Attachment 3

**Revised Traffic Impact Assessment** 

Traffic Impact Assessment Report

March 2025

# AECOM



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### Annex

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- Annex B Assessment Results of Global Parking Standard under HKPSG Adopted for the Application Site
- Annex C Town Chung New Town Extension Extracted from Planning Statement
- Annex D Junction Calculation Sheets



### 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Application Site covers various lots and adjacent Government land in DD 1 TC and adjoining government land, Tung Chung Valley, New Territories. The Application Site is located to the west of the junction of Yu Tung Road / Chung Mun Road with an area of about 33,808m<sup>2</sup> (**Figure 1.1**).
- 1.1.2 The Application Site is zoned "Residential (Group C)2" under the current Approved Tung Chung Valley Outline Zoning Plan (OZP) no. S/I-TCV/2. In statutory planning terms, residential development with a maximum plot ratio of 1.0 and building height of 20 mPD is permitted as of right within the Site (hereinafter referred to as "Conforming Scheme").
- 1.1.3 The Application Site is near the planned Tung Chung West (TCW) MTR Station and Tung Chung West PTI. Under the current application, the Applicant proposes to rezone the Site to "Residential (Group B)" with a domestic ratio of 2.1 to provide about 1,783 nos. of residential units with an average flat size of about 39.8 m<sup>2</sup> (hereinafter referred to as "Proposed Scheme"). Also, a covered private transport lay-by and some local commercial facilities with a non-domestic plot ratio of 0.22 are proposed for the Site.
- 1.1.4 AECOM Asia Co. Ltd. was commissioned by the Applicant as the Traffic Consultant to prepare a TIA report in support of the Section 12A planning application.

### 1.2 Objectives

- 1.2.1 The main objectives of this report are as follows-
  - Outline the proposed development parameters and internal transport facilities provision, vehicular access arrangement and pedestrian arrangement;
  - Review the current traffic condition in the vicinity of the Application Site;
  - Estimate the potential traffic generations and attractions of the Application Site;
  - Produce traffic forecasts on the surrounding road network at the adopted design year;
  - Assess traffic impact on the surrounding road network induced from the Application Site; and
  - Develop traffic improvement proposal(s), if necessary.

### 1.3 Structure of TIA Report

- 1.3.1 Following this introductory chapter, the TIA is structured as follows:
  - **Chapter 2**: Proposed Development, describes the development schedule of the Application Site and its internal traffic facilities provisions, vehicular access arrangement and pedestrian arrangement.
  - **Chapter 3**: Existing Traffic Condition, reviews the current traffic conditions in the vicinity. The future road network serving Tung Chung West would also be discussed.



- **Chapter 4**: Traffic Forecasting describes the traffic forecasting methodology and presents the forecasted traffic flows in design year.
- **Chapter 5**: Traffic Impact Assessment, assesses the traffic impact induced on the surrounding road network and recommends improvement schemes, if necessary; and
- **Chapter 6**: Summary and Conclusion, summarizes the findings of the study and presents the conclusion of this TIA.



### 2 APPLICATION SITE

### 2.1 Development Schedule

2.1.1 **Table 2.1** summarizes the development schedule of the Proposed Scheme. The proposed indicative Master Layout Plan (MLP) under the current application is illustrated in **Figure 2.1** for reference.

Table 2.1	Indicative Development Schedule of the Application Site
Table 2.1	indicative Development Schedule of the Application Site

Proposed Development	
Site Area	About 33,808m <sup>2</sup>
GFA	About 78,292m <sup>2</sup>
- Domestic Portion	About 70,997m <sup>2</sup>
<ul> <li>Non-Domestic Portion</li> </ul>	About 7,295m <sup>2</sup>
Plot Ratio	Not more than 2.32
- Domestic Portion	Not more than 2.10
<ul> <li>Non-Domestic Portion</li> </ul>	Not more than 0.22
Maximum Domestic Site Coverage	Not more than 33.3%
Maximum Building Height (main roof level)	
- Area (a)	Not more than 50mPD
- Area (b)	Not more than 80mPD
- Area (c)	Not more than 100mPD
No. of Storeys <sup>(1)</sup> 6 to 22 storeys above a	
	storey(s) podium
Domestic Portion	
Domestic GFA	About 70,997m <sup>2</sup>
Domestic Plot Ratio	Not more than 2.10
No. of Blocks	9
No. of Units	About 1,783
Average Flat Size	About 39.8m <sup>2</sup>
Anticipated Population <sup>(2)</sup>	About 5,171
Private Open Space <sup>(3)</sup>	Not less than 5,171m <sup>2</sup>
Non-Domestic Portion – Commercial and Cov	vered Private Transport Lay-by
Commercial GFA <sup>(4)</sup>	About 4,145m <sup>2</sup>
Covered Private Transport Lay-by GFA	About 3,150m <sup>2</sup>
Maximum Building Height	Not more than 19mPD
Residents' Clubhouses <sup>(5)</sup>	
Clubhouse GFA	About 3,000m <sup>2</sup>
No. of Storeys	1

Remarks:

- (1) Excluding basement floor(s) for car park and transfer plate; including above ground floors for commercial / covered private transport lay-by / ramp / E&M facilities / clubhouse / residential lobby / residential floors. The indicative typical floor-to-floor height is 3.25m which is subject to refinement at detailed design stage.
- (2) Adopting a person per flat ratio of 2.9 as per Tertiary Planning Units 950 951 under 2021 Population Census covering the Application Site
- (3) Not less than 1m<sup>2</sup> per person in accordance with Hong Kong Planning Standards and Guidelines (HKPSG) requirement
- (4) Commercial GFA refers to commercial uses ('Eating Place' and 'Shop and Services'), 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses), 'Place of Entertainment' and 'Place of Recreation, Sports or Culture'. A kindergarten with a GFA of about 930m<sup>2</sup> is proposed.
- (5) Residents' clubhouse GFA is based on the maximum GFA concession for clubhouse according to Buildings Department's Practice Note APP-104 and shall be disregarded from the total GFA calculation



### 2.2 Access Arrangement and Public Transport Facilities

Refer to the **Section 3.5 Future Road Network**, a four-arm roundabout junction intersecting Yu Tung Road / Chung Mun Road (J5) is planned. The roundabout will include a vehicular access road to serve the Application Site. The vehicular access for the Application Site is shown in **Figure 2.1.** With about 20m long queuing space between the ingress/egress point of the proposed development and the main road (Refer to **Figure 3.11**), it would be sufficient to accommodate an average traffic demand of about one vehicle per minute during peak hours (Table 4.5).

### 2.3 Public Transport Facilities

- 2.3.1 As mentioned in **Table 2.1** and refer to **Figure 2.1 Indicative Master Layout Plan**, even there will be a planned Tung Chung West MTR Station, a covered private transport lay-by is proposed within the Application Site to supplement the provision of transport services for the future residents and visitors of the Application Site. The proposed covered private transport lay-by will be located to the southeast of the Application Site. It will consist of 2 double-width bays of 7.3m in width and 42m in length and one bay of 7.3m in width and about 60m in length. All the 3 bays have been designed to allow manoeuvring of 12.8m buses. The management and maintenance responsibility of the covered private transport lay-by would be taken up the Applicant.
- 2.3.2 As mentioned in **Table 2.1**, the population of the Application Site will be 5,171. Reference was made to the published "Travel Characteristics Survey (TCS) 2011 Final Report". According to the TCS Final Report, the daily mechanised trip rate per population is 1.83 trips and the morning peak hour accounted for about 12% of the daily trips. The percentage of using public transport is about 73% of the total trips. By assuming a directional split of 90:10 in outbound/inbound direction, the estimated additional public transport demand in outbound direction in AM peak hour is about 746 passengers / hour (i.e. 5,171 x 1.83 x 0.12 x 0.73 x 0.9).
- 2.3.3 Taking into consideration (1) some of the existing bus routes at Yu Tung Road and Tung Chung Road are running to / from Tung Chung Station; and (2) the Application Site is located in proximity of North Lantau Expressway which is the major strategic route to all destinations in Hong Kong, the possible bus routes are proposed as a circular bus route running between Tung Chung Station and the Application Site and a cross-district bus route running between Urban District (Kowloon or Hong Kong Island) and the Application Site.
- 2.3.4 With reference to the place of work and study in the Application Site and the modal split of the working population and students at Tung Chung District in 2021 by-census published by Census and Statistics Department, it is estimated that about 27% of the future residents would work/study in Tung Chung while 73% would work/study in other districts. For people who would go to other districts for work/study, around 57% of them would take MTR. Hence, it is assumed that 70% of the future residents (i.e. 522 passengers / hr) would take the local route for local trips/bus-rail interchange and another 30% of the future residents (i.e. 224 passengers / hr) would take the cross-district bus route directly.
- 2.3.5 To cater for the estimated public transport demand from the Application Site, the following public transport services are proposed as listed in **Table 2.2**.



Table 2.2	Proposed Public Transport Services			
Public Transport Services	No. of Public Transport Route(s)	Frequency (min.)	Estimated Service Capacity (pax/hr) <sup>(1)</sup>	
Local Bus Route (Circular)	1	10	522	
Cross-District Bus Route	1	20	224	

Note: The capacity of bus is assumed to be 100 passengers/bus.

- 2.3.6 One Bus Route (Circular): Running between Tung Chung Station and the Application Site, with terminating point at the Application Site and a bus lay-by accommodating two buses at Tat Tung Road near Fu Tung Street adjacent to Tung Chung Station for passenger boarding / alighting. The estimated round trip journey distance and journey time are about 5km and 10 minutes respectively. The round trip time is estimated about 15 minutes (5km / 30kph + 5 minutes boarding/alighting time). For proposed headway of 10 minutes, in total 2 buses would be required (i.e. 15/10) during peak hour. For non-peak period, it is assumed that the proposed circular bus service would be operated in headway of 20 minutes, in total 1 bus would be required (i.e. 15/20) during the non-peak hour. The proposed routing is shown in **Figure 2.2**. The proposed circular routing and bus stops is a preliminary proposal and will be reviewed to meet the public transport plan and needs during the detailed design stage.
- 2.3.7 One Cross-District Bus Route: running between the Application Site and Urban Districts (Kowloon or Hong Kong Island). Based on capacity of 100 persons/bus, this would be equivalent to 3 bus trips/hour. Hence 3 bus trips of cross-district bus routes to/from urban areas (such as Kowloon, Hong Kong Island) are proposed during the AM / PM peak hours.
- 2.3.8 With the proposed public transport services, the overall provided capacity is around 900 passengers / hour, which shall be sufficient to accommodate the estimated public transport demand.
- 2.3.9 Nonetheless, the proposed public transport services and associated operation arrangement (i.e. origin/destination, frequency, stops, routings etc.) will be reviewed to align with the public transport needs of the nearby community by relevant stakeholders, bus operators and Government Departments during the detailed design stage.
- 2.3.10 Subject to the future planning of public transport services, the provisions of covered private transport lay-by within the Application Site will allow adequate facility to serve the future public transport demand generated by the proposed development
- 2.3.11 According to Table 8.7.15 Guidelines on PTI Designs, Chapter 8.7, Volume 9 of TPDM. Peripheral sawtooth bus bay, central stacking PTI and central island passenger platform PTI should be applicable to Site with a minimum breadth 60m. With the north-south running direction and approximately 30m width of the proposed covered private transport lay-by, the saw tooth design of the pick up and drop off bays of the Transport Interchange is considered not feasible. Therefore, typical parallel bays are proposed within the covered private transport lay-by.
- 2.3.12 As mentioned in **Table 2.1**, a covered private transport lay-by is proposed within the Application Site to cater for the provision of public transport services for the future residents and visitors of the Application Site. One bay is proposed for general pick-up / drop-off of passengers, including taxi. One bay is proposed for the circular bus route (between Tung Chung Station and the Application Site) while the remaining bay is proposed for the cross-district bus route during the AM/PM peak hours. The covered



private transport laybys will be accessible to the nearby community during the operational hours of the two proposed bus routes.

2.3.13 The ingress/egress of the Covered Private Transport Lay-by are proposed to be located at Chung Mun Road as shown in Figure 2.1. To provide a quick and direct routing of the proposed covered transport lay-by leading to and from Yu Tung Road and Chung Mun Road, the ingress allowing the vehicles to turn right or left into the lay-by and left-out from the lay-by is proposed. The traffic impact of the proposed vehicular arrangement is considered insignificant, taking into account of the low Volume to Capacity ratio of Chung Mun Road (Table 5.3) and low usage of planned bus lay-by located at Chung Mun Road (11-16 buses during peak hours, Table 3.4) to the north of the proposed ingress point. The indicative layout of the Covered Private Transport Lay-by together with the swept path analysis is shown in Annex A.

### 2.4 Internal Parking and Servicing Provisions

2.4.1 The parking and loading/unloading facilities of the Application Site would be provided in accordance with the requirements of the Hong Kong Planning Standards and Guidelines (HKPSG). The respective requirements are summarized in **Table 2.3**.

	HKPSG Requirements
Private Car Parking Spaces	<u>.</u>
<b>Private Housing</b> – Private Car Parking Spaces	GPS x R1 x R2 x R3 For flat size $\leq 40m^2$ = 1 space per 4-7 flats x 0.5 x 0.75 x 1.00 = 0.375 spaces per 4-7 flats For flat size : $40m^2 <$ flat size $\leq 70m^2$ , = 1 space per 4-7 flats x 1.2 x 0.75 x 1.00 = 0.9 spaces per 4-7 flats
Private Housing – Visitor Private Car Parking Spaces	5 spaces per block of more than 75 residential units
Commercial (Retail) – Private Car Parking spaces	1 car space per 150 – 300m² GFA
Commercial (Kindergarten) – Private Car Parking Spaces	0 to 1 car parking space per 4 to 6 classrooms
Motorcycle Parking Spaces	
<b>Private Housing</b> – Motorcycle Parking Spaces	1 space per 100-150 flats
<b>Retail</b> – Motorcycle Parking Spaces	5% - 10% total provision for private cars
Bicycle Parking Spaces	
<b>Private Housing</b> – Bicycle Parking Spaces	1 space for every 15 flats with flat size smaller than 70m <sup>2</sup>

### Table 2.3 HKPSG Parking and Servicing Facilities Provisions Requirement



	HKPSG Requirements	
Loading and Unloading Bay		
<b>Private Housing</b> – Loading and Unloading Bay	1 space for every 800 flats subject to min. 1 bay per block	
<b>Retail</b> – Loading and Unloading Bay	1 loading/ unloading bay for goods vehicles for every 800 to 1200m <sup>2</sup> or part thereof, GFA	
Lay-bys	-	
<b>Kindergarten</b> – Taxi / private cars lay-by	1 lay-by for taxis and private cars for every 5 to 8 classrooms	
<b>Kindergarten</b> – Small Coaches lay-by	A minimum of 2 lay-bys for school buses or 5 lay- bys for small coaches (each 3m x 7m)	

2.4.2 In light of the HKPSG requirements given in **Table 2.3**, the proposed provision for the Application Site according to the development schedules are summarized in **Table 2.4**. Taken into consideration the proximity to public transport services, traffic conditions and the illegal parking condition in the vicinity, it is proposed to adopt a GPS of 5 for calculating the residential carparking provision according to HKPSG. The assessment the GPS under HKPSG adopted for the Application Site is shown in **Annex B**. The Application Site is within 500m radius of new Tung Chung West MTR Station to justify the Accessibility Adjustment Ratio of 0.85 is shown in **Figure 2.3** of the Planning Statement and extracted in **Annex C**. For retail private car parking space, the midrange provision requirement has been adopted. For other facilities, higher end of provision has been adopted.

Provisions					
	Parameters	<b>Required Provision</b>		Proposed Provision	
Private Housing –	934 Flats	FS ≤ 40m <sup>2</sup>	51-88	224 <sup>(1)</sup>	
Private Car Parking	849 Flats	40m² <fs≤70m²< td=""><td>110-192</td><td></td></fs≤70m²<>	110-192		
Spaces	Total: 1,783 Flats	161-280 spaces		spaces	
<b>Private Housing</b> – Visitor Private Car Parking Spaces	9 Towers	45 spaces		45 <sup>(2)</sup> spaces	
<b>Retail</b> – Private Car Parking Spaces	3,215 m <sup>2</sup>	11 – 22 spaces		16 <sup>(3)</sup> spaces	
Kindergarten – Private Car Parking Spaces	6 Classrooms	0 – 2 spaces		2 spaces	
		Private Car Parl	king Spaces	<mark>287 spaces</mark>	
Private Housing – Motorcycle Parking Spaces	lotorcycle Parking 1,783 Flats 12 - 18 spaces		18 spaces		
<b>Retail</b> – Motorcycle Parking Spaces	5% - 10% total provision for private cars	1 - 2 spac	es	2 spaces	
		Motorcycle Parl	king Spaces	20 spaces	

Table 2.4Required and Proposed Parking and Servicing FacilitiesProvisions



	Parameters	Required Provision	Proposed Provision
Private Housing – Bicycle Parking Spaces	1,783 Flats <sup>(4)</sup>	119 spaces	119 spaces
		Bicycle Parking Spaces	119 spaces
Private Housing – Loading and Unloading Bay	9 Towers	9 bays	9 bays
<b>Retail</b> – Loading and Unloading Bay	ng and 3,215 m <sup>2</sup> 3-4 k		4 bays
		Loading and Unloading Bays	13 bays
Kindergarten – Taxi / private cars lay-by	6 Classrooms	2 lay-bys for taxi / private cars	2 lay-bys
Kindergarten – Small Coaches lay- by	-	5 lay-bys for small coaches (each 3m x 7m)	5 lay-bys

Notes: Round up figures adopted.

(1) GPS of 1 space per 5 flats is adopted.

All the towers have more than 75 units per block. Hence 5 visitor car parking spaces per block would be provided. 1 car space per 200  $m^2$  GFA is adopted. (2)

(3)

(4) No. of flats with flat size smaller than 70  $m^2$ .



### 3 EXISTING TRAFFIC CONDITION AND FUTURE ROAD NETWORK

### 3.1 Existing Traffic Arrangement

- 3.1.1 The Application Site is located to the west of the junction of Yu Tung Road / Chung Mun Road.
- 3.1.2 Yu Tung Road is a dual two district distributor road in east-west direction. It connects to Chung Mun Road at its western end and Tung Chung Eastern Interchange at its eastern end.
- 3.1.3 Tung Chung Eastern Interchange is a roundabout junction of Yu Tung Road / Yi Tung Road / North Lantau Highway. It serves as the major roundabout junction in Tung Chung area. It provides connection to the strategic highways North Lantau Highway for all other destinations in Hong Kong.

### 3.2 Traffic Survey

3.2.1 A total of 6 existing critical junctions and 3 critical road links have been identified for assessment and listed in **Table 3.1** and shown in **Figure 3.1**. Existing layout of the critical junctions are presented in **Figure 3.2** to **Figure 3.7**.

Table 5.1 Surveyed Key Junctions for Assessment					
Ref.	Junction	Туре	Fig. No.		
Junctior	Junctions				
J1	Yu Tung Road / Yi Tung Road / North Lantau Highway	Roundabout	3.2		
J2	Yu Tung Road / Shun Tung Road	Signal	3.3		
J3	Yu Tung Road / Chung Yan Road	Signal	3.4		
J4	Tung Chung Road / Chung Yan Road	Priority	3.5		
J5	Yu Tung Road / Chung Mun Road Prio		3.6		
J6	Tung Chung Road / Shek Mun Kap Road         Roundabout				
Road Links					
L1	L1 Yu Tung Road (between J2 and J3)				
L2	Yu Tung Road (between J3 and J5)				
L3	Chung Mun Road (to the south of J5)				

 Table 3.1
 Surveyed Key Junctions for Assessment

- 3.2.2 To investigate the current traffic condition of the identified critical junctions and critical road links, manual classified traffic counts were conducted on a typical weekday in May 2023. The surveys were undertaken during 7:00am 9:00am and 5:00pm 7:00pm.
- 3.2.3 The identified morning (AM) and evening (PM) peak hour are from 7:30am to 8:30am and from 5:30pm to 6:30pm respectively. The 2023 observed AM and PM peak hour traffic flows are shown in **Figure 3.8**.

### 3.3 Junction and Link Assessment

3.3.1 Based on the 2023 observed traffic flows, capacity assessments were carried out in accordance with the methodology documented in the appendices of Transport Planning and Design Manual (TPDM) Volume 2 Chapter 4 for priority junction /



roundabout. Signal junction assessments were based on TPDM Volume 4.

3.3.2 The existing junction performance of the critical junctions are summarized in Table3.2. The junction calculation spreadsheets are enclosed in Annex D.

Ref.	Junction	Indicator*	2023 Observed	
			AM Peak	PM Peak
J1	Yu Tung Road / Yi Tung Road / North Lantau Highway	DFC	0.36	0.30
J2	Yu Tung Road / Shun Tung Road	RC	54%	>100%
J3	Yu Tung Road / Chung Yan Road	RC	67%	>100%
J4	Tung Chung Road / Chung Yan Road	DFC	0.40	0.17
J5	Yu Tung Road / Chung Mun Road	DFC	0.27	0.22
J6	Tung Chung Road / Shek Mun Kap Road	DFC	0.24	0.24

Table 3.2Existing Junction Performance

\* RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout

- 3.3.3 At present, the critical junctions are operating within capacity during the AM and PM peak periods.
- 3.3.4 Based on the observed traffic flows in Figure 3.8, the volume / capacity (V/C) ratios of the identified critical road links were assessed. The results are summarized in Table 3.3.

Table 3.3 Existing Road Link Performance								
Ref.	Road Link	Direction	Capacity	2023 Traffic Flows (pcu/hr)		2023 V/C		
			(pcu/hr)	AM Peak	PM Peak	AM Peak	PM Peak	
L1	Yu Tung Rd	NB	3,050	1215	900	0.40	0.30	
LI	(Between J2 and J3)	SB	3,050	990	965	0.32	0.32	
L2	Yu Tung Road	NB	2745 <sup>(1)</sup>	375	220	0.14	0.08	
0	(Between J3 and J5)	SB	2745 <sup>(1)</sup>	355	220	0.13	0.08	
L3	Chung Mun Road (To the south of J5)	NB	2350	215	85	0.09	0.04	
		SB	2350	195	85	0.08	0.04	

 Table 3.3
 Existing Road Link Performance

Note: (1) A 10% reduction in road capacity is assumed to account for bus activities on Yu Tung Road (between J3 and J5)

3.3.5 The assessment results in Table 3.3 indicate that all the critical road links are operating within capacities during the AM and PM peak periods.

### 3.4 Existing Public Transport Facilities

3.4.1 The existing franchised bus routes serving Yu Tung Road, Tung Chung Road and Chung Mun Road, where are located within 500m radius of the Application Site are summarized in the **Table 3.4** and presented in **Figure 3.9**.

### Table 3.4Existing Public Transport Services



Route No.	Origin / Destination	Frequency (min.)					
Franchised Bus							
	Bus Routes – Tung Chung Road						
	Tai O $\leftarrow \rightarrow$ Tung Chung Station Bus Terminus	5 - 45					
11	Tai O (Sha Tsui) → Tung Chung Station Bus Terminus	07:10 (School Days Only), 14:05, 15:00, 15:45, 16:15, 17:00, 17:25					
	Tai O (Shui Hau) $\rightarrow$ Tung Chung Station Bus Terminus	06:40 (Mon to Fri), 07:00 (Mon to Sat)					
11A	Shek Pik $\leftarrow \rightarrow$ Tung Chung Station Bus Terminus	25 - 45					
23	Tung Chung Tat Tung Road Bus Terminus ← → Ngong Ping	15 - 60					
34	Tung Chung Tat Tung Road Bus Terminus ← → Shek Mun Kap	5 - 110					
	Tung Chung Station Bus Terminus $\leftarrow \rightarrow$ Mui Wo Pier	5 – 60					
3M	Pui O (Lo Wai Tsuen) → Tung Chung Station Bus Terminus	06:50, 07:20, 08:20					
A35	Mui Wo Pier $\leftarrow \rightarrow$ HZMB Hong Kong Port	From HZMB HK Port : 06:15, 06:40, 08:30, 18:15, 23:30					
		From Mui Wo Pier: 05:30, 07:25, 17:00, 22:00, 00:15 From Mui Wo Pier:					
N35	Mui Wo Pier $\leftarrow  ightarrow$ HZMB Hong Kong Pier	03:15, 04:20 From HZMB Hong Kong Pier: 01:30, 04:30					
	Bus Routes – Yu Tung Road						
36X	Mun Tung Estate → Disneyland	08:20					
37H	Ying Tung Estate $\leftarrow \rightarrow$ North Lantau Hospital	20 - 30					
37P	Yung Yat House (Yu Tung Road) ← → Caribbean Coast	3 – 5 (School Day)					
39M	Tung Chung Station Bus Terminus ← → Mun Tung Estate	7 - 15					
B6	HZMB Hong Kong Port $\leftarrow \rightarrow$ Mun Tung Estate	15 - 30					
B6S	Mun Tung Estate and HZMB Hong Kong Port (Via: Tung Chung Station)	15 Mondays to Fridays – 07:00 – 08:30 only (except Public Holidays)					
E11B	Tin Hau Station $\leftarrow \rightarrow$ Tung Chung (Mun Tung Estate)	12 - 40					
E11S	Tin Hau Station $\leftarrow \rightarrow$ Tung Chung (Mun Tung Estate)	5 - 7					
E21A	Ho Man Tin (Oi Man Estate) Tin Hau Station ← → Tung Chung (Yat Tung Estate)	20 - 30					
E21B	Ho Man Tin (Oi Man Estate) Tin Hau Station ← → Tung Chung (Yat Tung Estate)	20 - 30					
E21X	Tung Chung (Mun Tung Estate) $\rightarrow$ Hung Hom Station	07:48					
E22S	Tung Chung (Mun Tung Estate) ← → Tseung Kwan O (Po Lam)	From Mun Tung Estate: 06:50, 07:05, 07:20 From Po Lam: 17:35					



Route No.	Origin / Destination	Frequency (min.)				
E31	Tsuen Wan (Discovery Park) ← → Tung Chng (Yat Tung Estate)	15 - 25				
E36A	Tung Chung (Yat Tung Estate) ← → Yuen Long (Tak Yip Street)	25 - 60				
N31	Tsuen Wan (Discovery Park) ← → Airport (Ground Transportation Centre)	30				
S64X	Tung Chung (Mun Tung) $\leftarrow \rightarrow$ Airport	10 - 35				
	Bus Routes – Chung Mun Road					
37	Yat Tung Estate $\leftarrow \rightarrow$ Ying Tung Estate	10 – 20 (School Day)				
38X	Yat Tung Estate (Yu Tung Road) ← → Tung Chung Station Bus Terminus	6 – 8 (School Day)				

### 3.5 Future Road Network

3.5.1 According to PWP item No. 7786CL Tung Chung New Town Extension (Road Works at Yu Tung Road, Chung Mun Road, Road L29, Road L30 and Shek Mun Kap Road) and (Road Works at Road L22, Road L24, Road L25, Road L26 and Road L28), there will be new planned roads and road improvement works to serve the whole Tung Chung West. The road configuration and schematic layout of these planned roads are shown in **Table 3.5** and illustrated in **Figure 3.10**.

Table 3.5 Pl	anned Road Improvement Works and Planned New Roads
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Ref.	Road	Road Configuration	Types (New/Improvement)
1	Chung Mun Road	S-4	Improvement
2	Road L22	S-2	New
3	Road L23	S-2	New
4	Road L24	S-2	New
5	Road L25	S-2	New
6	Road L26	S-2	New
7	Road L28	S-2	New
8	Road L29	S-2	New
9	Road L30	S-2	New
10	Shek Mun Kap Road	S-2	Improvement

- 3.5.2 The critical junctions and identified road links for the traffic impact assessment in future are listed in Table 3.6 and shown in Figure 3.10. The planned junction layouts are presented in Figure 3.11 to Figure 3.17. The planned junction types (i.e. signalized, priority or roundabout) and junction improvement schemes for J2 and J3 are adopted under the Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) Design and Construction Deliverable C31 Final Detailed Traffic Impact Assessment Report (REP-116-02.)
- 3.5.3 Planned Junction Improvement Scheme for J2 under REP-116-02 (**Figure 3.18**): (1) convert the left-turn traffic lane from eastbound Yu Tung Road to northbound Shun



Tung Road into a free-flow lane and (2) make minor lane marking modification to form a separate lane for the left turn from eastbound of Yu Tung Road.

3.5.4 Planned Junction Improvement Scheme for J3 under REP-116-02 (Figure 3.19): (1) change the lane marking of the middle entry lane of southbound Chung Yan Road from left turn + straight ahead to straight ahead + right turn; (2) change the lane marking of the rightmost entry lane of southbound Chung Yan Road from straight ahead + right turn to right turn; (3) change the lane marking of the middle entry lane of westbound Yu Tung Road from straight ahead + right turn to straight ahead; (4) widen the eastbound Yu Tung Road to provide three entry lanes, with leftmost lane for left turn, middle lane for straight ahead, rightmost land for straight ahead + right turn.

Ref.	Junction	Existing /Planned	Type <sup>(2)</sup>	Fig. No.
Junctio	ons			
J1	Yu Tung Road / Yi Tung Road / North Lantau Highway	Existing	Roundabout	3.2
J2 <sup>(1)</sup>	Yu Tung Road / Shun Tung Road	Planned	Signal	3.18 (1)
J3 <sup>(1)</sup>	Yu Tung Road / Chung Yan Road	Planned	Signal	3.19 <sup>(1)</sup>
J4	Tung Chung Road / Chung Yan Road	Existing	Priority	3.5
J5	Yu Tung Road / Chung Mun Road / Road L22 / Road L23	Planned	Roundabout	3.11
J6	Tung Chung Road / Shek Mun Kap Road	Planned	Priority	3.12
J7	Road L29 / Road L30	Planned	Priority	3.13
J8	Tung Chung Road / Road L30	Planned	Priority	3.14
J9	Road L25 / Road L29	Planned	Priority	3.15
J10	Shek Mun Kap Road / Road L28 / Road L29	Planned	Priority	3.16
J11	Chung Mun Road / Road 24 / Road L29	Planned	Signal	3.17
Road L	inks			
L1	Yu Tung Road (between J2 and J3)			
L2	Yu Tung Road (between J3 and J5)			
L3	Chung Mun Road (to the south of J5)			

Table 3.6Critical Junctions for Assessment

Note: (1) Junction Improvement Works are adopted under Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.

(2) The planned junction types are adopted based on Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.



### 4 TRAFFIC FORECASTING

### 4.1 Design Year

4.1.1 The proposed development is tentatively scheduled for completion in 2030. Year 2033 is therefore selected as a design year for assessment purpose (i.e. 3 years after the planned completion).

### 4.2 Future Planned Developments

4.2.1 With the Application Site (Conforming Scheme), there are also several planned / potential developments in the vicinity, which have been taken into account in the background traffic forecast and are listed in **Table 4.1** and diagrammatically shown in **Figure 4.1**. The development parameters and average flat size in Table 4.1 are adopted based on the Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.)

Ref.	Lot	Proposed Use	Development Parameter <sup>(1)</sup>	Estimated Average Flat Size <sup>(1)</sup>
1	Application Site	Private Housing	236 units	140 m <sup>2</sup>
2	Site A	Private Housing	212 units	140 m <sup>2</sup>
3	Site B	Private Housing	818 units	100 m <sup>2</sup>
4	Site C	Private Housing	124 units	100 m <sup>2</sup>
5	Site D	Private Housing	245 units	140 m <sup>2</sup>
6	Site E	Private Housing	53 units	140 m <sup>2</sup>
7	Site F	Private Housing	126 units	140 m <sup>2</sup>
8	Area 23	Public Housing	1908 units	50 m <sup>2</sup>
9	Area 23	Commercial Facilities GFA	1,635 m² GFA	50 m <sup>2</sup>
10	Area 33	Private Housing	411 units	100 m <sup>2</sup>
11	Area 38 (Area 38A & B)	Commercial Development	29,601m <sup>2</sup> GFA	
12	Area 38 (Area 38C)	Commercial Development	2,742m <sup>2</sup> GFA	
13	Area 42	Public Housing Commercial Facilities GFA	6,600 units Commercial Facilities GFA=16,000m <sup>2</sup>	40 m <sup>2</sup>
14	Area 46	Public Housing Commercial Facilities GFA	1,711 units Commercial Facilities GFA=4,480m <sup>2</sup>	40m <sup>2</sup>
15	Area 48	Private Housing	187 units	100 m <sup>2</sup>

 Table 4.1
 Planned / Potential Future Developments in the Vicinity

Notes:

(1) Development parameters and average flat size are adopted based on the Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.)

### 4.3 Trip Generation of Planned / Potential Future Developments

4.3.1 For the Conforming Scheme, the development trip rates used in this report are adopted from the Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West)
 – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.) and presented in Table 4.2.



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		Table 4.2	TPDM ·	Trip Rates (pc	u/hr)	
Landuse	Average Flat Size	lat Size Unit	АМ	AM Peak		l Peak
	(m²)		Gen.	Att.	Gen.	Att.
Subsidised Hoursing Public Rental	40	pcu/hr/flat	0.0325	0.0213	0.0196	0.0263
Subsidised Houring HOS	50	pcu/hr/flat	0.0483	0.0279	0.0244	0.0351
	60	pcu/hr/flat	0.0415	0.0141	0.0157	0.0276
Private Housing / R(A)	70	pcu/hr/flat	0.0659	0.0301	0.0258	0.0409
	80	pcu/hr/flat	0.0737	0.0305	0.0289	0.0491
	100	pcu/hr/flat	0.1572	0.0665	0.0609	0.0864
Private Housing / R(B)	120	pcu/hr/flat	0.189	0.0845	0.0783	0.1074
	140	pcu/hr/flat	0.2166	0.0988	0.0924	0.1237
Retail / Shopping Complex (Office + Retail)		pcu/hr/100m <sup>2</sup> GFA	0.1285	0.1525	0.236	0.2622
Office		pcu/hr/100m <sup>2</sup> GFA	0.1045	0.1646	0.1217	0.0840

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Note:

the development trip rates (Conforming Scheme) used in this report are adopted from the Agreement No. CE 70/2015 (CE) Tung Chung New Town Extension (West) – Design and Construction Deliverable C31 – Final Detailed Traffic Impact Assessment Report (REP-116-02.) (1)

According to the trip rate in Table 4.2, Table 4.3 summarizes the estimated trip 4.3.2 generations of the planned / potential future developments as listed in Table 4.1.



		Estimated Trips (pcu/hr)				
Ref.		AM F		PM Peak		
		Generation	Attraction	Generation	Attraction	
1 – Application Site	Estimated Flow (pcu/hr) (236 units)	51	23	22	29	
2 – Site A	Estimated Flow (pcu/hr) (212 units)	53	30	33	42	
3 – Site B	Estimated Flow (pcu/hr) (818 units)	129	54	50	71	
4 – Site C	Estimated Flow (pcu/hr) (124 units)	19	8	8	11	
5 – Site D	Estimated Flow (pcu/hr) (245 units)	53	24	23	30	
6 – Site E	Estimated Flow (pcu/hr) (53 units)	11	5	5	7	
7 – Site F	Estimated Flow (pcu/hr) (126 units)	27	12	12	16	
8 – Area 23	Estimated Flow (pcu/hr) (1,908 units)	92	53	47	67	
9 – Area 23	(commercial facilities GFA = 1,635 m²)	2	2	4	4	
10 – Area 33	Estimated Flow <sup>(1)</sup> (pcu/hr) (411 units)	65	27	25	36	
11 – Area 38 (Area 38A & B)	Estimated Flow (pcu/hr) (29,601m <sup>2</sup> Retail GFA)	38	45	70	78	
12 – Area 38 (Area 38C)	Estimated Flow (pcu/hr) (2,742m <sup>2</sup> Retail GFA)	4	4	6	7	
	Estimated Flow (pcu/hr) ((6,600 units)	216	142	131	175	
13 – Area 42	Estimated Flow (pcu/hr) (commercial facilities GFA = 16,000m²)	21	24	38	42	
14 – Area 46	Estimated Flow (pcu/hr) (1,711 units)	56	36	34	45	
	Estimated Flow (pcu/hr) (commercial facilities GFA = 4,480m <sup>2</sup> )	6	7	11	12	
15 – Area 48	Estimated Flow (pcu/hr) (187 units)	29	12	11	16	

### Table 4.3 Estimated Traffic Flows for Planned Future Developments in the Vicinity

### 4.4 Reference Traffic Forecasts

- 4.4.1 For the future traffic forecasts, in-house local area models (LAM) would be developed on this area by making reference to TD's 2019-based Base District Traffic Model (BDTM) "NTW3" covering Lantau Island.
- 4.4.2 The 2019 / 2026 / 2031 BDTM would be cordoned off to produce LAM for providing traffic flows within the study area. By proportional of 2019 / 2026 BDTM condoned matrix, the 2023 LAM matrix was derived. The 2019 LAM road network would also be refined for matching with existing road network in year 2023. The 2023 LAM matrix will be taken and assigned to the 2023 LAM road network by "SATURN" software to produce the year 2023 traffic flows. The cordoned 2023 LAM would be validated against 2023 observed traffic flows to ensure the base year LAM could satisfactorily replicate the traffic flow before the model is used to produce future year traffic forecasts.
- 4.4.3 The 2031 road network would be retrieved for matching with the planned network in Tung Chung West. The growth pattern demand from the produced 2023 / 2031 BDTM matrix were fed into the LAM for projecting the traffic flows from year 2023 to year



2033. In addition, the trip ends of traffic zones were adjusted and controlled to the estimated trips generated by the future planned development in the vicinity as listed in Table 4.3. The 2033 reference traffic flows with the Conforming Scheme are shown in Figure 4.2.

### 4.5 **Design Traffic Forecasts**

4.5.1 In the current proposal, the Applicant suggested a higher domestic plot ratio of 2.10, which would include 1,783 residential units with an average flat size of 39.8m<sup>2</sup>. However, the TPDM has not provided any recommended trip generation rates for flats of this size. To address this, the adopted trip rates are determined by the trip rates for private housing of average flat size of 60 m<sup>2</sup> in Conforming Case in Table 4.2 in proportion to the change in average flat size. For example, trip generation rate of private housing in AM peak with averaged flat size of 40m<sup>2</sup> would be adjusted as follows: 0.0415 pcu/hr/flat x 40m<sup>2</sup> / 60m<sup>2</sup>. For the retail, the trip rate proposed in the Conforming Scheme in **Table 4.2** was adopted. For the kindergarten, the trip rate as stipulated in BDTM NT Final Report, Appendix P 2 - Proposed Trip Rates of kindergarten was adopted. The trip rate for the Proposed Scheme are summarized in Table 4.4.

				Trip Rates (pcu/hr/flat)					
Land Use	Average Flat Size (m <sup>2</sup> )	AM Peak		PM Peak					
		Gen.	Att.	Gen.	Att.				
Private Housing	40	0.0277 (1)	0.0094 (2)	0.0105 (3)	0.0184 (4)				
Retail	pcu/hr/100m <sup>2</sup>	0.1285	0.1525	0.236	0.2622				
Kindergarten	pcu/hr/class operating	2.3056	2.3056	0.0286	0.0286				

Table 4.4	Trip R	ates for	Proposed	Scheme
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Note:

The adopted trip generation rate = adopted trip generation rate of private housing with average flat size of 60 sqm in AM (1) peak x flat size of 40 sqm / flat size of 60 sqm = 0.0415 x 40 / 60 = 0.0277

The adopted trip attraction rate = adopted trip attraction rate of private housing with average flat size of 60 sqm in AM (2) peak x flat size of 40 sqm / flat size of 60 sqm =  $0.0141 \times 40$  / 60 = 0.0094The adopted trip generation rate = adopted trip generation rate of private housing with average flat size of 60 sqm in PM

(3) peak x flat size of 40 sqm / flat size of 60 sqm = 0.0157 x 40 / 60 = 0.0105

(4) The adopted trip attraction rate =adopted trip attraction rate of private housing with average flat size of 60 sqm in PM peak x flat size of 40 sqm / flat size of 60 sqm = 0.0276 x 40 / 60 = 0.0184

Based on the development schedule as mentioned in **Section 2**, the adopted trip rates 4.5.2 from **Table 4.4** (Proposed Scheme) and the development trip generation and attraction under the Proposed Scheme for the Application Site are illustrated in Table 4.5. The traffic generation under the Conforming Scheme is also listed for comparison purpose.



Table 4.5         Estimated Traffic Flows for the Application Site						
	Estimated Trips (pcu/hr)					
Subject Site	АМ	Peak	PM	Peak		
	Gen.	Att.	Gen.	Att.		
Conforming Scheme						
Domestic Portion (PR = 1.0)	51	23	22	29		
Proposed Scheme						
Domestic Portion (PR = 2.10)	49	17	19	33		
Retail	4	5	7	8		
Kindergarten	14	14	1	1		
Total Two-way Traffic (Conforming Scheme) (pcu/hr)	74 51			51		
Total Two-way Traffic (Proposed Scheme) (pcu/hr)	103 69		69			
Difference (pcu/hr)	29 18		8			

### Table 4.5 Estimated Traffic Flows for the Application Site

- 4.5.3 As shown in **Table 4.5**, as compared with the Conforming Scheme, the Proposed Scheme would generate additional two-way traffic of about 29 pcu/hr and 18 pcu/hr during the AM and PM peak hours.
- 4.5.4 The 2033 design traffic flows are produced by adding additional trip generated by the Application Site under the Proposed Scheme as estimated in **Table 4.5** to 2033 reference traffic flows. The 2033 design traffic flows (Proposed Scheme) are shown in **Figure 4.3**.



### 5 TRAFFIC IMPACT ASSESSMENT

### 5.1 Junction Capacity Assessment

5.1.1 The operational performance of 11 critical junctions based on year 2033 traffic forecasts as mentioned in **Section 4** have been assessed. The results of junction capacity analysis are summarized in **Table 5.1**. Junction capacity calculation sheets are attached in Annex B.

Junction Yu Tung Road / Yi Tung Road / North Lantau Highway	Indicator <sup>(1)</sup>	Refer (Conformin AM Peak	20 ence g Scheme) PM Peak	Des (Proposed	Scheme)
Yu Tung Road / Yi Tung Road /		(Conformin	g Scheme)	(Proposed	Scheme)
•	550	AM Peak	PM Peak		
•	550			AM Peak	PM Peak
	DFC	0.60	0.52	0.61	0.53
Yu Tung Road / Shun Tung Road	RC	21%	58%	20%	56%
Yu Tung Road / Chung Yan Road	RC	0%	29%	-1%	28%
Tung Chung Road / Chung Yan Road	DFC	0.49	0.21	0.49	0.21
Yu Tung Road / Chung Mun Road / Road L22 / Road L23	DFC	0.31	0.26	0.31	0.27
Tung Chung Road / Shek Mun Kap Road	DFC	0.15	0.16	0.15	0.16
Road L29 / Road L30	DFC	0.30	0.33	0.30	0.33
Tung Chung Road / Road L30	DFC	0.30	0.24	0.30	0.24
Road L29 / Road L25	DFC	0.39	0.23	0.39	0.23
Shek Mun Kap Road / Road L29 / Road L 28	DFC	0.16	0.15	0.16	0.15
Chung Mun Road / Road L29 / Road L24	RC	68%	>100%	68%	>100%
	Yu Tung Road / Shun Tung Road Yu Tung Road / Chung Yan Road Tung Chung Road / Chung Yan Road Yu Tung Road / Chung Mun Road / Road L22 / Road L23 Tung Chung Road / Shek Mun Kap Road Road L29 / Road L30 Tung Chung Road / Road L30 Road L29 / Road L25 Shek Mun Kap Road / Road L29 / Road L 28 Chung Mun Road / Road L29 /	Yu Tung Road / Shun Tung RoadRCRoadRCYu Tung Road / Chung Yan RoadRCTung Chung Road / Chung Yan RoadDFCYu Tung Road / Chung Mun Road / Road L22 / Road L23DFCTung Chung Road / Shek Mun Kap RoadDFCRoad L29 / Road L30DFCTung Chung Road / Road L30DFCRoad L29 / Road L25DFCShek Mun Kap Road / Road L29 / Road L28DFCShek Mun Kap Road / Road L29 / Road L28DFC	Yu Tung Road / Shun Tung RoadRC21%Yu Tung Road / Chung Yan RoadRC0%Tung Chung Road / Chung Yan RoadDFC0.49Yu Tung Road / Chung Mun Road / Road L22 / Road L23DFC0.31Tung Chung Road / Shek Mun Kap RoadDFC0.15Road L29 / Road L30DFC0.30Tung Chung Road / Road L30DFC0.30Road L29 / Road L25DFC0.39Shek Mun Kap Road / Road L29 / Road L 28DFC0.16Chung Mun Road / Road L29 / Road L29DFC0.16	Yu Tung Road / Shun Tung RoadRC21%58%Yu Tung Road / Chung Yan RoadRC0%29%Tung Chung Road / Chung Yan RoadDFC0.490.21Yu Tung Road / Chung Mun Road / Road L22 / Road L23DFC0.310.26Tung Chung Road / Shek Mun Kap RoadDFC0.150.16Road L29 / Road L30DFC0.300.33Tung Chung Road / Road L30DFC0.300.24Road L29 / Road L25DFC0.390.23Shek Mun Kap Road / RoadDFC0.160.15L29 / Road L 28DFC0.160.15Chung Mun Road / Road L29 / Road L 28DFC0.160.15	Yu Tung Road / Shun Tung Road       RC       21%       58%       20%         Yu Tung Road / Chung Yan Road       RC       0%       29%       -1%         Tung Chung Road / Chung Yan Road       DFC       0.49       0.21       0.49         Yu Tung Road / Chung Mun Road       DFC       0.31       0.26       0.31         Yu Tung Road / Chung Mun Road / Road L22 / Road L23       DFC       0.15       0.16       0.15         Tung Chung Road / Shek Mun Kap Road       DFC       0.30       0.33       0.30         Tung Chung Road / Shek Mun Kap Road       DFC       0.30       0.33       0.30         Tung Chung Road / Road L30       DFC       0.30       0.24       0.30         Road L29 / Road L25       DFC       0.39       0.23       0.39         Shek Mun Kap Road / Road L29 / Road L 28       DFC       0.16       0.15       0.16         Chung Mun Road / Road L29 /       RC       68%       >100%       68%

Table 5.1Junction Performance in 2033

Notes:

(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout

5.1.2 As shown in **Table 5.1**, all junctions will be operation within capacity in 2033 except J3 in AM peak period. In order to enhance junction capacity of J3, junction improvement schemes for J3 have been proposed for consideration.

### 5.2 Junction Improvement for Junction of Yu Tung Road / Chung Yan Road (J3)

5.2.1 To enhance junction capacity of J3, it is proposed to provide one additional westbound far-side flare traffic lane of about 60m on Yu Tung Road and revise the lane markings to optimize the junction performance. In addition, it is proposed to provide one additional receiving lane at Yu Tung Road eastbound on Yu Tung Road to cater the straight-ahead traffic of Yu Tung Road eastbound. The proposed junction layout for junction of Yu Tung Road / Chung Yan Road (J3) is shown in **Figure 5.1**. The junction performance is reassessed by taking into consideration the junction improvement and the junction would operate with sufficient capacity as shown in **Table 5.2**. Further junction improvement scheme, with demarcation of works indicated in **Figure 5.1**, at J3 is formulated for improving the junction performance and will be carried out by the project proponent prior to the completion of the Proposed Development.



Table 5.2         2033 Junction Performance with Improvement Sc	heme
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D			2033 Design Case		
Ref.	Junction	Indicator*	AM Peak	PM Peak	
J3	Yu Tung Road / Chung Yan Road	RC	20%	55%	

Notes: RC = Reserve Capacity for signal junction

### 5.3 Road Link Assessment

5.3.1 The volume / capacity (V/C) ratios of the identified critical road links based on 2033 traffic forecasts Reference and Design Cases have been assessed. The results are summarized in **Table 5.3**.

				2033							
				Reference Case				Design Case			
Ref.	Road Link	Direction Capacity (pcu/hr)	Traffic Flows (pcu/hr) V/C		C	Traffic Flows (pcu/hr)		V/C			
				AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1.4	Yu Tung Rd	NB	3,050	2105	1455	0.69	0.48	2130	1475	0.70	0.48
L1	_1 (Between J2 and J3)	SB	3,050	1550	1665	0.51	0.55	1560	1675	0.51	0.55
	Yu Tung	NB	2,745 (1)	1105	685	0.40	0.25	1125	700	0.41	0.26
	Road (Between J3 and J5)	SB	2,745(1)	775	740	0.28	0.27	785	755	0.29	0.28
L3	Chung Mun	NB	2350	725	390	0.31	0.17	725	390	0.31	0.17
LJ	Road	SB	2350	435	395	0.19	0.17	435	395	0.19	0.17

Table 5.3	<b>Road Link Performance</b>	in 2033

Note: (1) A 10% reduction in road capacity is assumed to account for bus activities on Yu Tung Road (between J3 and J5)

5.3.2 The assessment results in **Table 5.3** indicated that all the above road links would be operated within capacity in year 2033.

### 5.4 Pedestrian Impact Assessment

- 5.4.1 Pedestrian LOS was used to assess the performance of footpaths. The assessment of the LOS depends on the pedestrian flows and the widths of the footpaths by making reference to the TPDM, published by TD.
- 5.4.2 LOS defines the walking environment in six levels by measuring the pedestrian flow rate in terms of the effective width of footpath. LOS A and B are both very good service levels and LOS F is the worst condition, while LOS C is desirable for most design with dominant 'living' pedestrian activities. **Table 5.4** describes different levels of LOS related to different ranges of pedestrian flow rate.



### Table 5.4 Description of Pedestrian Level-of-Service (LOS) on Footpath

LOS	Flow Rate (ped/min/m)	Description
A	<mark>≤ 16</mark>	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
В	16 – 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 – 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in a unidirectional stream. Where reverse direction or crossing movement exists, minor conflicts will occur, and speed and volume will be somewhat lower.
D	<mark>33 – 49</mark>	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speed and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 – 75	Virtually all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass by slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulty. Design volumes approach the limit of walking capacity, with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams. n Manual (TPDM) Volume 6 Chapter 10 and Highway Capacity Manual

Sources: Transport Planning and Design Manual (TPDM) Volume 6 Chapter 10 and Highway Capacity Manual (HCM-version 2000) Chapter 11 Exhibit 11-8.

- 5.4.3 According to the TCS Final Report, the daily mechanised trip rate per population is 1.83 trips and the morning peak hour accounted for about 12% of the daily trips. The percentage of using MTR is 27% of the total trips. As a conservative approach, 30% of the total trip is adopted to estimate the walking trips to MTR station. During AM peak hour the walking trips to MTR station is about 341 pedestrian / hour (i.e. 5,171 x 1.83 x 0.12 x 0.3).
- 5.4.4 The anticipated pedestrian traffic from the Application Site (i.e. 341 pedestrian / hour) to TCW Station is expected to cross the Road L22. The adjacent developments in close proximity to the subject site are also taken into account for the pedestrian assessment.
- 5.4.5 **Table 5.5** and **Figure 5.2** indicate the estimated pedestrian traffic of the adjacent developments to the subject site.



Table 5.5         Estimated Pedestrian Traffic in close vicinity to the subject site						
Land Lot No.	Landuse	Parameters	Estimated Pedestrian Traffic (1) (2)			
<mark>36A</mark>	Social Welfare Facilities (GIC)	Land Area: 4,858 m <sup>2</sup>	50 ped/hr			
<mark>36F</mark>	Telephone Exchange (GIC)	Land Area: 1,062 m <sup>2</sup>	<mark>50 ped/hr</mark>			
<mark>38A</mark> & <mark>38B</mark>	Commercial	GFA: 31,248 m <sup>2</sup>	1,250 ped/hr			
38C	Commercial	GFA: 2,742 m <sup>2</sup>	<mark>110 ped/hr</mark>			
<mark>45F</mark>	Stormwater Attenuation and Treatment Ponds (OU)	Land Area: 3,426 m <sup>2</sup>	50 ped/hr			

Note: (1) Assumed 50 ped/hr for GIC and OU facilities. (2) With reference to HKPSG Chpater 5, Table 2, 25m2 commercial GFA per worker is adopted and

- 100% of workers would access the site during peak hours..
- 5.4.6 Along the at-grade route, pedestrian would pass through the footpath at the west of Road L22, cautionary crossing across Road L22 and north of Yu Tung Road to reach the MTR station. The minimum width of the footpath at the west of Road L22 and the north of Yu Tung Road is 2.5m and 4.8m respectively. The width of crossing across Road L22 is 3.5m.
- 5.4.7 To achieve a conservative approach, a surge factor of 1.2 has been considered for estimating the pedestrian traffic. **Table 5.6** and **Figure 5.3** summarize the estimated pedestrian traffic impact to the footpath in vicinity to the subject site.

Table 5.6 Estimated Pedestrian Traffic Impact to the footpath in vicinity to the subject site

Footpath of	Min. Width	Estimated Pedestrian Traffic	LOS
West of Road L22	<mark>2.5m</mark>	<mark>662 ped/hr</mark> (5 ped/min/m)	A
North of Yu Tung Road	<mark>4.8m</mark>	<mark>2222 ped/hr</mark> (8 ped/min/m)	A

5.4.8 With reference to TPDM Vol. 2, the capacity of a 3.5m wide pedestrian crossing is ranged from 2,100 ped/hr to 4,200 ped/hr. According to Table 5.6, the estimated pedestrian traffic using west of Road L22 is 662 ped/hr, it is anticipated those pedestrians would cross Road L22 crossing. In light of the above, the pedestrian traffic would not generate insurmountable impact to the pedestrian crossing and the estimated pedestrian traffic impact to the crossing is tabulated in **Table 5.7**.

Table 5.7	Estimated Pedestrian Traffic Impact to the crossing in vicinity to
	the subject site

Pedestrian Crossing across	Min. Width	Capacity	Estimated Pedestrian Traffic	Sufficient
Road L22	<mark>3.5m</mark>	<mark>4200 ped/hr</mark>	<mark>662 ped/hr</mark>	Yes



5.4.9 The pedestrian assessment results above revealed that all the footpath sections and crossing will be still operating at acceptable level.



### 6 CONCLUSION

### 6.1 Summary

- 6.1.1 The Application Site covers various lots and adjacent Government land in DD 1 TC and adjoining government land, Tung Chung Valley, New Territories. The Site is located to the west of the junction of Yu Tung Road / Chung Mun Road with an area of about 33,808m<sup>2</sup>.
- 6.1.2 The Application Site is zoned "Residential (Group C)2" under the current Approved Tung Chung Valley Outline Zoning Plan (OZP) no. S/I-TCV/2. In statutory planning terms, residential development with a maximum plot ratio of 1.0 and building height of 20 mPD is permitted as of right within the Site.
- 6.1.3 Refer to the **Section 3.5 Future Road Network**, a four-arm roundabout junction intersecting Yu Tung Road / Chung Mun Road (J5) is planned. The roundabout will include a vehicular access road to serve the Application Site.
- 6.1.4 The Application Site is close to the planned TCW MTR Station. Under the current application, the Applicant proposes to rezone the Site with a domestic plot ratio of 2.10 to provide about 1,783 nos. of residential units (with an average flat size of about 39.8m<sup>2</sup>) on the Site.
- 6.1.5 The parking and loading/unloading facilities of the Application Site would be provided in accordance with the requirements as stipulated in the HKPSG.
- 6.1.6 In order to review the existing traffic condition, traffic count surveys were conducted at 6 identified critical junctions and 3 identified road links to investigate the traffic condition during commuting peak hours. At present, all the critical junctions and identified road links are operating within capacity.
- 6.1.7 To supplement the provision of transport services for the future residents and visitors of the Application Site, the proposed Covered Private Transport Lay-by will consist of 2 double-width bays of 7.3m in width and 42m in length and 1 double-width bay of 7.3m in width and 60m in length. All the 3 bays have been designed to allow manoeuvring of 12.8m buses. One bay is proposed for general pick-up/drop-off of passengers, including taxi. The remaining two bays are proposed for bus services. The covered private transport laybys will be accessible to the nearby community during the operational hours of the two proposed bus routes. The management and maintenance responsibility of the covered private transport lay-by would be taken up the Applicant.
- 6.1.8 As compared with the Conforming Scheme, the Proposed Scheme would generate additional two-way traffic of about 29 pcu/hr and 18 pcu/hr during the AM and PM peak hour.
- 6.1.9 The Application Site is tentatively scheduled for completion in 2030. According to Guidelines and Requirements of TIA Studies, the TIA should assess at least 3 years after the planned completion of the Proposed Development. Hence, 2033 is adopted as the design year for this TIA.
- 6.1.10 Peak hour traffic forecasts in design year 2033 were generated by the local area model. In addition, the traffic generated by other key future developments and to/from the Application Site have been included.

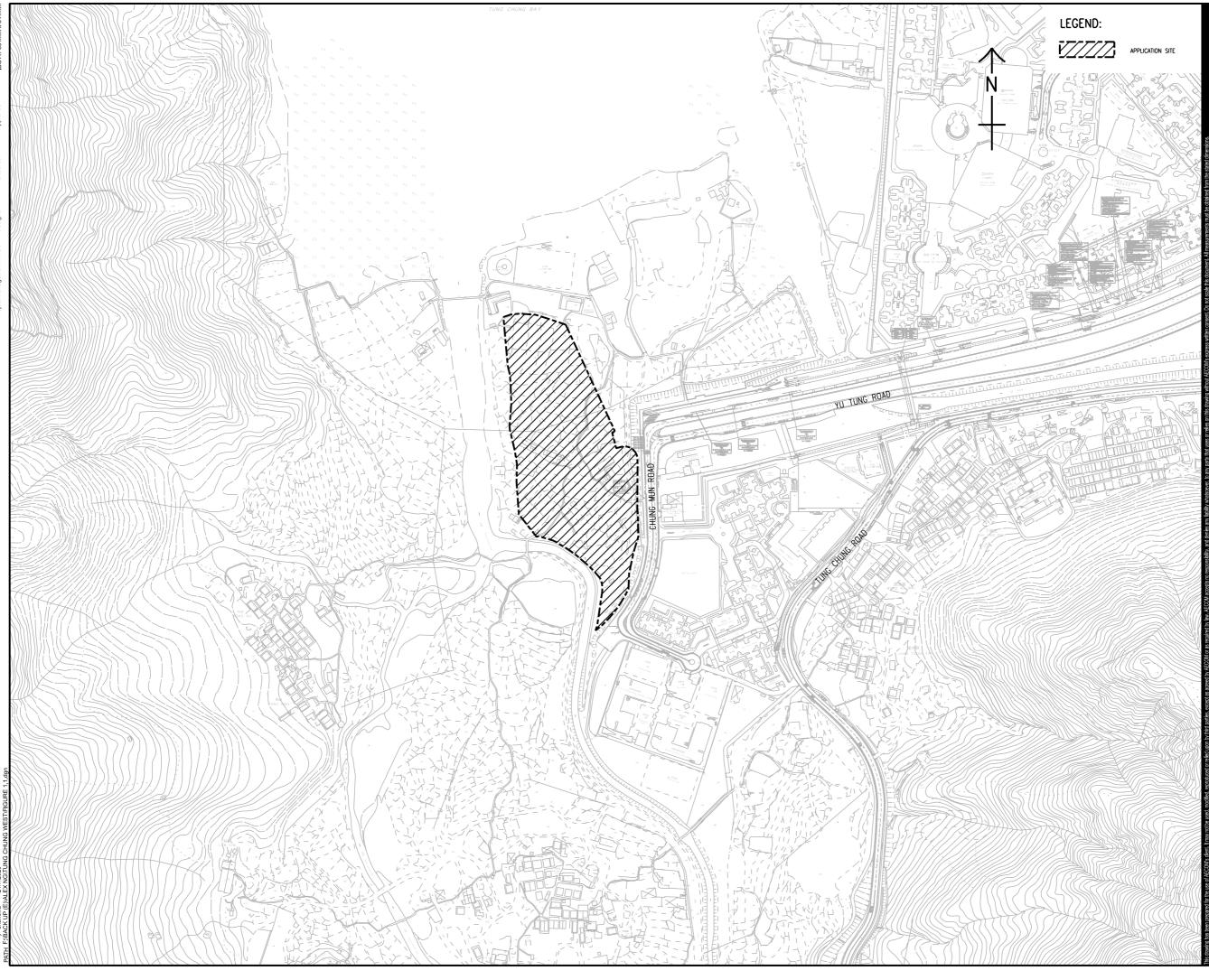


- 6.1.11 Junction capacity assessment was conducted for both 2033 reference and design cases. The results revealed that all junctions would be operating within junction capacity RC>=15% or DFC<=0.85 under design case in 2033 except for J3 in AM peak period even in 2033 Reference Case (i.e. Conforming Scheme). In light of this, further junction improvement scheme at J3 (as shown in **Figure 5.1**) is formulated for improving the junction capacity. With the said junction improvement scheme, J3 would operate with sufficient capacity in 2033 design case.
- 6.1.12 The assessment results in **Table 5.3** indicated that all the identified road links operated within capacity in year 2033.
- 6.1.13 Pedestrian assessment has been conducted for footpaths and crossings between the subject site and future MTR Tung Chung West station. The assessment result shows that sufficient footpath width has been provided to cater for at-grade pedestrian movements generated to/from the subject site, which have been tabulated in Table 5.6 and Table 5.7.

### 6.1.14 Conclusion

6.1.15 In light of the findings of this TIA, it is concluded that there is no adverse traffic impact imposed on the surrounding road network due to the Application Site. With the proposed mitigation measures in place, the Application Site is technically feasible in traffic terms.

# Figure





### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT



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### CONTRACT NO.

### SHEET TITLE

## SITE LOCATION

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FIGURE 1.1





### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

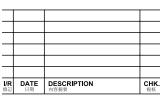


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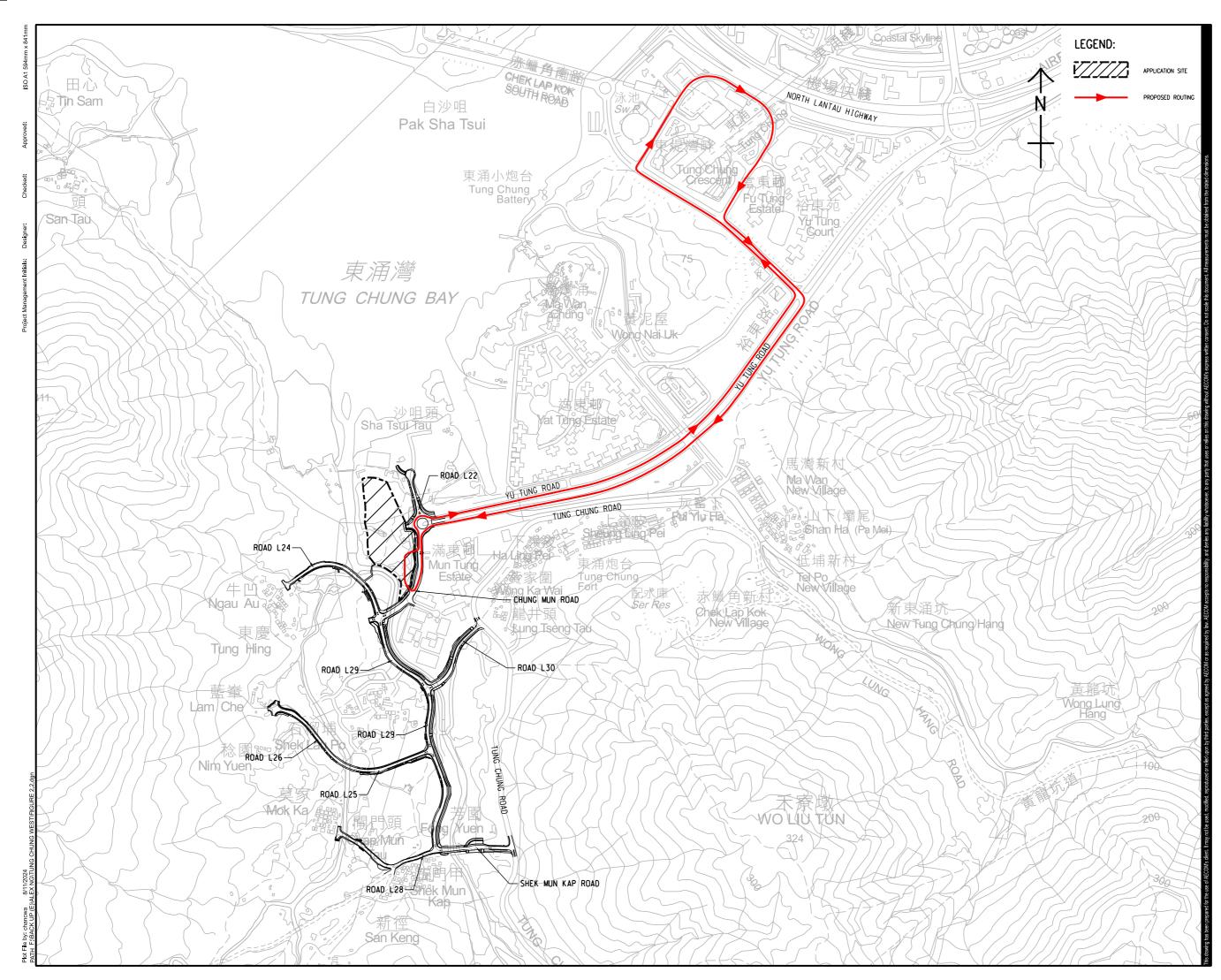
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SHEET NUMBER FIGURE 2.1

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PROJECT NO.

INDICATIVE MASTER LAYOUT PLAN





### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

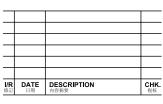


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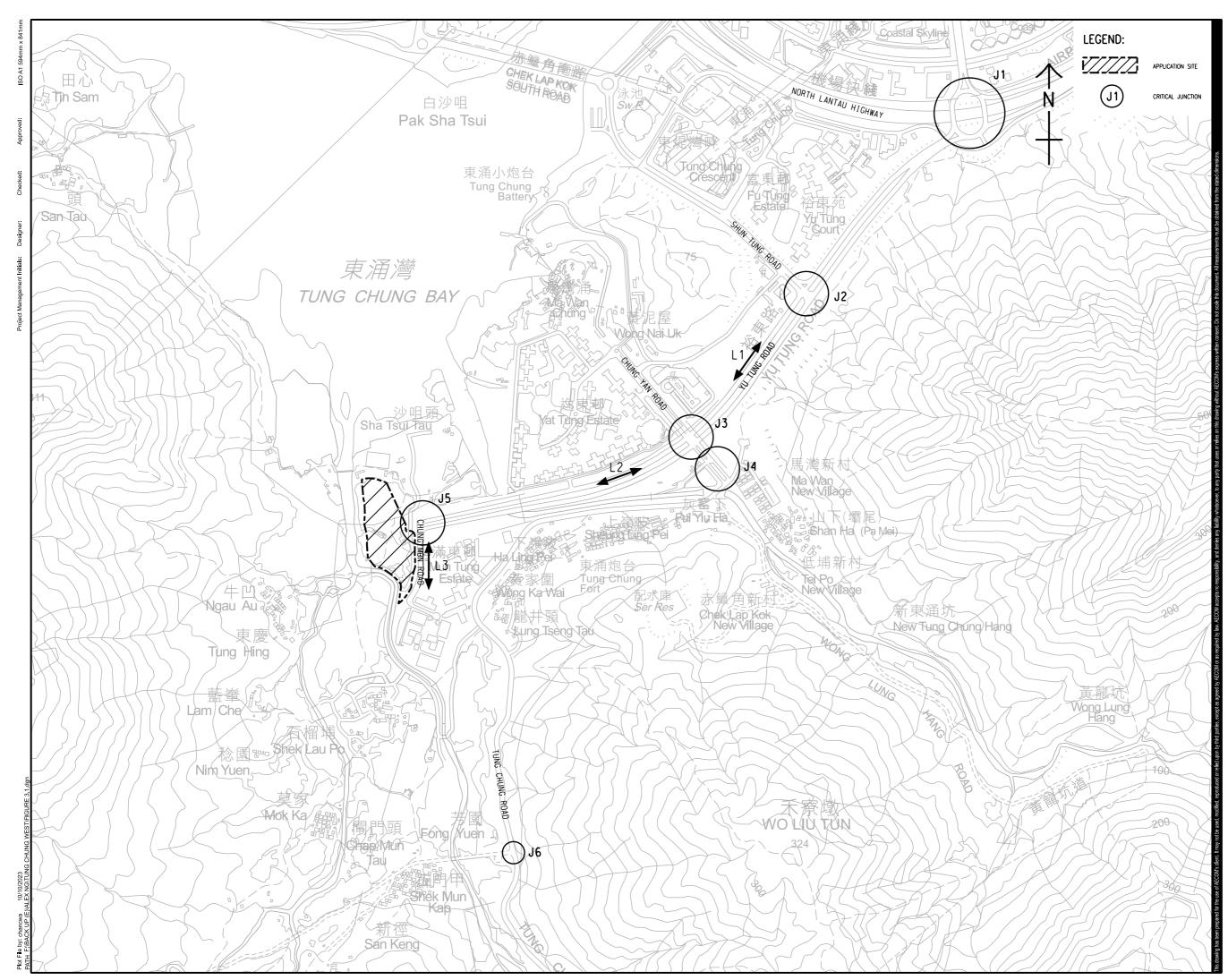
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ROUTING OF BUS SERVICE BETWEEN APPLICATION SITE AND TUNG CHUNG STATION

### SHEET NUMBER

FIGURE 2.2



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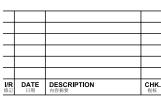


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LOCATION OF SURVEYED JUNCTIONS

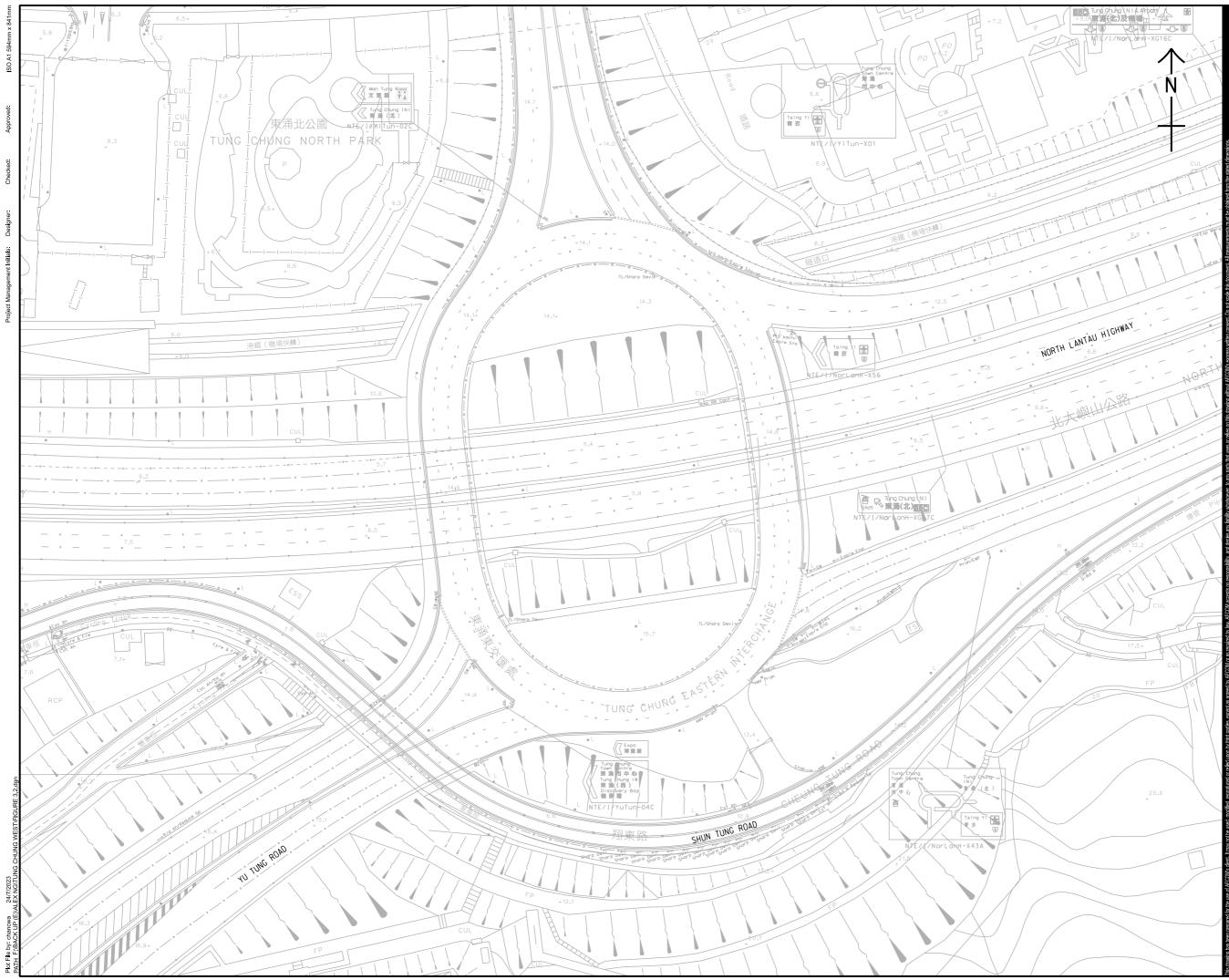
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FIGURE 3.1

PROJECT NO.

SHEET TITLE





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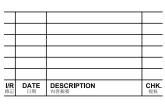


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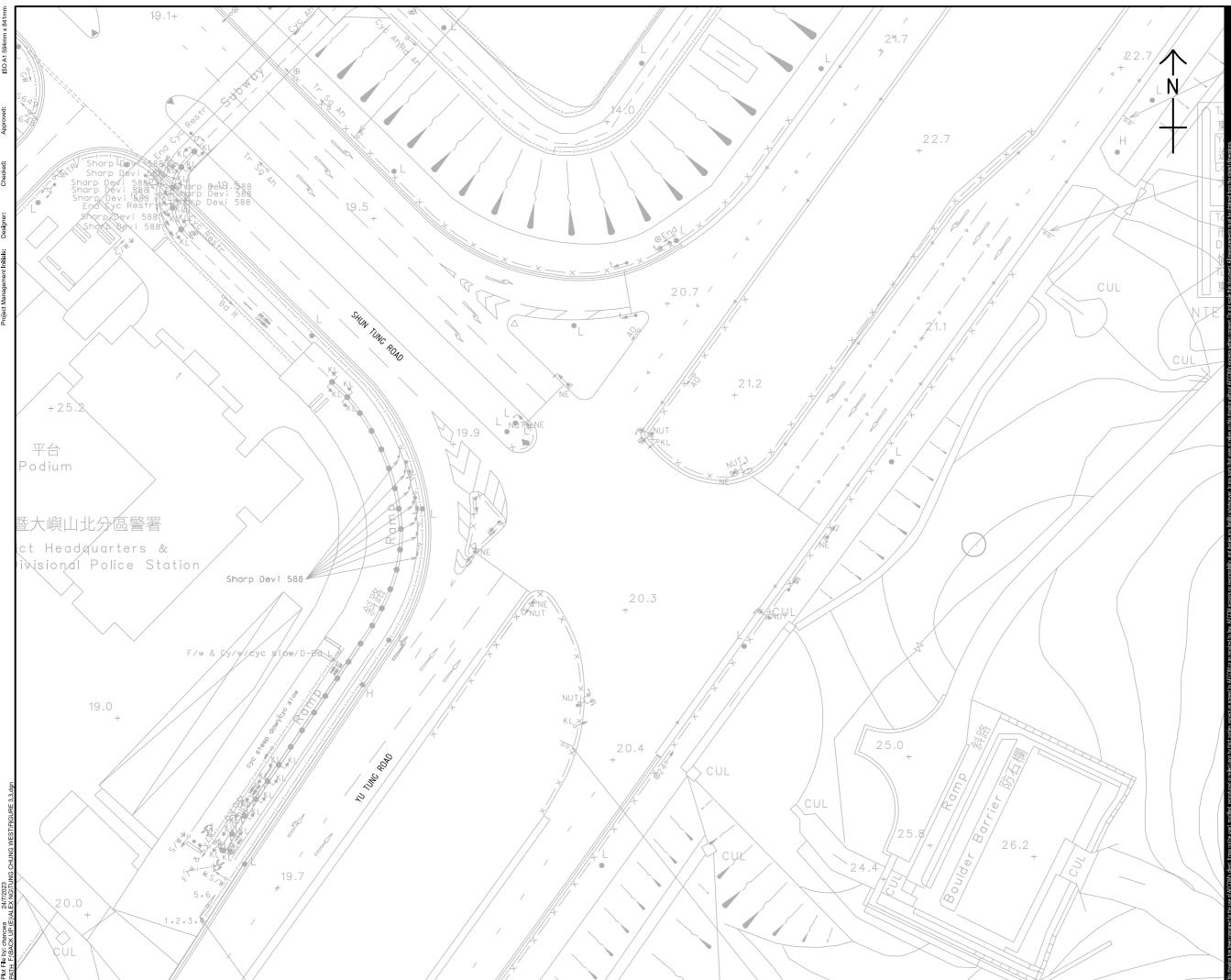
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EXISTING JUNCTION LAYOUT OF YU TUNG ROAD / YI TUNG ROAD / NORTH LANTAU HIGHWAY

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24/7/2023 EX NG/TU



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SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

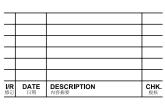


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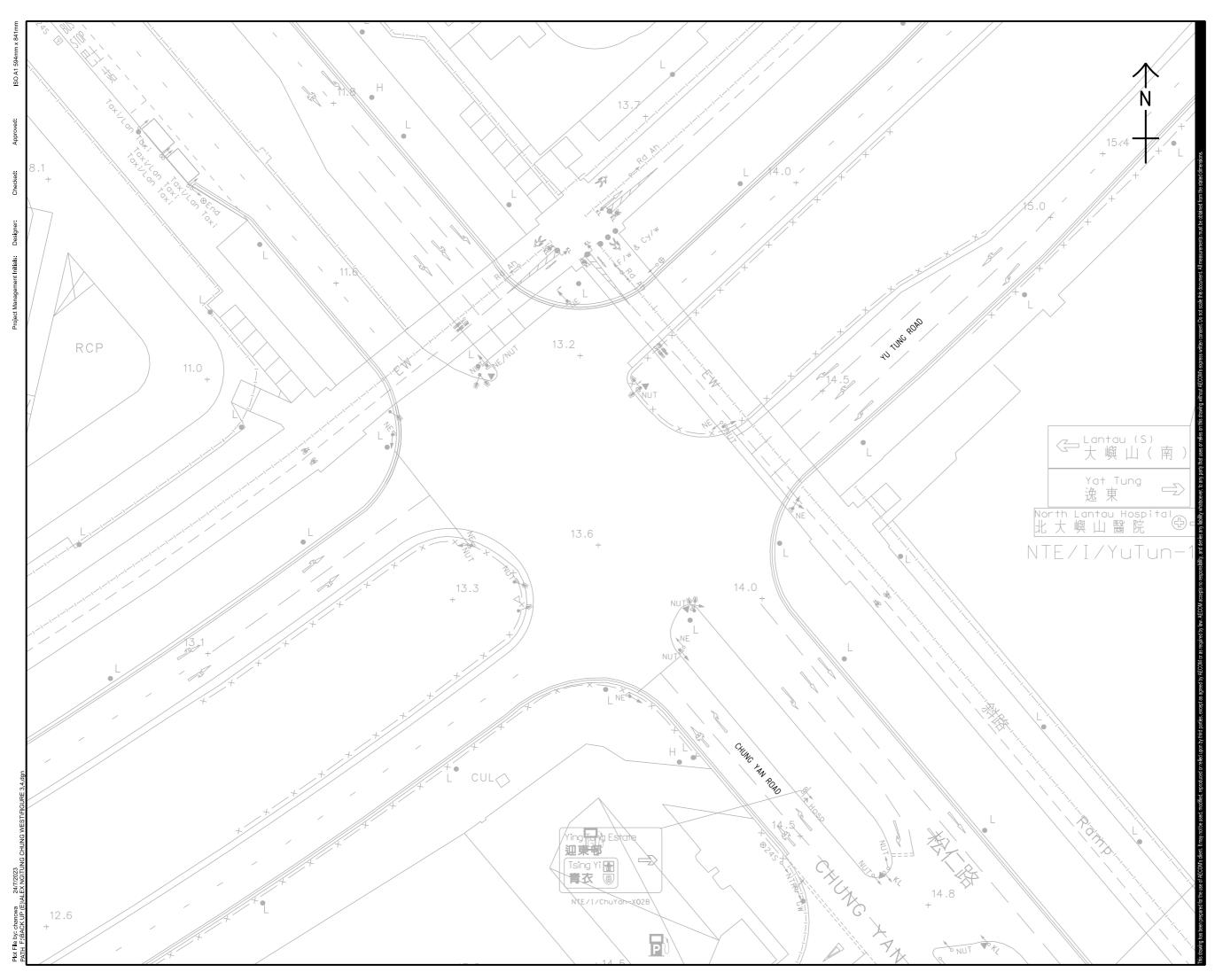
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EXISTING JUNCTION LAYOUT OF YU TUNG ROAD / SHUN TUNG ROAD (J2)

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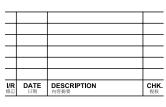


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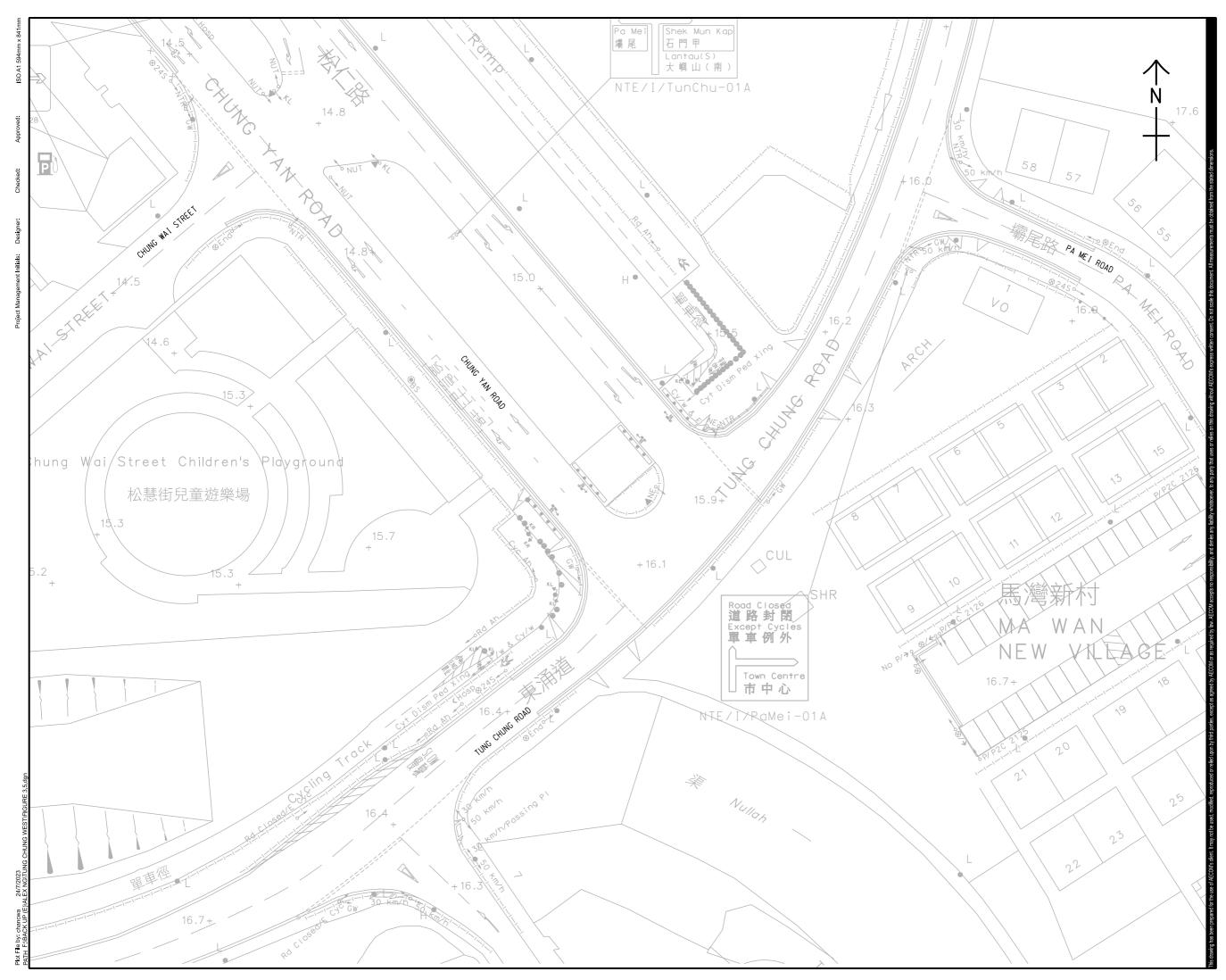
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EXISTING JUNCTION LAYOUT OF YU TUNG ROAD / CHUNG YAN ROAD (J3)

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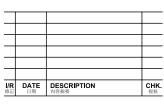


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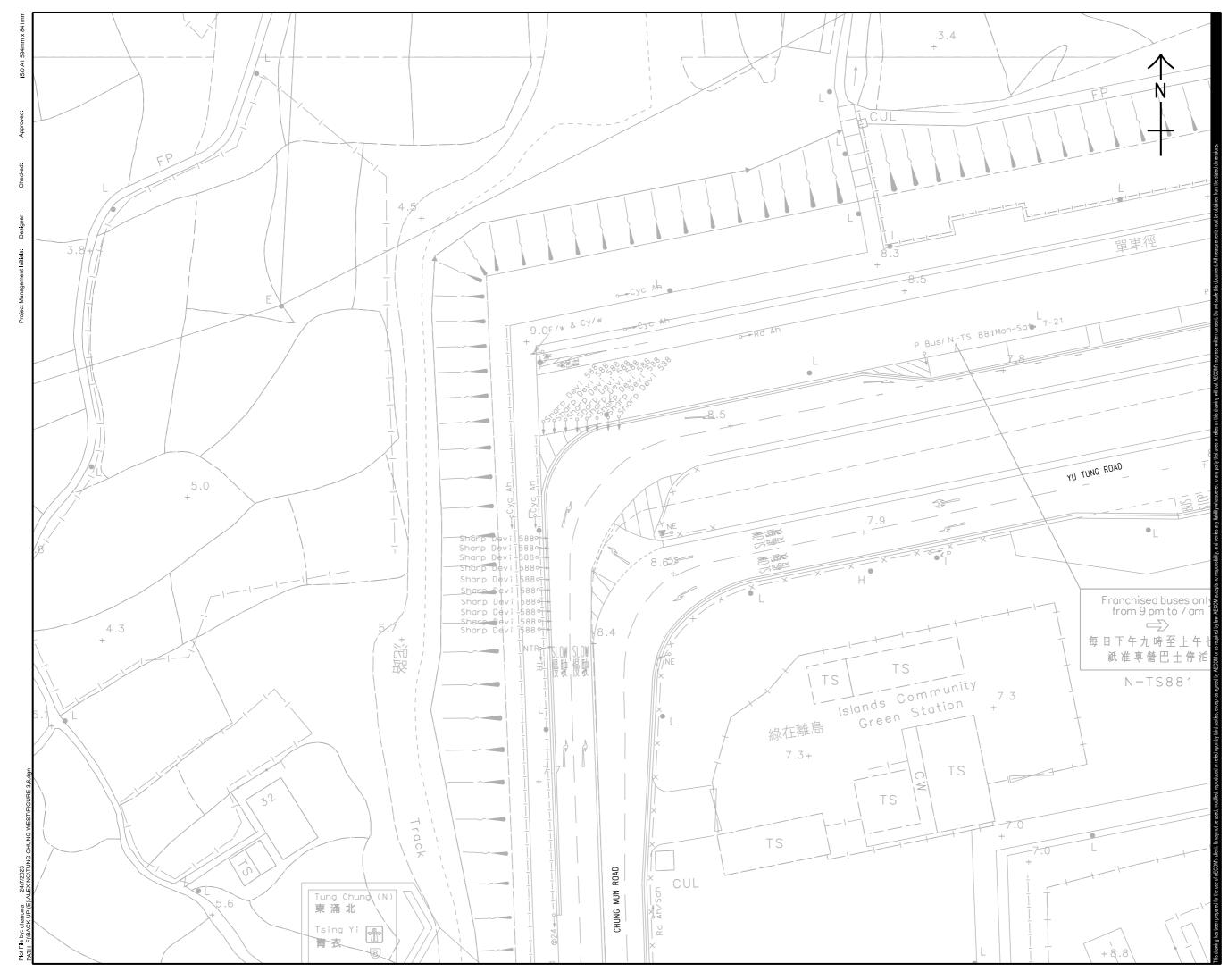
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# EXISTING JUNCTION LAYOUT OF TUNG CHUNG ROAD / CHUNG YAN ROAD (J4)

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SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTATUSI AND LANTAU ISLAND

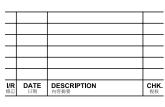


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EXISTING JUNCTION LAYOUT OF YU TUNG ROAD / CHUNG MUN ROAD (J5)

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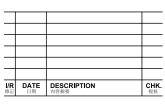


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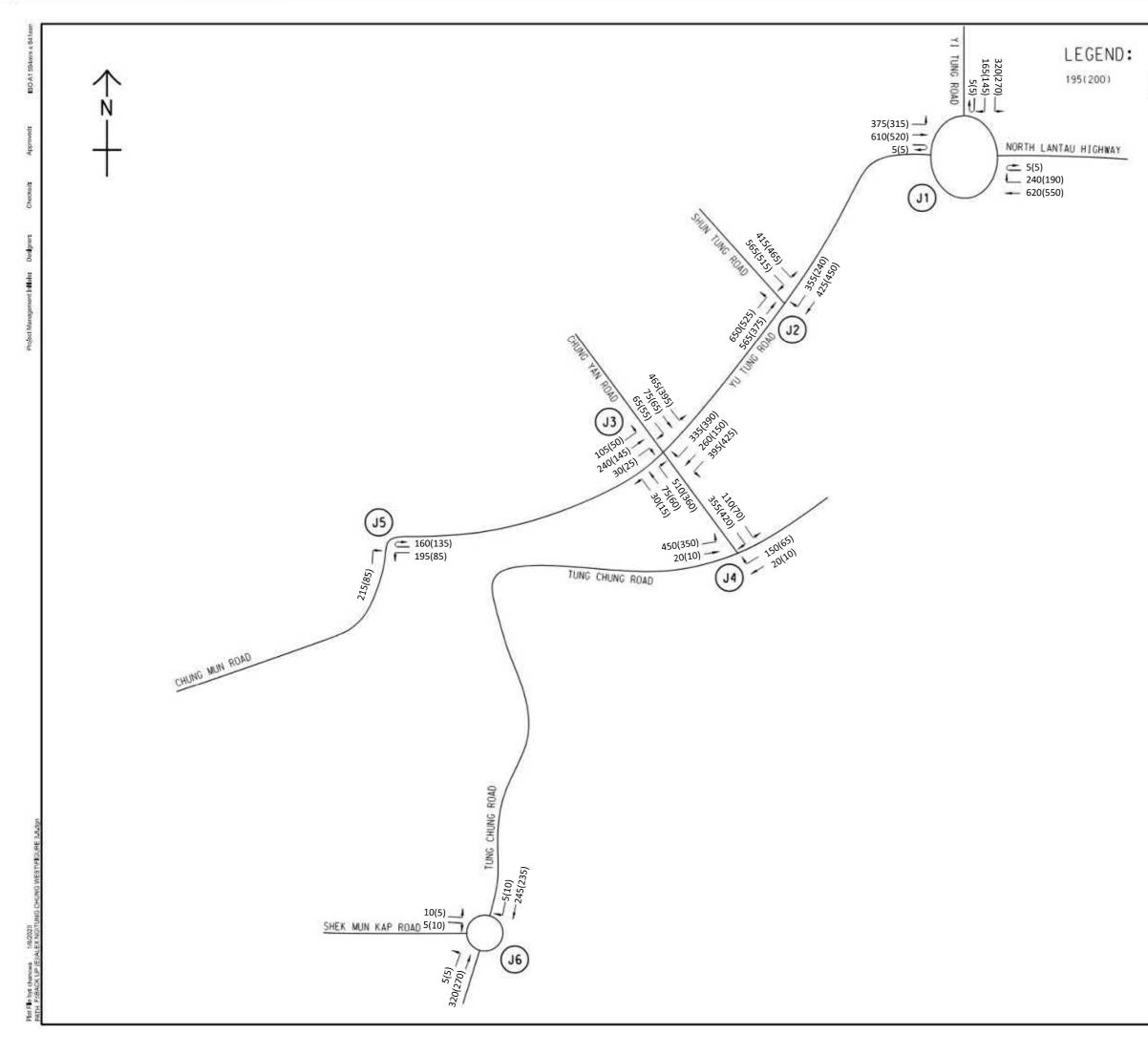
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EXISTING JUNCTION LAYOUT OF TUNG CHUNG ROAD / SHEK MUN KAP ROAD (J6)

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### AM(PM) PEAK HOUR TRAFFIC FLOWS IN PCU/HR



### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP G)" ZONE TO TRESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT EL



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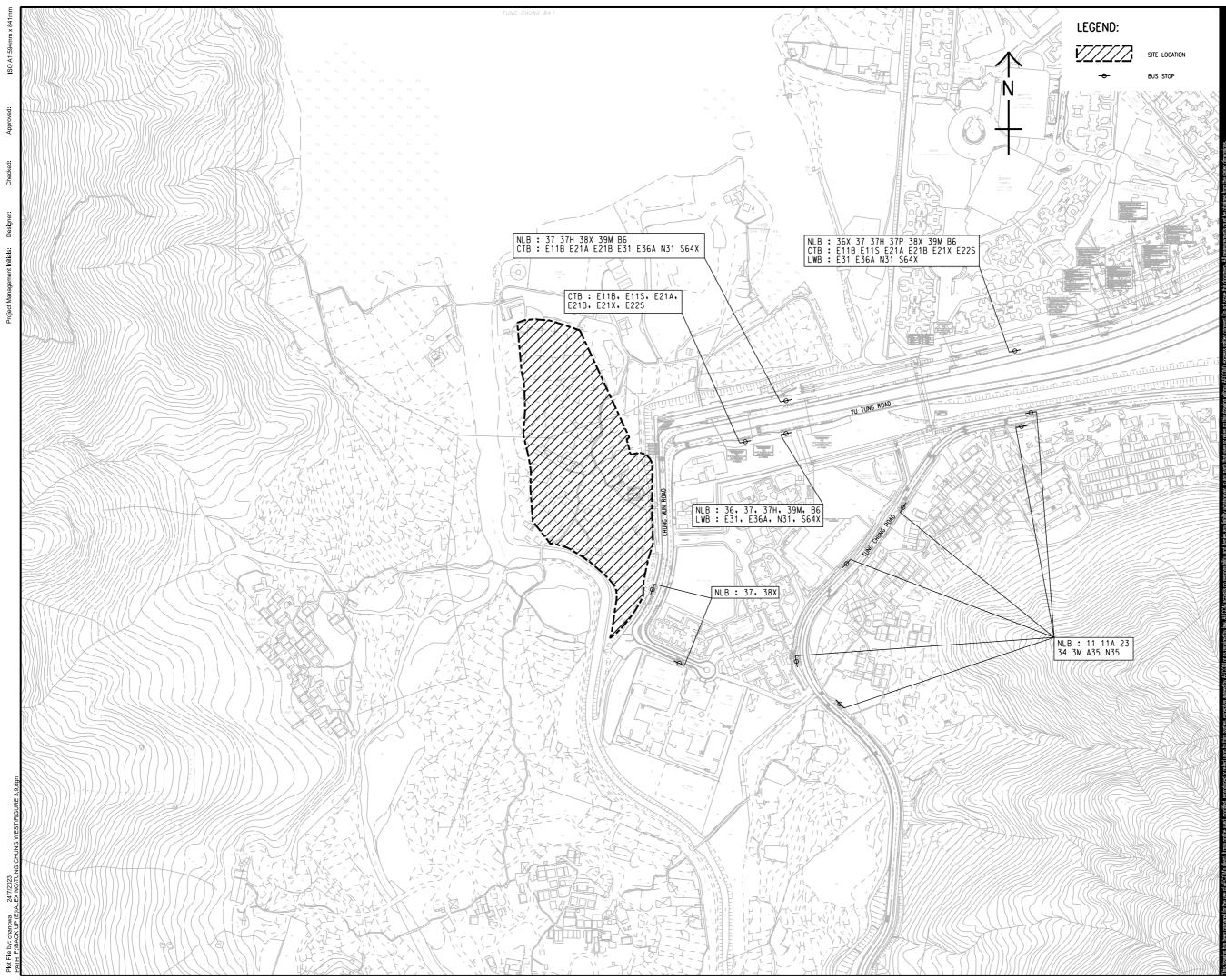
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2023 OBSERVED TRAFFIC FLOWS

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SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

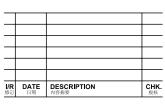


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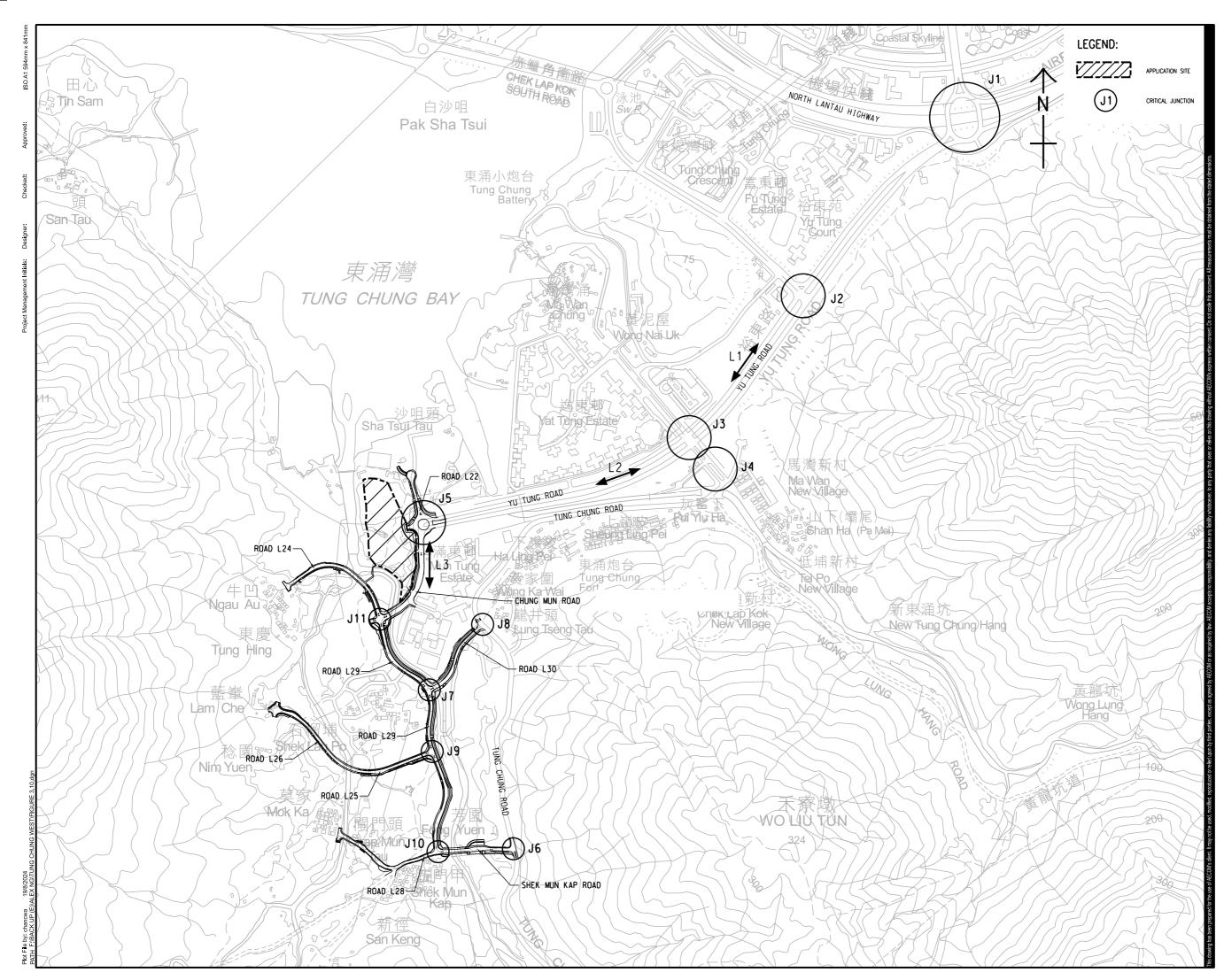
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EXISTING PUBLIC TRANSPORT IN IN THE VICINITY OF APPLICATION SITE

### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

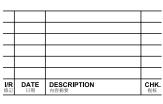


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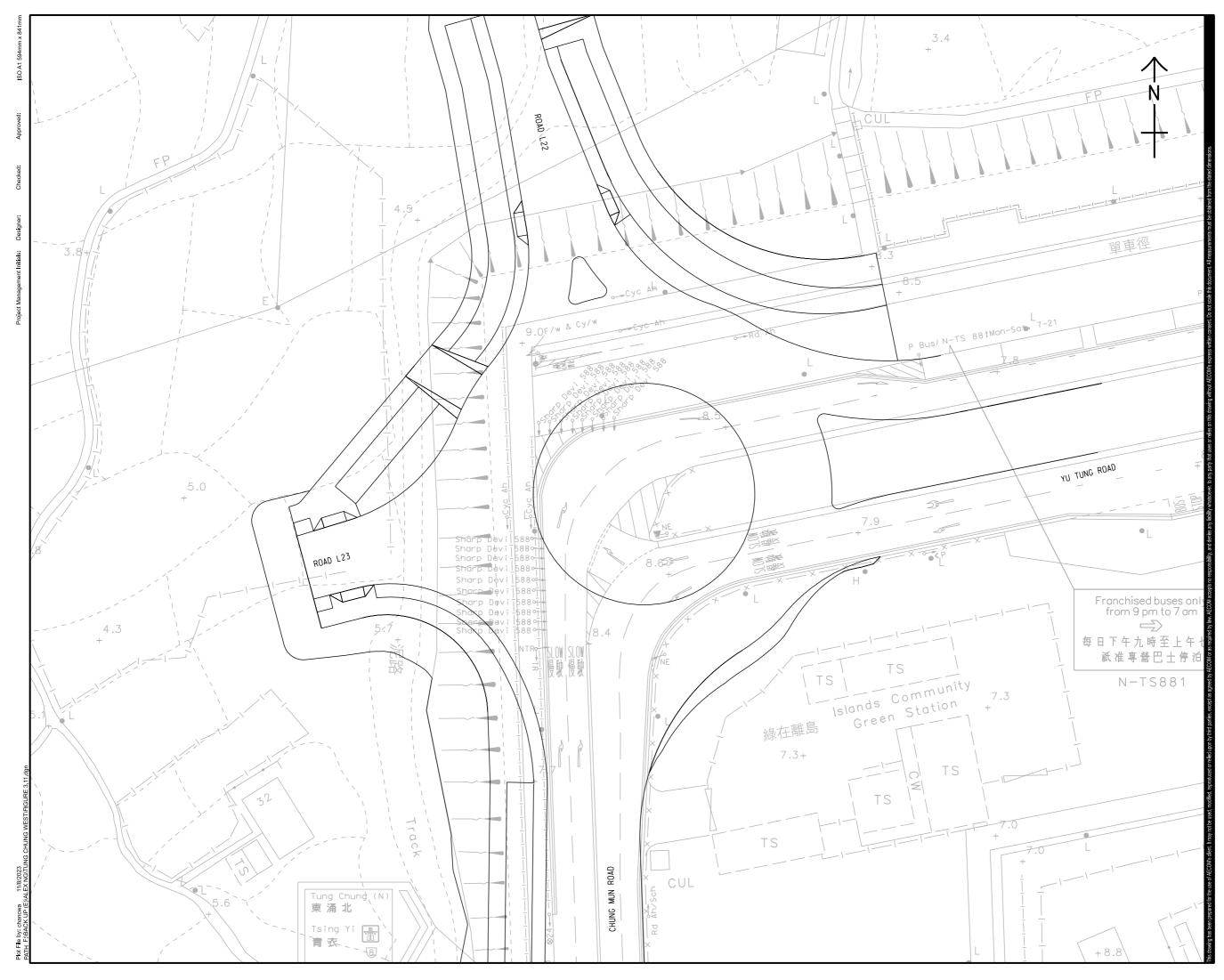
PROJECT NO.

### CONTRACT NO.

#### SHEET TITLE 圖新名稱

SCHEMATIC LAYOUT OF PLANNED ROAD NETWORK AND PLANNED CRITICAL JUNCTIONS

### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

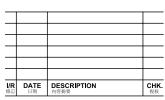


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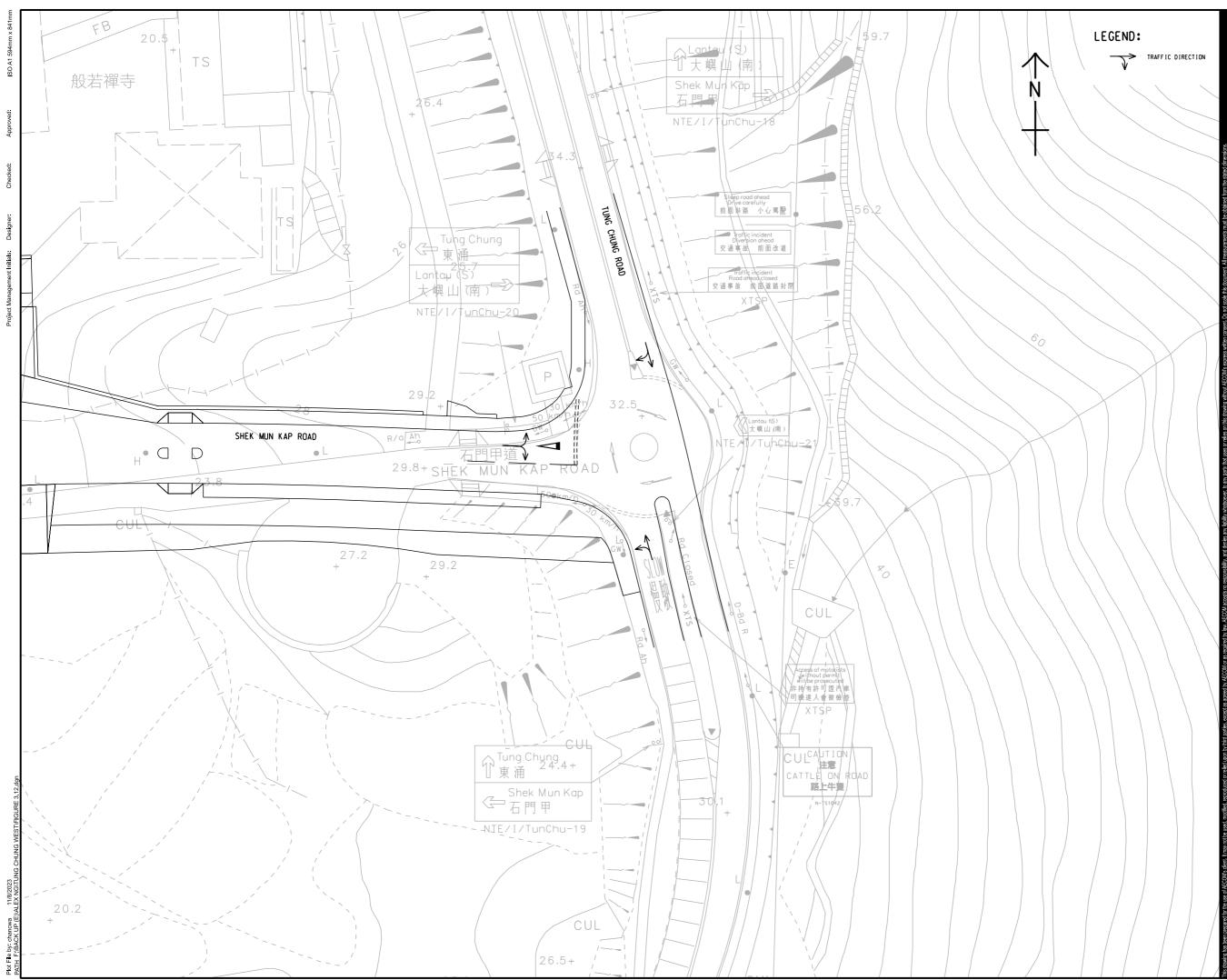
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### CONTRACT NO.

### SHEET TITLE

PLANNED JUNCTION LAYOUT OF YU TUNG ROAD / CHUNG MUN ROAD / ROAD L23 (J5)

### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

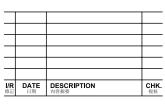


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KEY PLAN

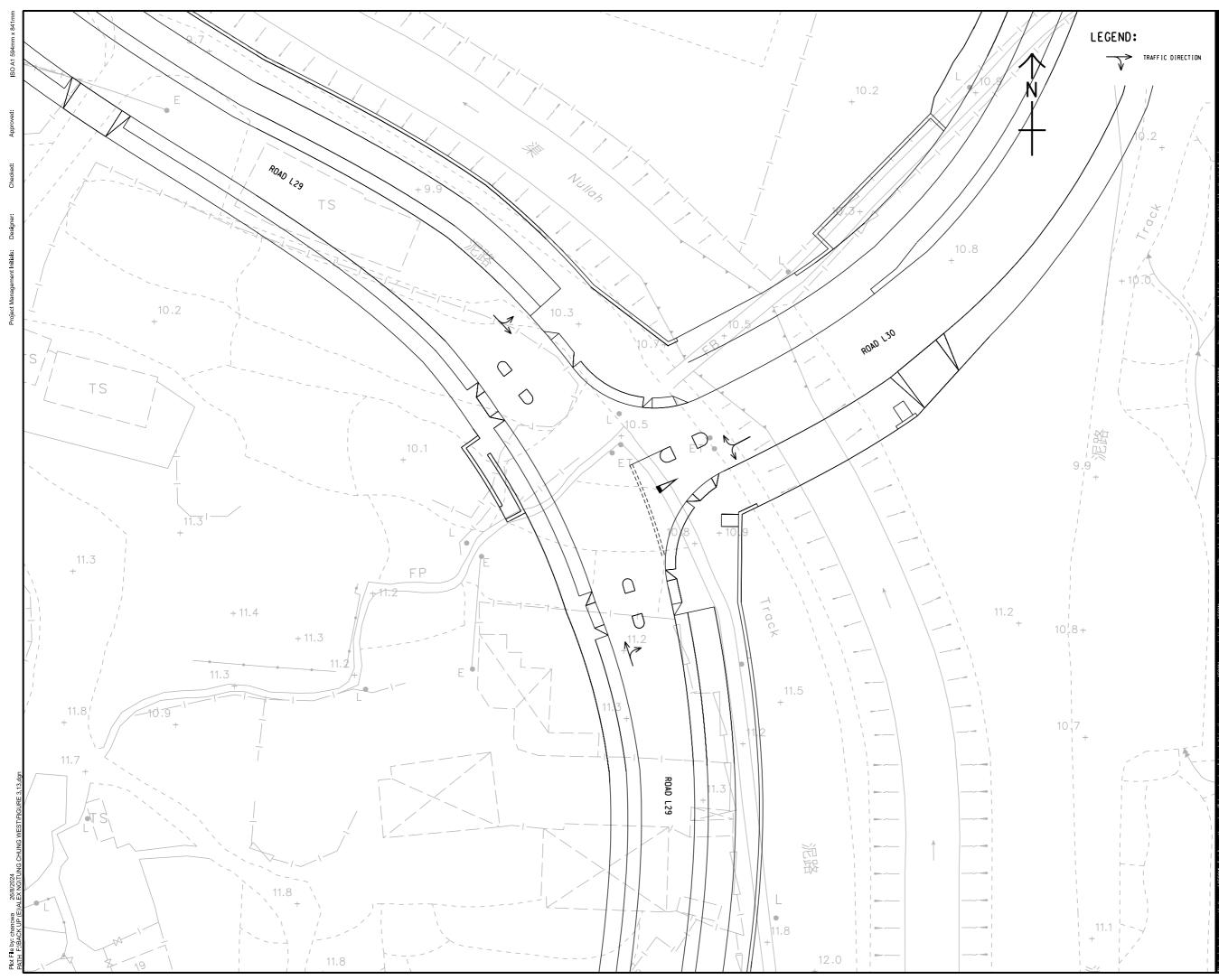
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#### CONTRACT NO.

### SHEET TITLE

PLANNED JUNCTION LAYOUT OF TUNG CHUNG ROAD / SHEK MUN KAP ROAD (J6)

#### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

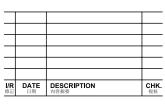


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### KEY PLAN

## PROJECT NO.

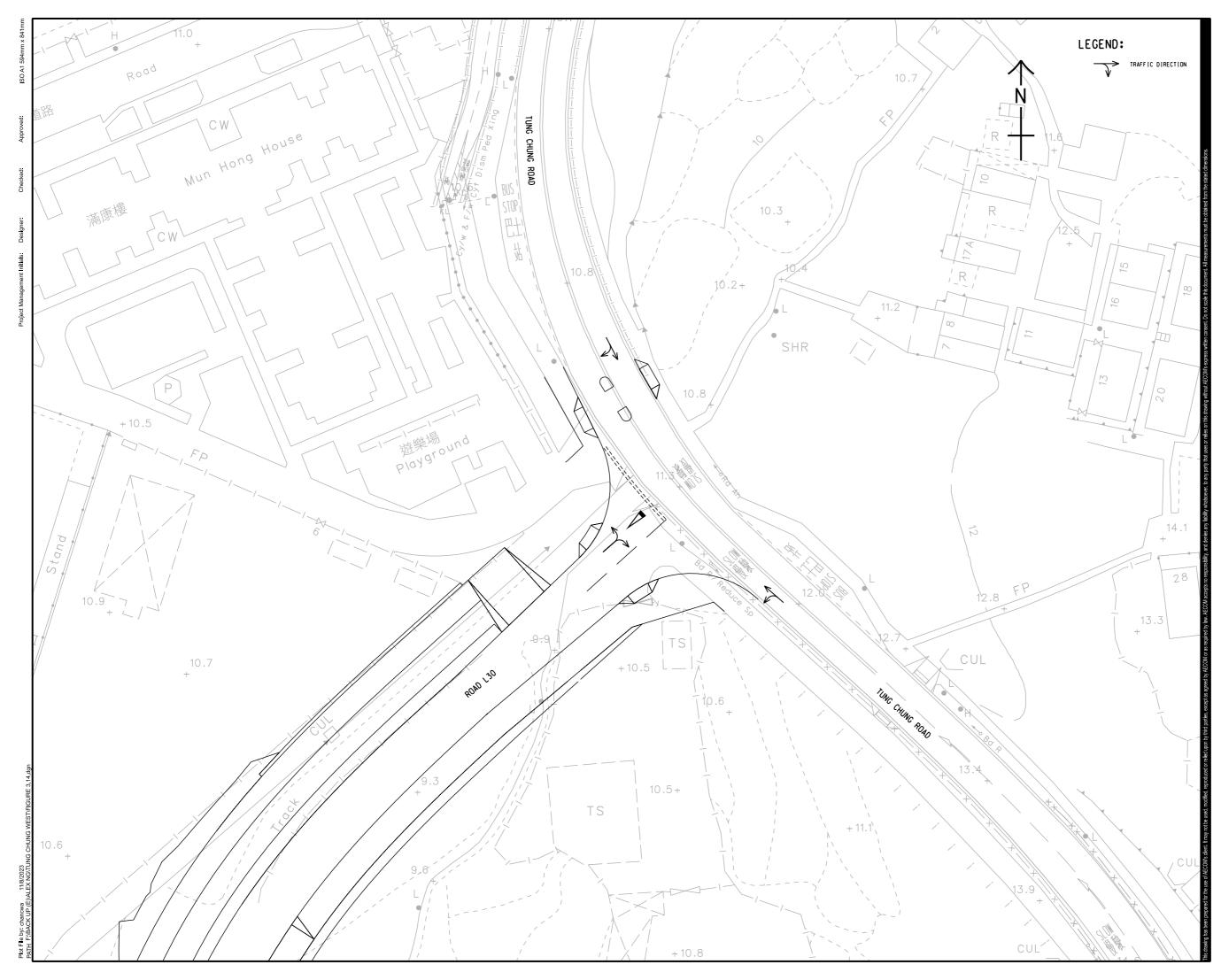
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# PLANNED JUNCTION LAYOUT OF ROAD L29 / ROAD L30 (J7)

SHEET NUMBER

FIGURE 3.13

## SHEET TITLE



# AECOM

#### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

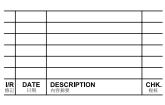


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### CONTRACT NO.

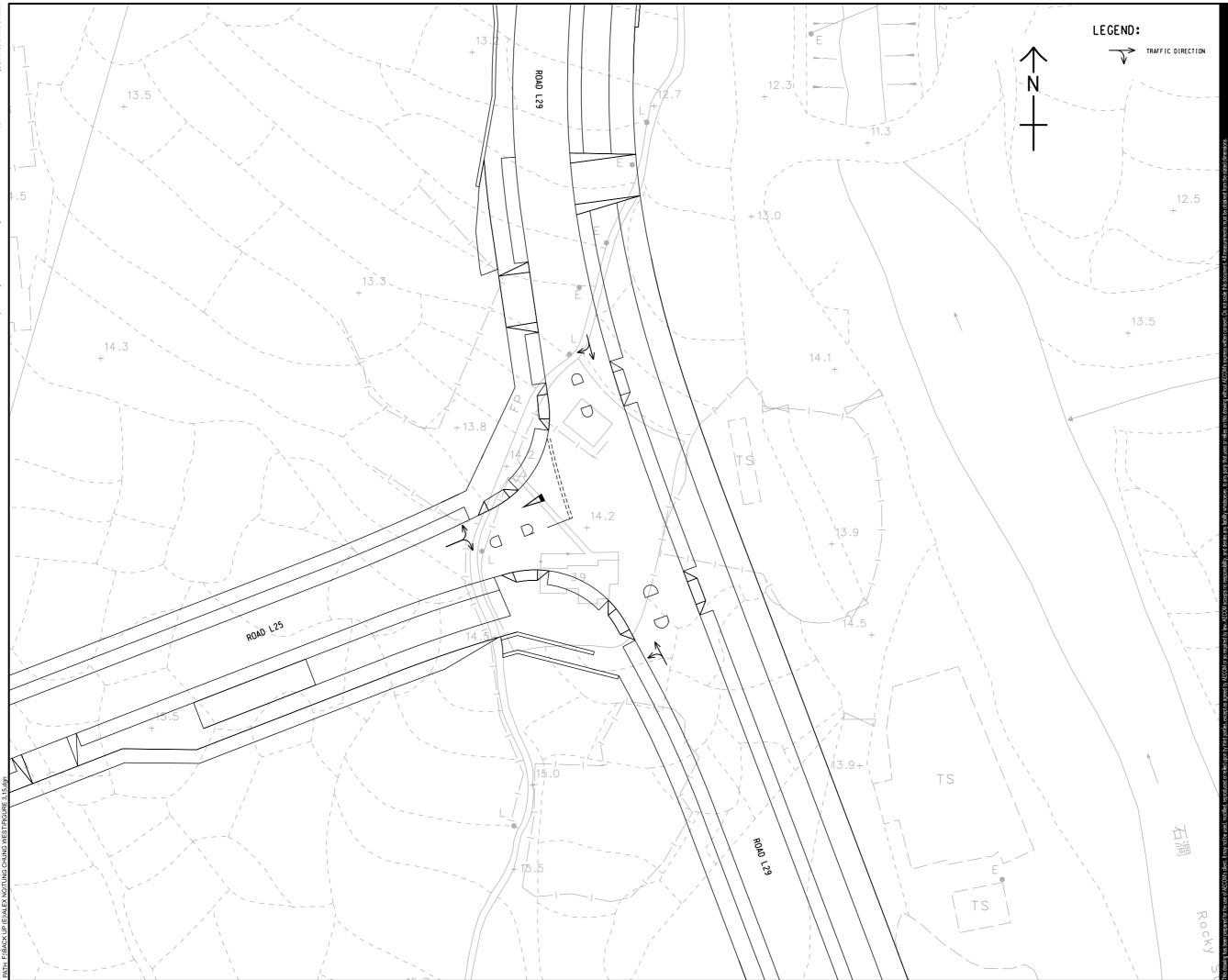
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## SHEET TITLE

PLANNED JUNCTION LAYOUT OF TUNG CHUNG ROAD / ROAD L30 (J8)

### SHEET NUMBER





Plot File b

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#### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

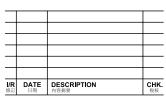


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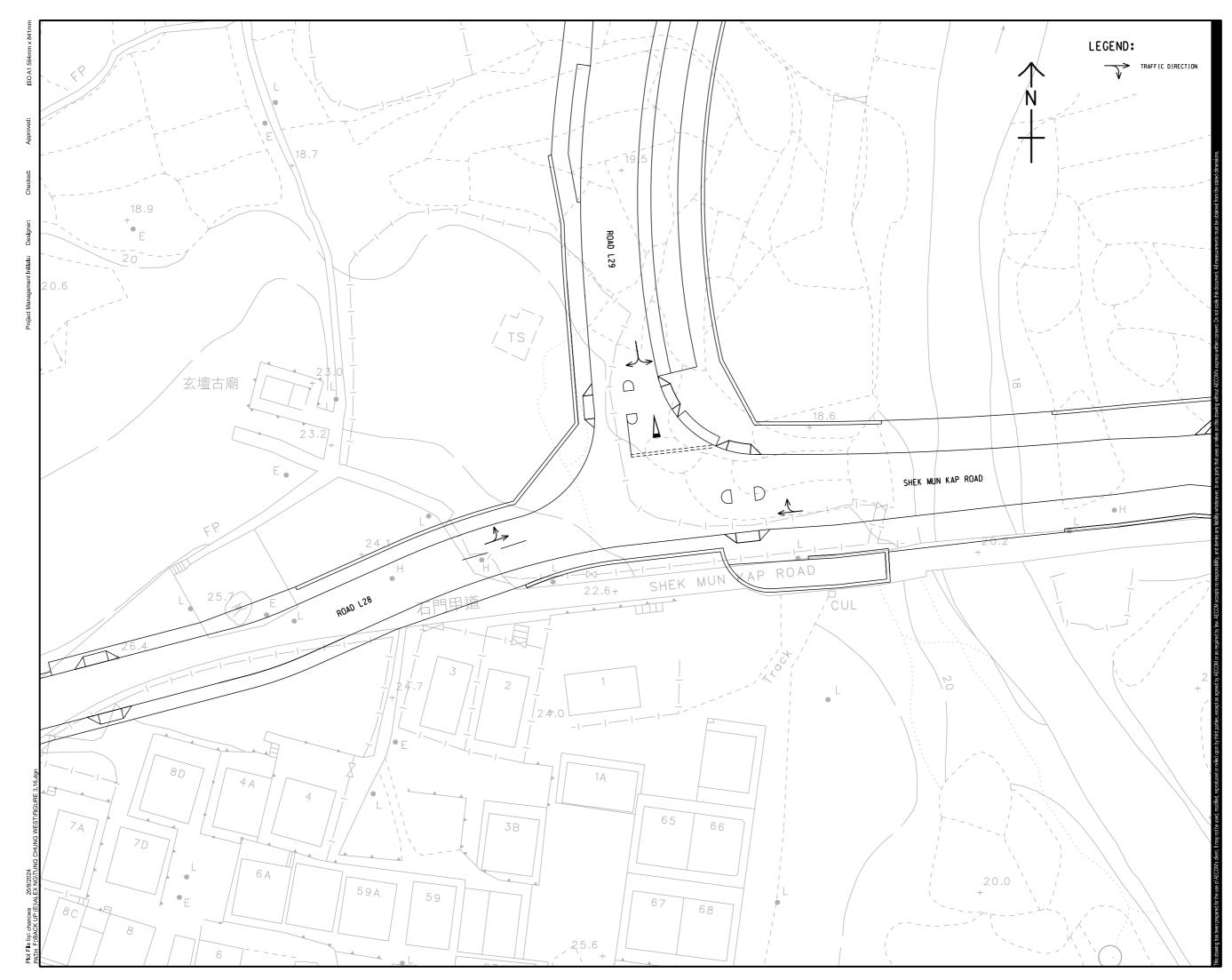
SHEET TITLE

SHEET NUMBER

FIGURE 3.15

PLANNED JUNCTION LAYOUT OF ROAD L25 / ROAD L29 (J9)

### CONTRACT NO.





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

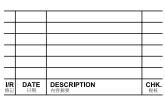


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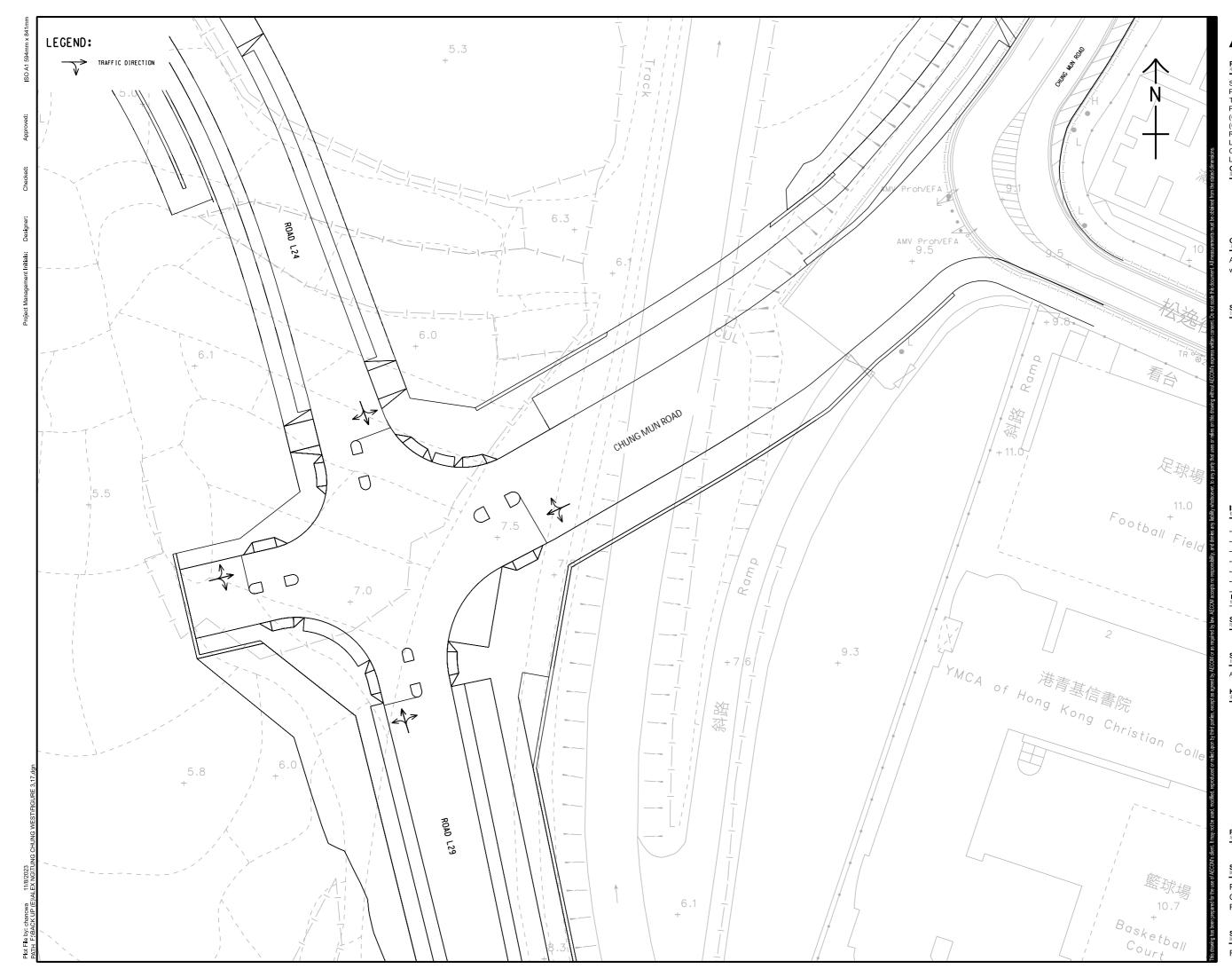
PROJECT NO.

#### CONTRACT NO.

#### SHEET TITLE

PLANNED JUNCTION LAYOUT OF SHEK MUN KAP ROAD / ROAD L28/ ROAD L29 (J10)

### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

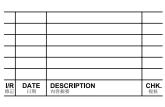


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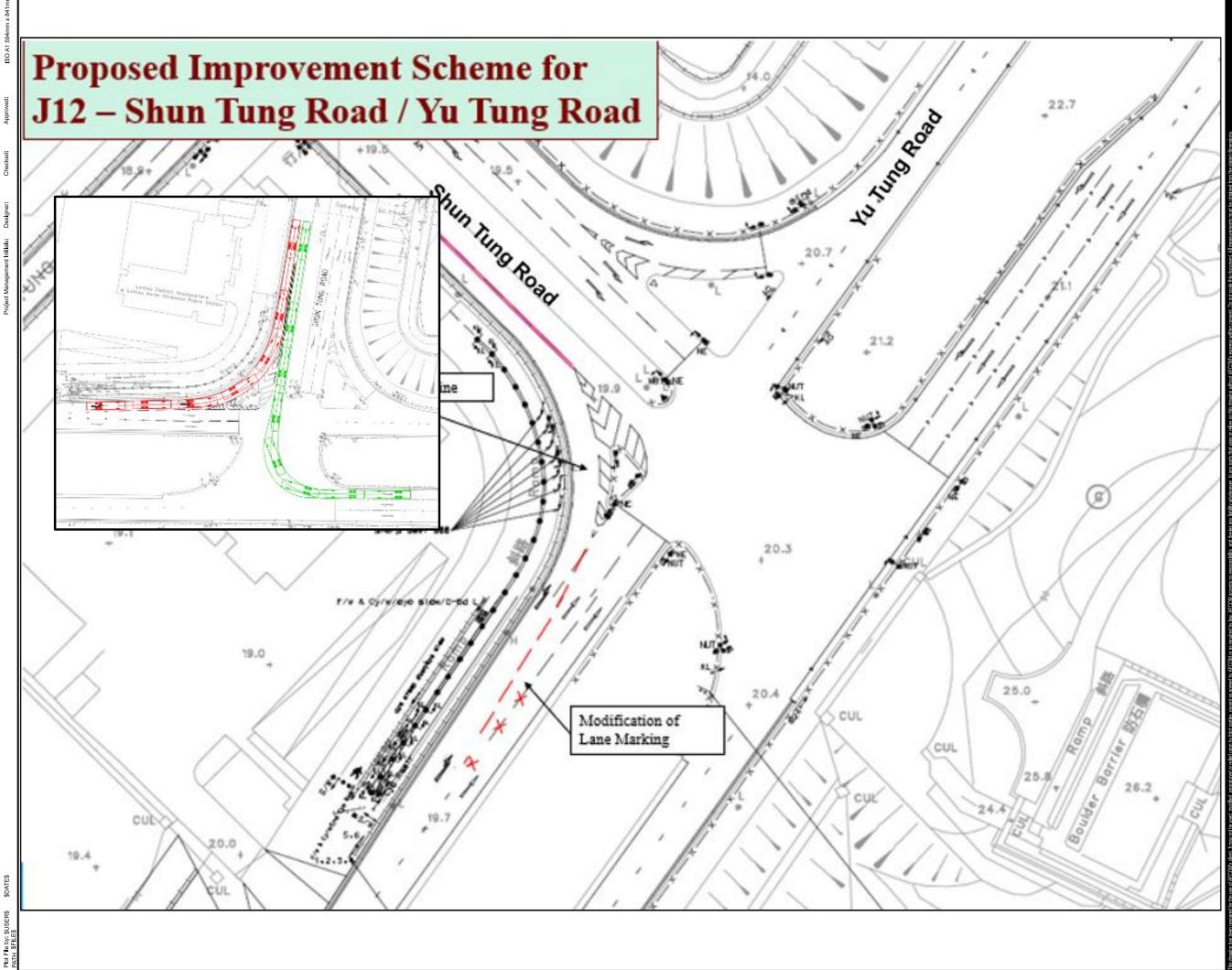
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### CONTRACT NO.

### SHEET TITLE

PLANNED JUNCTION LAYOUT OF CHUNG MUN ROAD / ROAD 24 / ROAD L29 (J11)

### SHEET NUMBER





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIAUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND

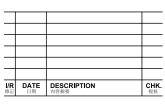


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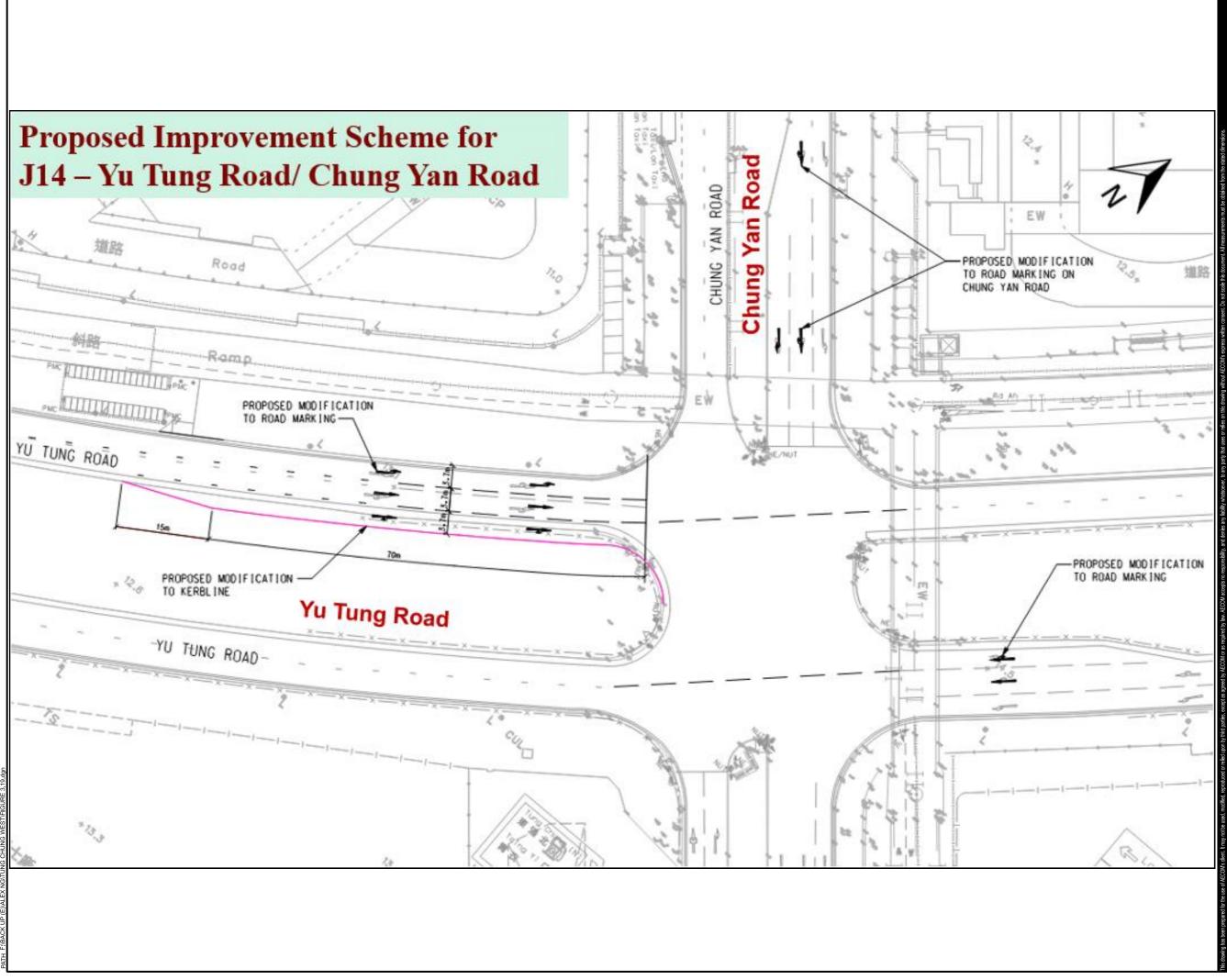
CONTRACT NO.

### SHEET TITLE

PROJECT NO.

PLANNED JUNCTION IMPROVEMENT SCHEME OF J2 UNDER TUNG CHUNG NEW TOWN EXTENSION (WEST) TIA (REP-116-02)

### SHEET NUMBER



ject Management Initials: Designer: Checked: Approved:

lot File by: chancwa 7/11/2024



### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

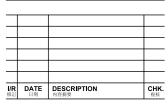


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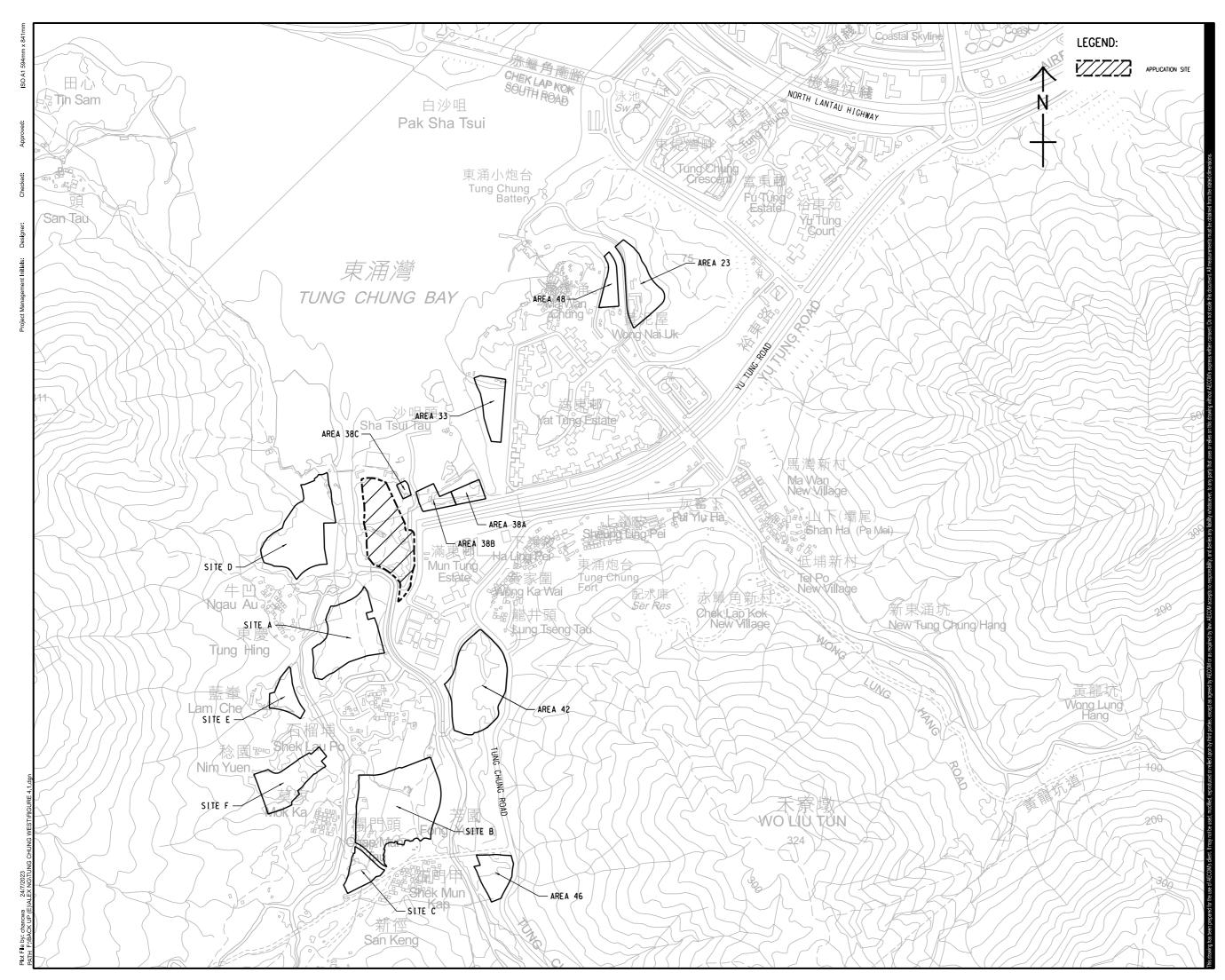
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### CONTRACT NO.

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PLANNED JUNCTION IMPROVEMENT SCHEME OF J3 UNDER TUNG CHUNG NEW TOWN EXTENSION (WEST) TIA (REP-116-02)

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SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

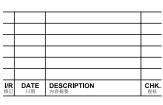


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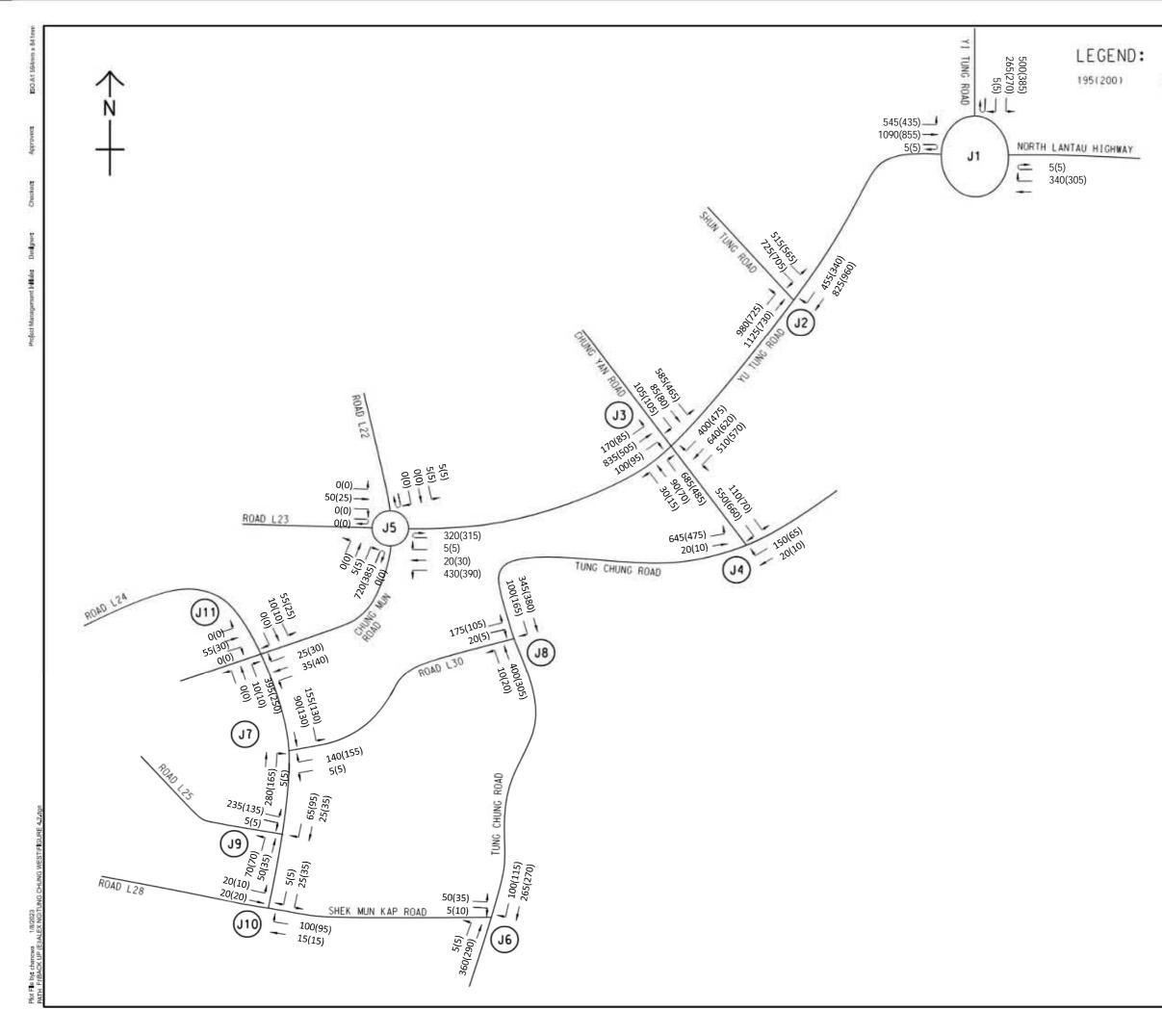
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PLANNED / POTENTIAL DEVELOPMENTS IN THE VICINITY OF APPLICATION SITE

#### SHEET NUMBER

FIGURE 4.1



### AM(PM) PEAK HOUR TRAFFIC FLOWS IN PCU/HR



### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZOMING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT



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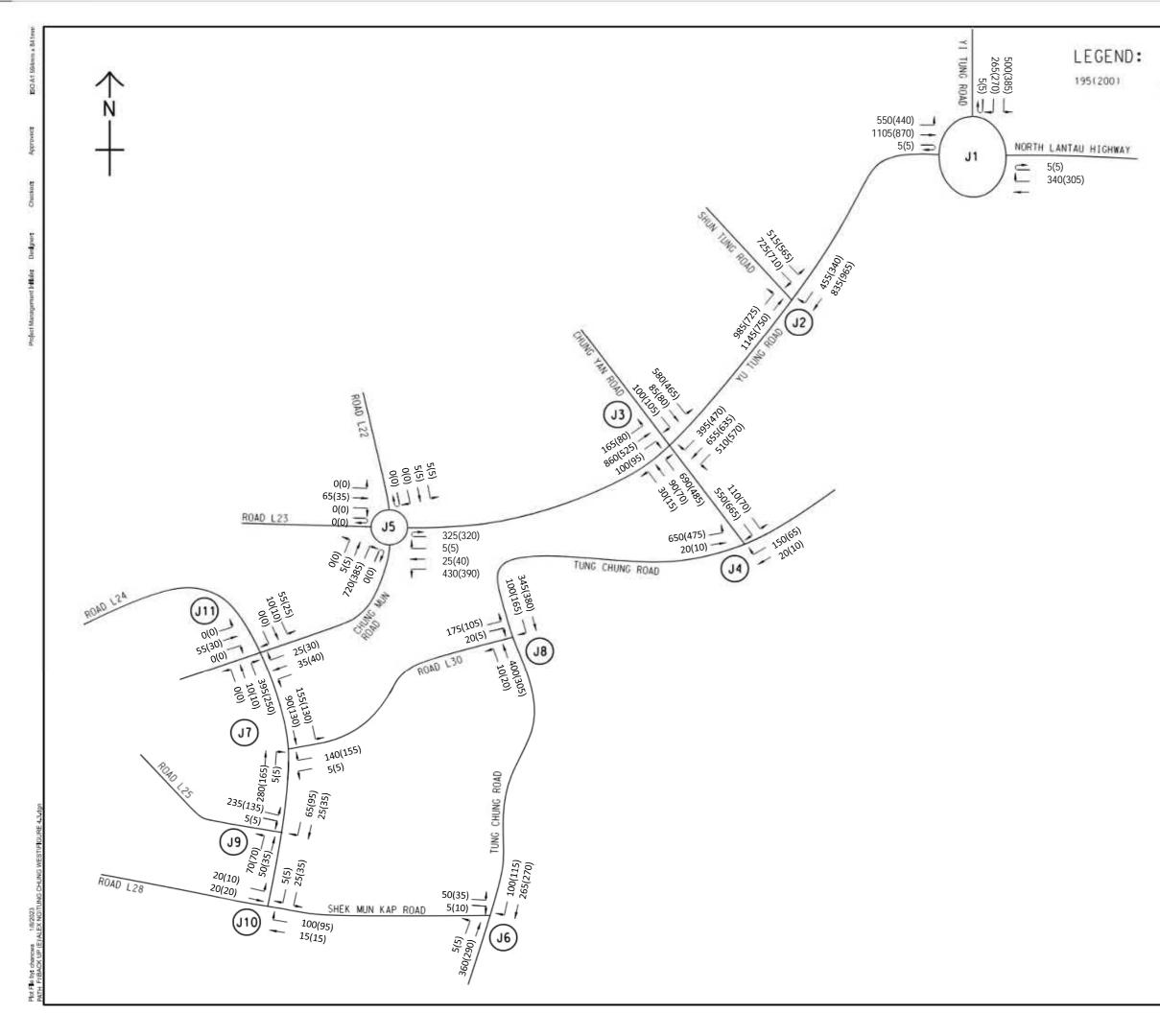
CONTRACT NO.

### SHEET TITLE

2033 REFERENCE TRAFFIC FLOWS (CONFORMING SCHEME)

### SHEET NUMBER

FIGURE 4.2



### AM(PM) PEAK HOUR TRAFFIC FLOWS IN PCU/HR



#### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNIG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE TRESIDENTIAL (GROUP 6)? ZONE ITO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D., 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT



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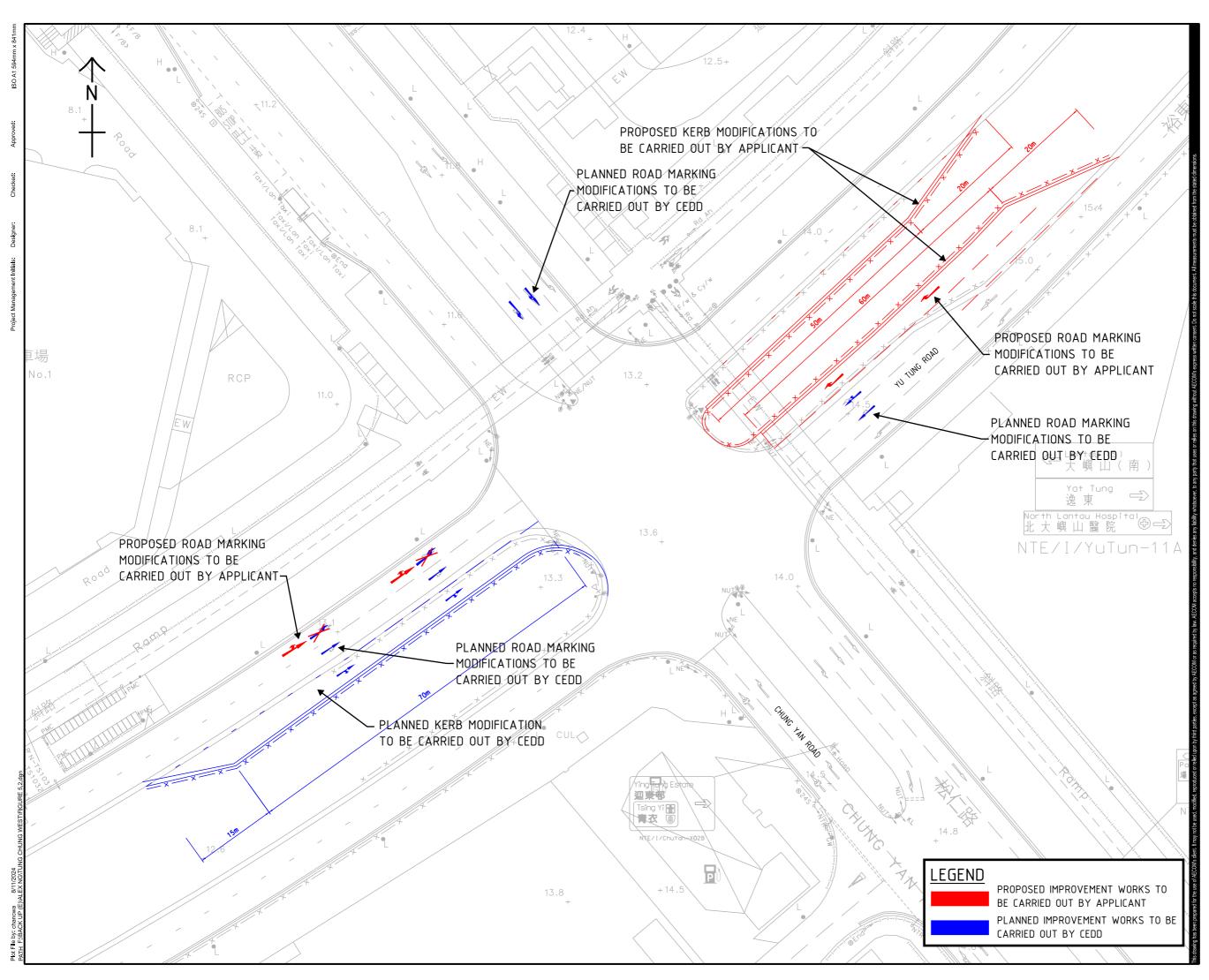
CONTRACT NO.

### SHEET TITLE

2033 DESIGN TRAFFIC FLOWS (PROPOSED SCHEME)

## SHEET NUMBER

FIGURE 4.3





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

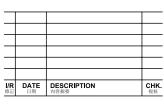


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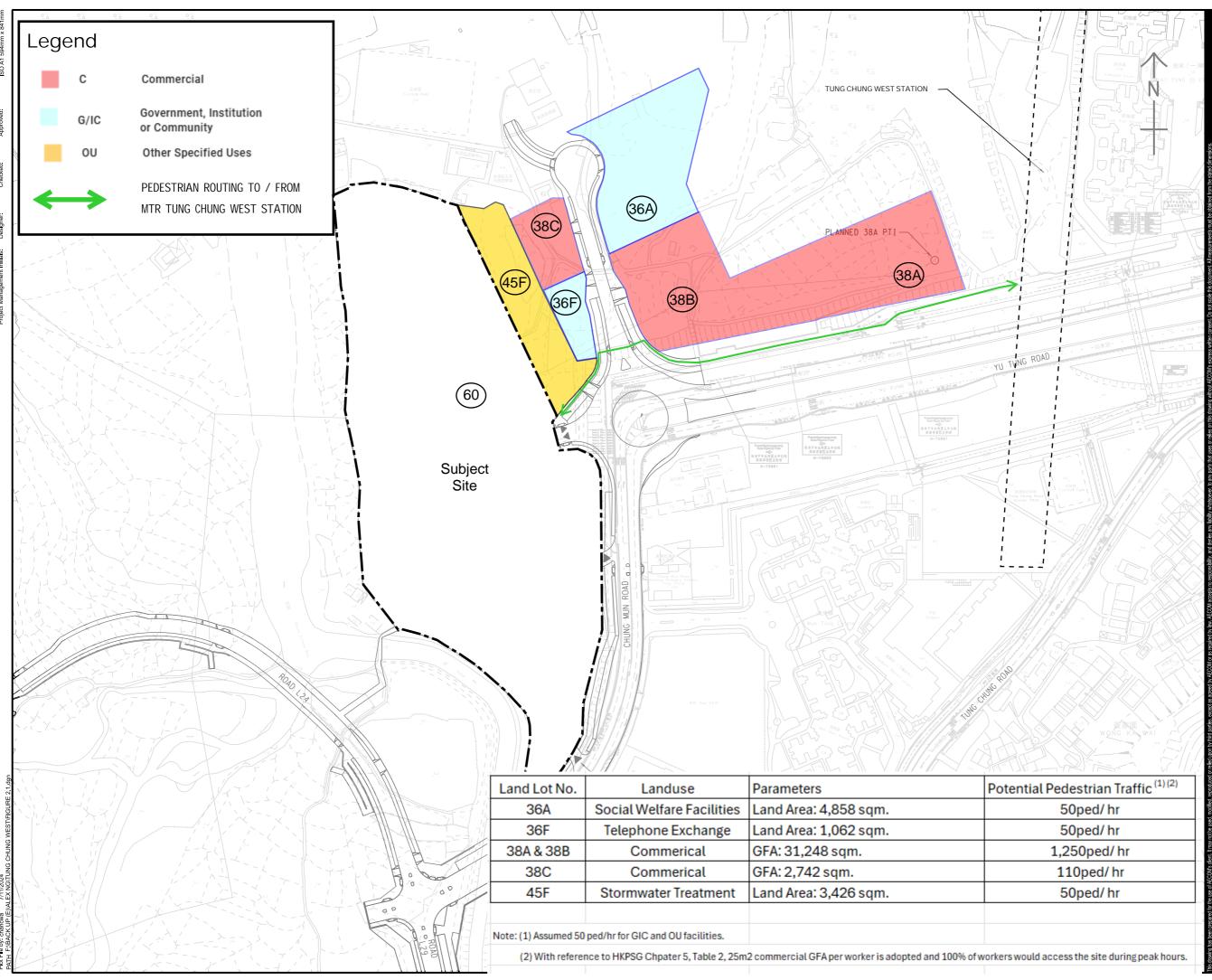
### CONTRACT NO.

#### SHEET TITLE

PROPOSED JUNCTION IMPROVEMENT SCHEME AT J3 (YU TUNG ROAD / CHUNG YAN ROAD)

#### SHEET NUMBER

FIGURE 5.1





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE (GROUP B) ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT XE



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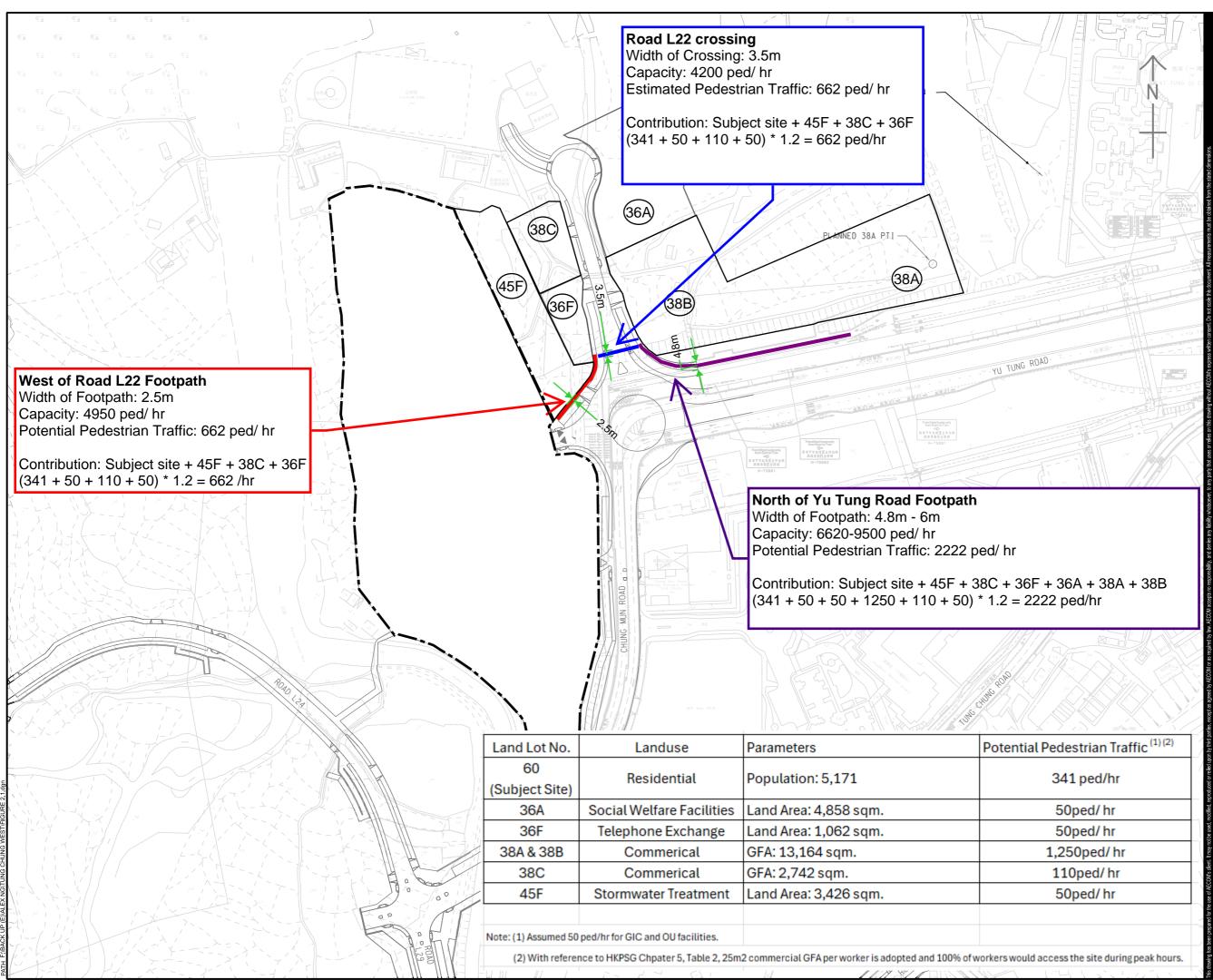
### CONTRACT NO.

### SHEET TITLE

PEDESTRIAN ROUTING TO / FROM TUNG CHUNG WEST MTR STATION AND ESTIMATED PEDESTRIAN TRAFFIC FROM ADJACENT SITE

### SHEET NUMBER

FIGURE 5.2





SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND



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KEY PLAN

PROJECT NO.

CONTRACT NO.

### SHEET TITLE

PEDESTRIAN ASSESSMENT

SHEET NUMBER

FIGURE 5.3

# Annex A

# Indicative Covered Private Transport Lay-by Layout Plan & Swept Path Analysis



# AECOM

#### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT 業主

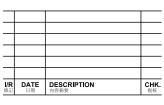


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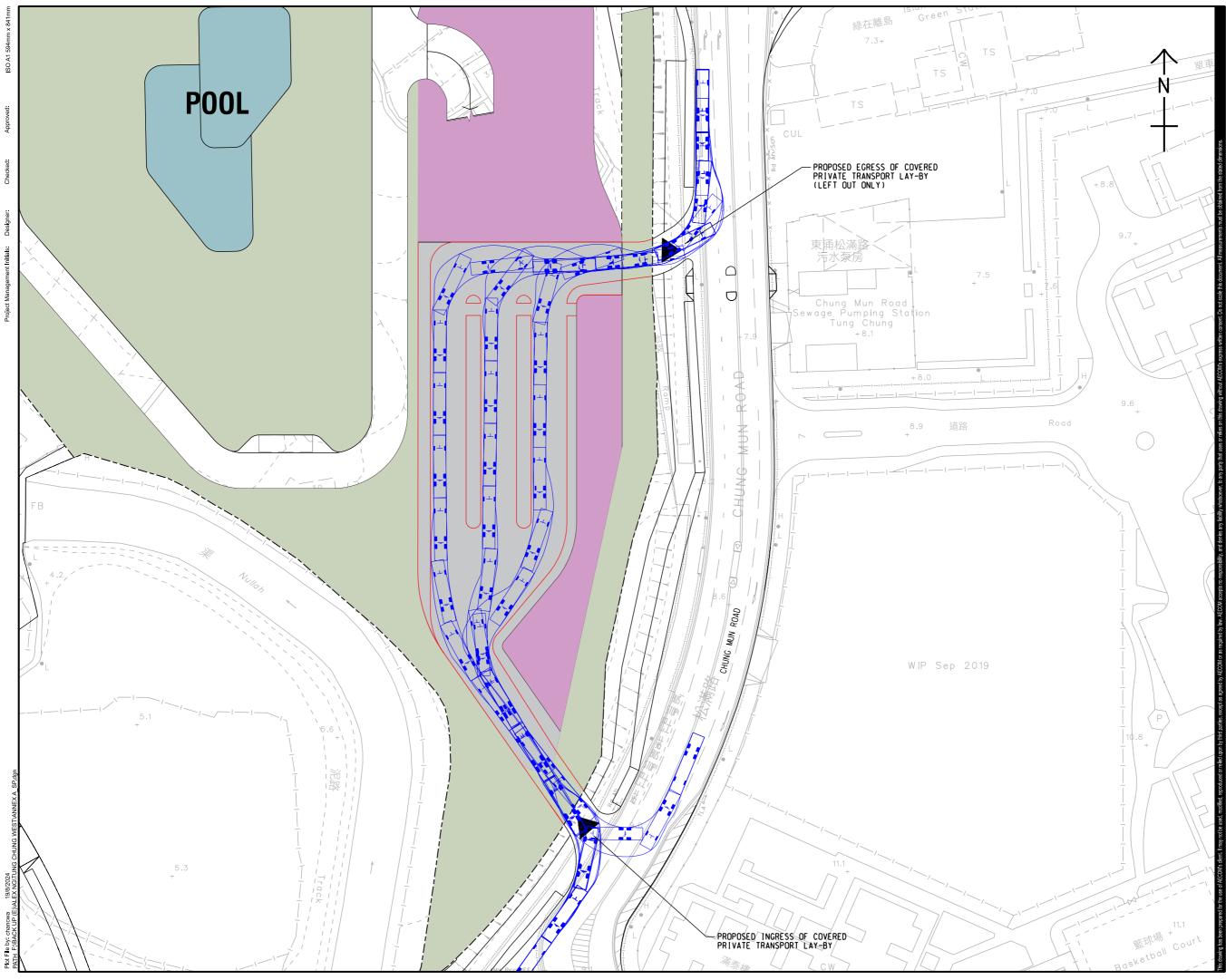
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KEY PLAN

## SHEET TITLE INDICATIVE COVERED PRIVATE TRANSPORT LAY-BY LAYOUT PLAN

PROJECT NO.

### CONTRACT NO.



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### PROJECT

SECTION 12A PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO THE TUNG CHUNG VALLEY OUTLINE ZONING PLAN TO REZONE "RESIDENTIAL (GROUP C)2" ZONE TO "RESIDENTIAL (GROUP B)" ZONE IN SUPPORT OF PRIVATE RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 1 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG, LANTAU ISLAND CLIENT

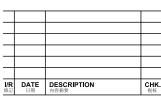


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PROJECT NO.

12.8m BUS SWEPT PATH ANALYSIS

SHEET NUMBER

ANNEX A\_SP

CONTRACT NO.

# Annex B

# Assessment Results of Global Parking Standard under HKPSG Adopted for the Application Site

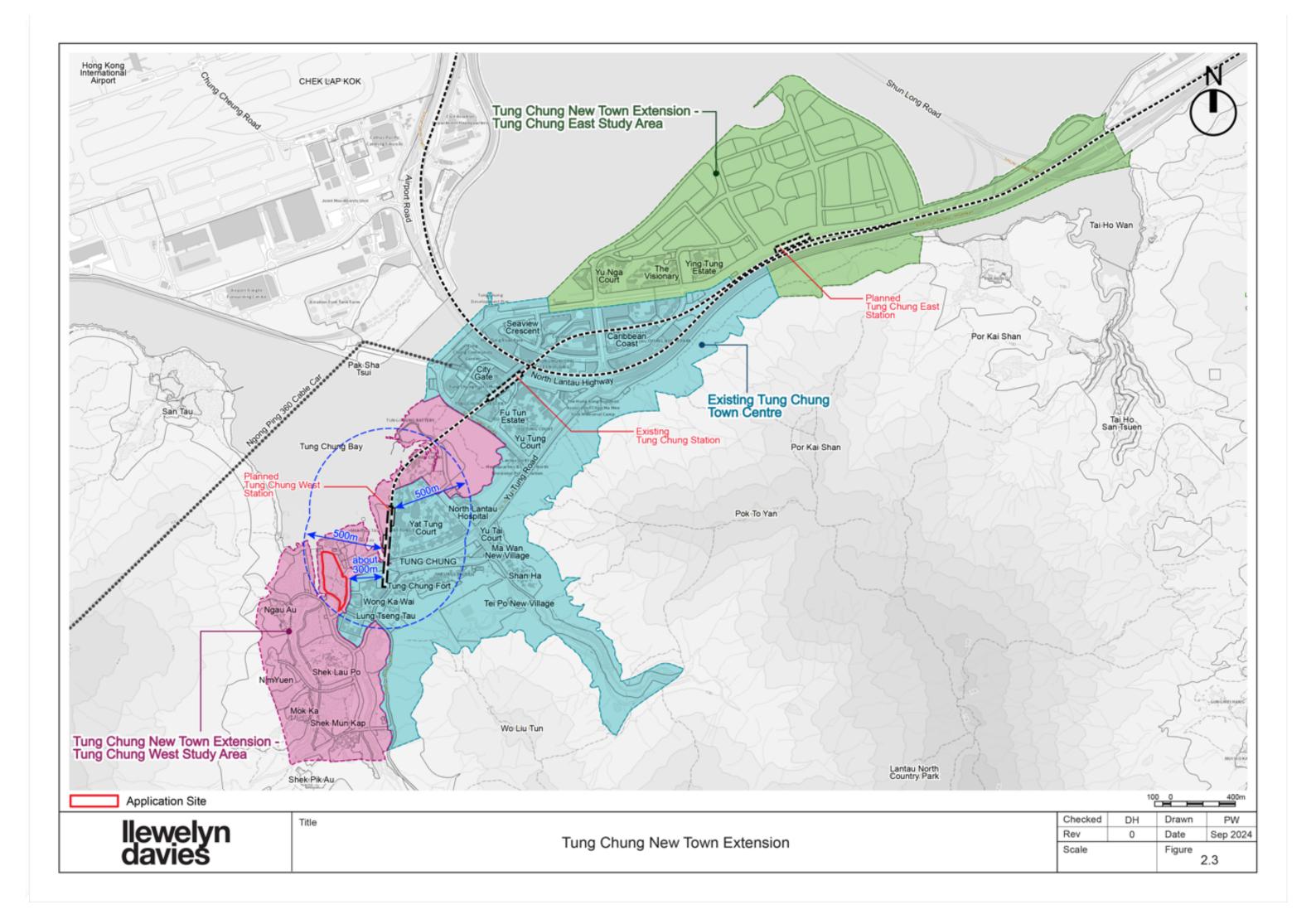
The following Table summarizes our assessment the Global Parking Standard (GPS) under HKPSG adopted for the Subject Site.

	Assessment	Adopted Value	Weighting
Proximity and convenience for access to PT services	There are 3 on-street bus terminus/en-route bus stop covering 15 bus routes at Yu Tung Road and an enroute bus stop covering 2 bus routes at Chung Mun Road. The walking distance from the Subject Site to those stops are about 200m. As stated in TPDM, the ideal walking distance to a bus stop should not exceed 400m. In addition, the proposed transport facilities to the southeast of the Subject Site will be provided to enhance road-based public transport. Hence the development site is considered to be <u>quite accessible</u> to the public transport services.	0.25	20%
Availability of public car parking spaces during peak hours	The nearest Mun Tung Estate car park provides 29 public private car parking spaces, including one designated for disabled drivers, which are available for use by the local community. It is located about 250m from the Subject Site. A recent observation of the Mun Tung Estate car park found that about 30% or more public parking spaces were available during AM and PM peak hours. It indicates that the unused capacity can be allocated to meet additional parking demands from nearby areas. Hence the public car parking spaces are considered to be moderately available for the development site.	0.50	30%
Traffic conditions	The nearby critical junctions in the vicinity has been assess in the TIA. All the assessed junctions including the proposed junction improvement scheme of Junction J3 Yu Tung Road / Chung Yan Road would operate within capacities. Hence the traffic conditions is considered to be <u>moderately congested</u> .	0.50	10%
Level of illegal parking	Illegal parking is observed in the vicinity but the situation is not common. Hence, level of illegal parking is considered <u>slightly</u> <u>severe</u> .	0.25	40%

Based on the above assessment and the adopted values for respective factors, the GPS is determined as 0.35 (i.e.  $0.25 \times 20\% + 0.50 \times 30\% + 0.5 \times 10\% + 0.25 \times 40\%$ ). Referring to the table above, the GPS value based GPSI under HKPSG GPS is 5 if ( $0.2 \le \text{GPSI} < 0.4$ ), a GPS of 5 would be appropriate for calculating the carparking provision at the proposed development according to HKPSG requirements.

# Annex C

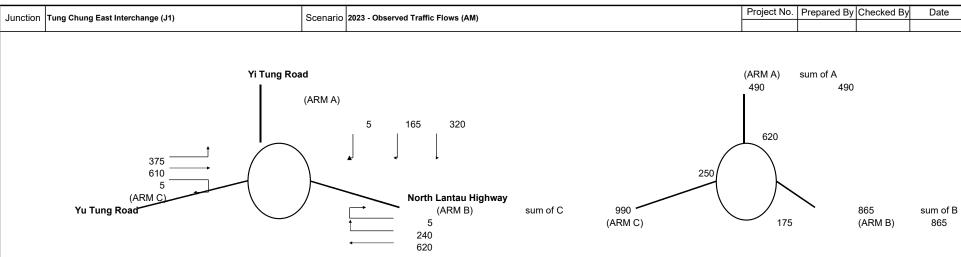
# Tung Chung New Town Extension Extracted from Planning Statement



# Annex D

# **Junction Calculation Sheet**

### **ROUNDABOUT CAPACITY CALCULATION**



ARM	A	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	8.00	7.10	8.00
E = Entry width (m)	12.00	12.00	12.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	55.00	60.00	40.00
D = Inscribed circle diameter (m)	107.00	107.00	107.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	490	865	990
Qc= Circulating flow across entry (pcu/h)	620	175	250
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.64	0.65	0.53
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	0.98	0.97
X2 = V + ((E-V)/(1+2S))	9.75	9.22	9.94
M = EXP((D-60)/10)	109.95	109.95	109.95
F = 303*X2	2956	2795	3010
Td= 1+(0.5/(1+M))	1.00	1.00	1.00
Fc= 0.21*Td(1+0.2*X2)	0.62	0.60	0.63
Qe= K(F-Fc*Qc)	2560	2638	2774
DFC = Design flow/Capacity = Q/Qe	0.19	0.33	0.36

CRITICAL DFC =	0.36	
TOTAL ENTRY FLOWS =	2345	PCU

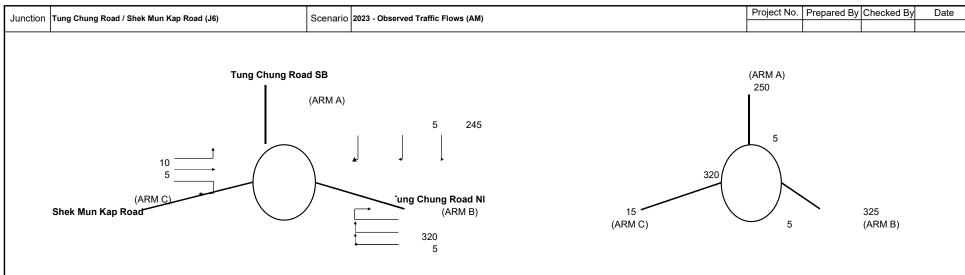
Filename:

		-	/ Shun Tui	ig Road					2023 AM OL	served Traffic	Flows						DESIGN:		CHECK:		JOB NO:		DATE
Tra (pc	iic Flow Diagram /hr) Shun Tung Road										Ð	8		No. of stages	s per cycle		N = C =	3 120	sec				
															4			-					360
							650		565	415							Sum(y) Y = Lost time L =				Y =	0.510 15	sec
							ECE	<b>+</b>										Total Flow			= '	18,780	pcu
		Yı	I Tung Ro	ad	Yu Tung Roa										ad			Optimum Cy Min. Cycle T		= (1.5×L+5 = L/(1-Y)	5)/(1-Y) = =	56 31	sec sec
									<u> </u>	355								Y <sub>ult</sub> R.C. <sub>ult</sub>		= 0.9 - 0.007 $= (Y_{ult} - Y)/Y_{2}$		0.788 54.5	%
									•	425								Practical Cyc	le Time C <sub>p</sub>	= 0.9×L/(0.	.9-Y) =	35	sec
																		Y <sub>max</sub>		= 1-L/C	=	0.875	
Sta	ge/Phase [	iagrams															1						
	в	٠				L		в	• ][									Critical	Case :	B,E			
	Α	→								D								R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100%	6 =	54%
			←			- <b>€</b>	_																
			F			F																	
F	5	Stage 1			Stage	e 2			Stage 3														
-			I/G =	5			I/G =	12		I/G =													
1						<u> </u>							LOW (pcu/h	r)		PROPOR							
PHASF	STAGE	LANE WIDTH	NO. OF			OSING	NEAR SIDE LANE	UPHILL GRADIEN	GRADIEN T EFFECT	ADDITIONA L CAPACITY	STRAIGHT- AHEAD SAT.		-	")	TOTAL FLOW	TURNING (%	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL			
	ST	(m)	LANES	LEFT	RIGHT	OPP TRV	NEAL	T (%)	(pcu/hr)	(pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У	У			
	Road NB	4.000	1	50			1		0		2015	650			650	100%		1956	0.332	0.332			
		4.000	2	50		0	0		0		4310	030	565		565	100 /6		4310	0.131	0.552			
E A	. 1				1 '															1 1			
4	ng Road E	В																					
4 n Tu   [	ng Road E	3.700	1	25	30	0	1		0		1985 4250	415		565	415 565	100%	100%	1873 4048	0.222				
n Tu   [   (	ng Road B 2,3 3		1 2	25	30	0	1 0		0 0		1985 4250	415		565	415 565	100%	100%	1873 4048	0.222 0.140				
/ n Tu   [   ( - - - - - - - - - - - - - - - - - - -	ng Road E 2,3 3 Road SB 1,2	3.700 3.700 3.650	2	25			0		0		4250 4100	415	425		565 425	100%		4048 4100	0.140				
n Tu   [   ( ] [ [ ung	ng Road B 2,3 3 Road SB 1,2	3.700 3.700	2	25	30 25	0	0		0		4250	415	425	565 355	565	100%	100%	4048	0.140	0.178			
/ n Tu   [   C   f	ng Road E 2,3 3 Road SB 1,2	3.700 3.700 3.650	2	25			0		0		4250 4100	415	425		565 425	100%		4048 4100	0.140	0.178			
/ n Tu   [   C   f	ng Road E 2,3 3 Road SB 1,2	3.700 3.700 3.650	2	25			0		0		4250 4100	415	425		565 425	100%		4048 4100	0.140	0.178			
	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				
	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				
	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				
4   [   C   C   F   E	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				
4   [   C   C   F   E	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				
4   [   C   C   F   E	Road SB 1,2 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 2 1		25	0	0 1 0		0 0 0		4250 4100 2120			355	565 425 355		100%	4048 4100 2000	0.140 0.104 0.178				

nction J	3 - Yu Ti	ung Road	/ Chung \	an Road					2023 AM Ot	oserved Traffi	c Flows						DESIGN:		CHECK		JOB NO:		DATE: No
Traffi	ic Flow Di	-	J Tung R	oad ——		30	105 240 30 <b>4</b> 75	Ch	65	75 335 260 395	465	Yu Tung	Road		Ő	e		No. of stage: Cycle time Sum(y) Lost time Total Flow Optimum Cy Min. Cycle T Yut	cle C <sub>o</sub>	= (1.5×L++ = L/(1-Y) = 0.9-0.007	Y = 0 L = 2 5)/(1-Y) = = 75×L = 0	4 120 sec .455 19 sec 0,510 pcu 61 sec 35 sec .758 05 6	
								Ch	ung Yan R	oad								R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	cle Time C <sub>r</sub>	= (Y <sub>ult</sub> -Y)/Y = 0.9×L/(0 = 1-L/C	).9-Y) =	66.5 % 38 sec .842	
Stage	e/Phase D	iagrams						1									1						
		l	► A				A											Critical			20.84 40004		
		В				с		₹	E		∎ ∎ ∎		F <b>f</b>					R.C.(C)	= (0	.9xY <sub>max</sub>	-Y)/Yx100%	= 67%	
	S	F Stage 1			Stag	e 2			Stage 3			Stage 4	. ,										
<b>.</b>			I/G =				I/G =	5		I/G =	5		I/G =	12			I						
PHASE	STAGE	LANE WIDTH	NO. OF		ADIUS (m)						AHEAD SAT.	1	FLOW (pcu/r	nr)	TOTAL FLOW	TURNING	RTION OF VEHICLES %)	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL			
		(m)	LANES	LEFT	RIGHT	9 PP	NEA	T (%)	(pcu/hr)	CAPACITY (pcu/hr)	(pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	у	У			
Tung F F B B	Road SB 1,4 1 1	3.500 3.600 3.600	1 1 1	15	20 10	0 0	1 0 0		0 0 0		1965 2115 2115	395	260	56 279	395 316 279	100%	18% 100%	1786 2087 1839	0.221 0.152 0.152				
	n Road V 4 4	3.500 3.500	1 1	25	25 25	0 0	1 0		0 0		1965 2105	30	75	194 316	299 316	10%	65% 100%	1880 1986	0.159 0.159	0.159			
. E		3.500 3.500	1 1	15	15	0	1 0		0 0		1965 2105	105	72 168	30	177 198	59%	15%	1855 2074	0.095 0.095	0.095			
	n Road E 1,2 2 2	3.500	1 1 1	16 18	25	0	1 0		0 0 0		1965 2105 2105	360 105	15 60	65	360 120 125	100% 88%	52%	1797 1962 2041	0.200 0.061 0.061	0.200			
																		1962 2041					

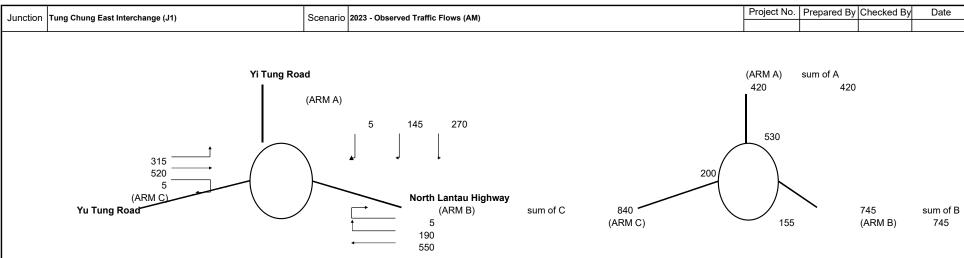
Junction J4 - Tung Chung Road	/ Chung Y	an Road	2023 AM Observed Trat	ffic Flows	Designed By :	Checked By :	Job No. :	Date	: Nov
Tung Chung Road (ARM C) 450 20			355 110 (ARM B) g Yan Road	(ARM A) Tung Chung Road	$W = Ma$ $W cr = Ce$ $W b-a = Lar$ $W b-c = Lar$ $W c-b = Lar$ $V c-b = Vis$ $Vr b-a = Vis$ $Vr b-a = Vis$ $Vr c-b = Vis$ $D = Stratered{tabular}$ $E = Stratered{tabular}$	ne width available to vehi ne width available to vehi ne width available to vehi ibility to the left for vehicl ibility to the right for vehi ibilitu to the right for vehi	0) • 9.0, kerbed central reser cle waiting in stream b-a ( cle waiting in stream b-c ( cle waiting in stream c-b ( cles waiting in stream b-a cles waiting in stream b-a cles waiting in stream b-c cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	J4
GEOMETRIC DETAILS:	040 (45)		144 100 00						
	ROAD (ARN		MAJOR ROA			MINOR ROAD (A	,		
W	=	7.3 (metres)	W c-b	= 3.6 (metre			= 3.6 (metres	-	
W cr	=	0 (metres)	Vr c-b	= 100 (metre	,		= 3.6 (metres	,	
q a-b	=	110 (pcu/hr)	q c-a	= 450 (pcu/hi	,		= 100 (metres	,	
q a-c	=	355 (pcu/hr)	q c-b	= 20 (pcu/hi	)		= 100 (metres	-	
							= 100 (metres = 150 (pcu/hr	,	
GEOMETRIC FACTORS :							= 150 (pcu/hr = 20 (pcu/hr		
D	=	0.948063				q b-0	20 (pou/ii	)	
E	=	0.977385							
F	=	0.977385							
Ŷ	=	0.748150							
THE CAPACITY OF MOVEMENT	:			```					
Q b-a	=	411							
Q b-c	=	622							
Q c-b	=	604				CRITICAL DF	C = 0.40		
Q b-ac	=	428							
COMPARISION OF DESIGN FLO	W TO CAP	ACITY :							
DFC b-a	=	0.36							
DFC b-c	=	0.03							
DFC c-b	=	0.03							
DFC b-ac	=	0.40							

Junction J5 - Chung Mun Road /	'u Tuna R	oad	2023 AM Observed T	raffic Flows		Designed By :	Checked By :	Job No. :	Date : Nov
Chung Mun Road (ARM C) 215 160			2023 AM Observed T	*	RM A) Road EB	W = M $W cr = Cr$ $W b-a = La$ $W b-c = La$ $W c-b = La$ $V c-b = La$ $V c-b = Vi$ $V r b-a = Vi$ $V r b-c = Vi$ $V r c-b = Vi$ $D = St$ $E = St$	ane width available to vehi ane width available to vehi ane width available to vehi sibility to the left for vehicle sibility to the right for vehic sibilitu to the right for vehic		05 - 4.07) 05 - 4.07) 05 - 4.07) 05 - 4.07) .0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)
GEOMETRIC DETAILS: MAJOR RO W W cr q a-b q a-c GEOMETRIC FACTORS : D	= = = =	A) 8.8 (metres) 0 (metres) 0 (pcu/hr) 0 (pcu/hr) 1.002944	ad (WB U-Turn) <i>MAJOR R</i> W c-b Vr c-b Vr c-b q c-a q c-b	OAD (ARM C) = = = =	4 (metres) 200 (metres) 215 (pcu/hr) 0 (pcu/hr)		MINOR ROAD (A)         W b-a         W b-c         W b-a         VI b-a         Vr b-a         Vr b-a         q b-a         q b-a         q b-c	3.6 (metres) 3.6 (metres) 50 (metres) 200 (metres) 17 (metres) 160 (pcu/hr)	
E F Y THE CAPACITY OF MOVEMENT : Q b-a Q b-a Q c-b Q b-ac COMPARISION OF DESIGN FLOW DFC b-a DFC b-a DFC c-b DFC c-b	= = = = = = = = = = = = = = = = = = =	0.903036 1.107269 0.696400 594 673 825 594 CITY : 0.27 0.00 0.00 0.27			·		CRITICAL DF	C = 0.27	



ARM	А	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	3.50	3.50	5.00
E = Entry width (m)	3.50	6.00	4.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	20.00	20.00	20.00
D = Inscribed circle diameter (m)	22.00	22.00	22.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	250	325	15
Qc= Circulating flow across entry (pcu/h)	5	5	320
OUTPUT PARAMETERS:			
S = Sharpness of flare = $1.6(E-V)/L$	0.00	0.33	-0.13
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.97	0.95	0.95
X2 = V + ((E-V)/(1+2S))	3.50	5.00	3.64
M = EXP((D-60)/10)	0.02	0.02	0.02
F = 303*X2	1061	1515	1102
Td= 1+(0.5/(1+M))	1.49	1.49	1.49
Fc= 0.21*Td(1+0.2*X2)	0.53	0.63	0.54
Qe= K(F-Fc*Qc)	1021	1433	881
DFC = Design flow/Capacity = Q/Qe	0.24	0.23	0.02

CRITICAL DFC =	0.24	
TOTAL ENTRY FLOWS =	590	PCU



ARM	Α	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	8.00	7.10	8.00
E = Entry width (m)	12.00	12.00	12.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	55.00	60.00	40.00
D = Inscribed circle diameter (m)	107.00	107.00	107.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	420	745	840
Qc= Circulating flow across entry (pcu/h)	530	155	200
OUTPUT PARAMETERS:			
S = Sharpness of flare = $1.6(E-V)/L$	0.64	0.65	0.53
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	0.98	0.97
X2= V + ((E-V)/(1+2S))	9.75	9.22	9.94
M = EXP((D-60)/10)	109.95	109.95	109.95
F = 303*X2	2956	2795	3010
Td= 1+(0.5/(1+M))	1.00	1.00	1.00
Fc= 0.21*Td(1+0.2*X2)	0.62	0.60	0.63
Qe= K(F-Fc*Qc)	2616	2649	2805
DFC = Design flow/Capacity = Q/Qe	0.16	0.28	0.30

CRITICAL DFC =	0.30	
TOTAL ENTRY FLOWS =	2005	PCU

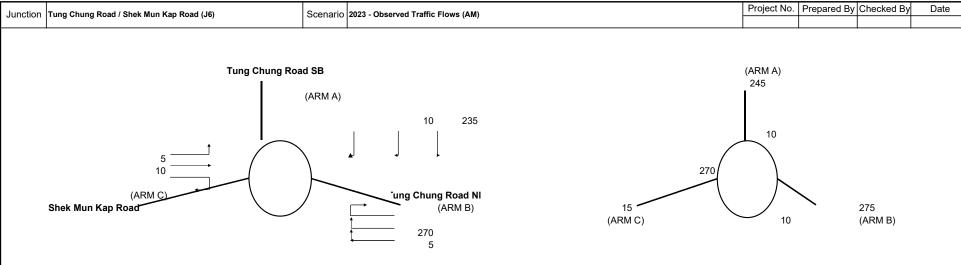
£Q)

_			/ Shun Tur	ng Road					2023 AM OL	served Traffic	Flows			_			DESIGN:		CHECK:		JOB NO:	:	DATE:
	fic Flow Di I/hr)	agram						Shun T	ung Road						Ô	6		No. of stages	s per cycle		N = C =	3 120	
															1			-					sec
							525	•	515	465								Sum(y) Lost time			Y =	0.388 15	sec
							375											Total Flow			=	18,780	pcu
							375																
		Yı	u Tung Ro	ad									Yı	u Tung Ro	ad			Optimum Cy Min. Cycle T		= (1.5×L+5 = L/(1-Y)	5)/(1-Y) = =	45 25	sec sec
									<u> </u>	240								Y <sub>ult</sub> R.C. <sub>ult</sub>		= 0.9 - 0.007 $= (Y_{ult} - Y)/Y_X$		0.788 102.8	%
									•	450								Practical Cyc	cle Time C <sub>p</sub>	$= 0.9 \times L/(0.$	.9-Y) =	26	sec
																		Y <sub>max</sub>		= 1-L/C	=	0.875	
Sta	ge/Phase D	iagrams															1						
	в	•				l		в	• ][									Critical	Case :	B,E			
	Α	→				ŤD E.			c <b>≁</b> ``	D								R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100%	6 =	103%
			←			- <b>(</b>	_																
			F			F																	
	S	tage 1			Stage	2			Stage 3														
			I/G =	5			I/G =	12		I/G =													
					DIUS	0	ш			ADDITIONA	STRAIGHT-	F	LOW (pcu/r	nr)		PROPOR							
PHASE	STAGE	LANE WIDTH	NO. OF LANES		n)	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN	GRADIEN T EFFECT	L	AHEAD SAT.		STRAIGH	DIGUT	TOTAL FLOW	TURNING (%		REVISED SAT. FLOW	FLOW FACTOR				
		(m)		LEFT	RIGHT	P H	"RE	T (%)	(pcu/hr)	(pcu/hr)	(pcu/hr)	LEFT	T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У				
ung	Road NB	4.000	1	50			1		0		2015	525			525	100%		1956	0.268	0.268			
	. 1	4.000	2			0	0		0		4310		375		375			4310	0.087				
A																							
 n Tui	l ng Road E			05					0		1005	405			405	4000/		4070	0.040				
	2,3	B 3.700 3.700	1 2	25	30	0	1 0		0 0		1985 4250	465		515	465 515	100%	100%	1873 4048	0.248 0.127				
 n Tui   C   C	2,3	3.700		25	30	0						465		515		100%	100%						
   []   C   - ung   F	2,3 3 Road SB	3.700 3.700 3.650	2	25			0				4250 4100	465	450		515 450	100%		4048 4100	0.127 0.110	0.120			
n Tui C C	2,3 3 Road SB	3.700 3.700	2	25	30 25	0	0		0		4250	465	450	515 240	515	100%	100% 100%	4048	0.127	0.120			
   []   C   - ung   F	2,3 3 Road SB	3.700 3.700 3.650	2	25			0		0		4250 4100	465	450		515 450	100%		4048 4100	0.127 0.110	0.120			
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				
 n Tui   C   C   F   E	2,3 3 Road SB 1,2 2	3.700 3.700 3.650 3.650	2 1		25	0	0 1 0		0 0 0		4250 4100 2120			240	515 450 240		100%	4048 4100 2000	0.127 0.110 0.120				

unction J3 - Yu Tu					906			2023 AM Ot	oserved Traffic	Flows						DESIGN:		CHECK		JOB NO:	DATE:	A2C
																						1
Traffic Flow Dia (pcu/hr)	gram						Chi	ung Yan Ro	oad					à	8		No. of stages	s per cycle		N = 4		
								55	0E	395				D			Cycle time			C = 120	sec	
						50		55	65 	395							Sum(y)			Y = 0.346		
						145 25											Lost time Total Flow			L = 19 = 20,510	sec pcu	
	Yu	I Tung Ro	ad ——		•		*	~	*	<b>`</b> ►	Yu Tung	Road					Total Tiow			- 20,010	pou	
						Ť		<u>└</u>	390 150								Optimum Cy	cle C <sub>o</sub>	= (1.5×L+5	)/(1-Y) = 51	sec	
								<u> </u>	425								Min. Cycle Ti		= L/(1-Y)	= 29	sec	
					15	60	360										Y <sub>ult</sub> R.C. <sub>ult</sub>		= 0.9-0.007 = (Y <sub>ult</sub> -Y)/Yx		%	
																	Practical Cyc	le Time C <sub>p</sub>			sec	
							Ch	ung Yan Ro	oad								Y <sub>max</sub>		= 1-L/C	= 0.842		
Stage/Phase Di	agrams																					
	l	► A															Critical	Case :	A,E,D			
					c	*		-		D							R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100% =	119%	]
	В	•						E		<b>▲ ↑</b> <i>∧</i>												-
	F (										F	= •										
Si	tage 1			Stage	e 2			Stage 3			Stage 4											
		I/G =				I/G =	5		I/G =	5		I/G =	12									
	LANE			DIUS	N N N N	۳ ۳	UPHILL	GRADIEN	ADDITIONA	STRAIGHT-	F	LOW (pcu/h	nr)	TOTAL	PROPOR		REVISED	FLOW				
PHASE	WIDTH (m)	NO. OF LANES	(n	n)	PPOSI	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	L CAPACITY	AHEAD SAT. FLOW	LEFT	STRAIGH T AHEAD	RIGHT	FLOW (pcu/hr)	(%		SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y			
			LEFT	RIGHT	0'	z			(pcu/hr)	(pcu/hr)					LEFT	RIGHT						
UTung Road SB	3.500	1	15			1		0		1965	425			425	100%		1786	0.238				
► B 1 ▼ B 1	3.600 3.600	1 1		20 10	0	0		0 0		2115 2115		150	134 256	284 256		47% 100%	2043 1839	0.139 0.139				
								Ŭ		2110			200	200		10070	1000	0.100				
hung Yan Road W	/B 3.500	1	25	25	0	1		0		1965	15	60	137	212	7%	65%	1884	0.112	0.112			
► D 4	3.500	1		25	0	0		0		2105			223	223		100%	1986	0.112				
I Tung Road NB																						
E 3	3.500 3.500	1 1	15	15	0	1 0		0		1965 2105	50	55 90	25	105 115	48%	22%	1876 2060	0.056 0.056	0.056			
ung Yan Road E	P																					
A   1,2	3.500	1	16			1		0		1965	320			320	100%		1797	0.178	0.178			
C 2 C 2	3.500 3.500	1 1	18	25	0	0		0 0		2105 2105	75	21 44	55	96 99	78%	56%	1976 2037	0.049 0.049				
'   ·   <del>-</del>																						
				1	1	1				1		1							1 I			

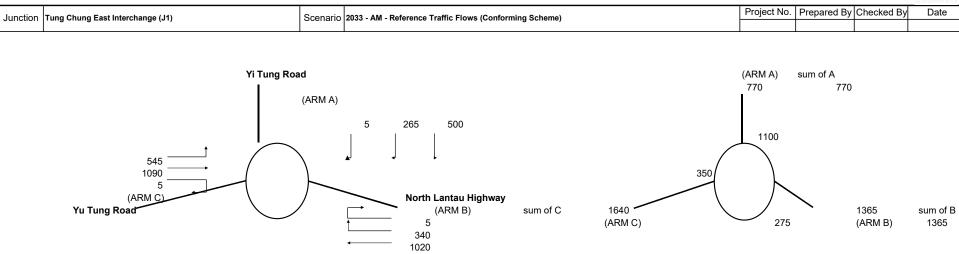
							1		
Junction J4 - Tung Chung Roa	d / Chung Y	an Road	2023 AM Observed Traf	fic Flows	Designed By :	Checked By :	Job No. :	Date :	: No
Tung Chung Road (ARM C) 350 10		•	420 70 ARM B) Yan Road	(ARM A) Tung Chung Road	W = Ma $W cr = Ce$ $W b-a = La$ $W b-c = La$ $W c-b = La$ $V c-b = Vis$ $Vr b-a = Vis$ $Vr b-a = Vis$ $Vr c-b = Vis$ $D = Str$ $E = Str$ $F = Str$	ne width available to veh ne width available to veh ne width available to veh sibility to the left for vehicl sibility to the right for vehi sibilitu to the right for vehi	0) • 9.0, kerbed central resen- cle waiting in stream b-a (2 cle waiting in stream b-c (2 cle waiting in stream c-b (2 cles waiting in stream b-a (2 cles waiting in stream b-a ( cles waiting in stream b-c ( cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)	J4
GEOMETRIC DETAILS: MAJOR W W cr	ROAD (ARM = =	// A) 7.3 (metres) 0 (metres)	MAJOR ROA W c-b Vr c-b	AD (ARM C) = 3.6 (metre = 100 (metre	·		<i>RM B)</i> = 3.6 (metres = 3.6 (metres	·	
d a-p	= =	70 (pcu/hr) 420 (pcu/hr)	q c-a q c-b	= 350 (pcu/h = 10 (pcu/h	r)	VI b-a Vr b-a Vr b-c	= 100 (metres = 100 (metres = 100 (metres	) ) )	
GEOMETRIC FACTORS :						4	= 65 (pcu/hr) = 10 (pcu/hr)		
D E F Y	= = =	0.948063 0.977385 0.977385 0.748150							
THE CAPACITY OF MOVEMEN	г:								
Q b-a Q b-c	=	418 609							
Q b-c Q c-b	=	598				CRITICAL DF	C = 0.17		
Q c-b Q b-ac	=	598 437				ORTIONE DE	<b>U</b> = <b>U</b> .17		
COMPARISION OF DESIGN FL	OW TO CAP	ACITY :							
DFC b-a	=	0.16							
DFC b-c	=	0.02							
DFC c-b	=	0.02							
DFC b-a	c =	0.17							

					(C) =1						
Junction J5 - Chun	g Mun Road / Y	u Tung R	oad	2023 AM Observed T	raffic Flows		Designed By :	Checked By :	Job No. :	Date :	: Nov
Chung Mun Road (ARM C)	85	•	•	ARM B) ad (WB U-Turn)	(A (A Tung Chung I	RM A) Road EB		ne width available to vehi ne width available to vehi ne width available to vehi ibility to the left for vehick ibility to the right for vehick ibility to the right for vehick	0) 9.0, kerbed central reserv cle waiting in stream b-a (2 cle waiting in stream b-c (2 cle waiting in stream b-a (2 cles waiting in stream b-a (2 cles waiting in stream b-a ( cles waiting in stream b-c ( cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)	J5
GEOMETRIC DETA	JLS: MAJOR RO W W cr q a-b q a-c	AD (ARM = = = =	A) 8.8 (metres) 0 (metres) 0 (pcu/hr) 0 (pcu/hr)	MAJOR R W c-b Vr c-b q c-a q c-b	OAD (ARM C) = = = =	4 (metres) 200 (metres) 85 (pcu/hr) 0 (pcu/hr)		MINOR ROAD (A W b-a = W b-c = VI b-a = Vr b-a = Vr b-c =	= 3.6 (metres = 3.6 (metres = 50 (metres = 200 (metres	) ) )	
GEOMETRIC FACT	ORS : D E F Y	= = =	1.002944 0.903036 1.107269 0.696400					q b-a = q b-c =	= 135 (pcu/hr)	,	
THE CAPACITY OF	MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = = =	615 673 825 615					CRITICAL DF	C = 0.22		
COMPARISION OF	DESIGN FLOW DFC b-a DFC b-c DFC c-b DFC b-ac	TO CAPA = = = =	CITY : 0.22 0.00 0.00 0.22								



ARM	А	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	3.50	3.50	5.00
E = Entry width (m)	3.50	6.00	4.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	20.00	20.00	20.00
D = Inscribed circle diameter (m)	22.00	22.00	22.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	245	275	15
Qc= Circulating flow across entry (pcu/h)	10	10	270
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.00	0.33	-0.13
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.97	0.95	0.95
X2= V + ((E-V)/(1+2S))	3.50	5.00	3.64
M = EXP((D-60)/10)	0.02	0.02	0.02
F = 303*X2	1061	1515	1102
Td= 1+(0.5/(1+M))	1.49	1.49	1.49
Fc= 0.21*Td(1+0.2*X2)	0.53	0.63	0.54
Qe= K(F-Fc*Qc)	1019	1430	906
DFC = Design flow/Capacity = Q/Qe	0.24	0.19	0.02

TOTAL ENTRY FLOWS = 535 PCU CRITICAL DFC = 0.24



ARM	A	В	С
INPUT PARAMETERS:			
V = Approach half width (m) E = Entry width (m) L = Effective length of flare (m) R = Entry radius (m) D = Inscribed circle diameter (m) A = Entry angle (degree) Q = Entry flow (pcu/h)	8.00 12.00 10.00 55.00 107.00 40.00 770	7.10 12.00 12.00 60.00 107.00 45.00 1365	8.00 12.00 12.00 40.00 107.00 45.00 1640
Qc= Circulating flow across entry (pcu/h)	1100	275	350
S = Sharpness of flare = 1.6(E-V)/L K = 1-0.00347(A-30)-0.978(1/R-0.05) X2= V + ((E-V)/(1+2S))	0.64 1.00 9.75	0.65 0.98 9.22	0.53 0.97 9.94
M = EXP((D-60)/10) F = 303*X2 Td= 1+(0.5/(1+M))	109.95 2956 1.00	109.95 2795 1.00	109.95 3010 1.00
Fc = 0.21*Td(1+0.2*X2) $Qe = K(F-Fc*Qc)$	0.62 2263	0.60 2579	0.63 2713
DFC = Design flow/Capacity = Q/Qe	0.34	0.53	0.60

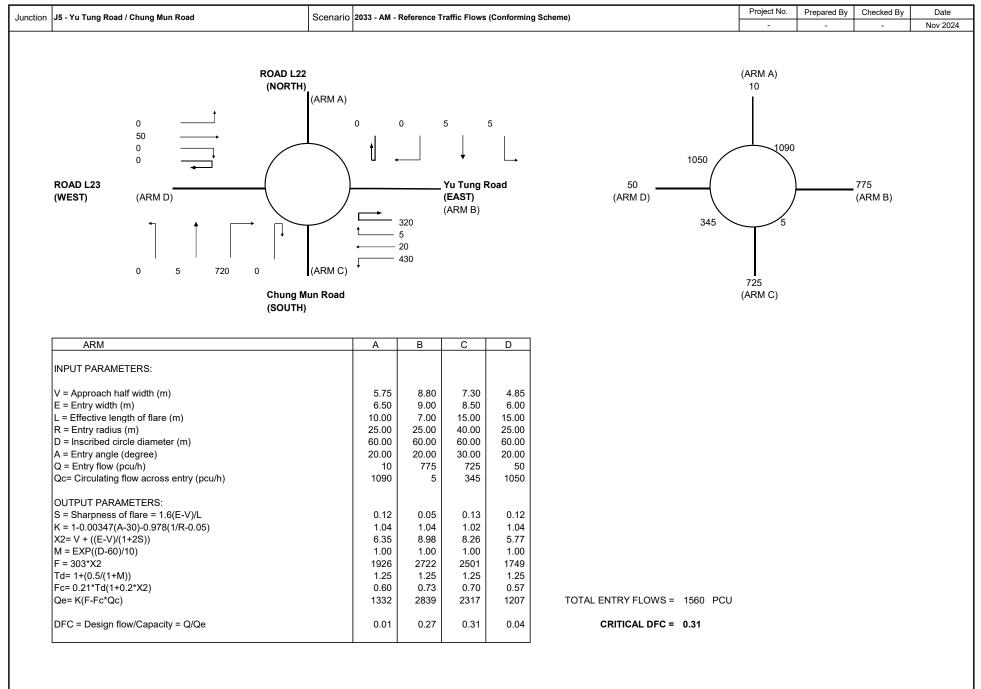
CRITICAL DFC =	0.60	
TOTAL ENTRY FLOWS =	3775	PCU

#### Filename:

		DN C/ ung Road							2033 AM Re	eference Traffi	c Flows (Confo	rming Sche	me) (With C	EDD Impro	/ements)		DESIGN:		CHECK	:	JOB NO:	DATE	AEC E: Nov
Traf (pcu	fic Flow D I/hr)	agram						Shun T	ung Road						Ø	ł.		No. of stages Cycle time	s per cycle		N = 3 C = 120	sec	
							980 1125	ر	725	515								Sum(y) Lost time Total Flow			Y = 0.668 L = 12 = 18,780	sec pcu	
		Yı	J Tung R	oad					 • •	455 825			Yı	u Tung Ro	ad			Optimum Cy Min. Cycle T Y <sub>ult</sub> R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	ime C <sub>m</sub>	$= (1.5 \times L+5)$ = L/(1-Y) = 0.9-0.0075 = (Y <sub>ult</sub> -Y)/Yx = 0.9 × L/(0.9 = 1-L/C	= 36 $5 \times L =$ 0.810 100% = 21.3	sec sec % sec	
Staç	ge/Phase [	Diagrams		1																			1
	в А	و →		₿∳		Ļ		В	الے ا	►								Critical			<u> </u>	249/	-
			<b>←</b> F			E € _€	_			-								R.C.(C)	= (0	<b>J.9X I <sub>max</sub>-</b>	Y)/Yx100% =	21%	
$\vdash$	ę	Stage 1			Stage	e 2			Stage 3	3													
·			I/G =	5			I/G =	5		I/G =	5												
	щ	LANE	NO. OF		DIUS m)	SING	SIDE	UPHILL	GRADIEN		STRAIGHT- AHEAD SAT.	F	LOW (pcu/ł	ır)	TOTAL	PROPOR TURNING	VEHICLES	REVISED	FLOW	CRITICAL			
PHASE	STAGE	WIDTH (m)	LANES	LEFT	RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	FLOW (pcu/hr)	(%	6) RIGHT	SAT. FLOW (pcu/hr)	FACTOR y	y			
Tung	Road NB	4.000 4.000	1 2	50		0	1 0		0 0		2015 4310	980	1125		980 1125	100%		1956 4310	0.501 0.261	0.261			
		B 3.700 3.700	1 2	25	30	0	1 0		0 0		1985 4250	515		725	515 725	100%	100%	1873 4048	0.275 0.179	0.179			
Tung F E		3.650 3.650	2 1		25	0	1 0		0 0		4100 2120		825	455	825 455		100%	4100 2000	0.201 0.228	0.228			
		1	1	1	1	1	1	1		1	1	1	1			1		1	1	1			

ction J3 - Yu Tu								2033 AM Re	eference Traffi	c Flows (Confo	rming Sche	eme) (With C	CEDD Impro	vements)		DESIGN:		CHECK:		JOB NO:		ATE: Nov
Traffic Flow Dia (pcu/hr)	gram						Ch	ung Yan R	oad		-			_1	6		No. of stages	s per cycle		N = 4	•	
														Ø			Cycle time			C = 120	sec	
						170		105	85 	585							Sum(y)			Y = 0.757	,	
						835 100	$\rightarrow$										Lost time Total Flow			L = 19 = 22,59	sec 5 pcu	
	Yu	Tung Ro	ad ——		•		~	<b>≁</b>	*	<b>`</b>	Yu Tung	Road								,		
								•	400 640								Optimum Cy		= (1.5×L+		sec	
					30	1 90	l 685	<b>f</b>	510								Min. Cycle T Y <sub>ult</sub>	ime C <sub>m</sub>	= L/(1-Y) = 0.9-0.007	= 78 75×L = 0.758	sec	
																	R.C. <sub>ult</sub> Practical Cyc	le Time C <sub>n</sub>	$= (Y_{ult}-Y)/Y$ $= 0.9 \times L/(0$		% sec	
							Ch	ung Yan R	oad								Y <sub>max</sub>	٩	= 1-L/C	= 0.842		
Stage/Phase Di	agrams									-			_									
	Ļ	A															Critical	Case :	A,E,D			
					c	*	<u> </u>	F		D							R.C.(C)	= (0	.9xY <sub>max</sub>	-Y)/Yx100% =	0%	
	в	<u> </u>						-														
	F 🕯										I	= 🗲										
s	tage 1			Stage	e 2			Stage 3			Stage 4											
		I/G =				I/G =	5		I/G =	5		I/G =	12									
щ щ	LANE	NO. OF	RAD		S D	E E	UPHILL	GRADIEN	ADDITIONA	STRAIGHT- AHEAD SAT.	F	LOW (pcu/r	nr)	TOTAL	PROPOR TURNING		REVISED	FLOW	CRITICAL			
PHASE STAGE	WIDTH (m)	LANES	(n LEFT	RIGHT	DPPOS TRAFI	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	FLOW (pcu/hr)	(%		SAT. FLOW (pcu/hr)	FACTOR y	y			
ung Road SB			LEFI	RIGHT											LEFT	RIGHT						
F 1,4 B 1	3.500 3.500	1 1	20			1 0		0 0		1965 2105	510	531		510 531	100%		1828 2105	0.279 0.252				
B 1	3.500	1		28	0			0		2105		109	400	509		79%	2020	0.252				
ng Yan Road W		4	25	25				0		1965	30	90	271	201	8%	69%	1878	0.000	0.208			
D 4 D 4	3.500 3.500	1 1	25	25 25	0	1 0		0		2105	30	90	414	391 414	070	100%	1986	0.208 0.208	0.206			
ung Road NB																						
E 3 E 3	3.500 3.500	1 1	15			1		0		1965 2105	170	471		170 471	100%		1786 2105	0.095 0.224	0.224			
E 3 ng Yan Road E	3.500 B	1		25	0	0		0		2105		365	100	465		22%	2078	0.224				
A   1,2	3.500 3.500	1 1	16	18		1		0		1965 2105	585	85	12	585 97	100%	13%	1797 2083	0.326 0.047	0.326			
C 2 C 2	3.500	1		25	0	0		0		2105			93	93		100%	1986	0.047				
-					1	1	1			1		1	1				1		1			

Junction J4 - Tung Chung Road	/ Chung Y	an Road	2033 AM Reference T	raffic Flows (C	onforming Scher		By : Checked By :	Job No	<u>.</u>	Date :	· N
Junction 54 - Tung Chung Koau			2055 AW Reference 1	Tame Flows (C			Sy . Checked By .	100 110	5	Date .	
Tung Chung Road (ARM C) 645 20			550 110 ARM B) Yan Road	)	NRM A) ung Road	W W cr W b-a	GEOMETRIC INPUT DATA = Major Road Width (6.4 - = Central Reserve width (1 = Lane width available to v = Lane width available to v = Lane width available to v = Visibility to the right for vet = Visibility to the right for vet = Visibility to the right for vet = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	20.0) .2 - 9.0, kerbed ehicle waiting in ehicle waiting in hicles waiting in ehicles waiting in ehicles waiting ir	stream b-a (2.05 stream b-c (2.05 stream c-b (2.05 stream b-a (22.0 - a stream b-a (17.0 a stream b-c (17.0	Ny) - 4.07) - 4.07) - 4.07) 250.0) - 250.0) - 250.0)	J4
W W cr q a-b q a-c GEOMETRIC FACTORS : D E	OAD (ARM = = = = =	1 A) 7.3 (metres) 0 (metres) 110 (pcu/hr) 550 (pcu/hr) 0.948063 0.977385	MAJOR R W c-b Vr c-b q c-a q c-b	OAD (ARM C) = = = =	3.6 (metres) 100 (metres) 645 (pcu/hr) 20 (pcu/hr)		MINOR ROAD W b-a W b-c VI b-a Vr b-a Vr b-c q b-a q b-c	(ARM B) = = = = = = =	3.6 (metres) 3.6 (metres) 100 (metres) 100 (metres) 150 (pcu/hr) 20 (pcu/hr)		
F Y THE CAPACITY OF MOVEMENT Q b-a Q b-c Q c-b Q b-ac	= = = = =	0.977385 0.748150 329 570 552 346					CRITICAL I	DFC =	0.49		
COMPARISION OF DESIGN FLO DFC b-a DFC b-c DFC c-b DFC c-b DFC b-ac	N TO CAP/ = = = =	ACITY : 0.46 0.04 0.04 0.49									



Junction J6 - Tung Chung Roa	d / Shek Mu	n Kap Road	2033 AM Reference Traf	fic Flows (Conforming	Scheme) Designed	By : Checked By :	Job No. :	Date	: No
Tung Chung Road (ARM C) 265 100			360 5 ARM B) ad L30	(ARM A) Tung Chung Road	NOTES : W W cr W b-a W c-b VI b-a Vr b-a Vr b-c Vr c-b D E F Y	(GEOMETRIC INPUT DATA) = Major Road Width (6.4 - 20. = Central Reserve width (1.2 - = Lane width available to vehi = Lane width available to vehi = Lane width available to vehi = Visibility to the left for vehicle = Visibility to the right for vehicle = Visibility to the right for vehicle = Visibility to the right for vehicle = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	9.0, kerbed central reserve cle waiting in stream b-a (2. cle waiting in stream b-c (2. cle waiting in stream c-b (2. es waiting in stream b-a (22. cles waiting in stream b-a (1 cles waiting in stream b-c (1	05 - 4.07) 05 - 4.07) 05 - 4.07) 05 - 4.07) 0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)	J6
W W cr q a-b q a-c GEOMETRIC FACTORS : D E	ROAD (ARN = = = = =	7.3 (metres) 0 (metres) 5 (pcu/hr) 360 (pcu/hr) 1.098970 1.066962	MAJOR ROA W c-b Vrc-b q c-a q c-b	= 3.6 ( = 200 ( = 265 (	metres) metres) pcu/hr) pcu/hr)	MINOR ROAD (A W b-a = W b-c = VI b-a = Vr b-a = Vr b-a = q b-a = q b-a =	<ul> <li>3.6 (metres)</li> <li>3.6 (metres)</li> <li>200 (metres)</li> <li>200 (metres)</li> <li>200 (metres)</li> <li>200 (metres)</li> <li>5 (pcu/hr)</li> </ul>		
F Y THE CAPACITY OF MOVEMEN Q b-a Q b-c Q c-b Q b-ac	= = =	1.066962 0.748150 488 690 689 665		·		CRITICAL DF	C = 0.15		
COMPARISION OF DESIGN FL DFC b-a DFC b-c DFC c-b DFC c-b DFC b-a	= = =	ACITY : 0.01 0.07 0.15 0.08							

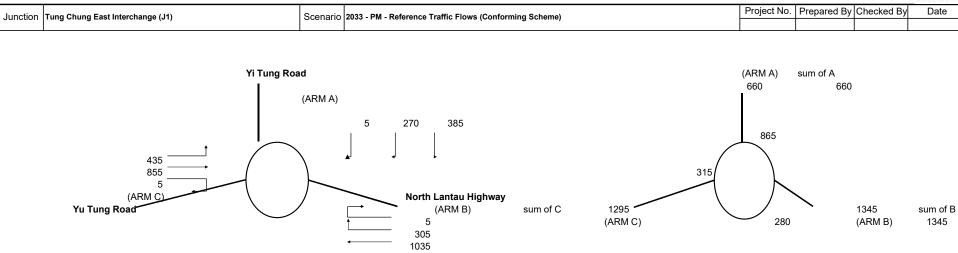
lum effert 17 De				0000 AM D. f	Tree ffile Floor		- I	Design of the standard Design	Late March	Deter 1
Junction J7 - Ro	ad L29 / Road L30	)		2033 AM Reference	I raffic Flow	vs (Contorming S	cheme) Designed	By : Checked By :	Job No. :	Date :
Road L29 (ARM C)	280				90 55	(ARM A)	NOTES : W W cr W b-a W c-b VI b-a Vr b-a	( GEOMETRIC INPUT DATA ) = Major Road Width (6.4 - 20 = Central Reserve width (1.2 = Lane width available to veh = Lane width available to veh = Visibility to the left for vehicl = Visibility to the right for vehi	9.0, kerbed central reserve cle waiting in stream b-a (2. cle waiting in stream b-c (2. cle waiting in stream c-b (2. es waiting in stream b-a (22	05 - 4.07) 05 - 4.07) 05 - 4.07) .0 - 250.0)
-			5 140	(ARM B)		Road L29	Vr b-c Vr c-b D E F Y	<ul> <li>Visibilitu to the right for vehi</li> <li>Visibility to the right for vehi</li> <li>Stream-specific B-A</li> <li>Stream-specific B-C</li> <li>Stream-specific C-B</li> <li>(1-0.0345W)</li> </ul>	cles waiting in stream b-c (1	7.0 - 250.0)
GEOMETRIC DE	MAJOR RC W W cr q a-b q a-c CTORS :	= = =	11.7 (metres) 1.5 (metres) 155 (pcu/hr) 90 (pcu/hr)	MAJOR W c-b Vr c-b q c-a q c-b	ROAD (ARN = = = =	1 C) 2.3 (me 100 (me 280 (pc 5 (pc	tres) µ/hr)	W b-c VI b-a Vr b-a Vr b-c q b-a	RM B)         =       2.3 (metres)         =       2.3 (metres)         =       100 (metres)         =       100 (metres)         =       100 (metres)         =       140 (pcu/hr)         =       5 (pcu/hr)	
	D E F Y	= = =	0.831663 0.857384 0.857384 0.596350							
THE CAPACITY	OF MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = =	479 611 593 482					CRITICAL DF	C = 0.30	
COMPARISION	DF DESIGN FLOW DFC b-a DFC b-c DFC c-b DFC c-b	TO CAPA = = = =								

lunation 10 Tuna Chung	and / Deed 1.2	• I	2022 AM Defenses T	noffic Flamm (Comfr	main a Calcana)	Designed D	Chasked Du.	Jah Na J	Data	
Junction J8 - Tung Chung	Koad / Road L3	U	2033 AM Reference T	ramic Flows (Conto	ming Scheme)	Designed B	y: Checked By:	Job No. :	Date	: r
Tung Chung Road (ARM C) 345 100		- 175 20	400 10 (ARM B) Road L30		A)	W W b-a W b-c W c-b VI b-a Vr b-a Vr b-c Vr c-b D E F	GEOMETRIC INPUT DATA ) = Major Road Width (6.4 - 20.0 = Central Reserve width (1.2 - = Lane width available to vehic = Lane width available to vehic = Lane width available to vehic = Visibility to the left for vehicle = Visibility to the right for vehicle = Visibility to the right for vehicle = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	9.0, kerbed central rese ele waiting in stream b-a ele waiting in stream b-c ele waiting in stream c-b s waiting in stream b-a ( les waiting in stream b-a les waiting in stream b-c	(2.05 - 4.07) (2.05 - 4.07) (2.05 - 4.07) 22.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	J8
W W ci q a-i q a-i GEOMETRIC FACTORS : D E F	) = : = = = =	7.3 (metres) 0 (metres) 10 (pcu/hr) 400 (pcu/hr) 1.098970 1.066962 1.066962	MAJOR R W c-b Vrc-b q c-a q c-b	OAD (ARM C) = = = =	3.6 (metres) 200 (metres) 345 (pcu/hr) 100 (pcu/hr)		MINOR ROAD (A) W b-a = W b-c = VI b-a = Vr b-a = Q b-a = Q b-c =	3.6 (metre 3.6 (metre 200 (metre 200 (metre 200 (metre 20 (pcu/h	s) s) s) s) r)	
Y THE CAPACITY OF MOVEM Q b- Q c-t Q b- Q c-t Q b- COMPARISION OF DESIGN DFC DFC DFC DFC	= = c = b-c = c-b =	0.748150 460 678 676 646 PACITY : 0.04 0.26 0.15 0.30					CRITICAL DF	C = 0.30		

Junction J9 - Road L2	0 / Dood I 25			2022 AM Deference	Troffic Ela	une 10 conferencie	- Cohomo)	Designed	By : Checked By :		b No. :	Data : N
Junction J9 - Road L2	9 / Road L25			2033 AM Reference	I rattic Fig	ows (Contormin	ig Scheme)	Designed	Ву: Спескеа Ву:	JO	D NO. :	Date : N
Road L29 (ARM C) 25 65		► ▼			50 70	°		NOTES : W W cr W b-a W b-c W c-b VI b-a	( GEOMETRIC INPUT DAT = Major Road Width (6.4 = Central Reserve width ( = Lane width available to = Lane width available to = Lane width available to = Visibility to the left for ve	20.0) 1.2 - 9.0, kert vehicle waitin vehicle waitin vehicle waitin	g in stream b-a (2.05 g in stream b-c (2.05 g in stream c-b (2.05	5 - 4.07) 5 - 4.07) 5 - 4.07)
				V	10	(ARM A)		Vrb-a Vrb-a	= Visibility to the right for v	-		
			<b>`</b>			Road L29		Vr b-c	= Visibilitu to the right for			
								Vr c-b	= Visibility to the right for	ehicles waitir	ng in stream c-b (17.	0 - 250.0)
								D	= Stream-specific B-A			
								E	= Stream-specific B-C			
			235 5					F	= Stream-specific C-B			
			•	<b>RM B)</b> d L25				Y	= (1-0.0345W)			
GEOMETRIC DETAILS	MAJOR ROAD W W cr q a-b q a-c S :	= = =	10.3 (metres) 1.5 (metres) 70 (pcu/hr) 50 (pcu/hr)	MAJOR W c-b Vr c-b q c-a q c-b	ROAD (AR = = = =	2.1 100 25	(metres) (metres) (pcu/hr) (pcu/hr)		MINOR ROA W b-a W b-c VI b-a Vr b-a Vr b-c q b-a q b-c	D (ARM B) = = = = = = =	2.3 (metres) 2.3 (metres) 100 (metres) 100 (metres) 100 (metres) 5 (pcu/hr) 235 (pcu/hr)	
	D E	=	0.831663									
	F	=	0.857384 0.838923									
	Υ	=	0.644650									
THE CAPACITY OF M							•					
	Q b-a	=	503									
	Q b-c	=	623									
	Q c-b	=	601						CRITICAL	DFC	= 0.39	
	Q b-ac	=	620									
COMPARISION OF DE	SIGN FLOW TO		CITY :									
	DFC b-a	=	0.01									
	DFC b-c	=	0.38									
	DFC c-b DFC b-ac	=	0.11									
			0.39									

Junction J10 - Road L28 / R	oad L29 / Shek	Mun Kap Road	2033 AM Reference Tr	affic Flows (Confe	ming Scheme	Designed B	y: Checked By:	Job No. :	Date	: N
Shek Mun Kap Road (ARM C) 15 100			20 20 ARM B) pad L29			W W cr W b-a W c-b VI b-a Vr b-a Vr b-a Vr c-b D E F	GEOMETRIC INPUT DATA ) = Major Road Width (6.4 - 20 = Central Reserve width (1.2 = Lane width available to ver = Lane width available to ver = Visibility to the left for vehic = Visibility to the right for veh = Visibility to the right for veh = Visibility to the right for veh = Stream-specific B-A = Stream-specific C-B = (1-0.0345W)	.0) - 9.0, kerbed central icle waiting in stream icle waiting in stream icle waiting in stream les waiting in stream icles waiting in stream	b-a (2.05 - 4.07) b-c (2.05 - 4.07) c-b (2.05 - 4.07) b-a (22.0 - 250.0) b-a (17.0 - 250.0) b-c (17.0 - 250.0)	JIL
GEOMETRIC DETAILS: MAJ W W or q a-b q a-c q a-c q a-c q a-c q b E F Y	=	VIA) 7.3 (metres) 0 (metres) 20 (pcu/hr) 20 (pcu/hr) 0.867478 0.894307 0.857384 0.748150	MAJOR RC W c-b Vr c-b q c-a q c-b	DAD (ARM C) = = = =	2.3 (metres) 100 (metres) 15 (pcu/hr) 100 (pcu/hr)		W b-c VI b-a Vr b-a Vr b-c q b-a	= 2.7 (n = 2.7 (n = 100 (n = 100 (n = 100 (n = 5 (p	netres)	
THE CAPACITY OF MOVEM Q b-a Q b-c Q c-b Q b-a COMPARISION OF DESIGN DFC DFC DFC DFC	= = c = FLOW TO CAP b-a = b-c = c-b =	501 659 629 627 PACITY : 0.01 0.04 0.16 0.05					CRITICAL DI	=C = 0.	.16	

			ng Mun R			CALO	906	2,47,0,0,4		2033 AM Re	eference Traffi	c Flows (Confo	rming Sche	eme)				DESIGN:		CHECK:		JOB N	IO:	DA	AEC ATE: Nov 2
	Traffic	Flow Dia	agram				•	0 _ 55 <del>-</del> 0 -	395	Road L29	10 25 35 180	55			Chung	Mun Road			No. of stages Cycle time Sum(y) Lost time Total Flow Optimum Cyu Min. Cycle Ti Y <sub>uft</sub> R.C. <sub>uft</sub> Practical Cyc	cle C <sub>o</sub> me C <sub>m</sub>	= $(1.5 \times L+4)$ = $L/(1-Y)$ = $0.9 \times L/(0$ = $(Y_{uit} \times Y)/Y$ . = $0.9 \times L/(0$	= '5×L = x100% =	5 120 0.316 49 9,965 115 72 0.533 68.3 76	sec pcu sec sec sec %	
Ļ	Stage/F	Phase D	iagrams							Koau L23									Y <sub>max</sub>		- 1-1/0	_	0.592		
	• ی		•	A		∲ → в •			د م				ſ		& Ep¦- ↓	<> Ep <> Ep	≴ Ep¦ V		Critical R.C.(C)			D,Ep -Y)/Yx100	9% =	68%	
ŀ		S	tage 1			Stage	e 2			Stage 3	3		Stage 4			Stage 5									
		G	6 = 5	I/G =	5	G = 5	i	I/G =	5		I/G =	5		I/G =	5	G = 20	I/G =	2							
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES		DIUS m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN T (%)	GRADIEN T EFFECT (pcu/hr)	ADDITIONA L CAPACITY (pcu/hr)	STRAIGHT- AHEAD SAT. FLOW (pcu/hr)	LEFT	ELOW (pcu/i STRAIGH T AHEAD	hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPOR TURNING (%	VEHICLES	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL				
+	A	1	3.500	1	30	25	0	1		0		1965	55	10	0	65	85%	0%	1885	0.034	0.034				
♠	в	2	3.500	1	30	25	0	1		0		1965	0	55	0	55	0%	0%	1965	0.028					
♠	с	3	3.500	1	30	25	0	1		0		1965	0	10	395	405	0%	98%	1856	0.218	0.218				
¶ ♠	D D	4 4	3.500 3.500	1 1	15 15	25	0	1 0		0 0		1965 2105	114 66	35	25	114 126	100% 52%	20%	1786 1978	0.064 0.064	0.064				
l 'edes	Ep	Crossin 5	g min.	GM 15	+	FGM 5	=	20	sec																



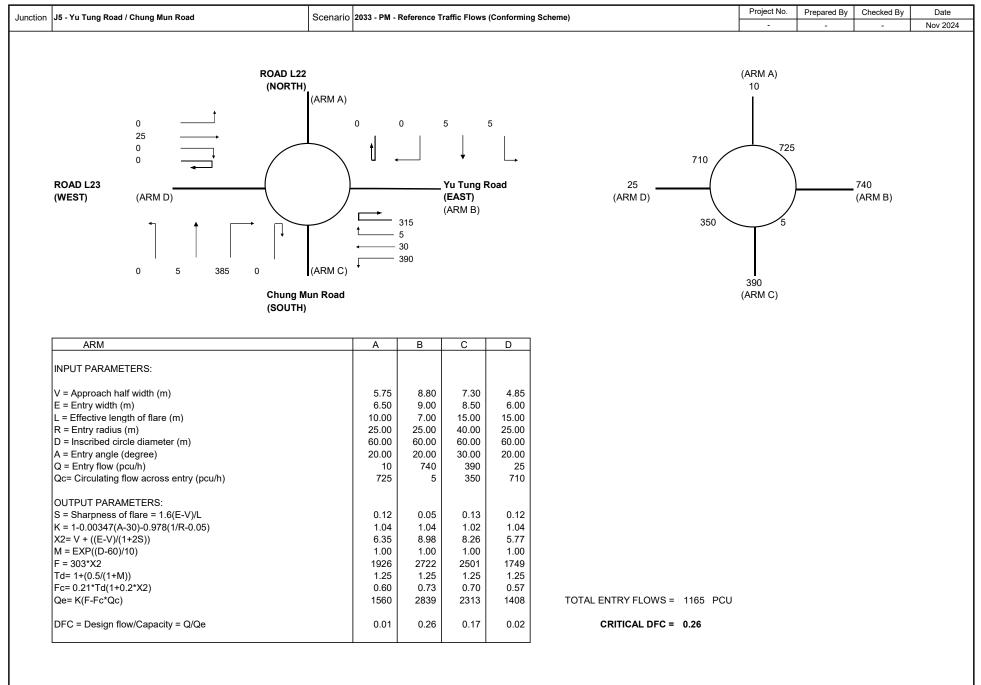
ARM	A	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	8.00	7.10	8.00
E = Entry width (m)	12.00	12.00	12.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	55.00	60.00	40.00
D = Inscribed circle diameter (m)	107.00	107.00	107.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h) Qc= Circulating flow across entry (pcu/h) OUTPUT PARAMETERS:	40.00 660 865	1345 280	1295 315
S = Sharpness of flare = $1.6(E-V)/L$	0.64	0.65	0.53
K = $1-0.00347(A-30)-0.978(1/R-0.05)$	1.00	0.98	0.97
X2= V + ((E-V)/(1+2S))	9.75	9.22	9.94
M = EXP((D-60)/10)	109.95	109.95	109.95
F = $303*X2$	2956	2795	3010
Td= $1+(0.5/(1+M))$	1.00	1.00	1.00
Fc= $0.21*Td(1+0.2*X2)$	0.62	0.60	0.63
Qe= K(F-Fc*Qc)	2408	2576	2734
DFC = Design flow/Capacity = Q/Qe	0.27	0.52	0.47

	5500	100
TOTAL ENTRY FLOWS =	3300	PCU

2 - Yu Tu	ing Road	/ Shun Tu	ung Road		CUL d Scher			2033 PM Re	eference Traffi	c Flows (Confo	rming Sche	eme) (With C	CEDD Impro	vements)		DESIGN:		CHECK	:	JOB NO:	DAT	AEC E: Nov 2
c Flow Dia hr)	agram						Shun T	ung Road						Ø			No. of stage: Cycle time	s per cycle		N = 3 C = 120	sec	
						725 730	و 	705	565								Sum(y) Lost time Total Flow			Y = 0.514 L = 12 = 18,780	sec pcu	
	Yı	J Tung R	oad					 • •	340 960			Yı	u Tung Ro	ad			Min. Cycle T Y <sub>ult</sub> R.C. <sub>ult</sub>	ïme C <sub>m</sub>	= L/(1-Y) = 0.9-0.0075 = (Y <sub>ult</sub> -Y)/Yx	= 25 5×L = 0.810 100% = 57.7	sec sec % sec	
e/Phase Di	iagrams				1																	]
в А	ب +	▲	в <u></u>		له <sub>D</sub>	_	В	•( د•	`► D								R.C.(C)			Y)/Yx100% =	58%	
s		F		Stad	F e 2			Stage 3														
	5	I/G =	5			I/G =	5	<u> </u>		5												
AGE	LANE WIDTH				OSING	R SIDE ANE	UPHILL GRADIEN	GRADIEN T EFFECT		STRAIGHT- AHEAD SAT.		-	·	TOTAL FLOW	TURNING	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL			
toad NB	(m)	LANES	LEFT	RIGHT	- 40 BT	L NEA	T (%)	(pcu/hr)	(pcu/hr)	(pcu/hr)	LEFT	T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У	y			
1	4.000 4.000	1 2	50		0	1 0		0 0		2015 4310	725	730		725 730	100%		1956 4310	0.371 0.169	0.169			
2,3 3	B 3.700 3.700	1 2	25	30	0	1 0		0 0		1985 4250	565		705	565 705	100%	100%	1873 4048	0.302 0.174	0.174			
toad SB 1,2 2	3.650 3.650	2 1		25	0	1 0		0 0		4100 2120		960	340	960 340		100%	4100 2000	0.234 0.170	0.170			
	VPhase D B A S Coad NB 1 P Road E 2,3 3 Coad SB 1,2 2	VPhase Diagrams B	wr)         Yu Tung R           YPhase Diagrams         Image: Constraint of the second	$\begin{array}{c c} Yu \ Tung \ Road \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \hline \\ \hline \\ \\ \hline \\ \hline \\ \\ \hline \hline \\ \hline \hline $	Yu Tung Road         Yu Tung Road         B       Image: second sec	Yu Tung Road         Yu Tung Road         B       Image: product of the second se	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \text{Shun Tung Road} \\ \hline \\ & \hline \\ \\ & \hline \\ & \hline \\ \\ \\ & \hline \\ \\ \\ \\$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\frac{1}{12} \frac{1}{2} \frac{1}{3} \frac{1}{3} \frac{1}{2} 1$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c} \text{N} \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{Vu Tung Road} \\ \hline \\ \text{Vu Tung Road } \\ \hline \\ \ \\ \text{Vu Tung Road } \\ \hline \\ \ \\ \text{Vu Tung Road } \\ \hline \\ \ \\ \text{Vu Tung Road } \\ \hline \\ \hline \\ \ \\ \hline \\ \ \\ \text{Vu Tung Road } \\ \hline \\ \hline \\ \ \\ \ \\ \ \\ \ \\ \ \ \\ \ \ \\ \ \\$	$\frac{1}{1} + \frac{1}{400} + \frac{1}{2} + \frac{1}{30} + \frac{1}{1} + \frac{1}{10} + $	$\frac{1}{122} + \frac{1}{23} + \frac{1}{23}$	$\frac{1}{12} + \frac{1}{256} + \frac{1}{12} $

unction J3 - Yu T		/ Chung Y						2033 PM Re	eference Traffi	c Flows (Confo	rming Sche	eme) (With C	EDD Impro	vements)		DESIGN:		CHECK		JOB NO:		DATE:	ATO Nov 2
Traffic Flow Di (pcu/hr)	-	u Tung Ro	oad ——		15	85 505 95	Ch	105	80 475 620 570	465	Yu Tung	Road		Ø			No. of stages Cycle time Sum(y) Lost time Total Flow Optimum Cy Min. Cycle T Yuit	cle C <sub>o</sub>	= (1.5×L+ = L/(1-Y) = 0.9-0.00	Y = ( L = = 2 5)/(1-Y) = = 75×L = (	4 120 0.603 16 22,595 73 40 0.780	sec pcu sec sec	
							Ch	ung Yan Ro	oad								R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	cle Time C <sub>p</sub>	= (Y <sub>ult</sub> -Y)/Y = 0.9 × L/(0 = 1-L/C	).9-Y) =	29.4 48 0.867	% sec	
Stage/Phase D	Diagrams	<b>→</b> A				<b>→</b> A											Critical						I
	В				с			E		◄		= √					R.C.(C)	= (0	.9xY <sub>max</sub>	-Y)/Yx100%	, =	29%	
S	F Stage 1			Stage	e 2			Stage 3		Ś	Stage 4												
PHASE	LANE WIDTH	I/G =	RAI	DIUS m)	DSING	NEAR SIDE LANE = D/I	5 UPHILL GRADIEN	GRADIEN T EFFECT	I/G =	STRAIGHT- AHEAD SAT.	F	I/G =		TOTAL FLOW	PROPOR TURNING (9	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL				
Tung Road SB	(m)	LANES	LEFT	RIGHT	OPPO	NEAF L2	T (%)	(pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У	У				
F 1,4 B 1 B 1 B 1	3.500 3.500 3.500	1 1 1	20	28	0	1 0		0 0 0		1965 2105 2105	570	560 60	475	570 560 535	100%	89%	1828 2105 2009	0.312 0.266 0.266	0.266				
ung Yan Road V D 4 D 4 Tung Road NB	3.500 3.500	1 1	25	25 25	0 0	1 0		0 0		1965 2105	15	70	192 293	277 293	5%	69% 100%	1881 1986	0.147 0.147	0.147				
E 3 E 3 E 3 ung Yan Road B	3.500 3.500 3.500	1 1 1	15	25	0	1 0		0 0 0		1965 2105 2105	85	303 202	95	85 303 297	100%	32%	1786 2105 2065	0.048 0.144 0.144	0.144				
A   1,2 C 2 ► C 2	3.500 3.500 3.500	1 1 1	16	18 25	0	1		0 0		1965 2105 2105	465	80	15 90	465 95 90	100%	15% 100%	1797 2078 1986	0.259 0.046 0.046	0.046				

Junction J4 - Tung C	Chung Road / Ch	una Va	n Road	2033 PM	Reference Tra	affic Flowe	(Conforming	Scheme)	esianed B	y: Checked By		Job No. :	Date :	· Nr
Junction 34 - Tung C		ung ra	II Kodu	2033 F W	Reference II	anic riows	Comorning	Scheme) De	esigned b	y. Checked by			Date .	
Tung Chung Road (ARM C) 47 1	5	<b>→</b>	-	RM B) Yan Road	660 70		(ARM A) Chung Road		W cr W b-a W b-c W c-b VI b-a VI b-a VI b-a VI c-b T c-b E F	GEOMETRIC INPUT DA = Major Road Width (6.4 = Central Reserve width = Lane width available to = Lane width available to = Visibility to the left for = Visibility to the right for = Visibility to the right for = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	- 20.0) (1.2 - 9.0, ke o vehicle wait o vehicle wait vehicles wait vehicles wait vehicles wait	ting in stream b-a (2.0 ting in stream b-c (2.0 ting in stream c-b (2.0 ng in stream b-a (22.0 iting in stream b-a (17 iting in stream b-a (17	only) 5 - 4.07) 5 - 4.07) 5 - 4.07) - 250.0) 0 - 250.0) 0 - 250.0)	J4
GEOMETRIC DETAIL	<i>MAJOR ROAL</i> W W cr q a-b q a-c	) (ARM) = = = =	A) 7.3 (metres) 0 (metres) 70 (pcu/hr) 660 (pcu/hr) 0.948063		MAJOR RO W c-b Vrc-b q c-a q c-b	AD (ARM C = = = =	3.6 ( 100 ( 475 (	metres) metres) pcu/hr) pcu/hr)		MINOR RO, W b-a W b-c VI b-a Vr b-a Vr b-c q b-a q b-c	AD (ARM B) = = = = = = = =	3.6 (metres) 3.6 (metres) 100 (metres) 100 (metres) 65 (pcu/hr) 10 (pcu/hr)		
THE CAPACITY OF N		= =	0.977385 0.977385 0.748150											
	Q b-a Q b-c Q c-b Q b-ac	= = =	336 545 534 354							CRITICA	_ DFC	= 0.21		
COMPARISION OF D	DFC b-a DFC b-c DFC c-b DFC c-b DFC c-b	) CAPA = = = =	CITY : 0.19 0.02 0.02 0.21											



Junction J6 - Tung Chung Road	Shok Mu	n Kan Boad	2033 PM Reference Tra	ffic Elsuns (Ca	a famina Schom		y: Checked By:	Job No. :	Data	: No
Junction J6 - Tung Chung Road	Snek wu	п кар коао	2033 PM Reference Tra	THE FIOWS (CO	I Schem	e) Designed B	y: Checked By:	JOD NO. :	Date	: NO
Tung Chung Road           (ARM C)           270           115		) - (AR 35 10 (AR Road	290 5 M B)	(AF	RM A) ng Road	W W cr W b-a W c-b VI b-a Vr b-a Vr b-c Vr c-b D E F	GEOMETRIC INPUT DATA ) = Major Road Width (6.4 - 20.1 = Central Reserve width (1.2 - = Lane width available to vehice = Lane width available to vehice = Lane width available to vehice = Visibility to the left for vehice = Visibility to the right for vehice = Visibility to the right for vehice = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	9.0, kerbed central re- cle waiting in stream b- cle waiting in stream b- cle waiting in stream c- es waiting in stream b- les waiting in stream b- les waiting in stream b-	a (2.05 - 4.07) c (2.05 - 4.07) b (2.05 - 4.07) a (22.0 - 250.0) -a (17.0 - 250.0) -c (17.0 - 250.0)	J6
W W cr q a-b q a-c GEOMETRIC FACTORS :	OAD (ARN = = = =	7.3 (metres) 0 (metres) 5 (pcu/hr) 290 (pcu/hr)	MAJOR ROA W c-b Vr c-b q c-a q c-b	AD (ARM C) = = = =	3.6 (metres) 200 (metres) 270 (pcu/hr) 115 (pcu/hr)		MINOR ROAD (Ai W b-a = W b-c = VI b-a = Vr b-a = Vr b-c = q b-a = q b-c =	3.6 (me 3.6 (me 200 (me 200 (me 200 (me 10 (pcu	tres) tres) tres) tres) /hr)	
D E F Y	= = =	1.098970 1.066962 1.066962 0.748150			,					
THE CAPACITY OF MOVEMENT Q b-a Q b-c Q c-b Q b-ac	= = =	502 710 709 650					CRITICAL DF	C = 0.1	6	
COMPARISION OF DESIGN FLO DFC b-a DFC b-c DFC c-b DFC c-b DFC b-ac	V TO CAP = = = =	ACITY : 0.02 0.05 0.16 0.07								

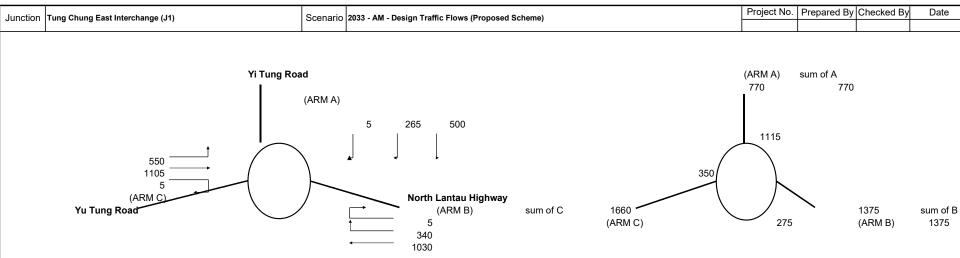
	( D		0000 000		Flamma (Chamfaranaine			1.1. 1.	Data
Junction J7 - Road L29	/ Road L30		2033 PM I	Reference Traffic	Flows (Contormin	g Scheme) Designed	By: Checked By:	Job No. :	Date :
Road L29 (ARM C) 165 5	<b>&gt;</b>			130 130	₹©	W W cr W b-a W b-c W c-b VI b-a	<ul> <li>Lane width available to ve</li> <li>Lane width available to ve</li> <li>Lane width available to ve</li> <li>Visibility to the left for veh</li> </ul>	0.0) 2 - 9.0, kerbed central reserve hicle waiting in stream b-a (2. hicle waiting in stream b-c (2. hicle waiting in stream c-b (2. cles waiting in stream b-a (22	05 - 4.07) 05 - 4.07) 05 - 4.07) .0 - 250.0)
					<b>(ARM A)</b> Road L29	Vr b-a Vr b-c Vr c-b D	= Visibilitu to the right for ve	hicles waiting in stream b-a (1 hicles waiting in stream b-c (1 hicles waiting in stream c-b (1	7.0 - 250.0)
						E	= Stream-specific B-C		
		5 155	5 I			F	= Stream-specific C-B		
			(ARM B)			Y	= (1-0.0345W)		
			Road L30				, ,		
	D =	130 (pcu/hr) 0.831663				(pcu/hr) (pcu/hr)	VI b-a Vr b-a Vr b-c q b-a q b-c	= 100 (metres) = 100 (metres) = 100 (metres) = 155 (pcu/hr) = 5 (pcu/hr)	
	E =								
	F = Y =								
THE CAPACITY OF MO	/EMENT :								
	⊋b-a =								
(	2 b-c =	605							
	Q c-b =						CRITICAL D	FC = 0.33	
C	) b-ac =	489							
COMPARISION OF DES									
	)FC b-a =								
Γ	)FC b-c =								
	)FC c-b =	0.01							
	)FCb-ac =								

Ting Chung Read (ARM 0)       NOTES: (GEOMETRIC NUT DATA)       (1)         185	Jumetian 10 Tume Chung F		0	2022 DA		offic Flamm 10	- framine Coho		Du Chas	and Durin	Job No. :	Data	
$ \begin{array}{c} \text{(ARM C)} & \hline & & \text{(ArM C)} \\ \hline & & & \text{(ArM B)} \\ \hline & & & \text{(ArM B)} \\ \hline & & & \text{(ArM B)} \\ \hline & & & & & \text{(ArM B)} \\ \hline & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & \text{(Arm B)} \\ \hline & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & & \text{(Arm B)} \\ \hline & & & & & & & & & \text{(All OR ROAD (ARM A)} \\ \hline & & & & & & & & & & & & & & & & & &$	Junction J8 - Tung Chung F	load / Road L3	U	2033 PN	Reference Ir	affic Flows (C	ontorming Sche	eme) Designed	By: Check	(ed By :	JOD NO. :	Date	: r
GEOMETRIC DETALLS:         MAUOR ROAD (ARM A)       MAUOR ROAD (ARM C)         W       =       7.3 (metres)       W c-b       =       3.6 (metres)       W b-a       =       3.6 (metres)         Q a-b       =       0 (metres)       V c-b       =       200 (metres)       W b-a       =       3.6 (metres)         Q a-b       =       201 (pou/hr)       Q c-a       =       380 (pou/hr)       V b-a       =       200 (metres)         Q a-c       =       305 (pou/hr)       Q c-b       =       165 (pou/hr)       V b-a       =       200 (metres)         V b-c       =       1.098970       =       =       2.00 (metres)       V b-c       =       2.00 (metres)         E       =       1.098970       =       =       1.05 (pou/hr)       Q b-c       =       105 (pou/hr)         E       =       1.0669962       - <t< th=""><th>(ARM C) 380</th><th></th><th></th><th>(ARM B)</th><th></th><th></th><th></th><th>W W cr W b-a W c-b VI b-a Vr b-a Vr b-a Vr c-b D E F</th><th><ul> <li>Major Road Wid</li> <li>Central Reserve</li> <li>Lane width avai</li> <li>Lane width avai</li> <li>Lane width avai</li> <li>Visibility to the la</li> <li>Visibility to the r</li> <li>Visibility to the r</li> <li>Visibility to the r</li> <li>Stream-specific</li> <li>Stream-specific</li> <li>Stream-specific</li> </ul></th><th>th (6.4 - 20.0) e width (1.2 - 9.0 able to vehicle able to vehicle able to vehicles w ght for vehicles w ght for vehicles ght for vehicles B-A B-C</th><th>waiting in stream b-a (; waiting in stream b-c (; waiting in stream c-b (; vaiting in stream b-a (2 waiting in stream b-a ( waiting in stream b-a (</th><th>2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)</th><th>J8</th></t<>	(ARM C) 380			(ARM B)				W W cr W b-a W c-b VI b-a Vr b-a Vr b-a Vr c-b D E F	<ul> <li>Major Road Wid</li> <li>Central Reserve</li> <li>Lane width avai</li> <li>Lane width avai</li> <li>Lane width avai</li> <li>Visibility to the la</li> <li>Visibility to the r</li> <li>Visibility to the r</li> <li>Visibility to the r</li> <li>Stream-specific</li> <li>Stream-specific</li> <li>Stream-specific</li> </ul>	th (6.4 - 20.0) e width (1.2 - 9.0 able to vehicle able to vehicle able to vehicles w ght for vehicles w ght for vehicles ght for vehicles B-A B-C	waiting in stream b-a (; waiting in stream b-c (; waiting in stream c-b (; vaiting in stream b-a (2 waiting in stream b-a ( waiting in stream b-a (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)	J8
Q b-a       =       453         Q b-c       =       704         Q c-b       =       700         Q b-ac       =       687	MAJ W W cr q a-b q a-c GEOMETRIC FACTORS : D E F	= = = = = =	7.3 (metres) 0 (metres) 20 (pcu/hr) 305 (pcu/hr) 1.098970 1.066962 1.066962		W c-b Vrc-b q c-a	= = =	200 (metres 380 (pcu/hr	s) `)	W b- W b- VIb Vrb- Vrb- Q b-a	a = c = a = a = c = a =	3.6 (metres 3.6 (metres 200 (metres 200 (metres 200 (metres 5 (pcu/hr)	) ) ) )	
$DFC \ b\text{-}c = 0.15$	Q b-a Q b-c Q c-b Q b-a COMPARISION OF DESIGN DFC	= = c = FLOW TO CAP D-a =	453 704 700 687 PACITY : 0.01						CRI	FICAL DFC	= 0.24		

	( D			Two ffice Elements				Laboration of	Deter
Junction J9 - Road L29	/ Road L25		2033 PM Reference	Traffic Flows (C	ontorming S	cheme) Designed E	By : Checked By :	Job No. :	Date :
Road L29 (ARM C) 35 95	<b>&gt;</b>				ARM A) Road L29	W W cr W b-a W c-b VI b-a Vr b-a Vr b-a	GEOMETRIC INPUT DATA = Major Road Width (6.4 - 2) = Central Reserve width (1.2 = Lane width available to ve = Lane width available to ve = Lane width available to ve = Visibility to the left for vehi = Visibility to the right for veh = Visibility to the right for veh	2.0) 2 - 9.0, kerbed central reserv hicle waiting in stream b-a (2 hicle waiting in stream b-c (2 hicle waiting in stream cb (2 cles waiting in stream b-a ( nicles waiting in stream b-c (	2.05 - 4.07) .05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)
		135	5 (ARM B) Road L25			Vr c-b D E F Y	<ul> <li>Visibility to the right for veh</li> <li>Stream-specific B-A</li> <li>Stream-specific B-C</li> <li>Stream-specific C-B</li> <li>(1-0.0345W)</li> </ul>	licies waiting in stream c-b (	17.0 - 250.0)
GEOMETRIC DETAILS:									
	MAJOR ROAD (A			ROAD (ARM C)			MINOR ROAD (	,	
	W =		W c-b	=	2.1 (me	,	W b-a	= 2.3 (metres)	
	W cr =		Vr c-b	=	100 (me	,	W b-c	= 2.3 (metres)	
	qa-b =	· • ( )	q c-a	=	35 (pci	,	VI b-a	= 100 (metres)	
	qa-c =	= 35 (pcu/hr)	q c-b	=	95 (pci	u/hr)	Vr b-a	= 100 (metres)	
							Vr b-c	= 100 (metres)	
							q b-a	= 5 (pcu/hr)	
GEOMETRIC FACTORS		0.001000					d p-c	= 135 (pcu/hr)	
	D =	0.001000							
	_								
	F = Y =								
	. =	0.044000							
THE CAPACITY OF MO									
	⊋b-a =	100							
(	¢ b-c =	626							
	⊋c-b =	= 604					CRITICAL D	FC = 0.23	
C	= b-ac ک	620							
(	20-00 -								
COMPARISION OF DES	IGN FLOW TO C								
COMPARISION OF DES	IGN FLOW TO C DFC b-a =	= 0.01							
COMPARISION OF DES	IGN FLOW TO C DFC b-a = DFC b-c =	= 0.01 = 0.22							
COMPARISION OF DES	IGN FLOW TO C DFC b-a =	= 0.01 = 0.22 = 0.16							

		0.00	Mara Kara Da ad	0000 DM D. (							Data	
Junction J10 - F	Road L28 / Road L2	29 / Shek	Mun Kap Road	2033 PM Reference T	raffic Flow	s (Contorming So	cheme) Designed	By : Checked By :	Job No	.:	Date :	: 1
Shek Mun Kap R (ARM C)	Road 15 95			20 10 RM B)		(ARM A) Road L28	NOTES : W W cr W b-a W b-c W c-b VI b-a Vr b-a Vr b-c Vr c-b D E F Y	( GEOMETRIC INPUT DATA = Major Road Width (6.4 - 2 = Central Reserve width (1. = Lane width available to ve = Lane width available to ve = Lane width available to ve = Visibility to the left for veh = Visibility to the right for ve = Visibility to the right for ve = Visibility to the right for ve = Stream-specific B-A = Stream-specific B-C = Stream-specific C-B = (1-0.0345W)	20.0) .2 - 9.0, kerbed c ehicle waiting in s ehicle waiting in s hicles waiting in s shicles waiting in s ehicles waiting in s	stream b-a (2.05 - stream b-c (2.05 - stream c-b (2.05 - tream b-a (22.0 - stream b-a (17.0 stream b-c (17.0	ly) - 4.07) - 4.07) - 4.07) 250.0) - 250.0) - 250.0)	JI
GEOMETRIC DE	MAJOR RC W W cr q a-b q a-c	DAD (ARM = = = = = =	A) 7.3 (metres) 0 (metres) 10 (pcu/hr) 20 (pcu/hr) 0.867478 0.894307	MAJOR R0 W c-b Vr c-b q c-a q c-b	DAD (ARM = = = =	C) 2.3 (me 100 (me 15 (pcu 95 (pcu	tres) ı/hr)	MINOR ROAD W b-a W b-c VI b-a Vr b-a Vr b-a q b-a q b-c	=	2.7 (metres) 2.7 (metres) 100 (metres) 100 (metres) 100 (metres) 5 (pcu/hr) 35 (pcu/hr)		
THE CAPACITY	F Y OF MOVEMENT : Q b-a Q b-c	= = =	0.857384 0.748150 504 660							0.45		
	Q c-b Q b-ac	=	632 636					CRITICAL I	DFC =	0.15		
			CITY :									
COMPARISION	OF DESIGN FLOW	TO CAPA										
COMPARISION	<b>OF DESIGN FLOW</b> DFC b-a	TO CAPA =	0.01									
COMPARISION												
COMPARISION	DFC b-a	=	0.01									

Junctio	on .111	1 - Chu	N C/		d I 29					2033 PM Re	eference Traffi	c Flows (Confo	rming Sche	eme)				DESIGN:		CHECK:		JOB N	0.	DAT	E: Nov 20
				oau / Itoa	u L23					2000 FINIT	sterence main	c riows (Conio	ming Sole	sille)						UNEOK.		300 1	0.	DAI	
	raffic l pcu/hr	Flow Dia	agram							Road L29									No. of stages	s per cycle		N =	5		(J.
										Ō	10	25							Cycle time			C =	120	sec	
								0_											Sum(y)			Y =	0.220		
								30 - 0 -			Ţ								Lost time Total Flow			L = =	50 9,965	sec pcu	
							•	•	~	•	•				Chung	Mun Road									
								Ī			30 40								Optimum Cy	cle C <sub>o</sub>	= (1.5×L+	5)/(1-Y) =	103	sec	
							0	 10	250	f T	230								Min. Cycle T Y <sub>ult</sub>		= L/(1-Y) = 0.9-0.007	=	64 0.525	sec	
							0	10	250										R.C. <sub>ult</sub>		$= (Y_{ult}-Y)/Y$		138.9	%	
										Deed 1 20									Practical Cyc	le Time C <sub>p</sub>			66	sec	
										Road L29									Y <sub>max</sub>		= 1-L/C	=	0.583		
s	Stage/F	Phase D	iagrams																						
																<>	>		Critical	Case :	A,B,C,I	D,Ep			
			*	A →		•										Ep	^ =_ <sup> </sup>		R.C.(C)	= (0	.9xY	-Y)/Yx100	% =	139%	٦
						÷− Β			(	5			-	<u> </u>	Ep		Ep¦ ↓			(-		.,			
						v			^ '					$\overline{\mathbf{f}}$		<> Ep	•								
L																									
L		S	tage 1			Stag	e 2			Stage 3	;	5	Stage 4			Stage 5									
		G	6 = 5	I/G =	5	G = 5	i	I/G =	5		I/G =	5		I/G =	5	G = 20	I/G =	2							
ENT		ш	LANE			DIUS	βņ	Н.	UPHILL	GRADIEN	ADDITIONA	STRAIGHT-	F	LOW (pcu/	hr)	TOTAL	PROPOR	RTION OF VEHICLES	REVISED	FLOW					
MOVEMENT	PHASE	STAGE	WIDTH (m)	NO. OF LANES	(1	m)	OPPOSING TRAFFIC	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	L	AHEAD SAT. FLOW	LEFT	STRAIGH	RIGHT	FLOW (pcu/hr)		%)	SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y				
¥			. ,		LEFT	RIGHT	5 F	ž		u · /	(pcu/hr)	(pcu/hr)		T AHEAD			LEFT	RIGHT	u . ,						
♠	A	1	3.500	1	30	25	0	1		0		1965	25	10	0	35	71%	0%	1897	0.018					
'																									
♠	в	2	3.500	1	30	25	0	1		0		1965	0	30	0	30	0%	0%	1965	0.015					
♠	с	,	2 500	4	30	25						1965	0	10	250	200	0%	96%	1858	0.440	0.140				
۹۳		3	3.500	1	30	20	0	1		0		1900	0	10	250	260	070	5070	1000	0.140	0.140				
¶	D	4	3.500	1	15			1		0		1965	143			143	100%		1786	0.080	0.080				
+	D	4	3.500	1	15	25	0	0		0		2105	87	40	30	157	56%	19%	1973	0.080					
	trian ( Ep	Crossin 5	ig min.	GM 15	+	FGM 5	=	20	sec																
						1	1	1			1	1	1	1	1	1	1	1			I				



ARM	A	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	8.00	7.10	8.00
E = Entry width (m)	12.00	12.00	12.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	55.00	60.00	40.00
D = Inscribed circle diameter (m)	107.00	107.00	107.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	770	1375	1660
Qc= Circulating flow across entry (pcu/h)	1115	275	350
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.64	0.65	0.53
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	0.98	0.97
X2= V + ((E-V)/(1+2S))	9.75	9.22	9.94
M = EXP((D-60)/10)	109.95	109.95	109.95
F = 303*X2	2956	2795	3010
Td= 1+(0.5/(1+M))	1.00	1.00	1.00
Fc= 0.21*Td(1+0.2*X2)	0.62	0.60	0.63
Qe= K(F-Fc*Qc)	2253	2579	2713
DFC = Design flow/Capacity = Q/Qe	0.34	0.53	0.61

CRITICAL DFC =	0.61	
TOTAL ENTRY FLOWS =	3805	PCU

Filename:

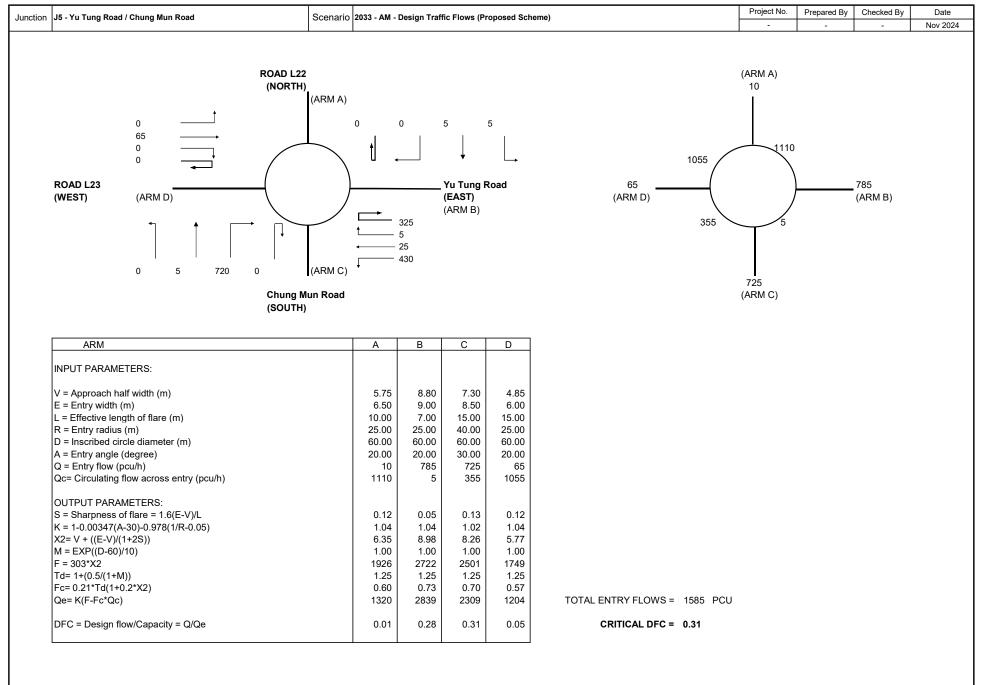
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ction	J2 - Yu T	ung Road	/ Shun Tu	ing Road ·	- Improve	d Sche	me		2033 AM De	esign Traffic F	lows (Proposed	I Scheme) (	(With CEDD	Improveme	nts)		DESIGN:		CHECK:		JOB NO:	DATE:	: No
Traf (pcu	fic Flow D /hr)	agram						Shun T	ung Road						Ő	¢.		No. of stages Cycle time	s per cycle		N = 3 C = 120	sec	
																		Sum(y)			Y = 0.672		
							985		725	515								Lost time Total Flow			L = 12 = 18,780	sec ) pcu	
							1145															,	
		Y	u Tung Ro	bad					-	\$			Y	ı Tung Ro	ad			Optimum Cy		= (1.5×L+5		sec	
									•	455								Min. Cycle Ti Y <sub>ult</sub>	me C <sub>m</sub>	= L/(1-Y) = 0.9-0.007	= 37 5×L = 0.810	sec	
										835								R.C. <sub>ult</sub> Practical Cyc	le Time C <sub>o</sub>	$= (Y_{ult}-Y)/Y_{x}$ $= 0.9 \times L/(0.12)$		% sec	
																		Y <sub>max</sub>		= 1-L/C	= 0.900		
Stag	je/Phase [	Diagrams																					-
	в	٩		в				в	ال ا									Critical	Case :	A,E,C			
	Α	•				E L			C.	D								R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100% =	20%	
			←			 ₽	_																
			F																				
	Ś	Stage 1	I/G =		Stage	e 2	I/G =	F	Stage 3	  /G =	F												
			1/0 -	5			1/0 -	5		1/0 -	5												
Щ	щ	LANE	NO. OF		DIUS m)		SIDE E	UPHILL	GRADIEN		STRAIGHT- AHEAD SAT.	F	LOW (pcu/r	ır)	TOTAL	PROPOR TURNING \		REVISED	FLOW	CRITICAL			
PHASE	STAGE	WIDTH (m)	LANES	LEFT	RIGHT	OPPOS TRAF	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	FLOW (pcu/hr)	(%	RIGHT	SAT. FLOW (pcu/hr)	FACTOR y	y			
Fung	Road NB	1			Nom												Nom						
A	1	4.000 4.000	1	50		0	1 0		0		2015 4310	985	1145		985 1145	100%		1956 4310	0.503 0.266	0.266			
 n Tur	Ig Road I	B																					
		3.700 3.700	1	25	30	0	1		0		1985 4250	515		725	515 725	100%	100%	1873 4048	0.275 0.179	0.179			
	Road SB								-														
F	1,2	3.650 3.650	2		25	0	1		0		4100 2120		835	455	835 455		100%	4100 2000	0.204 0.228	0.228			
-		3.050	'		25		0		0		2120			400	400		100%	2000	0.226	0.220			
	1	1	1	1	1	1	1		1	1		1	1							1			

101011 33	3 - Yu Ti	ung Road	Chung Y	′an Road ·	<ul> <li>Improve</li> </ul>	d Scher	ne		2033 AM De	esign Traffic F	lows (Proposed	Scheme)	(With CEDD	Improveme	nts)		DESIGN:		CHECK:		JOB NC	):	DATE	E: Nov
Traffic (pcu/h	: Flow Dia r)						165 860 100	Ch	ung Yan R 100	oad 85	580				Ø	é.		No. of stages Cycle time Sum(y) Lost time Total Flow	s per cycle		N = C = Y = L = =	4 120 0.762 19 22,595	sec pcu	
			ı Tung Ro	Jau ——		30	90	690 Ch	↓ ↓ ↓ ung Yan R	395 655 510 oad		Yu Tung	Roau					Optimum Cy Min. Cycle T Y <sub>ult</sub> R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	me C <sub>m</sub>	= (1.5 × L+5 = L/(1-Y) = 0.9-0.007 = (Y <sub>ult</sub> -Y)/Yx = 0.9 × L/(0. = 1-L/C	= 5×L = (100% =	141 80 0.758 -0.6 124 0.842	sec sec % sec	
Stage/	/Phase D	iagrams																	_					
		l	► A				<b>→</b> A		-									Critical R.C.(C)			Y)/Yx100%	/6 =	-1%	
		В 							E		┓	-	F <b>(</b>											-
	S	tage 1			Stag	e 2			Stage 3	;	:	Stage 4												
			I/G =				I/G =	5		I/G =	5		I/G =	12										
PHASE	STAGE	LANE WIDTH	NO. OF		DIUS m)	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN	GRADIEN T EFFECT	ADDITIONA L	STRAIGHT- AHEAD SAT.	F	LOW (pcu/r	nr)	TOTAL	PROPOR TURNING	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL				
		(m)	LANES	LEFT	RIGHT	OPPO	NEAF	T (%)	(pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	y	У				
Tung Ro	1,4 1 1	3.500 3.500 3.500	1 1 1	20	28	0	1 0		0 0 0		1965 2105 2105	510	536 119	395	510 536 514	100%	77%	1828 2105 2022	0.279 0.254 0.254					
Ing Yan	Road V 4 4	VB 3.500 3.500	1 1	25	25 25	0 0	1 0		0 0		1965 2105	30	90	274 416	394 416	8%	70% 100%	1878 1986	0.210 0.210	0.210				
Fung Ro	3 3 3	3.500 3.500 3.500	1 1 1	15	25	0	1 0		0 0 0		1965 2105 2105	165	483 377	100	165 483 477	100%	21%	1786 2105 2079	0.092 0.229 0.229	0.229				
ung Yan A C C	Road E 1,2 2 2	B 3.500 3.500 3.500	1 1 1	16	18 25	0	1 0		0 0 0		1965 2105 2105	580	85	10 90	580 95 90	100%	10% 100%	1797 2087 1986	0.323 0.045 0.045	0.323				

JUNCTION C						2033 AM De	sign Traffic Fi	lows (Proposed	Scheme) (	(With Additic	nal Improve	ments)		DESIGN:		CHECK	:	JOB NO:	DATE: No
Traffic Flow Diagram (pcu/hr) Yi	I Tung Road –		30	165 860 100	Chu	100	85 85 395 655 510	580	Yu Tung	Road		Ø			No. of stager Cycle time Sum(y) Lost time Total Flow Optimum Cy Min. Cycle T Y <sub>ult</sub> R.C. <sub>ult</sub> Practical Cyc	cle C <sub>o</sub> ime C <sub>m</sub>	= (1.5×L++ = L/(1-Y) = 0.9-0.007 = (Y <sub>ult</sub> -Y)/Y	= 46 75×L = 0.780 x100% = 19.8	sec pcu sec sec %
Stage/Phase Diagrams					Chu	ung Yan Ro	bad								Y <sub>max</sub>		= 1-L/C	= 0.867	300
в	► A		_↓ ( c	<b>▲</b> A		E		₽							Critical R.C.(C)			D -Y)/Yx100% =	20%
F	<u>ر</u>					01 0				F 🗲									
Stage 1	I/G = 5	Stage	92	I/G = :	5	Stage 3	I/G =		Stage 4	I/G =	5								
LANE HYDTH Styde (m)	NO. OF LANES	RADIUS (m)	OSING	OPPOSING TRAFFIC BUAN CLANE LANE LANE N L (%		N T EFFECT	ADDITIONA L CAPACITY	AHEAD SAT.	T.	ELOW (pcu/r			PROPOR TURNING (%	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL		
	LANES	FT RIGHT	OPP TR	L NEA	T (%)	(pcu/hr)	(pcu/hr)	(pcu/hr)	LEFT	T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У	У		
Tung Road SB           I         F         1,4         3.500           B         1         3.500           ▶         I         3.500           ▶         I         3.500           µg Yan Road WB         Image: State Sta	1 2 1 1 1	28 25	0 0	1 0 0		0 0 0 0		1965 2105 2105 2105	510	358 297	57 338	510 358 355 338	100%	16% 100%	1828 2105 2087 1986	0.279 0.170 0.170 0.170	0.170		
D 4 3.500 D 4 3.500 Tung Road NB	1 2 1	5 25 25	0 0	1 0		0 0		1965 2105	30	90	274 416	394 416	8%	70% 100%	1878 1986	0.210 0.210	0.210		
E 3 3.500 E 3 3.500 E 3 3.500 ung Yan Road EB	1 1: 1 1	25	0	1 0		0 0 0		1965 2105 2105	165	184 391 285	100	349 391 385	47%	26%	1876 2105 2073	0.186 0.186 0.186	0.186		
A 1,2 3,500 C 2 3,500 C 2 3,500	1 1) 1 1; 1		0	1		0 0 0		1965 2105 2105	422 158	15 70	100	422 173 170	100% 51%	100%	1797 2019 1986	0.235 0.086 0.086	0.086		

Junction J4 - Tung Chung	Road / Chung Ya	an Road	2033 AM Design Traff	ic Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date :	: No
Tung Chung Road (ARM C) 650 — 20 —			550 110 (ARM B) g Yan Road			e width available to vehi e width available to vehi e width available to vehi bility to the left for vehick bility to the right for vehic bility to the right for vehic	0) - 9.0, kerbed central reserv icle waiting in stream b-a (2 cle waiting in stream b-c (2 cle waiting in stream c-b (2 es waiting in stream b-a ( cles waiting in stream b-a ( cles waiting in stream b-c ( cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)	J4
		Chung	g Yan Road						
GEOMETRIC DETAILS:									
	JOR ROAD (ARN			OAD (ARM C)		MINOR ROAD (A	,		
W	=	7.3 (metres)	W c-b	= 3.6 (metres)			= 3.6 (metres		
Wo		0 (metres)	Vr c-b	= 100 (metres)			= 3.6 (metres	,	
q a-		110 (pcu/hr)	q c-a	= 650 (pcu/hr)		110 4	= 100 (metres	,	
q a∙	-c =	550 (pcu/hr)	q c-b	= 20 (pcu/hr)			= 100 (metres		
							= 100 (metres	,	
GEOMETRIC FACTORS :						•	= 150 (pcu/hr) = 20 (pcu/hr)		
GEOMETRIC FACTORS :	=	0.948063				q b-c =	= 20 (pcu/hr)		
E	=	0.948063							
F	=	0.977385							
г Y	=	0.748150							
	_			`					
THE CAPACITY OF MOVE									
Q b-		328							
Q b-		570							
Q c-		552				CRITICAL DF	C = 0.49		
Q b-	-ac =	345							
COMPARISION OF DESIGN									
DFC		0.46							
DFC		0.04							
DFC		0.04							
	b-ac =	0.49							



Junction J6 - Tung Chung Road /	Shek Mu	n Kap Road	2033 AM Design Traf	ic Flows (Prop	osed Scheme)	Designed By :	Checked By :	Job No. :	Date :	: Nov
Tung Chung Road (ARM C) 265 100		-	360 5 7 8 8 8 9 4 L30	5	RM A) Ing Road	W = Ma $W cr = Ce$ $W b-a = La$ $W b-c = La$ $W c-b = La$ $V c-b = Vis$ $V r b-a = Vis$ $V r b-c = Vis$ $V r c-b = Vis$ $D = Stu$ $E = Stu$ $F = Stu$	ne width available to vehi ne width available to vehi ne width available to vehi sibility to the left for vehicl sibility to the right for vehi sibilitu to the right for vehi	0) 9.0, kerbed central resen cle waiting in stream b-a (2 cle waiting in stream b-c (2 cle waiting in stream b-a (2 sles waiting in stream b-a ( cles waiting in stream b-c ( cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	J6
GEOMETRIC DETAILS: MAJOR RO W W cr q a-b q a-c GEOMETRIC FACTORS :	DAD (ARM = = = =	7.3 (metres) 0 (metres) 5 (pcu/hr) 360 (pcu/hr)	MAJOR R W c-b Vr c-b q c-a q c-b	OAD (ARM C) = = = =	3.6 (metres) 200 (metres) 265 (pcu/hr) 100 (pcu/hr)		W b-c == VI b-a == Vr b-a == Vr b-c == q b-a ==	<i>RM B</i> )         =       3.6 (metres         =       3.6 (metres         =       200 (metres         =       200 (metres         =       200 (metres         =       200 (metres         =       5 (pcu/hr)         =       50 (pcu/hr)	) ;) ;) ;)	
D E F Y	= = =	1.098970 1.066962 1.066962 0.748150								
THE CAPACITY OF MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = =	488 690 689 665					CRITICAL DF	C = 0.15		
COMPARISION OF DESIGN FLOW DFC b-a DFC b-c DFC c-b DFC c-b DFC b-ac	'TO CAP/ = = = =	ACITY : 0.01 0.07 0.15 0.08								

				2022 AM Design Troffie I	Claure (Bernstein d. Baharma)	Designed Dr.	Cheeked Dr.	lah Na	Data	NL
Junction J7 - Road	L29 / Road L30			2033 AM Design Traffic I	Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date :	N
Road L29 (ARM C) 28	80 <u></u> 5	 			Đ*	W = Ma W cr = Ce W b-a = La	ne width available to veh	0) - 9.0, kerbed central reserve icle waiting in stream b-a (2. icle waiting in stream b-c (2.	e only) 05 - 4.07)	J7
			<u>)</u> ← (	90 155	(ARM A) Road L29	W c-b = La VI b-a = Vis Vr b-a = Vis Vr b-c = Vis	ne width available to veh sibility to the left for vehicl sibility to the right for vehi sibilitu to the right for vehi	icle waiting in stream c-b (2. es waiting in stream b-a (22 cles waiting in stream b-a (1 cles waiting in stream b-c (1 cles waiting in stream c-b (1	05 - 4.07) .0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)	
						D = Str	eam-specific B-A			
							eam-specific B-C			
			5 140			F = Sti	eam-specific C-B			
				RM B)		Y = (1-	0.0345W)			
			Rua	ad L30						
	W cr q a-b q a-c	= = =	1.5 (metres) 155 (pcu/hr) 90 (pcu/hr)	Vr c-b q c-a q c-b	= 100 (metres = 280 (pcu/hr) = 5 (pcu/hr)		VI b-a Vr b-a Vr b-c q b-a	= 2.3 (metres) = 100 (metres) = 100 (metres) = 100 (metres) = 140 (pcu/hr) = 5 (pcu/hr)		
GEOMETRIC FACTO	D	=	0.831663							
GEOMETRIC FACTO	D E	=	0.857384							
GEOMETRIC FACTO	D									
	D E F Y	= =	0.857384 0.857384							
GEOMETRIC FACTO	D E F Y MOVEMENT :	= = =	0.857384 0.857384 0.596350							
	D E F Y MOVEMENT : Q b-a	= =	0.857384 0.857384 0.596350 479							
	D E F Y MOVEMENT : Q b-a Q b-c	= = = =	0.857384 0.857384 0.596350 479 611				CRITICAL DE			
	D E F Y MOVEMENT : Q b-a	= = =	0.857384 0.857384 0.596350 479				CRITICAL DF	C = 0.30		
THE CAPACITY OF	D E F Y MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = = = = =	0.857384 0.857384 0.596350 479 611 593 482		,		CRITICAL DF	°C = 0.30		
	D E F Y MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = = = = =	0.857384 0.857384 0.596350 479 611 593 482 CITY :		·		CRITICAL DF	°C = 0.30		
THE CAPACITY OF	D E F Y MOVEMENT : Q b-a Q b-c Q c-b Q b-ac DESIGN FLOW DFC b-a	= = = = = = TO CAPA	0.857384 0.857384 0.596350 479 611 593 482 CITY : 0.29		·		CRITICAL DF	°C = 0.30		
THE CAPACITY OF	D E F Y MOVEMENT : Q b-a Q b-c Q c-b Q b-ac DESIGN FLOW	= = = = = TO CAPA =	0.857384 0.857384 0.596350 479 611 593 482 CITY :				CRITICAL DF	°C = 0.30		

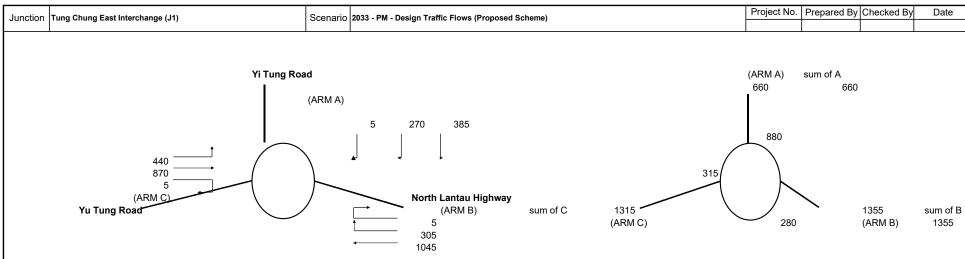
		1								
Junction J8 - Tung Chung Road	Road L30	)	2033 AM Design Traf	fic Flows (Proposed Scher	ne) Design	ed By :	Checked By :	Job No. :	Date	: Nov
Tung Chung Road (ARM C) 345			400 10 NRM B) ad L30		NOTES W W cr W b-4 W c-t V c-t V b-4 V r b-4 V r c-t D E F Y	= Major R = Central a = Lane wi b = Lane wi b = Lane wi a = Visibility a = Visibility c = Visibility c = Visibility = Stream = Stream	idth available to vehi idth available to vehi	0) - 9.0, kerbed central rese icle waiting in stream b-a icle waiting in stream b-c cle waiting in stream b-a cles waiting in stream b-a cles waiting in stream b-c cles waiting in stream c-b	(2.05 - 4.07) (2.05 - 4.07) (2.05 - 4.07) (22.0 - 250.0) a (17.0 - 250.0) c (17.0 - 250.0)	JB
GEOMETRIC DETAILS: MAJOR R W W cr q a-b q a-c GEOMETRIC FACTORS :	= = =	7.3 (metres) 0 (metres) 10 (pcu/hr) 400 (pcu/hr)	MAJOR R W c-b Vr c-b q c-a q c-b	OAD (ARM C) = 3.6 (m = 200 (m = 345 (p = 100 (p	etres) :u/hr)		W b-c = VI b-a = Vr b-a = Vr b-c = q b-a =	RM B) = 3.6 (metra = 3.6 (metra = 200 (metra = 200 (metra = 200 (metra = 20 (pcu/h = 175 (pcu/h	es) es) es) es) es)	
D E F Y	= = =	1.098970 1.066962 1.066962 0.748150								
THE CAPACITY OF MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = =	460 678 676 646					CRITICAL DF	C = 0.30		
COMPARISION OF DESIGN FLOW DFC b-a DFC b-c DFC c-b DFC c-b DFC b-ac	/ TO CAP/ = = = =	ACITY : 0.04 0.26 0.15 0.30								

Junction J9 - Ro	oad L29 / Road L2	5		2033 AM Design Traff	ic Flows	(Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date	: Nov
Road L29 (ARM C)	25			50 70 RM B)		(ARM A) Road L29	W = M $W cr = Cr$ $W b-a = La$ $W b-c = La$ $W c-b = La$ $V c-b = La$ $V b-a = Vi$ $V r b-a = Vi$ $V r b-c = Vi$ $V r c-b = Vi$ $D = St$ $E = St$ $F = St$	DMETRIC INPUT DATA ) ajor Road Width (6.4 - 20. entral Reserve width (1.2 - ane width available to vehi ane width available to vehi sibility to the left for vehicl sibility to the right for vehicl sibility to the right for vehic sibility to the right for	9.0, kerbed central reserved cle waiting in stream b-a cle waiting in stream b-c cle waiting in stream c-b es waiting in stream b-a ( cles waiting in stream b-a cles waiting in stream b-c	(2.05 - 4.07) (2.05 - 4.07) (2.05 - 4.07) (2.05 - 4.07) (2.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	et
GEOMETRIC DE	MAJOR RC W W cr q a-b q a-c	DAD (ARM = = = = =	1 <i>A)</i> 10.3 (metres) 1.5 (metres) 70 (pcu/hr) 50 (pcu/hr) 0.831663 0.857384	MAJOR R0 W c-b Vr c-b q c-a q c-b	DAD (ARM = = = =	// C) 2.1 (metres 100 (metres 25 (pcu/hr) 65 (pcu/hr)	)		<ul> <li>2.3 (metre</li> <li>2.3 (metre</li> <li>2.3 (metre</li> <li>100 (metre</li> <li>100 (metre</li> <li>100 (metre</li> <li>5 (pcu/h)</li> </ul>	s) s) s) s) r)	
THE CAPACITY	F Y OF MOVEMENT : Q b-a	= = =	0.838923 0.644650 503			,					
	Q b-c Q c-b	=	623 601					CRITICAL DF	C = 0.39		
	Q b-ac	=	620								
COMPARISION	OF DESIGN FLOW	TO CAP	ACITY :								
	DFC b-a	=	0.01								
	DFC b-c	=	0.38								
	DFC c-b	=	0.11								
	DFC b-ac	=	0.39								

lunation 140 Dead 14	00 / Deed   20 / 5	Shak Mun Kan Daad	2022 AM Design Troff	in Flower (Research Column)	Designed Dr.	Cheeked Dvv	lah Na	Data i N
Junction J10 - Road L2	28 / Road L29 / S	Snek мил кар коао	2033 AM Design Traff	ic Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date : N
Shek Mun Kap Road (ARM C) 15 100		-		- *O	W = Majo W cr = Cent W b-a = Lane W b-c = Lane	width available to vehi width available to vehi	9.0, kerbed central reserve cle waiting in stream b-a (2.0 cle waiting in stream b-c (2.0	05 - 4.07) 05 - 4.07)
		<u></u> +	20 20		VI b-a = Visib Vr b-a = Visib Vr b-c = Visib	ility to the left for vehicle ility to the right for vehic ilitu to the right for vehic	cle waiting in stream c-b (2.0 es waiting in stream b-a (22. cles waiting in stream b-a (17 cles waiting in stream b-c (17 cles waiting in stream c-b (17	0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)
						am-specific B-A		
						am-specific B-C		
		25 5				am-specific C-B		
			(ARM B) Road L29		Y = (1-0.	0345W)		
	<i>MAJOR ROAD (</i> W W cr q a-b q a-c	(ARM A) = 7.3 (metres) = 0 (metres) = 20 (pcu/hr) = 20 (pcu/hr)	MAJOR R W c-b Vr c-b q c-a q c-b	DAD (ARM C) = 2.3 (metres) = 100 (metres) = 15 (pcu/hr) = 100 (pcu/hr)		W b-c = VI b-a = Vr b-a = Vr b-c = q b-a =	= 2.7 (metres) = 2.7 (metres) = 100 (metres) = 100 (metres) = 100 (metres) = 5 (pcu/hr)	
GEOMETRIC FACTOR						q b-c =	= 25 (pcu/hr)	
	5	= 0.867478						
	-	= 0.894307						
	-	= 0.857384 = 0.748150						
	ı	- 0.740100		x				
THE CAPACITY OF MO		504						
		= 501						
		= 659					o _ 0.40	
		= 629				CRITICAL DF	C = 0.16	
	Q b-ac	= 627						
COMPARISION OF DES	SIGN FLOW TO	CAPACITY :						
		= 0.01						
	5.050	= 0.04						
	DFC c-b	= 0.16						
	DFC b-ac	= 0.05						

	011 0 1 1	1 - Chu	ng Mun R	load / Roa	ad L29					2033 AM De	esign Traffic F	lows (Proposed	Scheme)					DESIGN:		CHECK:		JOB N	0:	DA	TE: Nov 2
		Flow Dia	-				•	0 _ 55 <del>-</del> 0 -	395	Road L29		55			Chung	Mun Road			No. of stages Cycle time Sum(y) Lost time Total Flow Optimum Cyr Min. Cycle Ti Yutt	s per cycle	= (1.5 × L+5 = L/(1-Y) = 0.9-0.00 <sup>-</sup> = (Y <sub>ut</sub> -Y)Ys	N = C = L = = :)/(1-Y) = = 5×L =	5 120 0.316 49 9,965 115 72 0.533 68.3	sec pcu sec sec %	()
									I	Road L29									R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	le Time C <sub>p</sub>			76 0.592	sec	
	Stage/F	Phase D	iagrams			Ĵ → B J			م ا	c			C		^ Ep:- ↓	<> Ep <> Ep	∧ Ep¦ ↓		Critical R.C.(C)			0,Ep Y)/Yx100	% =	68%	
ŀ		S	Stage 1			Stag	e 2			Stage 3	;	Ś	Stage 4			Stage 5									
		G	6 = 5	I/G =	5	G = 5	i	I/G =	5		I/G =	5		I/G =	5	G = 20	I/G =	2							
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES		(m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN T (%)	GRADIEN T EFFECT (pcu/hr)	ADDITIONA L CAPACITY (pcu/hr)	STRAIGHT- AHEAD SAT. FLOW (pcu/hr)	F LEFT	FLOW (pcu/i STRAIGH T AHEAD	hr)	TOTAL FLOW (pcu/hr)	TURNING	RTION OF VEHICLES %) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y				
4	А	1	3.500	1	30	25	0	1		0		1965	55	10	0	65	85%	0%	1885	0.034	0.034				
♠	в	2	3.500	1	30	25	0	1		0		1965	0	55	0	55	0%	0%	1965	0.028					
♠	с	3	3.500	1	30	25	0	1		0		1965	0	10	395	405	0%	98%	1856	0.218	0.218				
¶ ♠	D D	4 4	3.500 3.500	1	15 15	25	0	1 0		0 0		1965 2105	114 66	35	25	114 126	100% 52%	20%	1786 1978	0.064 0.064	0.064				
Pedes		Crossir 5	ng min.	GM 15	+	FGM 5	=	20	sec																

## ROUNDABOUT CAPACITY CALCULATION



ARM	А	В	С
INPUT PARAMETERS:			
V = Approach half width (m)	8.00	7.10	8.00
E = Entry width (m)	12.00	12.00	12.00
L = Effective length of flare (m)	10.00	12.00	12.00
R = Entry radius (m)	55.00	60.00	40.00
D = Inscribed circle diameter (m)	107.00	107.00	107.00
A = Entry angle (degree)	40.00	45.00	45.00
Q = Entry flow (pcu/h)	660	1355	1315
Qc= Circulating flow across entry (pcu/h)	880	280	315
OUTPUT PARAMETERS:			
S = Sharpness of flare = 1.6(E-V)/L	0.64	0.65	0.53
K = 1-0.00347(A-30)-0.978(1/R-0.05)	1.00	0.98	0.97
X2 = V + ((E-V)/(1+2S))	9.75	9.22	9.94
M = EXP((D-60)/10)	109.95	109.95	109.95
F = 303*X2	2956	2795	3010
Td= 1+(0.5/(1+M))	1.00	1.00	1.00
Fc= 0.21*Td(1+0.2*X2)	0.62	0.60	0.63
Qe= K(F-Fc*Qc)	2399	2576	2734
DFC = Design flow/Capacity = Q/Qe	0.28	0.53	0.48

CRITICAL DFC =	0.53	
TOTAL ENTRY FLOWS =	3330	PCU

Filename:

ALC: N

iction J2 - Yu T	ing Road	/ Shun Tu	ng Road -	- Improve	d Sche	me		2033 PM De	esign Traffic F	lows (Proposed	I Scheme) (	(With CEDD	Improveme	nts)		DESIGN:		CHECK		JOB NO:		DATE: N
Traffic Flow Di (pcu/hr)	agram						Shun T	ung Road						Ø	ė.		No. of stage: Cycle time	s per cycle		N = C =	3 120 se	c
																	Sum(y)			Y = 0	.519	
						725		710	565								Lost time Total Flow			L = = 18	12 se 8,780 po	
						750														- 10	8,780 po	u
	Yı	ı Tung Ro	ad					-	6			Y	u Tung Ro	ad			Optimum Cy	cle C <sub>o</sub>	= (1.5×L+5	5)/(1-Y) =	48 se	с
								•	340								Min. Cycle T Y <sub>ult</sub>	ime C <sub>m</sub>	= L/(1-Y) = 0.9-0.007		25 se .810	с
									965								R.C. <sub>ult</sub> Practical Cyc	ala Tima C	$= (Y_{ult} - Y)/Y_{2}$	(100% = 5	5.9 %	
									905								Y <sub>max</sub>	sie nime C <sub>p</sub>	= 0.9 × L/(0 = 1-L/C		28 se .900	c
Stage/Phase D	iagrams																					
в	٠		в		l		в	•									Critical	Case :	A,E,C			
A	*				≻р Е,			c◀ `	Ď								R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100%	= 5	6%
		←			_•	_																
		F			г																	
5	tage 1			Stage	e 2			Stage 3														
		I/G =	5			I/G =	5		I/G =	5												
ų ų	LANE	NO. 05		DIUS	N N N N		UPHILL	GRADIEN	ADDITIONA	STRAIGHT- AHEAD SAT.	F	LOW (pcu/t	nr)	TOTAL	PROPOR	TION OF	REVISED	FLOW				
PHASE STAGE	WIDTH (m)	NO. OF LANES		m)	DPPOS	NEAR SIDE LANE	GRADIEN T (%)	T EFFECT (pcu/hr)	L CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	FLOW (pcu/hr)	(9		SAT. FLOW (pcu/hr)	FACTOR	CRITICAL y			
ung Road NB			LEFT	RIGHT		-									LEFT	RIGHT						
A 1	4.000 4.000	1	50		0	1 0		0		2015 4310	725	750		725 750	100%		1956 4310	0.371 0.174	0.174			
		2						0		4310		7.50		750			4010	0.174	0.174			
n Tung Road E D 2,3	В 3.700	1	25			1		0		1985	565			565	100%		1873	0.302				
C 3	3.700	2		30	0	0		0		4250			710	710		100%	4048	0.175	0.175			
ung Road SB	3.650	2				1		0		4100		965		965			4100	0.235				
E 2	3.650	1		25	0	0		0		2120			340	340		100%	2000	0.170	0.170			
1 1																						
															1			1	1			

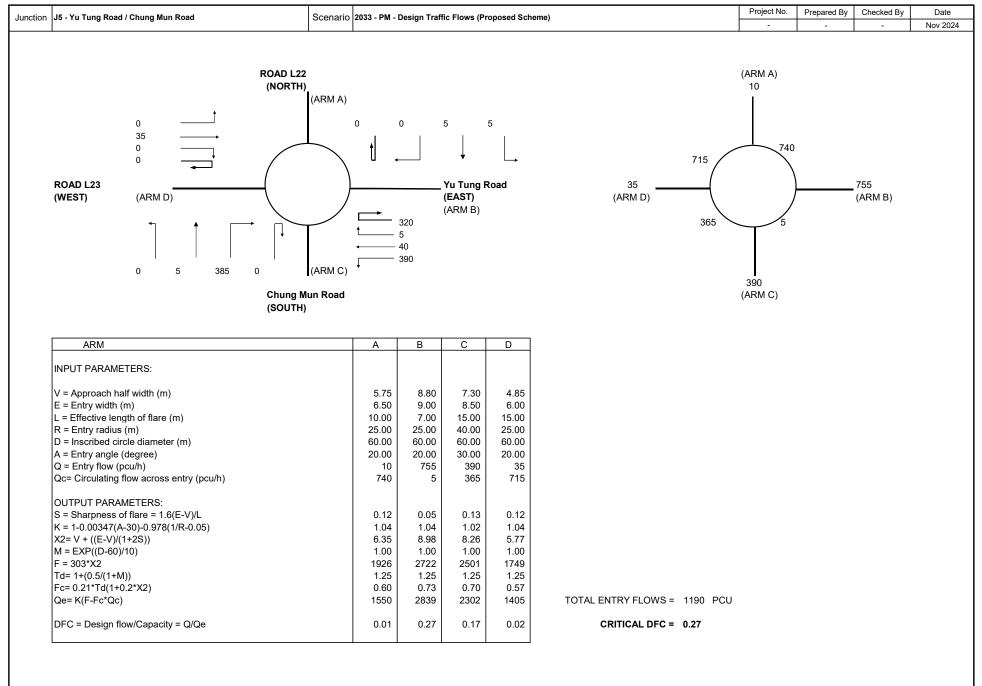
		ing Road		an Road -					2033 PM De	sign Traffic F	lows (Proposed	Scheme)	(With CEDD	Improveme	nts)		DESIGN:		CHECK:		JOB NO:	DATE:	AEO Nov 2
Traffic	c Flow Dia	-	I Tung Ro	ad ——		15	80 525 95 <b>•</b> 70	485	105	80 470 635 570	465	Yu Tung	Road		Ø			No. of stages Cycle time Sum(y) Lost time Total Flow Optimum Cy Min. Cycle Ti Y <sub>uft</sub> R.C. <sub>uft</sub> Practical Cyc	cle C₀ ime C <sub>m</sub>	$= (1.5 \times L+6$ = L/(1-Y) = 0.9-0.007 = (Y <sub>ult</sub> -Y)/Y: = 0.9 \times L/(0 = 1-L/C	= 41 5×L = 0.780 <100% = 27.9	sec pcu sec sec % sec	(
Stage	e/Phase D	iagrams							-														
		l	► A				¥ €											Critical				00%	
		в				С			E		₽		= •					R.C.(C)	= (0	.9X Y <sub>max</sub> .	·Y)/Yx100% =	28%	
	S	F tage 1	, 		Stage	e 2			Stage 3			Stage 4	- •										
I			I/G =	5			I/G =	5	_	I/G =	5		I/G =	5									
PHASE	STAGE	LANE WIDTH	NO. OF	RAE (n	DIUS n)	DSING	NEAR SIDE LANE	UPHILL GRADIEN	GRADIEN T EFFECT	ADDITIONA L	STRAIGHT- AHEAD SAT.	F	LOW (pcu/r	nr)	TOTAL FLOW	PROPOR TURNING (%	VEHICLES	REVISED SAT. FLOW	FLOW FACTOR	CRITICAL			
E		(m)	LANES	LEFT	RIGHT	OPP	NEAF L/	T (%)	(pcu/hr)	CAPACITY (pcu/hr)	FLOW (pcu/hr)	LEFT	STRAIGH T AHEAD	RIGHT	(pcu/hr)	LEFT	RIGHT	(pcu/hr)	У	У			
Tung R	toad SB 1,4 1 1	3.500 3.500 3.500	1 1 1	20	28	0	1 0		0 0 0		1965 2105 2105	570	565 70	470	570 565 540	100%	87%	1828 2105 2011	0.312 0.268 0.268	0.268			
ung Yar D D	n Road V 4 4	VB 3.500 3.500	1 1	25	25 25	0 0	1 0		0 0		1965 2105	15	70	192 293	277 293	5%	69% 100%	1881 1986	0.147 0.147	0.147			
E E E	load NB 3 3 3	3.500 3.500 3.500	1 1 1	15	25	0	1 0		0 0 0		1965 2105 2105	80	313 212	95	80 313 307	100%	31%	1786 2105 2067	0.045 0.149 0.149	0.149			
A C C	n Road E 1,2 2 2	3.500 3.500 3.500 3.500	1 1 1	16	18 25	0	1 0		0 0 0		1965 2105 2105	465	80	15 90	465 95 90	100%	15% 100%	1797 2078 1986	0.259 0.046 0.046	0.046			

Traffic	: Flow Dia	agram							ung Yan R		lows (Proposed				0.54		DESIGN:	No. of stores	CHECK:	•	JOB NO:	4	DATE	٦
(pcu/h	nr)							Cn	ung ran R	oad					Ô			No. of stages	s per cycle					
									105	80	465				V			Cycle time			C =	120	sec	
							80 525											Sum(y) Lost time			Y = 0 L =	0.505 16	sec	
		v.	. T D				95			Ļ	Ļ	V T	Deed					Total Flow					pcu	
		TL TL	I Tung Ro				t		•	470		Yu Tung	Road											
									<b>—</b>	635 570								Optimum Cy Min. Cycle Ti		= (1.5×L+5 = L/(1-Y)		59 32	sec sec	
						15	70	485	Y									Y <sub>ult</sub> R.C. <sub>ult</sub>		= 0.9-0.0075 = (Y <sub>ult</sub> -Y)/Yx		0.780 54.5	%	
																		Practical Cyc	le Time C <sub>p</sub>	= 0.9×L/(0.	9-Y) =	36	sec	
								Ch	ung Yan R	oad								Y <sub>max</sub>		= 1-L/C	= 0	0.867		
Stage	/Phase D	iagrams		1													1							
		l	► A				<b>→</b> A											Critical	Case :	B,C,E,D	)			
						c		<u>_</u>	F		D							R.C.(C)	= (0	.9xY <sub>max</sub> -	Y)/Yx100%	, =	55%	
		в	•					<b>_</b>	-															
		F	ſ									F	= 🗲											
	S	itage 1			Stage	e 2			Stage 3		9,	Stage 4												
			I/G =	5			I/G =	5		I/G =	5		I/G =	5			-							
				RAD	DIUS	9 U	щ			ADDITIONA	STRAIGHT-	F	LOW (pcu/h	ır)		PROPOR								
PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES		n)	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN T (%)	GRADIEN T EFFECT (pcu/hr)	L CAPACITY	AHEAD SAT. FLOW	LEFT	STRAIGH	RIGHT	TOTAL FLOW (pcu/hr)		VEHICLES 6)	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y	CRITICAL y				
		()		LEFT	RIGHT	9 -	ž	. (,0)	(pourin)	(pcu/hr)	(pcu/hr)		T AHEAD	110111	(pourit)	LEFT	RIGHT	(pourity	,					
ung R	oad SB 1,4	3.500	1	20			1		0		1965	570			570	100%		1828	0.312					
B	1	3.500 3.500	1 1		28	0	0		0 0		2105 2105		377 258	114	377 371		31%	2105 2071	0.179 0.179					
в	1 Road V	3.500	1		25	0	0		0		2105			356	356		100%	1986	0.179	0.179				
D	4	3.500	1	25	25	0	1		0		1965	15	70	192	277	5%	69%	1881	0.147	0.147				
D	4	3.500	1		25	0	0		0		2105			293	293		100%	1986	0.147					
ung R	oad NB 3	3.500	1	15			1		0		1965	80	139		219	37%		1896	0.116	0.116				
E	3	3.500	1						0		2105	50	243	05	243		409/	2105	0.116					
Ň	3 Road E		1		25	0	0		0		2105		143	95	238		40%	2056	0.116					
A C	1,2 2	3.500 3.500	1 1	16 18			1		0 0		1965 2105	400 65	61		400 126	100% 52%		1797 2018	0.223 0.062	0.062				
с	2	3.500	1		25	0	0		0		2105		19	105	124		85%	2003	0.062					
1																								
						1																		

Junction J4 - Tung Chung R	oad / Chung Y	an Road	2033 PM Design Traff	ic Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date :	Nc
Tung Chung Road (ARM C) 475 10			665 70 (ARM B) g Yan Road			e width available to vehi e width available to vehi e width available to vehi bility to the left for vehicl bility to the right for vehic bilitu to the right for vehi	0) 9.0, kerbed central reserv cle waiting in stream b-a (2 cle waiting in stream c-b (2 es waiting in stream b-a (2 cles waiting in stream b-a ( cles waiting in stream b-c ( cles waiting in stream c-b (	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 2.0 - 250.0) 17.0 - 250.0) 17.0 - 250.0)	J4
GEOMETRIC DETAILS:	DR ROAD (ARN			DAD (ARM C)		MINOR ROAD (A	RM B)		
MAJC W	JR ROAD (ARN =		W c-b			,	,	<b>`</b>	
W cr	=	7.3 (metres) 0 (metres)	VV C-b Vr c-b	= 3.6 (metres) = 100 (metres)			= 3.6 (metres = 3.6 (metres		
q a-b		70 (pcu/hr)	q c-a	= 475 (pcu/hr)			= 3.0 (metres	,	
d a-p d a-c	=	665 (pcu/hr)	q c-b	= 473 (pcu/hr) = 10 (pcu/hr)			= 100 (metres	,	
440		000 (pou/m)	4 5 5				= 100 (metres		
							= 65 (pcu/hr)	,	
GEOMETRIC FACTORS :							= 10 (pcu/hr)		
D	=	0.948063							
E	=	0.977385							
F	=	0.977385							
Y	=	0.748150		,					
THE CAPACITY OF MOVEME	INT :								
Q b-a	=	335							
Q b-c	=	544							
Q c-b	=	533				CRITICAL DF	C = 0.21		
Q b-ad		353							
COMPARISION OF DESIGN I									
DFC b		0.19							
DFC b		0.02							
DFC c DFC b		0.02							
	-ac =	0.21							

## ROUNDABOUT CAPACITY CALCULATIO

## AECOM



Junction J6 - Tung Chung I	Road / Shek Mu	n Kap Road	2033 PM Design Traffi	ic Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date :	No
Tung Chung Road (ARM C) 270			290 5 ARM B) ad L30			e width available to vehi e width available to vehi e width available to vehi bility to the left for vehicle bility to the right for vehic bility to the right for vehic	0) 9.0, kerbed central reserve cle waiting in stream b-a (2.0 cle waiting in stream b-c (2.0 cle waiting in stream b-a (2.0 ses waiting in stream b-a (17 cles waiting in stream b-c (17 cles waiting in stream c-b (17	only) )5 - 4.07) )5 - 4.07) )5 - 4.07) 0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)	J6
GEOMETRIC DETAILS: MAJ W W cr q a-1 q a-6 GEOMETRIC FACTORS : D		1 A) 7.3 (metres) 0 (metres) 5 (pcu/hr) 290 (pcu/hr) 1.098970	MAJOR RC W c-b Vr c-b q c-a q c-b	DAD (ARM C) = 3.6 (metres) = 200 (metres) = 270 (pcu/hr) = 115 (pcu/hr)		MINOR ROAD (A. W b-a = W b-c = VI b-a = Vr b-a = Vr b-c = q b-a = q b-c =	= 3.6 (metres) = 3.6 (metres) = 200 (metres) = 200 (metres) = 200 (metres) = 10 (pcu/hr)		
E F Y	= = =	1.066962 1.066962 0.748150							
THE CAPACITY OF MOVEM         Q b-a           Q b-a         Q b-a           Q c-b         Q b-a	=	502 710 709 650				CRITICAL DF	C = 0.16		
COMPARISION OF DESIGN DFC DFC DFC DFC	b-a = b-c = c-b =	ACITY : 0.02 0.05 0.16 0.07							

Junction J7 - Road L	29 / Road I 30			2033 PM Design Traff	fic Flowe IPe	onorad Cohamo)	Designed By	: Checked By :	Job No. :	Da	te: No
Junction 37 - Road E	297 Roau 130				IIC FIOW& (FI	oposed acheme)	Designed by	. Checked by .	300 110	Da	1.e. N
Road L29 (ARM C) 165		- <b>-</b>		130 130		(ARM A)	W = W cr = W b-a = W b-c = W c-b = VI b-a = Vr b-a =	EOMETRIC INPUT DATA ) Major Road Width (6.4 - 20 Central Reserve width (1.2 Lane width available to veh Lane width available to veh Lane width available to veh Visibility to the left for vehic Visibility to the right for vehi	<ul> <li>9.0, kerbed centra icle waiting in strea icle waiting in strea icle waiting in strea es waiting in strean cles waiting in strean</li> </ul>	m b-a (2.05 - 4.07) m b-c (2.05 - 4.07) m c-b (2.05 - 4.07) n b-a (22.0 - 250.0) m b-a (17.0 - 250.0)	
				(ARM B) Road L30		Road L29	Vrc-b = D = E = F =	Visibilitu to the right for veh Visibility to the right for vehi Stream-specific B-A Stream-specific B-C Stream-specific C-B (1-0.0345W)	-		
GEOMETRIC DETAIL		-									
	MAJOR ROA	•	,		OAD (ARM C	,		MINOR ROAD (A	,		
	W	=	11.7 (metres)	W c-b	=	2.3 (metres				(metres)	
	W cr	=	1.5 (metres)	Vr c-b	=	100 (metres	,			(metres)	
	q a-b	=	130 (pcu/hr)	q c-a	=	165 (pcu/hr)				(metres)	
	q a-c	=	130 (pcu/hr)	q c-b	=	5 (pcu/hr)	)			(metres)	
										(metres)	
GEOMETRIC FACTO										(pcu/hr)	
GEOMETRIC FACTO	D	=	0.831663					q b-c	= 5	(pcu/hr)	
	E	=	0.831663								
	F	=	0.857384								
	Y	=	0.596350								
THE CAPACITY OF M						``					
	Q b-a	=	486								
	Q b-c	=	605								
	Q c-b	=	590					CRITICAL DE	-C =	0.33	
	Q b-ac	=	489							-	
COMPARISION OF DI	ESIGN FLOW T	O CAPA	CITY :								
	DFC b-a	=	0.32								
	DFC b-c	=	0.01								
	DFC c-b	=	0.01								

Junction J8 - Tung Chung Ro	ad / Road L30	D	2033 PM Design Traff	ic Flows (Proposed	Scheme)	Designed By :	Checked By :	Job No. :	Date	: Nov
Tung Chung Road (ARM C) 380			305 20 RM B) ad L30			W         = Ma           W cr         = Ce           W b-a         = Lar           W b-c         = Lar           W c-b         = Lar           V c-b         = Lar           V b-a         = Vis           Vr b-a         = Vis           Vr b-c         = Vis           Vr c-b         = Vis           Vr c-b         = Vis           D         = Str           E         = Str           F         = Str	ne width available to veh ne width available to veh ne width available to veh ibility to the left for vehic ibility to the right for vehi ibility to the right for vehi	.0) - 9.0, kerbed central reser- icle waiting in stream b-a icle waiting in stream b-c icle waiting in stream b-a (les waiting in stream b-a icles waiting in stream b-a icles waiting in stream b-c cles waiting in stream c-b	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 22.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	JB
GEOMETRIC DETAILS: MAJO/ W W cr q a-b q a-c GEOMETRIC FACTORS :	R ROAD (ARN = = = = =	1 A) 7.3 (metres) 0 (metres) 20 (pcu/hr) 305 (pcu/hr)	MAJOR R( W c-b Vr c-b q c-a q c-b	= 2 = 3	8.6 (metres) 00 (metres) 80 (pcu/hr) 65 (pcu/hr)		W b-c VI b-a Vr b-a Vr b-c q b-a	ARM B) = 3.6 (metre = 3.6 (metre = 200 (metre = 200 (metre = 200 (metre = 5 (pcu/hi = 105 (pcu/hi	s) s) s) s)	
D E F Y	= = =	1.098970 1.066962 1.066962 0.748150			,		·		,	
THE CAPACITY OF MOVEMEN Q b-a Q b-c Q c-b Q b-ac	IT : = = = =	453 704 700 687					CRITICAL DF	<sup>-</sup> C = 0.24		
COMPARISION OF DESIGN FI DFC b- DFC b- DFC c- DFC c- DFC b-	a = c = o =	ACITY : 0.01 0.15 0.24 0.16								

Junction J9 - Ro	oad L29 / Road L25			2033 PM Design Traffic	Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date	: No
Road L29 (ARM C)	35 95			35 70	(ARM A) Road L29	$W = M_{i}$ $W cr = Ce$ $W b-a = La$ $W b-c = La$ $W c-b = La$ $V l b-a = Vi$ $V r b-a = Vi$ $V r b-c = Vi$	METRIC INPUT DATA ) ajor Road Width (6.4 - 20. entral Reserve width (1.2 - ine width available to vehi ine width available to vehi sibility to the left for vehicl sibility to the right for vehic sibility to the right for vehic sibility to the right for vehic	9.0, kerbed central reser cle waiting in stream b-a ( cle waiting in stream b-c ( cle waiting in stream c-b ( es waiting in stream b-a ( cles waiting in stream b-a cles waiting in stream b-c	2.05 - 4.07) 2.05 - 4.07) 2.05 - 4.07) 22.05 - 4.07) 22.0 - 250.0) (17.0 - 250.0) (17.0 - 250.0)	eL
			135 5 (AF Road	<b>RM B)</b> d L25		D = St E = St F = St	ream-specific B-A ream-specific B-C ream-specific C-B -0.0345W)	J	(	
GEOMETRIC DE	TAILS: MAJOR RC W W cr q a-b q a-c	AD (ARM = = = =	A) 10.3 (metres) 1.5 (metres) 70 (pcu/hr) 35 (pcu/hr)	MAJOR ROA W c-b Vr c-b q c-a q c-b	AD (ARM C) = 2.1 (metres = 100 (metres = 35 (pcu/hr) = 95 (pcu/hr)	5) )	W b-c = VI b-a = Vr b-a = Vr b-c =	= 2.3 (metre: = 2.3 (metre: = 100 (metre: = 100 (metre: = 100 (metre:	s) s) s) s)	
GEOMETRIC FA	CTORS : D E F Y	= = =	0.831663 0.857384 0.838923 0.644650					= 5 (pcu/hr = 135 (pcu/hr	,	
THE CAPACITY	OF MOVEMENT : Q b-a Q b-c Q c-b Q b-ac	= = = =	496 626 604 620		·		CRITICAL DF	C = 0.23		
COMPARISION	DF DESIGN FLOW DFC b-a DFC b-c DFC c-b DFC c-b DFC b-ac	TO CAPA = = = =	CITY : 0.01 0.22 0.16 0.23							

		I							
Junction J10 - Road L28 / Ro	ad L29 / Shek	Mun Kap Road	2033 PM Design Traffic	: Flows (Proposed Scheme)	Designed By :	Checked By :	Job No. :	Date :	: N
Shek Mun Kap Road (ARM C) 15 95		•	20 10 ARM B) ad L29	(ARM A) (ARM A) Road L28		e width available to veh e width available to veh e width available to veh bility to the left for vehicl bility to the right for vehi bilitu to the right for vehi	0) • 9.0, kerbed central reserve cle waiting in stream b-a (2 cle waiting in stream b-c (2. cle waiting in stream c-b (2. es waiting in stream b-a (22 cles waiting in stream b-a (1 cles waiting in stream b-c (1 cles waiting in stream c-b (1	05 - 4.07) 05 - 4.07) 05 - 4.07) .0 - 250.0) 7.0 - 250.0) 7.0 - 250.0)	J10
W W cr q a-b q a-c GEOMETRIC FACTORS :	R ROAD (ARI = = = =	7.3 (metres) 0 (metres) 10 (pcu/hr) 20 (pcu/hr)	MAJOR RO. W c-b Vr c-b q c-a q c-b	AD (ARM C) = 2.3 (metres) = 100 (metres) = 15 (pcu/hr) = 95 (pcu/hr)		W b-c VI b-a Vr b-a Vr b-c q b-a	RM B)         =       2.7 (metres)         =       2.7 (metres)         =       100 (metres)         =       100 (metres)         =       100 (metres)         =       5 (pcu/hr)         =       35 (pcu/hr)		
D E F Y	= = =	0.867478 0.894307 0.857384 0.748150		,					
THE CAPACITY OF MOVEME Q b-a Q b-c Q c-b Q b-ac	NT : = = = =	504 660 632 636				CRITICAL DF	°C = 0.15		
COMPARISION OF DESIGN F DFC b- DFC b- DFC c- DFC b- DFC b-	a = c = b =	PACITY : 0.01 0.05 0.15 0.06							

							506			2033 PM De	esign Traffic F	lows (Proposed	I Scheme)					DESIGN:		CHECK:		JOB N	IO:	DA	AECC TE: Nov 2
	Traffic (pcu/hr	Flow Di	agram							Road L29									No. of stages	s per cycle		N =	5		
								0 _ 30 <sup>_</sup>		0	10	25							Cycle time Sum(y) Lost time Total Flow			C = Y = L = =	120 0.220 50 9,965	sec sec pcu	
							▲ 0	10	250	Road L29	▼ 30 40 230	*			— Chung	Mun Road			Optimum Cyu Min. Cycle Ti Y <sub>ult</sub> R.C. <sub>ult</sub> Practical Cyc Y <sub>max</sub>	ime C <sub>m</sub>	$= (1.5 \times L+!)$ = L/(1-Y) = 0.9-0.007 = (Y <sub>ult</sub> -Y)/Y! = 0.9 × L/(0 = 1-L/C	= 75×L = x100% =	103 64 0.525 138.9 66 0.583	sec sec % sec	
, r	Stage/F	Phase D	Diagrams												1			1							
			4	A A		∲ → В }			•	c F			C		€ ₽ *	<> Ep <> Ep	∧ = = = ↓		Critical R.C.(C)			D,Ep -Y)/Yx100	)% =	139%	]
		S	Stage 1			Stage	e 2			Stage 3	3	5	Stage 4			Stage 5									
•		(	G = 5	I/G =	5	G = 5	i	I/G =	5		I/G =	5		I/G =	5	G = 20	I/G =	2							
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES		DIUS m)	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIEN T (%)	GRADIEN T EFFECT (pcu/hr)	ADDITIONA L CAPACITY	STRAIGHT- AHEAD SAT. FLOW	LEFT	FLOW (pcu/	hr) RIGHT	TOTAL FLOW (pcu/hr)	TURNING	RTION OF VEHICLES %)	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR y					
_					LEFT	RIGHT					(pcu/hr)	(pcu/hr)		T AHEAD			LEFT	RIGHT							
♠	A	1	3.500	1	30	25	0	1		0		1965	25	10	0	35	71%	0%	1897	0.018					
♠	в	2	3.500	1	30	25	0	1		0		1965	0	30	0	30	0%	0%	1965	0.015					
♠	с	3	3.500	1	30	25	0	1		0		1965	0	10	250	260	0%	96%	1858	0.140	0.140				
¶ ♠	D D	4 4	3.500 3.500	1 1	15 15	25	0	1 0		0 0		1965 2105	143 87	40	30	143 157	100% 56%	19%	1786 1973	0.080 0.080	0.080				
Pede		Crossir	ופי min.	GM 15	+	FGM 5	=	20	Sec																