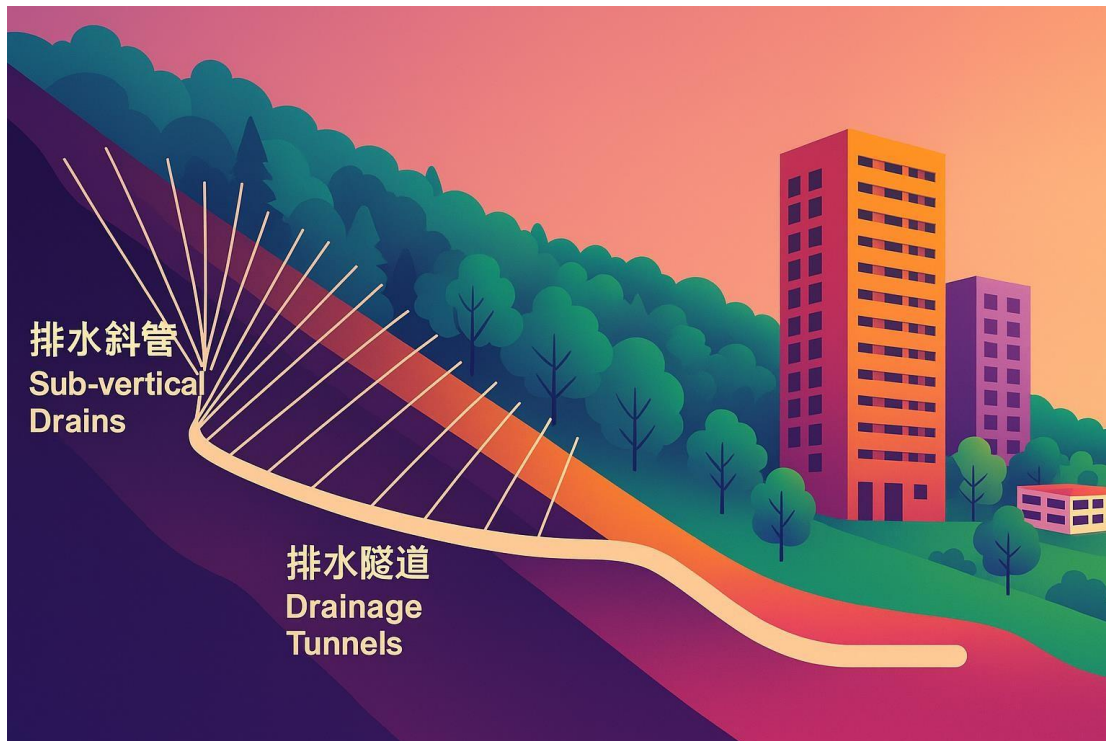


1. Introduction

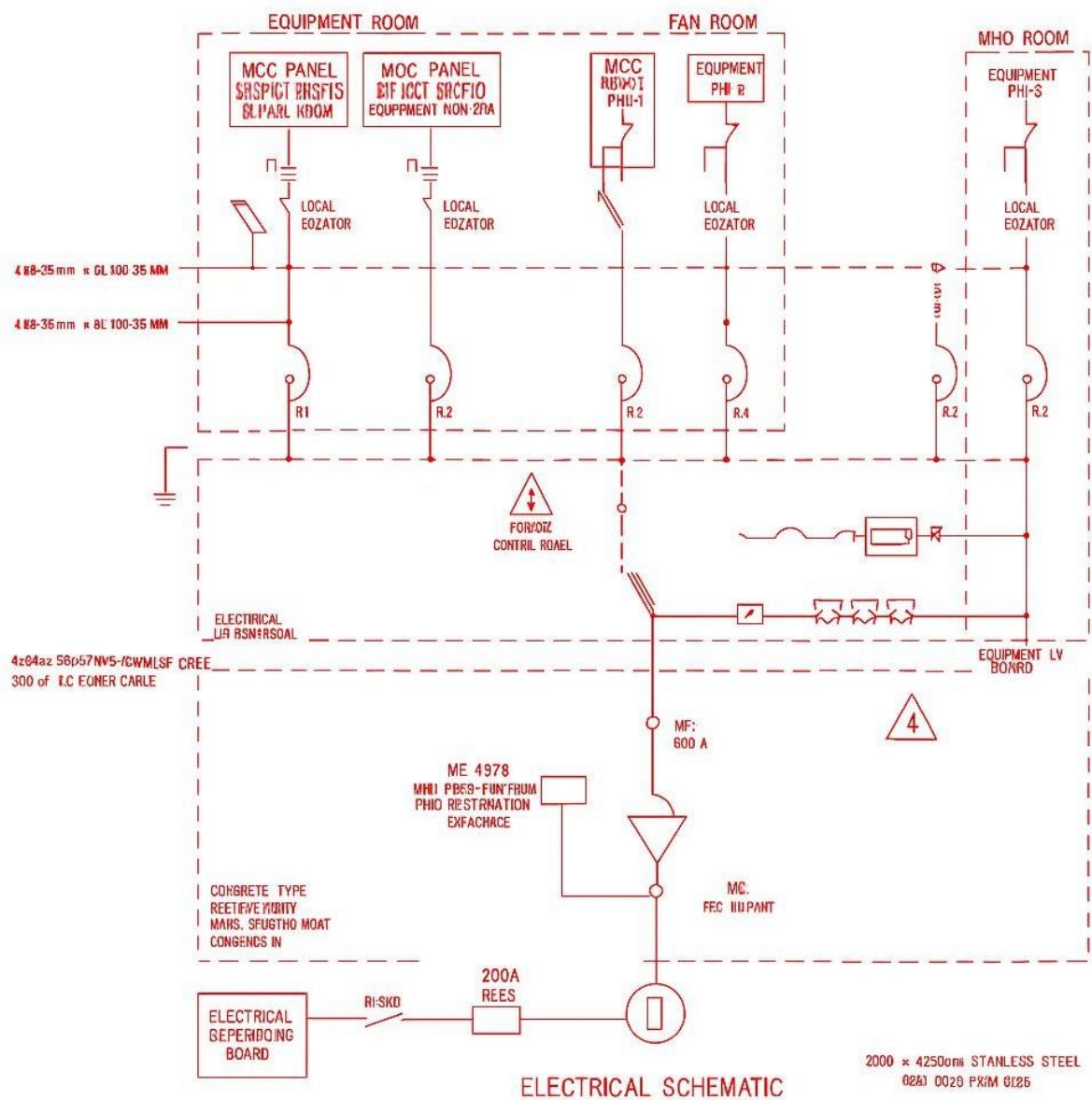
The Po Shan Drainage Tunnel features an advanced electrical system that supports its operation and monitoring functions. This system includes real-time groundwater monitoring to control water levels and reduce landslide risks, as well as a sub-vertical drain network. The tunnel is also equipped with a "Landslide Sci-Tech Chamber" that showcases the system's workings and the importance of slope safety.



2. Electrical System

Electricity is supplied by HEC to the 200A electrical LV switchboard, from where it is distributed to MCB boards. These boards provide power for lighting, equipment, and motors within the tunnel. The electrical schematic diagram is illustrated below.

3. LAYOUT AND SCHEMATIC DIAGRAM



4. Checking Record

工程項目：	固定公共電力裝置檢查測試				
PROJECT:	Po Shan Road Tunnel				
	Electrical Installation Periodic Inspection				
地點：	switch room				
LOCATION:	Electrical switch Room				
電箱：					
PANEL:	DB-vent fan				
CIRCUIT NO	AMPERE	LOCATION	CIRCUIT NO	AMPERE	LOCATION
線路	安培	位置	線路	安培	位置
1L1	10	lighting	2L1	10	lighting
1L2	10	lighting	2L2	10	lighting
1L3	10	lighting	2L3	10	lighting
3L1	32	s/o	4L1	32	s/o
2L2	32	s/o	4L2	32	s/o
3L3	32	s/o	4L3	32	s/o

工程項目：	固定公共電力裝置檢查測試				
PROJECT:	Po Shan Road Tunnel				
	Electrical Installation Periodic Inspection				
地點：	switch room				
LOCATION:	Electrical switch Room				
電箱：					
PANEL:	DB-vent fan				
CIRCUIT NO	AMPERE	LOCATION	CIRCUIT NO	AMPERE	LOCATION
線路	安培	位置	線路	安培	位置
1L1	63	fan room	2L1		
1L2	63	fan room	2L2		
1L3	63	fan room	2L3		

工程項目：	固定公共電力裝置檢查測試				
PROJECT:	Po Shan Road Tunnel				
	Electrical Installation Periodic Inspection				
地點：	switch room				
LOCATION:	Electrical switch Room				
電箱：					
PANEL:	DB-water pump				
CIRCUIT NO	AMPERE	LOCATION	CIRCUIT NO	AMPERE	LOCATION
線路	安培	位置	線路	安培	位置
1L1	32	pump	2L1		
1L2	32	Pump	2L2		
1L3	32	pump	2L3		

固定公共電力裝置檢查測試				
Po Shan Road Tunnel				
Electrical Installation Periodic Inspection				
switch room				
Electrical switch Room				
DB-Tunnel				
AMPERE	LOCATION	CIRCUIT NO	AMPERE	LOCATION
安培	位置	線路	安培	位置
20	A Tunnel lighting	2L1	20	equipment room lighting
20	A Tunnel lighting	2L2	6	tunnel lightng centre room
20	A Tunnel lighting	2L3	32	A tunnel fan room s/o
6	A tunnel exit signs	4L1	32	HKO equipment room s/o
20	Fan Room lighting	4L2	32	A tunnel s/o
20	Pump Room Lighting	4L3	32	A tunnel s/o
32	32A TPN s/o	6L1	6	Equipment room vent fan
32	32A TPN s/o	6L2	6	fan room vent fan
32	32A TPN s/o	6L3	10	pump room vent fan
32	projector s/o	8L1	16	network cap

工程項目：	固定公共電力裝置檢查測試				
PROJECT:	Po Shan Road Tunnel				
	Electrical Installation Periodic Inspection				
地點：					
LOCATION:	Electrical switch Room				
PANEL:	DB-LT				
CIRCUIT NO	AMPERE	LOCATION	CIRCUIT NO	AMPERE	LOCATION
線路	安培	位置	線路	安培	位置
1L1	20	Low Tunnel lighting	2L1	20	Low tunnel lighting
1L2	20	Low Tunnel lighting	2L2	20	Low tunnel lighting
1L3	20	Low Tunnel lighting	2L3	20	Low tunnel lighting
3L1	32	Low Tunnel s/o	4L1	32	Low tunnel drainage system
2L2	32	Low tunnel s/o	4L2	32	High tunnel drainage system
3L3	10	Air flow monitoring panel	4L3	32	AFA control and monitoring system



Lighting Locations

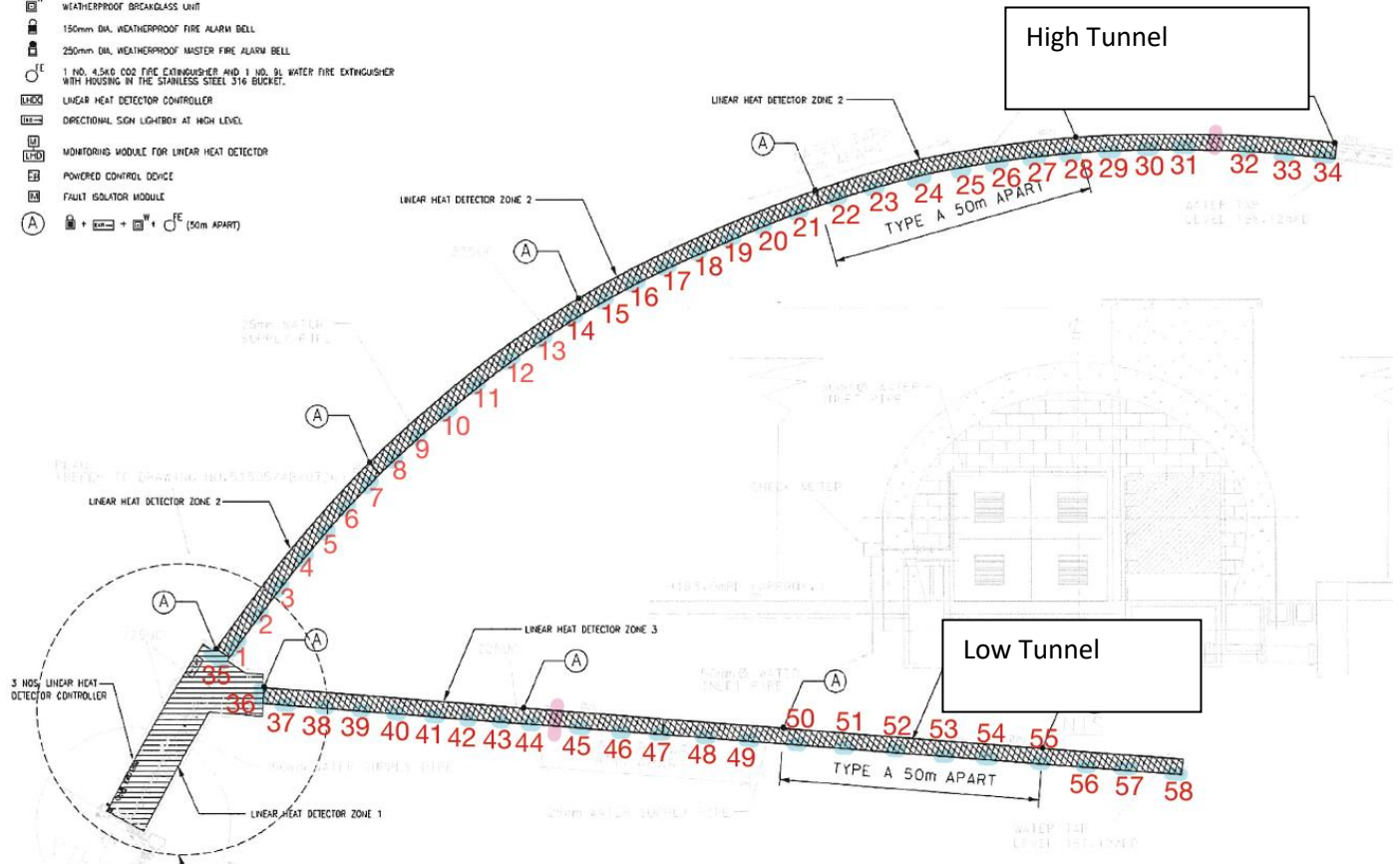
Location:	Po Shan Tunnel
Subject:	Repairing of Tunnel Illumination

NOTES:

1. ALL DIMENSIONS ARE IN mm, UNLESS SPECIFIED.

LEGEND:

- MAIN FIRE ALARM AND CONTROL PANEL
- WEATHERPROOF BREAKGLASS UNIT
- 150mm DIA. WEATHERPROOF FIRE ALARM BELL
- 250mm DIA. WEATHERPROOF MASTER FIRE ALARM BELL
- 1 NO. 4.5KG CO2 FIRE EXTINGUISHER AND 1 NO. 9L WATER FIRE EXTINGUISHER WITH HOUSING IN THE STAINLESS STEEL 316 BUCKET.
- LINEAR HEAT DETECTOR CONTROLLER
- DIRECTIONAL SIGN LIGHTBOX AT HIGH LEVEL
- MONITORING MODULE FOR LINEAR HEAT DETECTOR
- POWERED CONTROL DEVICE
- FAULT ISOLATOR MODULE
- TYPE A 50m APART



6.Damage Items**Electricity equipment damage items**

	Items		Location		Quantity	Recommendations
1	Light tube (E1)		No.12 ,13		2	Option 1: Replace the light tube directly. <i>(If the light tube does not function properly after replacement, proceed to Option 2).</i>
2	Energy multi-function meter (E2)		Electrical LV switchboard (Main switch room)		1	
3	32A MCB switch SP (E3)		"DB A tunnel" box for Projector S/O		1	
4	Emergency light set c/w battery & tube (F1)		Tunnel No.7,20,29,37,49,52		6	
5	Emergency light set c/w battery & tube (F2)		Corridor No.AT-11(E)		1	Option 2: Replace the entire fixture, including the light tube.
6	Emergency light set c/w battery & tube (F3)		Water booster room		1	
7	Emergency light tube (F4)		Tunnel No.3		1	

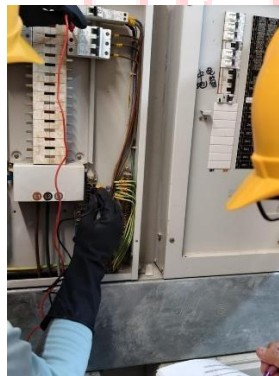




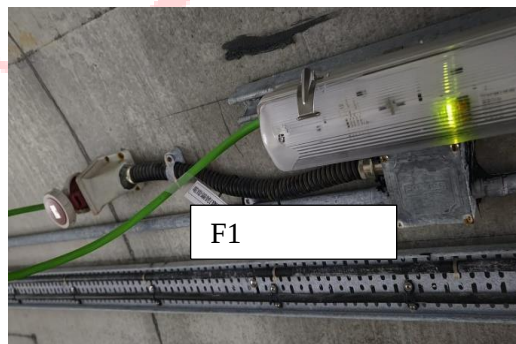
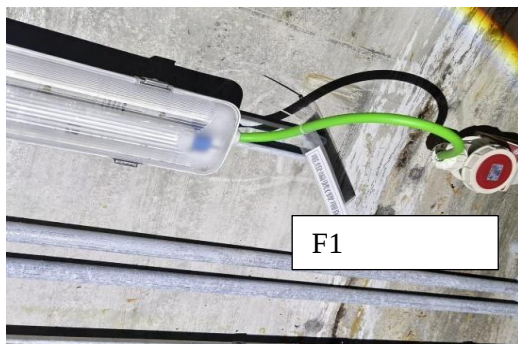
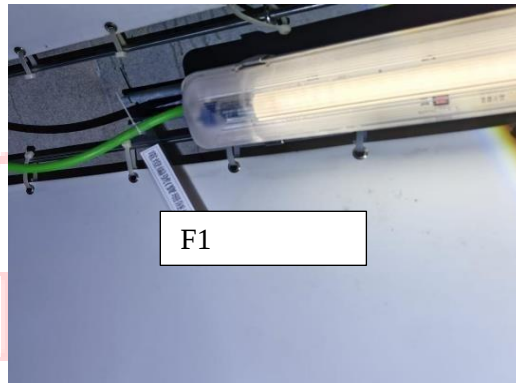
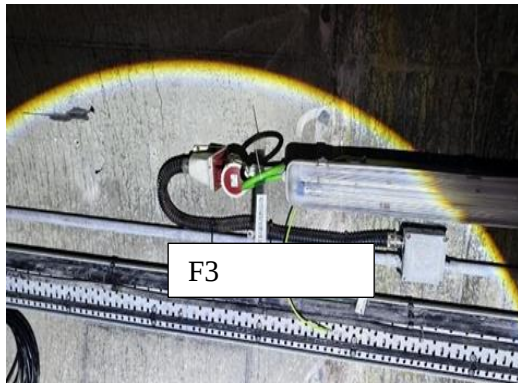
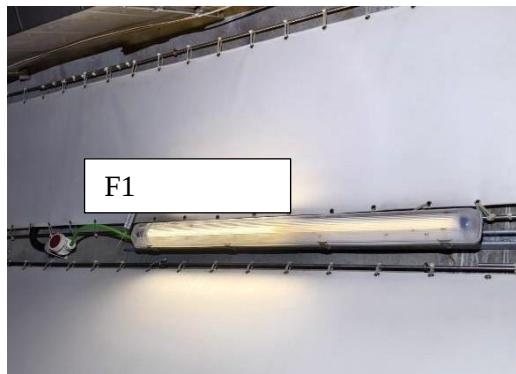
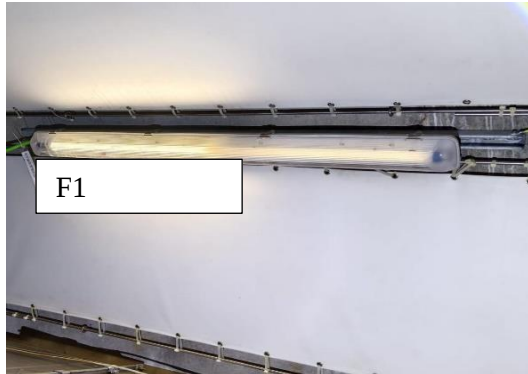
E2: Energy Multi-Function Meter

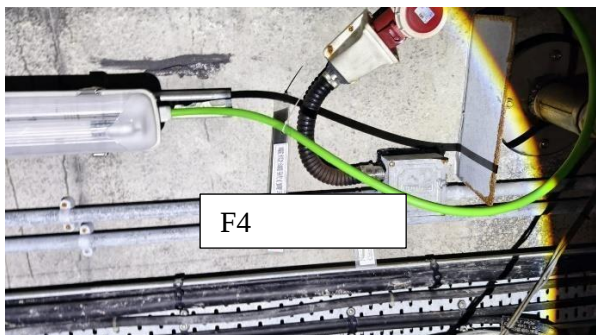
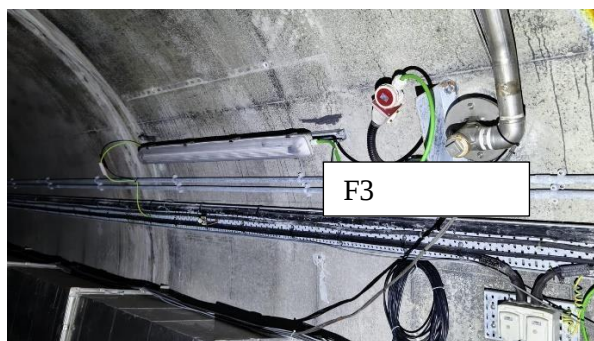
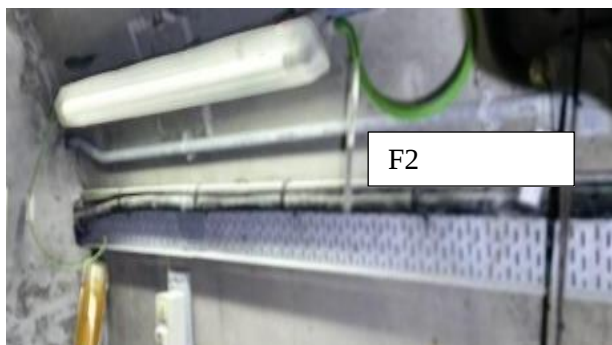


E3: 32A MCB Switch SP



Emergency Light Set C/W Battery & Tube





7.SITE PHOTO RECORD ON 30 APRIL

