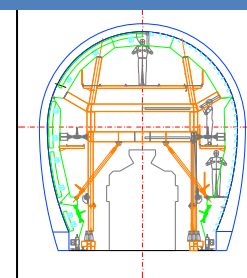
Lining & Civil Works



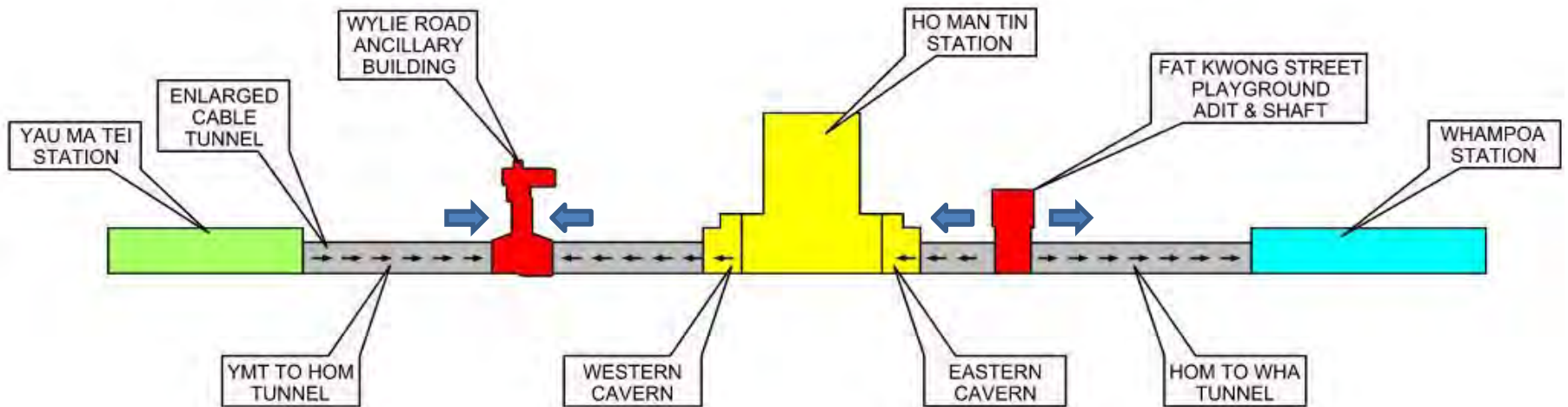
Twin Track Tunnels



Single Track Tunnels



Casting Directions





西松建設

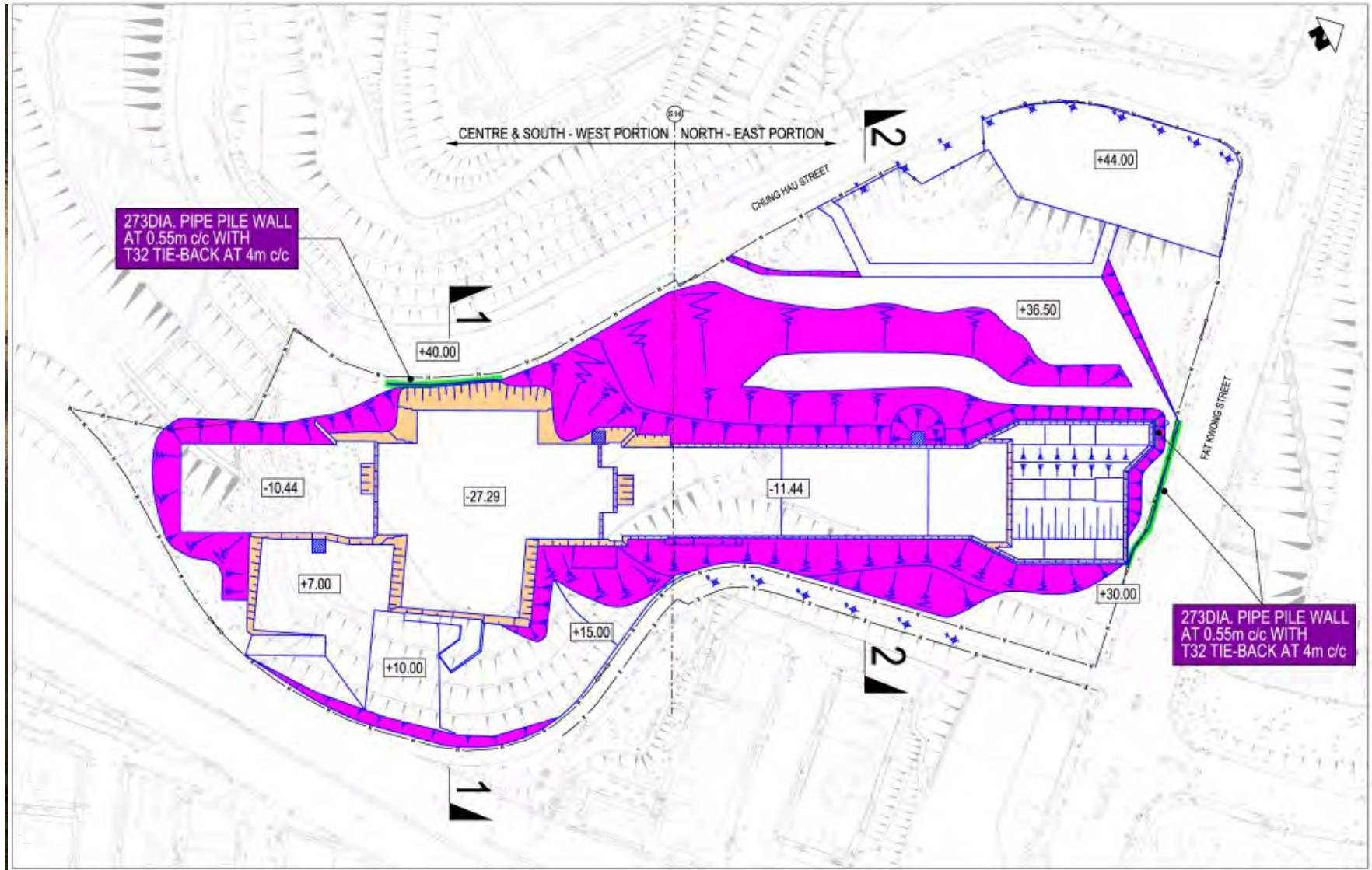


Nishimatsu Construction Co. Ltd.



MTR 港鐵

Site Formation at HOM





西松建設

Nishimatsu Construction Co. Ltd.

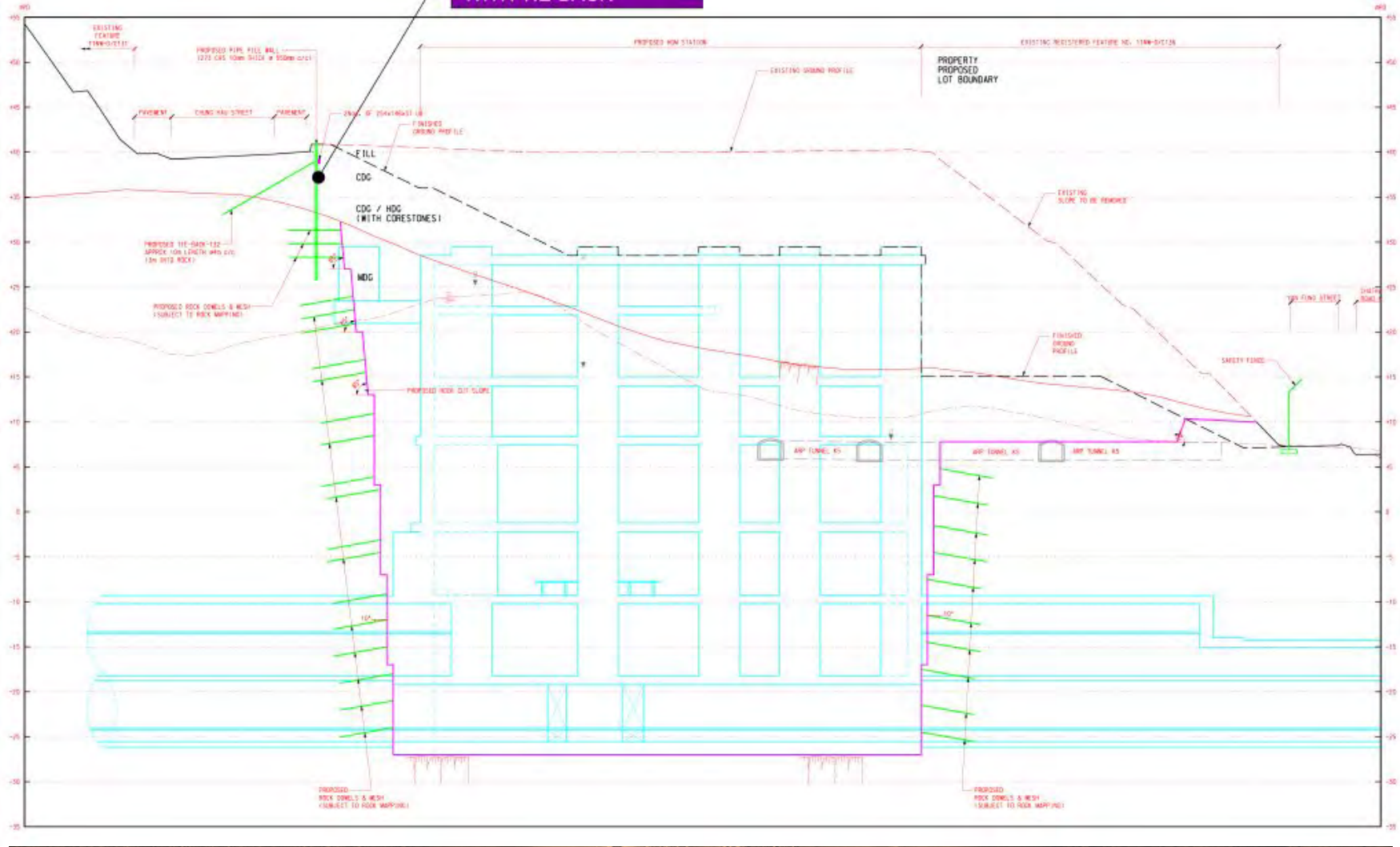


Sectional View of HOM



MTR 港鐵

273DIA. PIPE PILE WALL WITH TIE-BACK





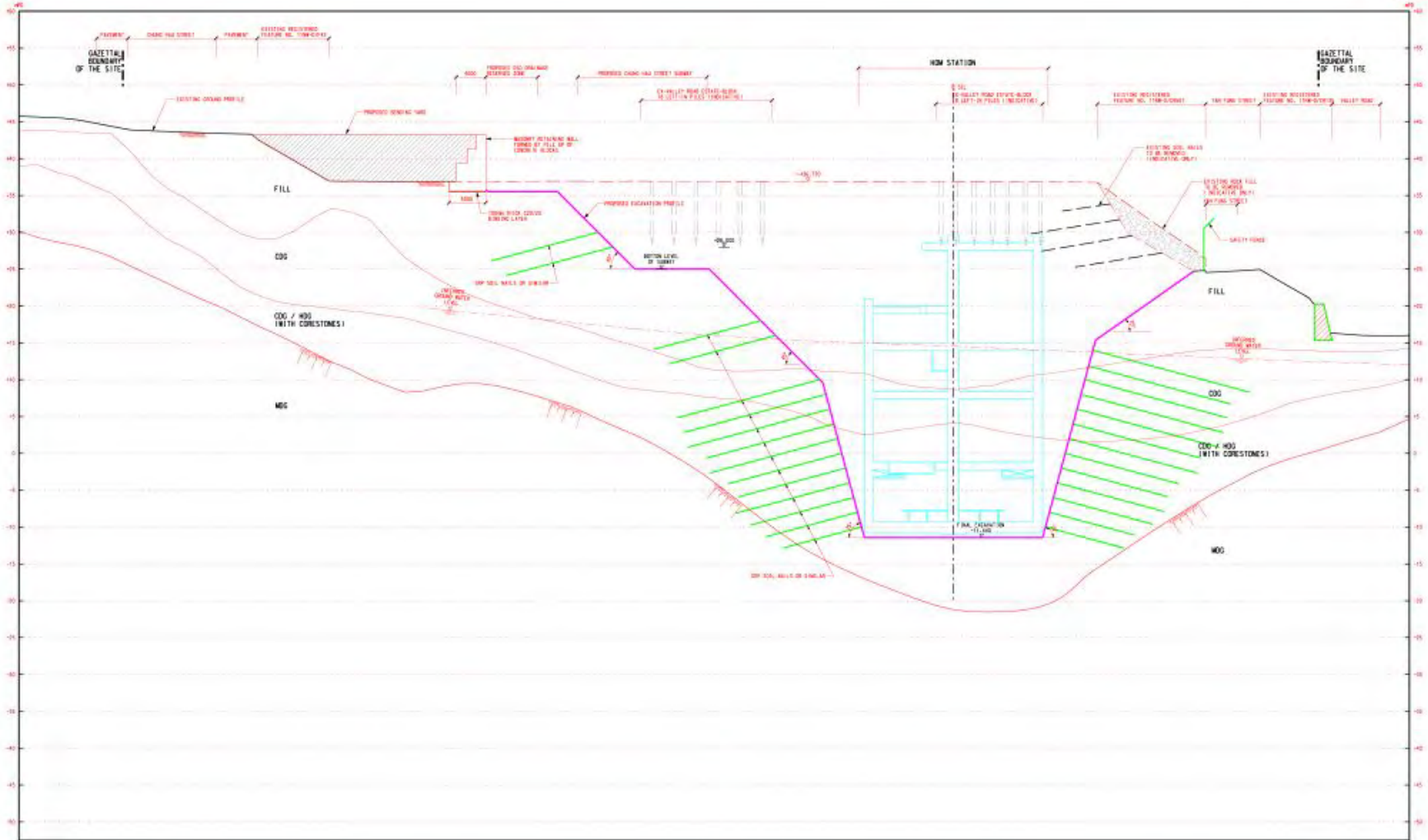
西松建設

Nishimatsu Construction Co. Ltd.



MTR 港鐵

Sectional View of HOM





西松建設

Nishimatsu Construction Co. Ltd.



MTR 港鐵

Surface Blasting at HOM







西松建設

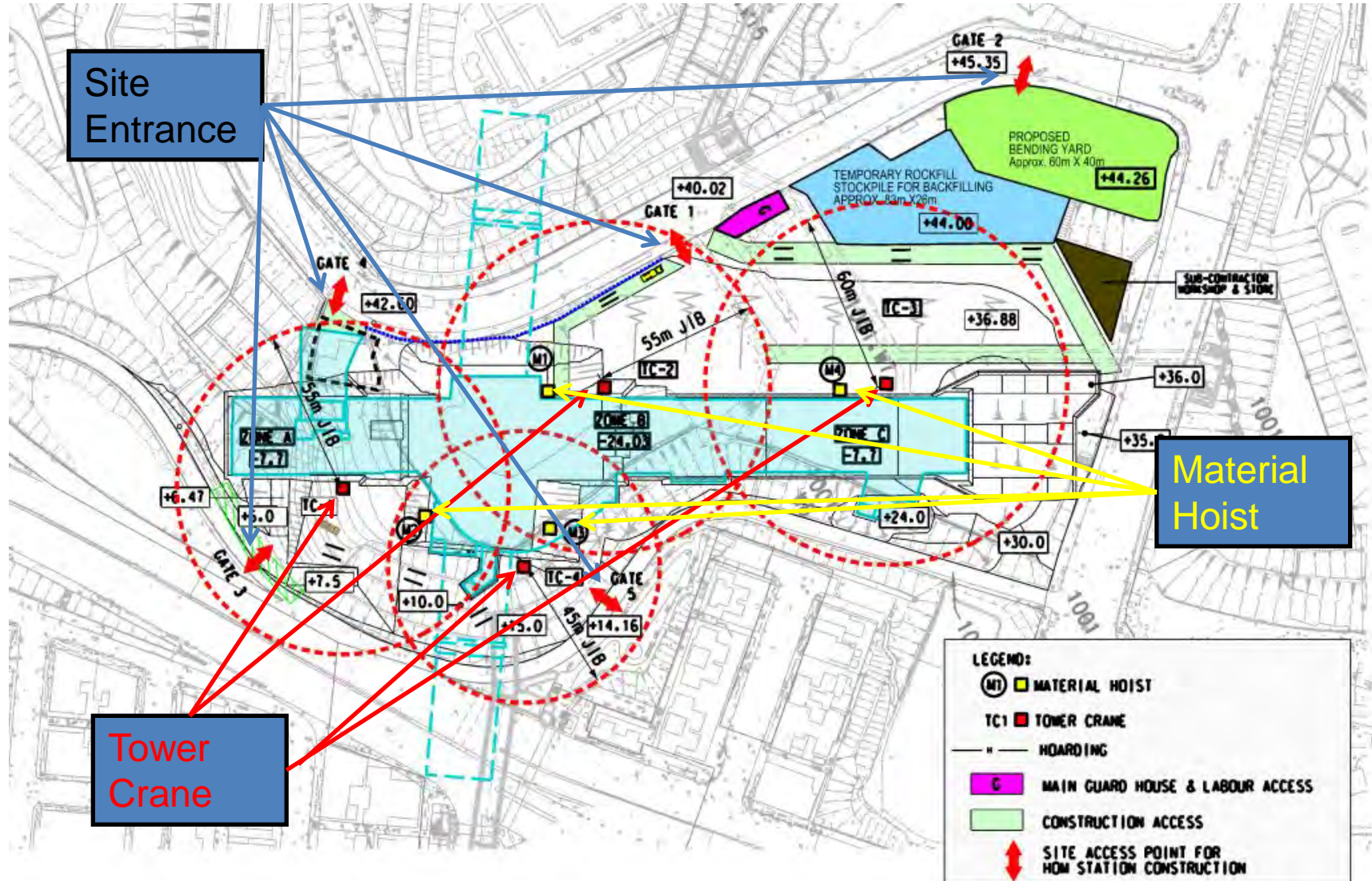
Nishimatsu Construction Co. Ltd.



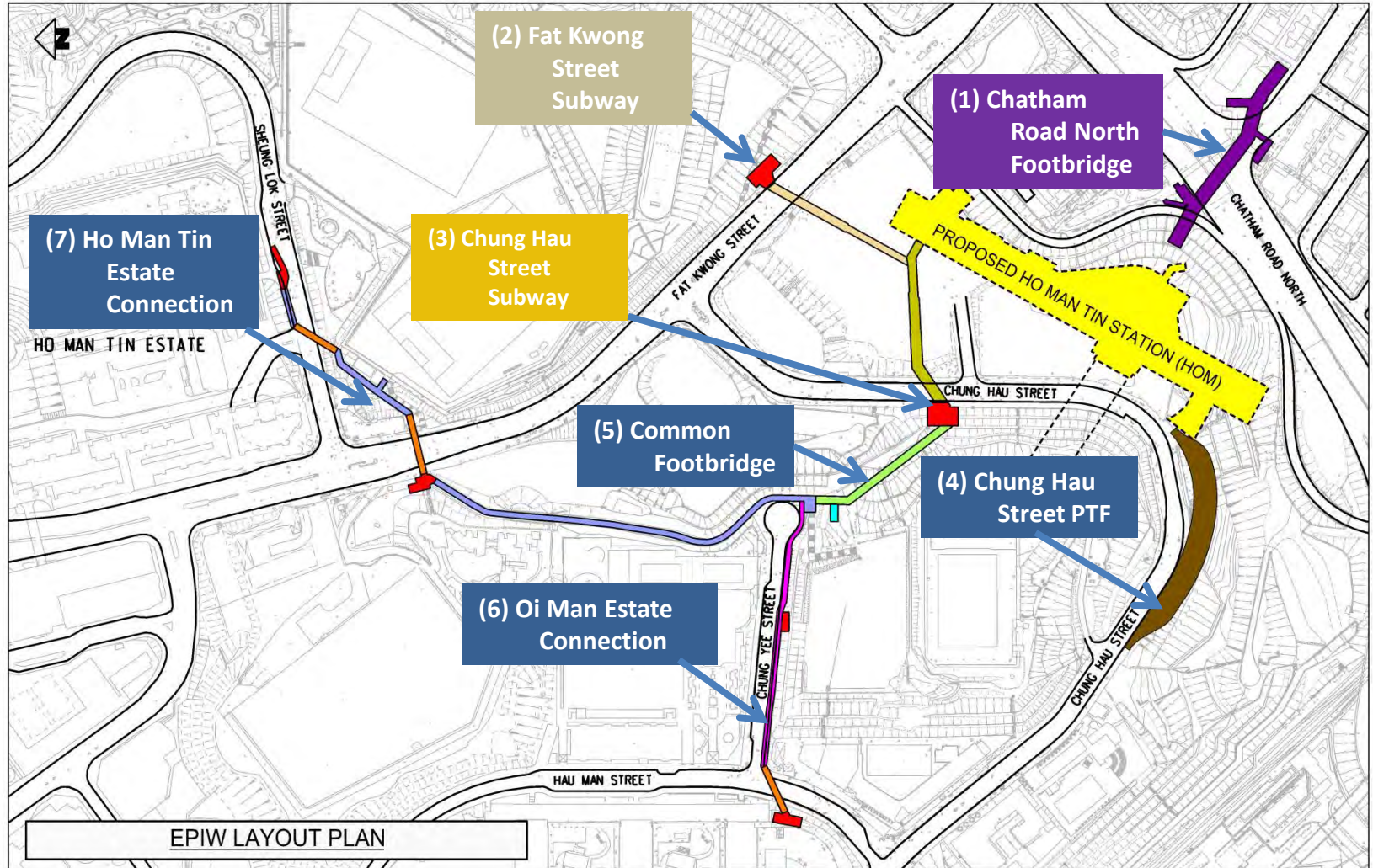
Station Construction



MTR 港鐵



EPIW Layout Plan



EPIW Worksites



Project Safety Management System

DOCUMENTATION HIERACHY

HKBO SQE Policy



Site Safety Policy/Alcohol & Drug Free Charter

Company Management Manual

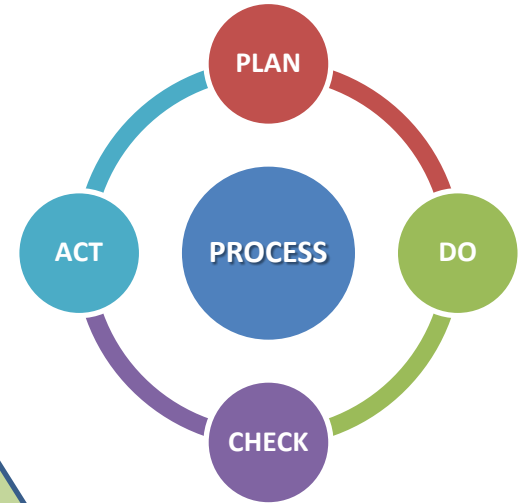
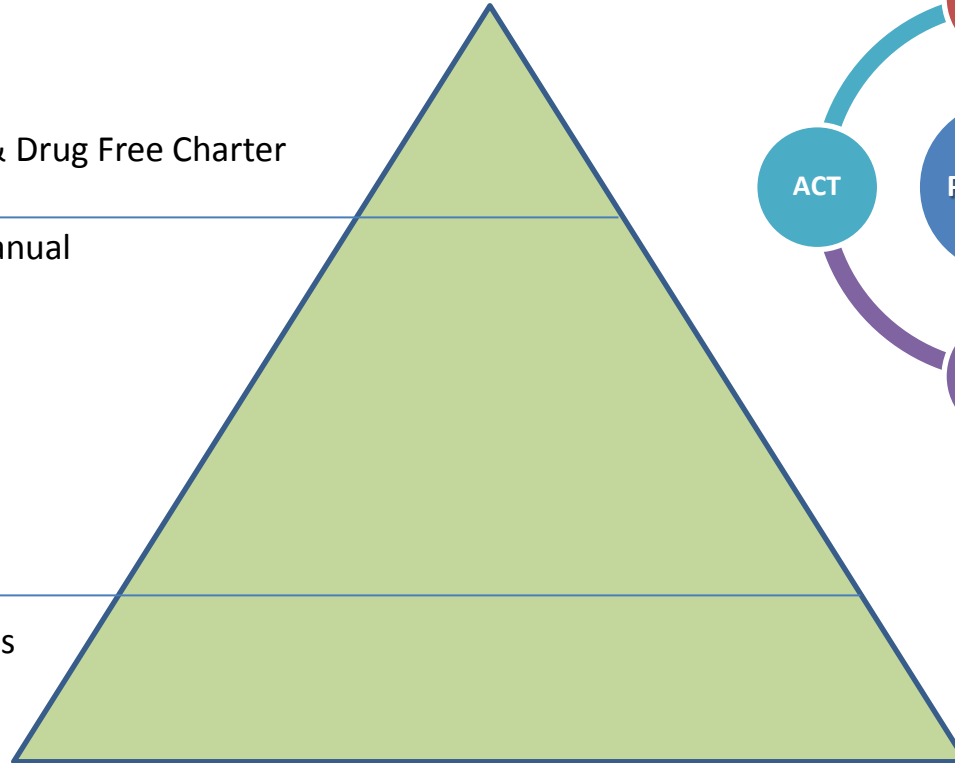


Project Safety Plan
Crisis Management Plan
Emergency Action Plan
Lifting Plan

Company Safety Procedures



Specific Work Rules
Work Permit System
Method Statements
Task Method Statements





PPE Color Code System for Different Areas

1) *Blue Zone – office area (i.e. FKP, WAB, GAR, HOM & WUS office areas and car parks)*

藍區
Blue Zone

除西松管理層要求外，否則不需配戴個人防護裝備
PPE Not Required Unless Otherwise Required by NCC

2) *Yellow Zone – HOM worksite, EPIW worksite, surface areas of noise enclosures*

黃區
Yellow Zone

除工作特定要求外，只需配戴基本個人防護裝備
Wear Basic PPE Except for Specified Works



安全帽
Safety Helmet



反光外層
Reflective Jackets



安全鞋
Safety Shoes

3) *Red Zone – Shaft and Tunnel Area (inside FKP, WAB, GAR noise enclosures, shaft and tunnel)*

紅區
Red Zone

除工作特定要求外，只需配戴以下個人防護裝備
Wear the PPE Below Except for Specified Works



安全帽
Safety Helmet



反光外層或
隧道的工作
Reflective Vests or
Tunnel Uniforms



安全鞋
Safety Shoes



耳塞或耳罩
Ear Protector
(Earplugs or Earbuds)