PLANNING LIMITED
規劃顧問有限公司

UNIT K, 16/F, MG TOWER
133 HOI BUN ROAD, KWUN TONG
KOWLOON, HONG KONG
九龍觀塘海濱道133號
萬兆豐中心16樓K室
電話TEL (852) 3426 8451
傳真FAX (852) 3426 9737
電郵EMAIL kta@ktaplanning.com

By Hand

Our Ref: S3088/LTTM/23/005Lg

27 February 2024

Secretary, Town Planning Board
15/F, North Point Government Offices
333 Java Road
North Point
Hong Kong

Dear Sir/Madam,

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public Use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun
- S12A Amendment of Plan Application –
TPB Ref.: Y/TM-LTYY/11
Further Information No. 1

Reference is made to the captioned S12A Application submitted to the Town Planning Board ("TPB") on 22 January 2024.

The Permanent Secretary for Transport and Logistics gazetted the PWP Item Nos. B764CL and B861CL Site Formation and Infrastructure Works for Public Housing Developments at San Hing Road and Hong Po Road, Tuen Mun (Road Works) on 26 January 2024. The Applicant has reviewed the gazette plan and noticed that there are changes in some of the road layout and traffic improvement measures near the Site. In order to reflect the latest road layout and traffic arrangement in the vicinity, we hereby submit a revised Traffic Impact Assessment (enclosed in **Annex A**) for consideration by the Transport Department and TPB.

Should you have any queries in relation to the attached, please do not hesitate to contact the undersigned at [redacted] or our Ms Anson YING at [redacted]

Thank you for your kind attention.

Yours faithfully
For and on behalf of
KTA PLANNING LIMITED

Gladys Ng

Encl. (4 hard copies)

cc. the Applicant & Team

KT/GN/AY/vy

Annex A

Revised Traffic Impact Assessment

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

Traffic Impact Assessment

Final Report
February 2024

Prepared by: CKM Asia Limited

Prepared for: Wing Mau Tea House Limited

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

CONTENTS

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

CONTENTS (CONT'D)

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

TABLES

NUMBER

Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

FIGURES

NUMBER

1.0 INTRODUCTION

Background

1.1 The subject site is located in D.D.130, Lam Tei, Tuen Mun (the "Subject Site"). At present, the Subject Site is unoccupied, and access to the Subject Site via an existing unnamed road which is connected to Ng Lau Road. The location of the Subject Site is shown in **Figure 1.1**.

1.2 A Section 12A planning application for the minor relaxation of the maximum plot ratio restriction to 2.5 for residential use at the Subject Site was approved by the Town Planning Board (TPB ref: Y/TM-LTYY/9) on 24th September 2021 (the "Approved Scheme"). This Section 12A planning application is for minor relaxation of the maximum plot ratio restriction for residential use at the Subject Site from the approved 2.5 to 5.0 (the "Proposed Development").

1.3 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic impact assessment in support of the Proposed Development. This report presents the findings and recommendations of the traffic impact assessment for the Proposed Development.

Structure of Report

1.4 The report is structured as follows:

Chapter One	-	Gives the background of the project;
Chapter Two	-	Describes the existing situation;
Chapter Three	-	Presents the Proposed Development;
Chapter Four	-	Describes the traffic impact analysis; and
Chapter Five	-	Gives the overall conclusion.

2.0 EXISTING SITUATION

The Subject Site

2.1 The Subject Site is bounded by the Light Rail Transit ("LRT") and the Tuen Ma Line to the East, and a nullah to the West. Access to the Subject Site is from the south and is via a bridge over the nullah. The Access Road is connected to Ng Lau Road.

The Road Network

2.2 Ng Lau Road is a single carriageway 2-lane 2-way local distributor which connects with the Lam Tei Interchange to the south and Castle Peak Road - Lam Tei underneath the Kong Sham Western Highway. It provides access to villages, e.g., San Hing Tsuen, Tuen Tsz Wai, and Tsing Chuen Wai.

2.3 Lam Tei Interchange connects Tsing Lun Road, Hong Po Road, Ng Lau Road, Castle Peak Road – Lam Tei, Yuen Long Highway and Tuen Mun Road. It is the main access for traffic accessing the Subject Site and strategic routes.

Existing Traffic Flows

2.4 To quantify the traffic flows in the vicinity of the Subject Site, manual classified counts were conducted on Tuesday, 18th April 2023, Wednesday, 19th April 2023 and Wednesday, 26th April 2023 during the AM and PM peak at the following junctions:

- J1: Unnamed Road/ Access Road;
- J2: Ng Lau Road/ Unnamed Road;
- J3: Ng Lau Road / Lam Tei Interchange;
- J4: Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange;
- J5: Lam Tei Interchange;
- J6: Lam Tei Interchange/ Castle Peak Road – Lam Tei;
- J7: Tsing Lun Road/ Tsz Tin Road;
- J8: San Hing Road / Ng Lau Road (Southern);
- J9: San Hing Road / Ng Lau Road (Northern);
- J10: T-junction at San Hing Road;
- J11: Ng Lau Road / Castle Peak Road – Lam Tei; and
- J12: Hong Po Road / Yan Tin Estate Access Road.

2.5 The locations of these junctions and the area of influence (the "AOI") are shown in **Figure 2.1** and the layouts are shown in **Figures 2.2 – 2.13** respectively.

2.6 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. The AM and PM peak hours identified from the surveys are found to be between 0800 – 0900 hours and 1700 – 1800 hours respectively. The existing AM and PM peak hour traffic flows in pcu/hour are presented in **Figure 2.14**.

Existing Junction Performance

2.7 The existing junction performance of the surveyed junctions are calculated based on the existing traffic flows, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM").

The results are summarised in **Table 2.1** and the detailed calculations are found in **Appendix A**.

TABLE 2.1 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	AM Peak	PM Peak
J1	Unnamed Road/ Access Road	Priority (DFC)	0.000	0.000
J2	Ng Lau Road/ Unnamed Road	Priority (DFC)	0.033	0.030
J3	Ng Lau Road/ Lam Tei Interchange	Signal (RC)	104%	95%
J4	Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange	RA (DFC)	0.501	0.548
J5	Lam Tei Interchange	RA (DFC)	0.480	0.453
J6	Lam Tei Interchange/ Castle Peak Road – Lam Tei	Signal (RC)	129%	223%
J7	Tsing Lun Road/ Tsz Tin Road	Signal (RC)	67%	111%
J8	San Hing Road/ Ng Lau Road (Southern)	Priority (DFC)	0.057	0.037
J9	San Hing Road/ Ng Lau Road (Northern)	Priority (DFC)	0.223	0.496
J10	T-junction at San Hing Road	Priority (DFC)	0.006	0.002
J11	Ng Lau Road / Castle Peak Road – Lam Tei	Signal (RC)	140%	133%
J12	Hong Po Road / Yan Tin Estate Access Road	Priority (DFC)	0.060	0.011

Note: RC – reserve capacity; DFC – design flow/capacity ratio, RA – Roundabout

2.8 The above results indicate that the surveyed junctions currently operate with capacities during the AM and PM peak hours.

Link Operational Performance

2.9 The link operational performance of the surveyed road links are calculated based on the existing traffic flows, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.2**.

TABLE 2.2 EXISTING LINK CAPACITY ASSESSMENT

Ref	Link		Adjusted Design Flow (veh/hr)		Traffic Demand (veh/hr)		V/C Ratio	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Castle Peak Road – Lam Tei	NB	2,604	2,520	763	1,314	0.29	0.52
		SB	2,604	2,604	1,444	763	0.55	0.29
L2	Castle Peak Road – Lingnan	NB	2,800	2,800	385	419	0.14	0.15
		SB	2,604	2,800	625	450	0.24	0.16
L3	Yuen Long Highway	NB	4,700	4,700	4,462	4,810	0.95	1.02
		SB	4,700	4,371	3,615	3,962	0.77	0.91
L4	Tuen Mun Road	NB	4,700	4,700	4,821	5,833	1.03	1.24
		SB	4,371	4,371	4,360	3,933	1.00	0.90
L5	San Hing Road	2-way	744	800	43	29	0.06	0.04
L6	Ng Lau Road (north of J9)	2-way	744	800	215	344	0.29	0.43
L7	Ng Lau Road (south of J2)	2-way	744	800	249	371	0.33	0.46
L8	Lam Tei Interchange (between J3 and J5)	EB	2,604	2,800	917	638	0.35	0.23
		WB	2,800	2,800	1,011	1,100	0.36	0.39
L9	Tsing Lun Road	NB	1,767	1,767	448	371	0.25	0.21
		SB	1,900	1,900	775	685	0.41	0.36

NB – northbound SB – southbound EB – eastbound WB – westbound

2.10 The above results show that the assessed road links operate with sufficient capacity, except for Tuen Mun Road northbound, which is operating with V/C ratios at 1.24 during PM peak hours.

Public Transport Facilities

2.11 The Subject Site is located close to public transport services, including franchised buses and public light buses and these operate within 400 metres or some 8-minutes' walk away. Details of these public transport services are presented in **Table 2.3**. The location and major pedestrian routes of these public transport services are shown in **Figure 2.15**.

TABLE 2.3 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (min)
CTB 50[1]	Tuen Mun (Ching Tin and Wo Tin) → Tsim Sha Tsui (Kowloon Station) [A]	4 per day
	Tsim Sha Tsui (Kowloon Station) → Tuen Mun (Ching Tin and Wo Tin) [B]	4 per day
CTB 55[1]	Tuen Mun (Ching Tin and Wo Tin) → Kwun Tong Ferry Pier [A]	4 per day
	Kwun Tong Ferry Pier → Tuen Mun (Ching Tin and Wo Tin) [B]	4 per day
CTB 56[1]	Tuen Mun (Ching Tin and Wo Tin) → Sheung Shui (Tin Ping Estate) [A]	4 per day
	Sheung Shui (Tin Ping Estate) → Tuen Mun (Ching Tin and Wo Tin) [B]	4 per day
CTB 56A[1]	Tuen Mun (Ching Tin and Wo Tin) → Queen's Hill Fanling (via: Sheung Shui Station) [C]	3 per day
	Queen's Hill Fanling (via: Sheung Shui Station) → Tuen Mun (Ching Tin and Wo Tin) [C]	2 per day
CTB 950[1]	Tuen Mun (Ching Tin and Wo Tin) → Exhibition Centre Station [A]	1 per day
	Exhibition Centre Station → Tuen Mun (Ching Tin and Wo Tin) [B]	1 per day
CTB 955[1]	Tuen Mun (Ching Tin and Wo Tin) → Sai Wan Ho [A]	1 per day
	Sai Wan Ho → Tuen Mun (Ching Tin and Wo Tin) [B]	1 per day
CTB B3A	Shan King Estate - Shenzhen Bay Port	30 - 60
CTB N969[D]	Tin Shui Wai Town Centre - Causeway Bay (Moreton Terrace)	20 - 45
KMB 53	Yoho Mall (Yuen Long) - Tsuen Wan (Nina Tower)	25 - 35
KMB 63X	Hung Shui Kiu (Hung Fuk Estate) - Jordan (West Kowloon Station)	12 - 30
KMB 67M	Tuen Mun (Siu Hong Court) - Kwai Fong Station	5 - 20
KMB 67X	Tuen Mun (Siu Hong Court) - Mong Kok East Station	6 - 25
KMB 68A	Long Ping Estate - Tsing Yi Station	8 - 25
KMB 258A[1]	Hung Shui Kiu (Hung Fuk Estate) → Lam Tin Station	2 per day
KMB 258P[2]	Hung Shui Kiu (Hung Fuk Estate) - Lam Tin Station	12 - 30
KMB 261P	Tuen Mun (Siu Hong Court) → Sheung Shui (Tin Ping) [2][A]	2 - 3 per day
	Sheung Shui (Tin Ping) → Tuen Mun (Siu Hong Court) [1][B]	1 per day
KMB 267X[1]	Tuen Mun (Siu Hong Court) → Lam Tin Station [A]	2 per day
	Lam Tin Station → Tuen Mun (Siu Hong Court) [B]	2 per day
KMB 960A[1]	Central → Hung Shui Kiu (Hung Fuk Estate) [B]	1 per day
KMB 960C[1]	Tuen Mun (Fu Tai Estate) → Causeway Bay (Victoria Park) [A]	2 per day
	Causeway Bay (Victoria Park) → Tuen Mun (Fu Tai Estate) [B]	1 per day
KMB 960P	Hung Shui Kiu (Hung Yuen Road) → Causeway Bay (Victoria Park)	10 - 35
	Causeway Bay (Victoria Park) → Hung Shui Kiu (Hung Yuen Road) [1][B]	1 per day
KMB 960X[1]	Hung Shui Kiu (Hung Yuen Road) → Quarry Bay (King's Road) [A]	8 per day
	Quarry Bay (King's Road) → Hung Shui Kiu (Hung Yuen Road) [B]	8 per day
KMB N260[D]	Tuen Mun Pier Head - Mei Foo	20 - 25
LWB A34	Hung Shui Kiu (Hung Yuen Road) - Airport (Ground Transportation Centre)	20 - 60
LWB E33P	Siu Hong Station (South) - Airport (Ground Transportation Centre)	12 - 45
LWB NA33[D]	Tuen Mun (Fu Tai Estate) → Cathay Pacific City	3 per day
	Cathay Pacific City → Tuen Mun (Fu Tai Estate)	5 per day
LWB NA37[D]	Tin Shui Wai Town Centre → Cathay Pacific City	5 per day
	Cathay Pacific City → Tin Shui Wai Town Centre	6 per day
NLB B2	Yuen Long MTR Station - Shenzhen Bay Port	25 - 40
GMB 42	Tsing Chuen Wai - Tuen Mun Town Centre	13 – 15
GMB 606S[D]	Yuen Long (Fung Cheung Rd) - Tsim Sha Tsui East	6 - 13

KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – CityBus GMB – Green Minibus
NLB – New Lantao Bus

Note: [1] Monday to Friday. (Except public holidays) [2] Monday to Saturday (Except public holidays)
[A] AM peak only [B] PM peak only [C] AM and PM peak only [D] Overnight service

Survey on Road-based Public Transport Services Located in the Vicinity

Road-based Public Transport

2.12 Survey on road-based public transport services listed in **Table 2.3** was conducted during the AM and PM peak periods on Thursday, 18th January 2024 at the bus stops near the subject site. The survey locations are shown in **Figure 2.15**. The survey results are summarized in **Table 2.4** and the detailed information are shown in **Appendix B**.

TABLE 2.4 OCCUPANCY OF EXISTING ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE

Direction	AM Peak			PM Peak		
	No. of Passenger		Occupancy	No. of Passenger		Occupancy
	Capacity [a]	Occupied [b]	[c]=[b]/[a]	Capacity [d]	Occupied [e]	[f]=[e]/[d]
Outbound – To other districts	5,057	3,588	71%	2,398	813	34%
Inbound – From other districts	2,297	823	36%	2,915	1,823	63%

2.13 The above results indicate that the surveyed road-based public transport services currently operate with spare capacities during the AM and PM peak hours.

Rail-based Public Transport

2.14 Based on the information obtained from the Legislative Council, the operational performance for MTR Tuen Ma Line in 2022 is summarized in **Table 2.5**.

TABLE 2.5 OPERATIONAL PERFORMANCE OF MTR TUEN MA LINE

Item	Parameters
Maximum carrying capacity when train frequency is maximized [a]	70,000 passengers / hour
Existing carrying capacity [b]	58,800 passengers / hour (1)
Current Patronage [c]	34,500 passengers / hour (2)
Current Loading [c]/[b] {Critical Link}	59% {Tsuen Wan West to Mei Foo}
Loading compared with maximum carrying capacity [c]/[a]	50%

Source: Reply Serial No. TLB168 for Question Serial No. 1237, Controlling Officer's Reply, Examination of Estimates of Expenditure 2023-24. Finance Committee. Legislative Council. 14 April 2023. <https://www.legco.gov.hk/yr2023/english/fc/fc/w_q/tlb-e.pdf>

(1) According to the reply, existing train frequency has not yet increased to the maximum level as permitted by the signaling system.

(2) According to the reply, in view of the impact of COVID-2019, patronage shown is based on those months in 2022 when the pandemic situation was relatively eased.

2.15 **Table 2.5** shows that the MTR Tuen Ma Line operates at 59% of its current capacity, or 50% of its maximum carrying capacity during the peak hour.

Existing Footpath Level-Of-Service

2.16 To quantify the existing pedestrian flows, pedestrian counts were conducted during the AM and PM peak periods on Thursday, 18th January 2024 at footpaths located in the vicinity of Proposed Development, and the observed peak 15-minute pedestrian flows are shown in **Figure 2.16**.

2.17 The Level-Of-Service ("LOS") of a pedestrian footpath depends on its width and number of pedestrians using the facility. Description of the LOS at walkway is obtained from Volume 6 of the TPDM and is presented in **Table 2.6**.

TABLE 2.6 DESCRIPTION OF PEDESTRIAN FOOTPATH LOS

LOS	Flow Rate (ped/min/m)	Description
A	≤ 16	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.
B	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 unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 – 49	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 speeds 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 over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. 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 characteristics of queued pedestrians than of moving pedestrian streams.

Source: Volume 6 Chapter 10 of TPDM

2.18 The observed peak 15-minute pedestrian flows LOS assessment is presented in **Table 2.7**.

TABLE 2.7 EXISTING LOS ASSESSMENT

Location	Clear Width[(1)] [Effective Width] (m)	Peak Period	Flow (ped/ 15 min)	Flow rate (ped/min/m)	LOS
P1. Footpath on the footbridge connected to Ng Lau Road	2.0[1.5]	AM	50	2.2	A
		PM	33	1.5	A
P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei	2.5[1.5]	AM	105	4.7	A
		PM	70	3.1	A
P3. Footbridge over Castle Peak Road – Lam Tei	2.5[1.5]	AM	72	3.2	A
		PM	35	1.6	A

[(1)] The width excludes railing and obstructions.

2.19 The above results indicate that the surveyed footpaths currently operate with LOS A during the AM and PM peak. As stated in the TPDM, LOS A to C is considered as an acceptable level of service: "In general, LOS C is desirable for most design at streets with dominant 'living' pedestrian activities".

3.0 THE PROPOSED DEVELOPMENT

Key Parameters

3.1 The Proposed Development key parameters are presented in **Table 3.1**.

TABLE 3.1 KEY PARAMETERS

Item		Proposed Development
Development Site Area		About 8,896 m^2
Domestic Plot Ratio		5.0
Domestic GFA		44,480 m^2
Flat Mix (GFA)	Flat Size ≤ 40m^2	1,110
	40m^2 < Flat Size ≤ 70m^2	275
Total number of Flats		**1,385**

Provision of Internal Transport Facilities

3.2 The internal transport facilities for the Proposed Development are provided in accordance with the recommendations of the Hong Kong Planning Standards and Guidelines ("HKPSG") and are presented in **Table 3.2**.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT

Facility	HKPSG Recommendation	Provision
Car Parking Space	**For Residents:** Parking Requirement = GPS x R1 x R2 x R3 Global Parking Standard (GPS): 1 car parking space per 4 - 7 flats Demand Adjustment Ratio (R1): 0.5 for flat size ≤ 40 m^2 GFA 1.2 for flat size 40 – 70 m^2 GFA Accessibility Adjustment Ratio(R2): 1.0 outside 500m-radius of rail station Development Intensity Adjustment Ratio (R3): 1.0 for Plot Ratio 2.0 – 5.0 For 1,100 flats with flat size less than 40 m^2 GFA Minimum: (1,110 / 7 x 0.5 x 1.0 x 1.0) = 79.3, say 80 nos. Maximum: (1,110 / 4 x 0.5 x 1.0 x 1.0) = 138.8, say 139 nos. For 275 flats with flat size 40 – 70 m^2 GFA Minimum: (275 / 7 x 1.2 x 1.0 x 1.0) = 47.2, say 48 nos. Maximum: (275 / 4 x 1.2 x 1.0 x 1.0) = 82.5, say 83 nos. Total *Minimum = 80 + 48 = 128 nos.* *Maximum = 139 + 83 = 222 nos.*	**222 nos.** @ 5.0m (L) x 2.5m (W) x 2.4m (H) **= HKPSG maximum**
	For Visitors: Visitor car parking for private residential developments with more than 75 units per block should be provided at 5 visitor spaces per block in addition to the recommendations, or as determined by the Authority. For 5 blocks: 5 x 5 nos. = 25 nos.	**25 nos.** (22 nos. @ 5.0m(L) x 2.5m(W) x 2.4m(H) + 3 nos. @ 5.0m(L) x 3.5m(W) x 2.4m(H) for person with disabilities) **= HKPSG maximum**
	Total Car Parking Space: *Minimum = 128 + 25 =* ***153 nos.*** *Maximum = 222 + 25 =* ***247 nos.*** *Note: For total no. of car parking space in lot = 151 – 250 nos., the Building (planning) regulation 72 require provision of 3 accessible car parking spaces*	***247 nos. (including 3 accessible car parking spaces)***

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT (CONT'D)

Facility	HKPSG Recommendation	Provision
Motorcycle Parking Space	**For Residential Uses:** TD Comment: 1 motorcycle parking space shall be provided for every 81 flats For 1,385 flats: 1,385 / 81 = 17.1, say 18 nos.	**18 nos. @** 2.4m (L) x 1.0m (W) x Min. 2.4m (H) **= fulfil TD comment, OK**
Goods Vehicle Loading/ Unloading Bay	**For Residential Uses:** Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority. For 5 blocks, each block less than 800 flats: **5 no.**	**5 nos.** @ 11.0m (L) x 3.5m (W) x Min. 4.7m (H) **= HKPSG minimum, OK**
Bicycle Parking Spaces	**For Residential Uses:** Within 0.5 – 2km to rail station, 1 space per 15 flats with flat size $<70m^2$ = 1,385 ÷ 15 = 93 nos.	***93 no.*** *@ 1.8m (L) x 0.8m (W) x Min. 2.4m (H)* ***= comply HKPSG, OK***

3.3 **Table 3.2** shows that the internal transport facilities provided comply with the recommendations of the HKPSG. The master layout plan of the Proposed Development is shown in **Figure 3.1**.

Planned Road Works near the Proposed Development

3.4 The existing access road and unnamed road connecting the Proposed Development with Ng Lau Road is planned to be improved, to provide a 7.3m-wide road carriageway, a 2m-wide footpath and a 2m-wide cycle track (the "Planned Road Works"). The Planned Road Works to be implemented by the Owner as part of the Approved Scheme and is found in **Appendix C**.

Swept Path Analysis

3.5 The CAD-based swept path analysis programme, Autodesk Vehicle Tracking, was used to check the ease of manoeuvring of vehicles within the Proposed Development, and the swept path analysis drawings are found in **Appendix D**. Vehicles are found to have no manoeuvring problems.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed Development is expected to be completed in 2030, and the design year adopted for the traffic assessment is, whichever later of the 2: (i) at least 3 years after the planned completion of the development, i.e., 2033, or (ii) 5 years from the date of this application, i.e., 2028. Therefore, Year 2033 is adopted for junction capacity analysis.

Traffic Forecasting

4.2 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the 2019-based BDTM NTW1 (the "BDTM"); (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

Modelling and Validation

4.3 The BDTM provides traffic forecasts for the years 2026 and 2031 and these have taken into account the planned developments, changes to the strategic road network, population growth, etc. Therefore, The BDTM is used as the basis to produce the traffic flow for this TIA.

4.4 The BDTM is validated, and the validation meets criteria found in the "BDTM Study". Nevertheless, the traffic network and zone in the vicinity of the Proposed Development were further reviewed to ensure the traffic model is up-to-date and the modelled flow can be adopted. The modelling and validation methodology include, but not limited to, the following:

- The road links and junctions were checked and updated to ensure that any recent change in the existing road network is considered and missing road links or junction does not exist.
- The schedules of public transport services such as franchised bus and green/ red minibus were also checked to ensure that the updated routings and headway information are adopted.
- The zone and centroid connectors were reviewed to ensure that the traffic zones generate/ attract traffic at appropriate locations.
- The traffic flows produced by BDTM at the surveyed junctions were reviewed with reference to the observed traffic flows.
- The validation methodology is same as that adopted in the BDTM. All count locations were reviewed and checked using the GEH statistic (a modified chi squared test to provide a statistic for both the magnitude of the difference and the percentage difference between modelled and observed flows). The GEH statistic is defined by:

$$\sqrt{\frac{(V_2 - V_1)^2}{\frac{1}{2}(V_2 + V_1)}}$$

where V_1 and V_2 are the observed and modelled flows.

4.5 The validation criteria adopted are found in **Table 4.1**.

TABLE 4.1 VALIDATION CRITERIA

Locations	Target
Traffic flows at all count locations	85% return a GEH statistic of 5 or less 100% return a GEH statistic of 10 or less

Estimated Traffic Growth Rate from 2031 to 2033

4.6 Reference is made to the "Hong Kong Population Projections 2022 – 2046" published by Census and Statistics Department, and the information is presented in **Table 4.2**.

TABLE 4.2 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Population in Hong Kong (thousands)
2031	7,820.2
2033	7,903.6
Average Annual Growth (2031 – 2033)	**0.53%**

4.7 **Table 4.2** shows that the annual population growth between 2031 and 2033 is 0.53%, and is adopted for estimated traffic growth rate from 2031 to 2033.

Additional Planned/ Committed Developments near the Subject Site

4.8 The planned/ committed developments near the Subject Site not included in the BDTM but have been incorporated to produce the future year traffic flows are listed in **Table 4.3** and the locations are presented in **Figure 4.1**.

TABLE 4.3 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Ref. No.	Development	Intake Year	Land Use	GFA (m^2)	No. of Flat (no.)	Average Flat Size (m^2)	No.
Tuen Mun Area 54 [1]							
A	Site 1 &1A Wo Tin Estate	2022	PRH	--	4,232	--	--
			Retail	2,420	--	--	--
			SWF	1,060	--	--	--
			Kindergarten	--	--	--	1 no.
B	Site 2 Yan Tin Estate	2017	PRH	--	4,688	--	--
			Retail	4,250	--	--	--
			SWF	3,600	--	--	--
C	Site 3 & 4 (East) Ching Tin Estate	2022	PRH	--	5,183	--	--
			Retail	3,130	--	--	--
			SWF	1,810	--	--	--
			Kindergarten	--	--	--	1 no.
D	Site 3 & 4 (West) Novo Land	2025	Private Housing	--	4,600	--	--
			Retail	5,000	--	--	--
E	Site 4A (East and West) [2]	2026	Light Public Housing	--	5,620	--	--
G	Site 4A (South)	2028	PRH	--	1,475	--	--
			Kindergarten	--	--	--	1 no.
H	Site 5	2028	SSF	--	1,020	--	--
			SWF	1,300	--	--	--

TABLE 4.3 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE (CONT'D)

Ref. No.	Development	Intake Year	Land Use	GFA (m^2)	No. of Flat (no.)	Average Flat Size (m^2)	No.
Development at San Hing Road and Hong Po Road, Tuen Mun[3]							
I	San Hing Road Site	2030 - 2033	PRH / SSF	--	9,400	--	--
			Primary School	--	--	--	1 nos.
			Kindergarten	--	--	--	2 nos.
			SWF	N/A	--	--	--
J	San Hing Road Site Extension	2030 - 2033	PRH / SSF	--	1,500	--	--
			Retail	5,000[4]	--	--	--
			Sport Centre	--	--	--	1 no.
K	Ho Pong Road Site	2030 - 2033	PRH / SSF	--	9,500	--	--
			Retail	5,000[4]	--	--	--
			Kindergarten	--	--	--	2 no.
			SWF	N/A	--	--	--
Other Planning Applications Nearby[5]							
L	A/TM-LTYY/ 426	2026	Private Housing	--	184	31	--
M	Y/TM-LTYY/ 10	--	Private Housing	--	288	40	--
N	A/TM-LTYY/ 301	--	NTEH [3]	--	1	195	--
O	A/TM-LTYY/ 335	--	NTEH [3]	--	1	195	--
P	A/TM-LTYY/ 336	--	NTEH [3]	--	1	195	--
Q	A/TM-LTYY/ 370	--	NTEH [3]	--	1	195	--
R	A/TM-LTYY/ 371	--	NTEH [3]	--	1	195	--
S	A/TM-LTYY/ 372	--	NTEH [3]	--	1	195	--

PRH – Public Rental Housing SSF – Subsidised Sale Flats NTEH – New Territories Exempted House
SWF – Social Welfare Facilities

(1) extracted from TIA of Approved Planning Applications A/TM/500 and A/TM/583
(2) extracted from Legislative Council Panel on Housing discussion paper CB(1)1123/2023(02) on December 2023
(3) extracted from Tuen Mun District Council discussion paper TMDC 19/2023 on September 2023
(4) No information on area for retail uses is found in public domain, assumed 5,000 m^2 GFA of retail
(5) extracted from Planning Statement of Approved Planning Applications

Planned Road Improvement Works Nearby

4.9 The planned road improvement works at assessed junctions are presented below.

Development at San Hing Road and Hong Po Road

4.10 Some road improvement works are planned under the "Site Formation and Infrastructure Works for Public Housing Developments at San Hing Road and Hong Po Road, Tuen Mun and Choi Shun Street, Sheung Shui – Investigation, Design and Construction" (Agreement No. CE 39/2021 (CE)) by Civil Engineering and Development Department ("CEDD"), and these are summarized in **Table 4.4**. The road improvement works are found in **Appendix E**.

TABLE 4.4 PLANNED ROAD IMPROVEMENT WORKS UNDER AGREEMENT NO. CE 39/2021 (CE) BY CEDD

Ref	Brief Description of the Improvement
J3	Provide 2 left-turn lanes at Ng Lau Road southbound
	Provide 1 left-turn lane at Lam Tei Interchange eastbound
J4	Provide exclusive left-turn lane from Hong Po Road southbound
	Modify the entry lanes from Lam Tei Interchange westbound
J6	Provide 2 right-turn lanes and 1 shared lane for right turn and straight ahead at Castle Peak Road – Lam Tei southbound
J7	Provide a channelized island at Tsz Tin Road eastbound*
J10	Widened to provide 2lane 2-way single carriageway at minor road
J12	Provide signalised cross junction

4.11 The improvement work described in **Table 4.4** will be completed gradually before 2030 – 2033, i.e., the intake of public housing of San Hing Road site, and San Hing Road site extension and Hong Po Road site (Note: These are items I, J and K in **Table 4.3**). These improvement works are adopted for the Year 2033 junction capacity analysis.

Hung Shiu Kiu New Development Area

4.12 Road improvement work is planned at Ng Lau Road / Castle Peak Road – Lam Tei (J11) under the "Hung Shui Kiu/Ha Tsuen New Development Area Package A Works for Second Phase Development - Design and Construction" (Agreement No. CE 01/2020 (CE)) by Civil Engineering and Development Department ("CEDD"). The layout of road improvement at J11 is presented in **Appendix E**.

Net Increase in Traffic Generation between the Approved Scheme and the Proposed Development

4.13 To estimate the traffic generation of the Proposed Development, reference is made to the TPDM. However, the smallest flat size in the TPDM is 60m^2 GFA, which is substantially larger than the Proposed Development average flat size of only 32m^2 GFA. Hence, the estimated traffic generation is conservative, i.e., on the high-side. The adopted trip generation rates and the estimated AM and PM peak hour traffic generation are presented in **Table 4.5**.

TABLE 4.5 ADOPTED TRIP RATES AND TRAFFIC GENERATION FOR PROPOSED DEVELOPMENT

Proposed Development	**AM Peak**		**PM Peak**	
	Generation	**Attraction**	**Generation**	**Attraction**
Trip Rates(pcu/ flat/ hr)				
Residential Use with average 60m^2 GFA	0.0718	0.0425	0.0286	0.0370
Traffic Generations (pcu/ hr)				
1,385 flats with average flat about 32m^2 GFA	***100***	***59***	***40***	***52***
	159		***92***	

4.14 The traffic generation of Approved Scheme found in the approved traffic impact assessment is presented in **Table 4.6**.

TABLE 4.6 ADOPTED TRAFFIC GENERATION FOR APPROVED SCHEME

Scheme	**AM Peak**		**PM Peak**	
	Generation	**Attraction**	**Generation**	**Attraction**
Approved Scheme	*37*	*22*	*18*	*23*
	59		*41*	

4.15 The net increase in traffic generation between the Approved Scheme and the Proposed Development is presented in **Table 4.7**.

TABLE 4.7 NET INCREASE IN TRAFFIC GENERATION

Scheme	Traffic Generation (pcu/ hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed Development (from Table 4.4) [a]	100	59	40	52
Approved Scheme (from Table 4.5) [b]	37	22	18	23
Net Increase [a] – [b]:	**+63**	**+37**	**+22**	**+29**
	+100		**+51**	

4.16 **Table 4.7** shows that the Proposed Development is expected to generate 100 and 51 additional pcu (2-way) in AM and PM peak respectively.

Year 2033 Traffic Flows

4.17 Year 2033 traffic flows for the following cases are derived:

Year 2033 Without Proposed Development [A] = *Traffic flows derived with reference to 2031 NTW1 BDTM + estimated traffic growth between 2031 and 2033 + estimated traffic generation of the planned / committed developments after 2019*

Year 2033 With Approved Scheme [B] = *[A]+ estimated traffic generation for Approved Scheme*

Year 2033 With Proposed Development [C] = *[B] + net increase in traffic generation by Proposed Development*

4.18 Year 2033 peak hour traffic flows for the above three cases are shown in **Figures 4.2 – 4.4** respectively.

Year 2033 Junction Capacity Analysis

4.19 Year 2033 junction capacity analysis for the three cases are summarised in **Table 4.7** and detailed calculations are found in the **Appendix A**.

TABLE 4.8 YEAR 2033 JUNCTION PERFORMANCE

Ref	Junction	Type of Junction (Parameter)	2033 Without Proposed Development		2033 With Approved Scheme		2033 With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
J1	Unnamed Road/ Access Road	Priority (DFC)	0.055	0.049	0.056	0.050	0.059	0.051
J2	Ng Lau Road/ Unnamed Road	Priority (DFC)	0.052	0.046	0.128	0.079	0.266	0.125
J3	Ng Lau Road/ Lam Tei Interchange	Signal (RC)	42%	48%	39%	46%	35%	44%
J4	Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange	RA (DFC)	0.694	0.659	0.703	0.666	0.719	0.675
J5	Lam Tei Interchange	RA (DFC)	0.797	0.668	0.806	0.677	0.822	0.691
J6	Lam Tei Interchange/ Castle Peak Road – Lam Tei	Signal (RC)	26%	49%	26%	49%	26%	49%
J7	Tsing Lun Road/ Tsz Tin Road	Signal (RC)	23%	61%	22%	60%	21%	59%
J8	San Hing Road/ Ng Lau Road (Southern)	Priority (DFC)	0.091	0.055	0.094	0.060	0.100	0.065
J9	San Hing Road/ Ng Lau Road (Northern)	Priority (DFC)	0.198	0.448	0.198	0.448	0.198	0.448
J10	T-junction at San Hing Road	Priority (DFC)	0.058	0.071	0.059	0.074	0.063	0.078
J11	Ng Lau Road / Castle Peak Road – Lam Tei	Signal (RC)	16%	15%	16%	15%	16%	15%
J12	San Hing Road / Hong Po Road	Signal (RC)	55%	96%	121%	197%	116%	195%

Note: RC – reserve capacity; RA – Roundabout, DFC – design flow/capacity ratio

4.20 **Table 4.8** shows that the Proposed Development has negligible traffic impact to the road junctions analysed.

Year 2033 Link Performance

4.21 The 2033 link performances are assessed and the results are shown in **Table 4.9**.

TABLE 4.9 YEAR 2033 LINK CAPACITY ASSESSMENT

Ref	Link		Adjusted Design Flow (veh /hr)		Year 2033 Traffic Demand (veh/hr)						Year 2033 V/C Ratio					
					Without Proposed Development		With Approved Scheme		With Proposed Development		Without Proposed Development		With Approved Scheme		With Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Castle Peak Road – Lam Tei	NB	2,604	2,604	864	1,434	864	1,434	865	1,434	0.33	0.55	0.33	0.55	0.33	0.55
		SB	2,604	2,604	1,810	1,238	1,810	1,238	1,812	1,240	0.70	0.48	0.70	0.48	0.70	0.48
L2	Castle Peak Road – Lingnan	NB	2,800	2,800	501	581	501	581	502	582	0.18	0.21	0.18	0.21	0.18	0.21
		SB	2,604	2,800	808	562	810	562	812	563	0.31	0.20	0.31	0.20	0.31	0.20
L3	Yuen Long Highway	NB	4,700	4,700	5,677	6,373	5,683	6,377	5,694	6,384	1.21	1.36	1.21	1.36	1.21	1.36
		SB	4,700	4,700	5,099	5,190	5,104	5,195	5,111	5,198	1.09	1.10	1.09	1.11	1.09	1.11
L4	Tuen Mun Road	NB	4,700	4,700	6,103	7,445	6,115	7,456	6,131	7,469	1.30	1.59	1.30	1.59	1.30	1.59
		SB	4,700	4,700	6,135	5,542	6,147	5,548	6,163	5,557	1.31	1.18	1.31	1.18	1.31	1.18
L5	San Hing Road	2-way	800	800	174	80	187	84	212	91	0.22	0.10	0.23	0.11	0.27	0.11
L6	Ng Lau Road (north of J9)	2-way	744	800	251	370	251	370	251	370	0.34	0.46	0.34	0.46	0.34	0.46
L7	Ng Lau Road (south of J2)	2-way	800	800	411	436	467	497	512	508	0.51	0.55	0.58	0.62	0.64	0.64
L8	Lam Tei Interchange (between J3 and J5)	EB	2,800	2,800	1,731	1,180	1,752	1,191	1,784	1,208	0.62	0.42	0.63	0.43	0.64	0.43
		WB	2,800	2,800	1,779	1,705	1,798	1,722	1,826	1,742	0.64	0.61	0.64	0.62	0.65	0.62
L9	Tsing Lun Road	NB	1,900	1,900	823	628	842	657	827	633	0.43	0.33	0.44	0.35	0.44	0.33
		SB	1,900	1,900	1,275	929	1,282	932	1,296	933	0.67	0.49	0.67	0.49	0.68	0.49

NB – northbound SB – southbound EB – eastbound WB – westbound

4.22 The above results show that the assessed road links operate with sufficient capacity, except for Yuen Long Highway (L3) and Tuen Mun Road (L4), both which operate with V/C ratios at 1.2 or above during the AM and PM peak hours in Year 2033. In view that there are no changes on the V/C ratios to L3 and L4 for cases without Proposed Development, with Approved Scheme and with Proposed Development, it can be concluded that the traffic generated due to the Proposed Development have negligible impact. With the planned strategic road improvement works, both Yuen Long Highway and Tuen Mun Road are expected to operate with sufficient capacity in Year 2033.

5.0 IMPACT TO PUBLIC TRANSPORT SERVICES

2033 Public Transport Occupancy Forecasting

5.1 2033 peak hour public transport occupancy is estimated based on (i) public transport demand growth from 2024 to 2033; and (ii) public transport demand generated by the Proposed Development and planned / committed developments in the vicinity.

Annual Public Transport Demand Growth Rate between 2024 – 2033

5.2 To establish the local public transport demand growth rate from 2024 to 2033, reference is made to several sources of information including:

- 2024 – 2029: "*Projections of Population Distribution 2021 – 2029*" published by Planning Department
- 2029 – 2033: "*Hong Kong Population Projections*" from the Census and Statistics Department

5.3 The "*Projections of Population Distribution 2021 – 2029*" has Tertiary Planning Units ("TPU"), i.e., the local area population projections up to 2025, and reference is made to 5 relevant TPUs, which are presented in **Table 5.1**.

TABLE 5.1 POPULATION PROJECTIONS OF THE 5 TPUS

Year	TPU				Total
	423 & 428	425	441	442	
2024	225,800	70,200	16,600	7,100	319,700
2025	227,100	71,300	16,300	7,100	321,800
Average Annual Growth 2024 to 2025	**0.58%**	**1.57%**	**-1.81%**	**0.00%**	**0.66%**

5.4 **Table 5.1** shows that the average annual population growth between 2024 and 2025 is 0.66%.

5.5 Between 2025 and 2029, reference is made to the population growth of Tuen Mun New Town, and population projections are presented in **Table 5.2**.

TABLE 5.2 TUEN MUN NEW TOWN POPULATION PROJECTIONS

Year	Tuen Mun New Town Population
2025	557,400
2029	575,400
Average Annual Growth 2025 to 2029	**0.80%**

5.6 **Table 5.2** shows that the average annual population growth in the Tuen Mun New Town between 2025 and 2029 is 0.8%.

5.7 Beyond 2029, reference is made to the "*Hong Kong Population Projections*" from the Census and Statistics Department, which is presented in **Table 5.3**.

TABLE 5.3 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Hong Kong Resident Population ('000)
2029	7,731.1
2033	7,903.6
Average Annual Growth 2029 to 2033	**0.55%**

5.8 **Table 5.3** shows that the average annual population growth in Hong Kong between 2029 – 2033 is 0.55%.

5.9 Based on the above, the annual growth factors adopted are 0.66% from 2024 to 2025, 0.8% between 2025 and 2029, and 0.55% between 2029 and 2033.

Estimated Peak Hour Mechanised Trip Generation of Subject Site

5.10 The mechanised trip generation of the Subject Site is estimated with reference to Travel Characteristic Survey 2011 and are presented in **Table 5.4**.

TABLE 5.4 ESTIMATED PEAK HOUR MECHANISED TRIP GENERATION OF THE SUBJECT SITE

Parameter	Calculation	Unit	Approved Scheme	Proposed Development
No. of Flats	A	flats	307	1,385
Average domestic household size in Tuen Mun[1]	B	persons/ flat	2.6	2.6
Population	C = B x A	persons	812	966
Average Daily Mechanised Trips[2]	D	trips/ persons/ day	1.83	1.83
Peak hour factor of Daily Mechanised Trips[3]	E	N/A	12%	12%
Estimated Peak Hour Mechanised Trip Generation	D = A x B x C	persons/ hr	176	791

(1) Extracted from Census and Statistic Department website
(2) From Table 3.3, Travel Characteristics Survey 2011 Final Report
(3) From Para. 3.3.7, Travel Characteristics Survey 2011 Final Report

Estimated Public Transport Demand Generated by the Subject Site

5.11 The transport mode of the Subject Site in the vicinity is assumed with reference to *"Travel Characteristic Survey 2011"* and is presented in **Table 5.4**, and the estimated public transport demand is calculated and shown in **Table 5.5**.

TABLE 5.5 TRANSPORT MODE OF THE SUBJECT SITE

Transport Mode			Ratio[1]	The Subject Site		
					Proposed Development [b]	Net Increase in Passenger Demand [C] = [b] – [a]
Public Transport	Rail-based	[a]	44%[2]	77	348	+271
	Road-based	[b]	38%[2]	67	301	+234
	Sub- total	*[c] = [a] + [b]*	*82%*	*144*	*649*	*+505*
Private Car / Taxi		[d]	18%	32	142	+110
Total		**[e] = [c] + [d]**	**100%**	**176**	**791**	**+615**

(1) From Table 3.6, Travel Characteristics Survey 2011 Final Report
(2) Adjusted based on local public transport provision near the subject site

5.12 **Table 5.5** shows that compared with the Approved Scheme, the Proposed Development is expected to generate additional public transport demand of 505 passengers per hour (2-way) during both AM and PM peak hours. The road-based public transport demand generated by the subject site is summarised in **Table 5.6**.

TABLE 5.6 ESTIMATED ROAD-BASED PUBLIC TRANSPORT DEMAND GENERATED BY THE SUBJECT SITE

Development		Road-based Public Transport Demand (persons / hour)			
		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
The Subject Site	Approved Scheme: 307 Flats [a]	61	6	6	61
	Proposed Development: 1,385 Flats [b]	271	30	30	271
	Net increase of road-based Passenger Demand [b] – [a]	210	24	24	210
		+234 (2-way)		+234 (2-way)	

5.13 **Tables 5.6** shows that compared with the Approved Scheme, the Proposed Development is expected to generate additional road-based public transport demand of 234 passengers per hour (2-way) during both AM and PM peak hours.

Public Transport Demand Generated by Planned / Committed Developments in the Vicinity

5.14 The public transport demand generated by planned / committed developments in the vicinity as presented in **Table 4.3** is considered in the Year 2033 public transport demand. Public transport interchanges are provided for the 2 planned development areas, i.e., "Tuen Mun Area 54" and "Development at San Hing Road and Hong Po Road, Tuen Mun". It is assumed that the public transport services provided would be sufficient to serve the demand generated by these development areas.

2033 Road-based Public Transport Occupancies

5.15 Year 2033 road-based public transport occupancies were derived with reference to the (i) observed road-based public transport occupancies in **Table 2.4**; (ii) annual public transport demand growth rate; and (iii) expected road-based public transport demand due to the planned / committed developments between 2024 – 2033 and the subject site.

5.16 Year 2033 road-based public transport occupancies were derived as follows:

2033 without the Proposed Development [A] = *2024 observed occupancy + adopted road-based public transport demand growth from 2024 to 2033 + estimated road-based public transport demand due to the planned / committed developments*

2033 with the Approved Scheme [B] = *[A] + estimated road-based public transport demand due to Approved Scheme*

2033 with the Proposed Development [C] = *[B] + net increase in estimated road-based public transport demand by Proposed Development*

5.17 The Year 2033 road-based public transport occupancies for the three cases are summarised in **Table 5.7**.

TABLE 5.7 YEAR 2033 ROAD-BASED PUBLIC TRANSPORT OCCUPANCY OPERATING NEARBY DURING PEAK HOURS

Direction	Case	AM Peak			PM Peak		
		No. of Passenger		Occupancy	No. of Passenger		Occupancy
		Capacity [a]	Occupied [b]	[c]=[b]/[a]	Capacity [d]	Occupied [e]	[f]=[e]/[d]
To other districts	Without Proposed Development	11,821	4,621	39%	2,776	846	30%
	With Approved Scheme	11,821	4,682	40%	2,776	852	31%
	With Proposed Development	11,821	4,892	41%	2,776	876	32%
From other districts	Without Proposed Development	3,181	1,049	33%	9,121	2,031	22%
	With Approved Scheme	3,181	1,055	33%	9,121	2,092	23%
	With Proposed Development	3,181	1,079	34%	9,121	2,302	25%

5.18 **Table 5.7** shows that the road-based public transport demand associated with the Proposed Development has negligible impact.

2033 Rail-Based Public Transport Occupancies

5.19 **Table 5.5** shows that the demand on rail-based public transport services, i.e. MTR Tuen Ma Line, associated with the Proposed Development is no more than 348 passengers during the peak hours. As shown in **Table 2.5**, the MTR Tuen Ma Line has a maximum carrying capacity of 70,000 passenger / hour. Hence, the additional passenger demand is only 0.5% of the maximum carrying capacity [Calculation: 348 ÷ 70,000 = 0.5%], which is negligible on the MTR Tuen Ma Line.

6.0 PEDESTRIAN IMPACT

2033 Pedestrian Flow Forecasting

6.1 2033 peak 15-minute pedestrian flows are produced by estimating (i) the pedestrian growth from 2024 to 2033; and (ii) expected pedestrian generated by the Proposed Development and planned / committed developments in the vicinity.

Annual Pedestrian Growth Rate between 2024 – 2033

6.2 Growth rates of 0.66% per annum from 2024 to 2025, 0.8% per annum for the period between 2025 and 2029, and 0.55% per annum for the period between 2029 and 2033, are adopted, and reference to these are found in **Paragraphs 5.2 – 5.9**.

Peak 15-minute Pedestrian Generated by Planned / Committed Developments in the Vicinity

6.3 Peak 15-minute pedestrian generated by planned / committed developments in the vicinity as presented in **Table 4.3** is included in the Year 2033 pedestrian flow.

Peak 15-minute Pedestrian Generation of by the Proposed Development

6.4 Based on public transport demand presented in **Table 5.5**, the peak 15-minute pedestrian generations of the Subject Site are shown in **Table 6.1**.

TABLE 6.1 PEDESTRIAN GENERATIONS OF THE SUBJECT SITE

Developments		Pedestrian Generations (ped / 15-minute)			
		AM Peak		PM Peak	
		GEN	ATT	GEN	ATT
The Subject Site	Approved Scheme: 307 Flats [a]	21	2	2	21
	Proposed Development: 1385 Flats [b]	91	10	10	91
	Net Increase of Pedestrian Generation [b] – [a]	+70	+8	+8	+70
		+78 (2-way)		+78 (2-way)	

GEN – Generation ATT – Attraction

6.5 **Tables 6.1** shows that compared with the Approved Scheme, the additional pedestrian generated by the Proposed Development is 78 persons (2-way) during both AM and PM peak 15 minutes.

Year 2033 Pedestrian Flows

6.6 Year 2033 pedestrian flows are produced with reference to (i) the observed 2024 pedestrian flows, (ii) annual pedestrian growth rate between 2024 – 2033, (iii) expected pedestrian generation due to the planned / committed developments between 2024 – 2033 and the Subject Site.

6.7 Year 2033 pedestrian flows for the footpath analysis were derived as follows:

2033 without Proposed Development [A] = *2024 observed pedestrian flows + Adopted pedestrian growth from 2024 to 2033 + estimated pedestrian due to the planned / committed developments*

2033 with Approved Scheme [B] = *[A] + pedestrian generation due to Approved Scheme*

2033 with Proposed Development [C] = *[B] + net increase in pedestrian generation due to Proposed Development*

Year 2033 LOS Analysis

6.8 Year 2033 peak 15-minute pedestrian flows for the three cases are estimated and presented in **Figure 6.1** and the corresponding LOS assessment is presented in **Table 6.2.**

TABLE 6.2 YEAR 2033 LOS ASSESSMENT

Location	Clear Width[(1)] [Effective Width] (m)	Peak Period	2033 without Proposed Development			2033 with Approved Scheme			2033 with Proposed Development		
			Flow	Flow rate	LOS	Flow	Flow rate	LOS	Flow	Flow rate	LOS
P1. Footpath on the footbridge accessing to Ng Lau Road	2.0[1.5]	AM	80	3.6	A	92	4.1	A	131	5.8	A
		PM	62	2.8	A	74	3.3	A	113	5.0	A
P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei	2.5[1.5]	AM	130	5.8	A	136	6.0	A	156	6.9	A
		PM	93	4.1	A	99	4.4	A	119	5.3	A
P3. Footbridge over Castle Peak Road – Lam Tei	2.5[1.5]	AM	79	3.5	A	85	3.8	A	105	4.7	A
		PM	40	1.8	A	46	2.0	A	66	2.9	A

Note: Flows in pedestrian / 15 minutes flow rates in pedestrian / 15 minutes / meter
[(1)] The width excludes railing and obstructions.

6.9 The results in **Table 6.2** show that the assessed footpaths operate with LOS A, i.e., have sufficient capacity to accommodate the expected pedestrian growth and additional pedestrian generated due to Proposed Development.

7.0 SUMMARY

7.1 The Subject Site is located in D.D.130, Lam Tei, Tuen Mun. At present, the Subject Site is unoccupied, and access to the Subject Site is via an existing unnamed road which is connected to Ng Lau Road.

7.2 Manual classified counts were conducted at junctions which are located in the vicinity in order to establish the existing traffic flows during AM Peak and PM peak hours.

7.3 The internal transport facilities provided comply with recommendations of the HKPSG and comments from Transport Department.

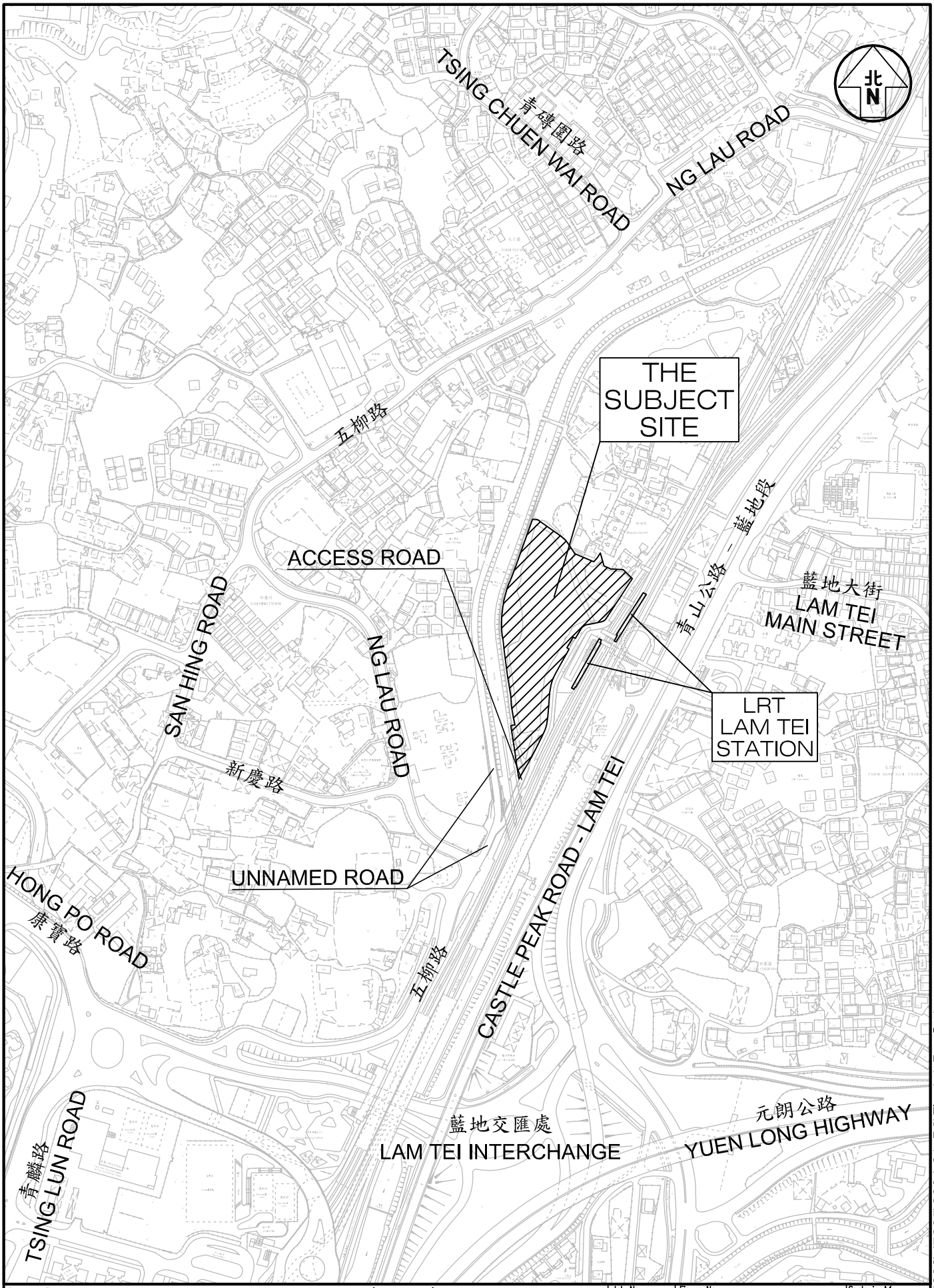
7.4 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM; (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

7.5 Compared to the Approved Scheme, the Proposed Development will generate only 100 and 51 additional pcu (2-way) in AM peak and PM peak respectively.

7.6 The assessment of the nearby public transport services found that the Proposed Development has negligible impact. The assessment of footpaths found that the Proposed Development has negligible impact.

7.7 This TIA concluded that compared with the Approved Scheme, the traffic generated by the Proposed Development is negligible. The Proposed Development is acceptable from traffic engineering terms.

Figures



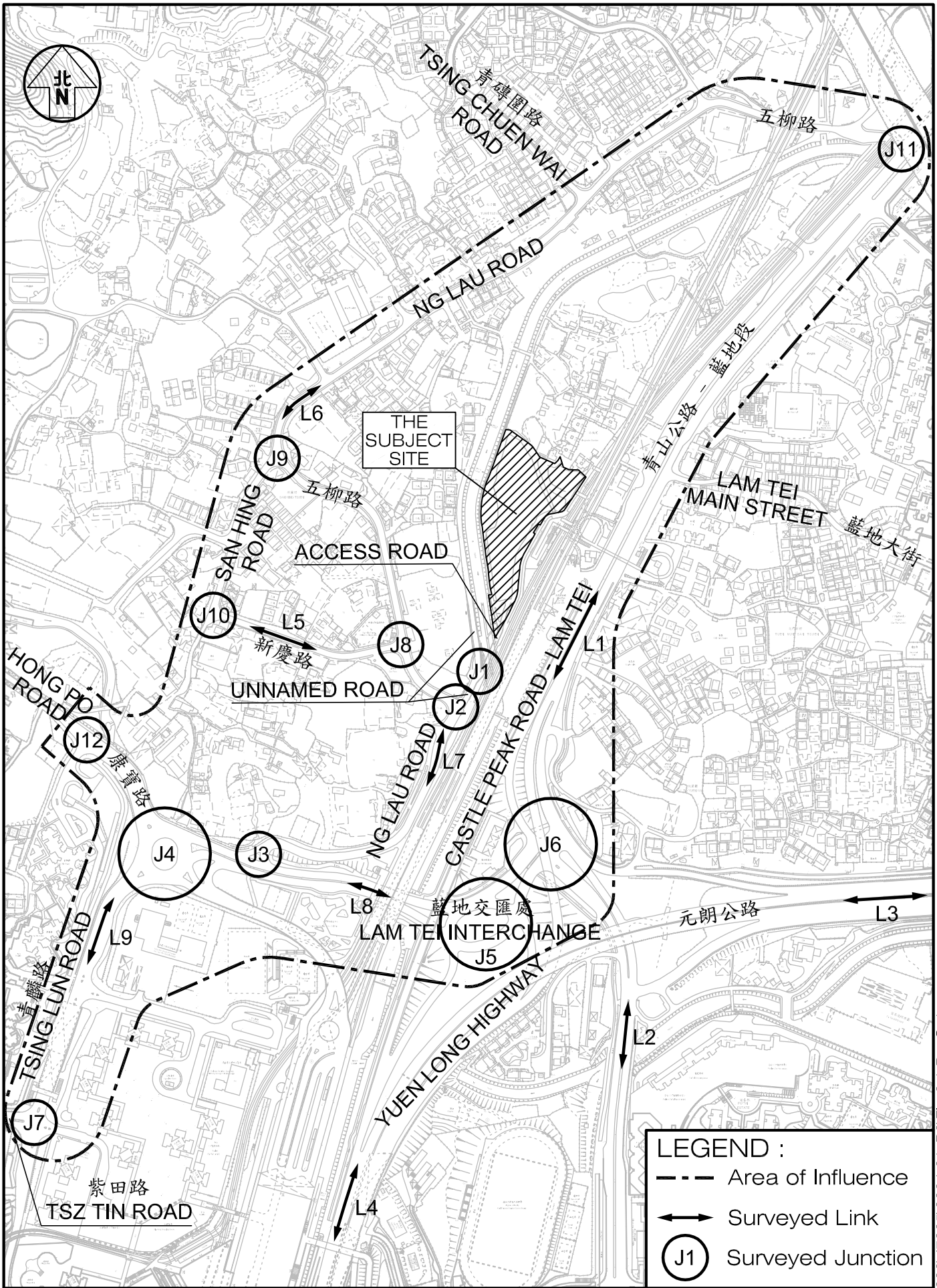
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 1.1			Scale in A4 1 : 4,000
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

Figure Title

LOCATION OF THE SUBJECT SITE

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 01_R6\Fig 1.1 RevG.dwg



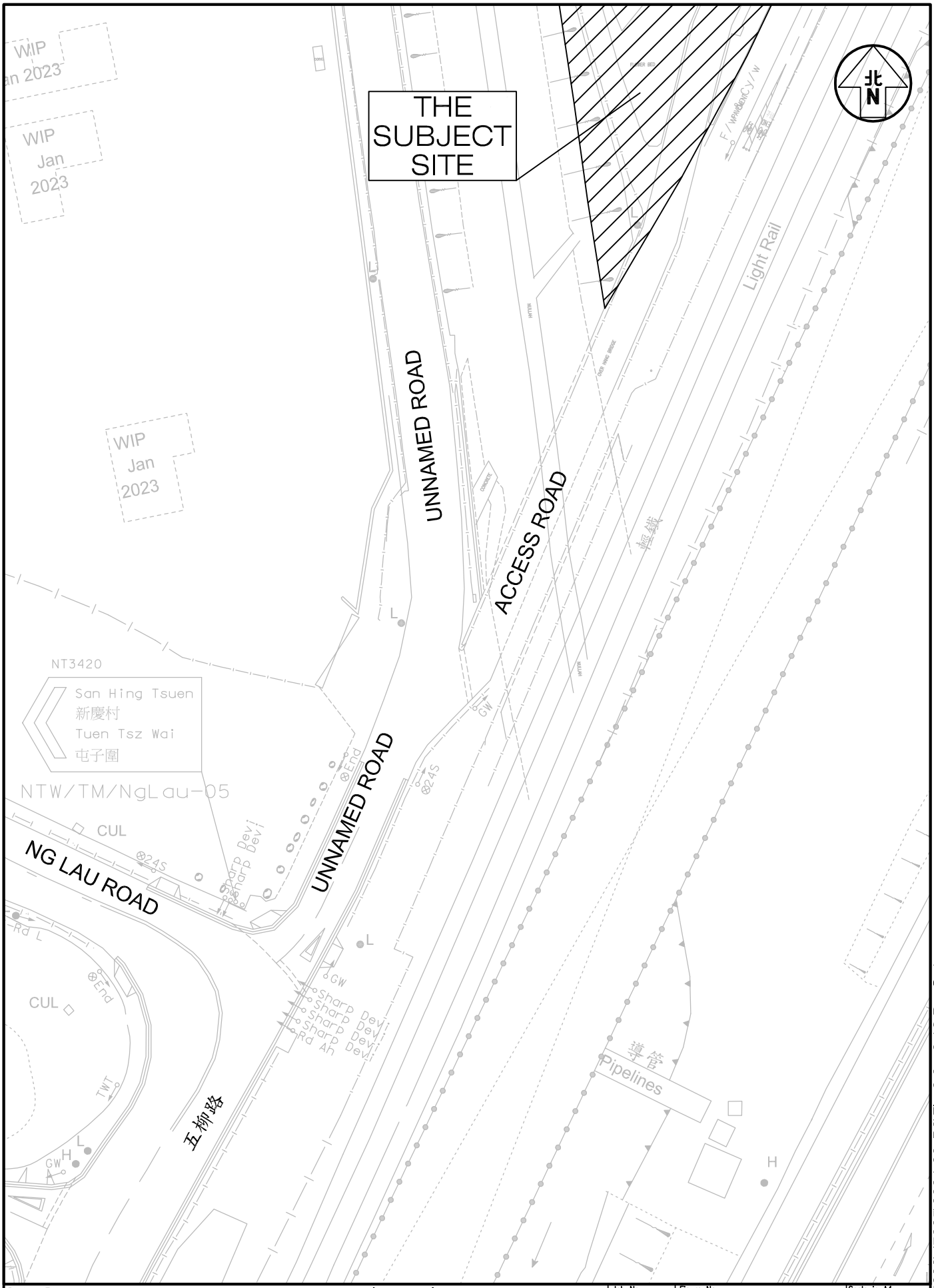
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title: LOCATION OF SURVEYED JUNCTIONS

Job No.	Figure No.			Scale in A4
J7265	2.1			1 : 5,000
Designed by	Drawn by	Checked by	Revision	Date
L K W	W S W	K C	G	20 FEB 2024

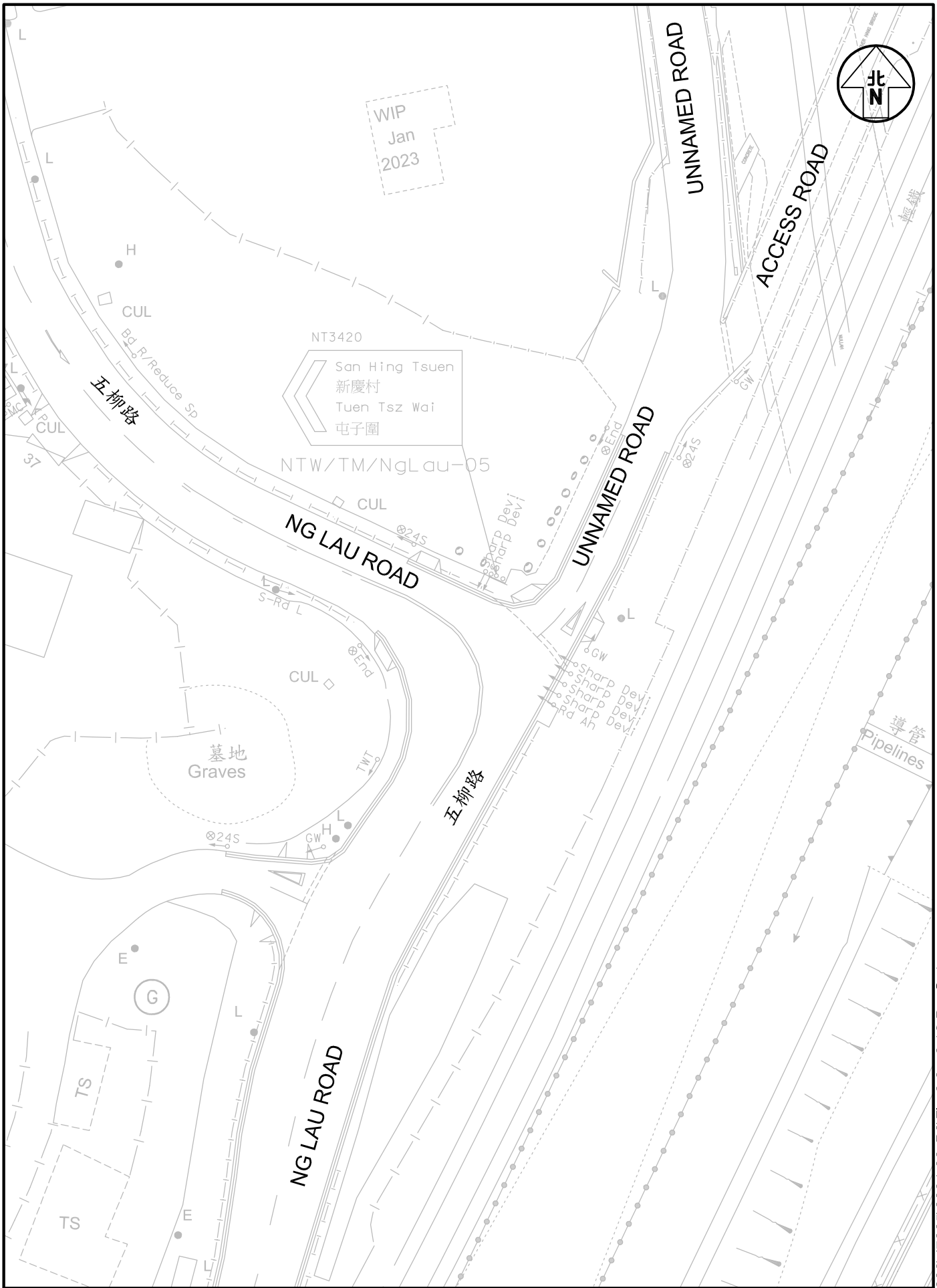
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOBs\J7250-J7299\J7265\2024 01_R6\Fig 2.1 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)				Job No. J7265	Figure No. 2.2	Scale in A4 1 : 500
				Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF UNNAMED ROAD / ACCESS ROAD				CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk		

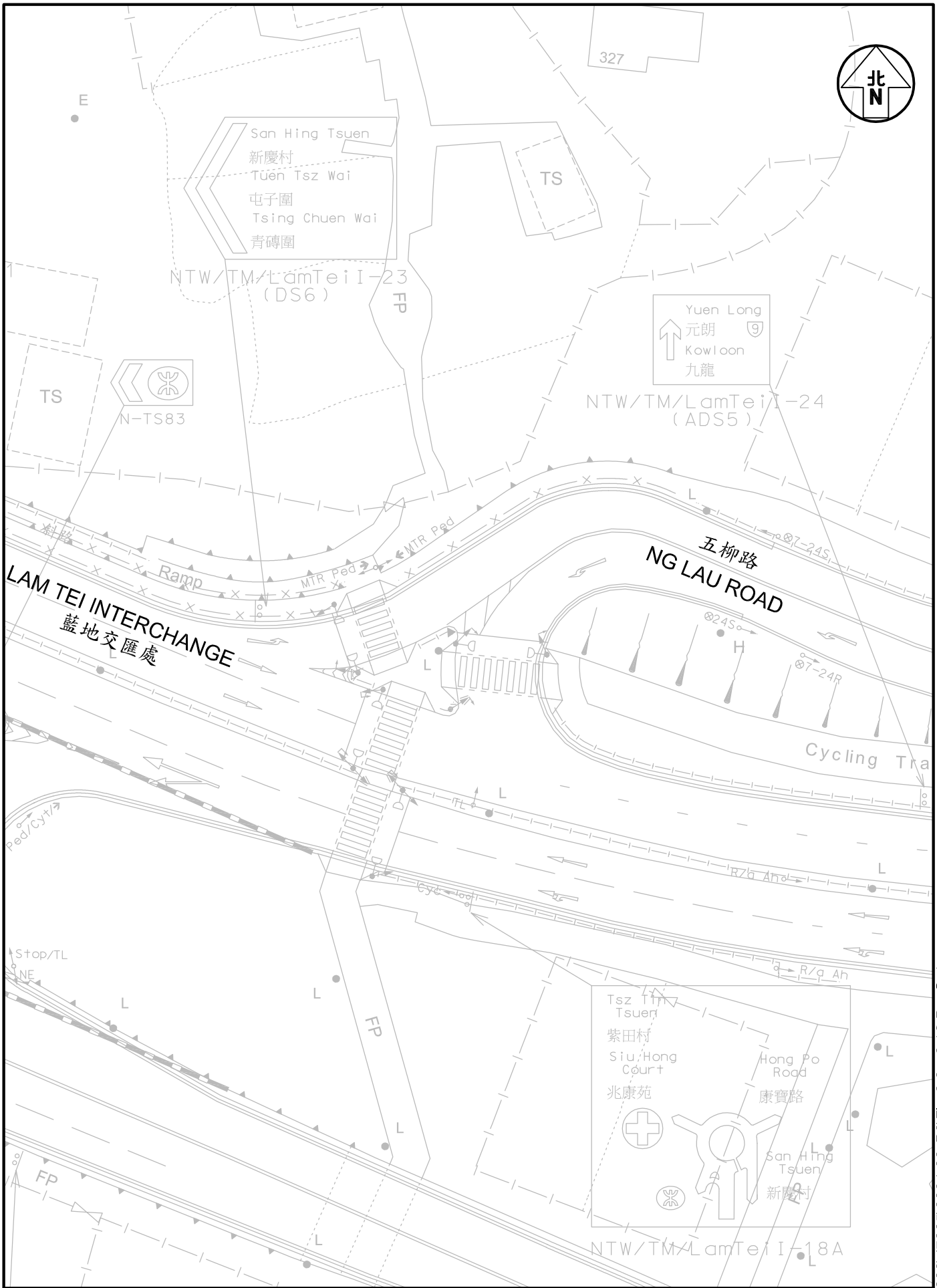
T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.3			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: **LAYOUT OF JUNCTION OF NG LAU ROAD / UNNAMED ROAD**					

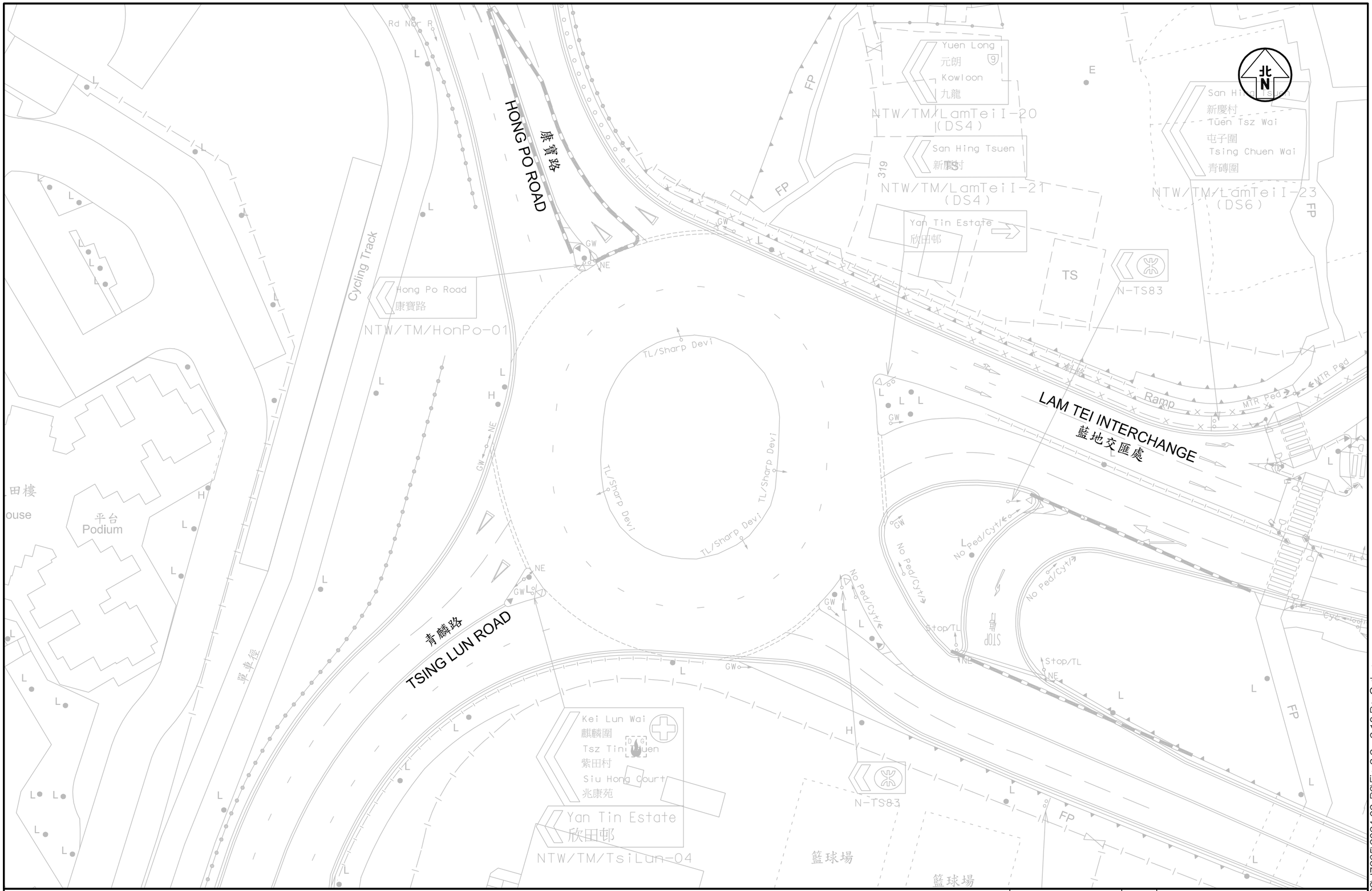
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.4			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF NG LAU ROAD / LAM TEI INTERCHANGE	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 2.5	Revision G
Figure Title	LAYOUT OF JUNCTION OF TSING LUN ROAD / HONG PO ROAD / LAM TEI INTERCHANGE	Designed by L K W / Drawn by W S W / Checked by K C	Scale in A3 1 : 500 / Date 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

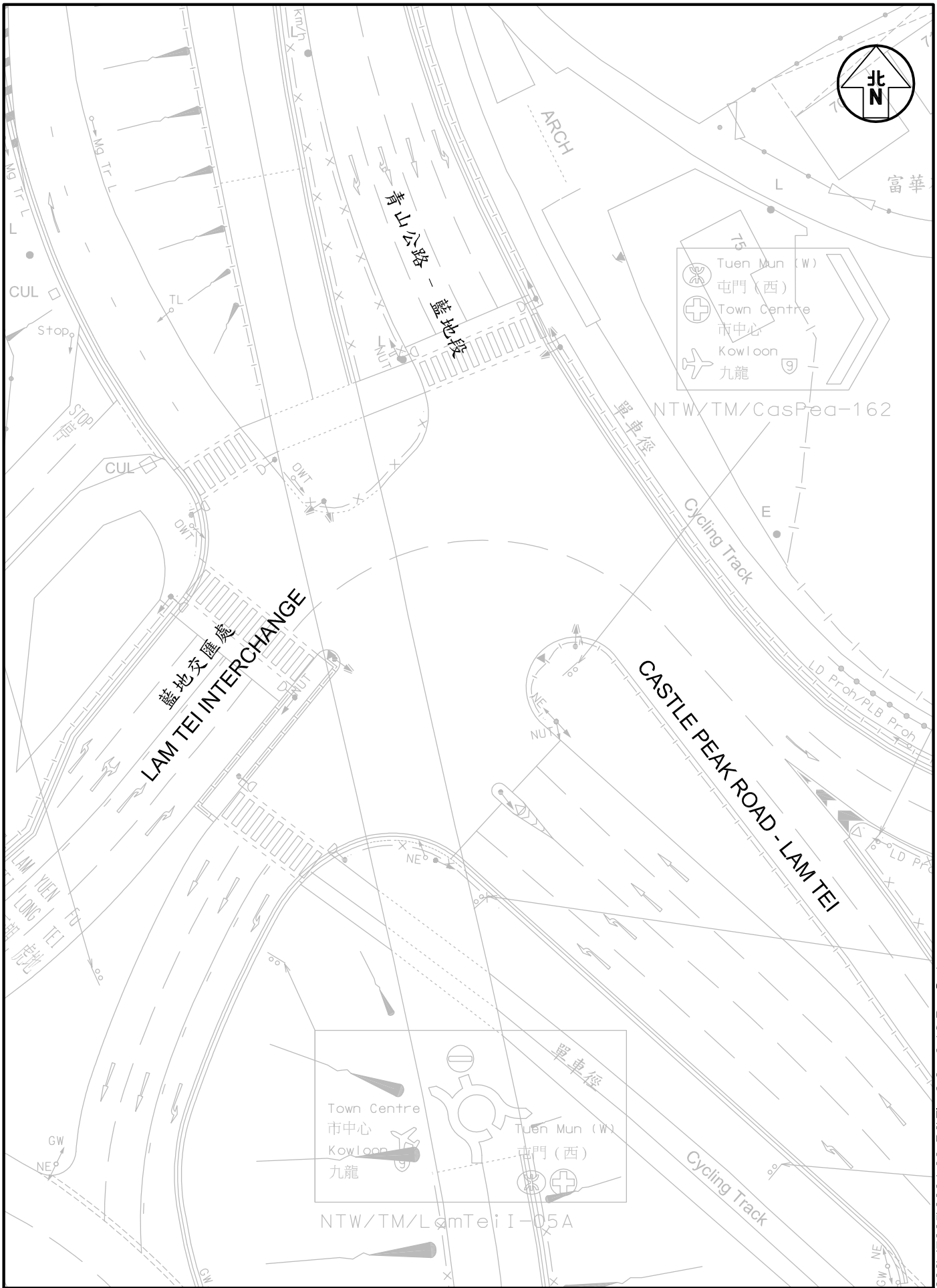
T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg

藍地交匯處
LAM TEI INTERCHANGE

Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 2.6	Revision G
Figure Title	LAYOUT OF JUNCTION OF LAM TEI INTERCHANGE	Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A3 1 : 500 / Date 20 FEB 2024	

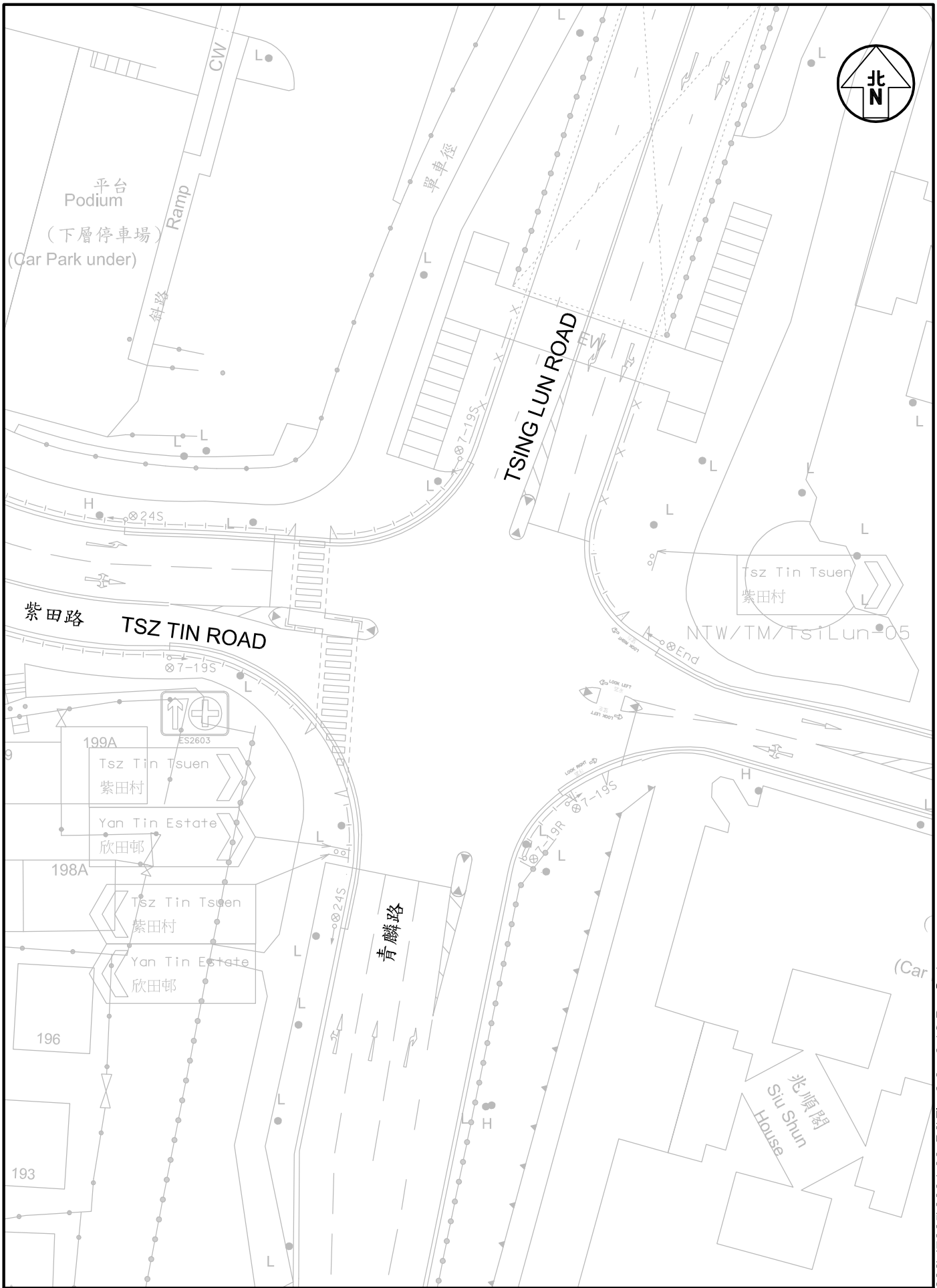
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOBJ7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.7			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF LAM TEI INTERCHANGE / CASTLE PEAK ROAD – LAM TEI	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

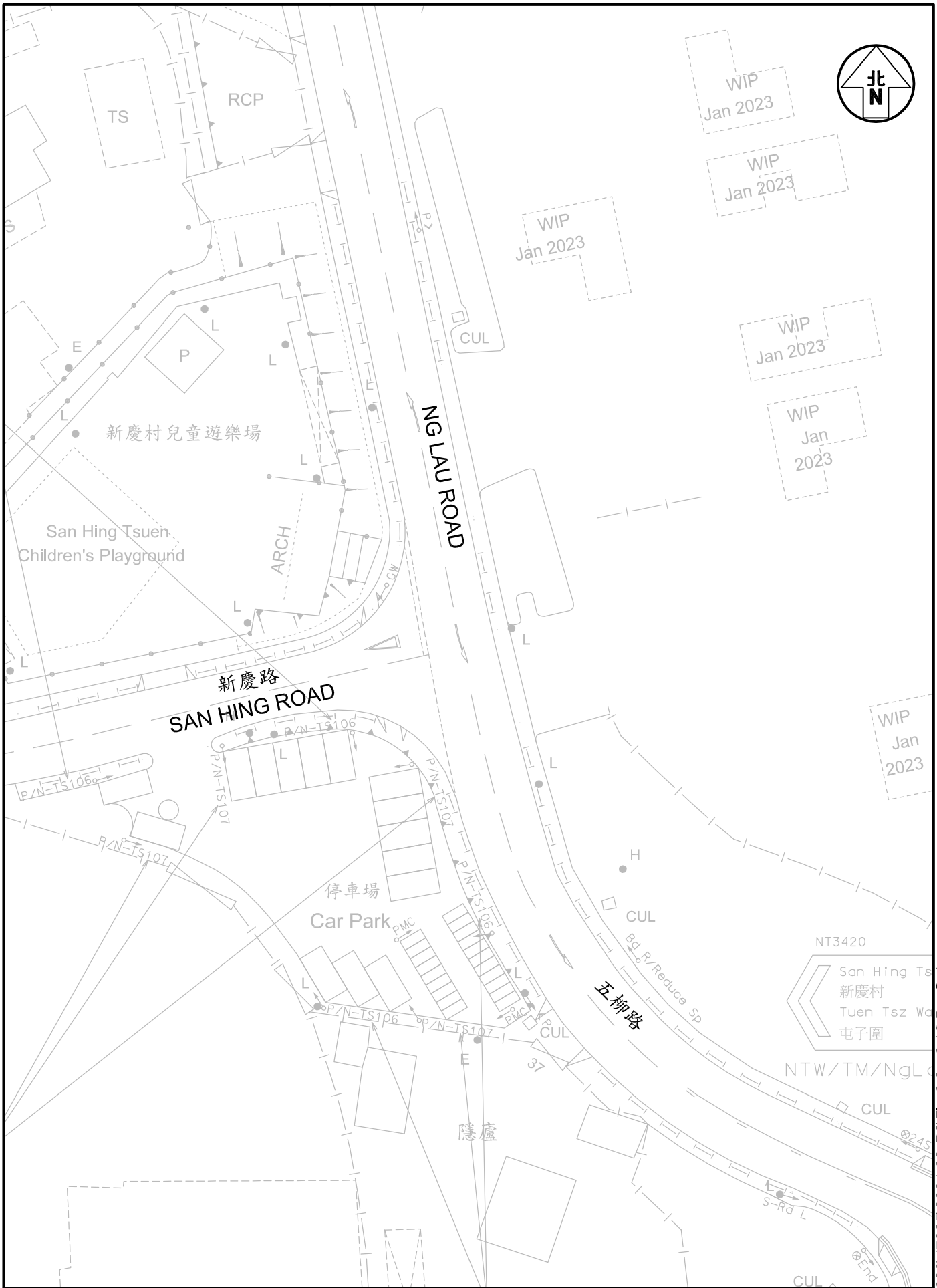
T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)					
Figure Title: LAYOUT OF JUNCTION OF TSING LUN ROAD / TSZ TIN ROAD	Job No. J7265	Figure No. 2.8			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

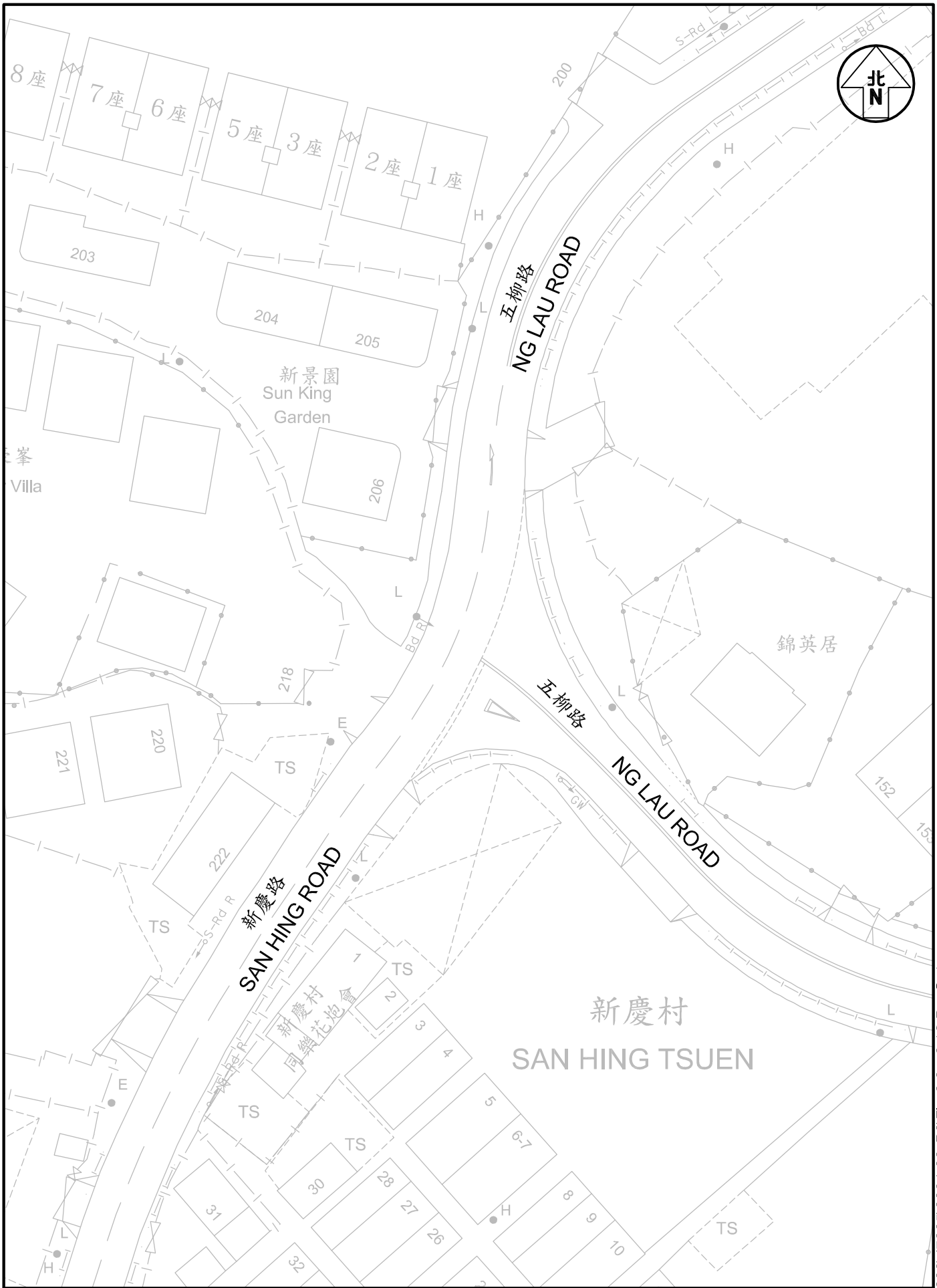
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



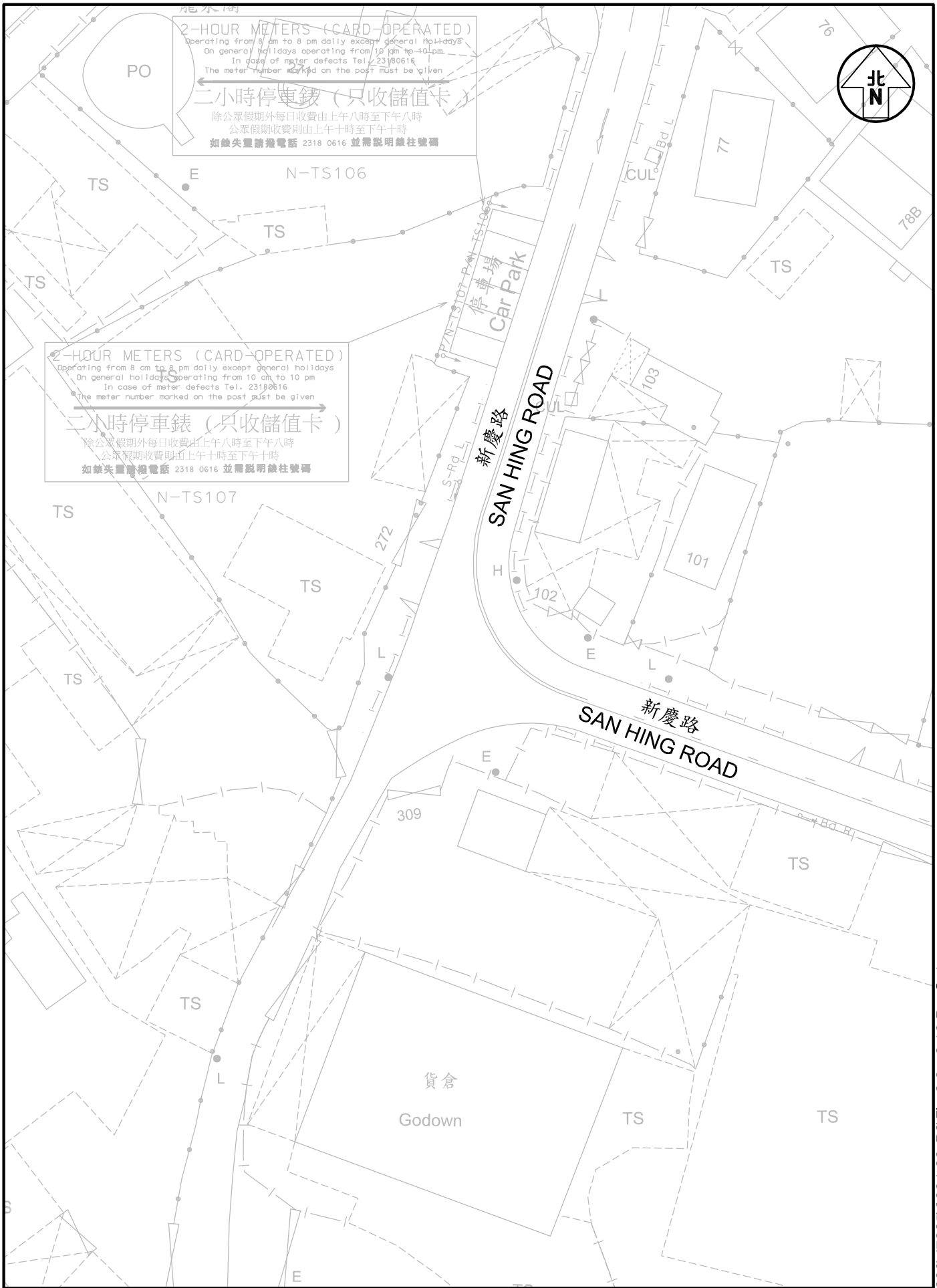
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.9			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF SAN HING ROAD / NG LAU ROAD (SOUTHERN)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



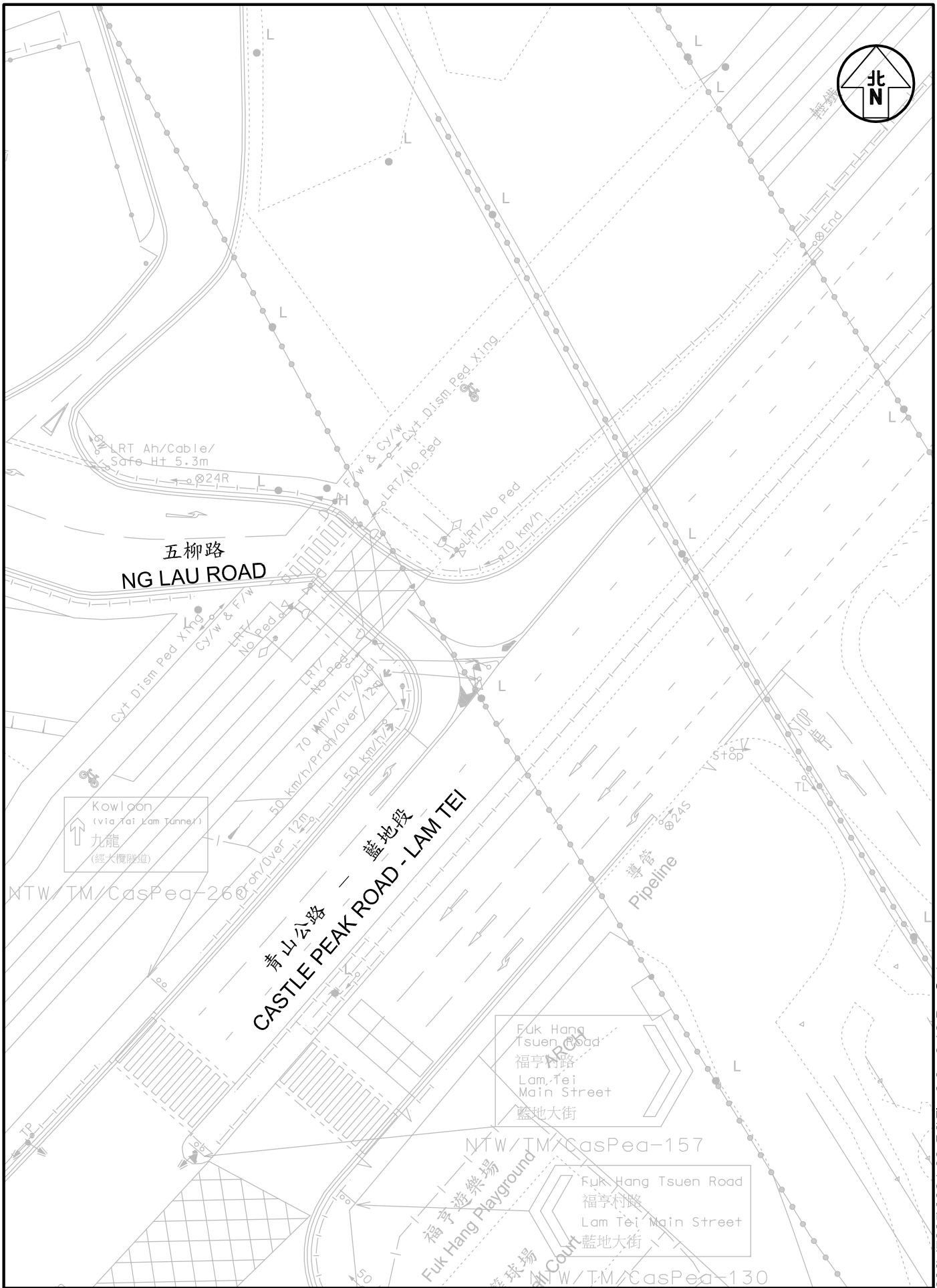
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.10			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF SAN HING ROAD / NG LAU ROAD (NORTHERN)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



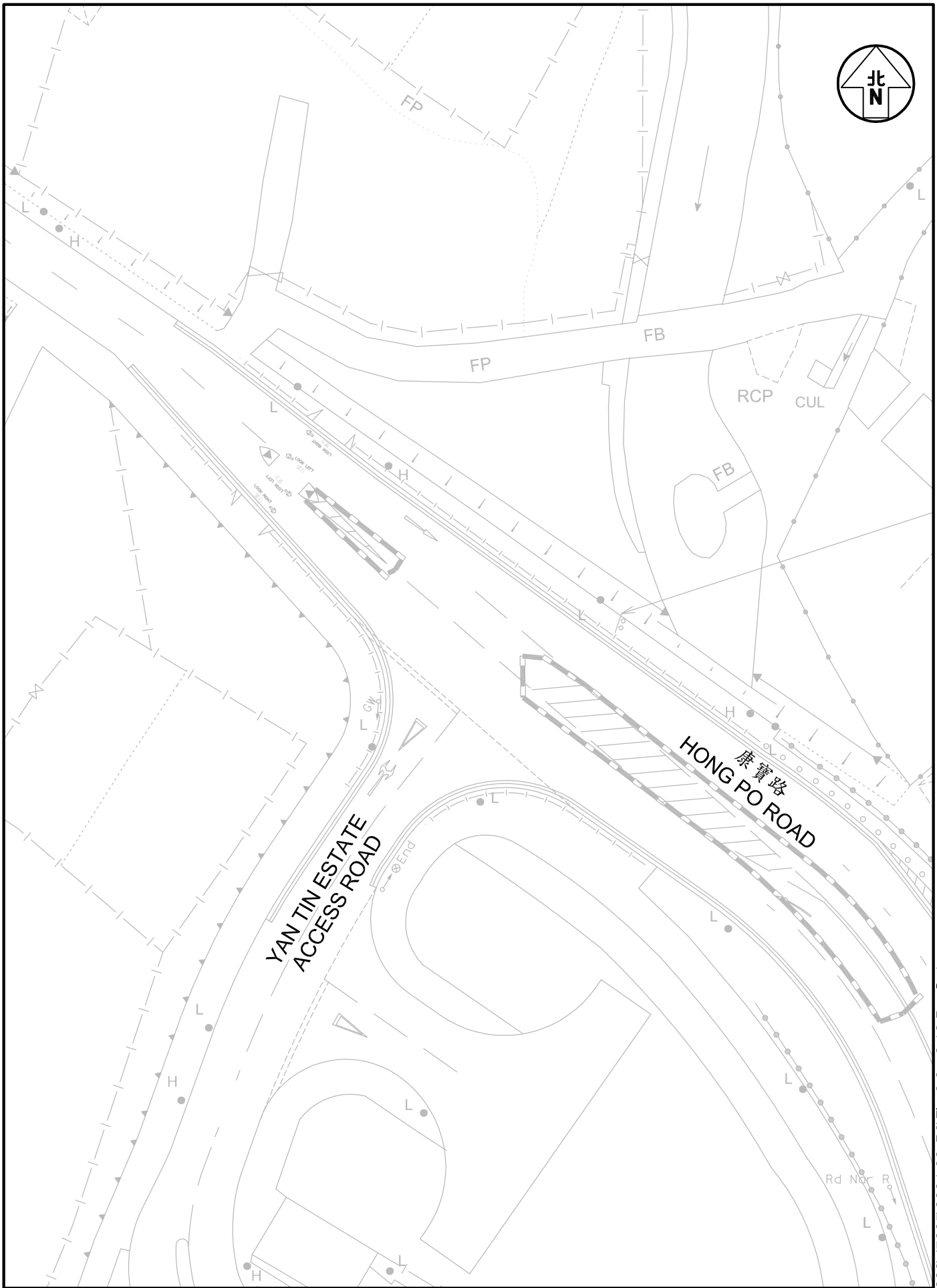
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.11			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF T-JUNCTION AT SAN HING ROAD	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



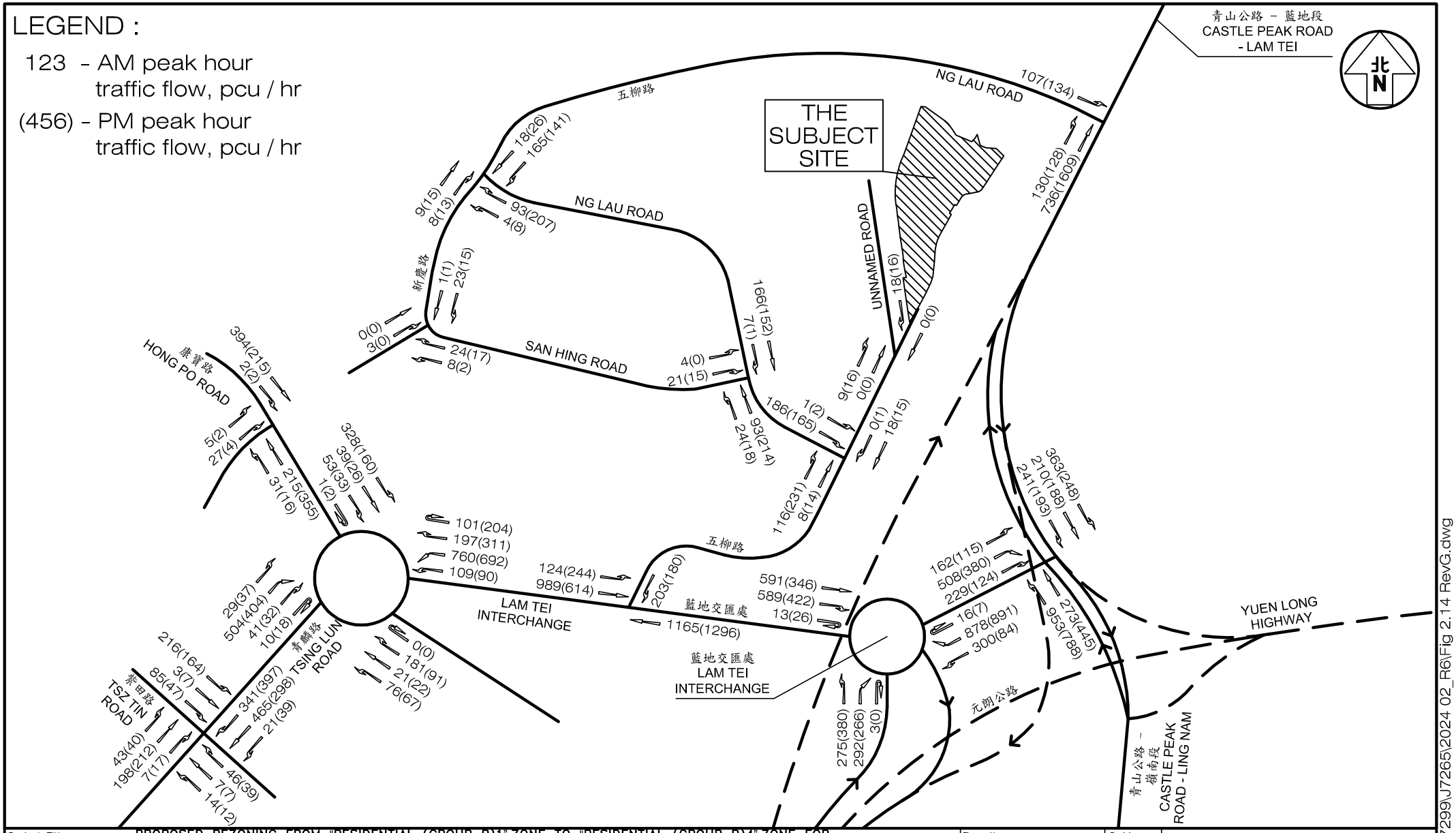
Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.12			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF NG LAU ROAD / CASTLE PEAK ROAD – LAM TEI	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.13			Scale in A4 1 : 500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: LAYOUT OF JUNCTION OF HONG PO ROAD / YAN TIN ESTATE ACCESS ROAD	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

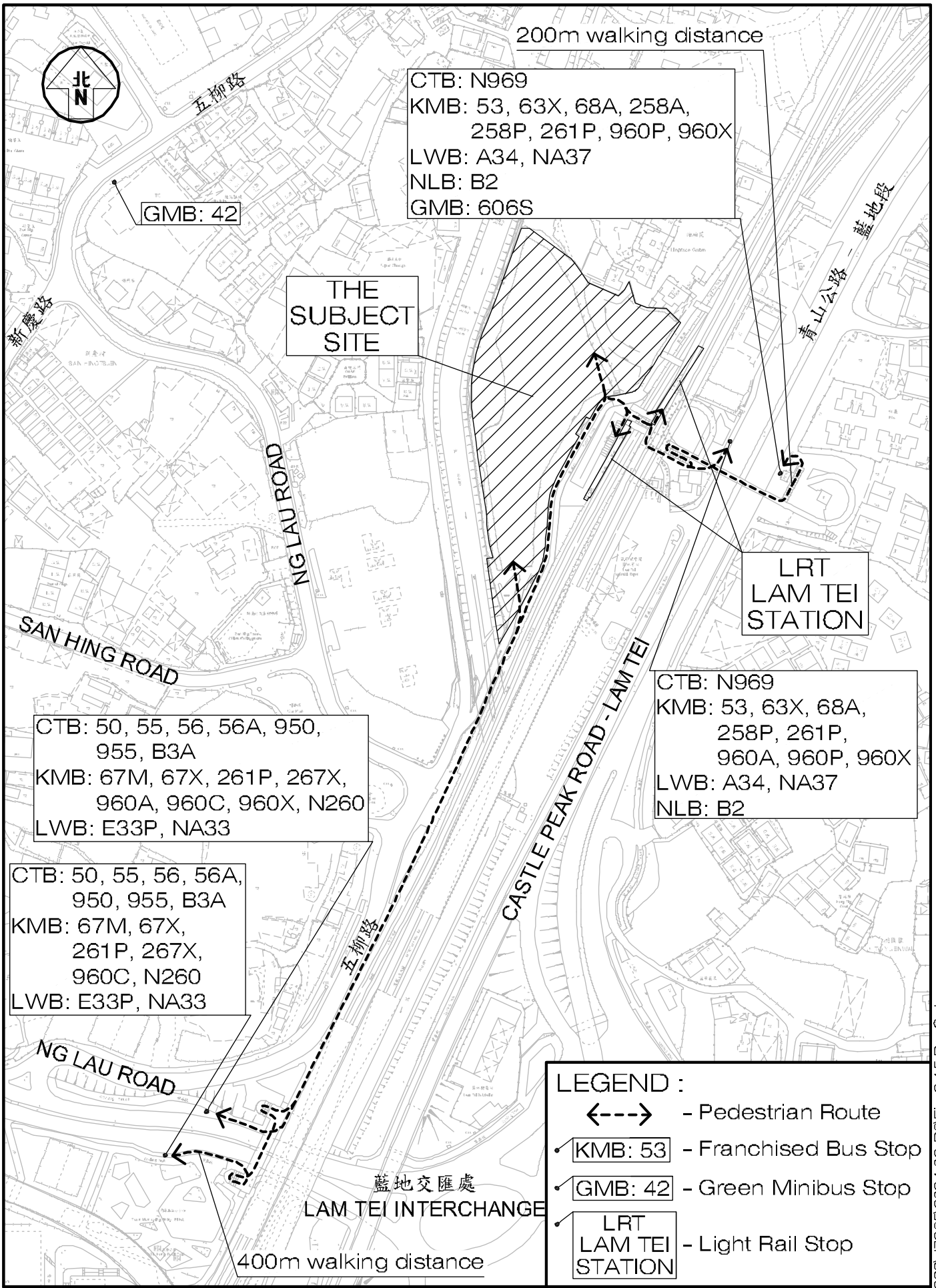
T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	J7265	Figure No. 2.14 / Revision G
Figure Title	EXISTING PEAK HOUR TRAFFIC FLOWS	Designed by L K W / Drawn by W S W / Checked by K C	Scale in A4 N.T.S. / Date 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.14 RevG.dwg

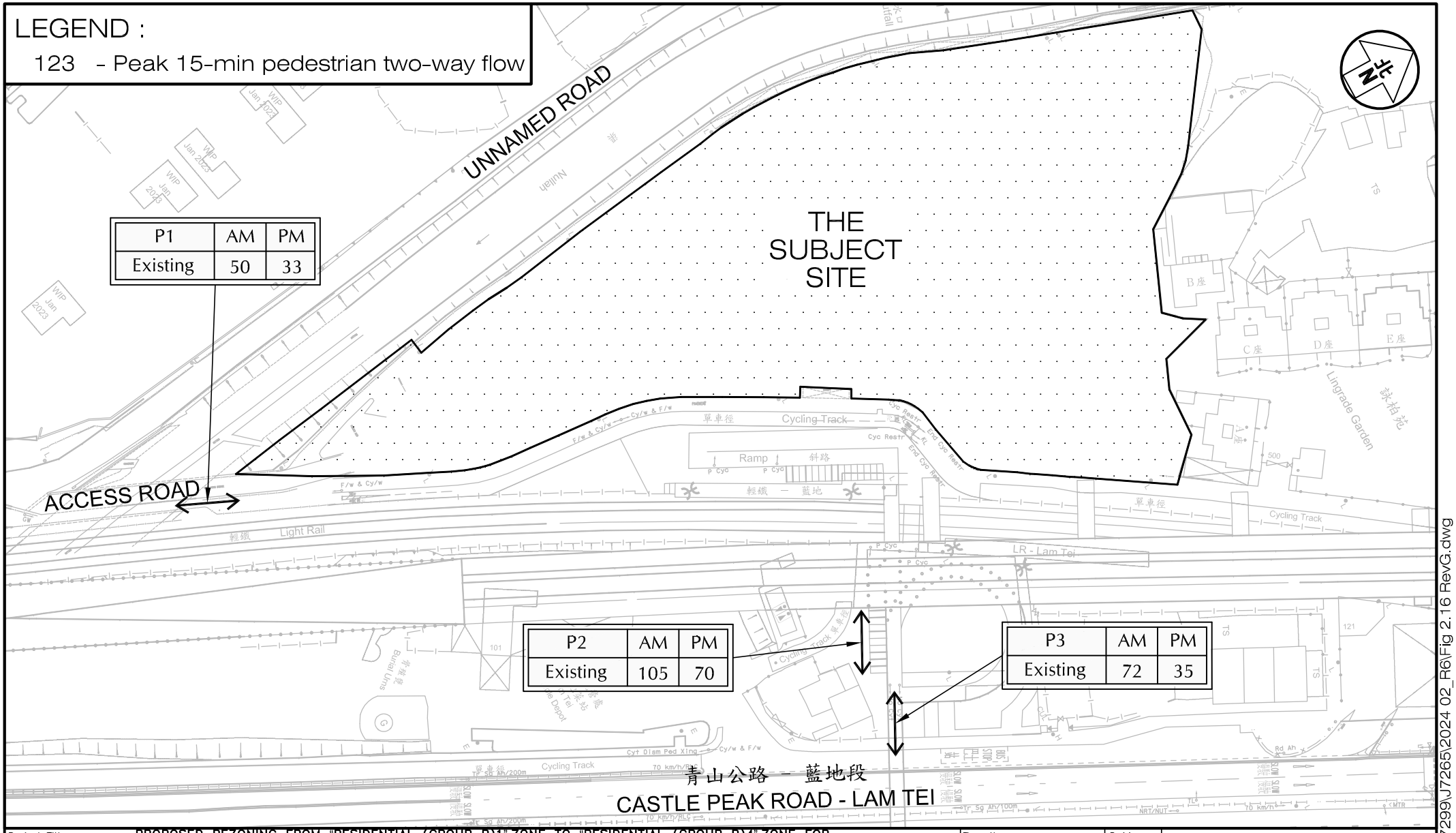


Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. 2.15			Scale in A4 1 : 2,500
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 2990 Fax : (852) 2528 6343 E-mail : mail@ckmasia.com.hk				

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.15 RevG.dwg

LEGEND :

123 - Peak 15-min pedestrian two-way flow



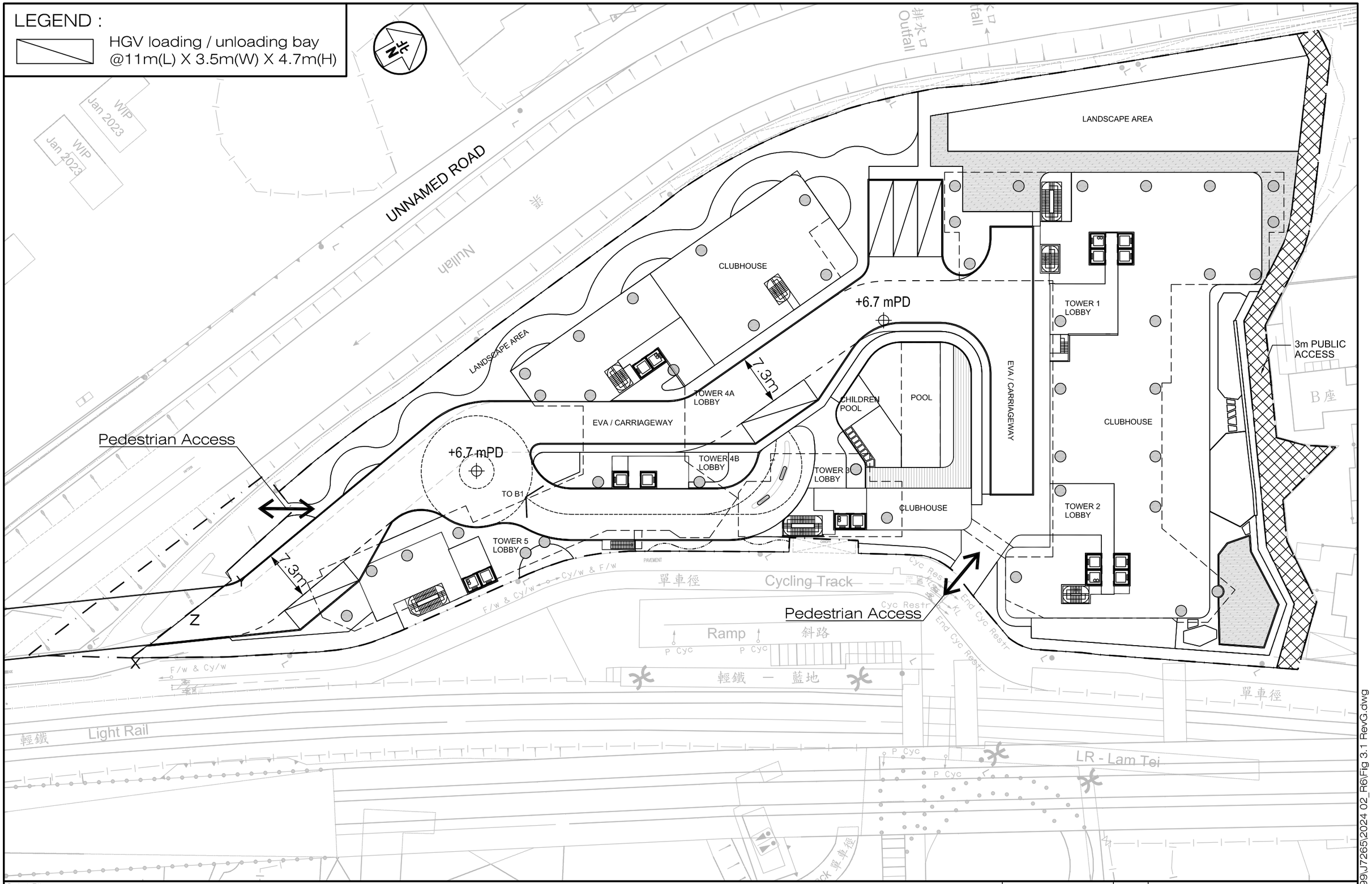
Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	J7265	Figure No. 2.16	Revision G
Figure Title	EXISTING PEAK 15-MINUTE PEDESTRIAN FLOWS		Designed by L K W / Drawn by W S W / Checked by K C	
			Scale in A4 1 : 1,000 / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.16 RevG.dwg

LEGEND :

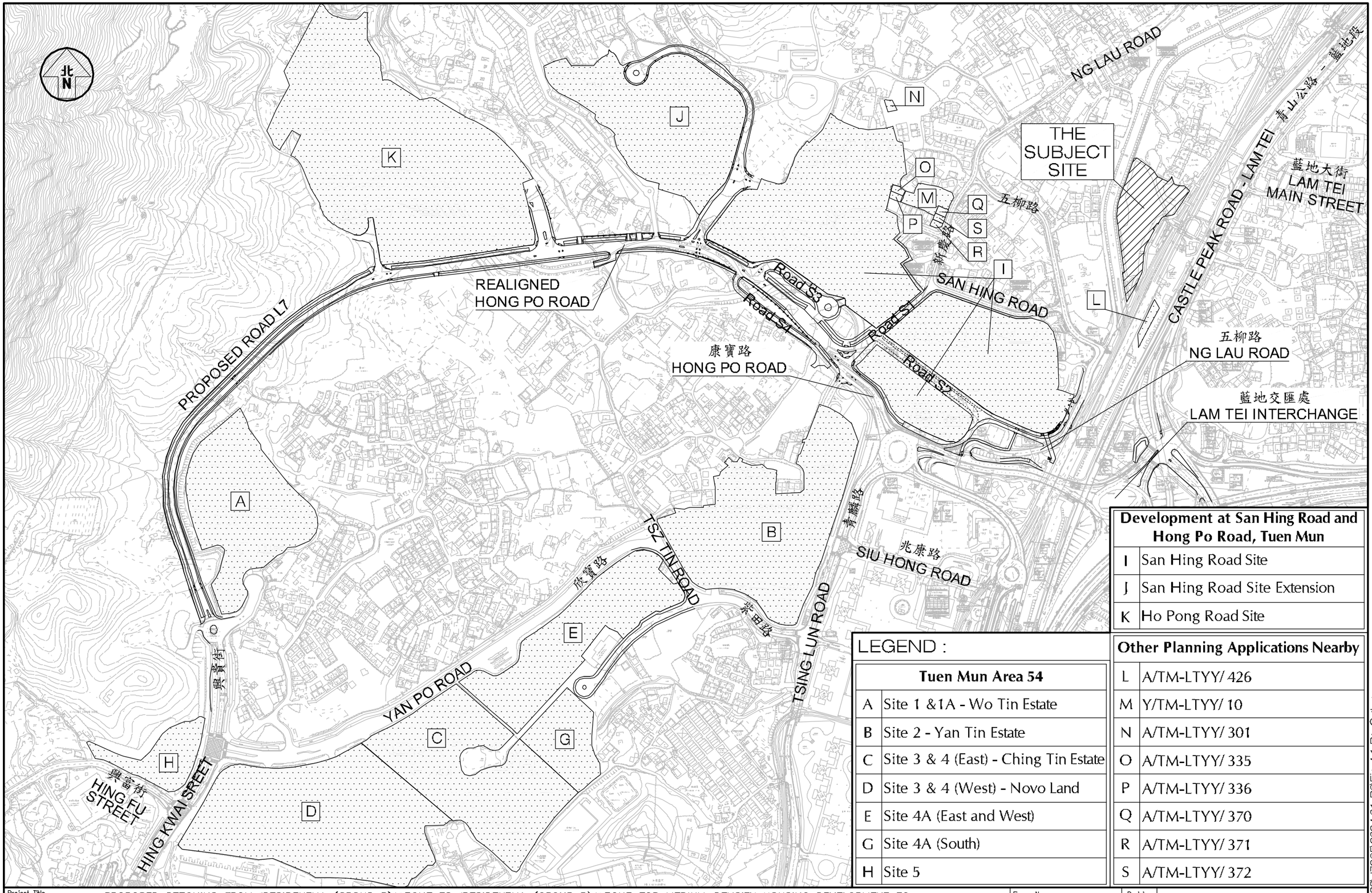
HGV loading / unloading bay
@11m(L) X 3.5m(W) X 4.7m(H)



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	J7265	
Figure Title	MASTER LAYOUT PLAN	Figure No. 3.1	Revision G
		Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A3 1 : 500 / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 3.1 RevG.dwg



Development at San Hing Road and Hong Po Road, Tuen Mun	
I	San Hing Road Site
J	San Hing Road Site Extension
K	Ho Pong Road Site

LEGEND :

Tuen Mun Area 54	
A	Site 1 &1A - Wo Tin Estate
B	Site 2 - Yan Tin Estate
C	Site 3 & 4 (East) - Ching Tin Estate
D	Site 3 & 4 (West) - Novo Land
E	Site 4A (East and West)
G	Site 4A (South)
H	Site 5

Other Planning Applications Nearby	
L	A/TM-LTYY/ 426
M	Y/TM-LTYY/ 10
N	A/TM-LTYY/ 301
O	A/TM-LTYY/ 335
P	A/TM-LTYY/ 336
Q	A/TM-LTYY/ 370
R	A/TM-LTYY/ 371
S	A/TM-LTYY/ 372

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265

Figure Title: THE MAJOR ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

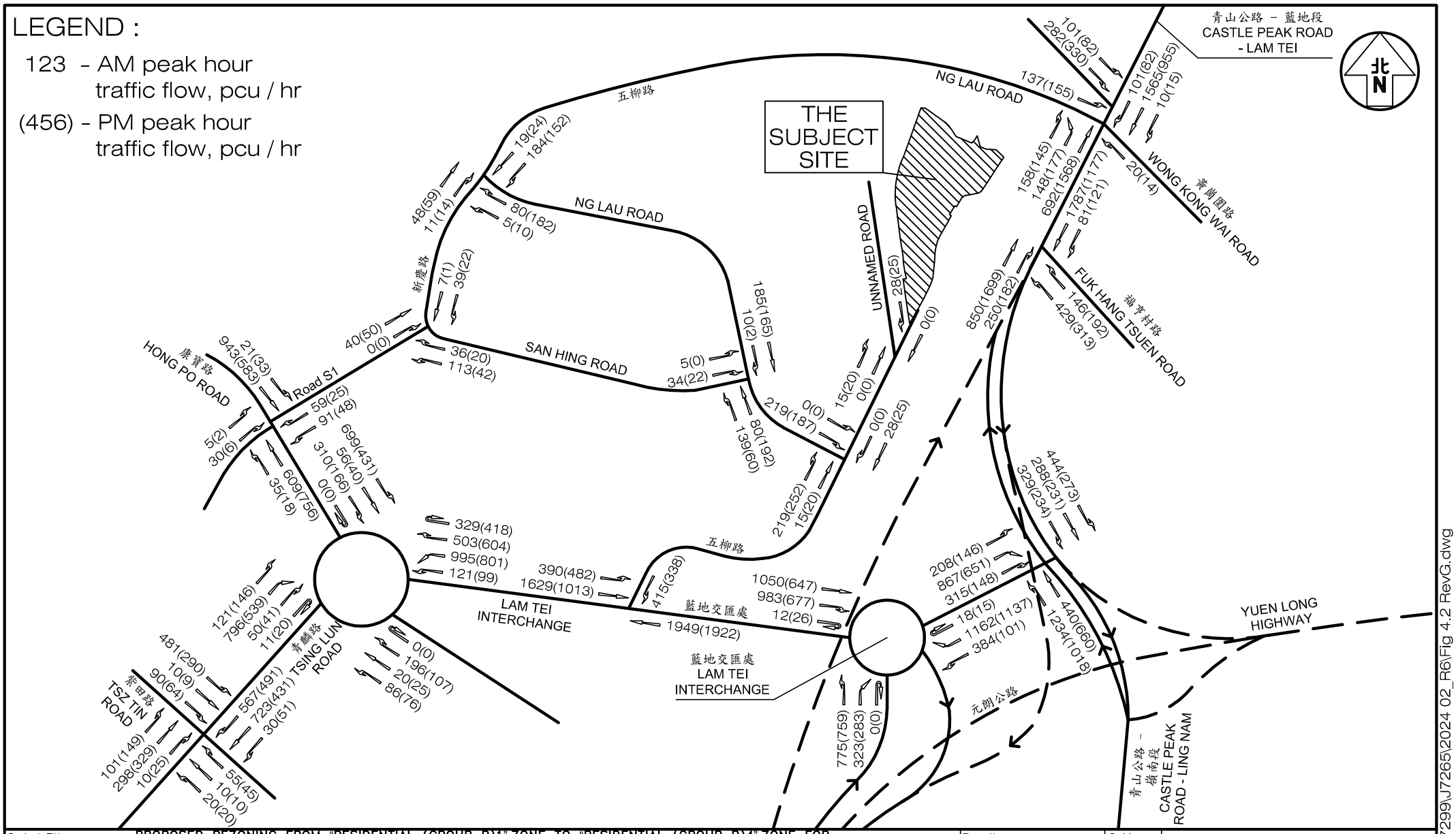
Figure No. 4.1 | Revision G

Designed by L K W | Drawn by W S W | Checked by K C

Scale in A3: 1 : 5,000 | Date: 20 FEB 2024

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

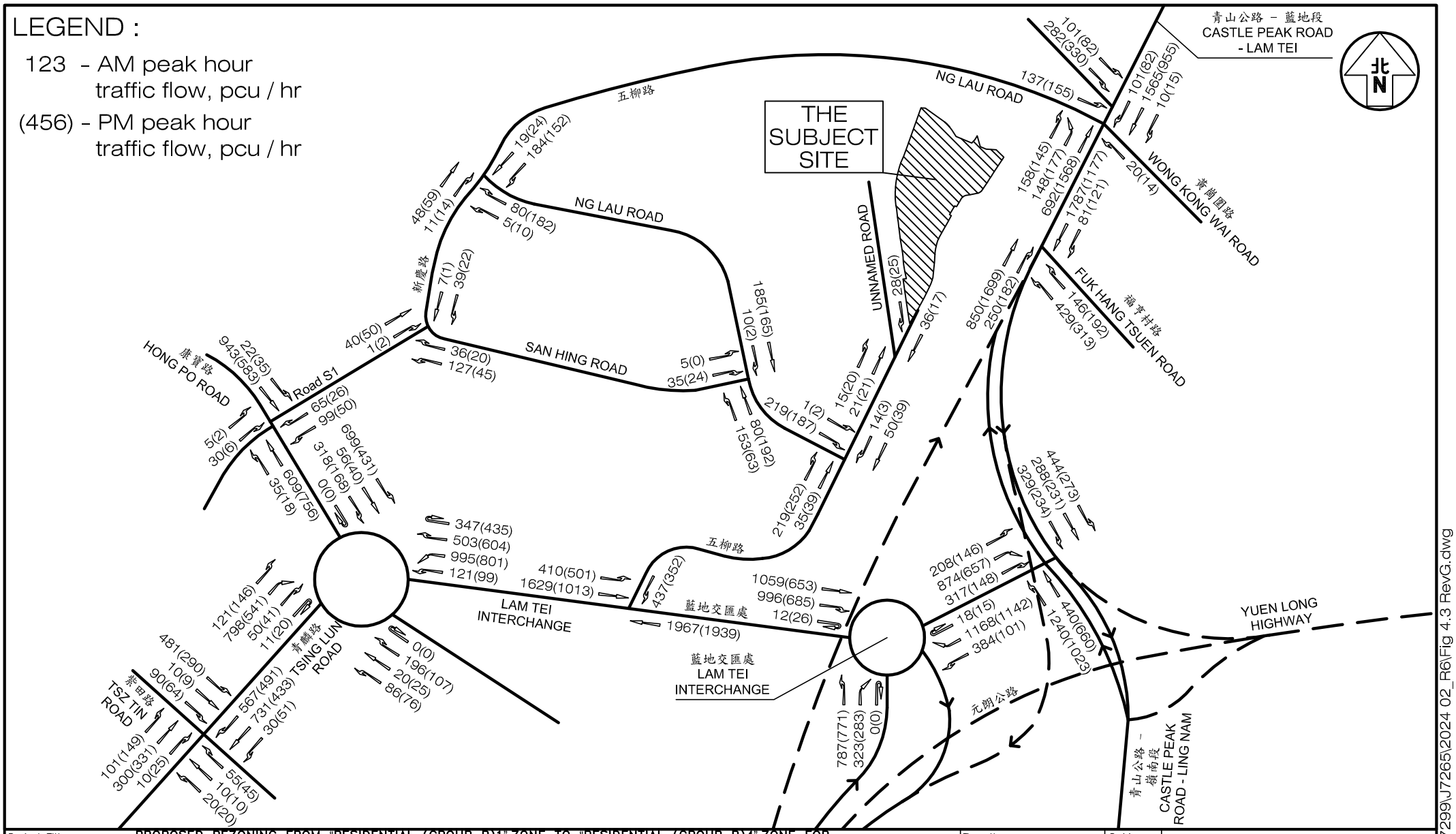
T:\JOB\J7250-J7299\J7265\2024 01_R6\Fig 4.1 RevG.dwg



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.2	Revision G
Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITHOUT PROPOSED DEVELOPMENT	Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A4 N.T.S. / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

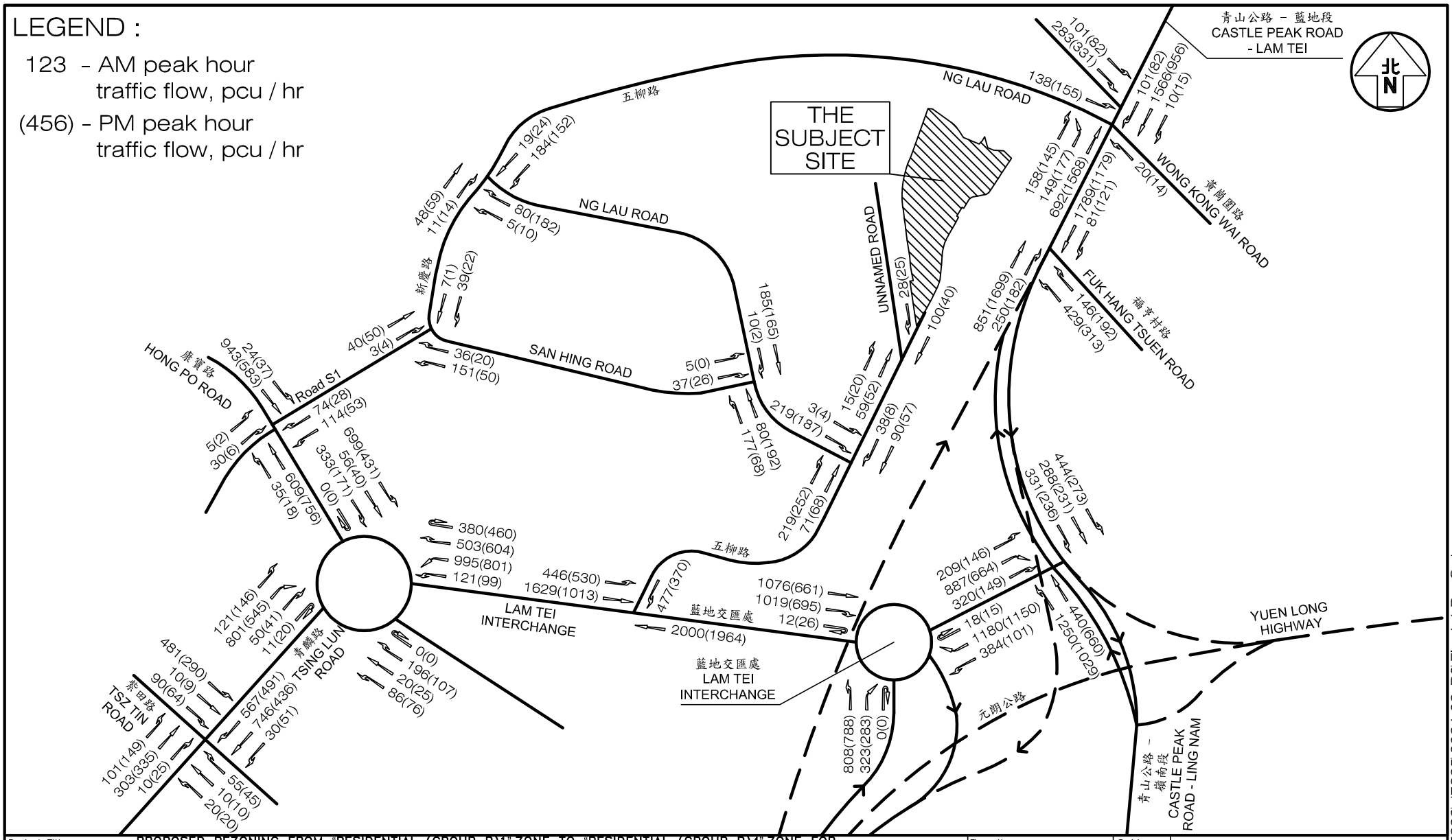
T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 4.2 RevG.dwg



Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.3	Revision G
Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITH APPROVED SCHEME	Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A4 N.T.S. / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 4.3 RevG.dwg



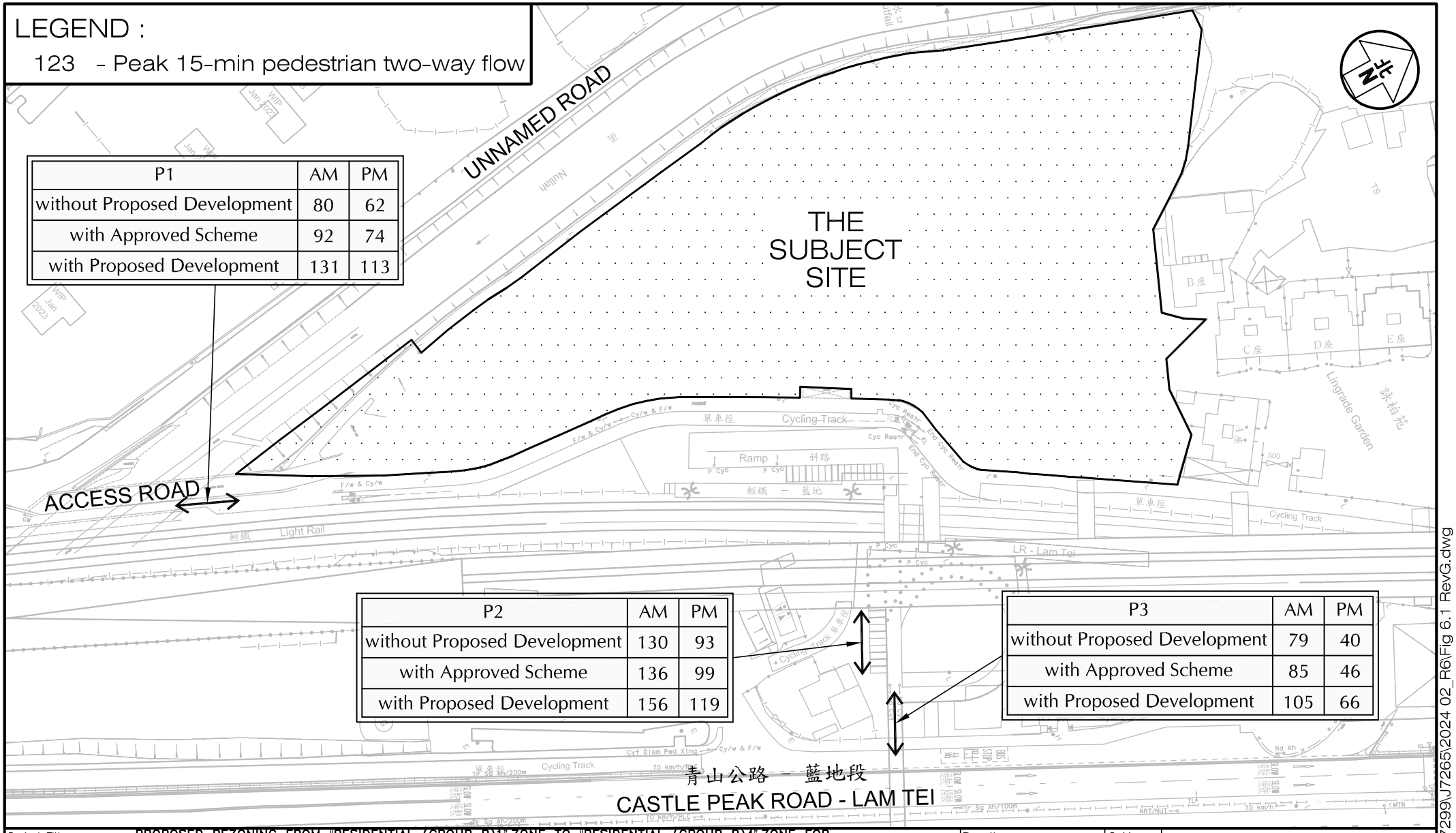
Project Title	PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265	Figure No. 4.4	Revision G
Figure Title	YEAR 2033 PEAK HOUR TRAFFIC FLOWS WITH PROPOSED DEVELOPMENT	Designed by L K W / Drawn by W S W / Checked by K C	
		Scale in A4 N.T.S. / Date 20 FEB 2024	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 4.4 RevG.dwg

LEGEND :

123 - Peak 15-min pedestrian two-way flow



P1	AM	PM
without Proposed Development	80	62
with Approved Scheme	92	74
with Proposed Development	131	113

P2	AM	PM
without Proposed Development	130	93
with Approved Scheme	136	99
with Proposed Development	156	119

P3	AM	PM
without Proposed Development	79	40
with Approved Scheme	85	46
with Proposed Development	105	66

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265

Figure Title: YEAR 2033 PEAK 15-MINUTE PEDESTRIAN FLOWS

Figure No. 6.1 | Revision G

Designed by L K W | Drawn by W S W | Checked by K C

Scale in A4: 1 : 1,000 | Date: 20 FEB 2024

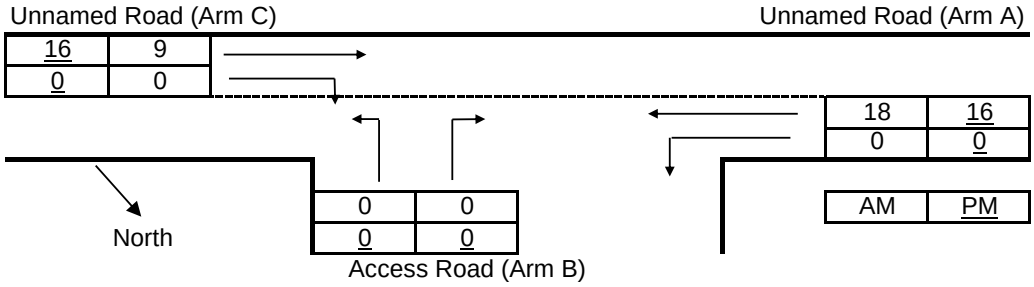
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 6.1 RevG.dwg

Appendix A – Junction Capacity Analysis

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 1



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	5.70	V-rBA	100	w-BA	2.05	D	0.8093
	W-CR	0.00	V-lBA	100	w-BC	2.05	E	0.8343
			V-rBC	100	w-CB	2.70	F	0.8943
			V-rCB	100			Y	0.8034

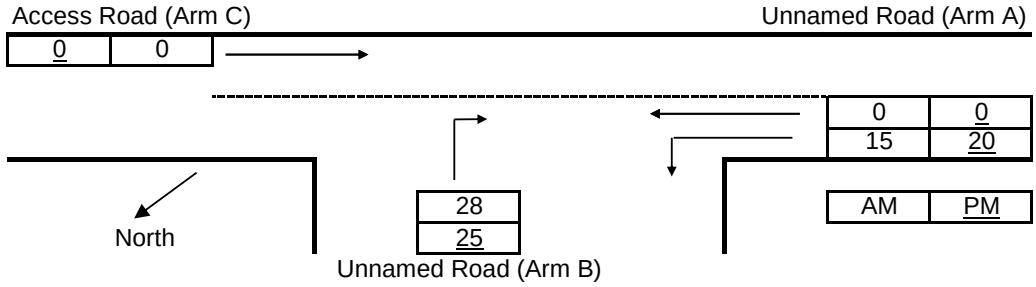
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu	AM	PM
q-CA	9	16	Q-BA	502	501
q-CB	0	0	Q-BC	617	618
q-AB	0	0	Q-CB	662	662
q-AC	18	16	Q-BAC	502	501
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.000	0.000

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Without Development				P. 2



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

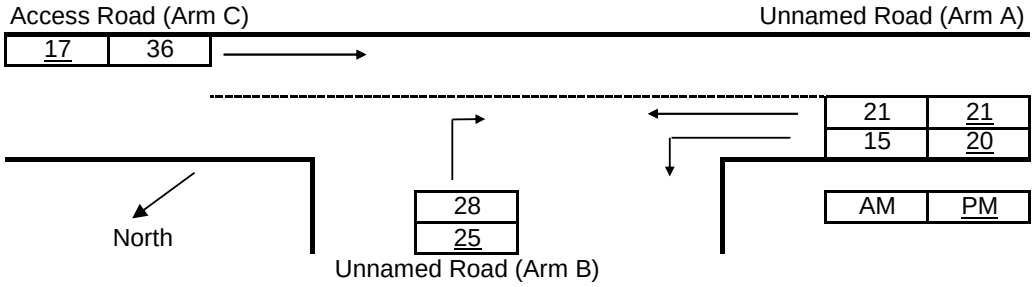
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	506	506
q-CB	0	0	Q-BC	620	620
q-AB	15	20	Q-CB	662	661
q-AC	0	0	Q-BAC	506	506
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.055	0.049
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.055	0.049

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Approved Scheme				P. 3



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

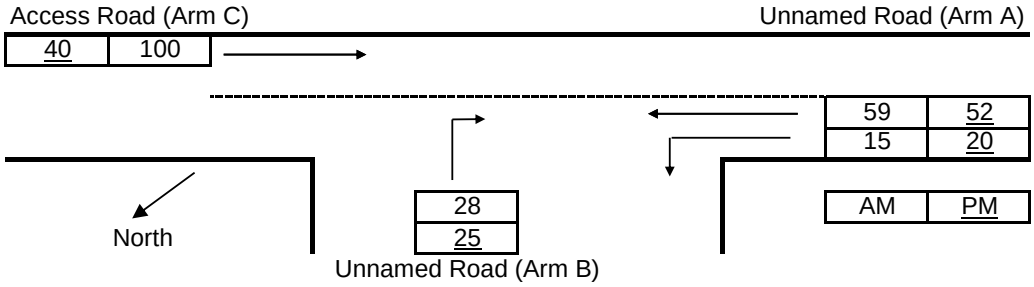
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	36	17	Q-BA	496	498
q-CB	0	0	Q-BC	615	615
q-AB	15	20	Q-CB	657	656
q-AC	21	21	Q-BAC	496	498
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.056	0.050
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.056	0.050

Priority Junction Analysis

Junction:	Unnamed Road / Access Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Proposed Scheme				P. 4



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.90	V-rBA	60	w-BA	4.70	D	0.8093
	W-CR	0.00	V-lBA	90	w-BC	0.00	E	0.8343
			V-rBC	0.00	w-CB	0.00	F	0.8943
			V-rCB	55			Y	0.8034

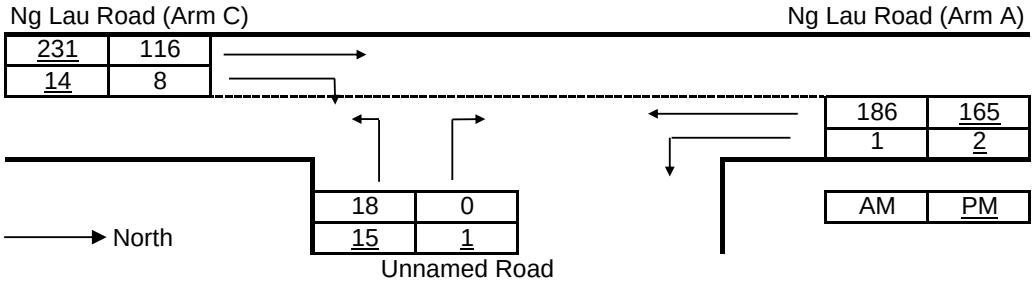
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	100	40	Q-BA	477	487
q-CB	0	0	Q-BC	606	607
q-AB	15	20	Q-CB	647	647
q-AC	59	52	Q-BAC	477	487
q-BA	28	25			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.059	0.051
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.059	0.051

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 5



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.65	V-rBA	30	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	100	w-BC	2.05	E	0.7808
			V-rBC	30	w-CB	4.70	F	1.0394
			V-rCB	60			Y	0.7016

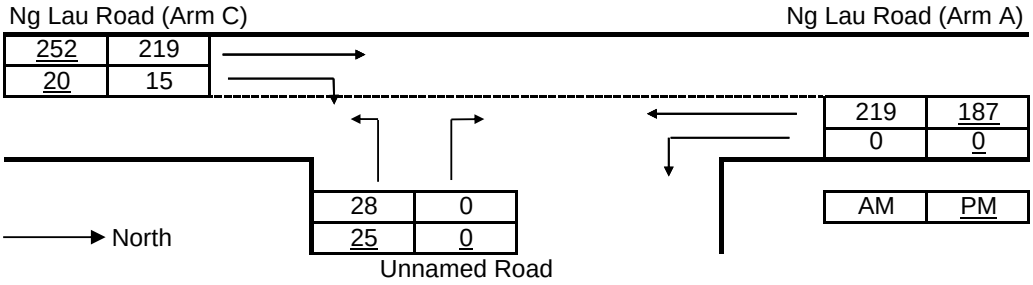
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	116	231	Q-BA	422	411
q-CB	8	14	Q-BC	545	549
q-AB	1	2	Q-CB	725	730
q-AC	186	165	Q-BAC	545	537
q-BA	0	1			
q-BC	18	15			
f	1.000	0.938			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.002
B-C	0.033	0.027
C-B	0.011	0.019
B-AC	0.033	0.030

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Without Development				P. 6



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

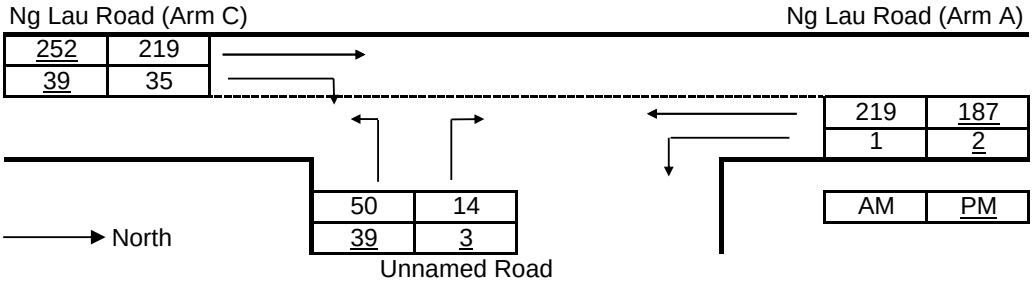
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	402	403
q-CB	15	20	Q-BC	538	544
q-AB	0	0	Q-CB	716	725
q-AC	219	187	Q-BAC	538	544
q-BA	0	0			
q-BC	28	25			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.052	0.046
C-B	0.021	0.028
B-AC	0.052	0.046

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Approved Scheme				P. 7



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

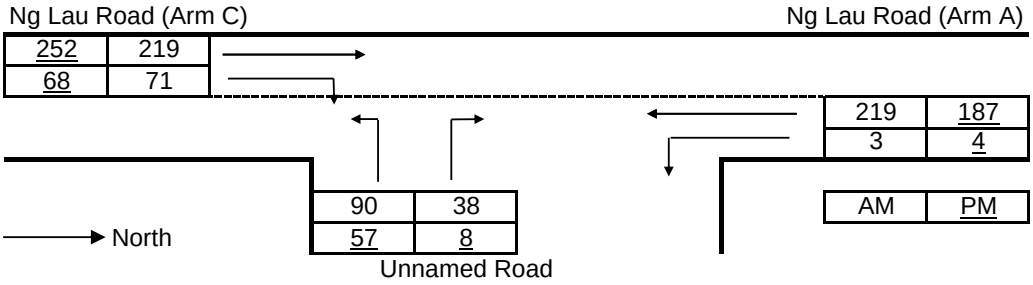
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	396	397
q-CB	35	39	Q-BC	538	544
q-AB	1	2	Q-CB	716	724
q-AC	219	187	Q-BAC	499	530
q-BA	14	3			
q-BC	50	39			
f	0.781	0.929			

Ratio-of-flow to Capacity	AM	PM
B-A	0.035	0.008
B-C	0.093	0.072
C-B	0.049	0.054
B-AC	0.128	0.079

Priority Junction Analysis

Junction:	Ng Lau Road / Unnamed Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Proposed Scheme				P. 8



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.50	V-rBA	20	w-BA	2.05	D	0.7574
	W-CR	0.00	V-lBA	90	w-BC	2.05	E	0.7808
			V-rBC	20	w-CB	4.70	F	1.0394
			V-rCB	25			Y	0.7016

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	219	252	Q-BA	386	389
q-CB	71	68	Q-BC	538	544
q-AB	3	4	Q-CB	715	724
q-AC	219	187	Q-BAC	482	519
q-BA	38	8			
q-BC	90	57			
f	0.703	0.877			

Ratio-of-flow to Capacity	AM	PM
B-A	0.098	0.021
B-C	0.167	0.105
C-B	0.099	0.094
B-AC	0.266	0.125

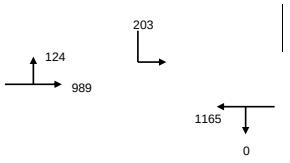
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: Existing Condition P. 9

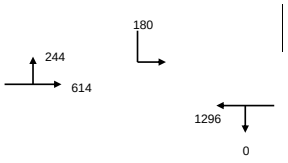
Design Year: 2023 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA+LT	A1	1	3.65	30.0		23	1957	534	0.273		60	1922	408	0.212	
	SA	A2	1	3.65				2120	579	0.273			2120	450	0.212	
Lam Tei Interchange WB	SA+LT	A3	1	3.65	15.0		0	1980	563	0.284	0.284	0	1980	626	0.316	0.316
	SA	A4	1	3.65				2120	602	0.284			2120	670	0.316	
Ng Lau Road SB	LT	B1	2	4.00	12.0		100	1791	203	0.113	0.113	100	1791	180	0.100	0.100
pedestrian phase		$C_{(P)}$	1		min crossing time =		8	sec GM +		8	sec FGM =		16	sec		
		$D_{(P)}$	2		min crossing time =		8	sec GM +		9	sec FGM =		17	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

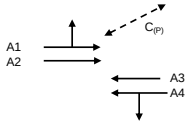
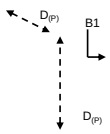


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.398		0.417	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	104%		95%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

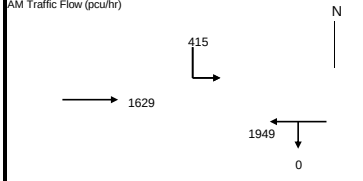
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: Without Development P. 10

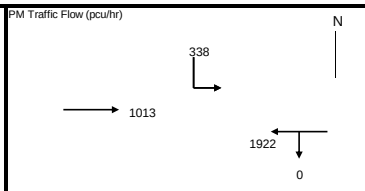
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	815	0.378			2155	507	0.235	
	SA	A3	1	4.00				2155	814	0.378			2155	506	0.235	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	942	0.467	0.467	0	2015	929	0.461	0.461
	SA	B2	1	4.00				2155	1007	0.467			2155	993	0.461	
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	199	0.106	0.106	100	1883	162	0.086	0.086
	LT	C2	2	5.00	15.0		100	2050	216	0.105		100	2050	176	0.086	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

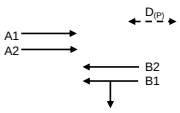
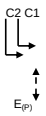


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.573		0.547	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	42%		48%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

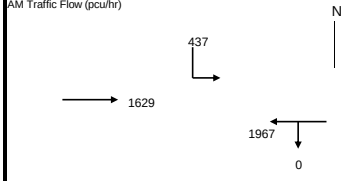
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: With Approved Scheme P. 11

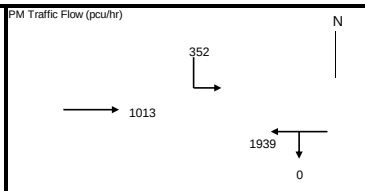
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	815	0.378			2155	507	0.235	
	SA	A3	1	4.00				2155	814	0.378			2155	506	0.235	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	950	0.471	0.471	0	2015	937	0.465	0.465
	SA	B2	1	4.00				2155	1017	0.472			2155	1002	0.465	
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	209	0.111	0.111	100	1883	169	0.090	0.090
	LT	C2	2	5.00	15.0		100	2050	228	0.111		100	2050	183	0.089	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

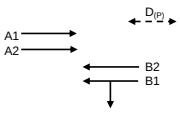
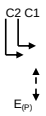


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.582		0.555	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	39%		46%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

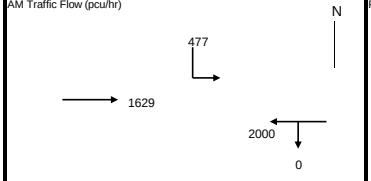
Junction: Ng Lau Road / Lam Tei Interchange Job Number: J7265

Scenario: With Proposed Scheme P. 12

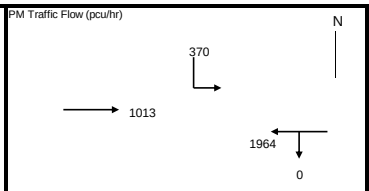
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lam Tei Interchange EB	SA	A2	1	4.00				2155	815	0.378			2155	507	0.235	
	SA	A3	1	4.00				2155	814	0.378			2155	506	0.235	
Lam Tei Interchange WB	SA+LT	B1	1	4.00	15.0		0	2015	966	0.479	0.479	0	2015	949	0.471	0.471
	SA	B2	1	4.00				2155	1034	0.480			2155	1015	0.471	
Ng Lau Road SB	LT	C1	2	5.50	10.0		100	1883	228	0.121	0.121	100	1883	177	0.094	0.094
	LT	C2	2	5.00	15.0		100	2050	249	0.121		100	2050	193	0.094	
pedestrian phase		$D_{(P)}$	1		min crossing time =		5	sec GM +		13	sec FGM =		18	sec		
		$E_{(P)}$	2		min crossing time =		10	sec GM +		12	sec FGM =		22	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

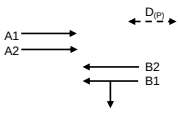


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.601		0.565	
L (s)	8		8	
C (s)	82		82	
practical y	0.812		0.812	
R.C. (%)	35%		44%	

Note:

1	2	3	4	5
				

AM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

Roundabout Analysis

Location: Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario: Existing Condition — Page 13
Design Year: 2023 — Job Number: J7265 — Date: 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c *
From A	101	109	760	197					1167	253
From B	181	0	76	21					278	1231
From C	504	41	10	29					584	610
From D	328	39	53	1					421	946
From E										
From F										
From G										
From H										
Total	1114	189	899	248					2450	

* q_c in existing condition is adjusted due to Temporary Traffic Arrangement

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c *
From A	204	90	692	311					1297	201
From B	91	0	67	22					180	1350
From C	404	32	18	37					491	720
From D	160	26	33	2					221	839
From E										
From F										
From G										
From H										
Total	859	148	810	372					2189	

* q_c in existing condition is adjusted for TTA

Legend

Arm	Road (in clockwise order)
A	Slip Road from Lam Tei Interchange
B	Access Road from Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	10.0	7.3	20.0	10.0	55	45	0.4
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D*	6.0	4.5	27.0	6.0	55	10	0.4
From E							
From F							
From G							
From H							

* Parameter in existing condition is adjusted for TTA

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	8.748	0.607	1.311	0.948	2651	0.757	2331	2369	1167	1297	0.501	0.548
From B	7.597	0.607	1.311	1.051	2302	0.694	1522	1435	278	180	0.183	0.125
From C	9.398	0.607	1.311	1.063	2848	0.793	2514	2421	584	491	0.232	0.203
From D	5.333	0.607	1.311	1.082	1616	0.569	1166	1232	421	221	0.361	0.179
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario Without Development Page 14
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	329	0	995	503					1827	427
From B	196	0	86	20					302	2148
From C	796	50	11	121					978	1048
From D	699	56	310	0					1065	1382
From E										
From F										
From G										
From H										
Total	2020	106	1402	644					4172	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	418	0	801	604					1823	267
From B	107	0	76	25					208	2009
From C	539	41	20	146					746	1154
From D	431	40	166	0					637	1125
From E										
From F										
From G										
From H										
Total	1495	81	1063	775					3414	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	6.0	55	19	0.6
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1+0.2x_2)$
t_D	$= 1+0.5/(1+M)$
M	$= \exp[(D-60)/10]$
x_2	$= v+(e-v)/(1+2S)$
S	$= 1.6(e-v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2632	2765	1827	1823	0.694	0.659
From B	7.812	0.607	1.311	1.051	2367	0.706	895	998	302	208	0.337	0.208
From C	9.398	0.607	1.311	1.063	2848	0.793	2144	2055	978	746	0.456	0.363
From D	10.493	0.607	1.311	1.094	3179	0.853	2188	2428	1065	637	0.487	0.262
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario With Approved Scheme
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	347	0	995	503					1845	435
From B	196	0	86	20					302	2174
From C	798	50	11	121					980	1066
From D	699	56	318	0					1073	1402
From E										
From F										
From G										
From H										
Total	2040	106	1410	644					4200	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	435	0	801	604					1840	269
From B	107	0	76	25					208	2028
From C	541	41	20	146					748	1171
From D	0	40	168	0					208	1144
From E										
From F										
From G										
From H										
Total	1083	81	1065	775					3004	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	$= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
F	$= 303x_2$
f_c	$= 0.210t_D(1+0.2x_2)$
t_D	$= 1+0.5/(1+M)$
M	$= \exp[(D-60)/10]$
x_2	$= v+(e-v)/(1+2S)$
S	$= 1.6(e-v)/L$

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2625	2764	1845	1840	0.703	0.666
From B	7.597	0.607	1.311	1.051	2302	0.694	834	941	302	208	0.362	0.221
From C	9.398	0.607	1.311	1.063	2848	0.793	2129	2041	980	748	0.460	0.367
From D	10.493	0.607	1.311	1.094	3179	0.853	2169	2410	1073	208	0.495	0.086
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario With Proposed Scheme
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	380	0	995	503					1878	450
From B	196	0	86	20					302	2222
From C	801	50	11	121					983	1099
From D	699	56	333	0					1088	1438
From E										
From F										
From G										
From H										
Total	2076	106	1425	644					4251	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	460	0	801	604					1865	272
From B	107	0	76	25					208	2056
From C	545	41	20	146					752	1196
From D	0	40	171	0					211	1173
From E										
From F										
From G										
From H										
Total	1112	81	1068	775					3036	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Lam Tei Interchange
B	Access Road to Siu Hong Station
C	Tsing Lun Road
D	Hong Po Road
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	11.0	7.8	30.0	10.0	55	20	0.5
From B	9.0	6.8	28.0	4.0	55	19	0.9
From C	11.5	7.8	100.0	9.0	55	23	0.7
From D	14.0	8.5	40.0	10.0	55	10	0.9
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	9.381	0.607	1.311	1.051	2842	0.792	2613	2761	1878	1865	0.719	0.675
From B	7.597	0.607	1.311	1.051	2302	0.694	799	920	302	208	0.378	0.226
From C	9.398	0.607	1.311	1.063	2848	0.793	2101	2020	983	752	0.468	0.372
From D	10.493	0.607	1.311	1.094	3179	0.853	2136	2383	1088	211	0.509	0.089
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario Existing Condition Page 17
Design Year 2023 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	16	0	878						894	605
From B	292	3	275						570	907
From C	317	589	13						919	311
From D										
From E										
From F										
From G										
Total	625	592	1166						2383	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	7	0	891						898	448
From B	266	0	380						646	924
From C	175	422	26						623	273
From D										
From E										
From F										
From G										
From H										
Total	448	422	1297						2167	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	45	22	0.0
From B	8.8	7.3	65.0	3.0	45	26	0.8
From C	7.7	6.0	100.0	8.0	45	17	0.3
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.223	1.409	1.052	2212	0.728	1864	1984	894	898	0.480	0.453
From B	7.877	0.223	1.409	1.048	2387	0.762	1777	1763	570	646	0.321	0.366
From C	7.012	0.223	1.409	1.084	2125	0.711	2064	2093	919	623	0.445	0.298
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario Without Development Page 18
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1162						1180	995
From B	323	0	775						1098	1192
From C	632	983	12						1627	341
From D										
From E										
From F										
From G										
From H										
Total	973	983	1949						3905	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1137						1152	703
From B	283	0	759						1042	1178
From C	379	677	26						1082	298
From D										
From E										
From F										
From G										
From H										
Total	677	677	1922						3276	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	45	22	0.0
From B	8.8	7.3	65.0	3.0	45	26	0.8
From C	7.7	6.0	100.0	8.0	45	17	0.3
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.223	1.409	1.052	2212	0.728	1565	1789	1180	1152	0.754	0.644
From B	7.877	0.223	1.409	1.048	2387	0.762	1549	1560	1098	1042	0.709	0.668
From C	7.012	0.223	1.409	1.084	2125	0.711	2041	2074	1627	1082	0.797	0.522
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario With Approved Scheme Page 19
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1168						1186	1008
From B	323	0	787						1110	1198
From C	637	996	12						1645	341
From D										
From E										
From F										
From G										
From H										
Total	978	996	1967						3941	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1142						1157	711
From B	283	0	771						1054	1183
From C	382	685	26						1093.462	298
From D										
From E										
From F										
From G										
From H										
Total	680	685	1939						3304.462	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	45	22	0.0
From B	8.8	7.3	65.0	3.0	45	26	0.8
From C	7.7	6.0	100.0	8.0	45	17	0.3
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.223	1.409	1.052	2212	0.728	1555	1783	1186	1157	0.762	0.649
From B	7.877	0.223	1.409	1.048	2387	0.762	1544	1556	1110	1054	0.719	0.677
From C	7.012	0.223	1.409	1.084	2125	0.711	2041	2074	1645	1093	0.806	0.527
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Location Lam Tei Interchange
Scenario With Proposed Scheme Page 20
Design Year 2033 Job Number J7265 Date 21 February 2024

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	18	0	1180						1198	1031
From B	323	0	808						1131	1210
From C	647	1019	12						1678	341
From D										
From E										
From F										
From G										
From H										
Total	988.4237	1019	2000						4007	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	15	0	1150						1165	721
From B	283	0	788						1071	1191
From C	387	695	26						1108	298
From D										
From E										
From F										
From G										
From H										
Total	685	695	1964						3344	

Legend

Arm	Road (in clockwise order)
A	Slip Road to Castle Peak Road
B	Slip Road to Tuen Mun Road
C	Slip Road to Tsing Lun Road
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	7.3	7.3	40.0	1.0	45	22	0.0
From B	8.8	7.3	65.0	3.0	45	26	0.8
From C	7.7	6.0	100.0	8.0	45	17	0.3
From D							
From E							
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	7.300	0.223	1.409	1.052	2212	0.728	1538	1775	1198	1165	0.779	0.656
From B	7.877	0.223	1.409	1.048	2387	0.762	1535	1550	1131	1071	0.737	0.691
From C	7.012	0.223	1.409	1.084	2125	0.711	2041	2074	1678	1108	0.822	0.534
From D												
From E												
From F												
From G												
From H												

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

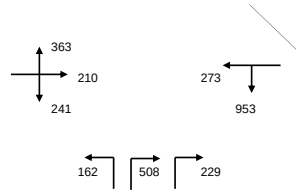
Scenario: Existing Condition P. 21

Design Year: 2023 Designed By: Checked By: Date: 21 Feb 2024

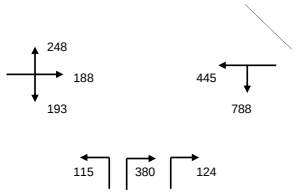
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road -Lam Tei SB LT	A1	1,4	3.25	80.0		100	1904	363	0.191	0.191	100	1904	248	0.130	0.130
SA	A2	1,4	3.25				2080	156	0.075			2080	132	0.063	
SA+RT	A3	1	3.25	22.5		64	1995	150	0.075		56	2005	127	0.063	
RT	A4	1	3.25	20.0		100	1935	145	0.075		100	1935	122	0.063	
Slip Road from Lam Tei Interchange LT	B1	2,3	3.50	8.0		100	1655	162	0.098		100	1655	115	0.069	
LT+RT	B2	2,3	3.50	30.0		100	2005	255	0.127		100	2005	191	0.095	
RT	B3	2,3	3.50	26.0		100	1990	253	0.127	0.127	100	1990	189	0.095	0.095
RT	B4	2,3	3.50	23.0		100	1976	229	0.116		100	1976	124	0.063	
Castle Peak Road NB LT	C1	3,4	3.50	14.0		100	1775	454	0.256		100	1775	375	0.211	
LT	C2	3,4	3.50	19.0		100	1951	499	0.256		100	1951	413	0.212	
SA	D1	4	3.50				2105	137	0.065			2105	223	0.106	
SA	D2	4	3.50				2105	136	0.065			2105	222	0.105	

pedestrian phase	$E_{(P)}$	1,3		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	
	$F_{(P)}$	1		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	$G_{(P)}$	2		min crossing time =	6	sec GM +	11	sec FGM =	17	sec	
	$H_{(P)}$	2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



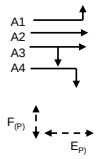
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

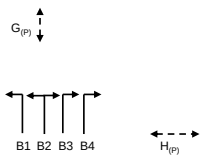
	AM Peak 1,4+2,3		PM Peak 1,4+2,3	
Sum y	0.318		0.225	
L (s)	21		21	
C (s)	110		110	
practical y	0.728		0.728	
R.C. (%)	129%		223%	

Note:

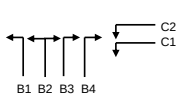
1



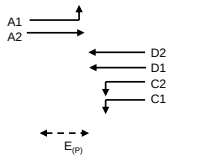
2



3



4



5

AM	G =	I/G = 15	G =	I/G =	G =	I/G = 8	G =	I/G =	G =		
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =		
PM	G =	I/G = 15	G =	I/G =	G =	I/G = 8	G =	I/G =	G =		
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =		

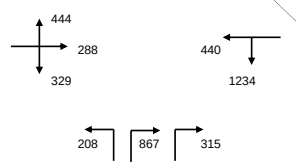
Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

Scenario: Without Development P. 22

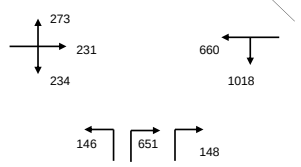
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	3.50	30.0		0	2105	288	0.137	0.137	0	2105	231	0.110	0.110
	RT	A3	1	3.50	25.0		100	1986	166	0.084		100	1986	118	0.059	
	RT	A4	1	3.50	20.0		100	1958	163	0.083		100	1958	116	0.059	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	553	0.263		100	2005	391	0.195	0.195
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	522	0.263		100	2086	406	0.195	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	315	0.161		100	1958	148	0.076	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	588	0.331	0.331	100	1775	485	0.273	
	LT	C2	3,4	3.50	19.0		100	1951	646	0.331		100	1951	533	0.273	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	
pedestrian phase		$D_{(P)}$	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		$E_{(P)}$	1,4		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		$F_{(P)}$	2		min crossing time =		6	sec GM +		11	sec FGM =		17	sec		
		$G_{(P)}$	2,3		min crossing time =		5	sec GM +		9	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



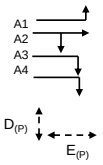
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

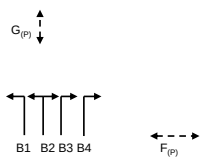
	AM Peak		PM Peak	
	1+3,4		1 + 2,3 + 4	
Sum y	0.468		0.462	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	26%		49%	

Note:

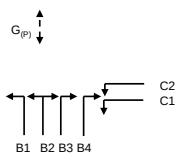
1



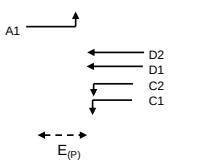
2



3



4



5

AM	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =							
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =							
AM	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =							
	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =							

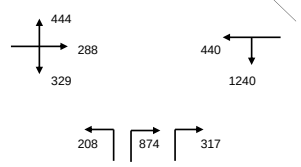
Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

Scenario: With Approved Scheme P. 23

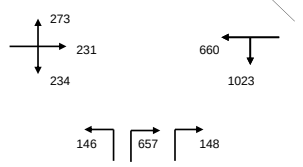
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	4.00	85.0		0	2155	288	0.134	0.134	0	2155	231	0.107	0.107
	RT	A3	1	3.50	25.0		100	1986	166	0.084		100	1986	118	0.059	
	RT	A4	1	3.50	20.0		100	1958	163	0.083		100	1958	116	0.059	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	557	0.265		100	2005	394	0.197	0.197
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	525	0.264		100	2086	409	0.196	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	317	0.162		100	1958	148	0.076	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	591	0.333	0.333	100	1775	487	0.274	
	LT	C2	3,4	3.50	19.0		100	1951	649	0.333		100	1951	536	0.275	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	
pedestrian phase		$E_{(P)}$	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		$F_{(P)}$	1,4		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		$G_{(P)}$	2		min crossing time =		6	sec GM +		11	sec FGM =		17	sec		
		$H_{(P)}$	2,3		min crossing time =		5	sec GM +		9	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



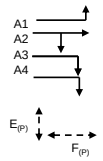
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

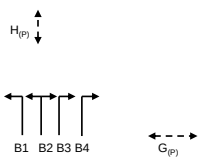
	AM Peak 1+3,4		PM Peak 1 + 2,3 + 4	
Sum y	0.467		0.460	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	26%		49%	

Note:

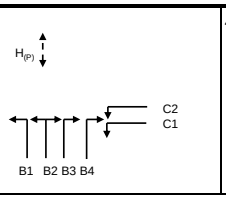
1



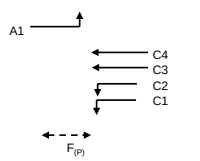
2



3



4



5

AM	G =		I/G = 15	G = 7		I/G = 11	G =		I/G =	G =		I/G = 7	G =			
	G =		I/G = 15	G =		I/G =	G =		I/G = 7	G =		I/G = 7	G =			
AM	G =		I/G = 15	G =		I/G =	G =		I/G = 7	G =		I/G = 7	G =			
	G =		I/G = 15	G = 7		I/G = 11	G =		I/G =	G =		I/G = 7	G =			

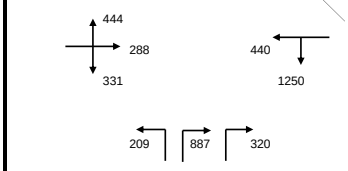
Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei Job Number: J7265

Scenario: With Proposed Scheme P. 24

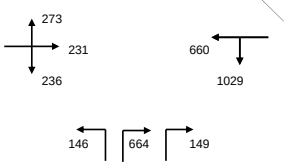
Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road SB	LT	A1	1,4	3.50	80.0		100	1929	444	0.230		100	1929	273	0.142	
	SA+RT	A2	1	4.00	85.0		0	2155	288	0.134	0.134	0	2155	231	0.107	0.107
	RT	A3	1	3.50	25.0		100	1986	167	0.084		100	1986	119	0.060	
	RT	A4	1	3.50	20.0		100	1958	164	0.084		100	1958	117	0.060	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2105	564	0.268		100	2005	397	0.198	0.198
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	532	0.268		100	2086	413	0.198	
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	320	0.163		100	1958	149	0.076	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	595	0.335	0.335	100	1775	490	0.276	
	LT	C2	3,4	3.50	19.0		100	1951	655	0.336		100	1951	539	0.276	
	SA	D1	4	3.50				2105	220	0.105			2105	330	0.157	0.157
	SA	D2	4	3.50				2105	220	0.105			2105	330	0.157	
pedestrian phase		$E_{(P)}$	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		$F_{(P)}$	1,4		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		$G_{(P)}$	2		min crossing time =		6	sec GM +		11	sec FGM =		17	sec		
		$H_{(P)}$	2,3		min crossing time =		5	sec GM +		9	sec FGM =		14	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



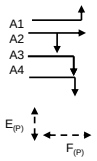
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

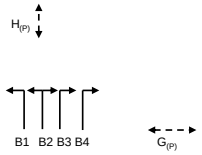
	AM Peak 1+3,4		PM Peak 1 + 2,3 + 4	
Sum y	0.469		0.462	
L (s)	38		26	
C (s)	110		110	
practical y	0.589		0.687	
R.C. (%)	26%		49%	

Note:

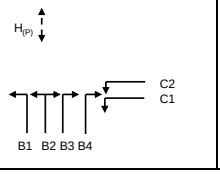
1



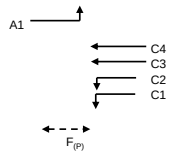
2



3



4



5

AM	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =
	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =
AM	G =	I/G = 15	G =	I/G =	G =	I/G = 7	G =	I/G = 7	G =
	G =	I/G = 15	G = 7	I/G = 11	G =	I/G =	G =	I/G = 7	G =

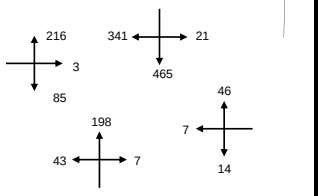
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: Existing Condition — P. 25

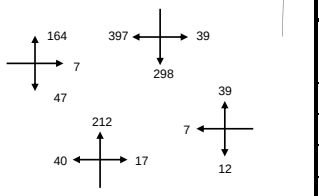
Design Year: 2023 — Designed By: — Checked By: — Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	486	0.247	0.247	12	1953	337	0.173	
	RT	A2	1	3.65	15.0		100	1927	341	0.177		100	2120	397	0.187	0.187
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		37	1899	115	0.061	0.061	33	1904	120	0.063	0.063
	SA	C2	2	3.40				2095	126	0.060			2095	132	0.063	
	RT	C3	2	3.40	15.0		100	1905	7	0.004		100	1905	17	0.009	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		90	1803	67	0.037	0.037	88	1806	58	0.032	0.032
Tsz Tin Road EB	LT	B1	4	3.38	10.0		100	1698	143	0.084	0.084	100	1698	98	0.058	0.058
	LT+SA+RT	B2	4	3.37	15.0		98	1905	161	0.085		94	2092	120	0.057	
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



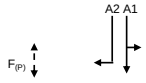
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

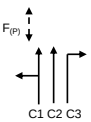
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.429		0.340	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	67%		111%	

Note:

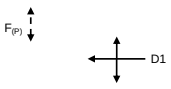
1



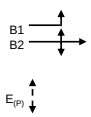
2



3



4



5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G = 14	I/G = 7	G =
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G = 14	I/G = 7	G =

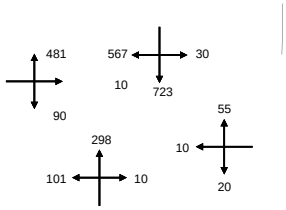
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: Without Development — P. 26

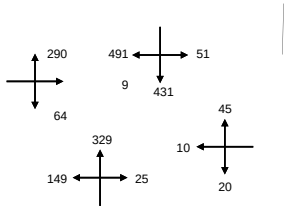
Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	753	0.382	0.382	11	1955	482	0.247	0.247
	RT	A2	1	3.65	15.0		100	1927	567	0.294		100	2120	491	0.232	
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		53	1880	189	0.101	0.101	66	1865	225	0.121	0.121
	SA	C2	2	3.40				2095	210	0.100			2095	253	0.121	
	RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Tsz Tin Road EB	LT	B1	4,1	3.38	10.0		100	1698	481	0.283		100	1698	290	0.171	
	SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



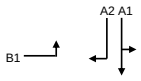
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

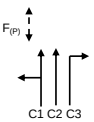
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.582		0.447	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	23%		61%	

Note:

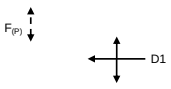
1



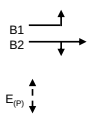
2



3



4



5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =

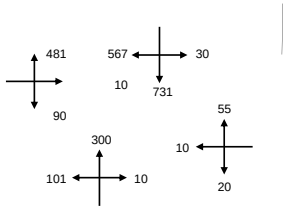
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: With Approved Scheme — P. 27

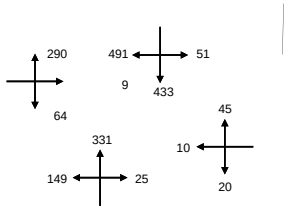
Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	761	0.386	0.386	10	1957	484	0.247	0.247
	RT	A2	1	3.65	15.0		100	1927	567	0.294		100	2120	491	0.232	
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		53	1880	190	0.101	0.101	66	1865	226	0.121	0.121
	SA	C2	2	3.40				2095	211	0.101			2095	254	0.121	
	RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Tsz Tin Road EB	LT	B1	4,1	3.38	10.0		100	1698	481	0.283		100	1698	290	0.171	
	SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



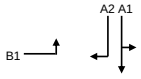
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

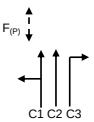
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.586		0.448	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	22%		60%	

Note:

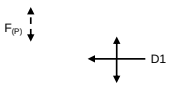
1



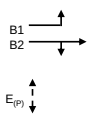
2



3



4



5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =

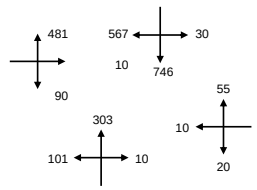
Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: With Proposed Scheme — P. 28

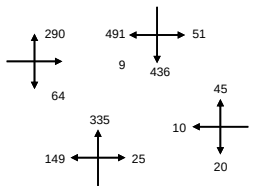
Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tsing Lun Road SB	LT+SA	A1	1	3.65	13.0		4	1971	776	0.394	0.394	10	1957	487	0.249	0.249
	RT	A2	1	3.65	15.0		100	1927	567	0.294		100	2120	491	0.232	
Tsing Lun Road NB	LT+SA	C1	2	3.30	23.0		53	1880	191	0.102	0.102	65	1866	228	0.122	0.122
	SA	C2	2	3.40				2095	213	0.102			2095	256	0.122	
	RT	C3	2	3.40	15.0		100	1905	10	0.005		100	1905	25	0.013	
Access Road to Siu Hong Court WB	LT+SA+RT	D1	3	3.50	15.0		88	1806	85	0.047	0.047	87	1808	75	0.041	0.041
Tsz Tin Road EB	LT	B1	4,1	3.38	10.0		100	1698	481	0.283		100	1698	290	0.171	
	SA+RT	B2	4	3.37	15.0		90	1919	100	0.052	0.052	88	1923	73	0.038	0.038
pedestrian phase		$E_{(P)}$	2		min crossing time =		5	sec GM +		10	sec FGM =		15	sec		
		$F_{(P)}$	3		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



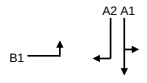
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

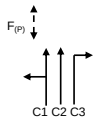
	AM Peak 1+2+3+4		PM Peak 1+2+3+4	
Sum y	0.594		0.450	
L (s)	24		24	
C (s)	118		118	
practical y	0.717		0.717	
R.C. (%)	21%		59%	

Note:

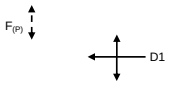
1



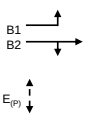
2



3



4

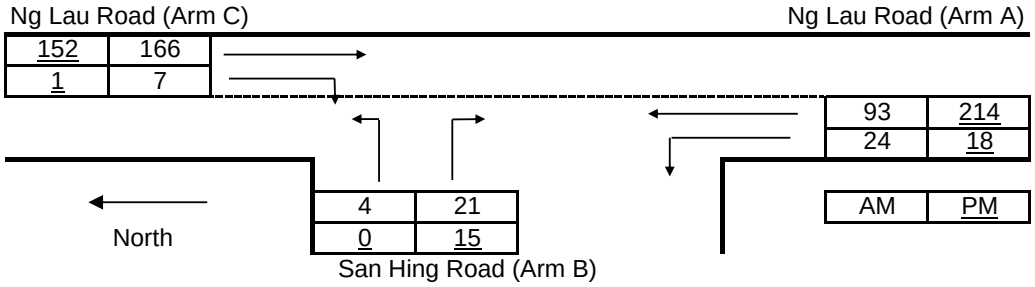


5

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =		
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =		
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G = 7	G =		
	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =		

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 29



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

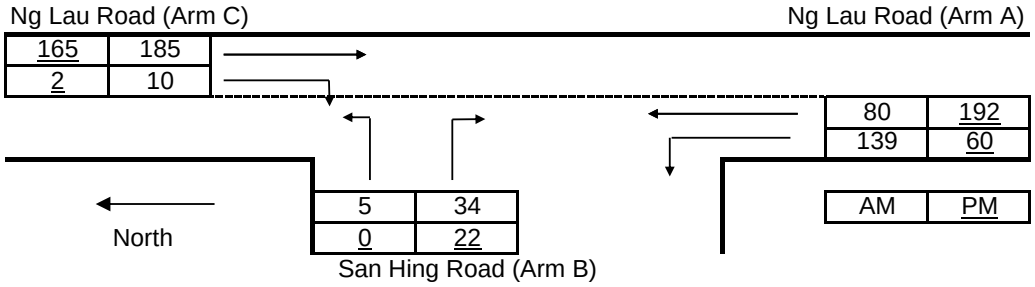
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	166	152	Q-BA	421	400
q-CB	7	1	Q-BC	579	552
q-AB	24	18	Q-CB	631	602
q-AC	93	214	Q-BAC	440	400
q-BA	21	15			
q-BC	4	0			
f	0.160	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.050	0.037
B-C	0.007	0.000
C-B	0.011	0.002
B-AC	0.057	0.037

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Without Development				P. 30



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

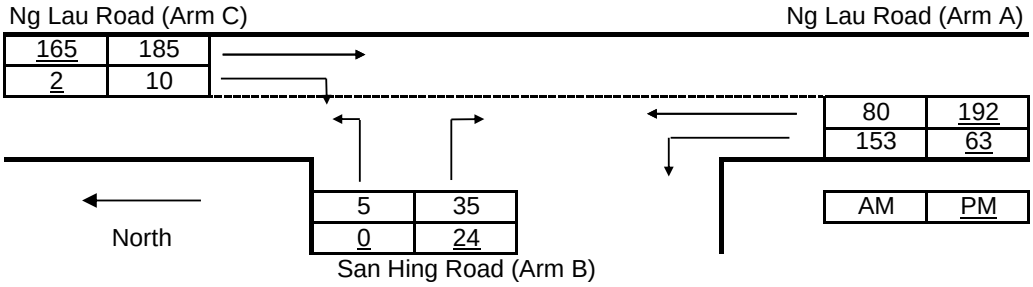
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	411	399
q-CB	10	2	Q-BC	571	553
q-AB	139	60	Q-CB	605	597
q-AC	80	192	Q-BAC	426	399
q-BA	34	22			
q-BC	5	0			
f	0.128	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.083	0.055
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.091	0.055

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Approved Scheme				P. 31



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

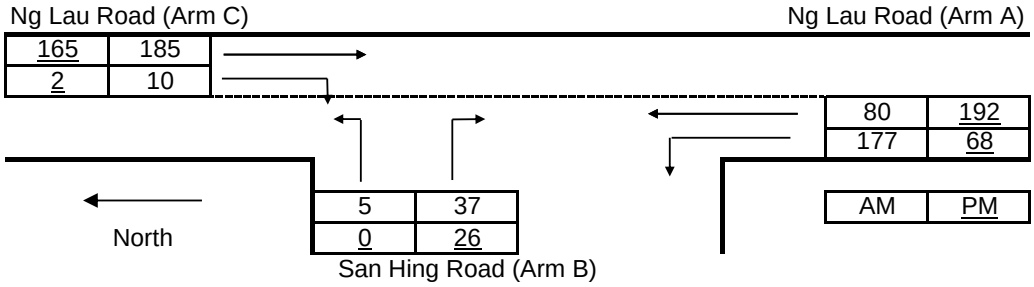
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	410	399
q-CB	10	2	Q-BC	570	553
q-AB	153	63	Q-CB	602	596
q-AC	80	192	Q-BAC	425	399
q-BA	35	24			
q-BC	5	0			
f	0.125	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.085	0.060
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.094	0.060

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Southern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Proposed Scheme				P. 32



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.65	V-rBA	23	w-BA	2.40	D	0.7441
	W-CR	0.00	V-lBA	23	w-BC	2.40	E	0.8078
			V-rBC	26	w-CB	3.00	F	0.8857
			V-rCB	57			Y	0.7706

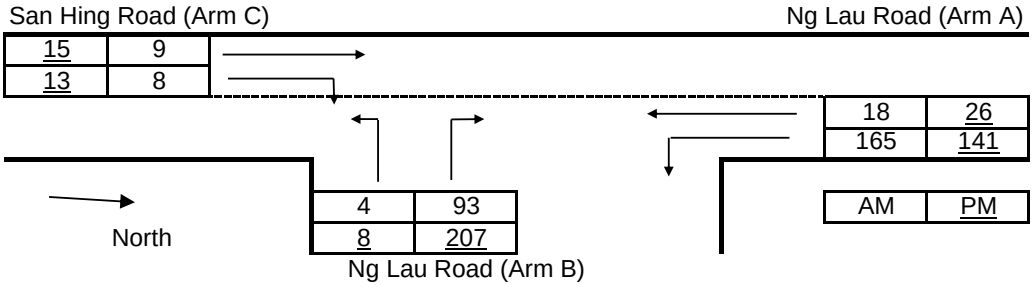
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	185	165	Q-BA	408	399
q-CB	10	2	Q-BC	568	552
q-AB	177	68	Q-CB	596	595
q-AC	80	192	Q-BAC	422	399
q-BA	37	26			
q-BC	5	0			
f	0.119	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.091	0.065
B-C	0.009	0.000
C-B	0.017	0.003
B-AC	0.100	0.065

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 33



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

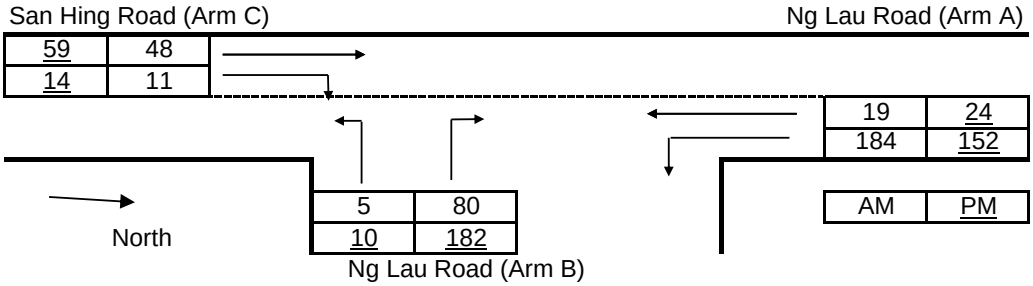
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	9	15	Q-BA	432	430
q-CB	8	13	Q-BC	561	561
q-AB	165	141	Q-CB	648	652
q-AC	18	26	Q-BAC	436	433
q-BA	93	207			
q-BC	4	8			
f	0.041	0.037			

Ratio-of-flow to Capacity	AM	PM
B-A	0.216	0.482
B-C	0.007	0.014
C-B	0.012	0.020
B-AC	0.223	0.496

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Without Development				P. 34



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

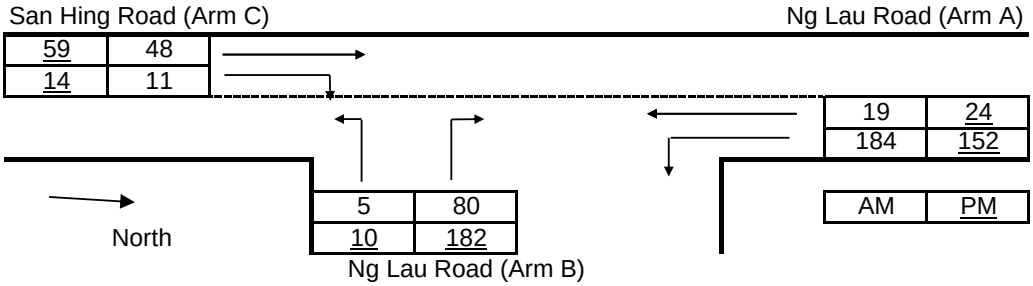
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Approved Scheme				P. 35



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

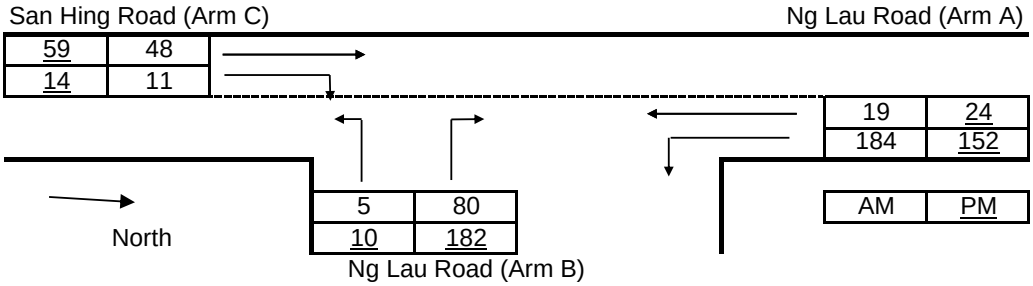
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	San Hing Road / Ng Lau Road (Northern)				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Proposed Scheme				P. 36



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.63	V-rBA	45	w-BA	1.90	D	0.7207
	W-CR	0.00	V-lBA	25	w-BC	1.90	E	0.7768
			V-rBC	42	w-CB	3.50	F	0.9344
			V-rCB	62			Y	0.7714

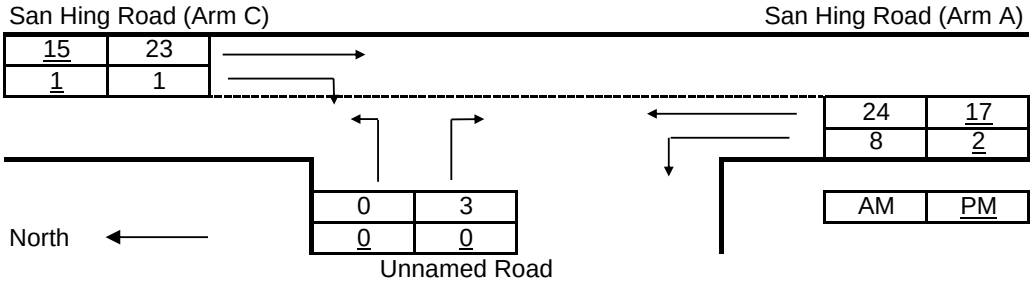
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	48	59	Q-BA	424	423
q-CB	11	14	Q-BC	559	560
q-AB	184	152	Q-CB	643	650
q-AC	19	24	Q-BAC	430	429
q-BA	80	182			
q-BC	5	10			
f	0.059	0.052			

Ratio-of-flow to Capacity	AM	PM
B-A	0.189	0.430
B-C	0.009	0.018
C-B	0.017	0.022
B-AC	0.198	0.448

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 37



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	25	w-BA	2.50	D	0.7912
	W-CR	0.00	V-lBA	100	w-BC	2.50	E	0.8156
			V-rBC	25	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

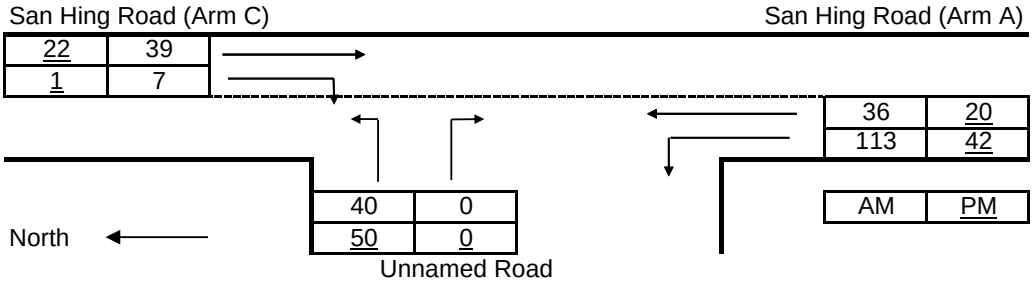
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	23	15	Q-BA	486	490
q-CB	1	1	Q-BC	601	603
q-AB	8	2	Q-CB	632	635
q-AC	24	17	Q-BAC	486	490
q-BA	3	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.006	0.000
B-C	0.000	0.000
C-B	0.002	0.002
B-AC	0.006	0.000

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Without Development				P. 38



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

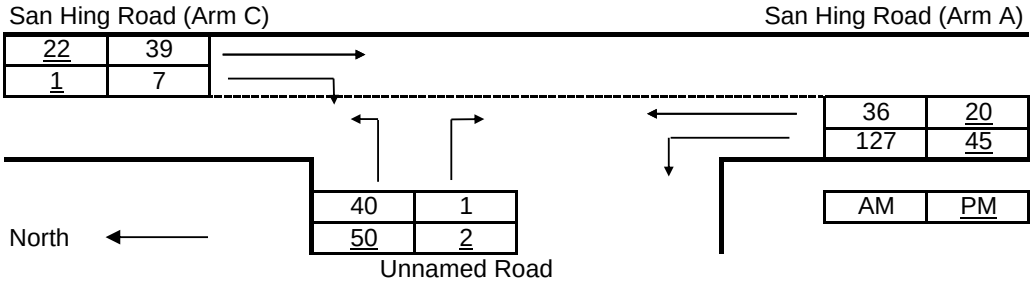
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	555	572
q-CB	7	1	Q-BC	695	707
q-AB	113	42	Q-CB	603	624
q-AC	36	20	Q-BAC	695	707
q-BA	0	0			
q-BC	40	50			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.058	0.071

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Approved Scheme				P. 39



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

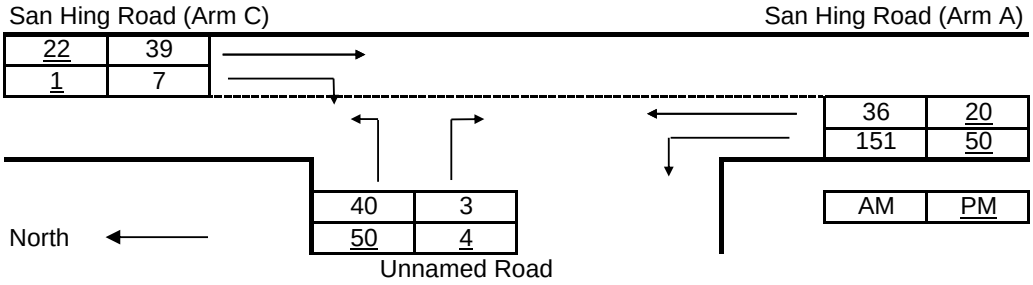
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	553	571
q-CB	7	1	Q-BC	694	707
q-AB	127	45	Q-CB	599	624
q-AC	36	20	Q-BAC	689	701
q-BA	1	2			
q-BC	40	50			
f	0.976	0.962			

Ratio-of-flow to Capacity	AM	PM
B-A	0.002	0.003
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.059	0.074

Priority Junction Analysis

Junction:	T-junction of San Hing Road				
Design Year:	2033	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	With Proposed Scheme				P. 40



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	6.00	V-rBA	45	w-BA	4.00	D	0.9343
	W-CR	0.00	V-lBA	100	w-BC	4.00	E	0.9632
			V-rBC	45	w-CB	3.00	F	0.8586
			V-rCB	25			Y	0.7930

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	39	22	Q-BA	551	571
q-CB	7	1	Q-BC	691	707
q-AB	151	50	Q-CB	593	622
q-AC	36	20	Q-BAC	679	694
q-BA	3	4			
q-BC	40	50			
f	0.930	0.926			

Ratio-of-flow to Capacity	AM	PM
B-A	0.005	0.007
B-C	0.058	0.071
C-B	0.012	0.002
B-AC	0.063	0.078

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

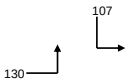
Scenario: Existing Condition P. 41

Design Year: 2023 Designed By: Checked By: Date: 21 Feb 2024

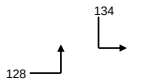
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	2	4.00	20.0		100	1874	107	0.057	0.057	100	1874	134	0.071	0.071
Castle Peak Road - Lam Tei NB	LT	B1	1	3.50	15.0		100	1786	130	0.073	0.073	100	1786	128	0.072	0.072

pedestrian phase	$C_{(P)}$	1,2		min crossing time =	8	sec GM +	8	sec FGM =	16	sec				
	$D_{(P)}$	3		min crossing time =	7	sec GM +	7	sec FGM =	14	sec				

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

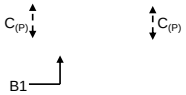
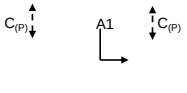
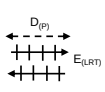


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1 + 2		PM Peak 1 + 2	
Sum y	0.130		0.143	
L (s)	2358		2284	
C (s)	3609		3627	
practical y	0.312		0.333	
R.C. (%)	140%		133%	

Note:

1	2	3	4	5
				
AM G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
PM G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei — Job Number: J7265

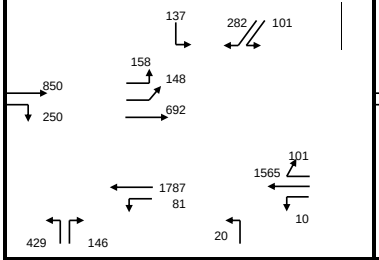
Scenario: Without Development — P. 42

Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

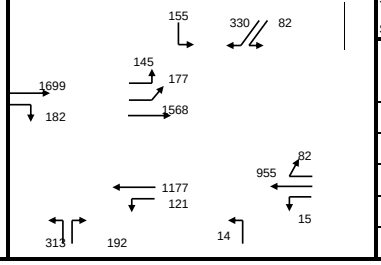
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	137	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	270	0.139			1945	540	0.278	
	SA	B2	2,3	3.30				2085	290	0.139			2085	579	0.278	
	SA	B3	2,3	3.30				2085	290	0.139			2085	580	0.278	
	RT	C1	1	3.40	15.0		100	1905	250	0.131	0.131	100	1905	182	0.096	0.096
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	148	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	346	0.163			2095	779	0.372	0.372
	SA	E2	2,3	3.65				2120	346	0.163			2120	789	0.372	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	594	0.300	0.300	4	1977	412	0.208	
	SA	F2	2,3	3.70				2125	637	0.300			2125	443	0.208	
	SA	F3	2,3	3.70				2125	637	0.300			2125	443	0.208	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	754	0.387		26	1906	459	0.241	
	SA	G2	1,2,3	3.65				2120	821	0.387			2120	511	0.241	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	200	0.103		100	1941	215	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

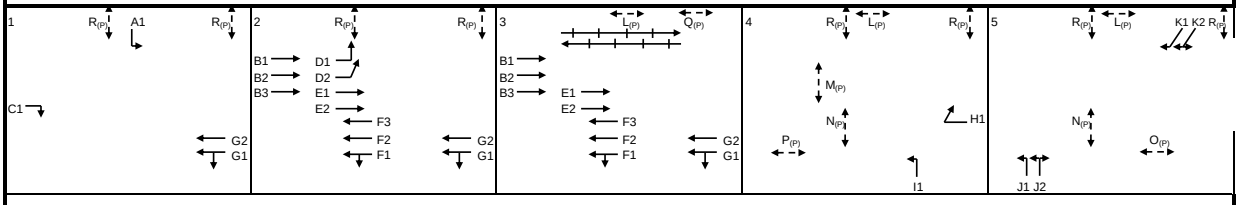


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2,3+4+5	AM Peak	PM Peak 1+2,3+4+5	PM Peak
Sum y	0.638		0.646	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

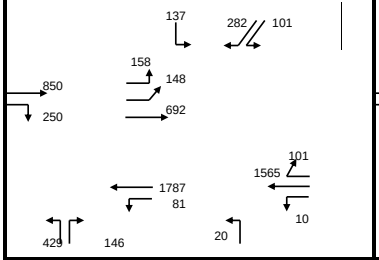
Scenario: With Approved Scheme P. 43

Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

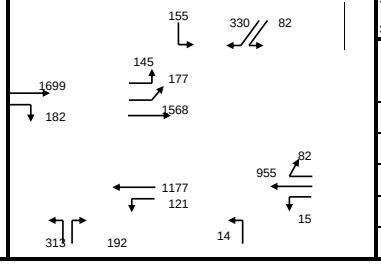
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	137	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	270	0.139			1945	540	0.278	
	SA	B2	2,3	3.30				2085	290	0.139			2085	579	0.278	
	SA	B3	2,3	3.30				2085	290	0.139			2085	580	0.278	
	RT	C1	1	3.50	15.0		100	1914	250	0.131	0.131	100	1914	182	0.095	0.095
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	148	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	346	0.163			2095	779	0.372	
	SA	E2	2,3	3.65				2120	346	0.163			2120	789	0.372	0.372
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	594	0.300		4	1977	412	0.208	
	SA	F2	2,3	3.70				2125	637	0.300			2125	443	0.208	
	SA	F3	2,3	3.70				2125	637	0.300	0.300		2125	443	0.208	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	754	0.387		26	1906	459	0.241	
	SA	G2	1,2,3	3.65				2120	821	0.387			2120	511	0.241	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	200	0.103		100	1941	215	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

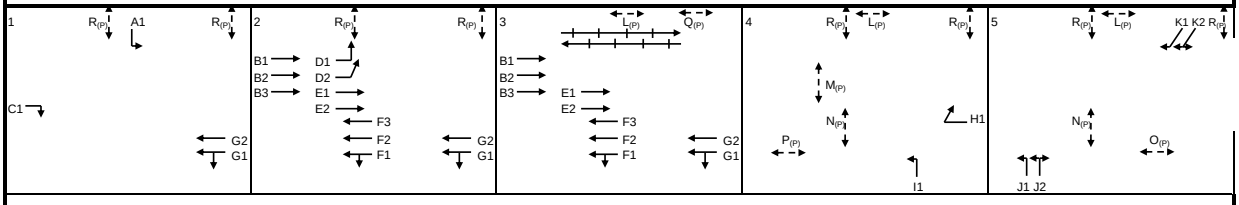


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2,3+4+5	AM Peak	PM Peak 1+2,3+4+5	PM Peak
Sum y	0.638		0.646	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Junction: Ng Lau Road / Castle Peak Road - Lam Tei Job Number: J7265

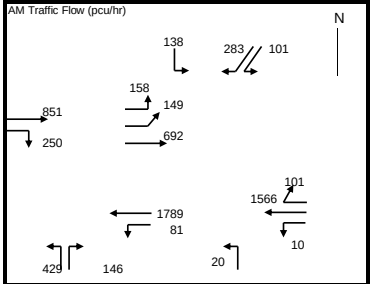
Scenario: With Proposed Scheme P. 44

Design Year: 2033 Designed By: Checked By: Date: 21 Feb 2024

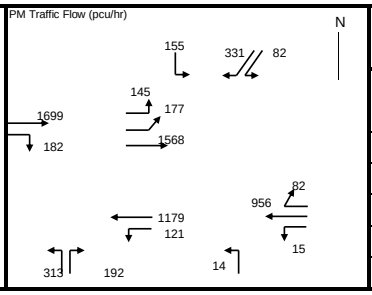
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	138	0.075		100	1832	155	0.085	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	271	0.139			1945	540	0.278	
	SA	B2	2,3	3.30				2085	290	0.139			2085	579	0.278	
	SA	B3	2,3	3.30				2085	290	0.139			2085	580	0.278	
	RT	C1	1	3.50	15.0		100	1914	250	0.131	0.131	100	1914	182	0.095	0.095
Castle Peak Road - Lam Tei NB	LT	D1	2	3.50	13.0		100	1762	158	0.090		100	1762	145	0.082	
	LT	D2	2	3.40	15.0		100	1905	149	0.078		100	1905	177	0.093	
	SA	E1	2,3	3.65				2120	346	0.163			2095	779	0.372	
	SA	E2	2,3	3.65				2120	346	0.163			2120	789	0.372	0.372
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		2	1981	595	0.300		4	1977	413	0.209	
	SA	F2	2,3	3.70				2125	638	0.300			2125	444	0.209	
	SA	F3	2,3	3.70				2125	637	0.300	0.300		2125	443	0.208	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.65	10.0		11	1948	755	0.388		26	1906	460	0.241	
	SA	G2	1,2,3	3.65				2120	821	0.387			2120	511	0.241	
	RT	H1	4	3.50	20.0		100	1958	101	0.052	0.052	100	1958	82	0.042	0.042
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	20	0.011		100	1752	14	0.008	
Fuk Hang Tsuen Road WB	LT	J1	5	3.65	12.0		100	1760	274	0.156	0.156	100	1760	241	0.137	0.137
	LT+RT	J2	5	3.65	15.0		100	1927	301	0.156		100	1927	264	0.137	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	183	0.103		100	1773	197	0.111	
	RT	K2	5	3.80	15.0		100	1941	201	0.104		100	1941	216	0.111	

pedestrian phase	$L_{(P)}$	3,4,5		min crossing time =	5	sec GM +	11	sec FGM =	16	sec
	$M_{(P)}$	3		min crossing time =	5	sec GM +	15	sec FGM =	20	sec
	$N_{(P)}$	3,4		min crossing time =	5	sec GM +	16	sec FGM =	21	sec
	$O_{(P)}$	5		min crossing time =	5	sec GM +	14	sec FGM =	19	sec
	$P_{(P)}$	4		min crossing time =	5	sec GM +	18	sec FGM =	23	sec
	$Q_{(P)}$	3		min crossing time =	11	sec GM +	11	sec FGM =	22	sec
	$R_{(P)}$	1,2,4,5		min crossing time =	5	sec GM +	13	sec FGM =	18	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

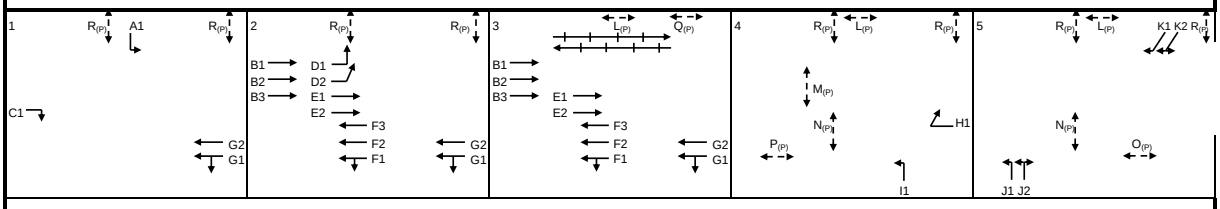


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2,3+4+5	AM Peak	PM Peak 1+2,3+4+5	PM Peak
Sum y	0.638		0.646	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	16%		15%	

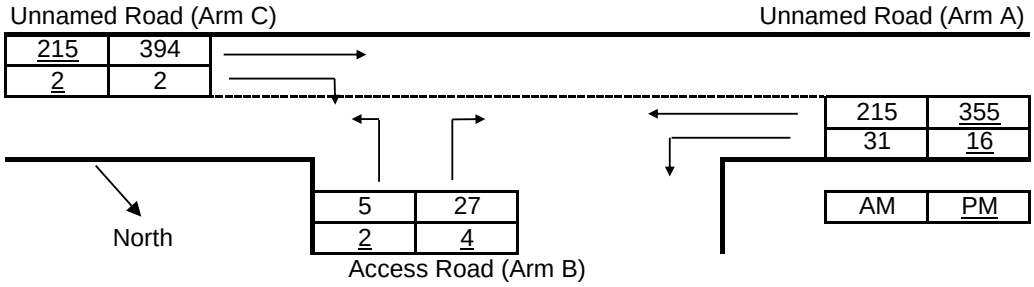
Note:



AM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =
PM	G =	I/G = 8	G =	I/G = 7	G =	I/G =	G =	I/G = 5	G =	I/G = 5
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Priority Junction Analysis

Junction:	Hong Po Road / Yan Tin Estate Access Road				
Design Year:	2023	Job Number:	J7265	Date:	21 Feb 2024
Scenario:	Existing Condition				P. 45



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	9.50	V-rBA	55	w-BA	4.40	D	0.9323
	W-CR	3.00	V-lBA	25	w-BC	4.40	E	1.0079
			V-rBC	55	w-CB	3.18	F	0.9042
			V-rCB	60			Y	0.6723

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	394	215	Q-BA	515	510
q-CB	2	2	Q-BC	695	662
q-AB	31	16	Q-CB	619	592
q-AC	215	355	Q-BAC	536	552
q-BA	27	4			
q-BC	5	2			
f	0.156	0.333			

Ratio-of-flow to Capacity	AM	PM
B-A	0.052	0.008
B-C	0.007	0.003
C-B	0.003	0.003
B-AC	0.060	0.011

Junction: Hong Po Road / San Hing Road — Job Number: J7265

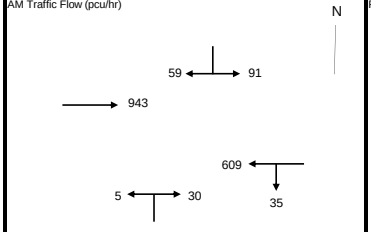
Scenario: Without Development — P. 46

Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

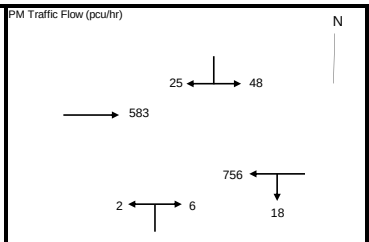
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	308	0.157	0.157	5	1975	372	0.188	0.188
	SA	A2	1	3.75				2130	336	0.158			2130	402	0.189	
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020	0.020	100	1786	8	0.004	0.004
Hong Po Road EB	SA	C1	1	3.65				1980	455	0.230	0.230		1980	282	0.142	0.142
	SA	C2	1	3.65				2120	488	0.230			2120	301	0.142	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	73	0.042	0.042	100	1722	36	0.021	0.021
	LT+RT	D2	3	3.65	15.0		100	1800	77	0.043		100	1800	37	0.021	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec	
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$H_{(P)}$	4		min crossing time =	9	sec GM +	5	sec FGM =	14	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

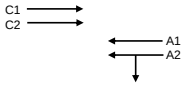
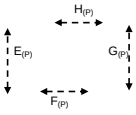


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2+3	AM Peak	PM Peak 1+2+3	PM Peak
Sum y	0.449		0.356	
L (s)	27		27	
C (s)	120		120	
practical y	0.698		0.698	
R.C. (%)	55%		96%	

Note:

1	2	3	4	5
				

AM	G =		I/G = 5	G =		I/G = 5	G =		I/G = 2	G = 15		I/G = 3	G =			
	G =		I/G =	G =		I/G =	G =		I/G =	G =		I/G =	G =			
PM	G =		I/G = 5	G =		I/G = 5	G =		I/G = 2	G = 15		I/G = 3	G =			
	G =		I/G =	G =		I/G =	G =		I/G =	G =		I/G =	G =			

Junction: Hong Po Road / San Hing Road — Job Number: J7265

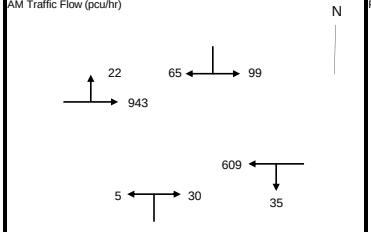
Scenario: With Approved Scheme — P. 47

Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

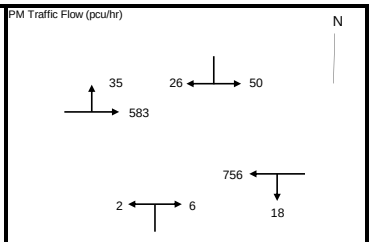
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	308	0.157		5	1975	372	0.188	
	SA	A2	1	3.75				2130	336	0.158			2130	402	0.189	0.189
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020		100	1786	8	0.004	
Hong Po Road EB	LT	C1	1	3.65	25.0		100	1868	22	0.012		100	1868	35	0.019	
	SA	C2	1	3.65				2120	472	0.223	0.223		2120	292	0.138	
	SA	C3	1	3.65				2120	471	0.222			2120	291	0.137	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	80	0.046	0.046	100	1722	37	0.021	0.021
	LT+RT	D2	3	3.65	15.0		100	1800	84	0.047		100	1800	39	0.022	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec	
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec	
	$H_{(P)}$	4		min crossing time =	11	sec GM +	9	sec FGM =	20	sec	
	$I_{(P)}$	2,3,4		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

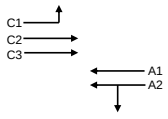
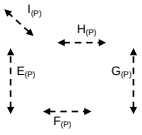


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+3		PM Peak 1+3	
Sum y	0.269		0.210	
L (s)	41		41	
C (s)	120		120	
practical y	0.593		0.593	
R.C. (%)	120%		182%	

Note:

	1	2	3	4	5
					
AM	G =	I/G = 5	G = 5	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =
	G =	I/G = 5	G =	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =
PM	G =	I/G = 5	G = 5	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =
	G =	I/G = 5	G =	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =

Junction: Hong Po Road / San Hing Road — Job Number: J7265

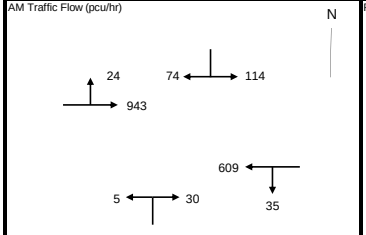
Scenario: With Proposed Scheme — P. 48

Design Year: 2033 — Designed By: — Checked By: — Date: 21 Feb 2024

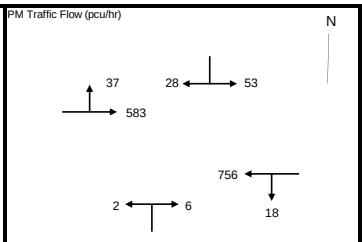
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Hong Po Road WB	SA+LT	A1	1	3.75	10.0		11	1958	308	0.157		5	1975	372	0.188	
	SA	A2	1	3.75				2130	336	0.158			2130	402	0.189	0.189
Access Road NB	LT+RT	B1	2	3.50	15.0		100	1786	35	0.020		100	1786	8	0.004	
Hong Po Road EB	LT	C1	1	3.65	25.0		100	1868	24	0.013		100	1868	37	0.020	
	SA	C2	1	3.65				2120	472	0.223	0.223		2120	292	0.138	
	SA	C3	1	3.65				2120	471	0.222			2120	291	0.137	
San Hing Road SB	LT	D1	3	3.65	10.0		100	1722	92	0.053	0.053	100	1722	40	0.023	0.023
	LT+RT	D2	3	3.65	15.0		100	1800	96	0.053		100	1800	41	0.023	

pedestrian phase	$E_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$F_{(P)}$	4		min crossing time =	7	sec GM +	6	sec FGM =	13	sec
	$G_{(P)}$	4		min crossing time =	8	sec GM +	7	sec FGM =	15	sec
	$H_{(P)}$	4		min crossing time =	11	sec GM +	9	sec FGM =	20	sec
	$I_{(P)}$	2,3,4		min crossing time =	5	sec GM +	9	sec FGM =	14	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

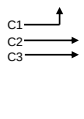
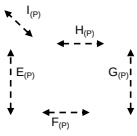


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

SM = S / (1 + 1.5 f/r) SM = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+3	AM Peak	PM Peak 1+3	PM Peak
Sum y	0.276		0.212	
L (s)	41		41	
C (s)	120		120	
practical y	0.593		0.593	
R.C. (%)	115%		180%	

Note:

1	2	3	4	5
				

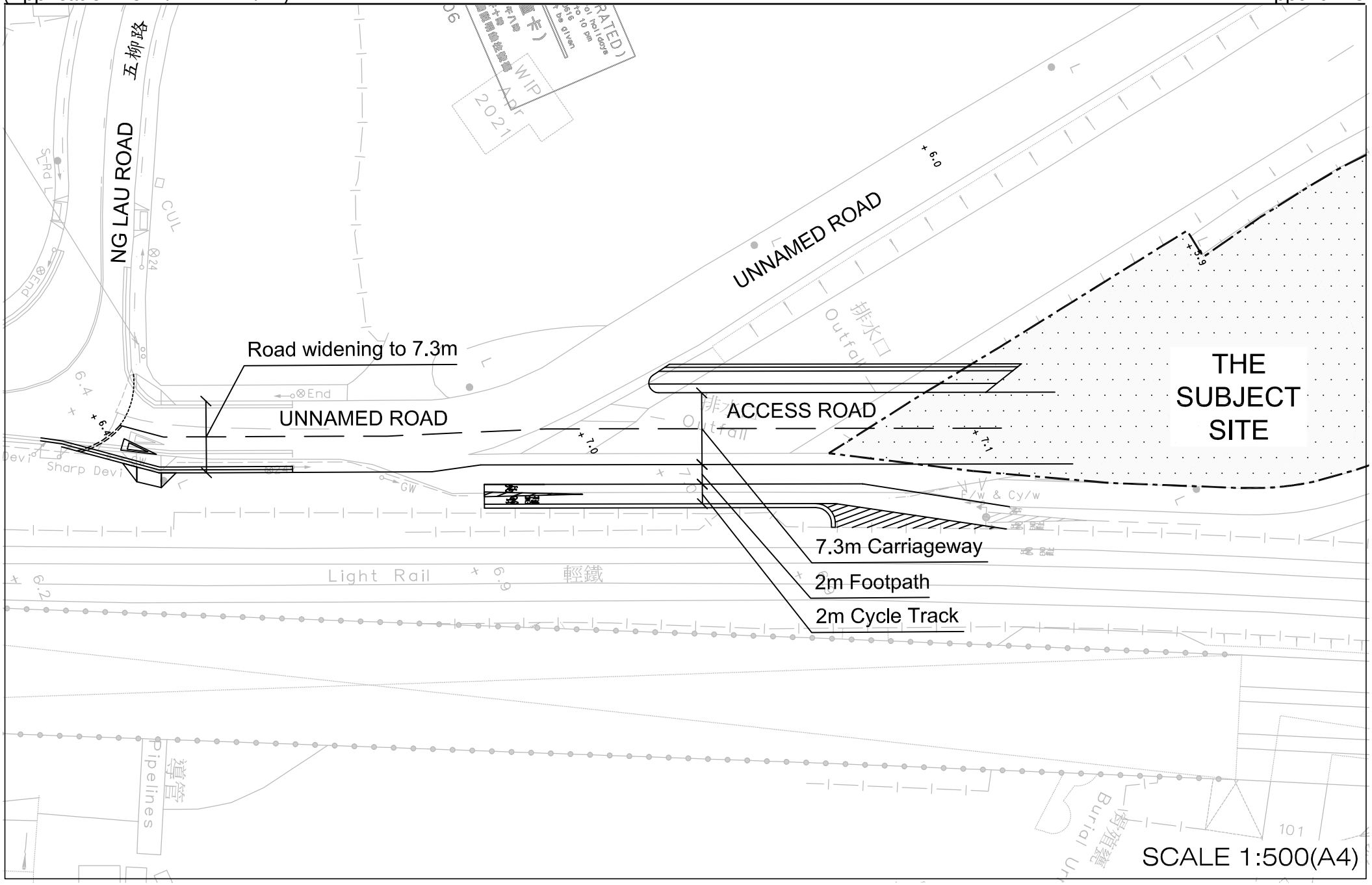
AM	G =	I/G = 5	G = 5	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =			
	G =	I/G = 5	G =	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =			
PM	G =	I/G = 5	G = 5	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =			
	G =	I/G = 5	G =	I/G = 5	G =	I/G = 10	G = 15	I/G = 3	G =			

Appendix B –
Public Transport Survey Result

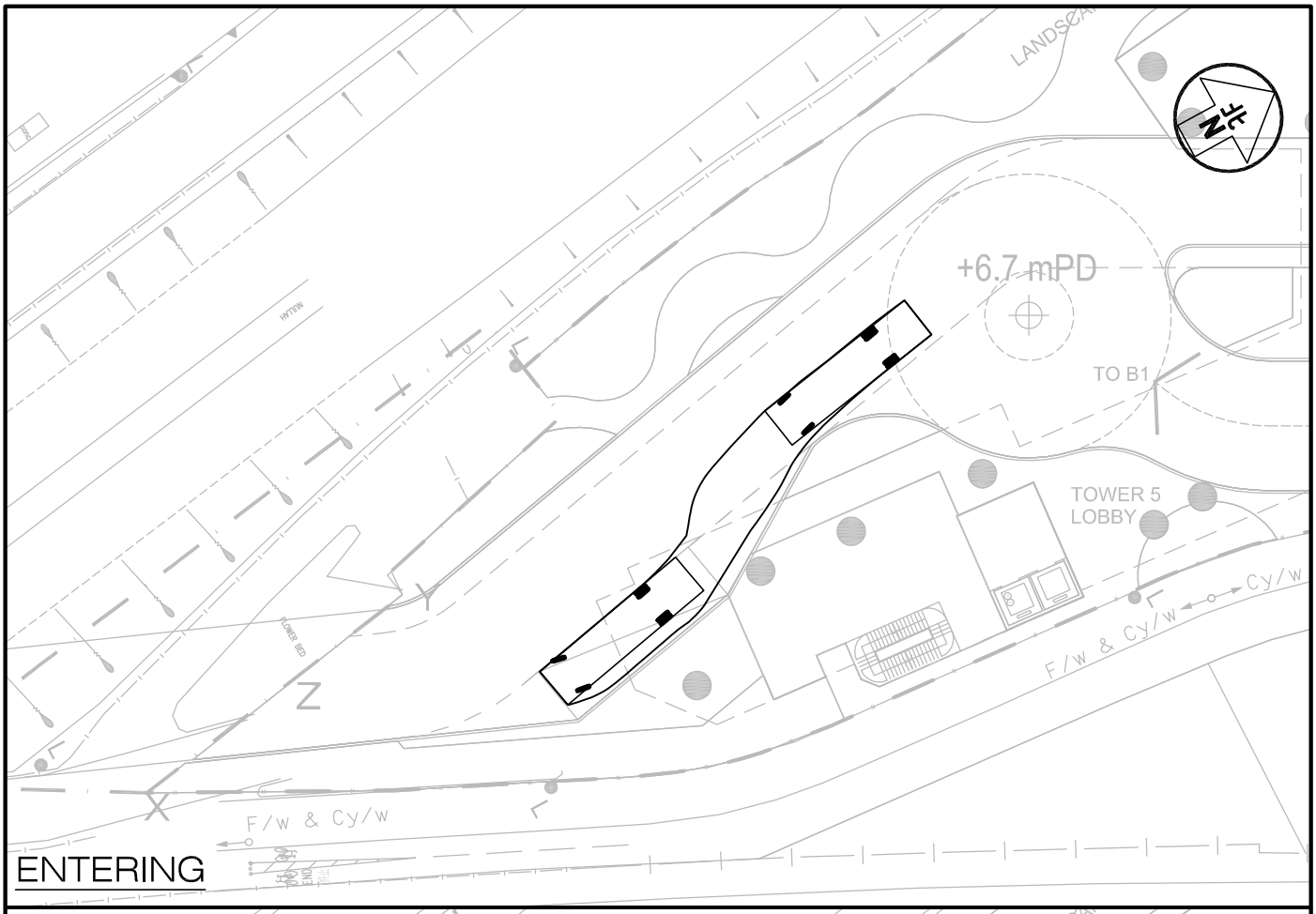
TABLE B1 DETAILED INFORMATION OCCUPANCY SURVEY RESULT ON THE PUBLIC TRANSPORT NEAR THE SUBJECT SITE

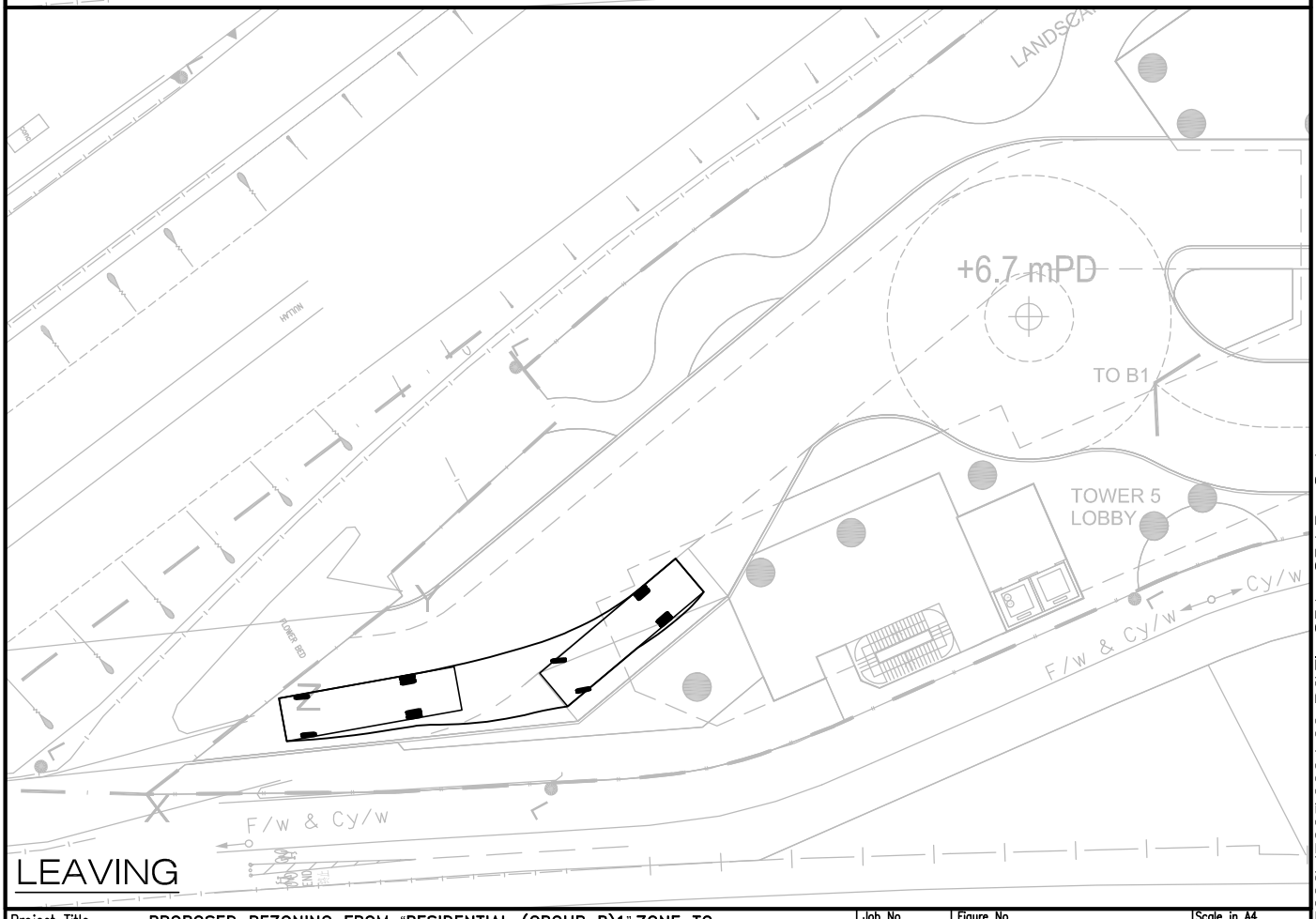
Direction	Routes	AM				PM			
		No. of Trips	No. of Passenger		Occupancy [c]=[b]/[a]	No. of Trips	No. of Passenger		Occupancy [c]=[b]/[a]
			Capacity [a]	Occupied [b]			Capacity [a]	Occupied [b]	
To other districts	CTB 50	3	405	203	50%	0	-	-	-
	CTB 55	3	405	270	67%	0	-	-	-
	CTB 56	0	-	-	-	0	-	-	-
	CTB 56A	4	540	378	70%	0	-	-	-
	CTB 950	2	270	169	63%	0	-	-	-
	CTB 955	1	135	68	50%	0	-	-	-
	CTB B3A	1	135	122	90%	1	135	68	50%
	KMB 53	2	270	102	38%	2	270	135	50%
	KMB 63X	5	675	380	56%	2	270	68	25%
	KMB 67M	12	1620	354	22%	5	675	68	10%
	KMB 67X	10	1350	280	21%	3	405	102	25%
	KMB 68A	6	810	439	54%	3	405	152	38%
	KMB 258P	2	270	135	50%	0	-	-	-
	KMB 261P	5	675	169	25%	0	-	-	-
	KMB 267X	3	405	122	30%	0	-	-	-
	KMB 960A	2	270	27	10%	0	-	-	-
	KMB 960C	2	270	14	5%	0	-	-	-
	KMB 960P	6	810	463	57%	0	-	-	-
	KMB 960X	9	1215	152	13%	0	-	-	-
	LWB A34	2	270	50	18%	1	135	11	8%
	LWB E33P	4	540	115	21%	0	-	-	-
	NLB B2	3	405	203	50%	3	405	152	38%
	GMB42	4	76	46	60%	4	76	31	40%
From other districts	CTB 50	0	-	-	-	3	405	102	25%
	CTB 55	0	-	-	-	3	405	102	25%
	CTB 56	0	-	-	-	0	-	-	-
	CTB 56A	2	270	135	50%	3	405	304	75%
	CTB 950	0	-	-	-	1	135	68	50%
	CTB 955	0	-	-	-	1	135	81	60%
	CTB B3A	1	135	68	50%	2	270	203	75%
	KMB 53	2	270	102	38%	2	270	203	75%
	KMB 63X	2	270	102	38%	3	405	304	75%
	KMB 67M	6	810	61	8%	10	1350	422	31%
	KMB 67X	4	540	75	14%	7	945	237	25%
	KMB 68A	3	405	237	58%	5	675	394	58%
	KMB 258P	0	-	-	-	3	405	102	25%
	KMB 261P	0	-	-	-	1	135	54	40%
	KMB 267X	0	-	-	-	2	270	68	25%
	KMB 960A	0	-	-	-	1	135	54	40%
	KMB 960C	0	-	-	-	1	135	68	50%
	KMB 960P	0	-	-	-	2	270	68	25%
	KMB 960X	0	-	-	-	9	1215	608	50%
	LWB A34	0	-	-	-	2	270	27	10%
	LWB E33P	0	-	-	-	3	405	41	10%
	NLB B2	3	405	178	44%	3	405	254	63%
	GMB42	4	76	20	26%	4	76	25	33%

Appendix C – Planned Road Works to be implemented by the Owner


NG LAU ROAD
五柳路
UNNAMED ROAD
Road widening to 7.3m
UNNAMED ROAD
ACCESS ROAD
THE SUBJECT SITE
7.3m Carriageway
2m Footpath
2m Cycle Track
Light Rail
輕鐵
Pipelines
導管
SCALE 1:500(A4)

Appendix D – Swept Path Analysis

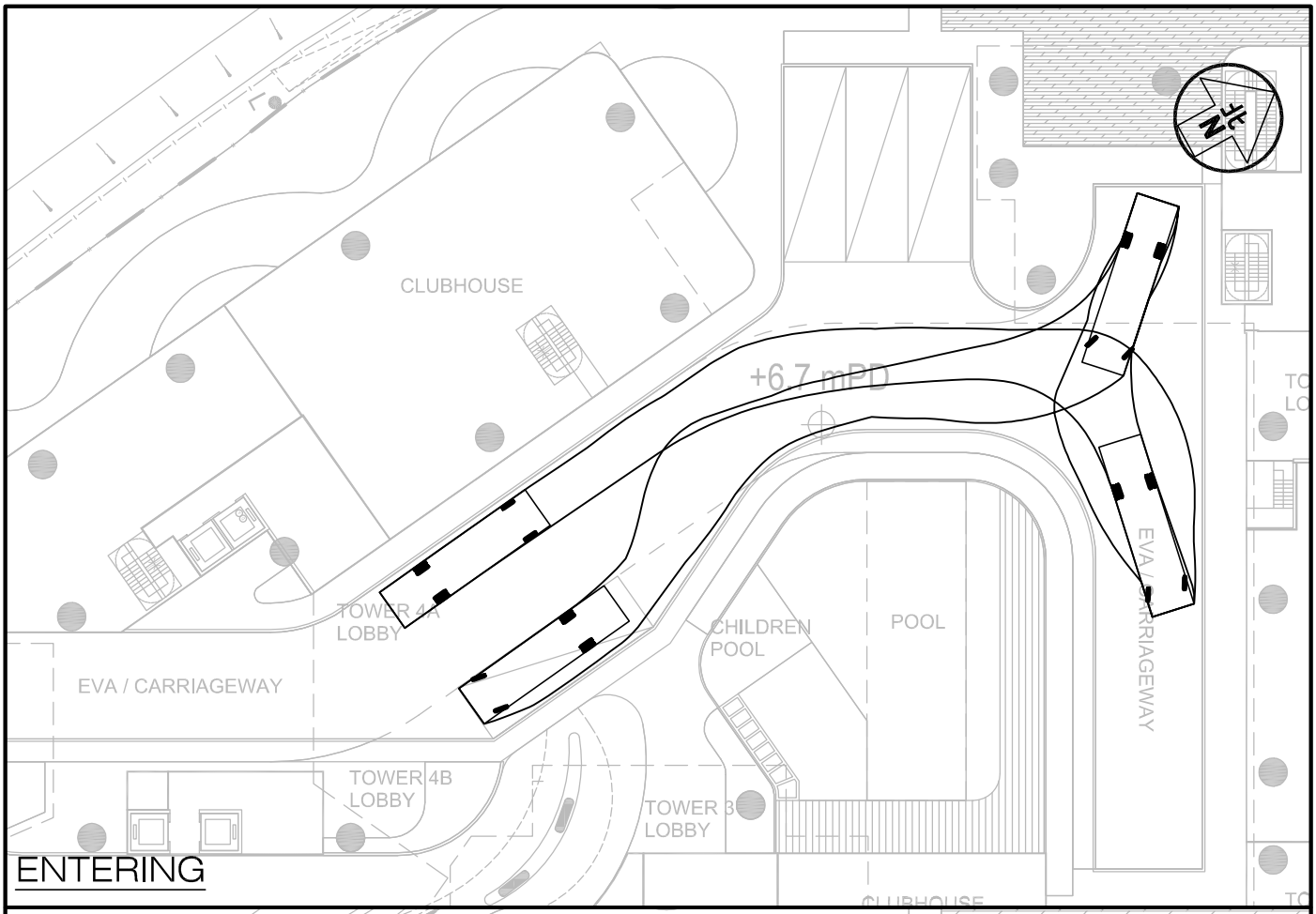


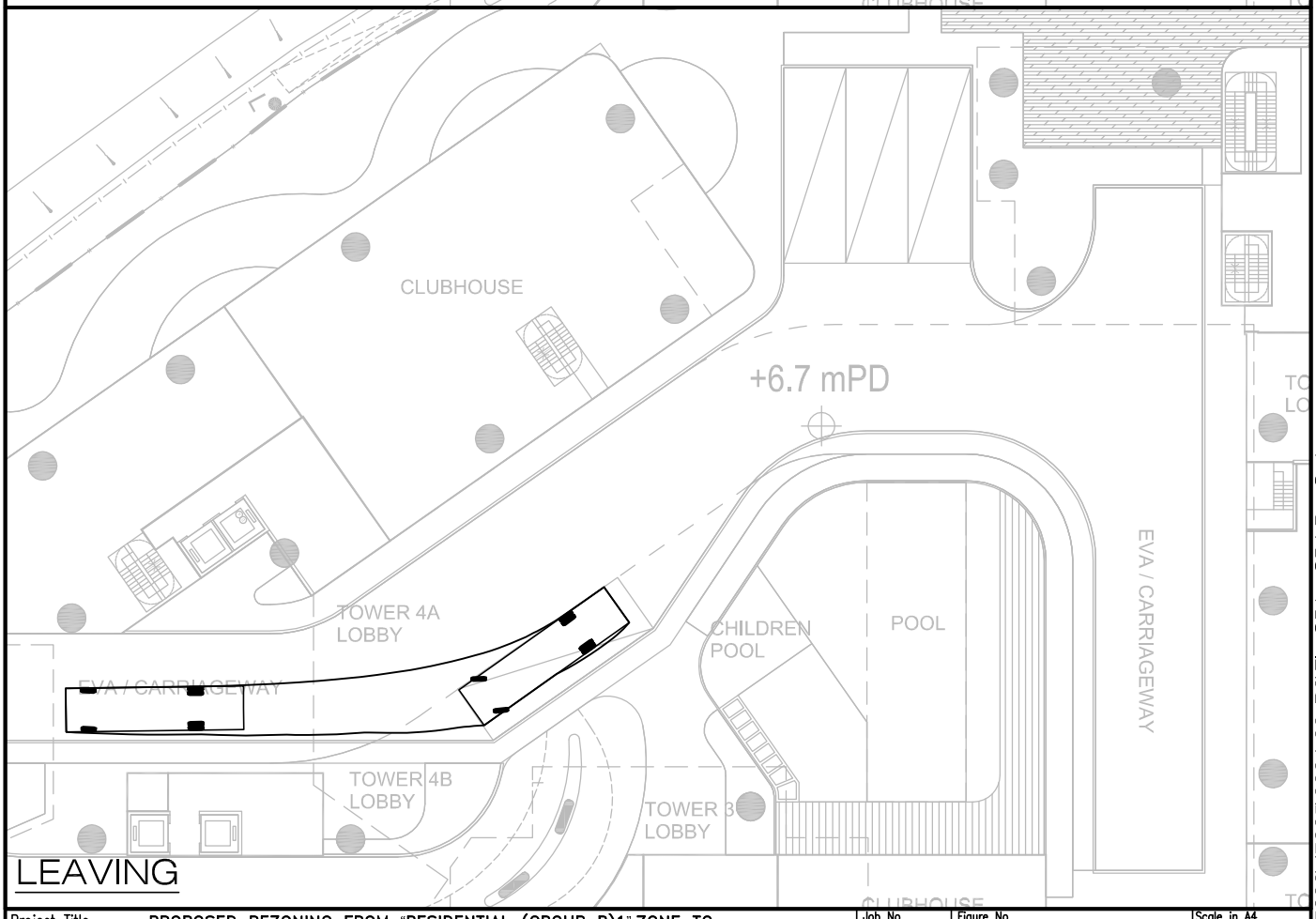


Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. SP1			Scale in A4 1 : 400
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024
Figure Title: **SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**					

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOBs\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

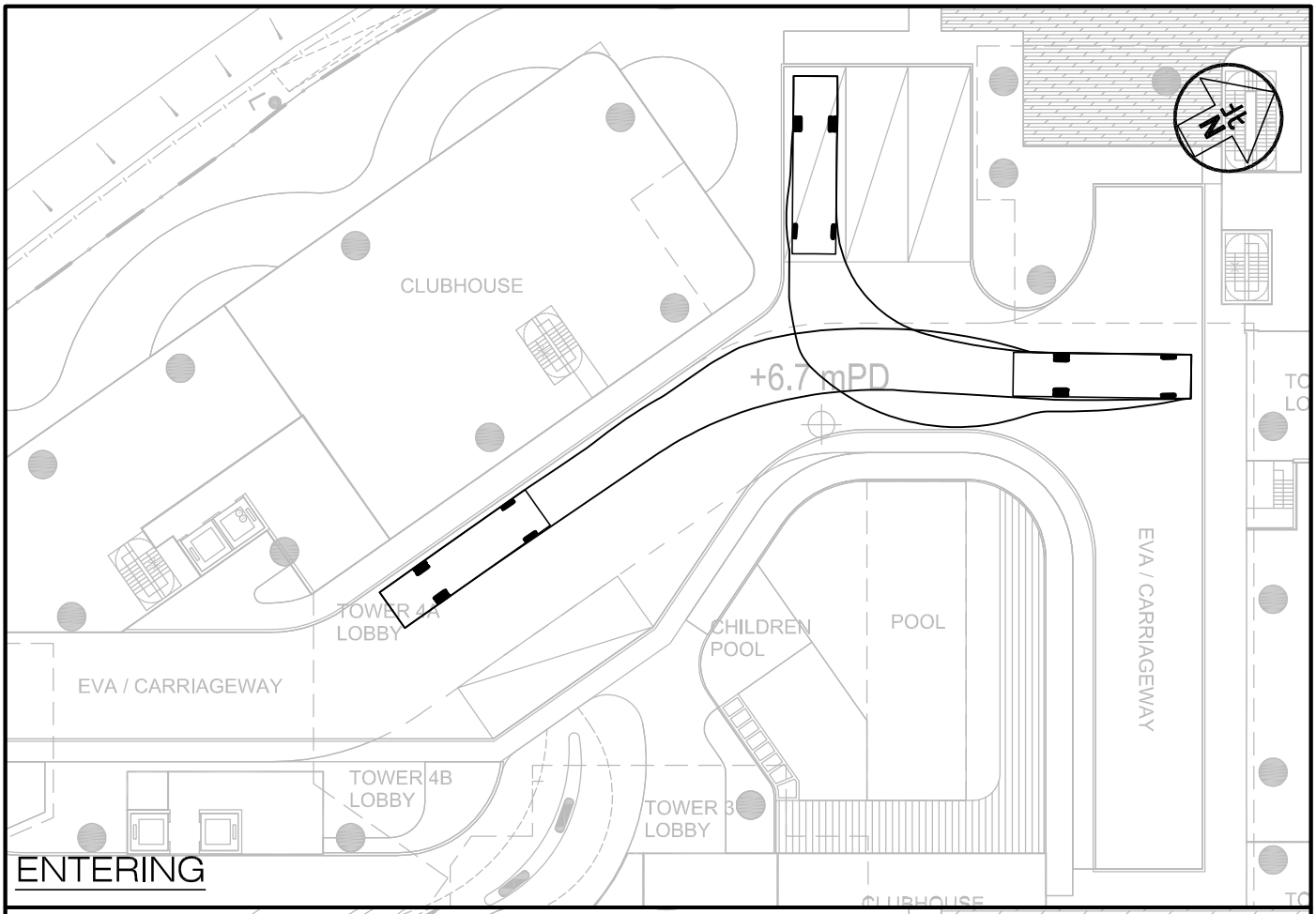
Job No.	Figure No.			Scale in A4
J7265	SP2			1 : 400
Designed by	Drawn by	Checked by	Revision	Date
L K W	W S W	K C	G	20 FEB 2024

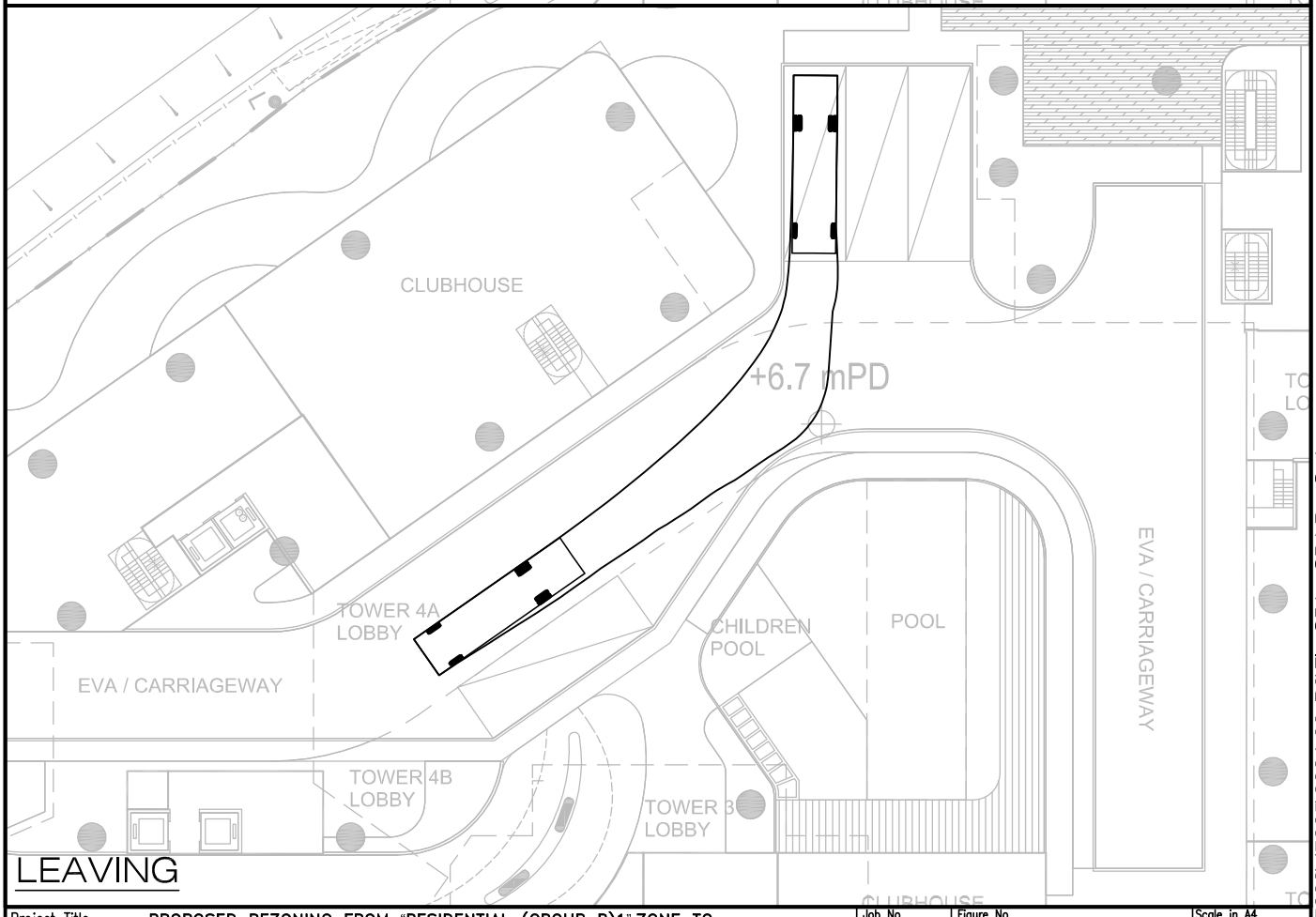
Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

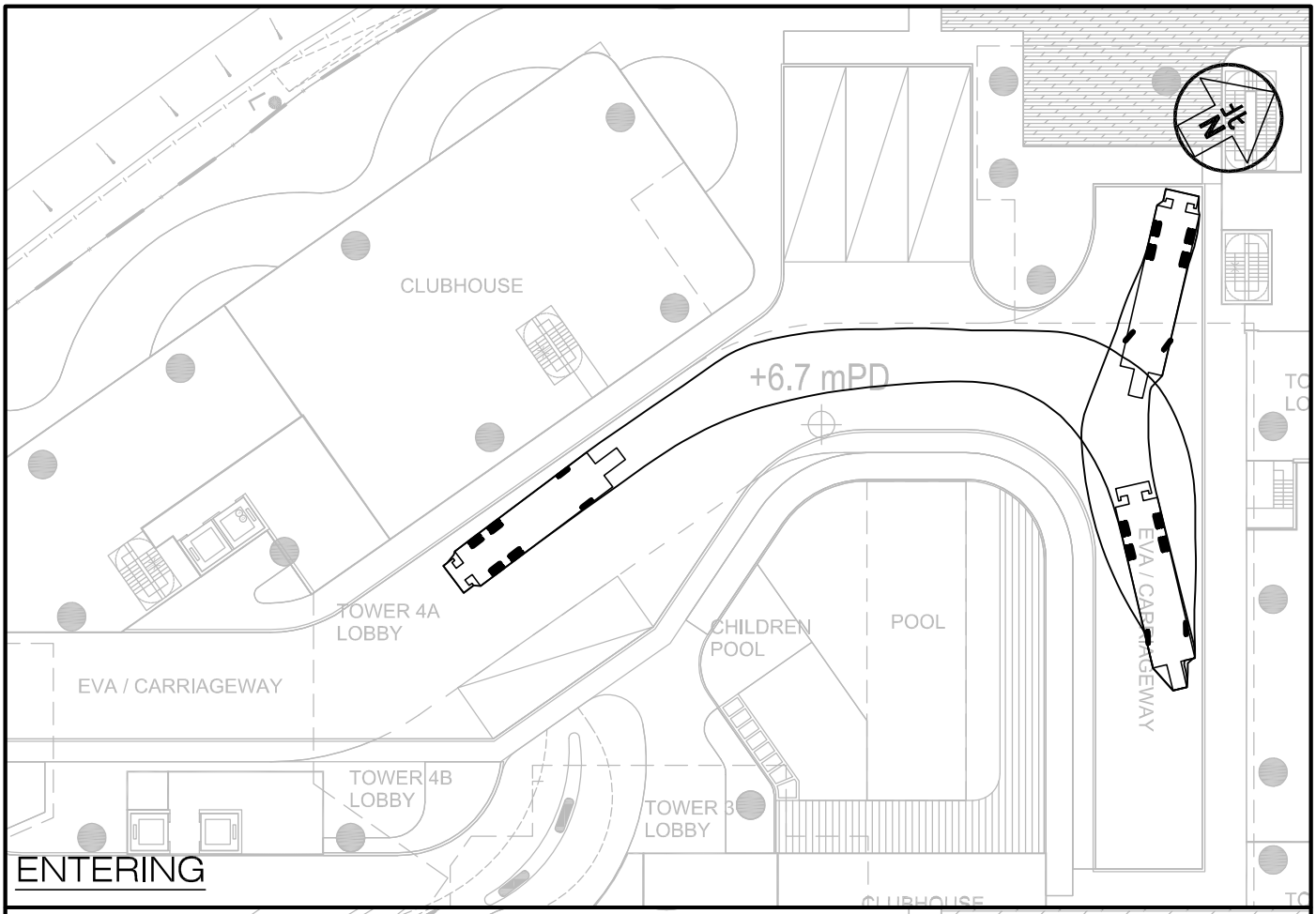
Job No.	Figure No.			Scale in A4
J7265	SP3			1 : 400
Designed by	Drawn by	Checked by	Revision	Date
L K W	W S W	K C	G	20 FEB 2024

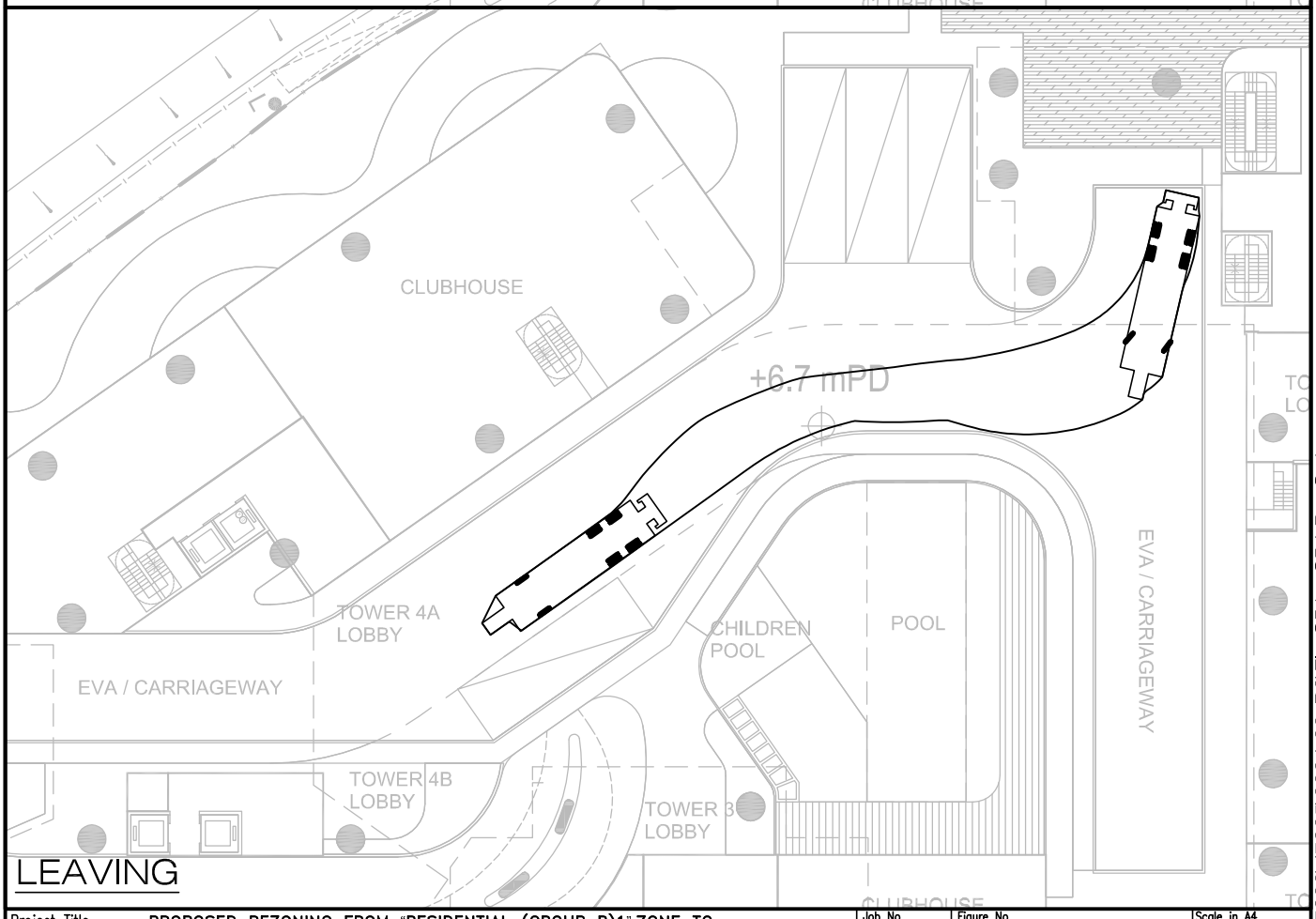
Figure Title

SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg





Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)	Job No. J7265	Figure No. SP4			Scale in A4 1 : 400
	Designed by L K W	Drawn by W S W	Checked by K C	Revision G	Date 20 FEB 2024

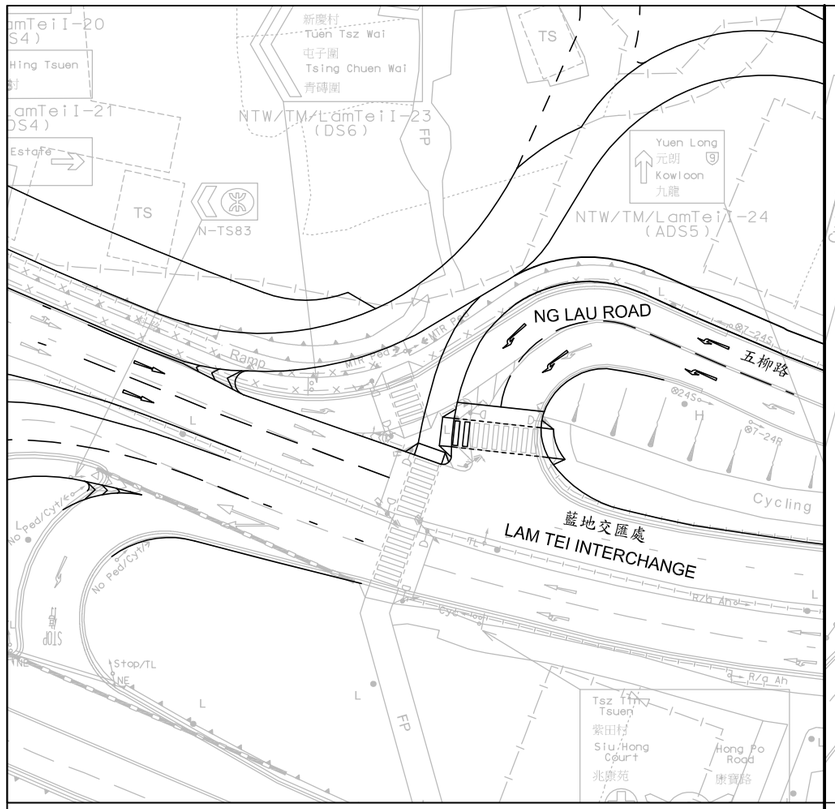
Figure Title

SWEPT PATH OF FIRE APPLIANCE ENTERING AND LEAVING THE SUBJECT SITE

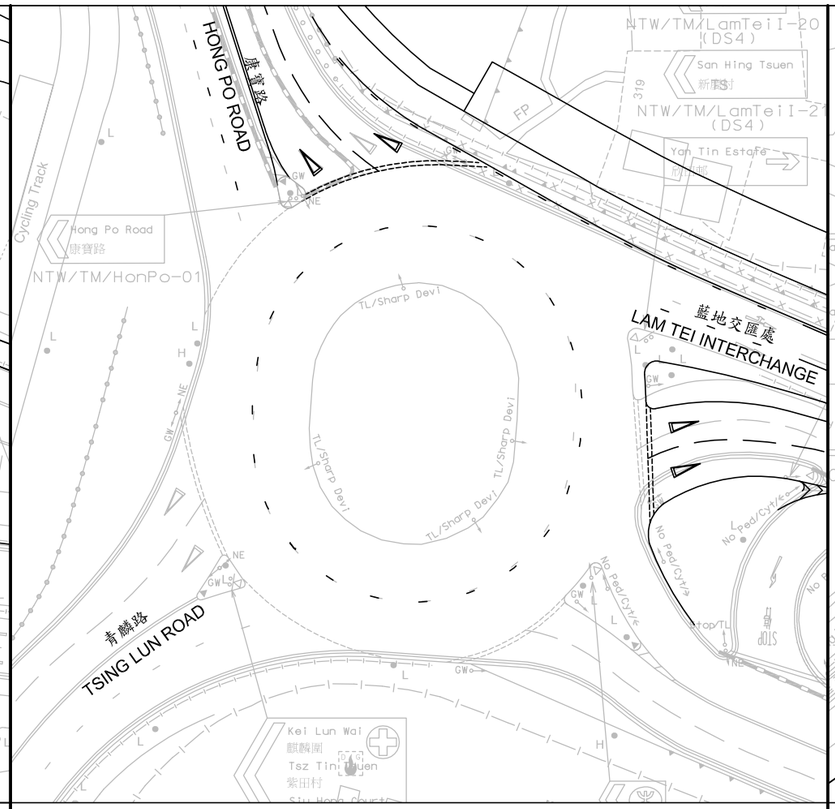
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg

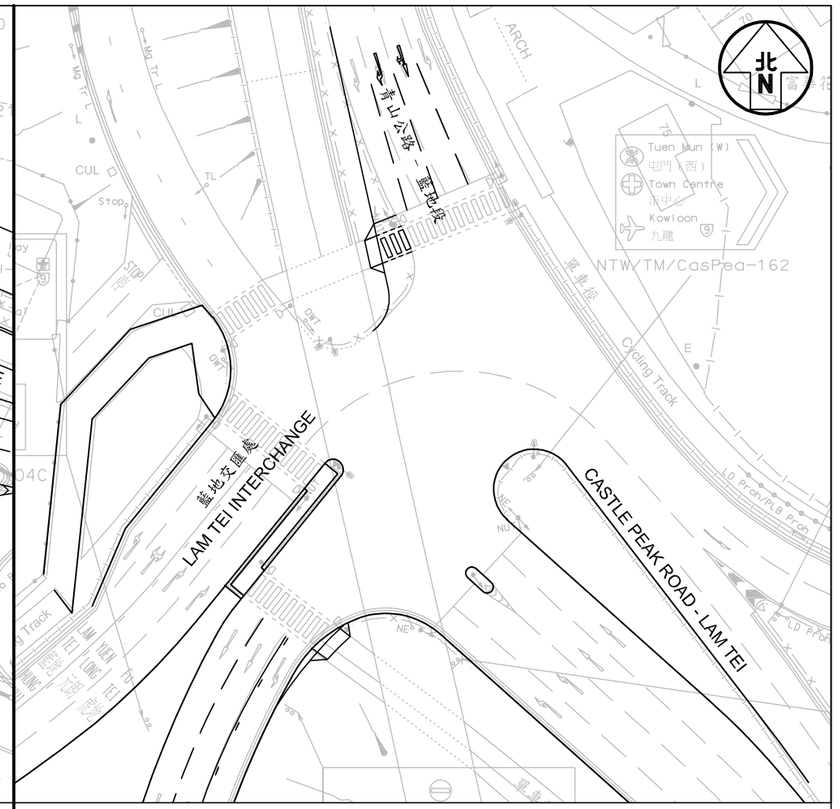
Appendix E –
Extract of Planned Road Works under Agreement No. CE 39/2021 (CE) by CEDD



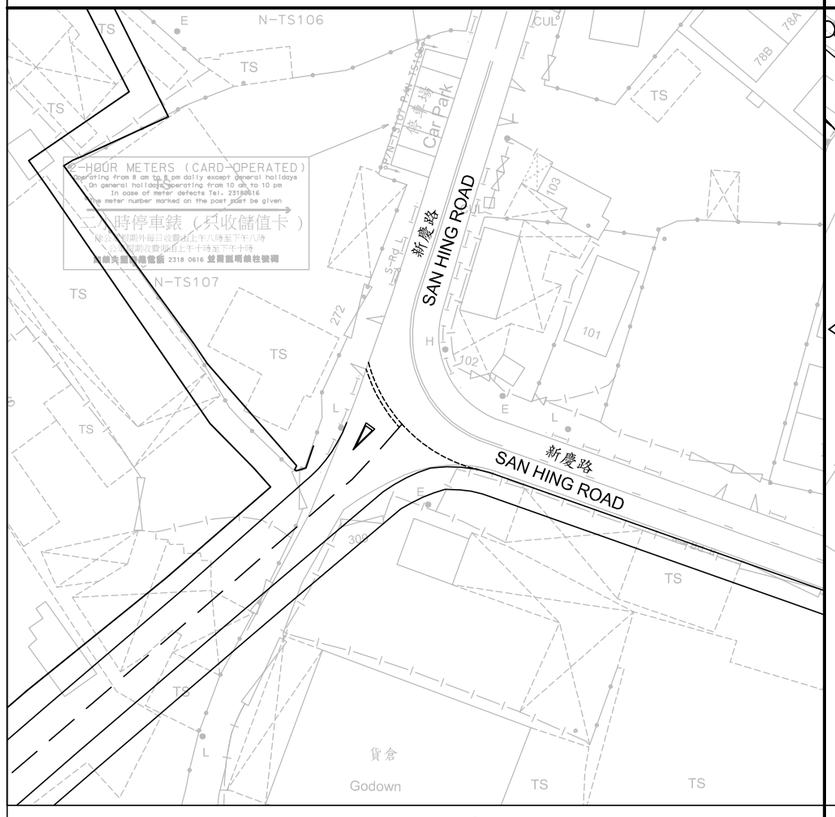
J3 - Ng Lau Road/ Lam Tei Interchange



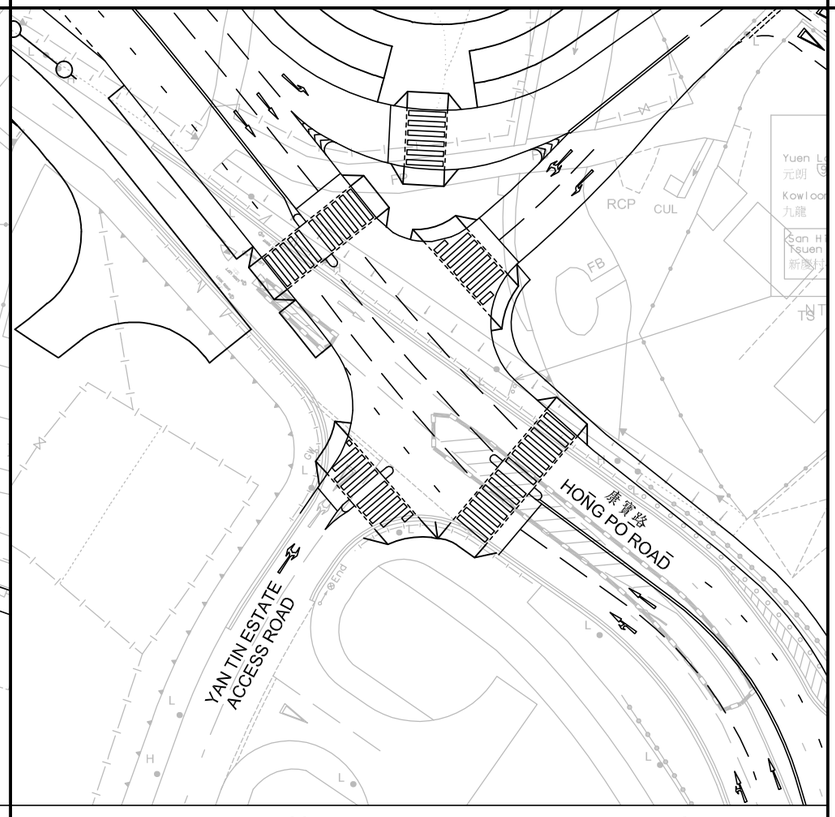
J4 - Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange



J6 - Lam Tei Interchange/ Castle Peak Road – Lam Tei



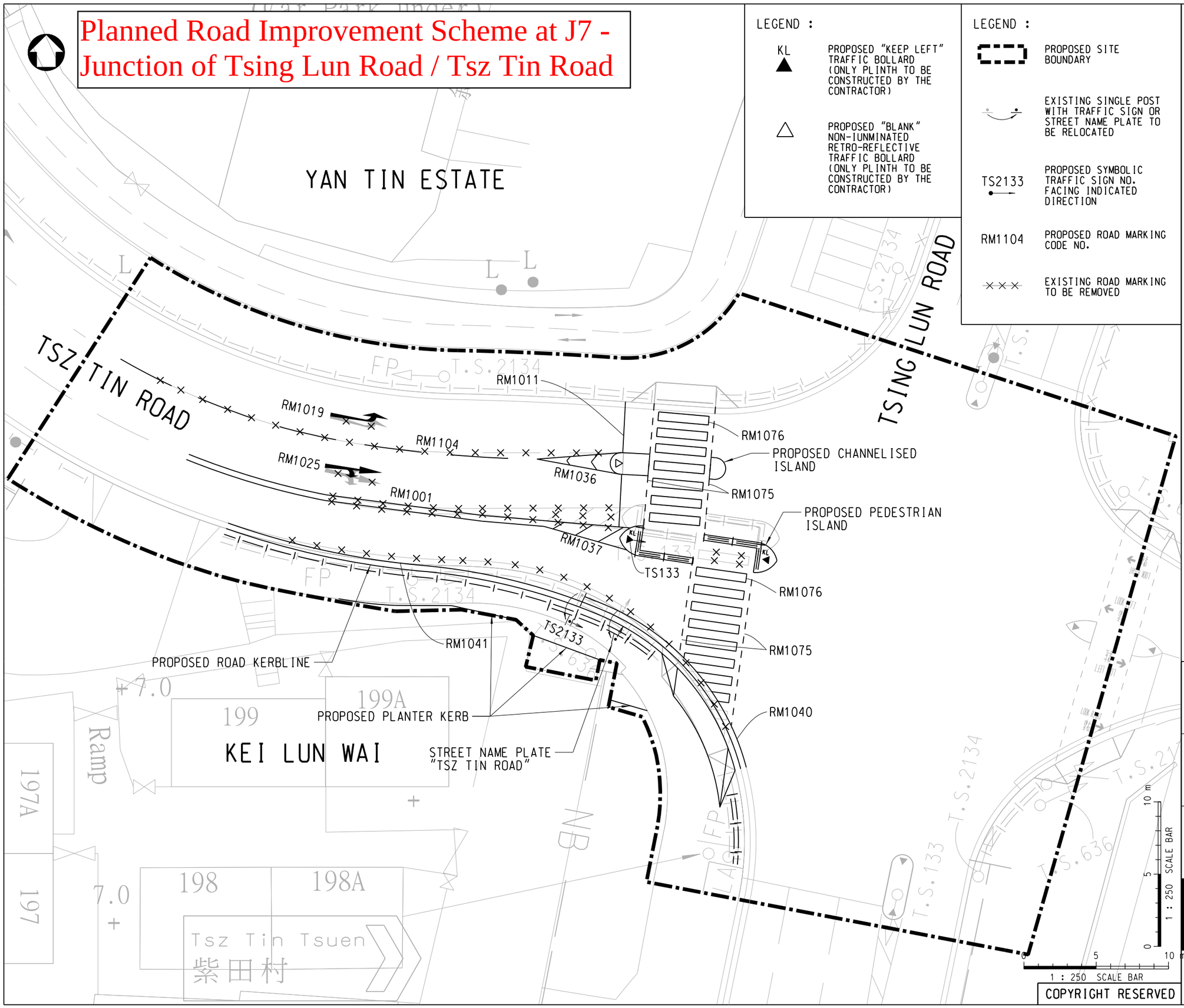
J10 - T-junction at San Hing Road



J12 - Hong Po Road/ Yan Tin Estate Access Road

scale 1:750 (A3)

Planned Road Improvement Scheme at J7 - Junction of Tsing Lun Road / Tsz Tin Road



LEGEND :

KL ▲	PROPOSED "KEEP LEFT" TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR)
△	PROPOSED "BLANK" NON-IUNMINATED RETRO-REFLECTIVE TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR)

LEGEND :

▭	PROPOSED SITE BOUNDARY
	EXISTING SINGLE POST WITH TRAFFIC SIGN OR STREET NAME PLATE TO BE RELOCATED
TS2133 →	PROPOSED SYMBOLIC TRAFFIC SIGN NO. FACING INDICATED DIRECTION
RM1104	PROPOSED ROAD MARKING CODE NO.
×××	EXISTING ROAD MARKING TO BE REMOVED

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. GRID LINES ARE IN HONG KONG METRIC GRID 1980.
3. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD).
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. LWSK-J5-0010.
5. DETAILS OF CONCRETE PLINTH FOR TRAFFIC BOLLARD SHALL REFER TO HyD STANDARD DRAWING NOS. H2140 TO H2141.
6. FOR DETAILS OF TRAFFIC SIGNS AND ROAD MARKING, REFER TO VOLUME 3 OF TRANSPORT PLANNING AND DESIGN MANUAL (TPDM) PUBLISHED BY TRANSPORT DEPARTMENT.
7. FOR SUPPORT DETAILS OF SINGLE POST TRAFFIC SIGNS INCLUDING COLOR OF POST, REFER TO HyD STANDARD DRAWING NOS. H2147 TO H2148.
8. BACK OF ALL SIGNS SHALL BE PAINTED IN GREY TO BS5252F CODE 18B19.
9. EXISTING ROAD MARKING TO BE AFFECTED SHALL BE REMOVED AND REPLACED BY PROPOSED ROAD MARKING.
10. NEW SUPPORTS, INCLUDING SINGLE/MULTIPLE POSTS AND FRAME SUPPORTS, SHALL BE CONSTRUCTED FOR ALL PROPOSED AND RELOCATED TRAFFIC OR DIRECTIONAL SIGNS.

works order title
IMPROVEMENT WORKS AT JUNCTION OF TSING LUN ROAD AND TSZ TIN ROAD, TUEN MUN

drawing title
TRAFFIC AIDS AND ROAD MARKING LAYOUT

drawing no.	scale
LWSK-J5-0009	1 : 250

office
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

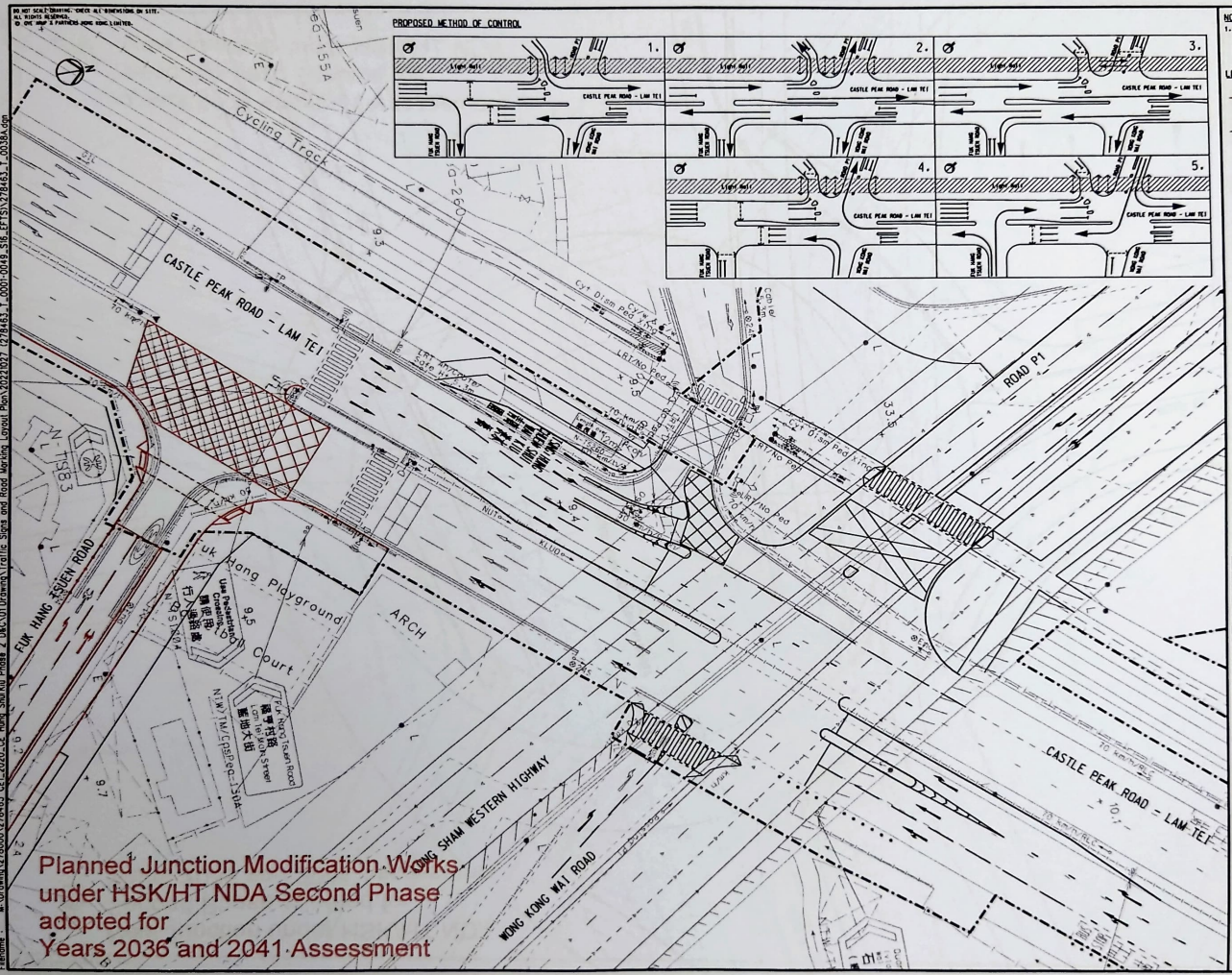
1 : 250 SCALE BAR

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

A3 420 x 297

S:#CV20101#Tsing Lun Road and Tsz Tin Road Junction#Sketches#LWSK-J5-0009.dgn
19/09/2022 **10.9.25.31#CAD_General#CAD_Common#PEN_TABLE#filename&date.tbl

Appendix F –
Extract of Planned Road Works under Agreement No. CE 01/2020 (CE) by CEDD



NOTES:
1. FOR NOTES AND LEGEND, REFER TO DWG.NO. 278463/T/0001.

LEGEND:

COMMITTED JUNCTION IMPROVEMENT SCHEME BY OTHERS

PLANNED JUNCTION IMPROVEMENT SCHEME UNDER HSK/HT NDA SECOND PHASE

Rev	Description	By	Date

Consultant: ARUP

Project Title: Agreement No. CE 1/2020 (CE) Hung Shui Kiu / Ha Tsuen New Development Area Package A Works for Second Phase Development – Design and Construction

Drawing title: JUNCTION LAYOUT PLAN – J38 CASTLE PEAK ROAD / ROAD P1/ FUK HANG TSUEN ROAD

Drawing no. 278463/T/0038A Rev. –

Drawn	Date	Checked	Approved
WAL	04/21	CFE1	DL

Scale: 1:250 @ A1 Status: PRELIMINARY

CEDD 土木工程拓展署 Civil Engineering and Development Department

Printed by : 8/11/2022
Filename : M:\Drawing\278000\278463_CE1_2020_CE_Hung_Shui_Kiu_Phase_2_DNC\01_Drawings\Traffic_Signs_and_Road_Marking_Layout_Plan\20221027_I278463_T_0001-0049_S16_EFTS\I278463_T_0038A.dgn