

Appendix II
Traffic Impact Assessment

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Traffic Impact Assessment Report – Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land



Document No. W1037/TIA/001/DBR

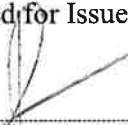
Issue 1

July 2025

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Traffic Impact Assessment Report – Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land

Approved for Issue by:	
	
Position:	<u>Project Manager</u>
Date:	<u>July 2025</u>

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Issue	Prepared by	Reviewed by	Date
1	HC	KW	July 2025

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1.0 INTRODUCTION

1.1 Project Background

- 1.1.1. Mannings (Asia) Consultants Ltd (MANN) was commissioned by Sum Wui Investment Limited to undertake the Traffic Impact Assessment (TIA) study for the Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land (The Site) located on Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories.
- 1.1.2. The Site falls within an area zoned “Agriculture” (“AGR”) on the Approved Ha Tsuen Fringe Outline Zoning Plan (OZP) No.: S/YL-HTF/12. The Site occupies an area of 9,938 m² (about). A 2-storey structure is proposed at the Site for site office and guardroom uses with total gross floor area (GFA) of 60 m² (about). The remaining area is reserved for area for open storage operations, vehicle parking and loading/unloading (L/UL) spaces and circulation area.
- 1.1.3. The Site is accessible via Deep Bay Road, Kai Pak Ling Road, and a temporary road constructed by another CEDD contract, which connects to the at-grade road network of Kong Shum Western Highway. The operation hours of the proposed development are Monday to Saturday from 09:00 to 19:00. There is no operation on Sunday and public holidays.
- 1.1.4. The Considering the potential for increased traffic from the Site, this TIA study will be conducted to evaluate the effects on the surrounding road network.

2.0 OBJECTIVES

- 2.0.1. The objectives of this TIA study cover:
 - To evaluate the feasibility of the Site from traffic engineering perspectives; and
 - To assess the traffic impact of the Site to the adjacent road network and road junction during operation of the Site.



3.0 EXISTING TRAFFIC CONDITION

3.1 Existing Traffic Pattern

- 3.1.1. Under the operation stage, the Site is accessible via Deep Bay Road, Kai Pak Ling Road, and a temporary road constructed by another CEDD contract, which connects to the at-grade road network of Kong Shum Western Highway. This is the proposed delivery route to the Site and mainly divided into three road section. The specifics of the delivery route and the details of three road sections are presented in Drawings No. Figure 1 of Delivery Route Plan in Appendix A.
- 3.1.2. Regarding Road Section 1, Deep Bay Road between the Site and Kai Pak Ling Road, the road width, as measured by the basemap of Lands Department, is approximately 3.0 meters. Observations and on-site measurements indicate that vehicles utilize the verge area, resulting in a total width exceeding 3.5 meters for vehicle use. However, due to the lack of intervisible passing bays, it is considered a substandard single-track access road.
- 3.1.3. Regarding Road Section 2, Kai Pak Ling Road, which lies between Deep Bay Road and a temporary road constructed under a separate CEDD contract, this section of Kai Pak Ling Road is a standard single-track access road. It features an approximate road width of 3.5 meters and includes passing bays that are intervisible, ensuring adequate provision for vehicles.
- 3.1.4. Regarding Road Section 3, the temporary road built by another CEDD contract, situated between Kai Pak Ling Road and the at-grade road network of Kong Shum Western Highway, this section of temporary road partially utilizes the permanent road configuration for public use during its construction phase. The road width of this temporary road is approximately 7 meters which is a single carriageway. Under the CEDD contract, the permanent road directly connects with the existing roundabout of the at-grade road network of Kong Shum Western Highway.

3.2 Observed Traffic Flow

- 3.2.1. Manual classified traffic count survey in the study area were carried out on 11 June 2025 (Wednesday) from 07:00 to 20:00 in order to collect the most updated traffic flow volume of the affected road section and access the feasibility of the works as shown in **Table 1** and the survey locations are indicated in Drawing No. **Figure 2** in **Appendix A**.

Table 1 - Affected Road Junctions and Roundabout

J1	The priority junction of Deep Bay Road with Kai Pak Ling Road
J2	The roundabout of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street

- 3.2.2. According to the survey results, the peak hour of the affected junctions is different during the survey period. The peak hour flows are summarized in **Table 2**.

Table 2 - Peak Hour Flow of the Affected Road Junctions / Roundabout

	Affected Road Section / Junction	AM PEAK	PM PEAK
J1	The priority junction of Deep Bay Road with Kai Pak Ling Road	07:45- 08:45	16:15- 17:15
J2	The roundabout of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street	07:30- 08:30	17:15- 18:15

- 3.2.3. The peak hour flow at each affected junction varies from 07:30 to 08:45 (AM PEAK) and 16:15 to 18:15 (PM PEAK). In order to present the peak hour flow at each junction for the most critical scenario, we have used the flow data at the peak hours of each junction and assemble them together in one traffic flownet as shown in Figure 3 in Appendix A.

4.0 TRAFFIC FORECAST

- 4.1. According to the preliminary plan, the Site is expected to be completed by 2025 and operate for a period of three years. However, since the planning application involves a 3-year development period, the study conservatively adopts 2028 as the design year. Accordingly, traffic flows during the operational phase should be projected based on conditions in 2028.
- 4.2. Traffic forecasts are estimated based on the results of the observed traffic survey and the 2019-Based Territorial Population and Employment Data Matrices (2019 TPEDM) published by Planning Department and the Annual Average Daily Traffic (AADT) data of the latest five years. The three sets of data aim to facilitate the assessment of the strategic development opportunities in the territory.
- 4.3. Territorial Population and Employment Data Matrices (TPEDM)
- 4.3.1. Table 3 presented the population and employment data in Northwest New Territories for 2019 and 2026 from 2019-based Territorial Population and Employment Data Matrices (TPEDM) provided by Planning Department.

Table 3 - Territorial Population and Employment Data Matrix (TPEDM)

Category	TPEDM (2019 Based)			Annual Growth
	2019	2023 ⁽¹⁾	2026	
Population	222,800	232,200	239,250	1.02%
Employment	58,400	68,943	76,850	4.00%
Total	281,200	301,143	316,100	1.69%

Source: 2019-based TPEDM published by Planned Department

Note (1): 2023 population and employment places are calculated by interpolation

- 4.4. Annual Average Daily Traffic (AADT)
- 4.4.1. Reference is made from the Annual Traffic Census (ATC) Reports for the ATC stations within the Study Area, Table 4 describes the location of the nearby ATC station and provides the corresponding traffic data.

Table 4 - Annual Traffic Census (ATC) Data

Location	Stn No.	from	to	AADT (veh / day)						Annual Growth
				2018	2019	2020	2021	2022	2023	
Ping Ha Rd & Fau Shan Rd	5858	Tin Ha Rd	Deep Bay Rd	12,680	12,590	12,070	10,310	8,390	8,590	-7.49%

4.5. Method of Forecasting

- 4.5.1. The traffic growth rates over successive years are presented in Table 3 and Table 4, respectively. The purpose of forecasting traffic flow for the year 2028 is to support traffic impact assessments during both the construction and operational phases as well as to anticipate future conditions. An annual growth rate of 1.69% is identified in Table 3, whereas a negative annual growth rate of -7.49% is shown in Table 4. Therefore, to adopt a conservative approach, the higher annual growth rate of 1.69% has been used for forecasting traffic flow in 2028.

4.6. Future Vehicular Flows

- 4.6.1. As the planning application indicates that the temporary open storage development will run for a period of 3 years, and the expected end year for the project site is 2028. This design year was adopted to reflect the operational period of the open storage, which aligns with the 3-year project duration described throughout the report. The traffic flow in year 2025 was obtained from the manual traffic count surveys undertaken 11 June 2025 (Wednesday). These survey flows were subsequently used as the base year traffic flows for the required traffic forecast.
- 4.6.2. As The forecasted traffic flows for year 2028 are based on the estimation equation as shown in Table 5. The resultant factor is shown in Table 6 for Traffic Growth Factor. This growth factor is applied to the relevant road sections in respect to the proximity of the locations.

Table 5 - Traffic Flows Estimation Equation (Peak 15 mins)

Scenario	Equation
2028 Traffic Flows	2025 Flows $\times (1+1.69\%)^3$

Table 6 - Traffic Growth Factors (Peak 15 mins)

Scenario	2025 Growth Factor
2028 Traffic Flows	2025 Flows $\times 1.032$

2028 Reference Flows= 2025 Flows x annual growth factors

2028 Design Flows = 2028 Reference Flows + Additional Traffic by Development

- 4.6.3. The 2028 Reference Traffic flownet and 2028 Design Traffic flownet are shown in Figure 4 and Figure 6 in Appendix A. And, the additional traffic flow by the development is shown in Figure 5 in Appendix A.

5.0 VEHICULAR TRAFFIC IMPACT ASSESSMENT

5.1. Estimation of Development Flows

5.1.1. To estimate the vehicular trips generated from the Site, trip rate derived from the TIA Final Report prepared by CKM Asia Limited under planning permission No. A/YL-HTF/1133 for the use of “Proposed Temporary Open Storage of New Vehicles (Private Cars), Construction Materials, Machineries, Equipment and Storage of Tools and Parts with Ancillary Site Office for a Period of 3 Years and Filling of Land at Various Lots in D.D. 128 and adjoining Government Land, Ha Tsuen, Yuen Long, New Territories” (hereinafter called “Previous CKM Study”) is adopted in this Study.

5.1.2. Adopted trip rate and projected development traffic for the Site are presented in Table 7-1 and Table 7-2 respectively.

Table 7-1 Adopted Daily Trip Rate from TIA Report under Previous CKM Study

Development Type	Daily Trips Rate
Open storage	0.00036 veh/m ²

5.1.3. Refer to the TIA Final Report under Previous CKM Study, 25% of traffic are generated during the AM and PM Peak periods. The calculated AM and PM peak hour traffic generation by the Site are presented in Table 7-2.

5.1.4. Table 7-2 Calculated Peak Hour Traffic Flows for the Site

Development Type	Parameter for the Site	Item	Vehicular Trips			
			Weekday AM		Weekday PM	
			In	Out	In	Out
Open storage	Site Area = 9,938 m ²	Trip Generation (veh/hr)	1	1	1	1
		Trip Generation (pcu/hr) ⁽¹⁾	3	3	3	3

Note: (1) For conservative approach, it is assumed that all vehicles are heavy vehicles with pcu factor 2.5.

5.1.5. The calculated peak hour development traffic flow for the Site is expected to be 3 pcu's (equivalent to 1 veh.) per direction for both AM and PM peak hours.

5.2. Future Link Capacity Assessment

5.2.1. In order to determine the utilization level of the affected, the Vehicle Capacity (VC) has been adopted. To estimate the traffic flow generated from the Site, it is assumed that 3 pcu's (equivalent to 1 veh.) per direction for both AM and PM peak hours

5.2.2. The link capacity assessments for year 2028 Reference and Design Scenario carried out and the results are presented in Table 8.

Table 8 - Summary of Future Link Capacity Assessment

Road Section	Location	Dir.	Design Capacity	2028 Reference				2028 Design			
				AM		PM		AM		PM	
				Flows (veh/hr)	P/Df ⁽¹⁾	Flows (veh/hr)	P/Df ⁽¹⁾	Flows (veh/hr)	P/Df ⁽¹⁾	Flows (veh/hr)	P/Df ⁽¹⁾
R1	Deep Bay Road	2-way	100	67	0.67	60	0.60	69	0.69	62	0.62
R2	Kai Pak Ling Road	2-way	100	40	0.40	28	0.28	42	0.42	30	0.30
R3	Temporary road	2-way	800	68	0.09	44	0.06	70	0.09	46	0.06

Notes: (1) P/Df = Peak Hourly Flows/ Design Flow Ratios for road links

5.2.3. The results in Table 8 indicate that all the concerned road links in the Study Area operate satisfactorily during the peak hours under the 2028 Reference Scenario (Without the Site) and Design Scenario (with the Site).

5.3. Future Junction Capacity Assessment

5.3.1. The junction capacity assessments for year 2028 Reference and Design Scenario carried out and the results are presented in Table 9. The detailed calculation sheets are shown in Appendix B.

Table 9 - Summary of Future Junction Capacity Assessment

Junction	Location	Type	Capacity Index	2028 Reference		2028 Design	
				AM	PM	AM	PM
J1	Deep Bay Rd/ Kai Pak Ling Rd	Priority	DFC	0.02	0.02	0.02	0.02

5.3.2. Referring to the results in Table 9, the affected junction would be operating within capacity during peak hours for both the 2028 Reference Scenario (Without the Site) and Design Scenario (with the Site).

- 5.3.1. Although the proposed delivery route is not planned to pass through Junction J2, a conservative approach has been adopted to account for possible deviations in vehicle movements. It is assumed that approximately 10% of delivery vehicles may inadvertently enter Junction J2. Therefore, J2 has also been included in the capacity assessment to ensure the robustness and completeness of the evaluation. Detailed junction capacity assessments are provided in Appendix B.

Table 10 – Junction Capacity Assessment for Affected Roundabout

Junction	Location	Type	Capacity Index	2028 Reference		2028 Design	
				AM	PM	AM	PM
J2	Deep Bay Rd/ Lau Fau Shan Rd	Roundabout	DFC	0.44	0.35	0.44	0.35

- 5.3.3. Referring to the results in Table 10, the affected junction would be operating within capacity during peak hours for both the 2028 Reference Scenario (Without the Site) and Design Scenario (with the Site).



6.0 DEEP BAY ROAD UPGRADE WORKS

- 6.1. Based on Section 3.1, the proposed delivery route's Road Section 2 (Kai Pak Ling Road) and Road Section 3 (the temporary road constructed under a separate CEDD contract) are expected to meet standard road provisions for public use. Conversely, Road Section 1 (Deep Bay Road), connecting the Site to Kai Pak Ling Road, is identified as a substandard single-track access road, primarily due to the absence of intervisible passing bays.
- 6.2. Traffic assessment conducted during the operational phase of the Site indicates that the generated traffic will not significantly impact the roads along the delivery route. To further ensure smooth traffic flow, particularly on Road Section 1 of Deep Bay Road, the Site owner intends to implement mitigation measures. These measures include upgrading Road Section 1 of Deep Bay Road to a standard single-track access road with the provision of adequate, intervisible passing bays to facilitate two-way traffic flow. These enhancements will not only improve traffic flow but also optimize logistics within the surrounding local areas.
- 6.3. Appropriate warning signs and lighting would be provided on the approaches to and along the works areas in accordance with the standards and requirements as stipulated in the latest version of the “Code of Practice for the Lighting, Signing and Guarding of Road Works” and the “Transport Planning and Design Manual”.



- 6.4. The design parameters for the design of single track access road refers to TPDM Volume 2, Chapter 3.11 Single Track Access Road and the details are summarized below:
- As the roads serve as an Emergency Access for fire engines a minimum carriageway width of 3.5m should be provided.
 - At passing bays, lay-bys and elsewhere where a two lane section of road is required a nominal carriageway width of 6.0m should be provided
 - The main criterion for passing places is that they should be intervisible. Where forward visibility is unrestricted passing places should be provided at intervals of approximately 60m (measured from the end of one to the start of the next) consistent with adjacent topography and land tenure.
 - Each passing place should preferably be at least 12m long to accommodate two light vehicles, plus nominal tapers of 1:3
 - Where a road is initially two lane for a short section prior to becoming a single track road, traffic sign 604 (TC 304) "Single track road with passing places" should be erected.
 - The speed limit will normally be 50 km/h.
 - Passing bays should normally be signed by means of traffic sign 620 (TC 313).
- 6.5. Based on the design requirement, the proposed passing bay locations at concerned Road Section 1 of Deep Bay Road is shown in Figure 7 Passing Bays Plan in Appendix A.



7.0 SUMMARY AND CONCLUSION

- 7.1. This report has been undertaken for the “Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land” (The Site) located on Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories. The study evaluates the existing traffic conditions, forecasts future traffic demands, and assesses the traffic impact of the development over a 3-year operational period up to the year 2028.
- 7.2. Under the operation stage, the Site is accessible via Deep Bay Road, Kai Pak Ling Road, and a temporary road constructed by another CEDD contract, which connects to the at-grade road network of Kong Shum Western Highway. This is the proposed delivery route to the Site and mainly divided into three road section.
- 7.3. In order to appraise the existing traffic condition, manual traffic count surveys were conducted on 11 June 2025 (Wednesday) from 07:00 to 20:00. These observed traffic flow data were subsequently used for undertaking the assessment of the proposed TTA schemes in 2025.
- 7.4. Forecasts were prepared with reference to the 2019-Based Territorial Population and Employment Data Matrices (TPEDM) and the Annual Average Daily Traffic (AADT) data, resulting in the adoption of a conservative annual traffic growth rate of 1.69%.
- 7.5. Refer to the road link capacity assessments, all the concerned road links in the Study Area operate satisfactorily during the peak hours under the 2028 Reference Scenario (Without the Site) and Design Scenario (with the Site)
- 7.6. For junction capacity assessments, all the affected junction would be operating within capacity during peak hours for both the 2028 Reference Scenario (Without the Site) and Design Scenario (with the Site)
- 7.7. The proposed delivery route's Road Section 2 (Kai Pak Ling Road) and Road Section 3 (the temporary road constructed under a separate CEDD contract) are expected to meet standard road provisions for public use. Conversely, Road Section 1 (Deep Bay Road), connecting the Site to Kai Pak Ling Road, is identified as a substandard single-track access road, primarily due to the absence of intervisible passing bays.
- 7.8. Traffic assessment conducted during the operational phase of the Site indicates that the generated traffic will not significantly impact the roads along the delivery route. To further ensure smooth traffic flow, particularly on Road Section 1 of Deep Bay Road, the Site owner intends to implement mitigation measures. These measures include upgrading Road Section 1 of Deep Bay Road to a standard single-track access road with the provision of adequate, intervisible passing bays to facilitate two-way traffic flow. These enhancements will not only improve traffic flow but also optimize logistics within the surrounding local areas.



- 7.9. In conclusion, the projected traffic volume from the Site is anticipated to have a negligible impact on the adjacent road networks. Furthermore, the proposed mitigation measures include upgrading Road Section 1 of Deep Bay Road to a standard single-track access road, with the provision of adequate, intervisible passing bays to facilitate two-way traffic flow to ensure efficient two-way traffic flow, thereby benefiting the local community. Therefore, it is acceptable from traffic point of view.



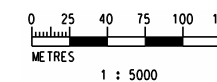
APPENDIX A

Drawings



←→ Delivery Route of the Site

- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

Contractor Designer



Designed	Drawn	Checked
Approved		Date

Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Delivery Routing Plan

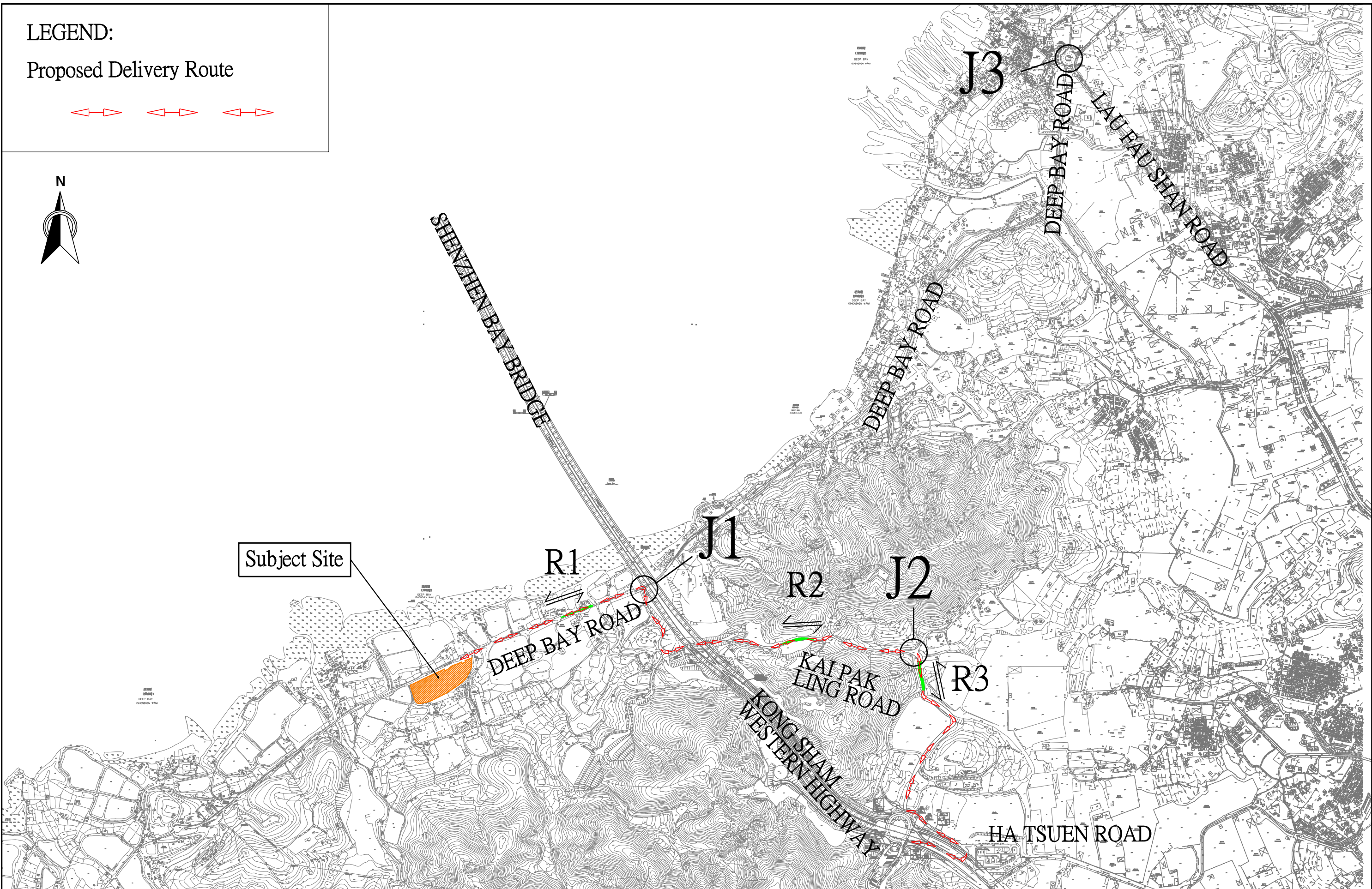
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DBR/FIGURE 1

Rev.

-  Road Section 1 : Deep Bay Road
-  Road Section 2 : Existing Kai Pak Ling Road
-  Road Section 3 : Temporary Road Constructed by another CEDD contract

LEGEND:
Proposed Delivery Route



Drawing title		
Location Plan		
Drawing number		Scale
Figure 2		N.T.S.
		Rev

LEGEND:

Peak Hour Flow in weekday

PM AM

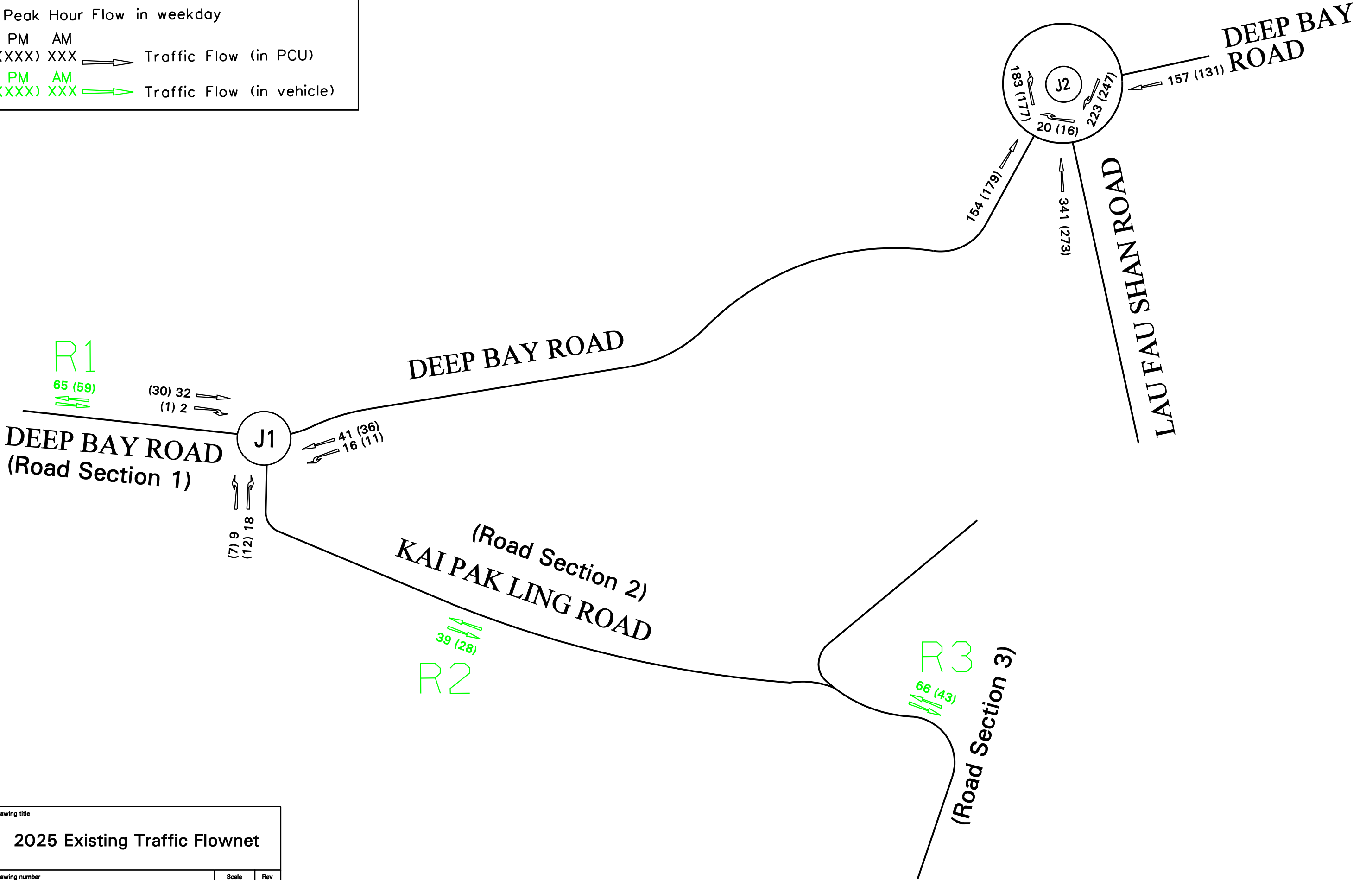
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Traffic Flow (in PCU)

PM AM

(XXX) XXX

Traffic Flow (in vehicle)



Drawing title		
2025 Existing Traffic Flownet		
Drawing number	Scale	Rev
Figure 3	N.T.S.	

LEGEND:

Peak Hour Flow in weekday

PM AM

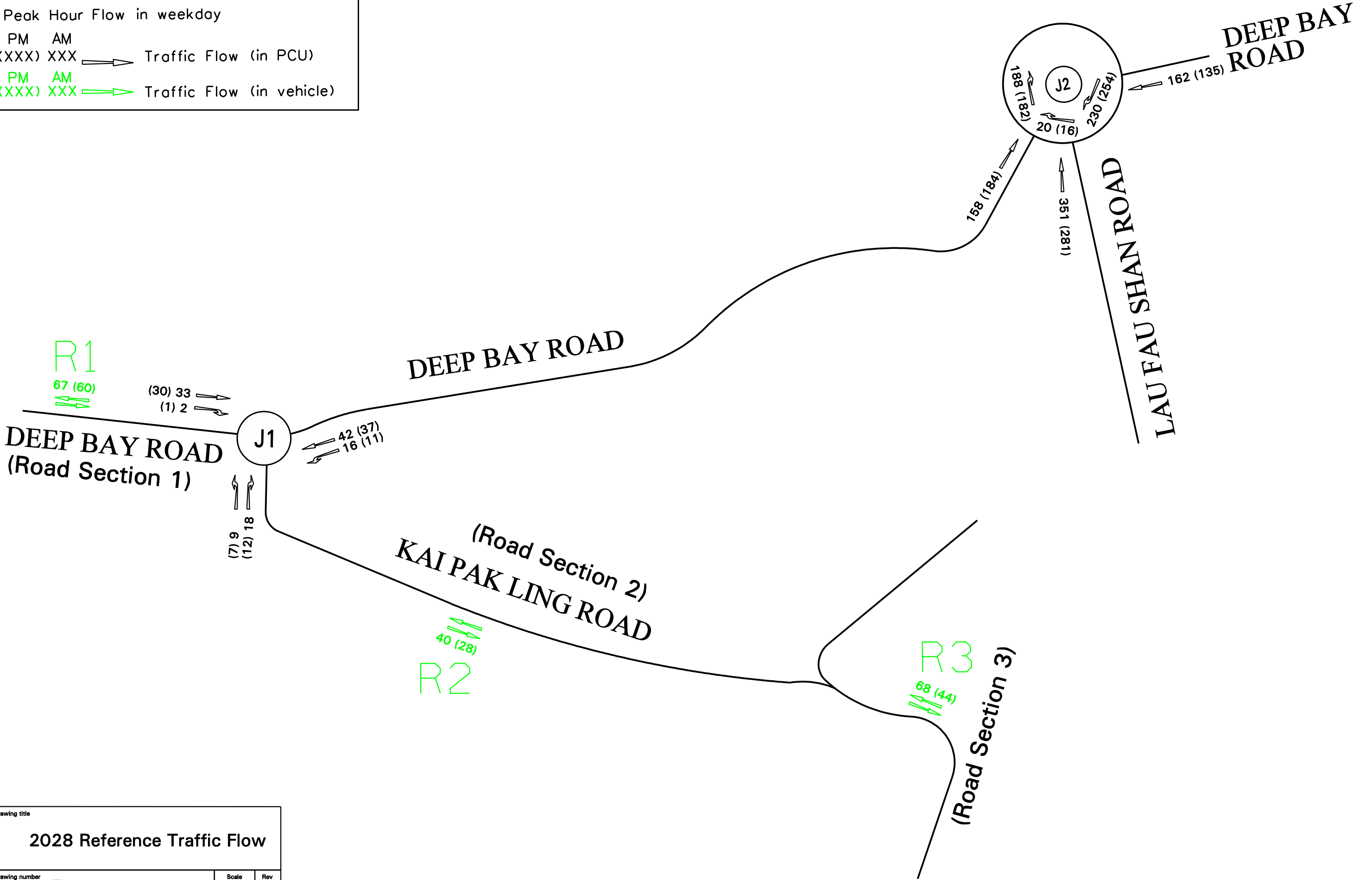
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Traffic Flow (in PCU)

PM AM

(XXX) XXX

Traffic Flow (in vehicle)



Drawing title		
2028 Reference Traffic Flow		
Drawing number	Scale	Rev
Figure 4	N.T.S.	

LEGEND:

Peak Hour Flow in weekday

PM

AM

(XXX) XXX

PM

AM

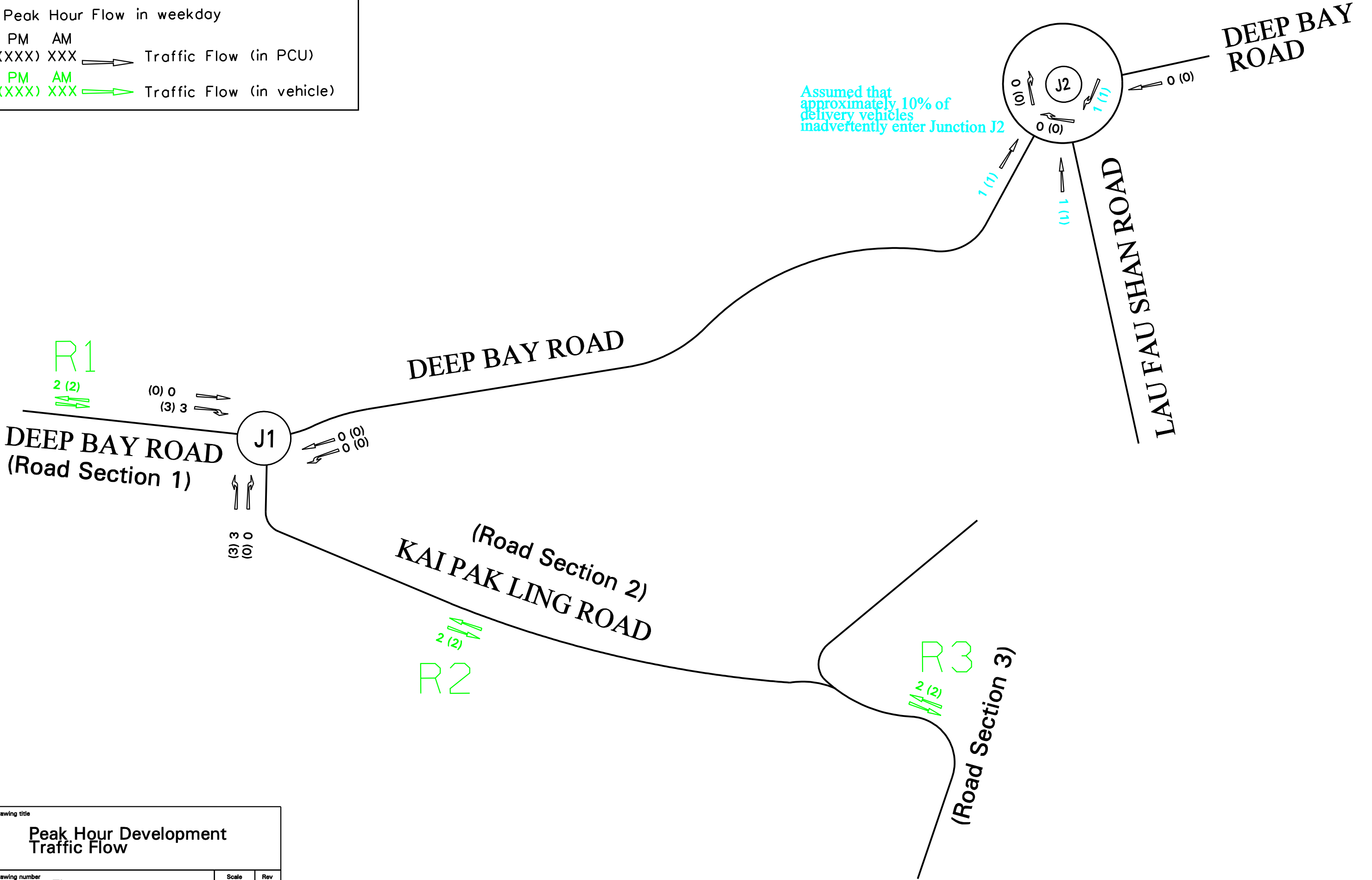
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Traffic Flow (in PCU)

Traffic Flow (in vehicle)



Drawing title		
Peak Hour Development Traffic Flow		
Drawing number	Scale	Rev
Figure 5	N.T.S.	

LEGEND:

Peak Hour Flow in weekday

PM

AM

(XXX) XXX

PM

AM

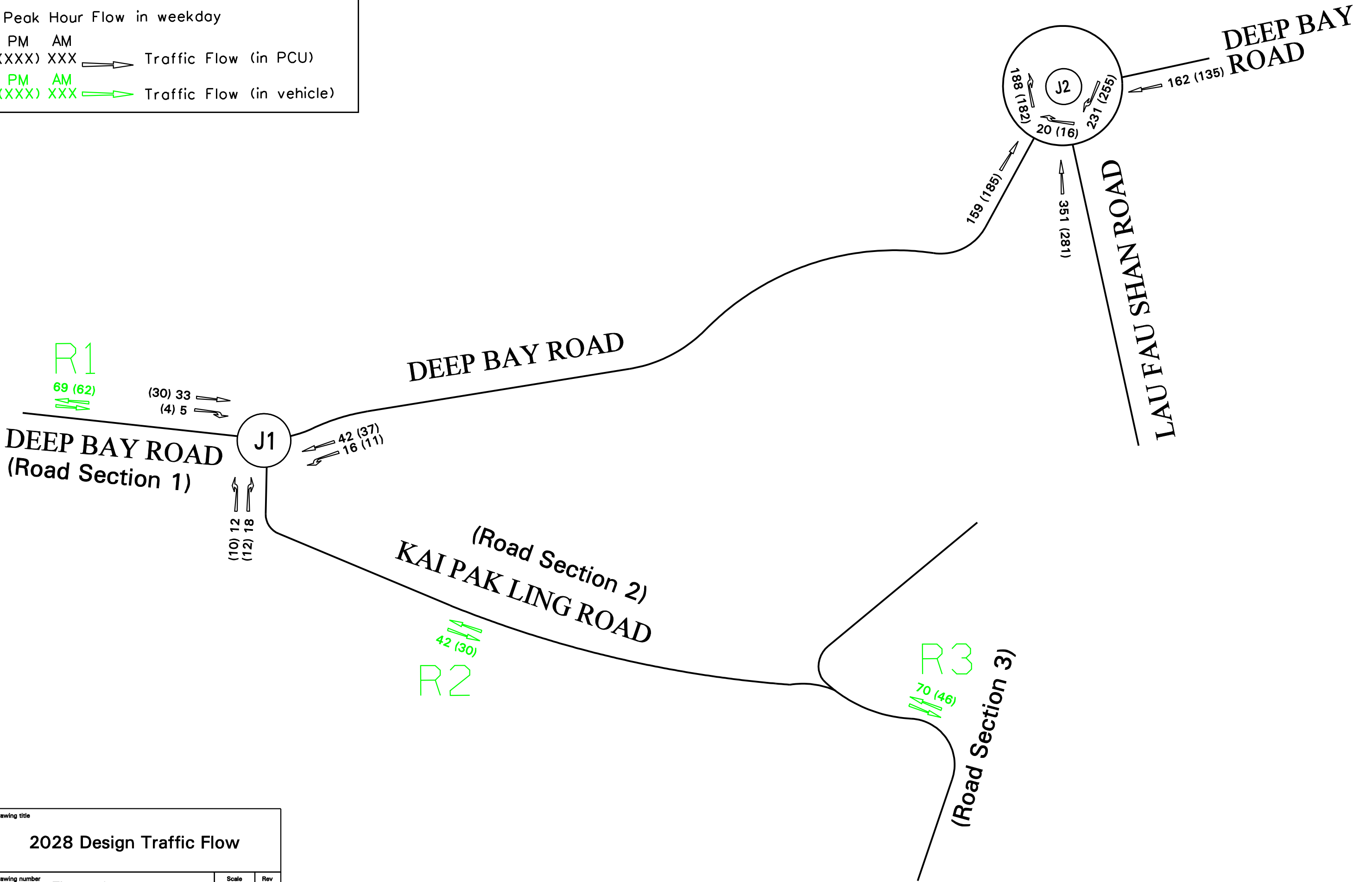
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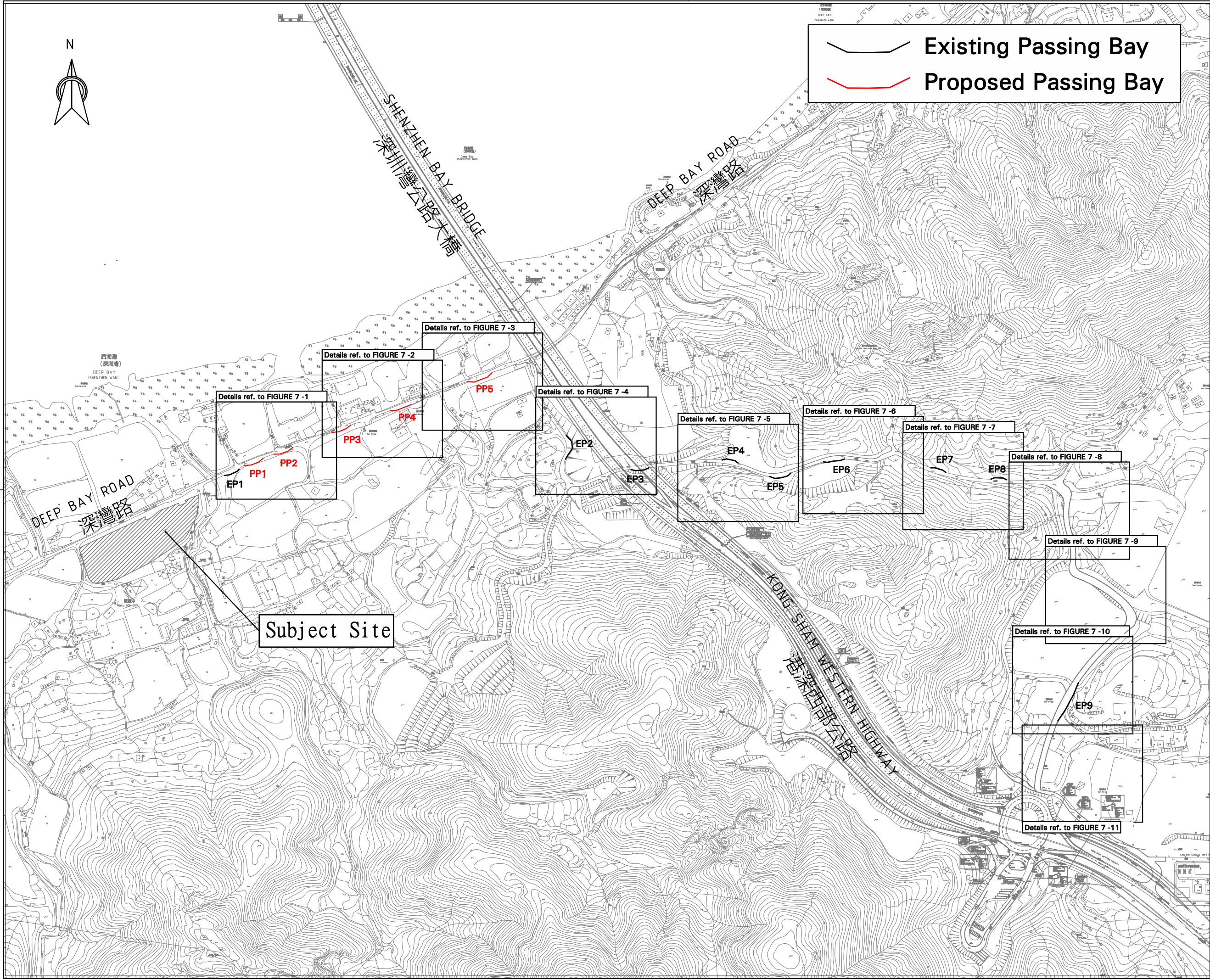
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Traffic Flow (in PCU)

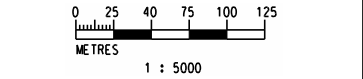
Traffic Flow (in vehicle)



Drawing title		
2028 Design Traffic Flow		
Drawing number	Scale	Rev
Figure 6	N.T.S.	



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Designed	Drawn	Checked
Approved		Date

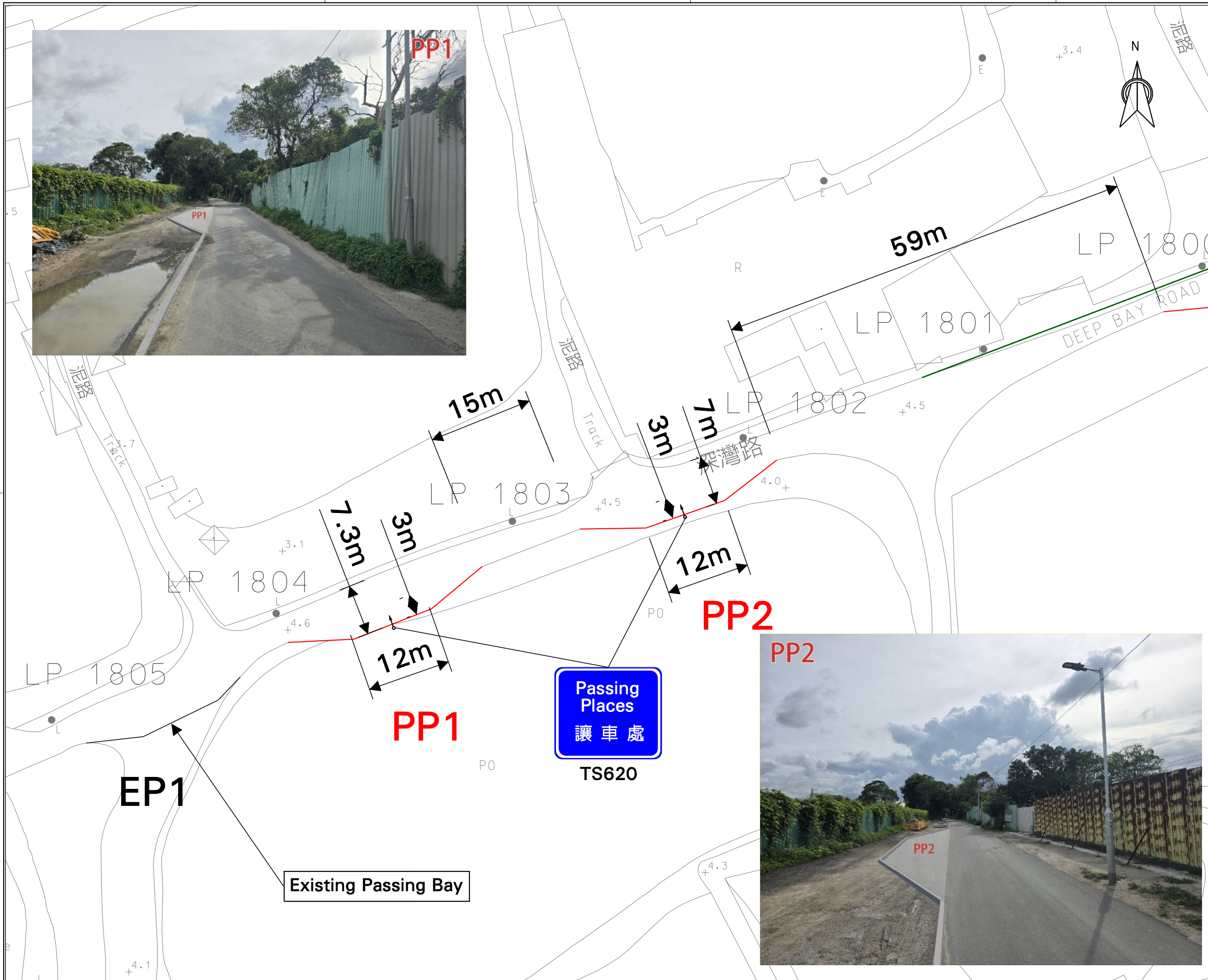
Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

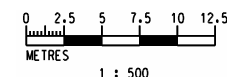
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FIGURE 7

Rev.



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Designed	Drawn	Checked
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Approved	Date
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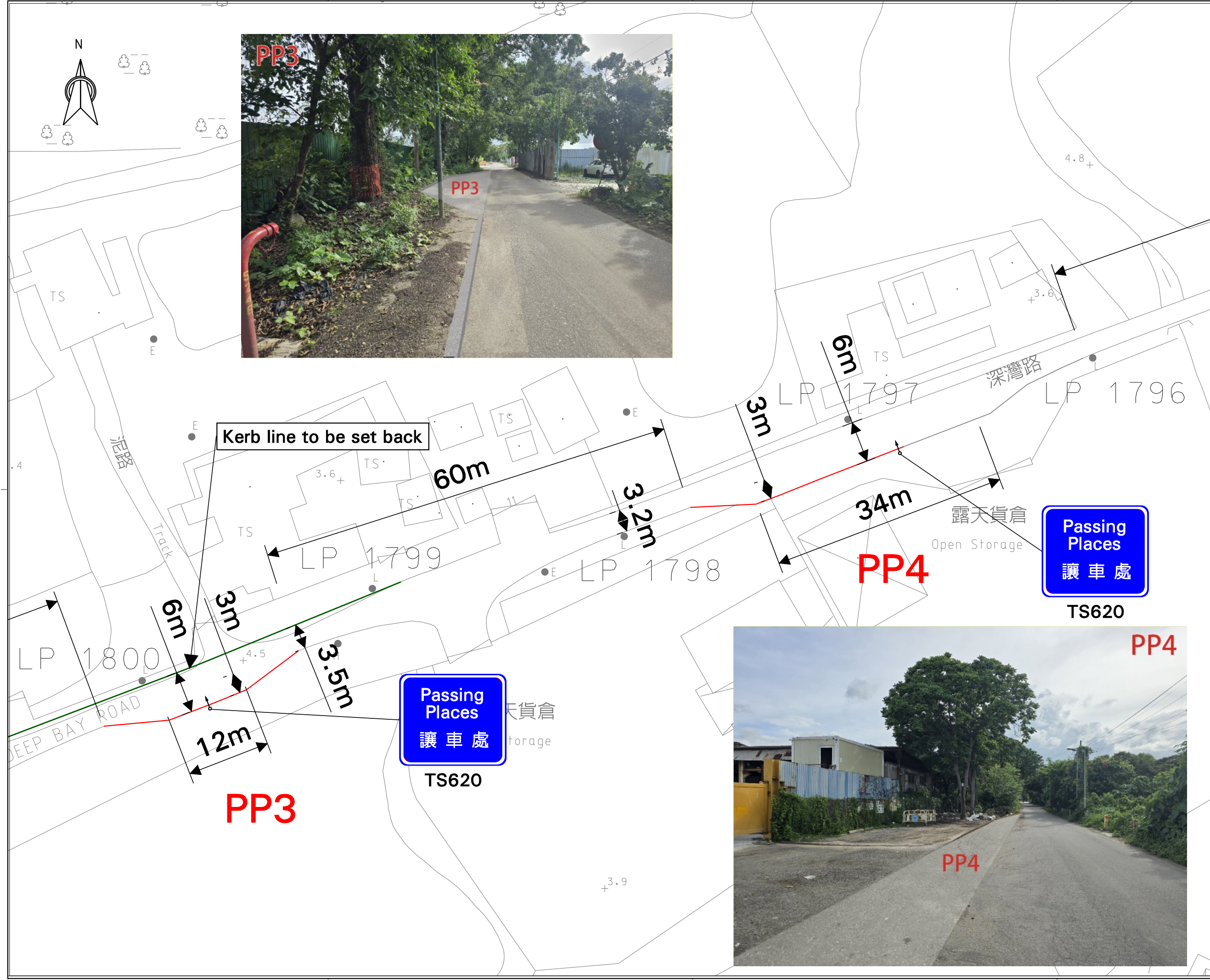
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Title

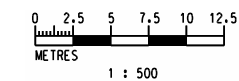
Passing Bay Plan

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FIGURE 7-1	



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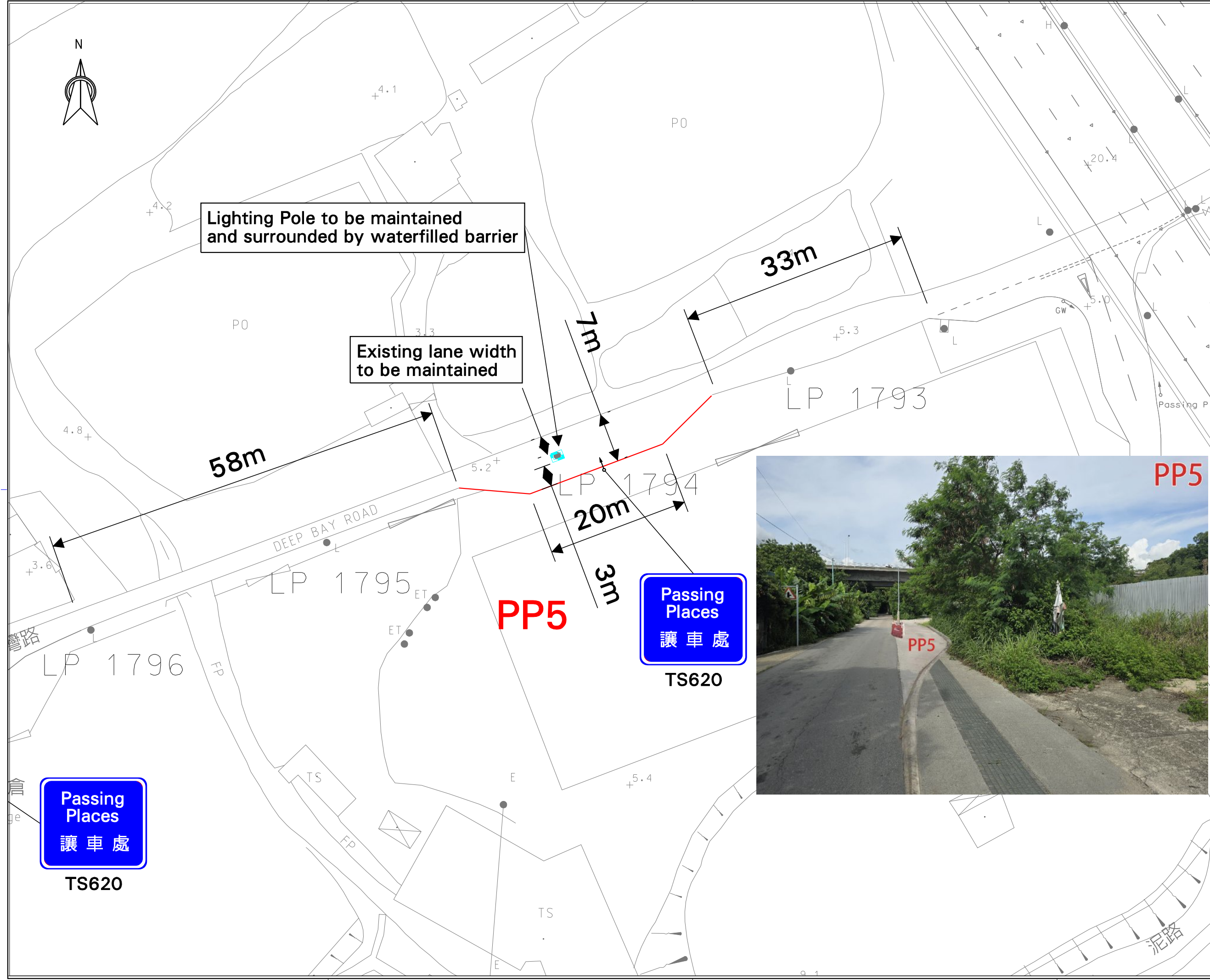
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Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

Scale in A1
A3

Drawing No.
FIGURE 7-2



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

0 2.5 5 7.5 10 12.5
METRES
1 : 500

Rev.	Description of Revision	Date	Ckd.

Project Manager

Sum Wui Investment Limited

Contractor Designer

MANNINGS
(Asia) Consultants Limited

Designed	Drawn	Checked

Approved	Date

Project

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title

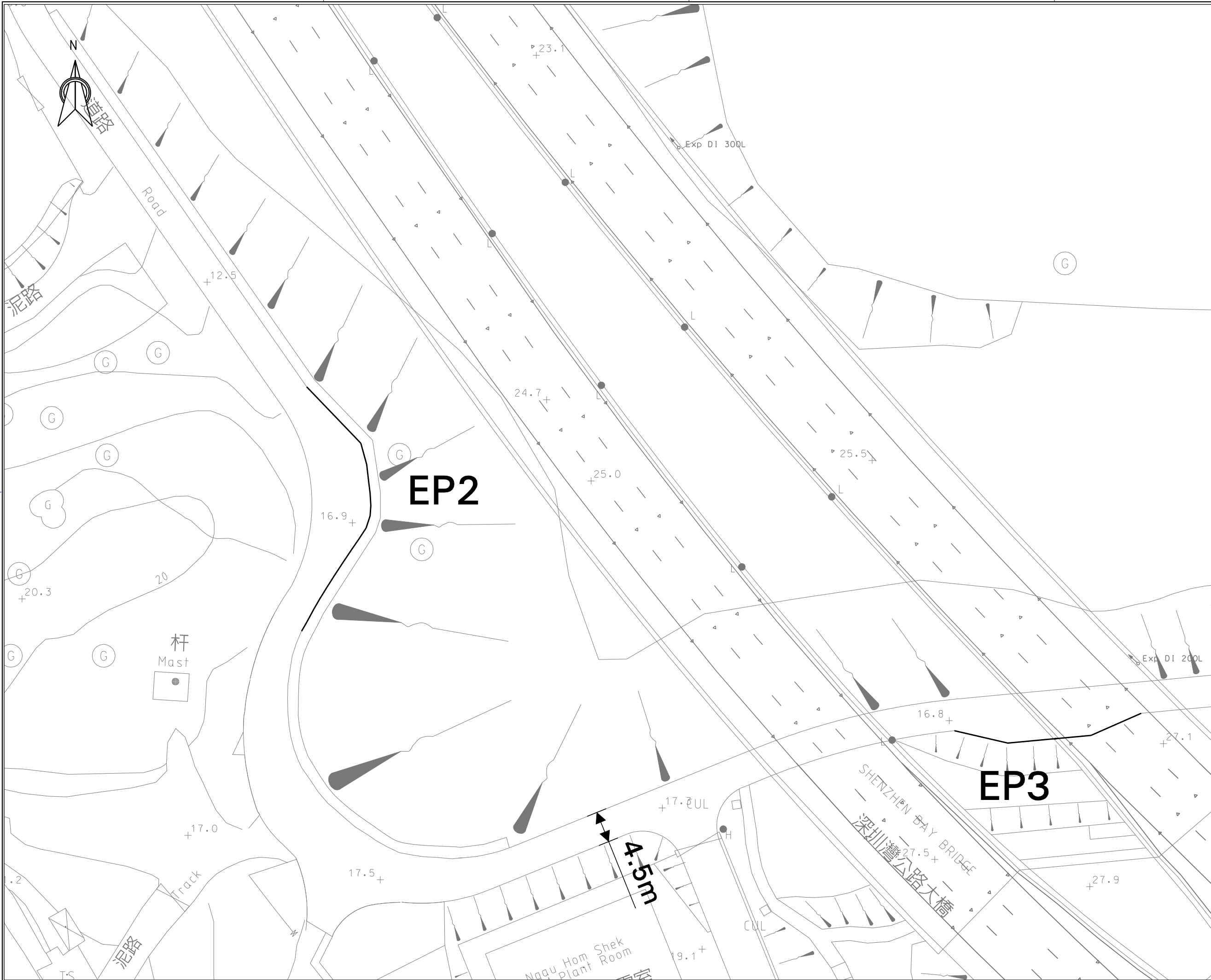
Passing Bay Plan

Scale in A1
A3

Drawing No.

FIGURE 7-3

Rev.



- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

Contractor Designer



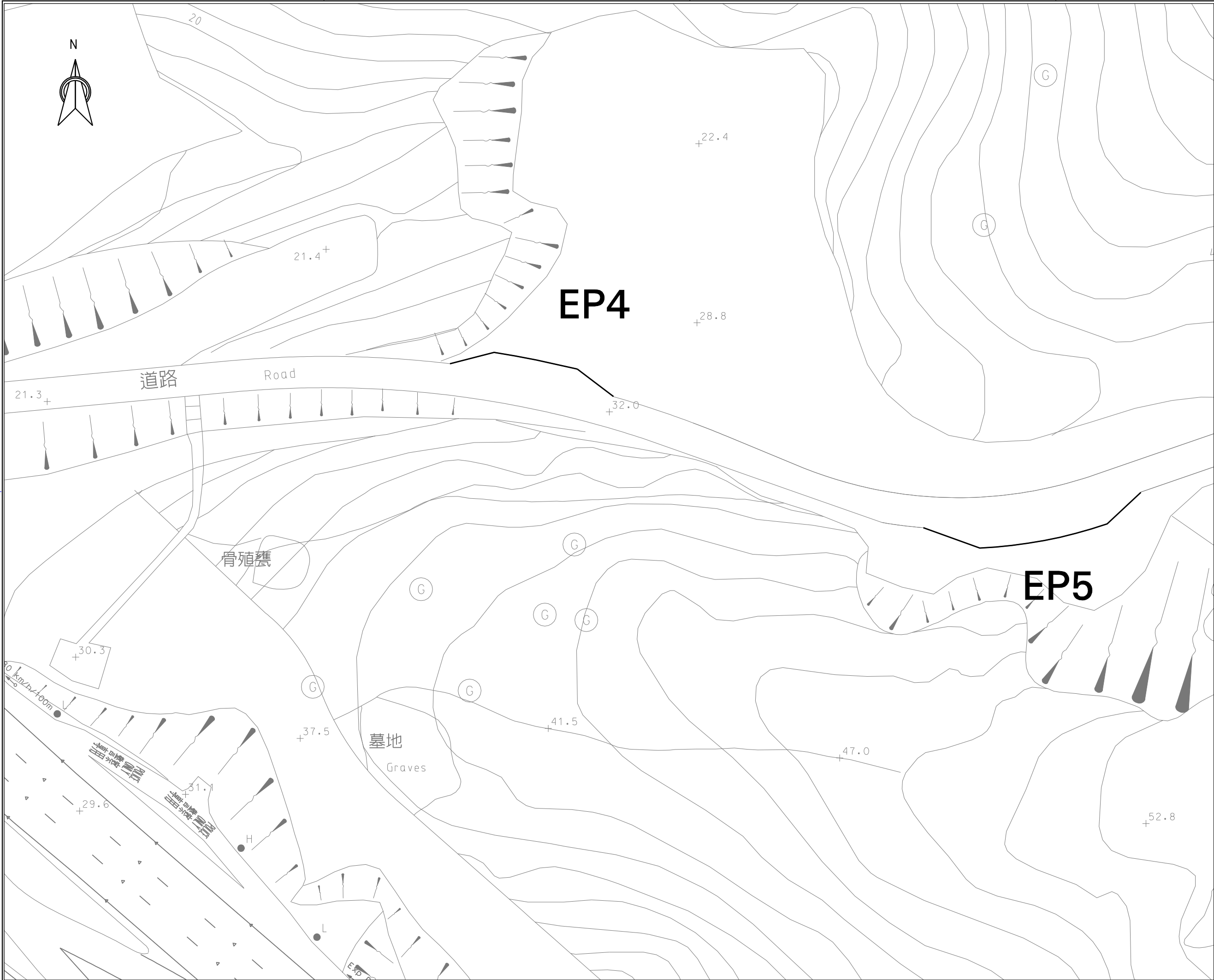
Designed	Drawn	Checked
Approved		Date

Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

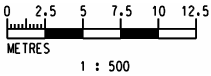
Title
Passing Bay Plan

Scale in A1
A3

Drawing No. FIGURE 7-4	Rev.
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- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

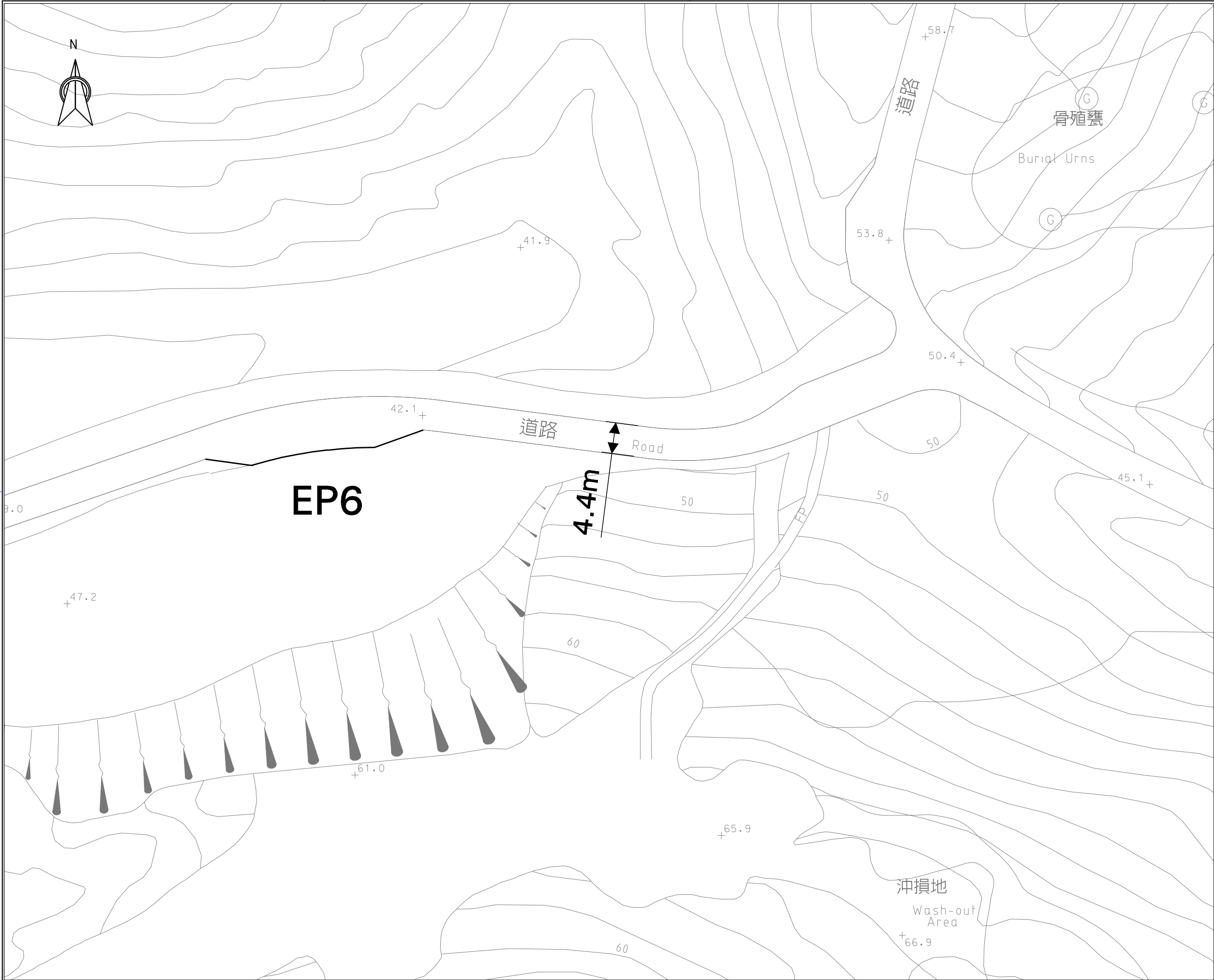
Contractor Designer
MANNINGS
(Asia) Consultants Limited

Designed	Drawn	Checked
Approved	Date	

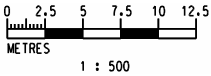
Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

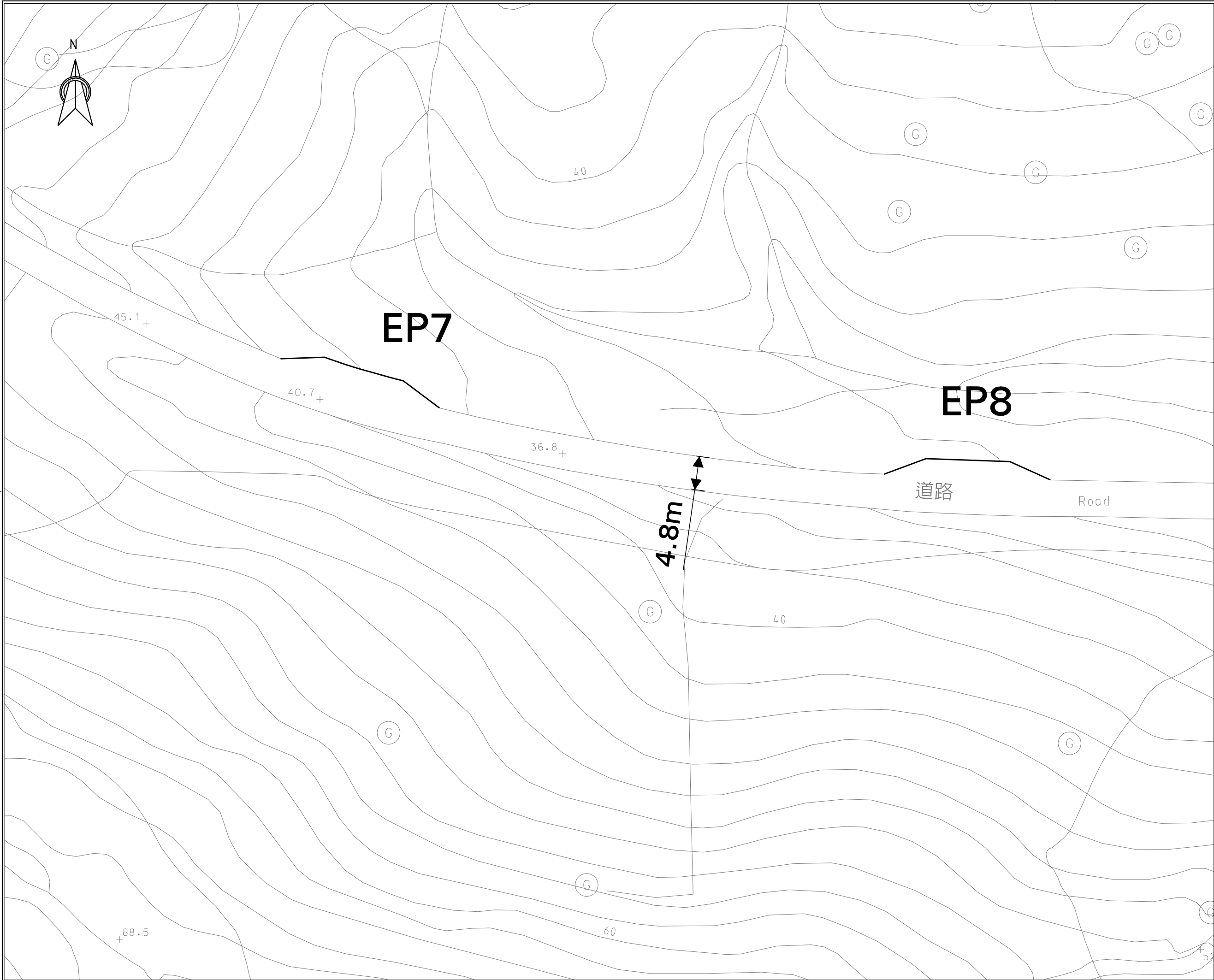
Scale in A1 A3	Rev.
Drawing No. FIGURE 7-5	



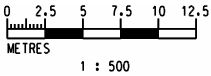
- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
Project Manager			
Sum Wui Investment Limited			
Contractor Designer			
<div><div>MANNINGS (Asia) Consultants Limited</div></div>			
Designed		Drawn	Checked
Approved			Date
Project			
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories			
Title			
Passing Bay Plan			
Scale in A1 A3			
Drawing No.			Rev.
FIGURE 7-6			



- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

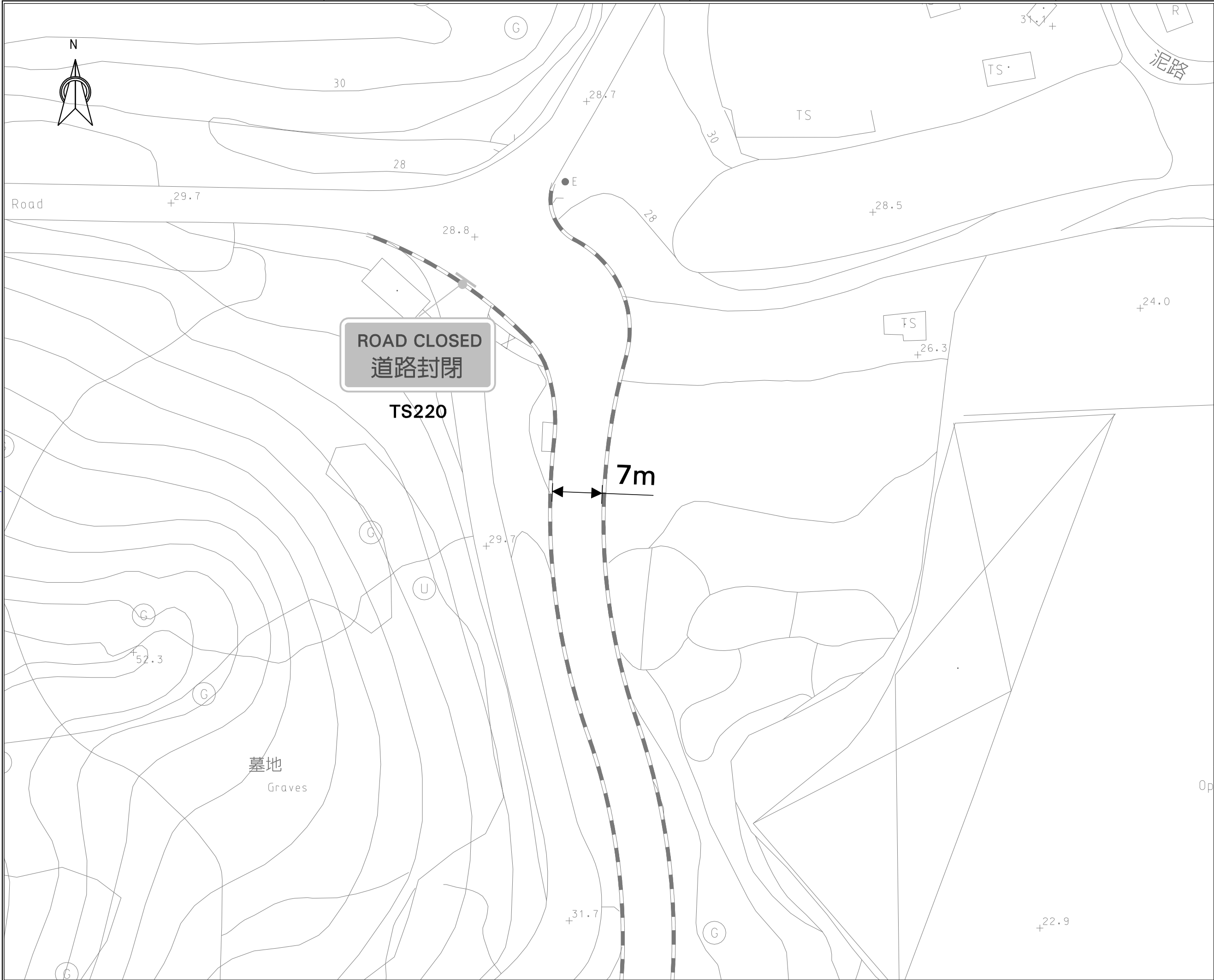
Contractor Designer
 **MANNINGS**
(Asia) Consultants Limited

Designed	Drawn	Checked
Approved		Date

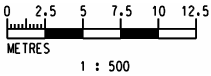
Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

Scale in A1 A3	Drawing No. FIGURE 7-7	Rev.
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- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

Contractor Designer


Designed	Drawn	Checked
Approved	Date	

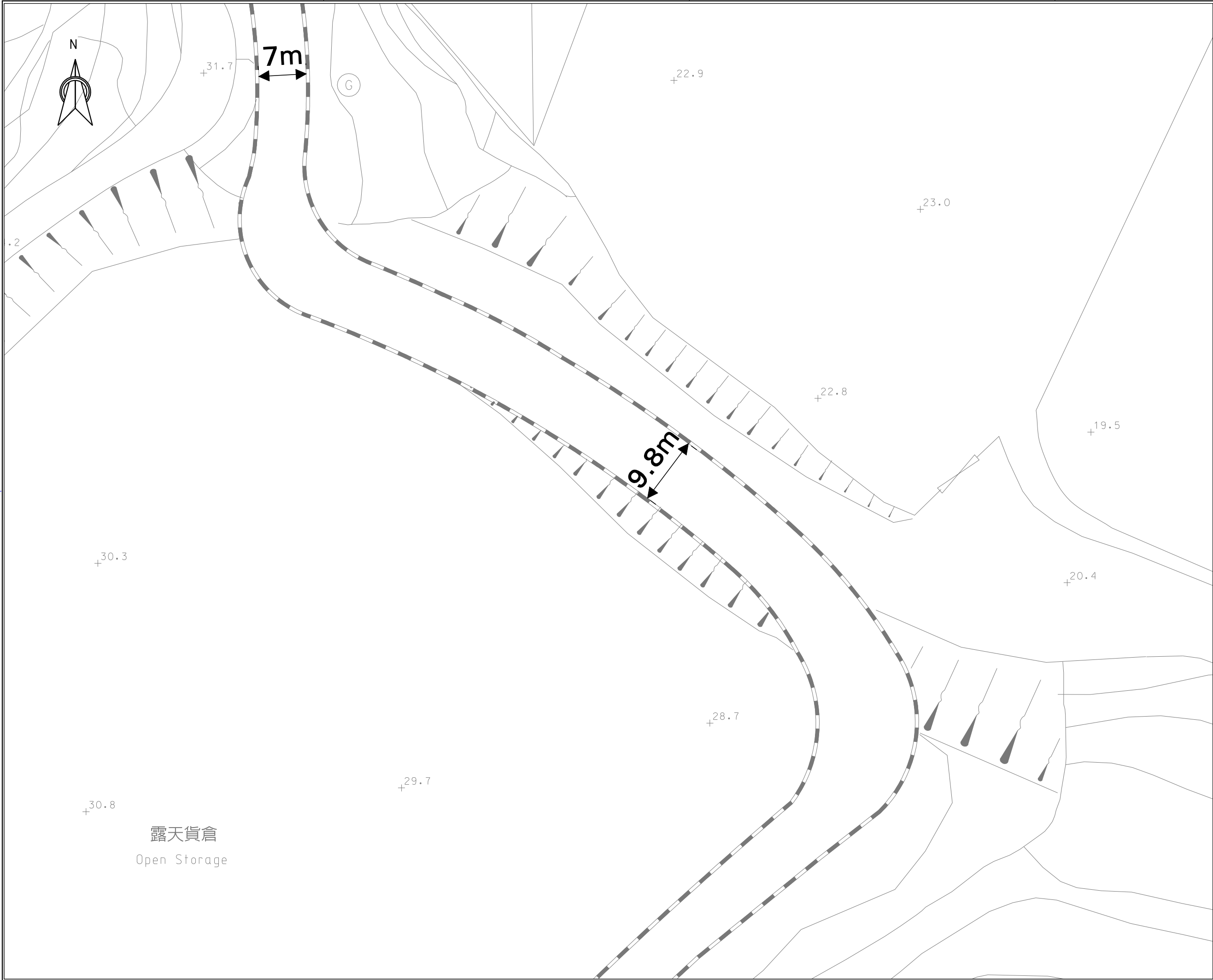
Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

Scale in A1
A3

Drawing No.
FIGURE 7-8

Rev.



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.


0 2.5 5 7.5 10 12.5
METRES
1 : 500

Rev.	Description of Revision	Date	Ckd.

Project Manager

Sum Wui Investment Limited

Contractor Designer



Designed	Drawn	Checked
Approved	Date	

Project

Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title

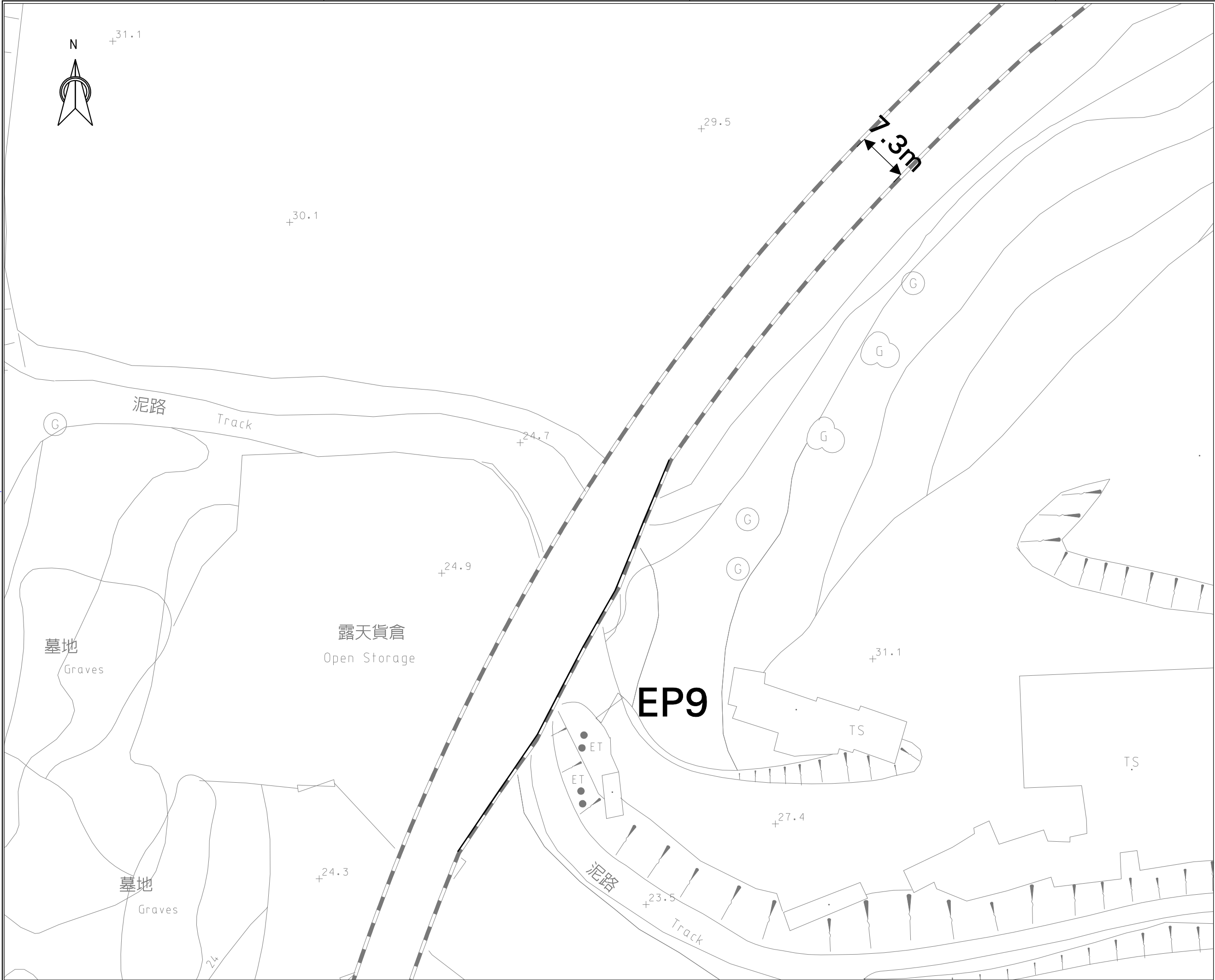
Passing Bay Plan

Scale in A1
A3

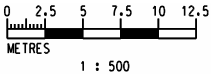
Drawing No.

FIGURE 7-9

Rev.



- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager

Sum Wui Investment Limited

Contractor Designer



Designed	Drawn	Checked
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Approved	Date
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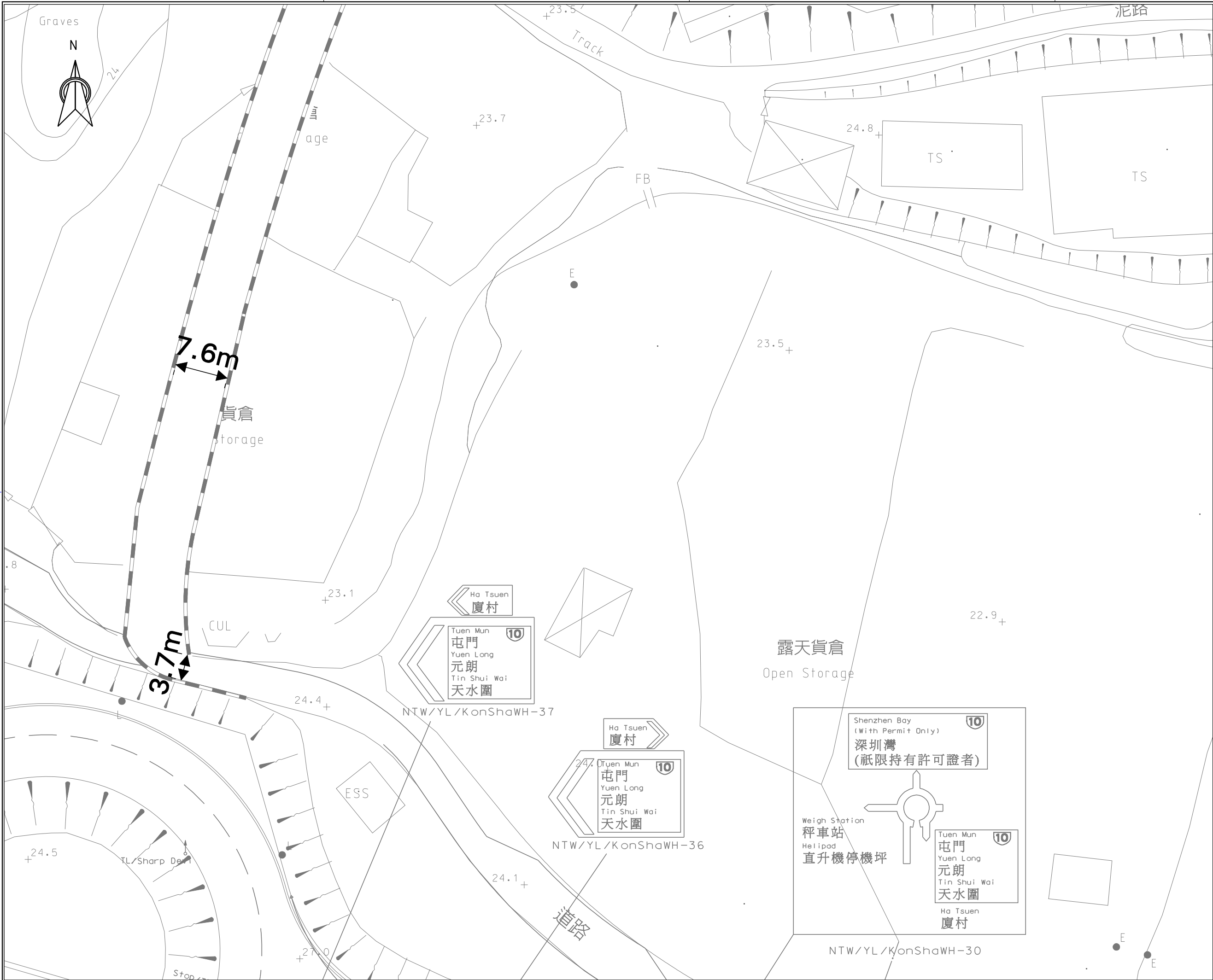
Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title

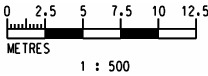
Passing Bay Plan

Scale in A1
A3

Drawing No.	Rev.
FIGURE 7-10	



- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.



Rev.	Description of Revision	Date	Ckd.
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Project Manager
Sum Wui Investment Limited

Contractor Designer
MANNINGS
(Asia) Consultants Limited

Designed	Drawn	Checked
Approved		Date

Project
Proposed Temporary Open Storage of Construction Materials and Machinery with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years, Various Lots in D.D. 128, Pak Nai, Yuen Long, New Territories

Title
Passing Bay Plan

Scale in A1
A3

Drawing No.
FIGURE 7-11

Rev.

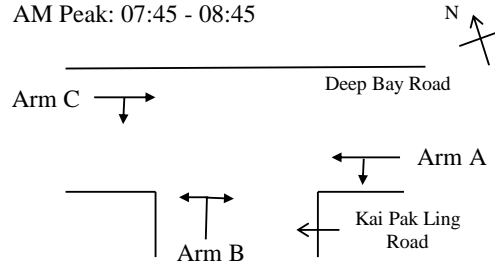


APPENDIX B

Traffic Analysis

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	1 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road Existing Traffic Condition From 07:00-20:00 Weekday (AM Peak)	Checked	KW		
		Drg. Ref.			

AM Peak: 07:45 - 08:45



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	16 pcu/hr			
q a-c	=	41 pcu/hr			
q c-a	=	32 pcu/hr	Wc-a	=	4 m
q c-b	=	2 pcu/hr	Wc-b	=	4 m
q b-a	=	18 pcu/hr	Wb-a	=	4 m
q b-c	=	9 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

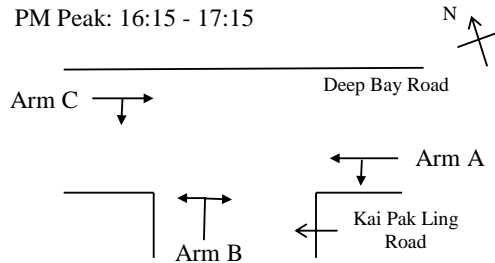
Q b-a	=	568
Q b-c	=	720
Q c-b	=	717

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.01
R c-a	=	0.02
R c-b	=	0.00

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	2 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road Existing Traffic Condition From 07:00-20:00 Weekday (PM Peak)	Checked	KW		
		Drg. Ref.			

PM Peak: 16:15 - 17:15



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	11 pcu/hr			
q a-c	=	36 pcu/hr			
q c-a	=	30 pcu/hr	Wc-ad	=	4 m
q c-b	=	1 pcu/hr	Wc-b	=	4 m
q b-a	=	12 pcu/hr	Wb-ad	=	4 m
q b-c	=	7 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

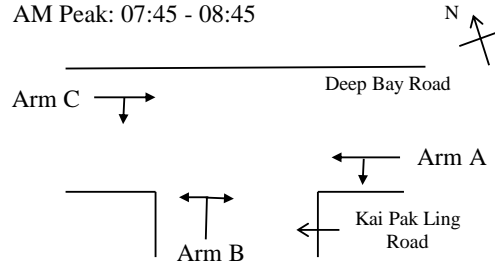
Q b-ad	=	571
Q b-c	=	722
Q c-b	=	720

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.01
R c-a	=	0.02
R c-b	=	0.00

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	1 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road 2028 Reference Traffic Condition	Checked	KW		
		Drg. Ref.			

AM Peak: 07:45 - 08:45



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	16 pcu/hr			
q a-c	=	42 pcu/hr			
q c-a	=	33 pcu/hr	Wc-a	=	4 m
q c-b	=	2 pcu/hr	Wc-b	=	4 m
q b-a	=	18 pcu/hr	Wb-a	=	4 m
q b-c	=	9 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

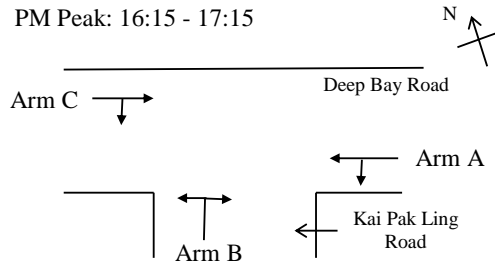
Q b-a	=	568
Q b-c	=	720
Q c-b	=	717

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.01
R c-a	=	0.02
R c-b	=	0.00

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	2 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road 2028 Reference Traffic Condition	Checked	KW		
		Drg. Ref.			

PM Peak: 16:15 - 17:15



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	11 pcu/hr			
q a-c	=	37 pcu/hr			
q c-a	=	30 pcu/hr	Wc-ad	=	4 m
q c-b	=	1 pcu/hr	Wc-b	=	4 m
q b-a	=	12 pcu/hr	Wb-ad	=	4 m
q b-c	=	7 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

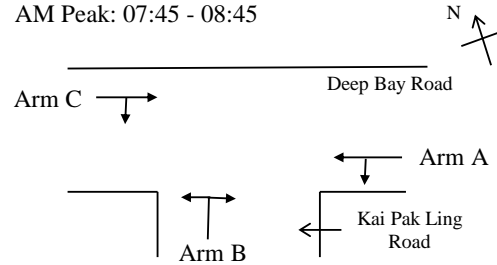
Q b-ad	=	571
Q b-c	=	722
Q c-b	=	720

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.01
R c-a	=	0.02
R c-b	=	0.00

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	1 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road 2028 Design Traffic Condition	Checked	KW		
		Drg. Ref.			

AM Peak: 07:45 - 08:45



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	16 pcu/hr			
q a-c	=	42 pcu/hr			
q c-a	=	33 pcu/hr	Wc-a	=	4 m
q c-b	=	5 pcu/hr	Wc-b	=	4 m
q b-a	=	18 pcu/hr	Wb-a	=	4 m
q b-c	=	12 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

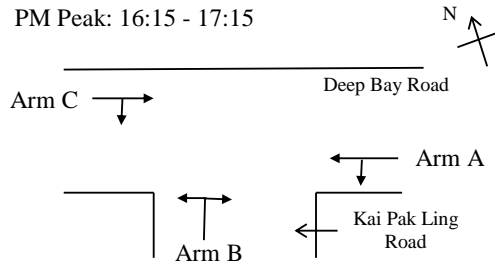
Q b-a	=	566
Q b-c	=	720
Q c-b	=	717

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.02
R c-a	=	0.02
R c-b	=	0.01

Job No.	W1037	File Name	W1037_DFC_DBR_KPLR	Page	2 of 2
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Junncton Capacity Analysis of the junction of Deep Bay Road with Kai Pak Ling Road 2028 Design Traffic Condition	Checked	KW		
		Drg. Ref.			

PM Peak: 16:15 - 17:15



W — Major road width
 Wcr — Central reserve width
 Wc-a — Lane width available to veh. waiting in stream c-a
 Wc-b — Lane width available to veh. waiting in stream c-b
 Vr c-a — Visibility to the right for veh. waiting in stream c-a
 Vl b-a — Visibility to the left for veh. waiting in stream b-a

GEOMETRIC DETAILS:

W	=	4 m			
Wcr	=	0 m			
q a-b	=	11 pcu/hr			
q a-c	=	37 pcu/hr			
q c-a	=	30 pcu/hr	Wc-ad	=	4 m
q c-b	=	4 pcu/hr	Wc-b	=	4 m
q b-a	=	12 pcu/hr	Wb-ad	=	4 m
q b-c	=	10 pcu/hr	Wb-c	=	4 m
			Vr b-a	=	70 m
			Vr b-c	=	70 m
			Vr c-b	=	70 m
			Vl b-a	=	70 m

GEOMETRIC PARAMETERS:

D	=	0.9391 pcu/hr
E	=	0.9864 pcu/hr
F	=	0.9864 pcu/hr
Y	=	0.8620 pcu/hr

CAPACITY OF MOVEMENT:

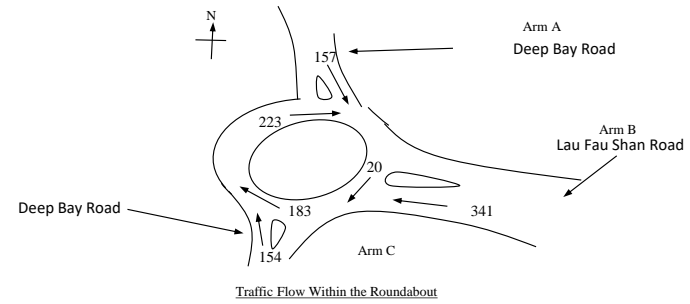
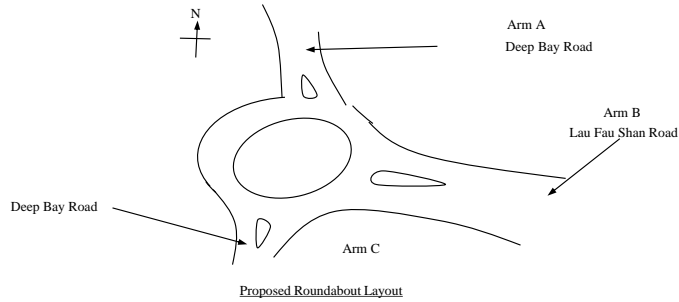
Q b-ad	=	569
Q b-c	=	722
Q c-b	=	720

RATIO OF DESIGN FLOW TO CAPACITY FOR EACH APPROACH:

R b-c	=	0.01
R c-a	=	0.02
R c-b	=	0.01

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2 Existing Traffic Condition From 07:00-20:00 Weekday (AM Peak)	Checked	KW	Date	

AM Peak: 07:30 - 08:30



Design Parameters:

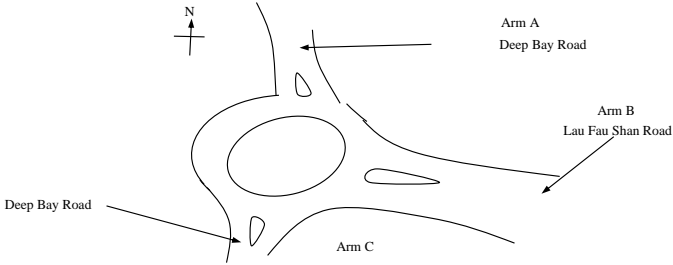
			Arm A	Arm B	Arm C
e	=	entry width (m)	=	4.1	4.2
v	=	approach half width (m)	=	2.5	2.6
L	=	effective length of flare (m)	=	12.8	4.8
s	=	sharpness of flare	=	0.20	0.53
φ	=	entry angle (°)	=	51	53
D	=	inscribed circle diameter (m)	=	20	20
r	=	entry radius (m)	=	73	5.5

Calculation:

			Arm A	Arm B	Arm C
q _c	=	circulating flow across entry	=	223	20
K	=	$1 - 0.00347(F - 30) - 0.978(1/r - 0.05)$	=	0.96	0.79
x ₂	=	$v + ((e - v)/(1 + 2s))$	=	3.64	3.37
M	=	$\exp((D - 60)/10)$	=	0.02	0.02
F	=	$303x_2$	=	1103.79	1022.38
t _D	=	$1 + 0.5/(1 + M)$	=	1.49	1.49
f _c	=	$0.21t_D(1 + 0.2x_2)$	=	0.54	0.52
Q _E	=	$K(F - f_c q_c)$	=	946	801
DFC	=	traffic flow into the roundabout/Q _E	=	0.17	0.43

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2 Existing Traffic Condition From 07:00-20:00 Weekday (PM Peak)	Checked	KW	Date	

PM Peak: 17:15 - 18:15



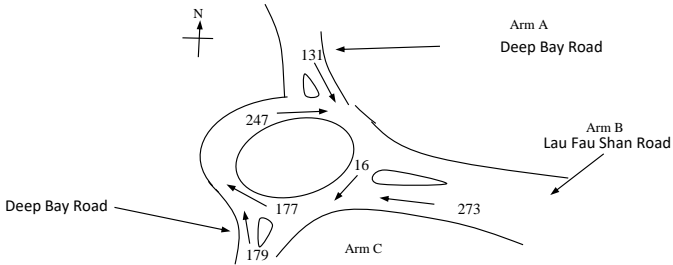
Proposed Roundabout Layout

Design Parameters:

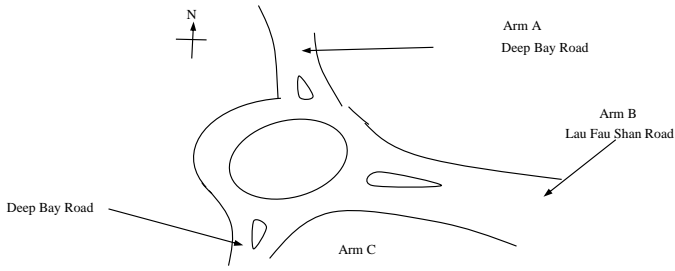
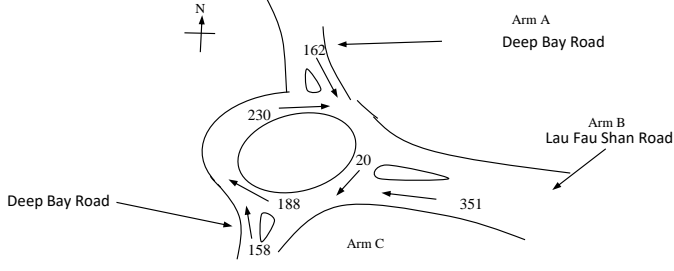
e	=	entry width (m)	=	Arm A	Arm B	Arm C
v	=	approach half width (m)	=	4.1	4.2	3.9
L	=	effective length of flare (m)	=	2.5	2.6	2.5
s	=	sharpness of flare	=	12.8	4.8	6.9
ϕ	=	entry angle (°)	=	0.20	0.53	0.32
D	=	inscribed circle diameter (m)	=	51	53	41
r	=	entry radius (m)	=	20	20	20
			=	73	5.5	7.9

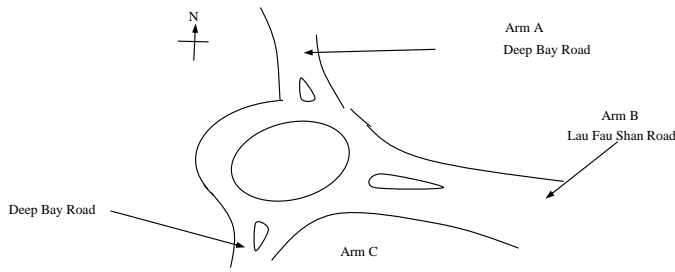
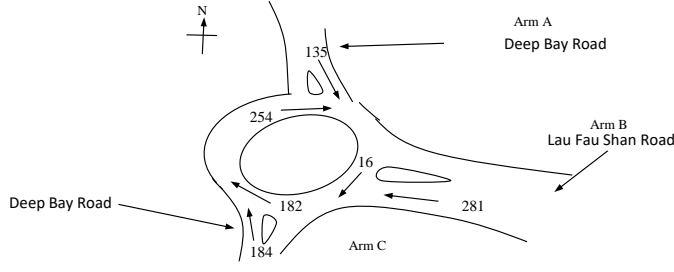
Calculation:

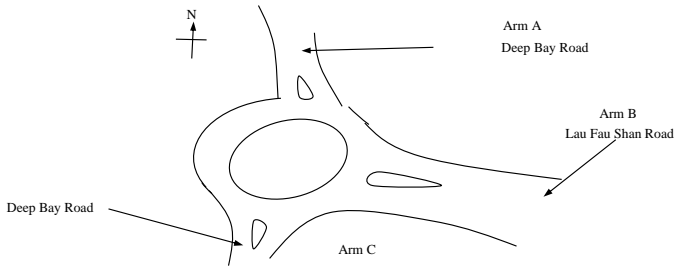
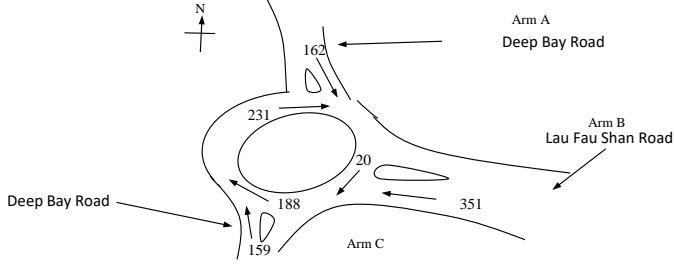
q _c	=	circulating flow across entry	=	Arm A	Arm B	Arm C
K	=	$1-0.00347(F-30)-0.978(1/r-0.05)$	=	247	16	177
x ₂	=	$v+((e-v)/(1+2s))$	=	0.96	0.79	0.89
M	=	$\exp((D-60)/10)$	=	3.64	3.37	3.35
F	=	$303x_2$	=	0.02	0.02	0.02
t _D	=	$1+0.5/(1+M)$	=	1103.79	1022.38	1014.70
f _c	=	$0.21t_D(1+0.2x_2)$	=	1.49	1.49	1.49
Q _E	=	$K(F-f_cq_c)$	=	0.54	0.52	0.52
DFC	=	traffic flow into the roundabout/Q _E	=	934	802	818
			=	0.14	0.34	0.22

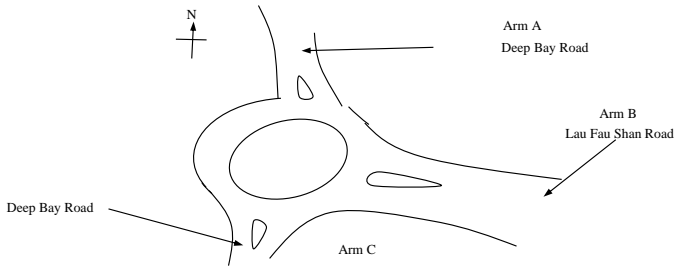
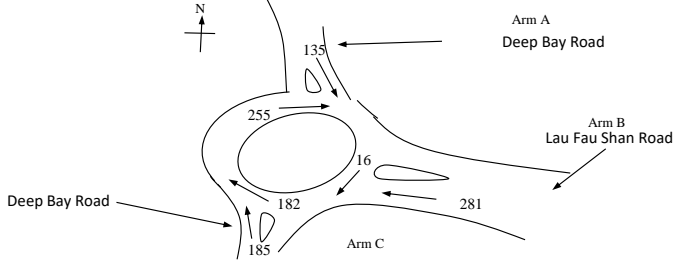


Traffic Flow Within the Roundabout

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2	Checked	KW	Date	
2028 Reference Traffic Condition					
AM Peak: 07:30 - 08:30					
<div>  <p>Proposed Roundabout Layout</p> </div> <div>  <p>Traffic Flow Within the Roundabout</p> </div>					
Design Parameters:					
e	=	entry width (m)	=	Arm A	4.1
v	=	approach half width (m)	=	Arm B	4.2
L	=	effective length of flare (m)	=	Arm C	3.9
s	=	sharpness of flare	=		2.5
φ	=	entry angle (°)	=		12.8
D	=	inscribed circle diameter (m)	=		4.8
r	=	entry radius (m)	=		6.9
					0.20
					0.53
					0.32
					51
					53
					41
					20
					20
					7.9
Calculation:					
q _c	=	circulating flow across entry	=	Arm A	230
K	=	$1 - 0.00347(F - 30) - 0.978(1/r - 0.05)$	=	Arm B	20
x ₂	=	$v + ((e - v)/(1 + 2s))$	=	Arm C	188
M	=	$\exp((D - 60)/10)$	=		0.96
F	=	$303x_2$	=		0.79
t _D	=	$1 + 0.5/(1 + M)$	=		0.89
f _c	=	$0.21t_D(1 + 0.2x_2)$	=		3.64
Q _E	=	$K(F - f_c q_c)$	=		3.37
DFC	=	traffic flow into the roundabout/Q _E	=		3.35
					0.02
					0.02
					1103.79
					1022.38
					1014.70
					1.49
					1.49
					1.49
					0.54
					0.52
					0.52
					943
					801
					813
					0.17
					0.44
					0.19

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2	Checked	KW	Date	
2028 Reference Traffic Condition					
PM Peak: 17:15 - 18:15					
					
<u>Proposed Roundabout Layout</u>		<u>Traffic Flow Within the Roundabout</u>			
Design Parameters:		Arm A	Arm B	Arm C	
e	= entry width (m)	= 4.1	4.2	3.9	
v	= approach half width (m)	= 2.5	2.6	2.5	
L	= effective length of flare (m)	= 12.8	4.8	6.9	
s	= sharpness of flare	= 0.20	0.53	0.32	
φ	= entry angle (°)	= 51	53	41	
D	= inscribed circle diameter (m)	= 20	20	20	
r	= entry radius (m)	= 73	5.5	7.9	
Calculation:		Arm A	Arm B	Arm C	
q _c	= circulating flow across entry	= 254	16	182	
K	= $1-0.00347(F-30)-0.978(1/r-0.05)$	= 0.96	0.79	0.89	
x ₂	= $v+((e-v)/(1+2s))$	= 3.64	3.37	3.35	
M	= $\exp((D-60)/10)$	= 0.02	0.02	0.02	
F	= $303x_2$	= 1103.79	1022.38	1014.70	
t _D	= $1+0.5/(1+M)$	= 1.49	1.49	1.49	
f _c	= $0.21t_D(1+0.2x_2)$	= 0.54	0.52	0.52	
Q _E	= $K(F-f_cq_c)$	= 930	802	816	
DFC	= traffic flow into the roundabout/Q _E	= 0.15	0.35	0.23	

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2	Checked	KW	Date	
2028 Design Traffic Condition					
AM Peak: 07:30 - 08:30					
<div>  <p>Proposed Roundabout Layout</p> </div> <div>  <p>Traffic Flow Within the Roundabout</p> </div>					
Design Parameters:					
e	=	entry width (m)	=	Arm A	4.1
v	=	approach half width (m)	=	Arm B	4.2
L	=	effective length of flare (m)	=	Arm C	3.9
s	=	sharpness of flare	=		2.5
φ	=	entry angle (°)	=		12.8
D	=	inscribed circle diameter (m)	=		4.8
r	=	entry radius (m)	=		6.9
					0.20
					0.53
					0.32
					51
					53
					41
					20
					20
					7.9
Calculation:					
q _c	=	circulating flow across entry	=	Arm A	231
K	=	$1-0.00347(F-30)-0.978(1/r-0.05)$	=	Arm B	20
x ₂	=	$v+((e-v)/(1+2s))$	=	Arm C	188
M	=	$\exp((D-60)/10)$	=		0.96
F	=	$303x_2$	=		0.79
t _D	=	$1+0.5/(1+M)$	=		0.89
f _c	=	$0.21t_D(1+0.2x_2)$	=		3.64
Q _E	=	$K(F-f_cq_c)$	=		3.37
DFC	=	traffic flow into the roundabout/Q _E	=		3.35
					0.02
					0.02
					1103.79
					1022.38
					1014.70
					1.49
					1.49
					1.49
					0.54
					0.52
					0.52
					942
					801
					813
					0.17
					0.44
					0.20

Job No.	W1037	File Name	W1037_DFC_DBR_LFSR_SHTS	Page	1 of 1
Client	Sum Wui Investment Limited	Calculated	HC	Date	25/6/2025
Subject	Signal calculation for the junction of Deep Bay Road with Lau Fau Shan Road / Shan Tung Street - J2	Checked	KW	Date	
2028 Design Traffic Condition					
PM Peak: 17:15 - 18:15					
<div>  <p>Proposed Roundabout Layout</p> </div> <div>  <p>Traffic Flow Within the Roundabout</p> </div>					
Design Parameters:					
e	=	entry width (m)	=	Arm A	4.1
v	=	approach half width (m)	=	Arm B	4.2
L	=	effective length of flare (m)	=	Arm C	3.9
s	=	sharpness of flare	=		2.5
φ	=	entry angle (°)	=		12.8
D	=	inscribed circle diameter (m)	=		0.20
r	=	entry radius (m)	=		0.53
					0.32
					51
					53
					41
					20
					20
					73
					5.5
					7.9
Calculation:					
q _c	=	circulating flow across entry	=	Arm A	255
K	=	$1-0.00347(F-30)-0.978(1/r-0.05)$	=	Arm B	16
x ₂	=	$v+((e-v)/(1+2s))$	=	Arm C	182
M	=	$\exp((D-60)/10)$	=		0.96
F	=	$303x_2$	=		0.79
t _D	=	$1+0.5/(1+M)$	=		0.89
f _c	=	$0.21t_D(1+0.2x_2)$	=		3.64
Q _E	=	$K(F-f_cq_c)$	=		3.37
DFC	=	traffic flow into the roundabout/Q _E	=		3.35
					0.02
					0.02
					1103.79
					1022.38
					1014.70
					1.49
					1.49
					0.54
					0.52
					930
					802
					816
					0.15
					0.35
					0.23