

**Brief on the Sheetpile Proposal for
Retaining T1 Area at the Launching Shaft Area,
of the To Kwa Wan Station of
Shatin to Central Link – Tai Wai to Hung Hom Section
(SCL(TAW-HUH))**

BACKGROUND

Further to the completion of the archaeological survey-sum-excavation in the Sacred Hill (North) area as recommended in the approved Environmental Impact Assessment report for the project of Shatin to Central Link (SCL), Dr Liu Wensuo, the archaeologist engaged by the consultant of the Mass Transit Railway Corporation Limited (MTRCL), was granted a licence on 4 December 2013 by the Antiquities Authority to carry out an archaeological watching brief in the Launching Shaft area (LSA). During the Antiquities Advisory Board's visit on 2 May 2014, members noted the remains of features of Song-Yuan period in T1 including compact surface, wall structures, an open drainage, a pit and a square shaped well.

2. Owing to the archaeological potential of the areas beyond the LSA, the archaeological watching brief was expanded with a licence granted on 24 April 2014 to cover these areas (the green area as shown in figure 1).

**SHEET PILING PROPOSAL FOR RETAINING AREAS WITHIN THE
ARCHAEOLOGICAL WATCHING BRIEF**

3. At present, most of the archaeological work in the LSA has been completed. In order to facilitate the protection of the exposed archaeological features and cultural relics in T1 and the continuation of construction works in the rest of the LSA, MTRCL has submitted a sheet piling proposal for retaining T1 area (Annex A) for the Antiquities and Monuments Office's consideration. The proposal includes:

- Shoring system for Launching Shaft,
- Monitoring proposal plan for sheetpiling works,
- Proposed plant catalogue for installing sheetpile cofferdam, and

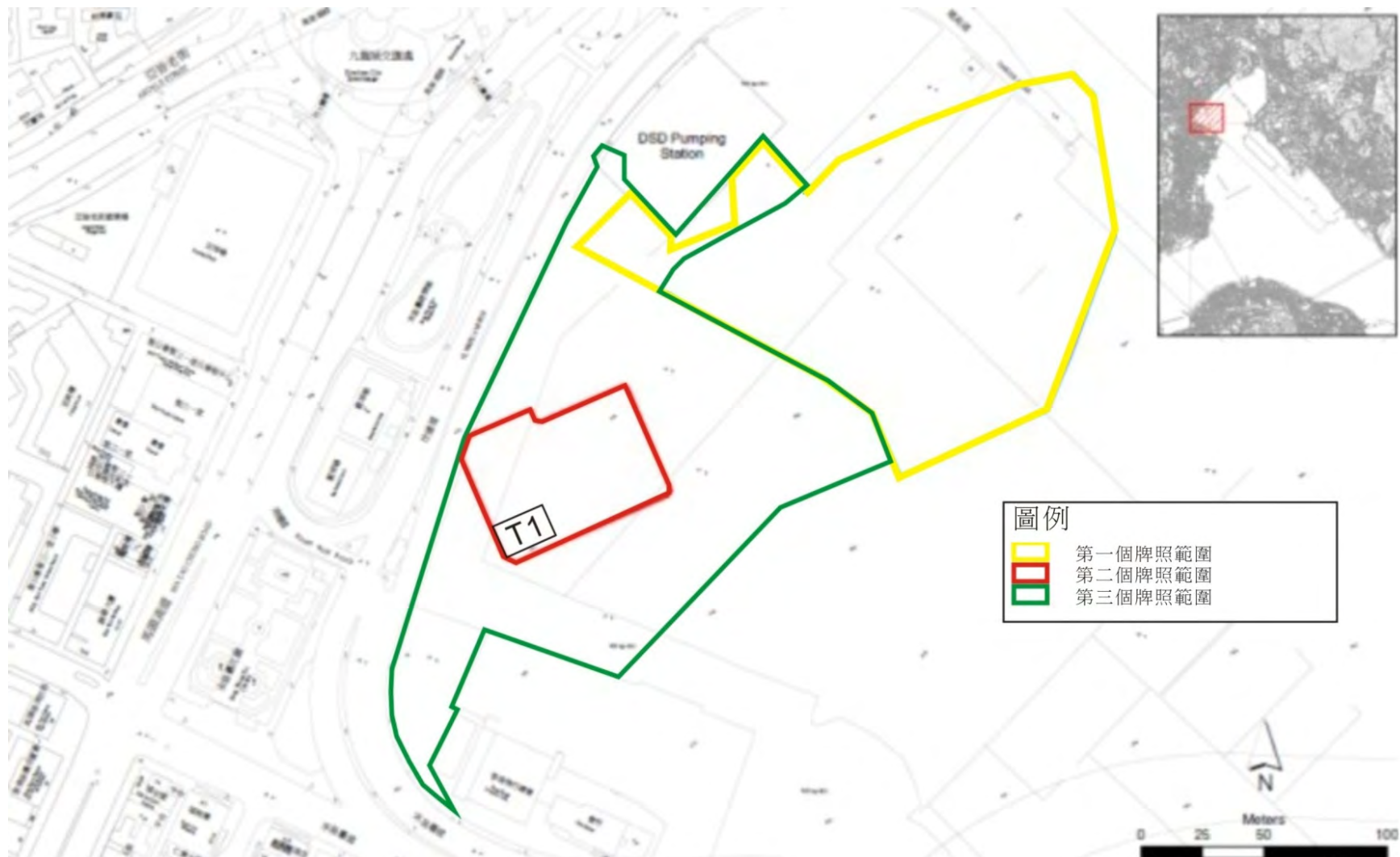
- Reference monitoring records.

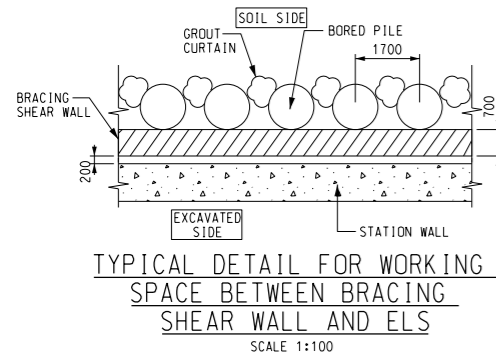
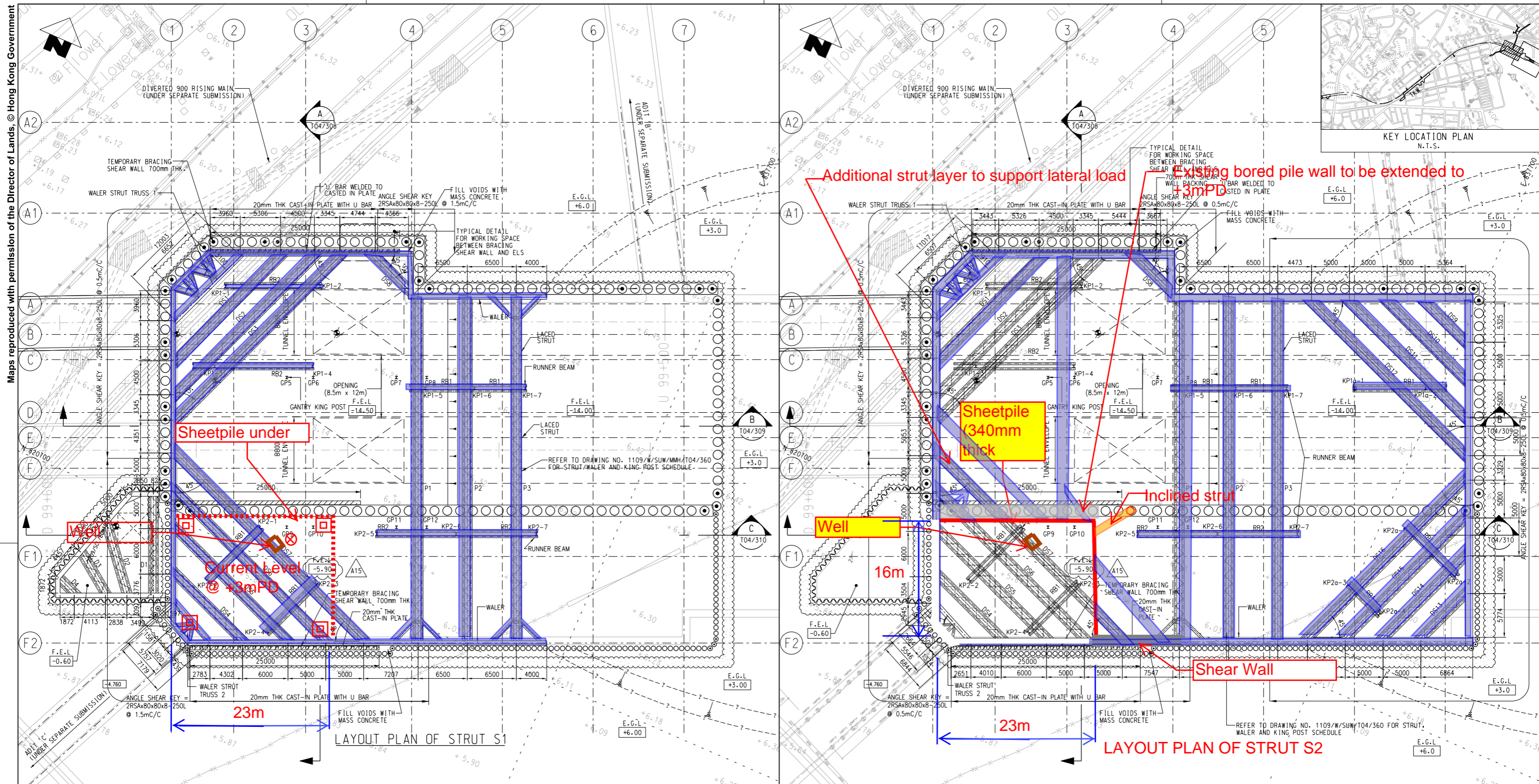
4. In addition, in consideration of site safety and stability of the areas for the archaeological watching brief in the expanded areas, MTRCL also proposed to install diagonal struts and waling at Adit C and Ventilation Area.

- Shoring system for Adit C,
- 50m Monitoring Zone for Adit C, and
- Shoring system for Ventilation Area.

The details are in Annexes A and B.

Antiquities and Monuments Office
May 2014





NOTES:

1. GENERAL NOTES AND TYPICAL DETAILS SHALL REFER TO DRAWING NOS. 1109/W/SUM/MMH/CO1/301 TO 303, 1109/W/SUM/MMH/T04/351 TO 355 AND 360 TO 372.
2. ELS DEVELOPED WALL ELEVATION SHALL REFER TO DRAWING NOS. 1109/W/SUM/MMH/T04/311 TO 312.
3. SETTING OUT OF PILE WALL SHALL REFER TO DRAWING NO. 1109/W/SUM/MMH/T04/304.
4. REFER DRAWING NO. 1109/W/SUM/MMH/T04/364 FOR PRELOADING DETAILS.
5. REFER TO DRAWING NO. 1109/W/SUM/MMH/T04/360 FOR STEEL MEMBER SCHEDULE AND PRE-LOADING SCHEDULE FOR ELS.
6. ALL STEEL MATERIALS SHALL BE GRADE S355 U.O.N.
7. GRADE TO CONCRETE PACKING SHALL BE PROVIDED BETWEEN TEMPORARY WALL AND WALER GAP.

8. ALL KINGPOSTS WITHIN THE EXCAVATION AREA SHALL BE INSTALLED INTO MIN. Ø550 PRE-DRILLED BOREHOLES, TO THE SPECIFIED EMBEDMENT DEPTH. FOR PREBORED HOLE ABOVE FORMATION LEVEL SHALL BE FILLED WITH SUITABLE BACKFILL MATERIAL, AND BELOW FORMATION LEVEL SHALL BE FILLED WITH MIN 30MPa GROUT.

9. SHEETPILES SHALL BE INSTALLED BY GIKEN SILENT PILER.

NOTES ON GROUNDWATER RECHARGE:

1. IN THE EVENT THAT THE GROUNDWATER LEVEL IS FOUND TO BE LOWER THAN 1m below the DESIGN LOWEST GROUNDWATER LEVEL, RECHARGE WELLS SHALL BE INSTALLED TO RESTORE THE ORIGINAL GROUNDWATER LEVEL.
2. IF GROUNDWATER RECHARGE IS TO BE CARRIED OUT TO MAINTAIN THE SPECIFIED GROUNDWATER LEVELS AT ANY LOCATION, THE GROUNDWATER RECHARGE SYSTEM SHALL HAVE THE MEANS TO REGULATE AND MEASURE THE RATE OF RECHARGE AND TO PROVIDE AN ADEQUATE CONTINUOUS SUPPLY OF WATER FOR RECHARGE.

LEGEND:



SHEET PILE (TYPE IV)

1200mm DIA.
BORED PILE WALL

610mm DIA. 12.5mm THK.
PIPE PILE WALL

FINAL EXCAVATION LEVEL

EXISTING GROUND LEVEL

KING POST

SCL ALIGN

GAZETTE BOUNDARY
(FOR INFORMATION ONLY)

MTR SCL GI STATION (2003)

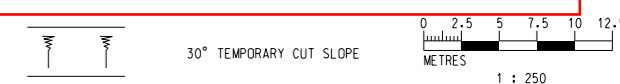
TEMPORARY BRACING SHEAR WALL

SCL PRELIMINARY DESIGN
 SHEET 24 OF 27 (10/11/2000)

PHASE GI STATION (2010)

REFERENCES

FOR REFERENCE ONLY



				DRAWN	KL
A15	INCORPORATE BD COMMENTS	KL	26FEB14	DH	DESIGNED TC
A14	INCORPORATE JV COMMENTS	KL	13JAN14	DH	CHECKED RH
A13	INCORPORATE JV COMMENTS	KL	21NOV13	DH	APPROVED DC
A12	INCORPORATE ICE COMMENTS	KL	17OCT13	DH	DATE 07/08/2013
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D REV	DESCRIPTION	BY DATE	APPROVED		



SHATIN TO CENTRAL LINK

ORIGINATOR



新昌
HSIN CHONG



Mott MacDonald

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TITLE	CONTRACT 1109 SUW AND TKW STATIONS AND TUNNELS SUNG WONG TOI STATION ELS LAYOUT PLAN - STRUT LAYER S1 AND S2
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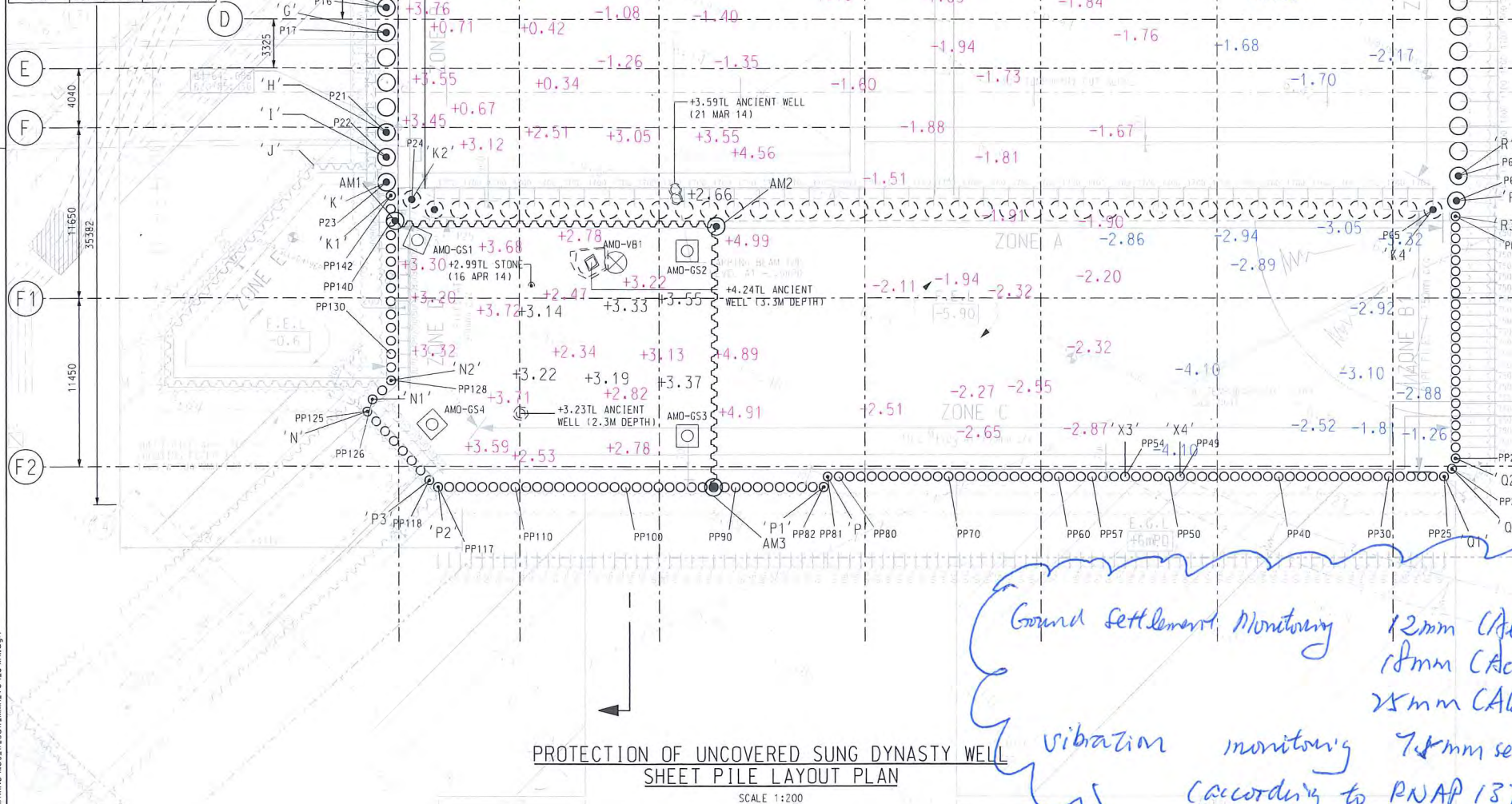
SCALE 1:250 (A1)	DRAWING NO. 1109/W/SUW/MMH/T04/305	REV. A15
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BORED PILE, PIPE PILE AND SHEET PILE WALL SETTING OUT POINTS					
SETTING OUT POINT	EASTING	NORTHING	SETTING OUT POINT	EASTING	NORTHING
A	837635.8517	820735.6184	L6	837726.8527	820692.9095
A1	837635.0339	820734.4659	L60	837695.6689	820679.3606
B	837632.8154	820728.8386	X1	837678.5345	820747.4053
C	837632.6058	820727.1516	X2	837681.6529	820748.7602
D	837635.3156	820720.9148	X3	837697.5403	820703.8334
E	837635.9930	820719.3556	X4	837700.9797	820692.9095
F	837638.7828	820713.3189			
G	837639.3803	820711.5597			
H	837642.0903	820705.3229			
I	837642.7675	820703.7638			
K	837643.4449	820702.2046			
K1	837644.0816	820701.4795			
K2	837645.4893	820701.8194			
K3	837647.1892	820701.7948			
K4	837709.5567	820728.8926			
N	837648.4636	820687.3476			
N1	837648.4536	820688.2475			
N2	837649.1027	820689.9231			
P	837678.9676	820695.7639			
P1	837678.9996	820695.0145			
P2	837654.9239	820684.5540			
P3	837654.1334	820684.1334			
Q	837717.9067	820713.4994			
Q1	837717.7638	820713.1985			
Q2	837717.4887	820712.5008			
R	837710.7764	820730.0768			
R1	837710.2283	820731.6861			
R2	837700.0667	820755.0739			
R3	837711.1371	820729.0800			
S	837698.8039	820756.2121			
S1	837697.2447	820755.5347			
S2	837687.8896	820751.4700			
T	837664.5018	820741.3083			
T1	837662.8537	820741.7252			
U	837660.8214	820746.4028			
U1	837659.2395	820745.7801			
V	837643.6476	820739.0057			
W	837642.0884	820738.3282			
AVC3	837627.2330	820676.0440			
L1	837691.8792	820772.2256			
L1a	837691.8792	820772.2256			
L2	837637.5596	820744.6245			
L3	837621.689	820707.1743			
L4	837635.5265	820674.8232			
L5	837663.2923	820665.2934			
L5a	837672.4640	820669.2784			
AM1	837665.0294	820700.0284			
AM2	837665.2199	820708.3992			
AM3	837672.1208	820692.0258			

















PROTECTION OF UNCOVERED SUNG DYNASTY WELL
SHEET PILE LAYOUT PLAN
SCALE 1:200

Ground Settlement Monitoring 12mm (Alert)
18mm (Action)
25mm (Alarm)
vibration monitoring 7.5mm sec⁻¹
(according to RNAP 137)

NOTES:

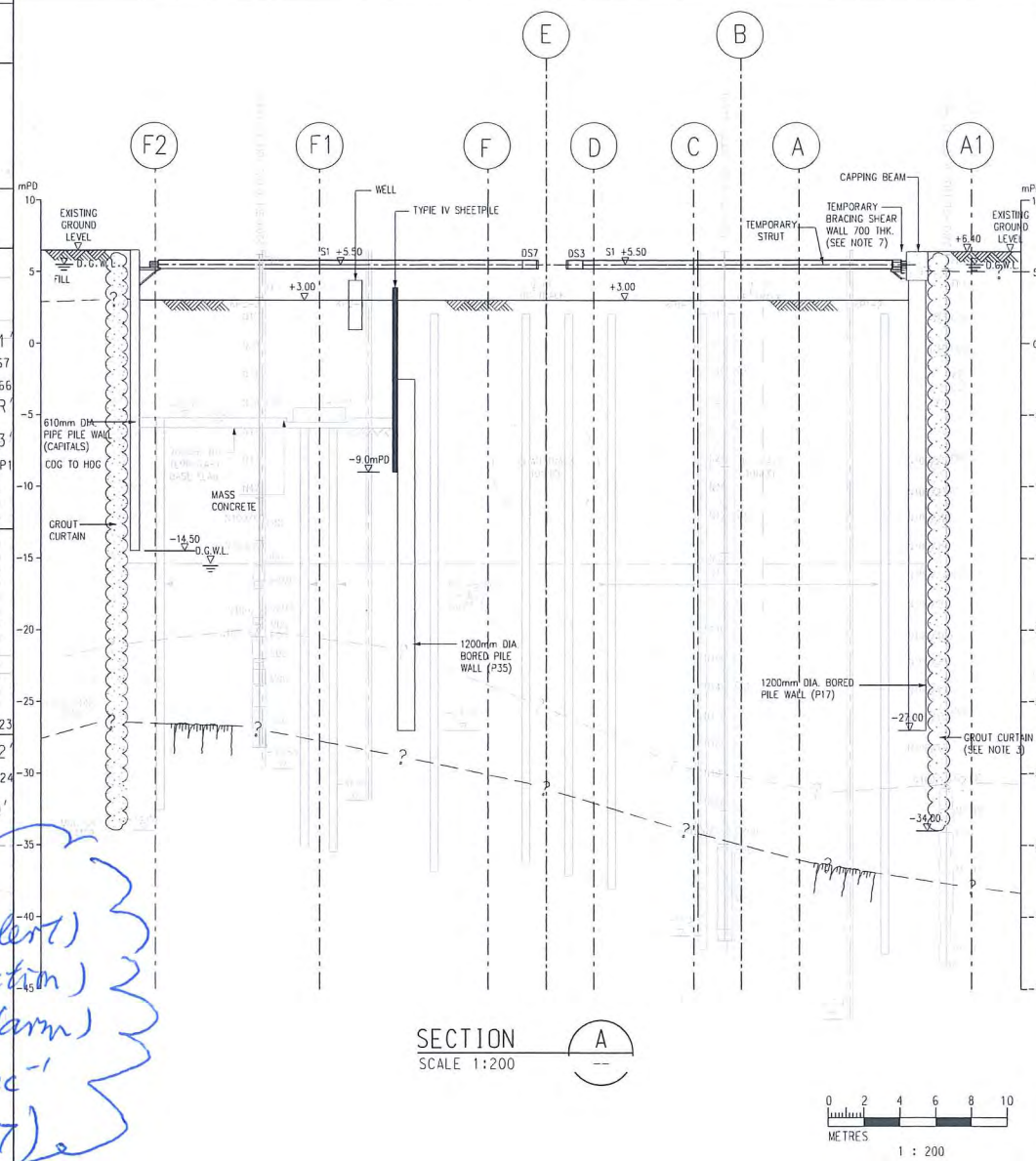
1. MONITORING DETAILS SHALL REFER TO AAA VALUES SPECIFIED DRAWING NOS. 1109/W/SUW/MMH/C01/051 AND 052.

LEGEND:

	SHEET PILE (TYPE IV)		ALLOWABLE WORKING LOAD AREA (MAX 50kPa) WITHIN 21m FROM EDGE OF COFFERDAM ALL OTHER AREAS OUTSIDE ARE GENERAL CONSTRUCTION LOAD SURCHARGE 20kPa MAX SEE NOTE 3.
	1200mm DIA. BORED PILE WALL @ 1700mm c/c MAX		LANDS DEPARTMENT'S SHORT TERM TENANCY (STT)
	610mm DIA. PIPE PILE WALL. 12.5mm THK.		EXISTING GROUND LEVEL
	EXISTING DRILLHOLE		30° TEMPORARY CUT SLOPE
	GROUT CURTAIN WALL		GROUND SETTLEMENT MONITORION POINT
F.E.L 	EXCAVATION LEVEL	AMD-GS1	
	SETTING OUT POINT	AMD-VB1	
	EXISTING GROUND LEVEL		VIBRATION MONITORING POINT

TEMPORARY SHEET PILE WALL SCHEDULE (S275)

PILE NO.	SHEET PILE TYPE	EXISTING GROUND LEVEL (mPD)	PILE TOE LEVEL (mPD)	CUT-OF LEVEL (mPD)
-	FSP IV	+3.0	-9.00	+3.0



SECTION
SCALE 1:200

TITLE	CONTRACT 1109 SUW AND TKW STATIONS AND TUNNELS SUNG WONG TOI STATION PROTECTION ON UNCOVERED SUNG DYNASTY WELL LAYOUT PLAN
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SCALE 1 : 200 (A1)	DRAWING NO. 1109/W/SUW/MMH/T04/841
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REV. 1/78

DRAWN	KL
DESIGNED	TC
CHECKED	RC
APPROVED	DH
DATE	07/08/2013

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SHATIN TO CENTRAL LINK

ORIGINATOR	
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  新昌
HSINCHO
Samsung – Hsin Chong Joint Venture



Mott MacDonald

CADD REF.	
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					A1	1st SUBMISSION			KL	26APR14	DH
REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION			BY	DATE	APPROVED

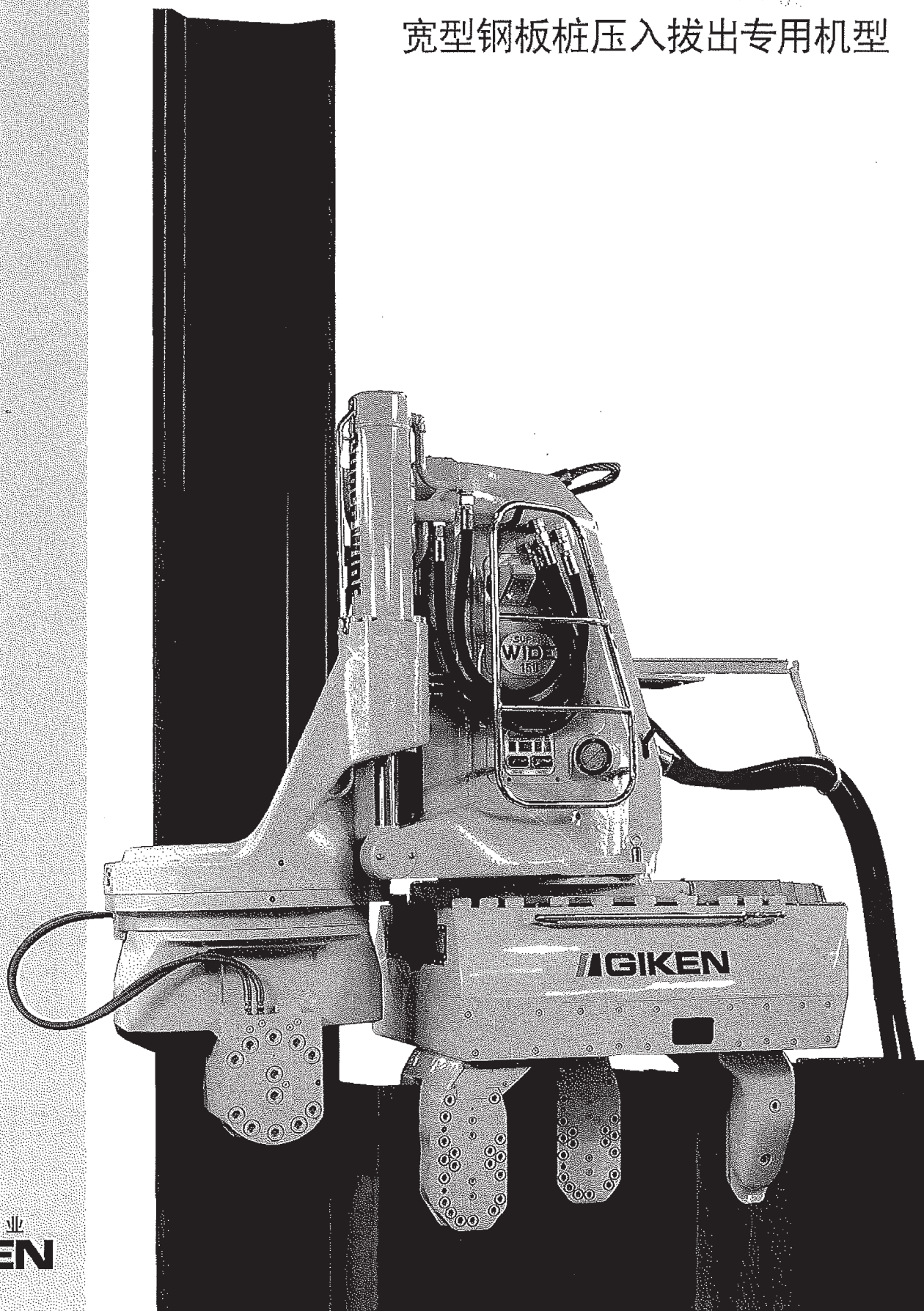
PIER

YELLOW
SERIES

安全·幸福·挑战

SUPERWIDE 100 150

宽型钢板桩压入拔出专用机型



新工法提案企业

GIKEN

规格

	SW100	SW150
压入力	1000kN (102ton)	1500kN (153ton)
拔出力	1100kN (112ton)	1600kN (163ton)
行程	750 mm	800 mm
压入速度	(2000min ⁻¹) 1.5~35.2 m/min	(2000min ⁻¹) 1.0~23.2 m/min
拔出速度	(2000min ⁻¹) 3.2~27.5 m/min	(2000min ⁻¹) 2.4~18.2 m/min
适用桩材	宽型钢板桩600mm IIw~IVw型 (SX10, SX18, SX27) 钢板桩500mm VL, VLi型	
操作方法	有线操作盘	有线操作盘
移动方式	自走式	自走式
全长	2,720 mm	2,730 mm
全宽	1,145 mm	1,145 mm
全高	2,520 mm	2,675 mm
质量	8,200 kg	9,800 kg
动力源	柴油引擎 (涡轮增压)	
额定输出	169kW (230PS) / 1800min ⁻¹ (超低噪音)	
油箱容积	375 L	
液压油箱容积	550 L	
全长	※ ② 4,300 mm	
全宽	※ ② 1,705 mm	
全高	※ ② 2,350 mm	
※ ① 质量	4,500 kg	
※ ① 总质量	※ ② 6,100 kg	
操作方法	有线操作盘	
动力源	2 油泵×2 马达 (使用动力单元的液压油)	
行驶速度	1.4 km/h	
质量	1,000 kg	
反作用力底座	折叠式	
全长	3,380 mm (折叠架张开时 6,210 mm)	
全宽	2,120 mm (折叠架张开时 5,060 mm)	
全高	520 mm	
质量	2,000 kg	

※① 配备有20m油压管, 加满油箱, 注入标准液压油时的状态

※② 配置有履带式行走装置与多功能工具箱时的状态

■ 多功能工具箱

标准配备有现场作业所必需的工具与器材。

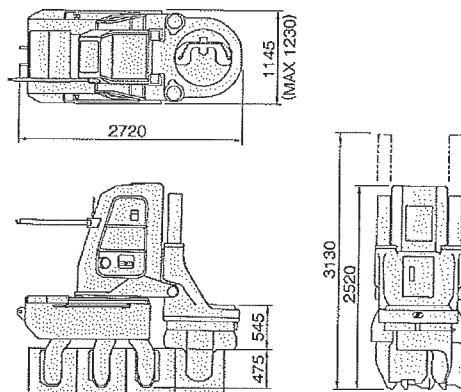
电焊机 / 输出电流为50A~190A(使用率40%)的直流电焊机。对应φ4mm焊条。

气割设备与各种工具。质量为600kg(不含气灌)

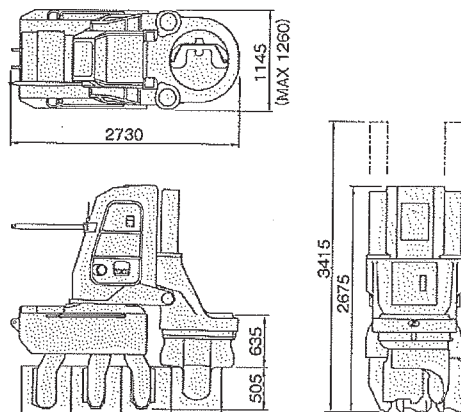
※受部分国家与地区的法规限制, 电焊机有不在标准配备之内的情况。

※本公司具有随时更改该产品及其相关产品的型号, 规格, 配备的权利, 恕不另行通知。

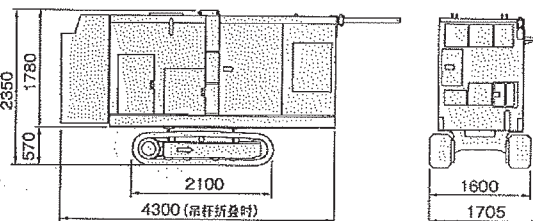
SW100



SW150



动力单元



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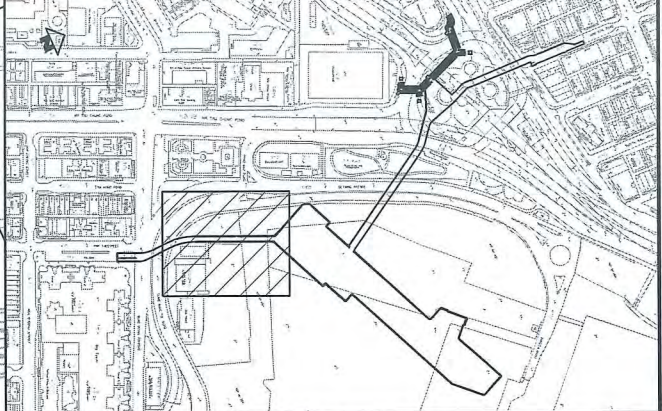
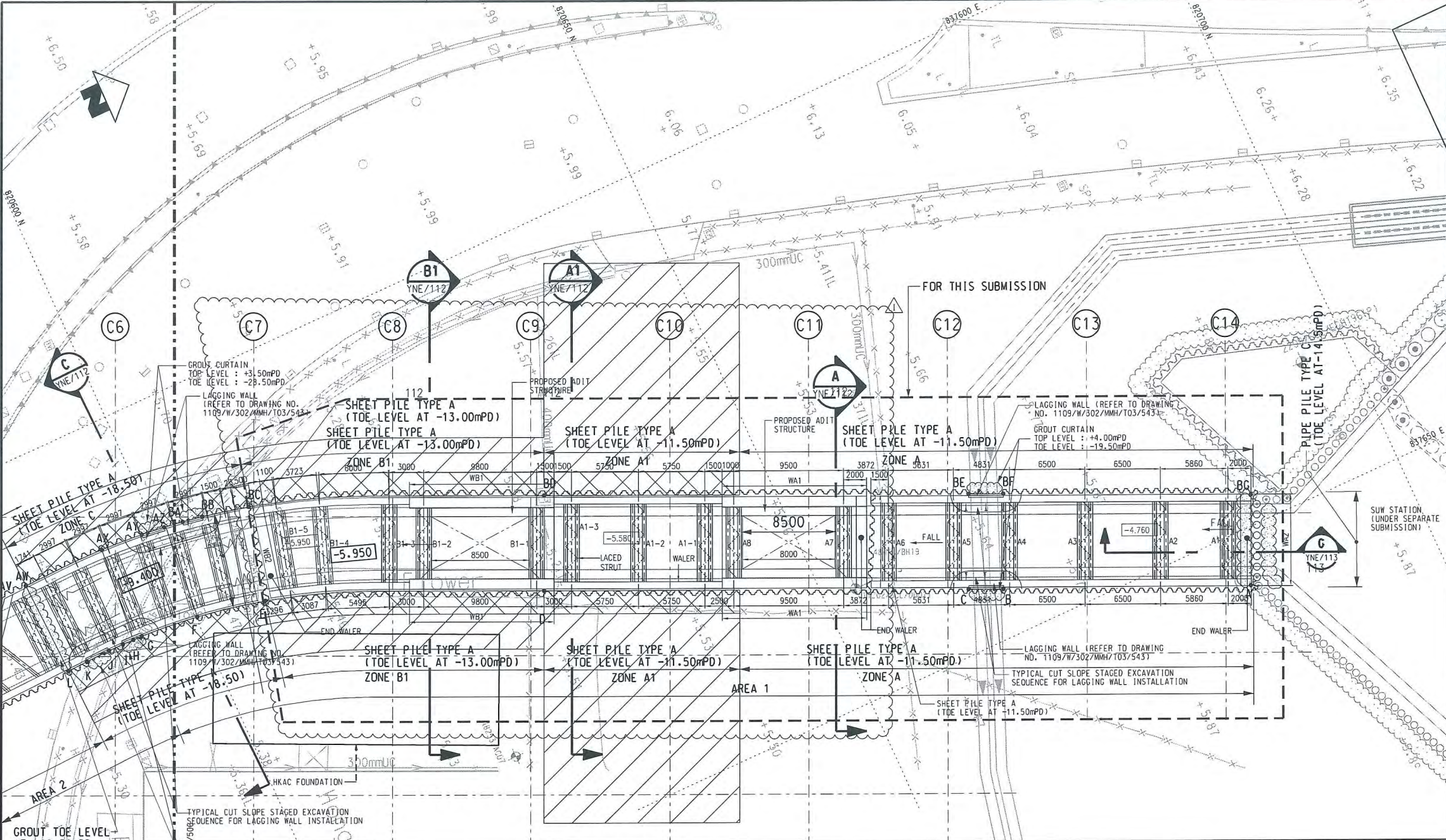
邮箱: trustcn@hotmail.com

SUW Adit C Monitoring Summary																						
			25-六月-13				26-六月-13			27-六月-13			22-七月-13			23-七月-13			24-七月-13			
	AAA Value	Initial Reading (mPD)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)		
BMP (Type B)	Alert 12mm Action 18mm Alarm 25mm																					
B446		5.4512	5.4518	0.8	0.6	5.4514	-0.4	0.2	5.4514	0	0.2	5.4511	-0.5	-0.1	5.4512	0.1	0	5.4516	0.4	0.4		
B445		5.7025	5.7032	1.1	0.7	5.7036	0.4	1.1	5.7036	0	1.1	5.703	0.7	0.5	5.7025	-0.5	0	5.7027	0.2	0.2		
B444		5.4189	5.4185	0.5	-0.4	5.4189	0.4	0	5.4189	0	0	5.4189	0.9	0	5.4187	-0.2	-0.2	5.4189	0.2	0		
B443		5.4413	5.441	0.1	-0.3	5.4415	0.5	0.2	5.4415	0	0.2	5.4394	-0.5	-1.9	5.4402	0.8	-1.1	5.44	-0.2	-1.3		
B442		5.4482	5.4476	-1.3	-0.6	5.4473	-0.3	-0.9	5.4473	0	-0.9	5.4479	-0.2	-0.3	5.4489	1	0.7	5.4487	-0.2	0.5		
B441		5.4446	---	---	---	---	---	---	---	---	---	5.4409	-1.1	-3.7	5.4412	0.3	-3.4	5.4417	0.5	-2.9		
DMP (Type 1)	Alert 6mm Action 8mm Alarm 10mm																					
G75		4.9788	4.98	0.5	1.2	---	---	---	---	---	---	---	---	---	4.9789	-0.6	0.1	---	---	---		
G19		5.0134	5.0146	0.1	1.2	---	---	---	---	---	---	---	---	---	5.0135	-1.4	0.1	---	---	---		
G20		5.057	5.0582	0.1	1.2	---	---	---	---	---	---	---	---	---	5.057	-1.9	0	---	---	---		
G13		5.529	5.5291	-0.5	0.1	5.5288	-0.3	-0.2	5.529	0.2	0	5.5271	-0.4	-1.9	5.5282	1.1	-0.8	5.5285	0.3	-0.5		
G281		5.4846	5.4842	-0.4	-0.4	5.4845	0.3	-0.1	5.4845	0	-0.1	5.4832	0.8	-1.4	5.4842	1	-0.4	5.4837	-0.5	-0.9		
G279		5.705	5.7057	0.9	0.7	5.7054	-0.3	0.4	5.7054	0	0.4	5.7042	1.1	-0.8	5.7048	0.6	-0.2	5.7043	-0.5	-0.7		
G282		5.0831	5.0833	0.8	0.2	5.0829	-0.4	-0.2	5.0829	0	-0.2	5.0823	0.5	-0.8	5.0828	0.5	-0.3	5.0822	-0.6	-0.9		
G280		5.856	5.8556	-1	-0.4	5.8569	1.3	0.9	5.8569	0	0.9	5.8552	1	-0.8	5.8557	0.5	-0.3	5.856	0.3	0		
G4		5.3805	5.3811	1	0.6	5.3811	0	0.6	5.3805	-0.6	0	5.3796	0.4	-0.9	5.3798	0.2	-0.7	5.3792	-0.6	-1.3		
G2		5.5566	5.5567	0.9	0.1	5.5559	-0.8	-0.7	5.5557	-0.2	-0.9	5.5554	0.2	-1.2	5.5551	-0.3	-1.5	5.5549	-0.2	-1.7		
G299		5.9025	5.9013	0.6	-1.2	5.9009	-0.4	-1.6	5.9009	0	-1.6	5.9003	0.3	-2.2	5.9005	0.2	-2	5.9006	0.1	-1.9		
G368		5.9393	5.9379	0.2	-1.4	5.9369	-1	-2.4	5.9369	0	-2.4	5.938	0.6	-1.3	5.9372	-0.8	-2.1	5.9368	-0.4	-2.5		
G1		6.4338	6.4327	0.4	-1.1	6.4327	0	-1.1	6.4334	0.7	-0.4	6.4305	-0.7	-3.3	6.432	1.5	-1.8	6.4322	0.2	-1.6		
G298		6.0726	6.0716	0.8	-1	6.0719	0.3	-0.7	6.0719	0	-0.7	6.0706	-0.7	-2	6.0695	-1.1	-3.1	6.0695	0	-3.1		
G387B		6.1113	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
DMP (Type 2)																						
G362			6.3757	6.3742	-0.1	-1.5	6.3752	1	-0.5	6.3752	0	-0.5	6.3729	-0.2	-2.8	6.3731	0.2	-2.6	6.3734	0.3	-2.3	
G397			6.1897	6.1896	1.2	-0.1	6.1892	-0.4	-0.5	6.1892	0	-0.5	6.1879	-0.5	-1.8	6.1886	0.7	-1.1	6.1882	-0.4	-1.5	
GSP1030			5.4453	5.4347	0.9	-10.6	5.4351	0.5	-10.2	5.4354	1.2	-9.9	5.435	-0.2	-10.3	5.4352	0.4	-10.1	5.4356	0.8	-9.7	
G284	5.4431		5.4432	0.6	0.1	5.4439	0.7	0.8	5.4439	0	0.8	5.4441	0.1	1	5.444	-0.1	0.9	5.4441	0.1	1		
G5	5.4953		5.4953	-0.3	0	5.4957	0.4	0.4	5.4958	0.1	0.5	5.4979	1	2.6	5.4971	-0.8	1.8	5.497	-0.1	1.7		
G75	4.9788		4.98	0.5	1.2	---	---	---	---	---	---	---	---	---	4.9789	-0.6	0.1	---	---	---		
G12	5.1841		5.1821	-1.7	-2	5.1824	0.3	-1.7	5.1828	0.4	-1.3	5.1851	0.9	1	5.1849	-0.2	0.8	5.1851	0.2	1		
GSP1030	5.9549		5.9535	-0.3	-1.4	5.954	0.5	-0.9	5.9553	1.3	0.4	5.9576	0.3	2.7	5.9571	-0.5	2.2	5.9569	-0.2	2		
GSP1030	5.9508		5.9507	0.1	-0.1	5.9504	-0.3	-0.4	5.9507	0.3	-0.1	5.9516	-0.6	0.8	5.951	-0.6	0.2	5.9511	0.1	0.3		
GSP1030	5.6602		5.6576	-1.4	-2.6	5.6574	-0.2	-2.8	5.6585	1.1	-1.7	5.6627	-0.6	2.5	5.6619	-0.8	1.7	5.6615	-0.4	1.3		
G75	5.6691		5.6667	-1.4	-2.4	5.6668	0.1	-2.3	5.6668	0	-2.3	5.6695	-0.6	0.4	5.6691	-0.4	0	5.6689	-0.2	-0.2		
UMP	Alert 12mm Action 18mm Alarm 25mm																					
US13		6.4049	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
US14		6.405	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
US15		6.4559	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
US16		6.5379	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
US17		5.9677	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
US18		5.9942	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UMP1017		5.758	5.7548	-0.8	-3.2	5.7552	0.4	-2.8	5.7565	1.3	-1.5	5.7564	0.7	-1.6	5.7568	0.4	-1.2	5.7571	0.3	-0.9		
UMP1018		5.7943	5.7914	-0.4	-2.9	5.7916	0.2	-2.7	5.7923	0.7	-2	5.7926	1.4	-1.7	5.793	0.4	-1.3	5.7934	0.4	-0.9		
UMP1016		5.7915	5.7878	-0.4	-3.7	5.7879	0.1	-3.6	5.7871	-0.8	-4.4	5.7884	0.5	-3.1	5.7887	0.3	-2.8	5.7889	0.2	-2.6		
UMP1020	5.8318	5.8308	-1	-1	5.8306	-0.2	-1.2	5.8303	-0.3	-1.5	5.8325	0.7	0.7	5.8321	-0.4	0.3	5.832	-0.1	0.2			
UMP1014	5.7139	5.7118	-0.6	-2.1	5.712	0.2	-1.9	5.7124	0.4	-1.5	5.7132	-0.6	-0.7	5.7135	0.3	-0.4	5.7134	-0.1	-0.5			
UMP1013	5.6902	5.6907	0.4	0.5	5.6904	-0.3	0.2	5.6907	0.3	0.5	5.692	0.2	1.8	5.6915	-0.5	1.3	5.6911	-0.4	0.9			
U96	5.1125	5.1140	1.3	1.4	5.1146	0.3	1.1	5.1137	0.9	0.2	5.1136	0.3	0.1	5.1133	-0.3	-0.2	5.113	-0.3	-0.5			
U97	5.036	5.0364	0	0.4	5.037	0.6	1	5.0361	-0.9	0.1	5.0344	-0.1	-1.6	5.0355	1.1	-0.6	5.0359	0.4	-0.1			
VMP																						
VMP102		N/A	<0.51			0.78			0.53			<0.51			<0.51			<0.51				
VMP2		N/A	0.65			0.85			0.52			1.45			0.56			0.52				
CMP101		N/A	<0.51			0.67			<0.51			<0.51			0.53			<0.51				
VMP1	N/A	<0.51			0.55			<0.51			<0.51			<0.51			0.54					
TP																						
T215		N/A	-756			-758			-755			-750			-753			-751				

Vibration Monitoring

SUW Adit C Monitoring Summary																					
			1-八月-13				2-八月-13			3-八月-13			5-八月-13			6-八月-13			19-十月-13		
	AAA Value	Initial Reading (mPD)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	Reading (mPD)	Movement from previous (mm)	Cummulative Settlement (mm)	
BMP (Type B)	Alert 12mm Action 18mm Alarm 25mm																				
B446		5.4512	5.4512	0.5	0	5.4506	-0.6	-0.6	5.4501	-0.5	-1.1	5.4511	1	-0.1	5.4514	0.3	0.2	5.4511	-0.5	-0.1	
B445		5.7025	5.7027	-0.2	0.2	5.703	0.3	0.5	5.7031	0.1	0.6	5.7029	-0.2	0.4	5.7028	-0.1	0.3	5.7021	-0.5	-0.4	
B444		5.4189	5.4184	0.3	-0.5	5.4181	-0.3	-0.8	5.4177	-0.4	-1.2	5.4184	0.7	-0.5	5.419	0.6	0.1	5.4182	-0.6	-0.7	
B443		5.4413	5.4396	0.6	-1.7	5.4384	-1.2	-2.9	5.4379	-0.5	-3.4	5.4386	0.7	-2.7	5.439	0.4	-2.3	5.4392	0.2	-2.1	
B442		5.4482	5.4476	-0.6	-0.6	5.4472	-0.4	-1	5.4469	-0.3	-1.3	5.4479	1	-0.3	5.4485	0.6	0.3	5.4481	-0.6	-0.1	
B441		5.4446	5.4416	0.4	-3	5.4427	1.1	-1.9	5.442	-0.7	-2.6	5.4418	-0.2	-2.8	5.4416	-0.2	-3	5.4412	0.1	-3.4	
DMP (Type 1)	Alert 6mm Action 8mm Alarm 10mm																				
G75		4.9788	---	---	---	---	---	---	---	---	---	---	---	---	4.9778	-1.7	-1	---	---	---	
G19		5.0134	---	---	---	---	---	---	---	---	---	---	---	---	5.0133	0.3	-0.1	---	---	---	
G20		5.057	---	---	---	---	---	---	---	---	---	---	---	---	5.0571	-0.6	0.1	---	---	---	
G13		5.529	5.5284	-0.4	-0.6	5.5293	0.9	0.3	5.5279	-1.4	-1.1	5.5278	-0.1	-1.2	5.5285	0.7	-0.5	5.5291	-0.2	0.1	
G281		5.4846	5.4856	0.2	1	5.4843	-1.3	-0.3	5.4836	-0.7	-1	5.4838	0.2	-0.8	5.4839	0.1	-0.7	5.4847	0.6	0.1	
G279		5.705	5.704	-1.3	-1	5.7029	-1.1	-2.1	5.7031	0.2	-1.9	5.7045	1.4	-0.5	5.7044	-0.1	-0.6	5.7057	0.6	0.7	
G282		5.0831	5.0832	-0.7	0.1	5.0831	-0.1	0	5.0828	-0.3	-0.3	5.0822	-0.6	-0.9	5.0827	0.5	-0.4	5.0839	0.9	0.8	
G280		5.856	5.8564	-0.2	0.4	5.8554	-1	-0.6	5.8544	-1	-1.6	5.854	-0.4	-2	5.8552	1.2	-0.8	5.8561	-0.1	0.1	
G4		5.3805	5.3808	0	0.3	5.3807	-0.1	0.2	5.3805	-0.2	0	5.3801	-0.4	-0.4	5.3791	-1	-1.4	5.3793	0.2	-1.2	
G2		5.5566	5.557	0.4	0.4	5.5569	-0.1	0.3	5.5573	0.4	0.7	5.5578	0.5	1.2	5.5564	-1.4	-0.2	5.5544	-0.3	-2.2	
G299		5.9025	5.9028	-1.1	0.3	5.9025	-0.3	0	5.9029	0.4	0.4	5.9023	-0.6	-0.2	5.9011	-1.2	-1.4	5.9	0.2	-2.5	
G368		5.9393	5.939	0.9	-0.3	5.9395	0.5	0.2	5.939	-0.5	-0.3	5.9382	-0.8	-1.1	5.9375	-0.7	-1.8	5.9377	0.2	-1.6	
G1		6.4338	6.4334	0.3	-0.4	6.4331	-0.3	-0.7	6.433	-0.1	-0.8	6.4323	-0.7	-1.5	6.4316	-0.7	-2.2	6.4317	0	-2.1	
G298		6.0726	6.0725	-0.8	-0.1	6.0732	0.7	0.6	6.0729	-0.3	0.3	6.072	-0.9	-0.6	6.071	-1	-1.6	6.0688	-0.2	-3.8	
G387B		6.1113	6.1114	-0.4	0.1	6.1116	0.2	0.3	6.1119	0.3	0.6	6.1115	-0.4	0.2	6.1106	-0.9	-0.7	6.1096	-0.1	-1.7	
DMP (Type 2)		Alert 12mm Action 18mm Alarm 25mm																			
G362			6.3757	6.3747	-0.6	-1	6.3751	0.4	-0.6	6.374	-1.1	-1.7	6.3741	0.1	-1.6	6.3735	-0.6	-2.2	---	---	---
G397			6.1897	6.1889	0.2	-0.8	6.1887	-0.2	-1	6.1885	-0.2	-1.2	6.1887	0.2	-1	6.1887	0	-1	6.1894	-0.3	-0.3
GSP1030			5.4453	---	---	---	---	---	---	---	---	---	5.4351	-0.9	-10.2	5.4341	-1	-11.2	5.4348	-0.1	-10.5
G284	5.4431		5.4434	-0.3	0.3	5.4446	1.2	1.5	5.4441	-0.5	1	5.4437	-0.4	0.6	5.444	0.3	0.9	---	---	---	
G5	5.4953		5.4947	-0.6	-0.6	5.4933	-1.4	-2	5.4936	0.3	-1.7	5.494	0.4	-1.3	5.4941	0.1	-1.2	5.4944	-0.2	-0.9	
G75	4.9788		---	---	---	---	---	---	---	---	---	---	---	---	4.9778	-1.7	-1	---	---	---	
G12	5.1841		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.1853	0.4	1.2	
GSP1030	5.9549		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
GSP1030	5.9508		5.9477	-0.5	-3.1	5.948	0.3	-2.8	5.9483	0.3	-2.5	5.9486	0.3	-2.2	---	---	---	---	---	---	
GSP1030	5.6602	5.659	-0.4	-1.2	5.6585	-0.5	-1.7	5.6581	-0.4	-2.1	5.6575	-0.6	-2.7	5.6576	0.1	-2.6	5.66	0.2	-0.2		
G75	5.6691	5.6695	-0.2	0.4	5.6693	-0.2	0.2	5.6683	-1	-0.8	5.6666	-1.7	-2.5	5.6654	-1.2	-3.7	---	---	---		
UMP	Alert 12mm Action 18mm Alarm 25mm																				
US13		6.4049	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4024	-0.4	-2.5	
US14		6.405	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4021	-1	-2.9	
US15		6.4559	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.4534	-1	-2.5	
US16		6.5379	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.5354	-1	-2.5	
US17		5.9677	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.9642	-1.3	-3.5	
US18		5.9942	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.9917	-0.5	-2.5	
UMP1017		5.758	5.758	0.8	0	5.7571	-0.9	-0.9	5.7574	0.3	-0.6	5.7556	-1.8	-2.4	5.7546	-1	-3.4	---	---	---	
UMP1018		5.7943	5.7934	0.2	-0.9	5.7939	0.5	-0.4	5.7942	0.3	-0.1	5.7928	-1.4	-1.5	5.7916	-1.2	-2.7	---	---	---	
UMP1016		5.7915	5.789	0.3	-2.5	5.7903	1.3	-1.2	5.7911	0.8	-0.4	5.7888	-2.3	-2.7	5.7883	-0.5	-3.2	---	---	---	
UMP1020		5.8318	5.8323	-0.4	0.5	5.8309	-1.4	-0.9	5.8307	-0.2	-1.1	5.8289	-1.8	-2.9	5.8289	0	-2.9	5.8317	0.3	-0.1	
UMP1014		5.7139	5.7134	-0.7	-0.5	5.7133	-0.1	-0.6	5.7133	0	-0.6	5.7128	-0.5	-1.1	5.7118	-1	-2.1	5.7132	-0.4	-0.7	
UMP1013		5.6902	5.6886	-0.7	-1.6	5.69	1.4	-0.2	5.69	0	-0.2	5.6886	-1.4	-1.6	5.6875	-1.1	-2.7	5.69	0.3	-0.2	
U96		5.1135	5.1142	-0.1	0.7	5.1131	-1.1	-0.4	5.1135	0.4	0	5.1134	-0.1	-0.1	5.1135	0.1	0	5.1137	0.4	0.2	
U97		5.0366	5.0364	0.7	0.5	5.0361	-0.3	0.1	5.0365	0.4	0.5	5.0358	-0.7	-0.2	5.0353	-0.5	-0.1	5.0356	0.5	-0.1	
VMP	Alert 12mm Action 18mm Alarm 25mm																				
VMP102		N/A	<0.51			<0.51			0.67			0.57			<0.51			0.89			
VMP102		N/A	<0.51			<0.51			0.82			2.27			<0.51			1.12			
CMP101		N/A	<0.51			<0.51			0.52			<0.51			1.94			<0.51			
VMPC1	N/A	0.56			<0.51			0.71			0.71			0.98			0.67				
T2																					
T215	N/A	-744			-747			-747			-746			-747			-746				

Vibration Monitoring



KEY PLAN

N.T.S.

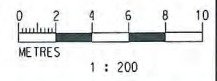
- NOTE:**
1. SHEET PILE SHALL BE WELDED FOR ZONE A1, B1 AND C. FOR DETAILS, REFER TO DRAWING NO. 1109/W/302/MMH/T03/544.
 2. NO EXCAVATION SHALL BE CARRIED OUT BETWEEN GRID C13 AND TBM LAUNCHING SHAFT PRIOR TO THE COMPLETION OF GRID C1 TO GRID 3 OF THE SUW STATION PERMANENT STRUCTURE TO ROOF LEVEL.
 3. THE DETAILS ON THE TEMPORARY WALL, REDUCE LEVEL & STRUT LOADS ARE BASED ON MM REPORT NO. 312757/SCL/0007B-1 REV A.
 4. ALL STEEL MATERIALS SHALL BE GRADE S355 U.D.N.
 5. GRADE 30 CONCRETE PACKING SHALL BE PROVIDED BETWEEN TEMPORARY WALL AND WATER GAP.
 6. CONCRETE PACKING SHALL ACHIEVE MINIMUM CUBE STRENGTH OF 10MPa BEFORE EXCAVATION TO NEXT LEVEL.
 7. THE EXCAVATION WORKS FOR AREA BETWEEN GRID C11.5 TO C14 SHALL NOT BE CARRIED OUT PRIOR TO THE COMPLETION OF THE EXCAVATION WORKS FOR AREA BETWEEN GRID C7 TO C11.5

- LEGEND:**
- GROUT CURTAIN (TOP LEVEL AT GROUND LEVEL)
 - SHEET PILE WALL
 - EXISTING BOREHOLE
 - 1 IN 1.8 GRADIENT CUT SLOPE
 - PROPOSED FINAL EXCAVATION LEVEL
 - SETTING OUT POINT
 - EXISTING GROUND LEVEL
 - MAIN STRUT / SECONDARY STRUT
 - WALING
 - PIPE PILE WALL
 - LOADING AREA WITH MAXIMUM SURCHARGE OF 5 kPa (12m OFFSET FROM SHEET PILE FOR ZONE A1, B1 AND C)
 - LOADING AREA WITH MAXIMUM SURCHARGE OF 10 kPa (15m OFFSET FROM SHEET PILE FOR ZONE B1 AND C, 20m OFFSET FROM SHEET PILE FOR ZONE A1)

PROPOSED TEMPORARY WALL SETTING OUT

SETTING OUT POINT	EASTING (m)	NORTHING (m)	SETTING OUT POINT	EASTING (m)	NORTHING (m)
A	837654.618	820683.982	AE	837604.208	820526.956
B	837645.930	820664.442	AF	837594.200	820531.520
C	837644.685	820661.713	AG	837595.206	820533.726
D	837629.472	820628.361	AH	837596.850	820537.331
E	837620.194	820606.066	AI	837597.680	820539.151
F	837619.005	820600.147	AJ	837598.393	820540.714
G	837618.520	820595.073	AK	837600.265	820544.819
H	837618.488	820594.210	AL	837600.796	820545.982
I	837618.466	820593.297	AM	837604.261	820553.581
J	837618.463	820591.951	AN	837605.727	820556.795
K	837618.523	820589.835	AO	837607.943	820561.388
L	837618.591	820588.037	AP	837608.910	820563.918
M	837618.943	820578.710	AQ	837607.821	820565.698
N	837619.333	820568.370	AR	837600.394	820569.869
O	837619.692	820567.461	AS	837596.428	820578.582
P	837628.354	820563.320	AT	837610.353	820571.925
Q	837634.396	820549.414	AU	837610.767	820572.446
R	837626.063	820553.298	AV	837610.488	820585.316
S	837623.704	820558.726	AW	837610.397	820587.728
T	837619.432	820560.768	AX	837610.298	820594.988
U	837618.700	820556.742	AY	837610.551	820598.697
V	837617.792	820557.091	AZ	837610.786	820600.724
W	837615.705	820552.164	BA	837611.029	820602.381
X	837614.269	820549.016	BB	837611.333	820604.117
Y	837610.804	820541.418	BC	837612.238	820608.134
Z	837610.273	820540.254	BD	837622.011	820637.764
AA	837608.401	820536.150	BE	837637.222	820665.116
AB	837607.688	820534.587	BF	837638.467	820667.846
AC	837606.858	820532.767	BG	837647.521	820681.218
AD	837605.214	820529.162	BH	837612.122	820544.307
			BI	837602.113	820548.872
			BJ	837609.292	820538.102
			BK	837599.279	820542.658

TEMPORARY WALL	
TYPE A	SHEET PILE WALL FSP-V (S355)
TYPE B	SHEET PILE WALL FSP-IV (S275)
TYPE C	PIPE PILE WALL 610 DIA. 12.5mm THK. AT 900mm c/c



SUMMARY OF STRUT AND WALER SIZES

ZONE A

ROW	LEVEL (m)	PROP-LOAD (kN/m)	PRE-LOAD (kN/m)	PRE-LOAD (TON)	LACED STRUT SIZE (kg/m) (S355)	WALER SIZE (kg/m) (GRADE)		
						GENERAL	WA1	WA2 (END)
S1	+3.5	384	—	—	2W24, 101	2W24, 149 (S275)	2W36, 388 (S275)	2W36, 253 (S275)
S2	+2.0	458	200	130	2W24, 125	2W24, 179 (S275)	2W36, 388 (S275)	2W36, 253 (S275)
S3 (PERPENDICULAR REPROP)	-2.6	—	—	—	2W24, 125	—	—	—

ZONE B1

ROW	LEVEL (m)	PROP-LOAD (kN/m)	PRE-LOAD (kN/m)	PRE-LOAD (TON)	LACED STRUT SIZE (kg/m) (S355)	WALER SIZE (kg/m) (GRADE)		
						GENERAL	WB1	WB2
S1	+4.5	82	—	—	2W24, 101	2W24, 149 (S275)	2W24, 149 (S275)	2W24, 149 (S275)
S2	+2.0	318	150	98	2W24, 155	2W24, 149 (S275)	2W36, 253 (S275)	2W36, 253 (S275)
S3	-0.5	309	150	98	2W24, 155	2W24, 149 (S275)	2W36, 253 (S275)	2W36, 253 (S275)
S4	-2.5	396	170	111	2W36, 313	2W24, 149 (S275)	2W36, 388 (S275)	2W36, 253 (S275)
S5 (PERPENDICULAR REPROP)	-3.0	—	—	—	2W24, 155	—	—	—
S6 (PERPENDICULAR REPROP)	-1.0	—	—	—	2W24, 155	2W24, 149 (S275)	2W36, 253 (S275)	—

ZONE A1						
ROW	LEVEL (m)	PROP-LOAD (kN/m)	PRE-LOAD (kN/m)	LACED STRUT SIZE (kg/m) (S355)	WALER SIZE (kg/m)	GRADE
S1	+4.5	70	-	2W24, 101	2W24, 149	S275
S2	+2.0	377	150	98	2W24, 155	
S3	-1.5	295	150	98	2W24, 155	
S4	-3.5	222	100	65	2W24, 155	
S5 (PERPENDICULAR REPROP)	-4.5	-	-	-	2W24, 155	
S6 (PERPENDICULAR REPROP)	-2.1	-	-	-	2W24, 155	

G	REVISED AS JV COMMENT	MRR	10DEC13	SHL	DRAWN	TLM
F	REVISED AS JV COMMENT	MRR	11NOV13	SHL	DESIGNED	SHL
E	REVISED AS JV COMMENT	TLM	11OCT13	SHL	CHECKED	LYL
D	REVISED AS JV COMMENT	MRR	24SEP13	SHL	APPROVED	LYL
C	REVISED AS JV COMMENT	MRR	19AUG13	SHL	DATE	18/07/2013
B	REVISED STRUT LEVEL AT ZONE C	TLM	16AUG13	SHL	DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED ON SITE.	
A	ISSUED FOR APPROVAL	TLM	18JUL13	SHL	MTR CORPORATION LIMITED 2008 COPYRIGHT IN RESPECT OF THIS DRAWING / DOCUMENT IS OWNED BY THE MTR CORPORATION LIMITED OF HONG KONG. NO REPRODUCTION OF THE DRAWING / DOCUMENT OR ANY PART BY WHATEVER MEANS IS PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE MTR CORPORATION LIMITED.	

SHANTIN TO CENTRAL LINK

ORIGINATOR

SAMSUNG Hsin Chong Joint Venture

SUBCONTRACTOR

YONGNAM

CADD REF.

1109_W_302_SHJ_T04_YNE_101_1.dgn

TITLE

CONTRACT 1109

SUW AND TKW STATIONS AND TUNNELS

SUW ADIT C

ELS LAYOUT PLAN

SHEET 1 OF 2

SCALE

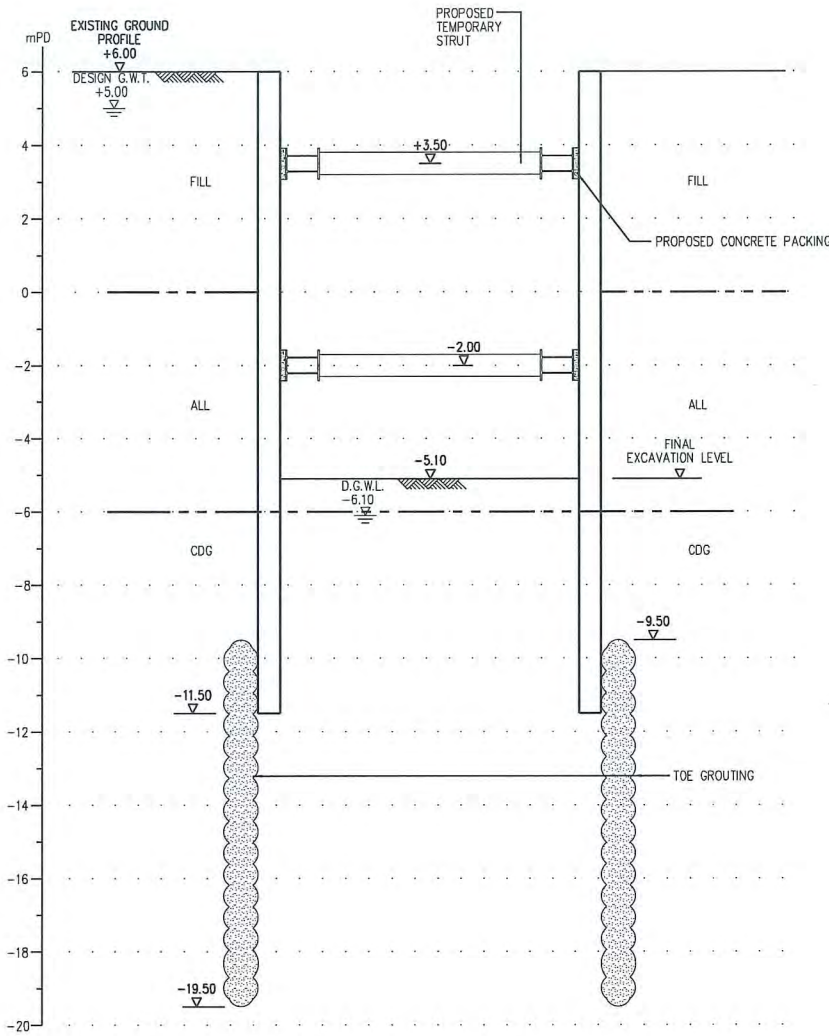
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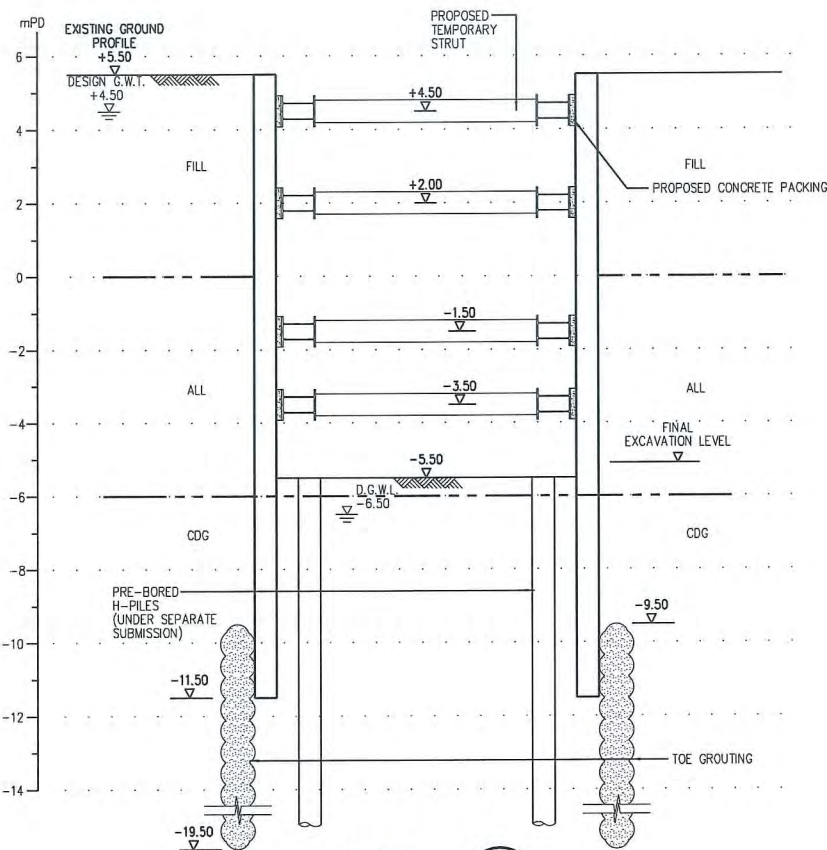
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REV.

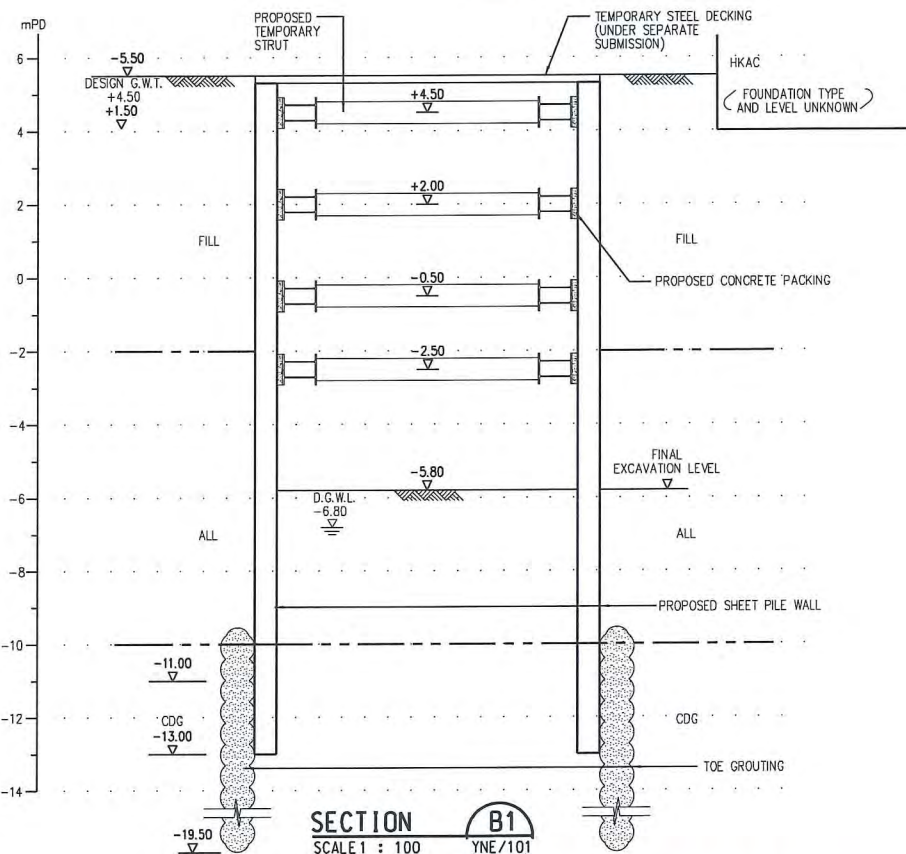
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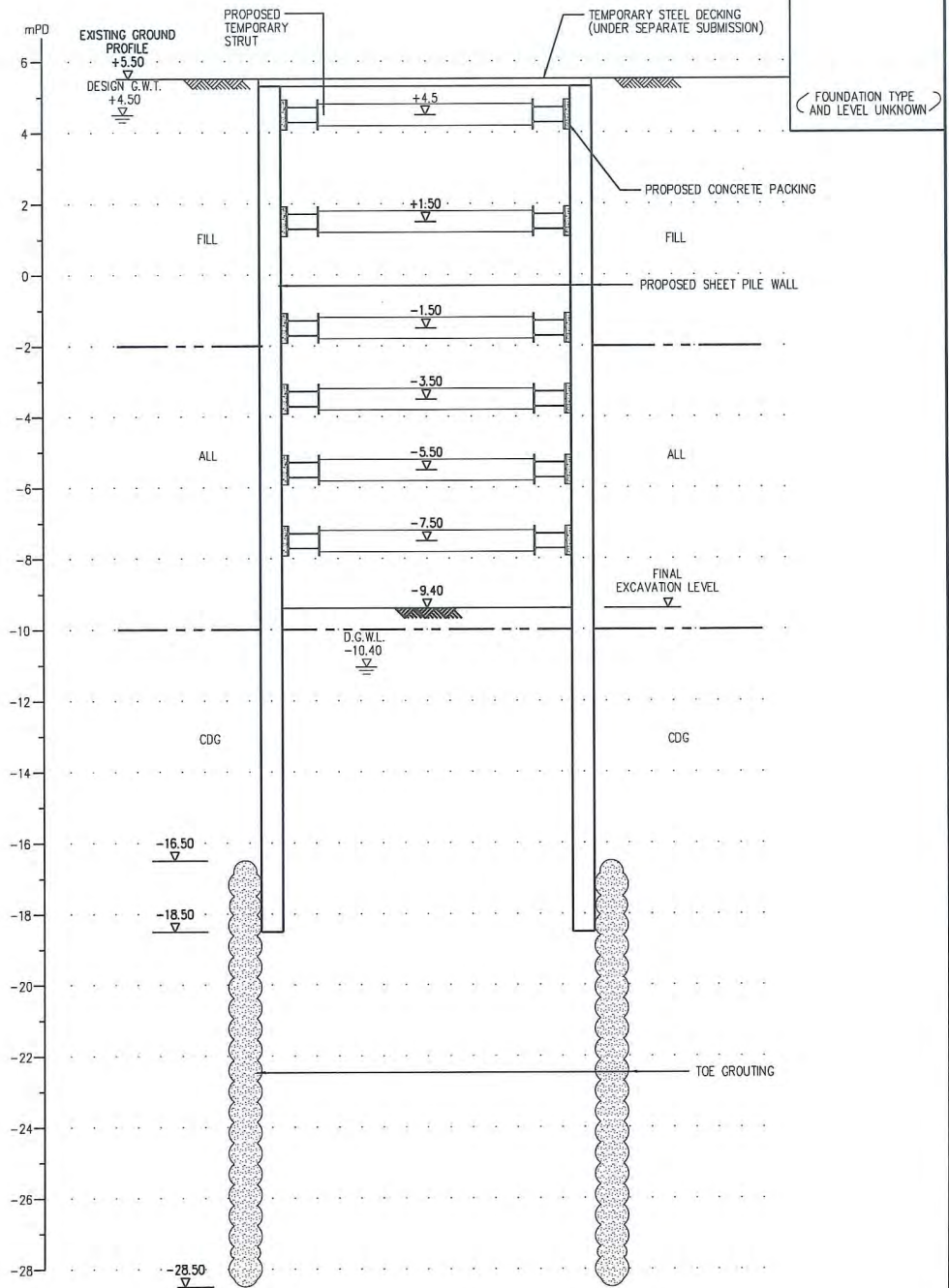
SECTION A
SCALE 1 : 100
YNE/101



SECTION A1
SCALE 1 : 100
YNE/101



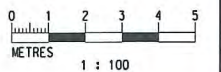
SECTION B1
SCALE 1 : 100
YNE/101



SECTION C
SCALE 1 : 100
YNE/101

NOTES:

1. THE DETAILS ON THE TEMPORARY WALL, REDUCED LEVEL & STRUT LOADS ARE BASED ON DRAWING NO: MOTT MACDONALD REPORT NO: 312757/SCL1109/00078-1 REV A OCTOBER 2013.
2. ALL STEEL MATERIALS SHALL BE GRADE S355 U.O.N.
3. GRADE 30 CONCRETE PACKING SHALL BE PROVIDED BETWEEN TEMPORARY WALL AND WALER GAP.
4. CONCRETE PACKING SHALL ACHIEVE MINIMUM CUBE STRENGTH OF 10MPa BEFORE EXCAVATION TO NEXT LEVEL.
5. PRE-BORED H-PILES LAYOUT AND TYPICAL DETAILS, REFER TO DRAWING NOS. 1109/W/000/OAP/C19/102 AND 1109/W/000/OAP/C20/186 RESPECTIVELY.



DRAWN	MRR
DESIGNED	SHL
CHECKED	LYL
APPROVED	LYL
DATE	03/MAR/2014
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SHATIN TO CENTRAL LINK

ORIGINATOR

Samsung - Hsin Chong Joint Venture

SUBCONTRACTOR

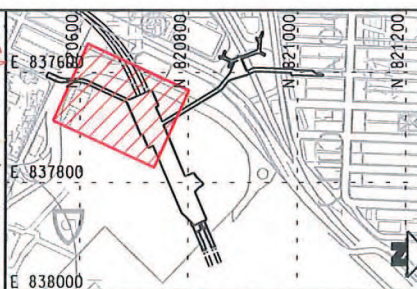
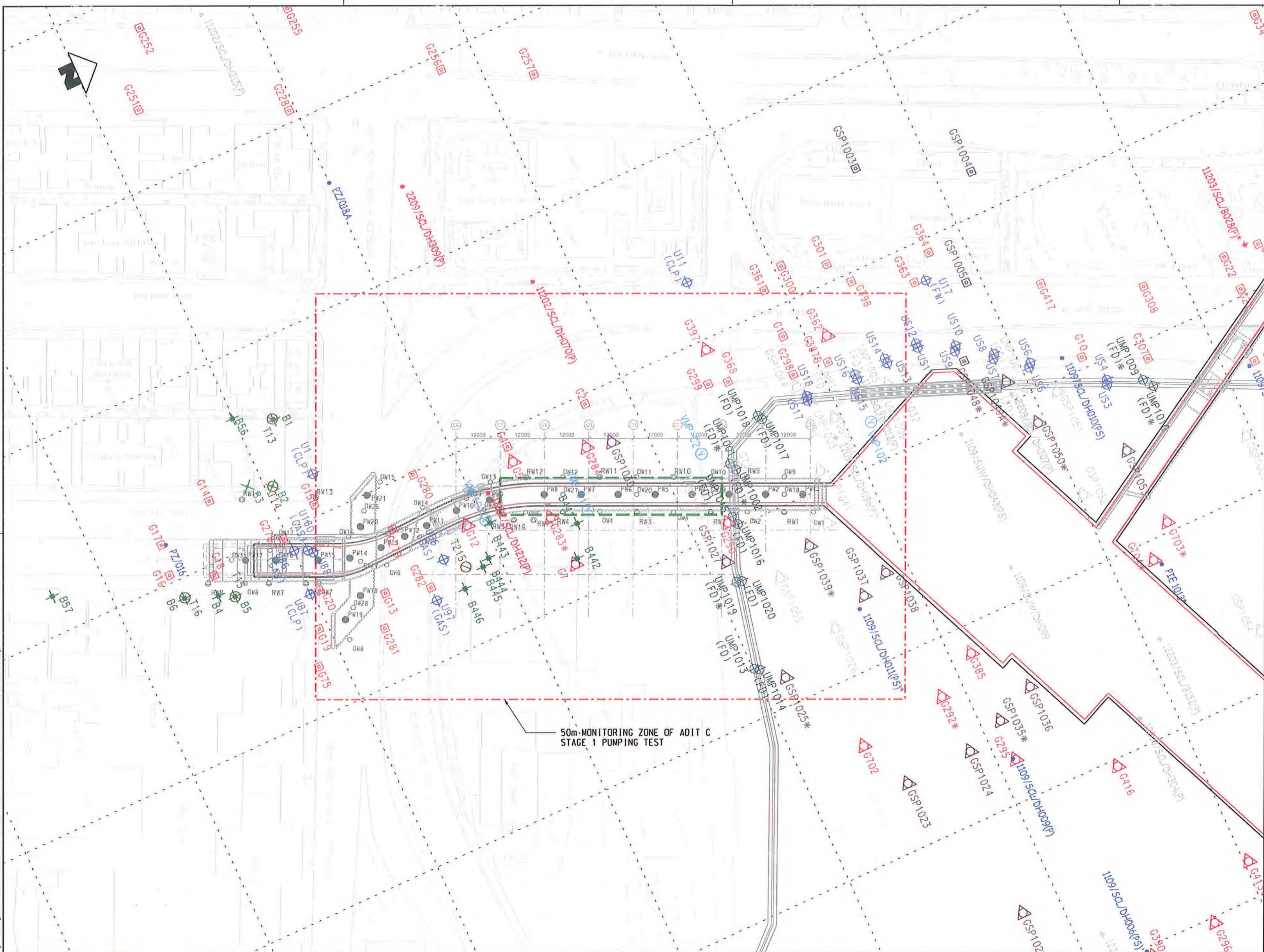
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CADD REF.

1109_W_302_SHJ_T04_YNE_112A.dgn

TITLE			
CONTRACT 1109			
SUW AND TKW STATIONS AND TUNNELS			
SUW ADIT C (PORTION 1)			
TEMPORARY STRUTTING ELEVATION			
(SHEET 1 OF 2)			
SCALE	DRAWING NO.	REV.	
1 : 100 (A1)	1109/W/302/SHJ/T04/YNE/112	A	

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PLOT DRN: 1109 - Engineering & Design\07 CAD\DRAWING\01\01 SKETCH\US RAYSONATION Lem\30.11.2013\09_AL_SK_001.dgn



KEY PLAN
N.T.S

- LEGEND:**
- BUILDING MOVEMENT POINT (TYPE A)
 - BUILDING MOVEMENT POINT (TYPE B)
 - DEFORMATION MONITORING POINT (TYPE I)
 - DEFORMATION MONITORING POINT (TYPE II)
 - MOVEMENT MONITORING POINT (PRISM)
 - MOVEMENT MONITORING POINT (RELECTIVE TAPE)
 - VERTICAL INCLINOMETER (INC)
 - TILE PLATE
 - UTILITIES MONITORING POINT
 - NEW INSTALLED PIEZOMETER
 - EXISTING PIEZOMETER
 - VIBRATION MONITORING POINT
 - MAGNETIC PROBE EXTENSOMETER (MPX)
 - AUTOMATIC VIBRATION MONITORING POINT
 - EXTENT OF PUMPING TEST

- NOTES:**
- 1) THOSE INSTRUMENTS SHOWN IN HALF-TONE HAVE BEEN DAMAGED DUE TO CONSTRUCTION NEEDS.
 - 2) THOSE INSTRUMENTS MARKED WITH "*" REPRESENT COVERED / INACCESSIBLE / BLOCKED.
 - 3) THOSE INSTRUMENTS SHOWN IN ORANGE HAVE BEEN EXCLUDED IN THE CONTRACT AS CONFIRMED.
 - 4) MONITORING FREQUENCY TO BE DAILY.

DRAWN RY
DESIGNED -
CHECKED -
APPROVED -
DATE 29/NOV/2013

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ORIGINATOR
SAMSUNG Hsin Chong Joint Venture

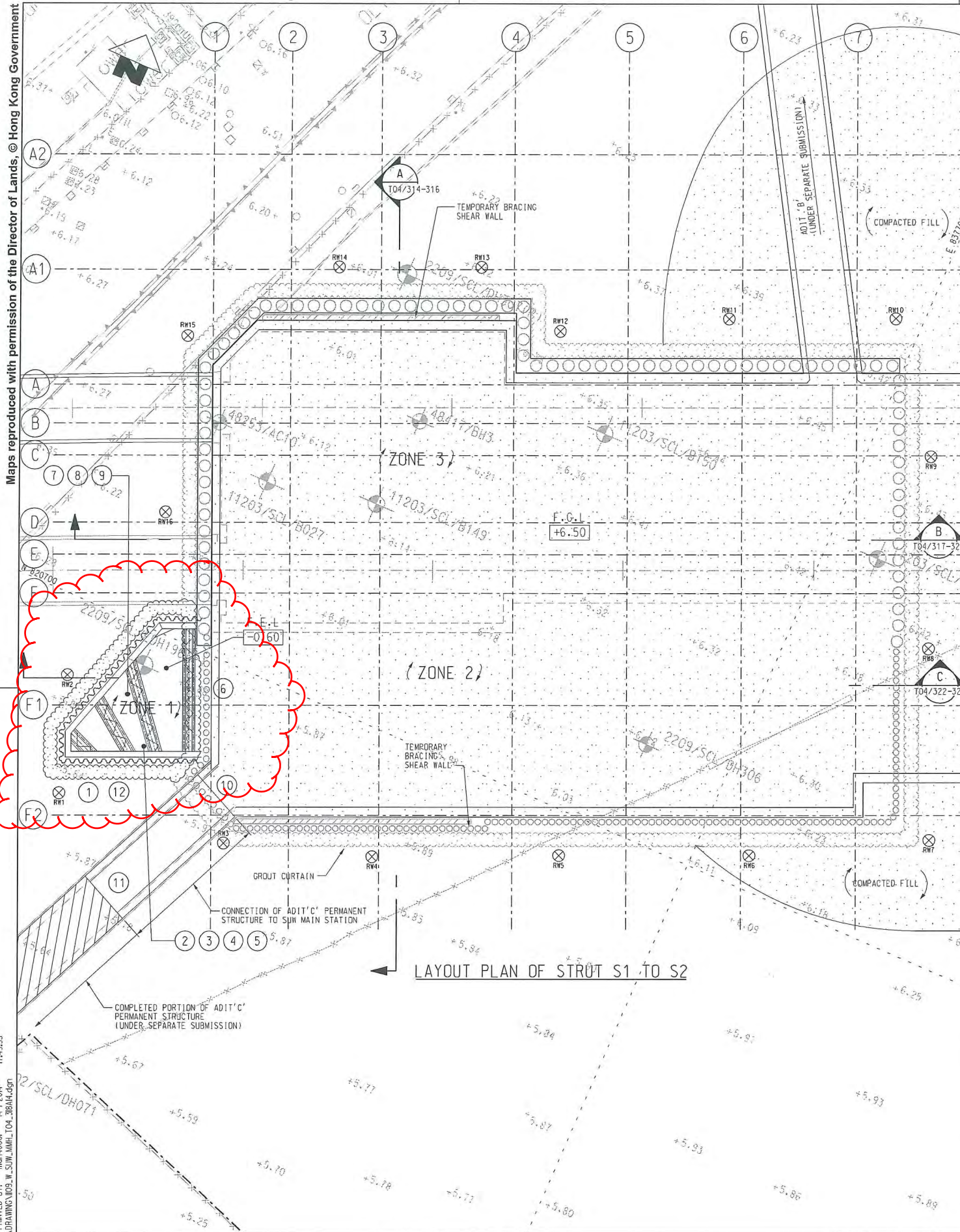
CADD REF. 1109_AL_SK_001_A.dgn

TITLE
CONTRACT 1109
SUW AND TKW STATIONS AND TUNNELS
INSTRUMENTATION POINT LAYOUT
50m MONITORING ZONE OF ADIT C
STAGE 1 PUMPING TEST

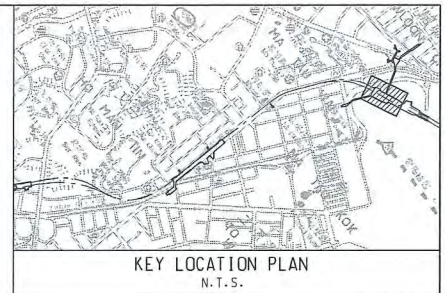
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DRAWING NO. 1109/AL/SK/001

REV. A

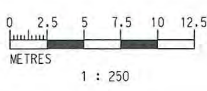


- STAGE 6:**
- CARRY OUT STAGE 3 PUMPING TEST WITHIN ZONE 1.
 - DEWATER TO +3.50 mPD WITHIN ZONE 1, EXCAVATE TO +4.5 mPD WITHIN ZONE 1.
 - INSTALL STRUT LAYER S1 AT +5.50 mPD WITHIN ZONE 1.
 - DEWATER TO -1.60 mPD WITHIN ZONE 1.
 - EXCAVATE TO FINAL EXCAVATION LEVEL AT -0.6 mPD WITHIN ZONE 1.
 - TRIM DOWN THE RELEVANT PIPE PILE/BORE PILE WALL WITHIN ZONE 1 TO MATCH THE FINAL EXCAVATION LEVEL OF -0.6 mPD.
 - CONSTRUCT THE PERMANENT STRUCTURE WITH WATERPROOFING TO ROOF LEVEL INSIDE OF ZONE 1.
 - BACKFILL THE SPACE BETWEEN THE PERMANENT STRUCTURE AND THE SHEET PILE AND PIPE PILE WALL BY MASS CONCRETE AT ZONE 1.
 - AFTER PERMANENT STRUCTURE CONCRETE INSIDE ZONE 1 HAS GAINED SUFFICIENT STRENGTH(45MPa), REMOVE STRUT LAYER S1 AND BACKFILL AND COMPACT TO FINAL GROUND LEVEL.
 - EXCAVATION WITHIN ADIT 'C' COFFERDAM AND TRIM PIPE PILES AT SOUTH EAST SIDE OF SUW COFFERDAM TO MATCH WITH ADIT 'C' FORMATION LEVEL.
 - CONSTRUCT AND CONNECT ADIT 'B' PERMANENT STRUCTURE TO SUW MAIN STATION.
 - ALLOW G.W.T. TO RECHARGE TO INITIAL LEVELS.



- NOTES:**
- GENERAL NOTES AND TYPICAL DETAILS SHALL REFER TO DRAWING NOS. 1109/W/SUW/MMH/C01/301 TO 303, 1109/W/SUW/MMH/T04/351 TO 355 AND 361 TO 372.
 - ELS DEVELOPED WALL ELEVATION SHALL REFER TO DRAWING NOS. 1109/W/SUW/MMH/T04/311 TO 312.
 - SETTING OUT OF PILE WALL SHALL REFER TO DRAWING NO. 1109/W/SUW/MMH/T04/304.
 - PRELOAD SCHEDULE ON DRAWING 1109/W/SUW/MMH/T04/360.
- NOTES ON GROUNDWATER RECHARGE:**
- IN THE EVENT THAT THE GROUNDWATER LEVEL IS FOUND TO BE LOWER THAN 1m BELOW THE DESIGN LOWEST GROUNDWATER LEVEL, RECHARGE WELLS SHALL BE INSTALLED TO RESTORE THE ORIGINAL GROUNDWATER LEVEL.
 - IF GROUNDWATER RECHARGE IS TO BE CARRIED OUT TO MAINTAIN THE SPECIFIED GROUNDWATER LEVELS AT ANY LOCATION, THE GROUNDWATER RECHARGE SYSTEM SHALL HAVE THE MEANS TO REGULATE AND MEASURE THE RATE OF RECHARGE AND TO PROVIDE AN ADEQUATE CONTINUOUS SUPPLY OF WATER FOR RECHARGE.

- LEGEND:**
- SHEET PILE (TYPE IV)
 - 1200mm DIA. AT 1700 c/c MAX BORED PILE WALL
 - 610mm DIA. 12.5mm THK. PIPE PILE WALL
 - FORMATION LEVEL
 - EXISTING GROUND LEVEL
 - KING POST
 - SCL ALIGNMENT
 - MTR SCL G1 STATION (2003)
 - SCL PRELIMINARY DESIGN PHASE G1 STATION (2009)
 - SCL DETAILED DESIGN PHASE G1 STATION (2010)
 - ARCHIVAL G1 STATION (VARIOUS DATES)
 - GAZETTE BOUNDARY (FOR INFORMATION ONLY)
 - GROUT CURTAIN WALL / TOE GROUTING
 - ARCHEOLOGICAL SURVEY -CUM- EXCAVATION EXTENT
 - BRACING SHEAR WALL
 - PROPOSED RECHARGE WELL



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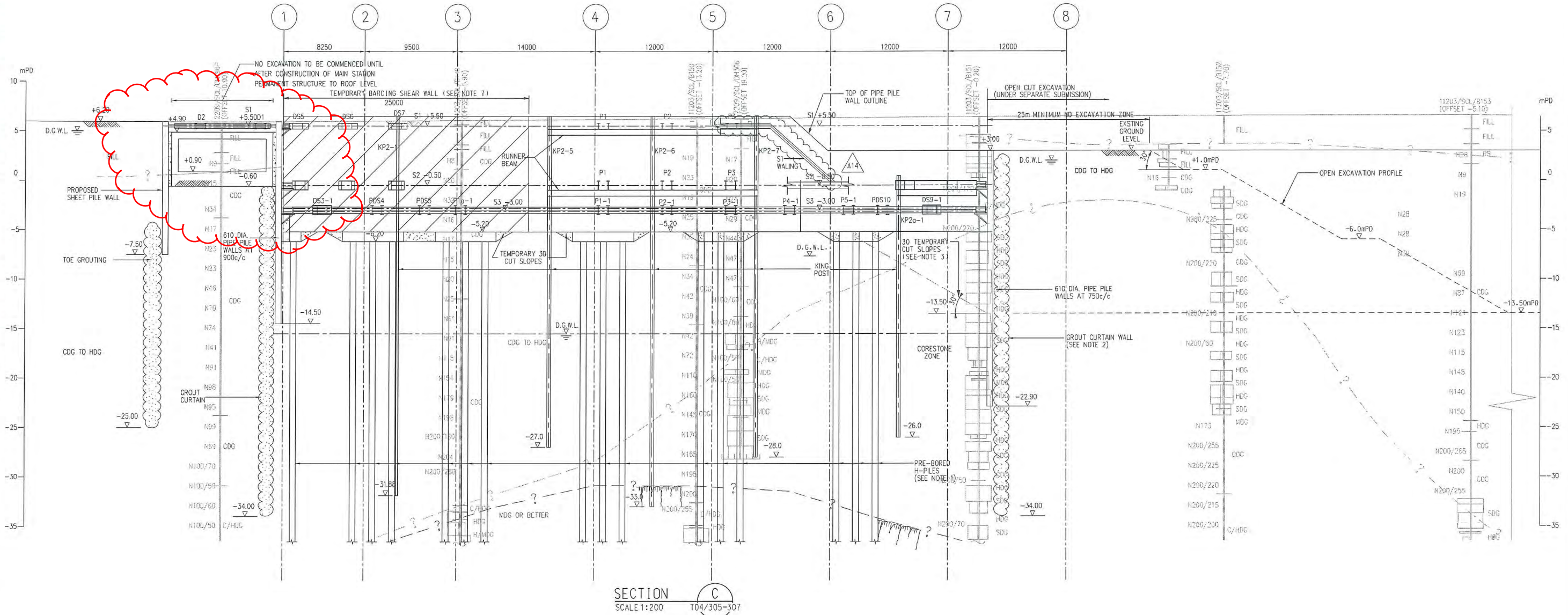
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A14	INCORPORATED JV COMMENTS	KL	13JAN14	DH					
A13	INCORPORATED STAGED PUMPING TEST	KL	30DEC13	DH					
A12	INCORPORATE ICE COMMENTS	KL	29OCT13	DH					
A11	1st SUBMISSION	KL	06SEP13	DH					
A10	BD APPROVED DRAWING (VERTICAL MEMBERS) (5/8/2013)	KL	07AUG13	DH					

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SAMSUNG
新昌 Hsin Chong
Mott MacDonald
Samsung - Hsin Chong Joint Venture


CADD REF.
1109_W_SUW_MMH_T04_318A14.dgn

TITLE CONTRACT 1109 SUW AND TKW STATIONS AND TUNNELS SUNG WONG TOI STATION CONSTRUCTION SEQUENCE PLAN (SHEET 6 OF 6)		SCALE 1 : 500 (A1)	DRAWING NO. 1109/W/SUW/MMH/T04/318	REV. A14
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SECTION C
SCALE 1:200 T04/305-307

LEGEND:

 700mm THK. TEMPORARY BRACING SHEAR WALL

NOTE:

1. STATION FOUNDATION PRE-BORED H-PILES TO BE PROVIDED UNDER SEPARATE SUBMISSION.
2. GROUT CURTAIN FOUNDING LEVEL SHALL BE -34.0mPD.
3. 30° TEMPORARY CUT SLOPE USED DURING CONSTRUCTION STAGE OF OPEN CUT EXCAVATION AND COFFERDAM INTERFACE.
4. ALL STEEL MATERIAL SHALL BE GRADE S355 U.O.N.
5. GRADE 30 CONCRETE SHALL BE PROVIDED BETWEEN WALL AND WATER GAP.
6. ALL KING POSTS WITHIN THE EXCAVATION AREA SHALL BE INSTALLED INTO MIN. 550 DIA. PRE-DRILLED BOREHOLES TO THE SPECIFIED EMBEDMENT DEPTH FOR PRE-BORED HOLE ABOVE FORMATION LEVEL SHALL BE FILLED WITH SUITABLE BACKFILL MATERIAL AND BELOW FORMATION LEVEL SHALL BE FILLED WITH MIN. 30MPa GROUT.
7. REFER TO DRAWING NO. 1109/W/SUW/MMH/T04/352 FOR TYPICAL CONSTRUCTION SEQUENCE OF TEMPORARY BRACING SHEAR WALL.

0 2 4 6 8 10
METRES
1 : 200

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A14	INCORPORATE JV COMMENTS	KL	13JAN14	DH					
A13	INCORPORATED STAGED PUMPING TEST	KL	30DEC13	DH					
A12	INCORPORATE JV COMMENTS	KL	18NOV13	DH					
A11	INCORPORATE JV COMMENT	KL	30AUG13	DH					
A10	BD APPROVED DRAWING (VERTICAL MEMBERS) (5/8/2013)	KL	07AUG13	DH					

DRAWN	KL
DESIGNED	TC
CHECKED	RC
APPROVED	DH
DATE	07/08/2013
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SHATIN TO CENTRAL LINK

ORIGINATOR

SAMSUNG **新昌 Hsin Chong** **Mott MacDonald**

Samsung - Hsin Chong Joint Venture

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TITLE		CONTRACT 1109	
		SUW AND TKW STATIONS AND TUNNELS	
		SUNG WONG T01 STATION	
		ELS SECTIONS - SECTION C	
SCALE	1 : 200 (A1)	DRAWING NO.	1109/W/SUW/MMH/T04/310
REV.	A14		