Proposed Residential Care Home for Persons with Disability ("RCHD") at Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun

Traffic Review

Final Report
April 2026

Prepared by: **CKM Asia Limited**

Proposed Residential Care Home for Persons with Disability ("RCHD") At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun

CONTENTS

Proposed Residential Care Home for Persons with Disability ("RCHD")
At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun

TABLES

NUMBER

Proposed Residential Care Home for Persons with Disability ("RCHD")
At Lot 827 RP in D.D.130, Fuk Hang Tsuen Road, Lam Tei, Tuen Mun

FIGURES

NUMBER

1.0 INTRODUCTION

Background

1.1 The subject site is located at Lot 827 RP in D.D. 130 in Lam Tei. The Owner of the subject site has the intention to develop a residential care home for persons with disability ("Proposed RCHD")

1.2 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic study in support of the Proposed RCHD. This report presents the findings and recommendation of the traffic study for the Proposed RCHD.

Structure of Report

1.3 The report is structured as follows:

Chapter One	-	Gives the background of the project;
Chapter Two	-	Describes the existing situation;
Chapter Three	-	Outlines the Proposed RCHD;
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 located to the southeast of the junction of Fuk Hang Tsuen Road / Lam Tei Main Street. It is occupied by temporary car park, and during the site visit in March 2026, there were no more than 10 private car parked in this temporary car park.

The Road Network

2.2 Fuk Hang Tsuen Road is a single carriageway 2-lane local distributor which connects with the Castle Peak Road – Lam Tei to the north and Lam Tei Main Street, to the south.

2.3 Lam Tei Main Street is a single carriageway 1-lane 1-way westbound road. It connects Fuk Hang Tsuen Road with Castle Peak Road - Lam Tei.

2.4 Castle Peak Road – Lam Tei is a dual carriageway 3-lane rural trunk road which connects with the Lam Tei Interchange to the south and Castle Peak Road – Hung Shui Kiu to the North.

Existing Traffic Flows

2.5 To quantify the traffic flows at junctions located in the vicinity of the subject site, manual classified counts were conducted at 0700 – 0900 and 1700 – 1900 hours on Thursday, 5th February 2026 and Friday, 6th February 2026 at the following junctions:

- J1: Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road;
- J2: Castle Peak Road – Lam Tei / Lam Tei Interchange;
- J3: Castle Peak Road – Lam Tei / Lam Tei Main Street;
- J4: Fuk Hang Tsuen Road / Lam Tei Main Street; and
- J5: Fuk Hang Tsuen Road / Man Chat Road

2.6 The locations of these junctions are shown in **Figure 2.1** and the layouts are shown in **Figures 2.2 – 2.5** respectively.

2.7 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 junction in pcu/hour are presented in **Figure 2.6**.

Performance of the Surveyed Junctions

2.8 The existing junction performance of the surveyed junctions are calculated based on the observed traffic counts, 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	Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road	Signal (RC)	40%	59%
J2	Castle Peak Road – Lam Tei / Lam Tei Interchange	Signal (RC)	135%	212%
J3	Castle Peak Road – Lam Tei / Lam Tei Main Street	Priority (DFC)	0.278	0.207
J4	Fuk Hang Tsuen Road / Lam Tei Main Street	Roundabout (DFC)	0.174	0.151
J5	Fuk Hang Tsuen Road / Man Chat Road	Priority (DFC)	0.532	0.491

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

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

Public Transport Facilities

2.10 The Subject Site is located close to high capacity transport services, including franchised bus and public light buses. Details of the road-based public transport facilities are presented in **Table 2.2** and shown in **Figure 2.7**.

TABLE 2.2 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (min)
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 68A	Long Ping Estate - Tsing Yi Station	12 - 30
KMB 258A(1)	Hung Shui Kiu (Hung Fuk Estate) → Lam Tin Station(A)	3 per day
KMB 258P(2)	Hung Shui Kiu (Hung Fuk Estate) - Lam Tin Station(C)	12 - 30
KMB 261P	Tuen Mun (Siu Hong Court) → Sheung Shui (Tin Ping) (2)(A)	1-3 per day
	Sheung Shui (Tin Ping) → Tuen Mun (Siu Hong Court) (1)(B)	1 per day
KMB 960P	Hung Shui Kiu (Hung Yuen Road) → Causeway Bay (Victoria Park)(A)	10 - 35
	Causeway Bay (Victoria Park) → Hung Shui Kiu (Hung Yuen Road) (1)(B)	5 per day
KMB 960X(1)	Hung Shui Kiu (Hung Yuen Road) → Quarry Bay (King's Road) (A)	9 per day
	Quarry Bay (King's Road) → Hung Shui Kiu (Hung Yuen Road) (B)	10 per day
LWB A34	Hung Shui Kiu (Hung Yuen Road) - Airport (Ground Transportation Centre)	15 - 45
LWB NA37(D)	Tin Shui Wai Town Centre → Cathay Pacific City	6 per day
	Cathay Pacific City → Tin Shui Wai Town Centre	7 per day
CTB N969(D)	Tin Shui Wai Town Centre - Causeway Bay (Moreton Terrace)	20 - 45
NLB B2	Yuen Long MTR Station - Shenzhen Bay Port	20 - 30
GMB 606S(D)	Yuen Long (Fung Cheung Road) - 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

3.0 THE PROPOSED RCHD

Development Parameters

3.1 The parameters of the Proposed RCHD are presented in **Table 3.1**.

TABLE 3.1 PARAMETERS OF THE PROPOSED DEVLEOPMENT

Item	Proposed RCHD
Site Area	1,694m^2 (About)
No. of beds	No more than 320

Internal Transport Facilities for the Proposed RCHD

3.2 RCHDs typically have significantly fewer visitors and lower staff-to-patient ratio than a hospital. Hence, RCHD has much lower parking demand than a hospital. In view that the recommendation of internal transport facilities for RCHD is not specified in the HKPSG, reference is made to 3 similar RCHDs, in terms of the number of beds, and transport accessibility and these are presented in **Table 3.2**:

TABLE 3.2 SIMILAR RCHD

Similar RCHD	Distance from MTR (km)	No. of beds	Provision of Internal Transport Facility			
			Car parking space	Private car / taxi lay-by	LGV L/UL bay	Light bus/ ambulance
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung)	1	505	6 (1 space per 84 beds)	Nil	1	1
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai)	1.4	212	6 (1 space per 35 beds)	1	Nil	Nil
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun)	1.2	243	4 (1 space per 61 beds)	1	1	1

Note: LGV L/UL bay – light goods vehicle loading / unloading bay

3.3 **Table 3.2** shows that the 3 similar RCHDs provide around 1 car parking space per 35 – 84 beds. Based on this rate, a total of 7 car parking spaces are provided for the Proposed RCHD with 320 beds.

3.4 In addition to the car parking spaces, 1 private car / taxi lay-by, 1 LGV loading/ unloading bay and 1 light bus / ambulance shared-use parking space are provided for the operational needs, and these are presented in **Table 3.3**. The G/F layout plan is shown in **Figure 3.1**.

TABLE 3.3 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED RCHD

Internal Transport Facilities	Provision	Dimension (m)		
		Length	Width	Headroom
Car Parking Space	7 nos. [(1)]	5	2.5	2.4
Private Car / Taxi Lay-by	1 no.	5	2.5	2.4
LGV Loading/ Unloading Bay	1 no.	7	3.5	3.6
Light Bus/ ambulance shared-use parking space	1 no.	9	3.0	3.6

[(1)] Including one accessible car parking space with dimension of 5m (length) x 3.5m (width) x 2.4m (headroom)

3.5 The Proposed RCHD provides LGV loading / unloading bay instead of M/HGV because: (1) all deliveries observed at 3 similar RCHDs were conducted using only LGVs and goods vans, and (2) according to the Project Architect, due to the building design constraints, provision of the M/HGV loading / unloading bay is difficult.

Fuk Hang Tsuen Road Footpath abuts the Proposed RCHD

3.6 As shown in **Figure 3.1**, the layout incorporated a setback and provided minimum 2.5m-wide footpath at Fuk Hang Tsuen Road. In view that the existing overhead cable and its supporting poles near the site entrance do not affect the vehicular and pedestrian traffic, these utilities will remain unchanged.

Swept Path Analysis

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

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed RCHD is expected to be completed in 2031, and the design year adopted for the traffic assessment is: (i) at least 3 years after the planned completion of the development, or (ii) 5 years from the date of this application, whichever is the later. Based on (i), the design year is 2034, and for (ii) the design year is 2031. Since the later year is 2034, the design year adopted for junction capacity analysis for the Proposed RCHD is 2034.

Traffic Forecasting

4.2 Year 2034 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM, which contains the latest planning assumption and has taken into account all committed highway infrastructures; (ii) the estimated traffic growth from 2031 to 2034; (iii) expected traffic generation by the planned / committed development in the vicinity; and (iv) expected traffic generation by the Proposed RCHD.

Estimated Growth Rate from 2031 to 2034

4.3 Reference is made to the: (i) the Annual Average Daily Traffic ("AADT") of core stations located in the vicinity of the Proposed RCHD, which is found in the Annual Traffic Census, published by Transport Department, and (ii) the Hong Kong Population Projection published by Census and Statistics Department.

4.4 The information for (i) and (ii) are presented in **Tables 4.1** and **4.2** respectively.

TABLE 4.1 AADT OF THE CORE STATIONS FOUND IN THE VICINITY OF THE SUBJECT SITE

Station	6213	6604	Overall
Road	Castle Peak Road - Hung Shui Kiu	Lam Tei Main Street	–
From	Tin Ha Road	Castle Peak Road – Lam Tei	–
To	Lam Tei Interchange	Fuk Hang Tsuen Road	–
2018	32,740	880	33,620
2019	33,220	960	34,180
2020	34,710	950	35,660
2021	34,800	1,020	35,820
2022	34,500	1,070	35,570
2023	34,030	1,150	35,180
2024	32,970	1,220	34,190
Average Annual Growth (2018-2024)	**0.46%**	**2.02%**	**0.51%**

4.5 **Table 4.1** shows that the annual average traffic growth of 0.51%.

TABLE 4.2 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

Year	Population in Hong Kong (thousands)
2031	7,820.2
2034	7,945.1
Average Annual Growth (2031 – 2034)	**0.53%**

4.6 **Table 4.2** shows that the annual population growth between 2031 – 2034 is 0.53%. To be conservative, the annual growth rate of 0.53% is adopted for 2031 – 2034.

Planned/ Committed Developments near the Subject Site

4.7 The planned/ committed developments near the Subject Site have been incorporated to produce the future year traffic flows are listed in **Table 4.3**.

TABLE 4.3 PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

Ref. No.	Development	Use	No. of Flats
A	Tuen Mun Area 54 Site 4A (East and West)	Light Public Housing	5,620
B	Tuen Mun Area 54 Site 4A (South)	PRH	1,475
C	Tuen Mun Area 54 Site 5	SSF	1,020
D	Development at San Hing Road and Hong Po Road, Tuen Mun	PRH / SSF	20,400
E	proposed residential development at Lots 531 RP, 532 S.D. RP and 532 RP in DD 130, Lam Tei (A/TM-LTYY/ 426)	Private Housing	184
F	Proposed Residential Development at Lots 220 RP (part) and 221 in D.D. 130, San Hing Tsuen (Y/TM-LTYY/ 10)	Private Housing	288
G	Proposed Residential Development at Various Lots in D.D. 130, Lam Tei (Y/TM-LTYY/ 11)	Private Housing	1,390
H	Pok Oi Hospital Lam Tei Elderly Home at Fuk Hang Tsuen Road	1434-beds RCHE	N/A
I	Proposed Minor Relaxation of Building Height Restriction at Lingnan University	11,000m^2 Education Institution	N/A

PRH – Public Rental Housing SSF – Subsidised Sale Flats RCHE – Residential Care Home for the Elderly

Planned Road Improvement Works Nearby

4.8 The planned road improvement works are adopted for the Year 2034 junction capacity analysis and are presented below.

Hung Shiu Kiu New Development Area

4.9 Road improvement work is planned at J1, i.e., junction of Castle Peak Road – Lam Tei / Fuk Hang Tsuen Road / Ng Lau Road, 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"), and the road improvement work is found in **Appendix C**.

Development at San Hing Road and Hong Po Road

4.10 Road improvement work is planned at J3, i.e., junction of Castle Peak Road – Lam Tei / Lam Tei Interchange, under "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 CEDD, and the road improvement work is found in **Appendix D**.

4.11 Upon completion of the junction improvement work, Castle Peak Road – Lam Tei southbound will provide 2 right-turn lanes, 1 shared lane for right turn and straight ahead and 1 left turn lane. The improvement work 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.

Net Increase in Traffic Generation of the Proposed RCHD

4.12 A survey on existing use of the subject site was conducted on Friday, 6th February 2026, and the results are presented in **Table 4.4**.

TABLE 4.4 TRAFFIC GENERATION OF EXISTING USE

Item	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Existing Use (pcu/hr)	3	2	1	3
	5 (2-way)		**4 (2-way)**	

4.13 **Table 4.4** shows that the existing use generates 5 and 4 pcu per hour (2-way) during AM and PM peaks respectively.

4.14 To quantify the traffic generated by the Proposed RCHD, reference is made to 3 similar RCHDs, in terms of the number of beds, and transport accessibility. The traffic generation rate of the RCHDs and adopted traffic generation rates for the Proposed RCHD are summarised in **Table 4.6**.

TABLE 4.5 TRAFFIC GENERATION RATE OF SIMILAR RCHDS AND ADOPTED TRAFFIC GENERATION RATES

Development	Traffic Generation Rates (pcu/bed/hr)					
	AM Peak			PM Peak		
	GEN	ATT	2-way	GEN	ATT	2-way
Caritas Jockey Club Lai King Rehabilitation Centre (31 Lai Chi Ling Road, Kwai Chung) - 505 beds	0.0178	0.0218	0.0396	0.0059	0.0020	0.0079
Po Leung Kuk Y.C.Cheng Centre (9 Yau Ting Street, Tai Wai) - 212 beds	0.0330	0.0425	0.0755	0.0330	0.0236	0.0566
Jockey Club Tuen Mun Home For The Aged Blind (8 Tsing Fuk Lane, Tuen Mun) - 243 beds	0.0206	0.0453	0.0658	0.0412	0.0082	0.0494
Adopted Traffic Generation Rate	**0.0330**	**0.0425**	**0.0755**	**0.0330**	**0.0236**	**0.0566**

GEN – generation, ATT – attraction

4.15 Based on the adopted traffic generation rate in **Table 4.5**, the AM and PM peak hour traffic generation of the Proposed RCHD are calculated and presented in **Table 4.6**.

TABLE 4.6 TRAFFIC GENERATION OF THE PROPOSED RCHD

Proposed RCHD *(320-bed RCHD)*	Parameter	AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Traffic Generation	pcu/hr	*11*	*14*	*11*	*8*
		25 (2-way)		***19 (2-way)***	

4.16 **Table 4.6** shows that the Proposed RCHD generates 25 and 19 pcu per hour (2-way) during AM and PM peaks respectively.

4.17 The additional traffic generated by the Proposed RCHD is calculated using the traffic generation of Proposed RCHD shown in **Table 4.6**, and the existing uses shown in **Table 4.4**, and is presented in **Table 4.7**.

TABLE 4.7 ADDITIONAL TRAFFIC GENERATIONS BY THE PROPOSED RCHD

Development	Traffic Generations (pcu/ hour)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Proposed RCHD (from **Table 4.6**) [a]	11	14	11	8
Existing Uses (from **Table 4.4**) [b]	3	2	1	3
Net Increase in Traffic Generations [a] – [b]	**+8**	**+12**	**+10**	**+5**
	+20(2-way)		**+15(2-way)**	

4.18 **Table 4.7** shows that compared to existing use, the Proposed RCHD is expected to generate additional 20 and 15 pcu / hour (2-way) during AM and PM peak hours respectively.

Year 2034 Traffic Flows

4.19 Year 2034 traffic flows for the following cases are derived:

Year 2034 Without the Proposed RCHD [A] = *Traffic flows derived with reference to 2031 NTW1 BDTM + estimated traffic growths from 2031 to 2034 + estimated traffic generation of the approved / new developments*

Year 2034 With the Proposed RCHD [B] = *[A] + Additional traffic generated by the Proposed RCHD*

4.20 Year 2034 peak hour traffic flows for the above two cases are shown in **Figures 4.1 and 4.2** respectively.

Year 2034 Junction Capacity Analysis

4.21 Year 2034 junction capacity analysis for the cases without and with the Proposed RCHD are summarised in **Table 4.8** and detailed calculations are found in the **Appendix A**.

TABLE 4.8 YEAR 2034 JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	Year 2034 without Proposed RCHD		Year 2034 with Proposed RCHD	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Castle Peak Road – Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road	Signal (RC)	18%	23%	18%	23%
J2	Castle Peak Road – Lam Tei / Lam Tei Main Street	Priority (DFC)	21%	46%	21%	46%
J3	Castle Peak Road – Lam Tei / Lam Tei Interchange	Signal (RC)	0.300	0.220	0.306	0.228
J4	Fuk Hang Tsuen Road / Lam Tei Main Street	Roundabout (DFC)	0.288	0.239	0.307	0.263
J5	Fuk Hang Tsuen Road / Man Chat Road	Priority (DFC)	0.568	0.518	0.569	0.518

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

4.22 **Table 4.8** shows that the traffic generation associated with the Proposed RCHD has negligible traffic impact to the road junctions analysed.

5.0 SUMMARY

5.1 The subject site is located at Lot 827 RP in D.D. 130 in Lam Tei, to the southeast of the junction of Fuk Hang Tsuen Road / Lam Tei Main Street. The subject site is at present occupied by temporary car park. The Owner of the subject site has the intention to develop a RCHD.

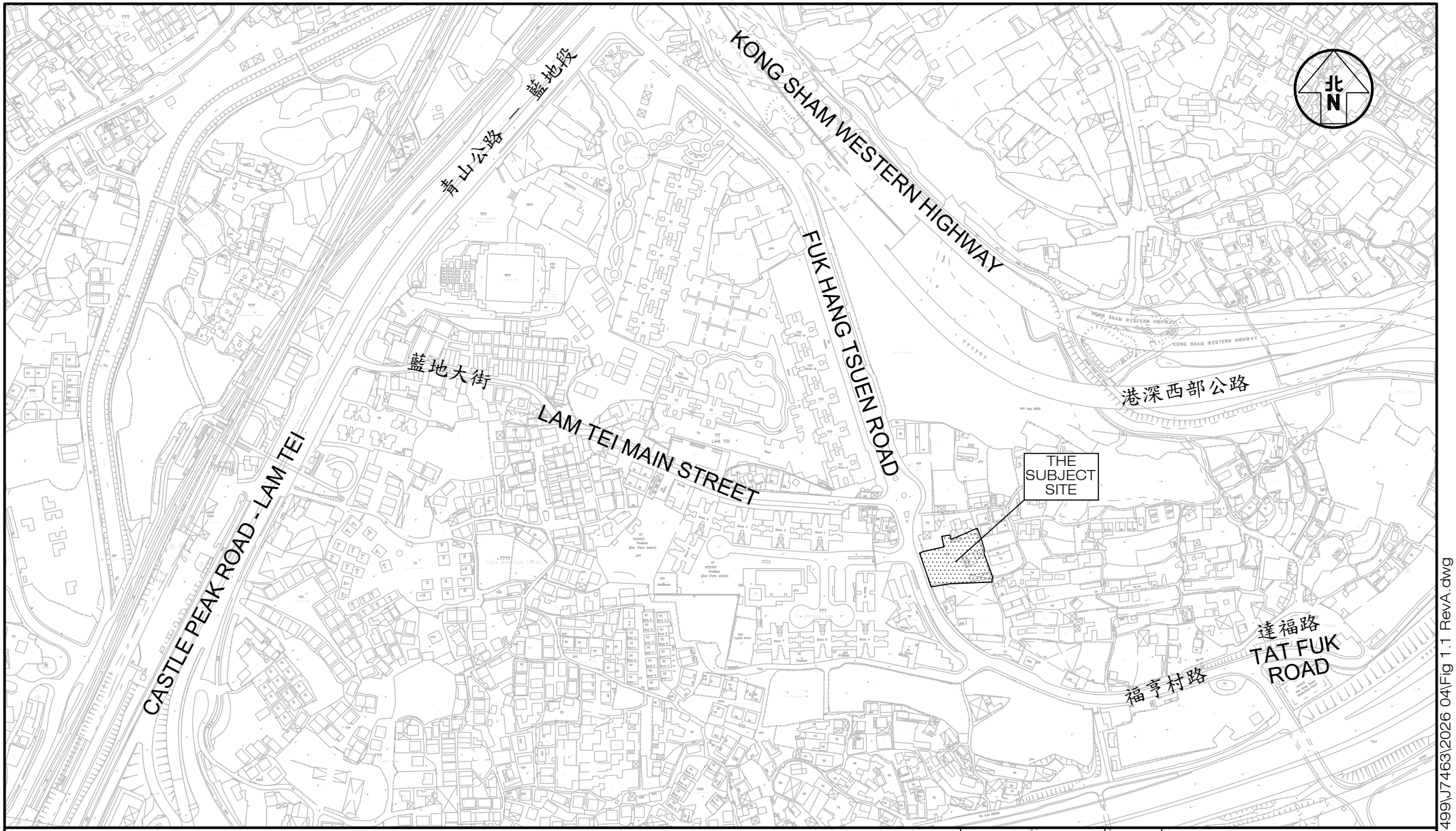
5.2 Manual classified counts were conducted at junctions, which are located in the vicinity in order to establish the existing traffic flows during weekday AM peak, PM peak and weekend peak.

5.3 Internal transport facilities for the Proposed RCHD are provided with reference to similar RCHDs.

5.4 Traffic generated by the Proposed RCHD is estimated based on the trip generation rates obtained from the survey of similar RCHDs.

5.5 The junction capacity analysis results found that the additional traffic generated by the Proposed RCHD has negligible traffic impact to the analysed junctions in Year 2034. From traffic engineering grounds, the Proposed RCHD is acceptable.

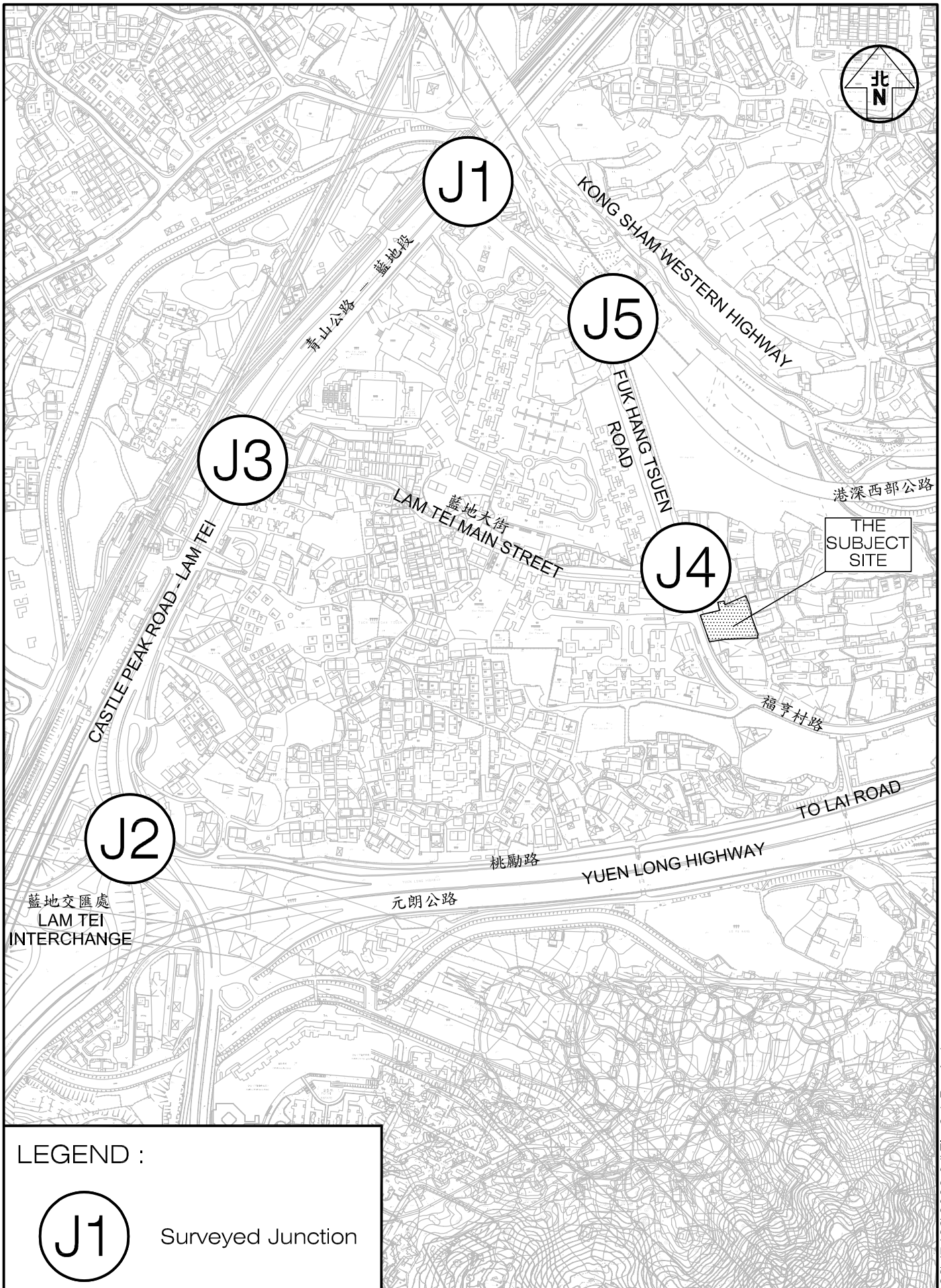
Figures



Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	
Figure Title	LOCATION OF THE SUBJECT SITE	Figure No. 1.1	Revision A
		Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 1 : 4,000	Date 15 APR 2026

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\J7450-J7499\J7463\2026 04\Fig 1.1 RevA.dwg



LEGEND :

J1 Surveyed Junction

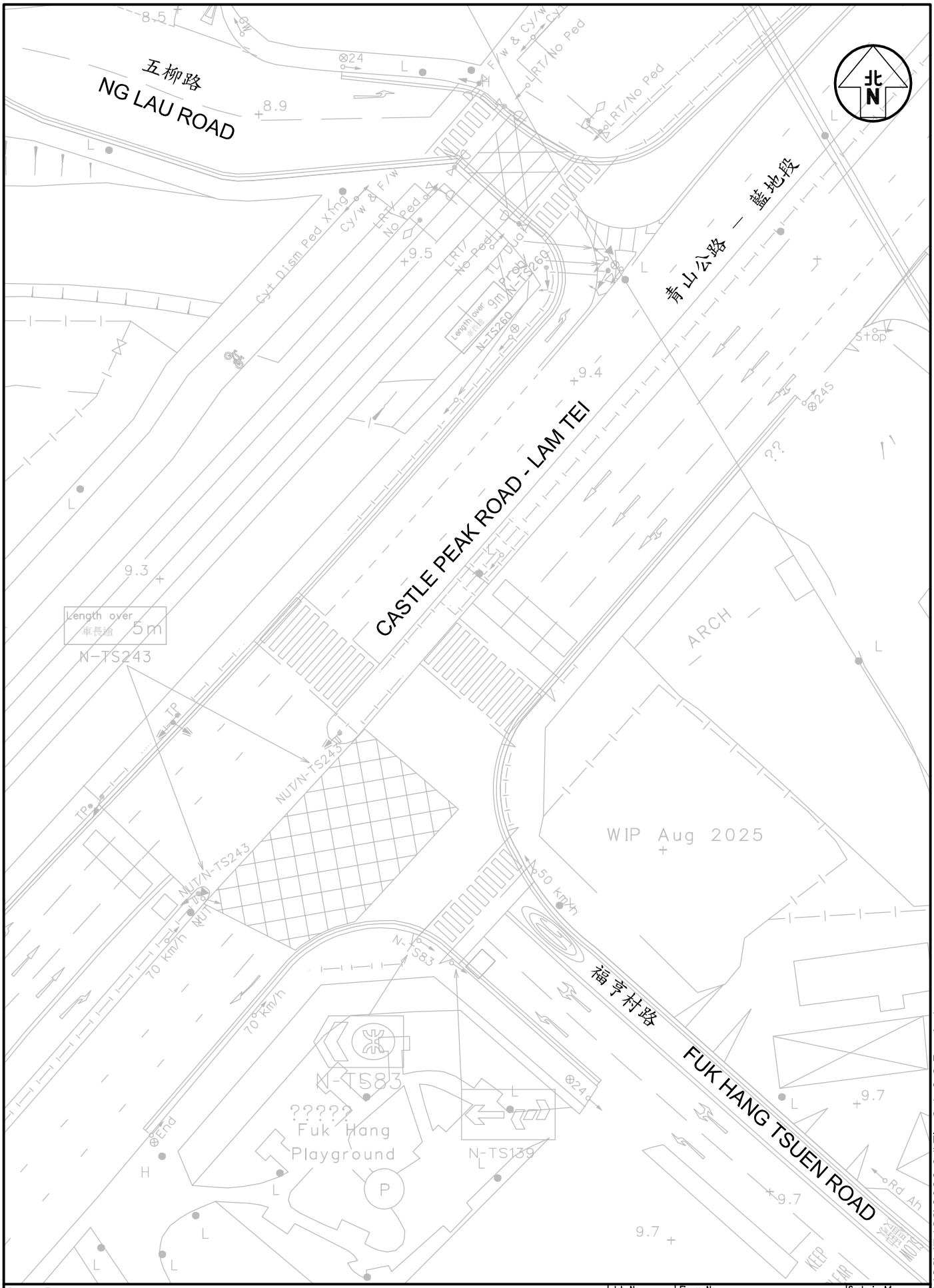
Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Job No.	Figure No.			Scale in A4
J7463	2.1			1 : 5,000
Designed by	Drawn by	Checked by	Revision	Date
L K W	S C Y	K C	A	15 APR 2026

Figure Title
LOCATION OF SURVEYED JUNCTIONS

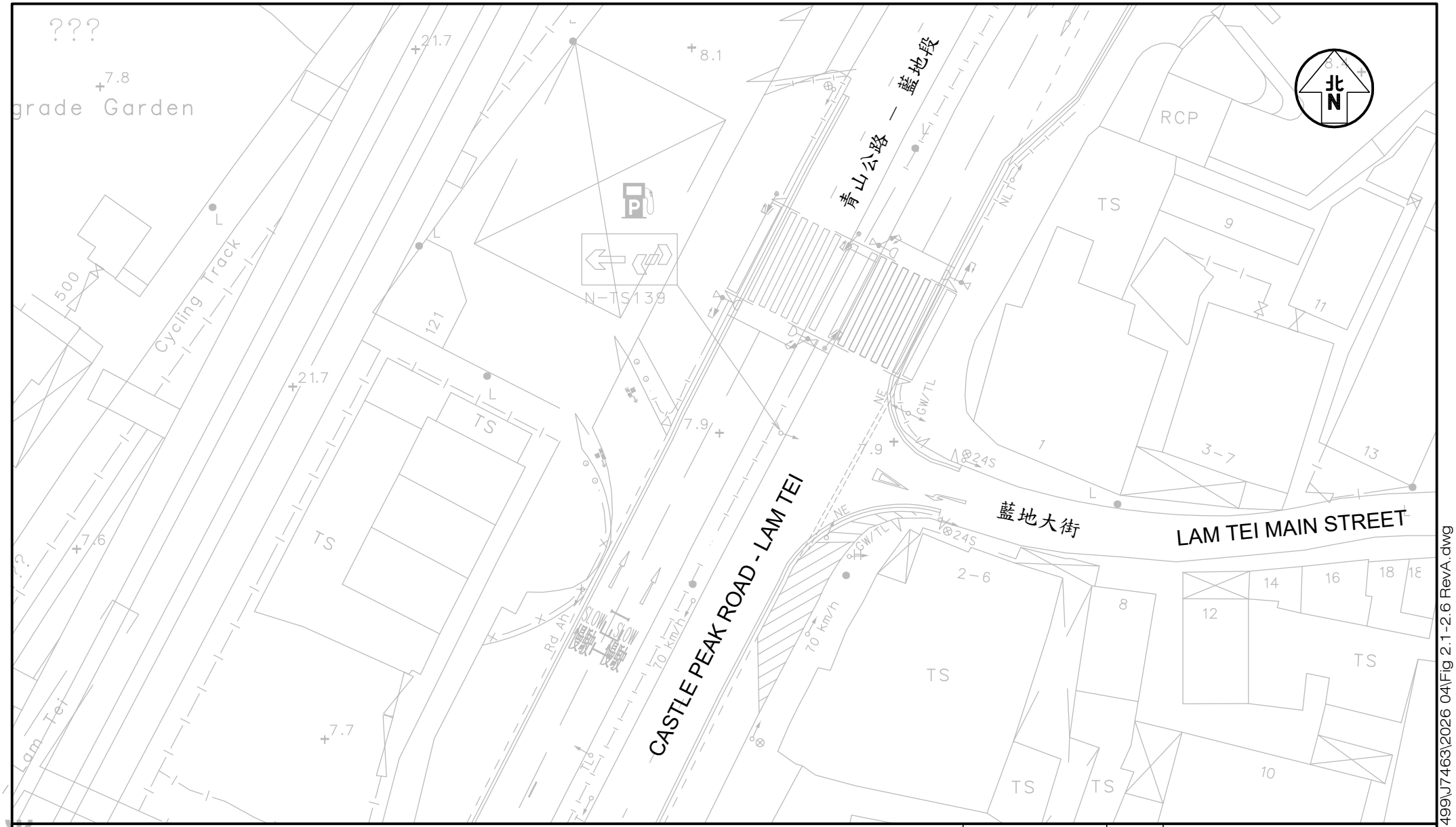
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7450-J7499\J7463\2026 04\Fig 2.1 RevA.dwg



Project Title: S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)	Job No. J7463	Figure No. 2.2			Scale in A4 1 : 500
	Designed by L K W	Drawn by S C Y	Checked by K C	Revision A	Date 15 APR 2026
Figure Title: JUNCTION LAYOUT OF CASTLE PEAK ROAD – LAM TEI / NG LAU ROAD / FUK HANG TSUEN 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\J7450-J7499\J7463\2026 04\Fig 2.1-2.6 RevA.dwg



Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)	J7463	Figure No. 2.3	Revision A
Figure Title	JUNCTION LAYOUT OF CASTLE PEAK ROAD – LAM TEI / LAM TEI MAIN STREET		Designed by L K W / Drawn by S C Y / Checked by K C	
			Scale in A4 1 : 500 / Date 14 APR 2026	

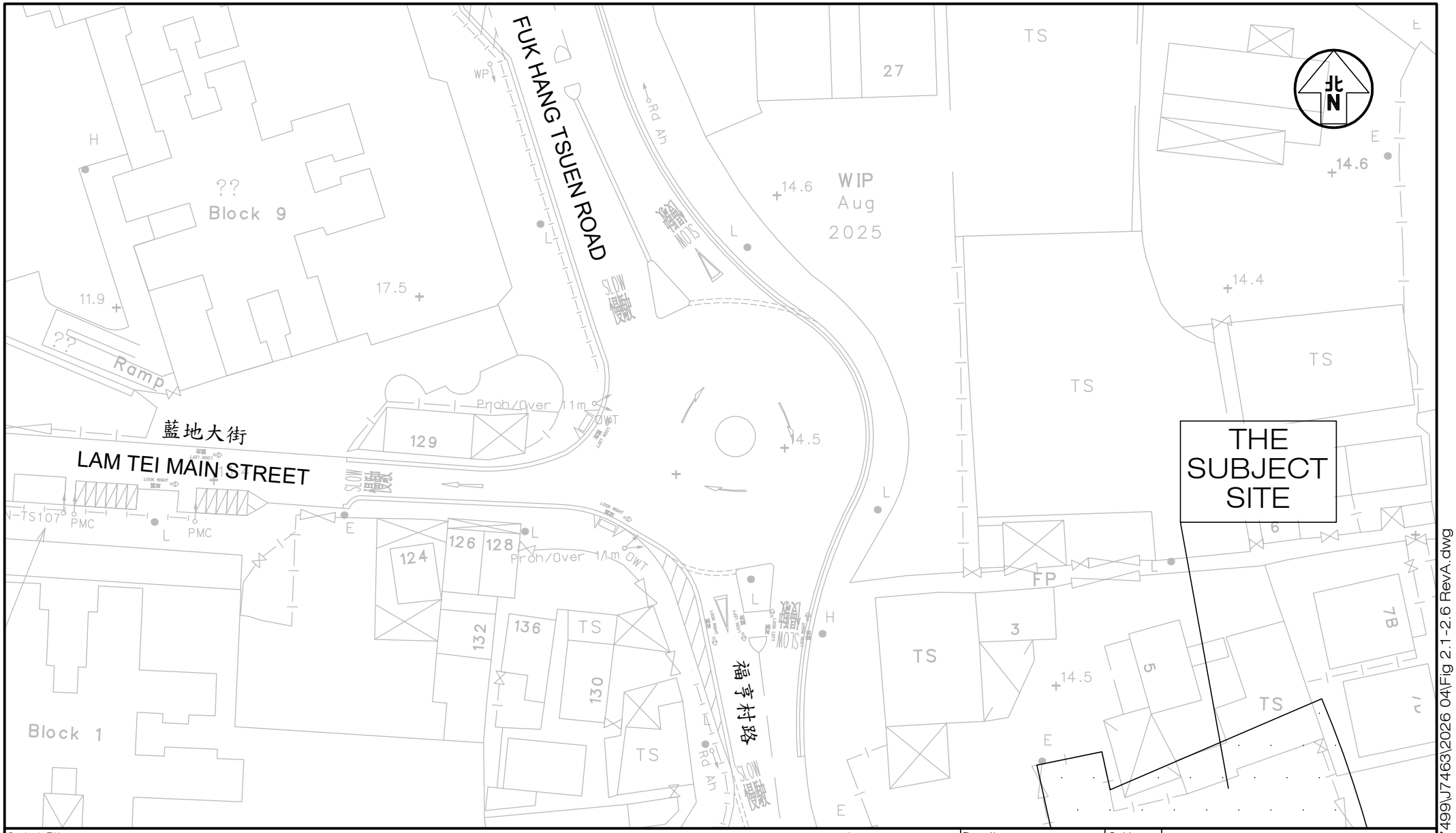
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7450-J7499\J7463\2026 04\Fig 2.1-2.6 RevA.dwg

Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)	J7463	Figure No. 2.4 / Revision A
Figure Title	JUNCTION LAYOUT OF CASTLE PEAK ROAD – LAM TEI / LAM TEI INTERCHANGE		Designed by L K W / Drawn by S C Y / Checked by K C
			Scale in A4 1 : 500 / Date 14 APR 2026

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\J7450-J7499\J7463\2026 04\Fig 2.1-2.6 RevA.dwg



Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)	J7463	
Figure Title	JUNCTION LAYOUT OF FUK HANG TSUEN ROAD / LAM TEI MAIN STREET	Figure No. 2.5	Revision A
		Designed by L K W / Drawn by S C Y / Checked by K C	
		Scale in A4 1 : 500	Date 14 APR 2026

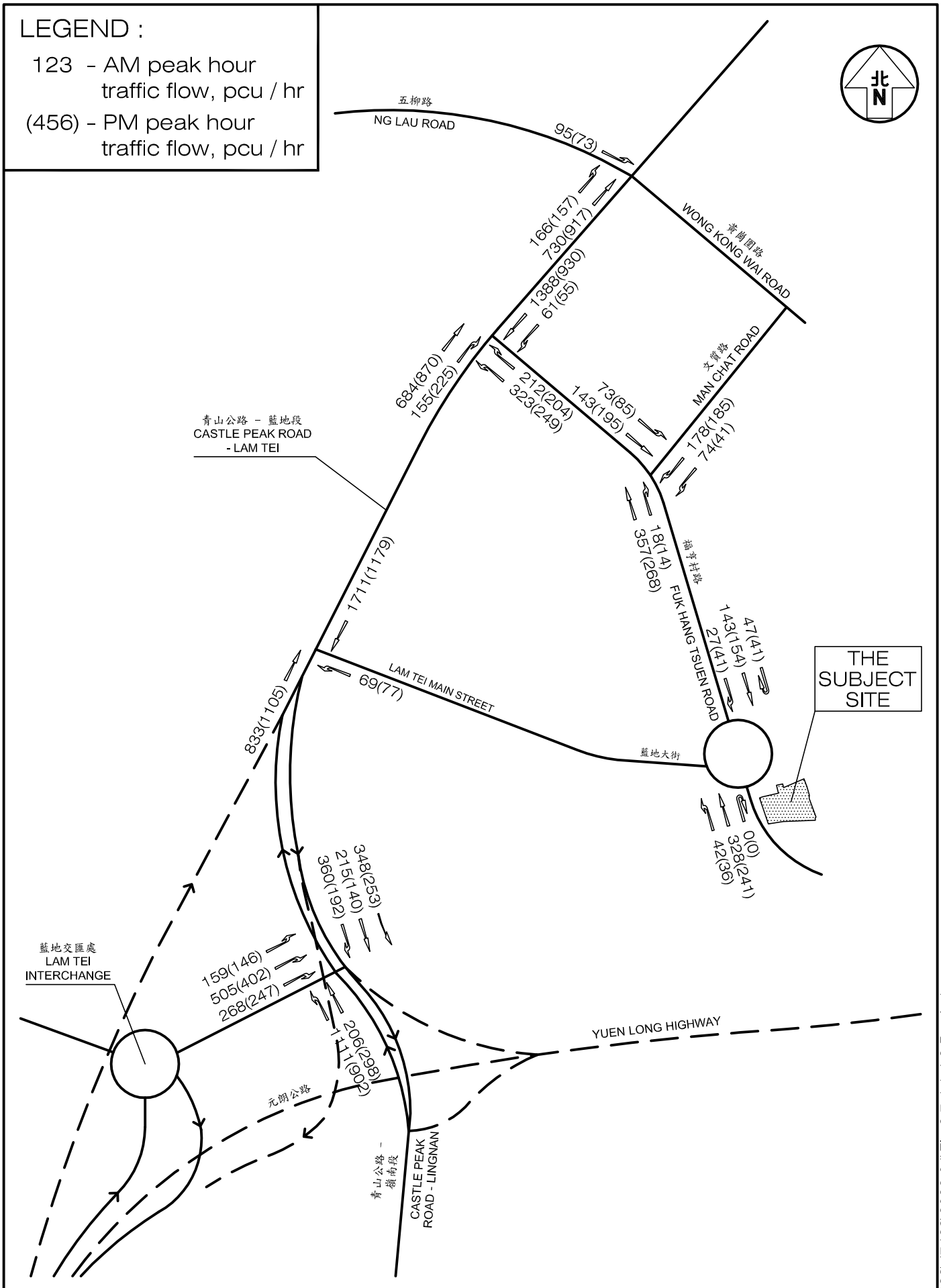
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7450-J7499\J7463\2026 04\Fig 2.1-2.6 RevA.dwg

Project Title	S12A FOR PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY OR ELDERLY IN LOT 827RP IN DD130 TUEN MUN AND ADJOINING GOVERNMENT LAND (FUK HANG TSUEN ROAD)	J7463	Figure No. 2.6 / Revision A
Figure Title	JUNCTION LAYOUT OF FUK HANG TSUEN ROAD / MAN CHAT ROAD		Designed by L K W / Drawn by S C Y / Checked by K C
			Scale in A4 1 : 500 / Date 14 APR 2026

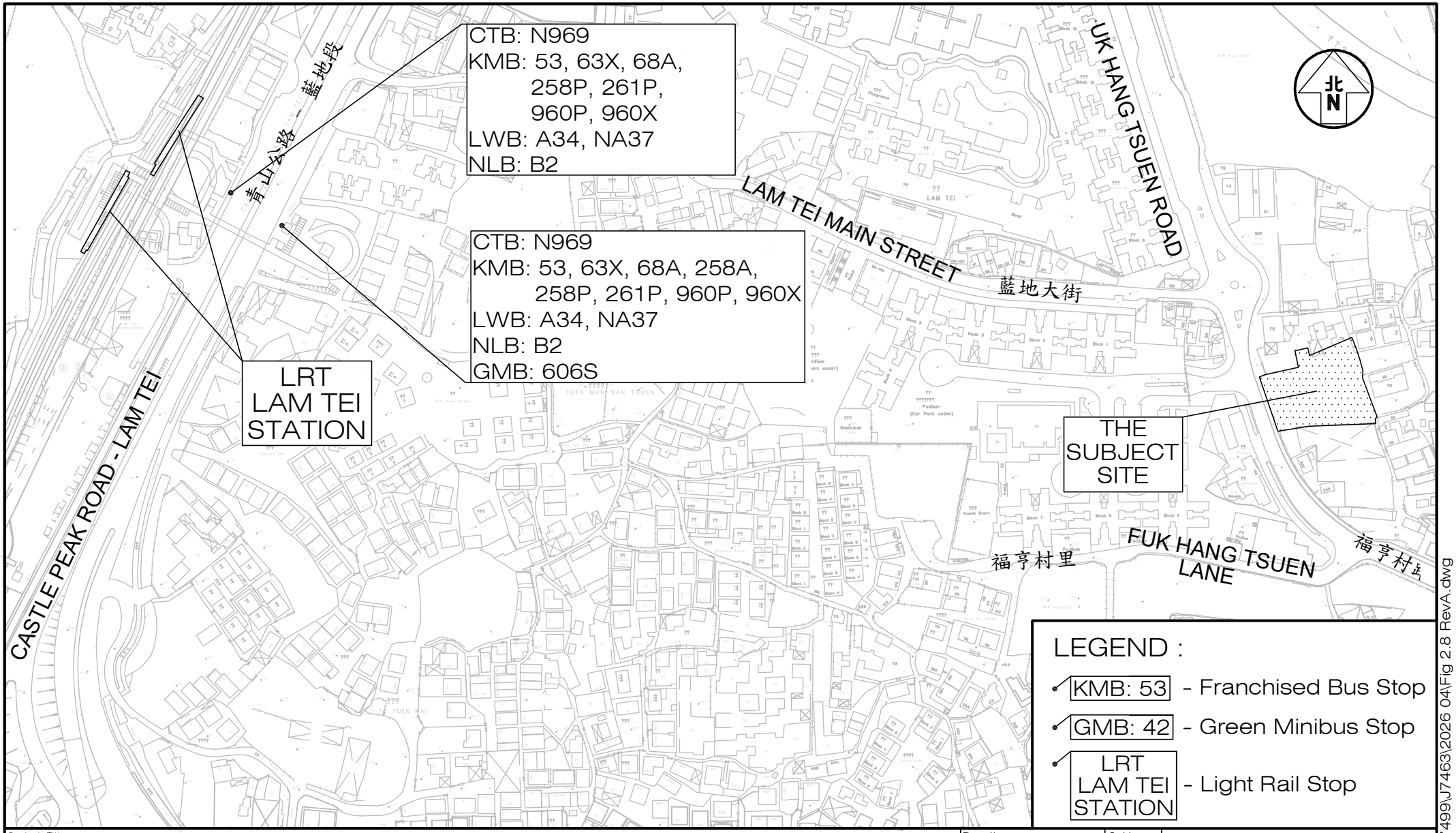
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7450-J7499\J7463\2026 04\Fig 2.1-2.6 RevA.dwg



Project Title: PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	Job No. J7463	Figure No. 2.7			Scale in A4 N.T.S.
	Designed by L K W	Drawn by S C Y	Checked by K C	Revision A	Date 15 APR 2026
Figure Title: OBSERVED PEAK HOUR TRAFFIC FLOWS	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				

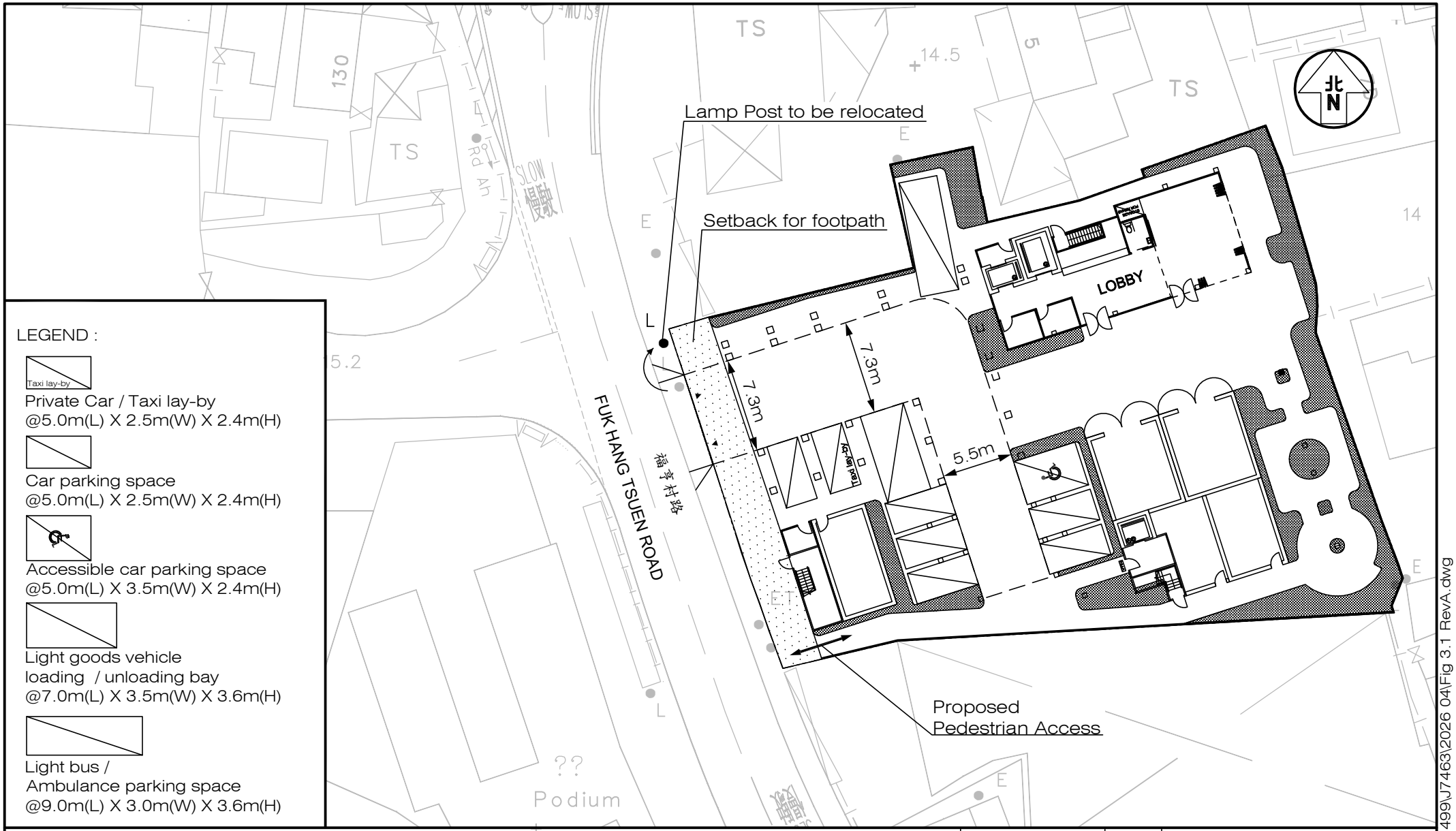
T:\JOB\J7450-J7499\J7463\2026 04\Fig 2.7 4.1 4.2 RevA.dwg



Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	Figure No. 2.8 / Revision A
Figure Title	ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE		Designed by L K W / Drawn by S C Y / Checked by K C / Scale in A4 1 : 2,500 / Date 15 APR 2026

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\J7450-J7499\J7463\2026 04\Fig 2.8 RevA.dwg



LEGEND :

Taxi lay-by
Private Car / Taxi lay-by
@5.0m(L) X 2.5m(W) X 2.4m(H)

Car parking space
@5.0m(L) X 2.5m(W) X 2.4m(H)

Accessible car parking space
@5.0m(L) X 3.5m(W) X 2.4m(H)

Light goods vehicle
loading / unloading bay
@7.0m(L) X 3.5m(W) X 3.6m(H)

Light bus /
Ambulance parking space
@9.0m(L) X 3.0m(W) X 3.6m(H)

Project Title

PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

J7463

Figure Title

PROPOSED LAYOUT PLAN

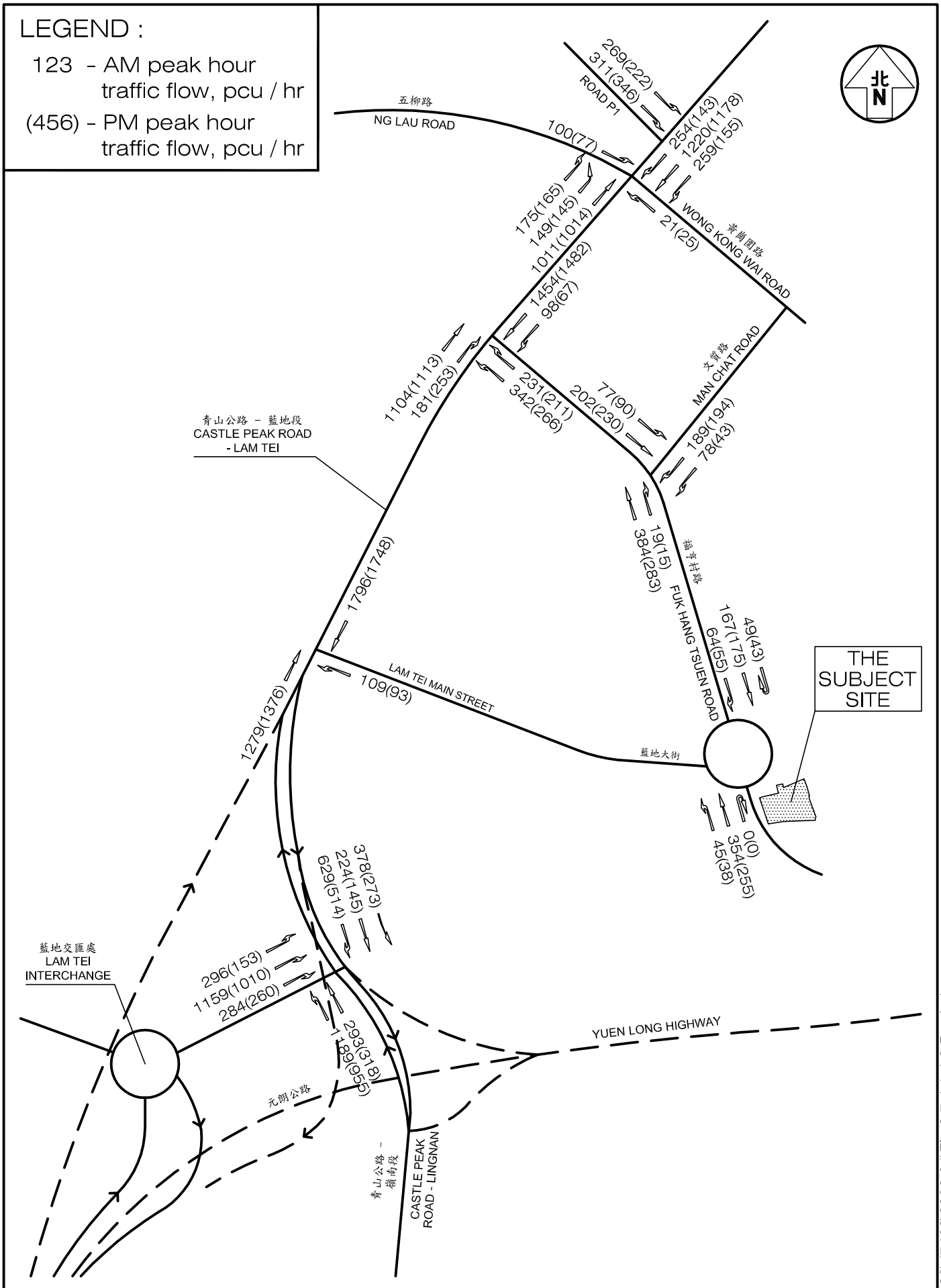
Figure No.	Revision
3.1	A

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

Scale in A4	Date
1 : 400	15 APR 2026

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\J7450-J7499\J7463\2026 04\Fig 3.1 RevA.dwg



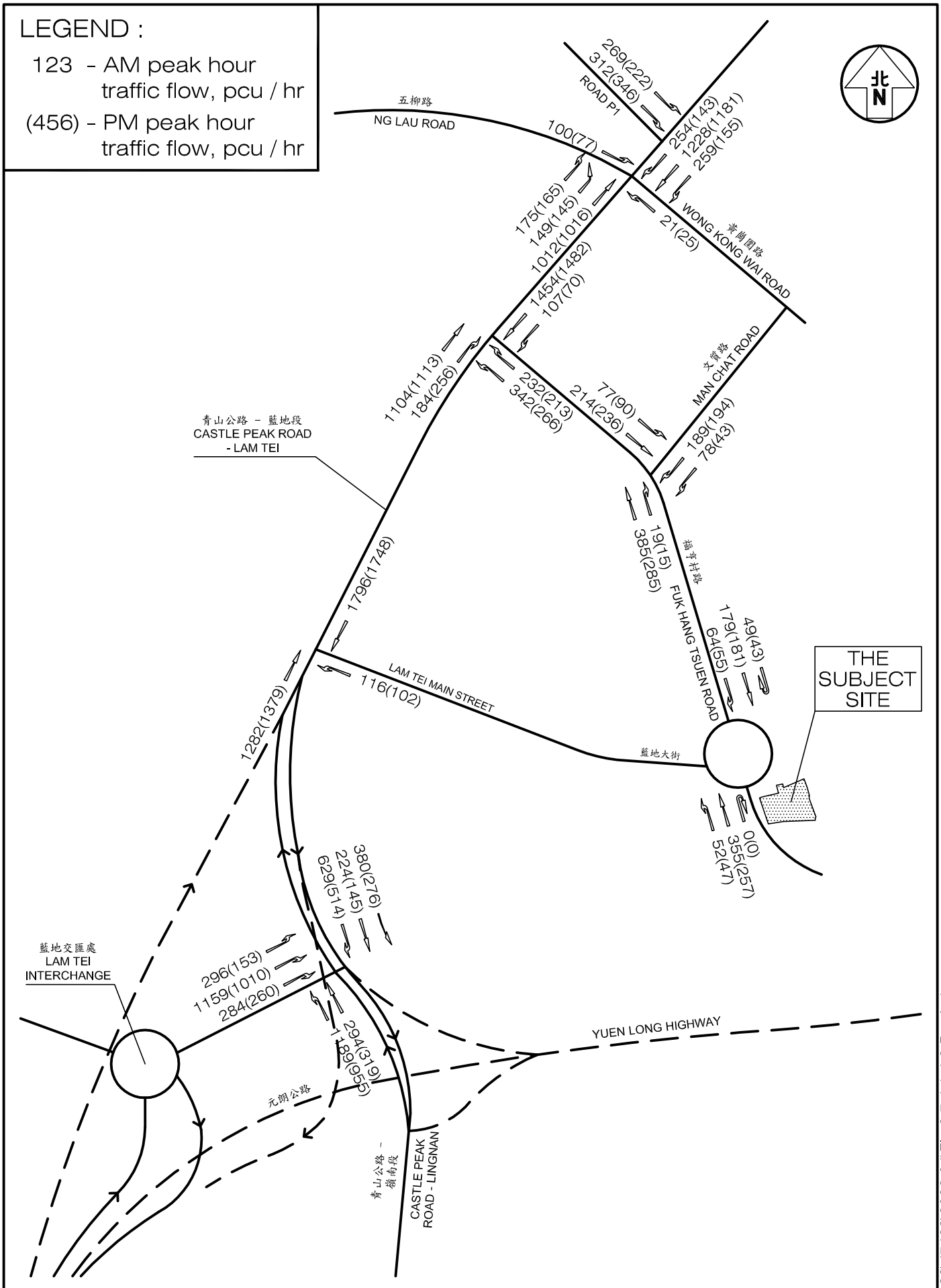
Project Title
PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD")
AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN

Job No.	Figure No.			Scale in A4
J7463	4.1			N.T.S.
Designed by	Drawn by	Checked by	Revision	Date
L K W	S C Y	K C	A	15 APR 2026

Figure Title
YEAR 2034 PEAK HOUR TRAFFIC FLOWS
WITHOUT THE PROPOSED DEVELOPMENT

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\J7450-J7499\J7463\2026 04\Fig 2.7 4.1 4.2 RevA.dwg



Project Title: PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	Job No. J7463	Figure No. 4.2			Scale in A4 N.T.S.
	Designed by L K W	Drawn by S C Y	Checked by K C	Revision A	Date 15 APR 2026
Figure Title: YEAR 2034 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED DEVELOPMENT	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\J7450-J7499\J7463\2026 04\Fig 2.7 4.1 4.2 RevA.dwg

Appendix A
Junction Capacity Analysis

Junction: Castle Peak Road - Lam Tei / Fuk Hang Tusen Road Job Number: J7463

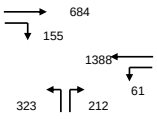
Scenario: Existing Condition P. 1

Design Year: 2026 Designed By: Checked By: Date: 16 Apr 2026

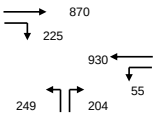
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road - Lam Tei NB	SA	E1	1	3.30				1945	218	0.112			1945	277	0.142	
Castle Peak Road - Lam Tei NB	SA	E2	1	3.30				2085	233	0.112			2085	297	0.142	
Castle Peak Road - Lam Tei NB	SA	E3	1	3.30				2085	233	0.112			2085	296	0.142	
Castle Peak Road - Lam Tei NB	RT	P1	2	3.70	15.0		100	1932	155	0.080	0.080	100	1932	225	0.116	0.116
Castle Peak Road - Lam Tei SB	LT+SA	F1	1	3.70	15.0		13	2098	479	0.228	0.228	18	1950	310	0.159	0.159
Castle Peak Road - Lam Tei SB	SA	F2	1	3.70				2125	485	0.228			2125	338	0.159	
Castle Peak Road - Lam Tei SB	SA	F3	1	3.70				2125	485	0.228			2125	337	0.159	
Fuk Hang Tsuen Road WB	LT	K1	3	3.70	15.0		100	1805	258	0.143	0.143	100	1805	219	0.121	0.121
Fuk Hang Tsuen Road WB	LT+RT	K2	3	3.70	15.0		100	1932	277	0.143		100	1932	234	0.121	

pedestrian phase	$G_{(P)}$	2,3,4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec	
	$H_{(P)}$	3		min crossing time =	10	sec GM +	10	sec FGM =	20	sec	
	$Q_{(P)}$	4		min crossing time =	6	sec GM +	12	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		PM Peak 1 + 2 + 3	
Sum y	0.452		0.397	
L (s)	36		36	
C (s)	120		120	
practical y	0.630		0.630	
R.C. (%)	40%		59%	

Note:

1	2	3	4	5
B1 B2 B3 → G2 G1 ←	C1 → $H_{(P)}$ $G_{(P)}$	K1 K2 $G_{(P)}$	$H_{(P)}$ $G_{(P)}$ $Q_{(P)}$	
AM G = I/G = 7	G = I/G = 7	G = I/G = 5	G = 18 I/G = 2	G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G =
PM G = I/G = 7	G = I/G = 7	G = I/G = 5	G = 18 I/G = 2	G =
G = I/G =	G = I/G =	G = I/G =	G = I/G =	G =

Junction: Castle Peak Road - Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road — Job Number: J7463

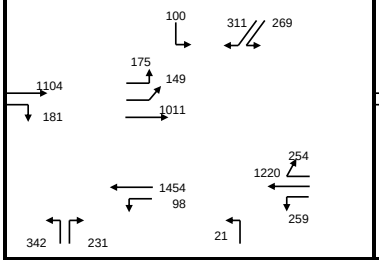
Scenario: Future Condition (Without Proposed RCHD) — P. 2

Design Year: 2034 — Designed By: — Checked By: — Date: 16 Apr 2026

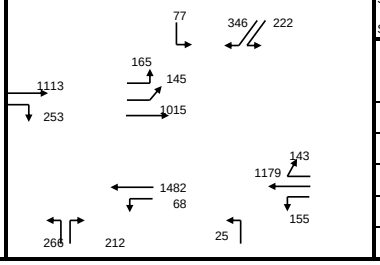
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	100	0.055		100	1832	77	0.042	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	351	0.180			1945	354	0.182	
	SA	B2	2,3	3.30				2085	376	0.180			2085	379	0.182	
	SA	B3	2,3	3.30				2085	377	0.181			2085	380	0.182	
	RT	C1	1	3.70	15.0		100	1932	181	0.094	0.094	100	1932	253	0.130	0.130
Castle Peak Road - Lam Tei NB	LT	D1	2	3.70	13.0		100	1780	175	0.098		100	1780	165	0.093	
	LT	D2	2	3.70	15.0		100	1932	149	0.077		100	1932	145	0.075	
	SA	E1	2,3	3.70				2125	506	0.238			2125	508	0.239	
	SA	E2	2,3	3.65				2120	505	0.238			2125	507	0.239	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		20	1946	487	0.250		14	1958	489	0.250	0.250
	SA	F2	2,3	3.70				2125	532	0.250			2125	531	0.250	
	SA	F3	2,3	3.70				2125	533	0.251	0.251		2125	530	0.249	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.70	10.0		37	1881	694	0.369		25	1913	632	0.330	
	SA	G2	1,2,3	3.70				2125	785	0.369			2125	702	0.330	
	RT	H1	4	3.50	20.0		100	1958	254	0.130	0.130	100	1958	143	0.073	0.073
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	21	0.012		100	1752	25	0.014	
Fuk Hang Tsuen Road WB	LT	J1	5	3.70	15.0		100	1805	277	0.154		100	1805	231	0.128	
	LT+RT	J2	5	3.70	15.0		100	1932	296	0.153		100	1932	247	0.128	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	272	0.153	0.153	100	1773	266	0.150	0.150
	RT	K2	5	3.80	25.0		100	2014	308	0.153		100	2014	302	0.150	

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)

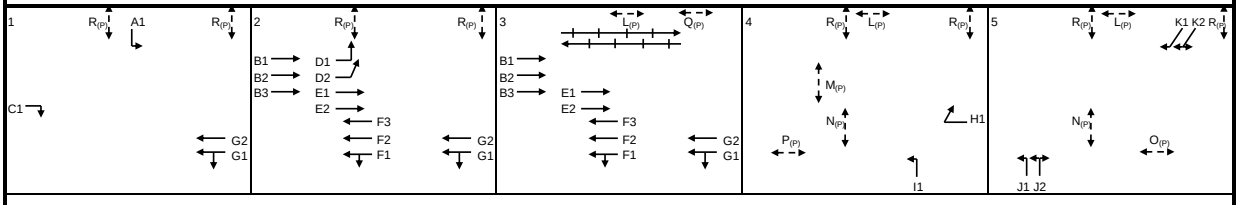


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

	AM Peak		PM Peak	
	1+2,3+4+5		1+2,3+4+5	
Sum y	0.628		0.603	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	18%		23%	

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: Castle Peak Road - Lam Tei / Ng Lau Road / Fuk Hang Tsuen Road Job Number: J7463

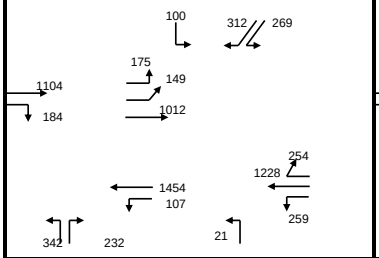
Scenario: Future Condition (With Proposed RCHD) P. 3

Design Year: 2034 Designed By: Checked By: Date: 16 Apr 2026

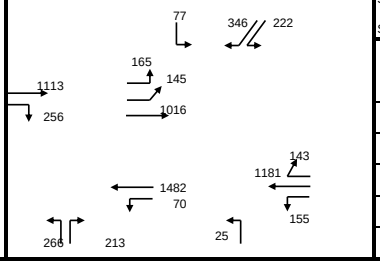
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Ng Lau Road EB	LT	A1	1	4.00	15.0		100	1832	100	0.055		100	1832	77	0.042	
Castle Peak Road - Lam Tei NB	SA	B1	2,3	3.30				1945	351	0.180			1945	354	0.182	
	SA	B2	2,3	3.30				2085	376	0.180			2085	379	0.182	
	SA	B3	2,3	3.30				2085	377	0.181			2085	380	0.182	
	RT	C1	1	3.70	15.0		100	1932	184	0.095	0.095	100	1932	256	0.132	0.132
Castle Peak Road - Lam Tei NB	LT	D1	2	3.70	13.0		100	1780	175	0.098		100	1780	165	0.093	
	LT	D2	2	3.70	15.0		100	1932	149	0.077		100	1932	145	0.075	
	SA	E1	2,3	3.70				2125	507	0.239			2125	508	0.239	
	SA	E2	2,3	3.65				2120	505	0.238			2125	508	0.239	
Castle Peak Road - Lam Tei SB	LT+SA	F1	2,3	3.70	15.0		22	1942	490	0.252	0.252	16	1954	489	0.250	0.250
	SA	F2	2,3	3.70				2125	536	0.252			2125	532	0.250	
	SA	F3	2,3	3.70				2125	535	0.252			2125	531	0.250	
Castle Peak Road - Lam Tei SB	LT+SA	G1	1,2,3	3.70	10.0		37	1881	698	0.371		24	1916	633	0.330	
	SA	G2	1,2,3	3.70				2125	789	0.371			2125	703	0.331	
	RT	H1	4	3.50	20.0		100	1958	254	0.130	0.130	100	1958	143	0.073	0.073
Wong Kong Wai Road WB	LT	I1	4	4.00	10.0		100	1752	21	0.012		100	1752	25	0.014	
Fuk Hang Tsuen Road WB	LT	J1	5	3.70	15.0		100	1805	277	0.154		100	1805	231	0.128	
	LT+RT	J2	5	3.70	15.0		100	1932	297	0.154		100	1932	248	0.128	
Road P1	LT+RT	K1	5	3.80	12.0		100	1773	272	0.153		100	1773	266	0.150	0.150
	RT	K2	5	3.80	25.0		100	2014	309	0.153	0.153	100	2014	302	0.150	

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)

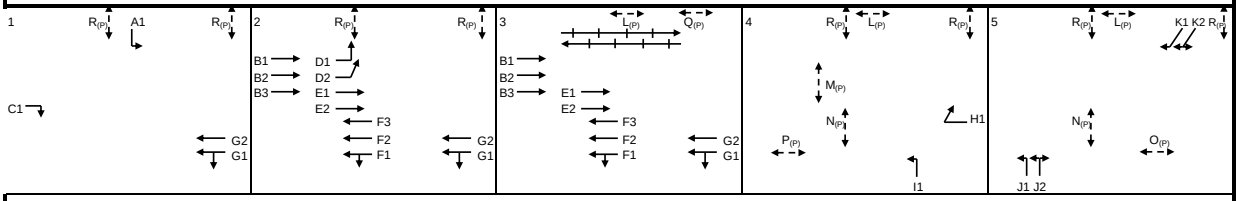


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

	AM Peak		PM Peak	
	1+2,3+4+5		1+2,3+4+5	
Sum y	0.631		0.605	
L (s)	21		21	
C (s)	120		120	
practical y	0.743		0.743	
R.C. (%)	18%		23%	

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: Castle Peak Road – Lam Tei / Lam Tei Interchange Job Number: J7463

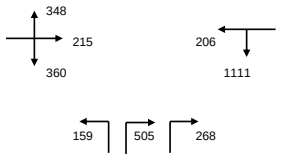
Scenario: Existing Condition P. 4

Design Year: 2026 Designed By: Checked By: Date: 16 Apr 2026

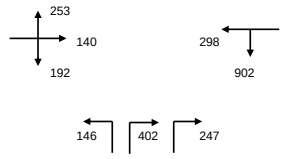
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Castle Peak Road -Lam Tei SB	LT	A1	1,4	3.25	80.0		100	1904	348	0.183	0.183	100	1904	253	0.133	0.133
	SA	A2	1,4	3.25				2080	200	0.096			2080	115	0.055	
	SA+RT	A3	1	3.25	22.5		92	1960	189	0.096		77	1978	110	0.056	
	RT	A4	1	3.25	20.0		100	1935	186	0.096		100	1935	107	0.055	
Slip Road from Lam Tei Interchange	LT	B1	2,3	3.50	8.0		100	1655	159	0.096		100	1655	146	0.088	
	LT+RT	B2	2,3	3.50	30.0		100	2005	253	0.126		100	2005	202	0.101	
	RT	B3	2,3	3.50	26.0		100	1990	252	0.127	0.127	100	1990	200	0.100	0.100
	RT	B4	2,3	3.50	23.0		100	1976	268	0.136		100	1976	247	0.125	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	529	0.298		100	1775	430	0.242	
	LT	C2	3,4	3.50	19.0		100	1951	582	0.298		100	1951	472	0.242	
	SA	D1	4	3.50				2105	103	0.049			2105	149	0.071	
	SA	D2	4	3.50				2105	103	0.049			2105	149	0.071	

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)



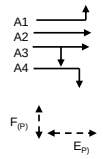
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

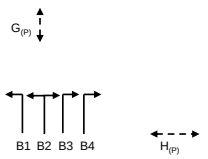
	AM Peak 1,4+2,3	AM Peak	PM Peak 1,4+2,3	PM Peak
Sum y	0.309		0.233	
L (s)	21		21	
C (s)	110		110	
practical y	0.728		0.728	
R.C. (%)	135%		212%	

Note:

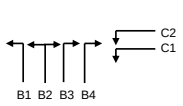
1



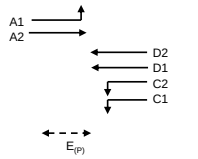
2



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 =	

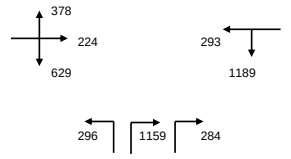
Junction: Castle Peak Road – Lam Tei / Lam Tei Interchange Job Number: J7265

Scenario: Future Condition (Without Proposed RCHD) P. 5

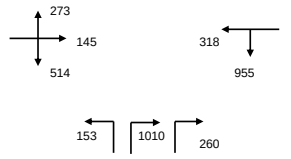
Design Year: 2034 Designed By: Checked By: Date: 16 Apr 2026

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	378	0.196		100	1929	273	0.142	
	SA+RT	A2	1	3.50	30.0		24	2080	295	0.142		36	2068	227	0.110	
	RT	A3	1	3.50	25.0		100	1986	281	0.142	0.142	100	1986	218	0.110	0.110
	RT	A4	1	3.50	20.0		100	1958	277	0.141		100	1958	214	0.109	
Slip Road from	LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2103	748	0.356		100	2103	598	0.284	
Lam Tei Interchange	(To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	707	0.356	0.356	100	1986	565	0.285	0.285
	(To CPR) RT	B4	2,3	3.50	20.0		100	1958	284	0.145		100	1958	260	0.133	
Castle Peak Road NB	LT	C1	3,4	3.50	14.0		100	1775	566	0.319		100	1775	455	0.256	
	LT	C2	3,4	3.50	19.0		100	1951	623	0.319		100	1951	500	0.256	
	SA	D1	4	3.50				2105	147	0.070	0.070		2105	159	0.076	0.076
	SA	D2	4	3.50				2105	146	0.069			2105	159	0.076	
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)



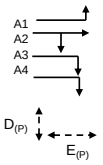
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

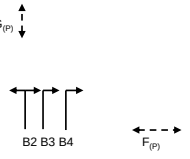
	AM Peak 1 + 2,3 + 4		PM Peak 1 + 2,3 + 4	
Sum y	0.567		0.470	
L (s)	26		26	
C (s)	110		110	
practical y	0.687		0.687	
R.C. (%)	21%		46%	

Note:

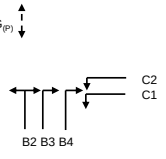
1



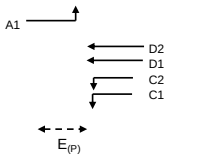
2



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 =			

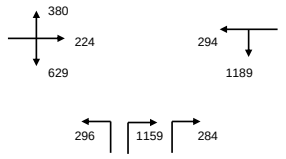
Junction: Castle Peak Road – Lam Tei / Lam Tei Interchange Job Number: J7265

Scenario: Future Condition (With Proposed RCHD) P. 6

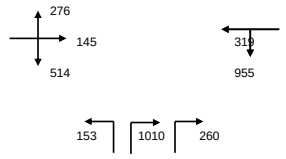
Design Year: 2034 Designed By: Checked By: Date: 16 Apr 2026

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	380	0.197		100	1929	276	0.143	
SA+RT	A2	1	3.50	30.0		24	2080	295	0.142		36	2068	227	0.110	
RT	A3	1	3.50	25.0		100	1986	281	0.142	0.142	100	1986	218	0.110	0.110
RT	A4	1	3.50	20.0		100	1958	277	0.141		100	1958	214	0.109	
Slip Road from LT+(To YL Hwy)RT	B2	2,3	3.50	30.0		100	2103	748	0.356		100	2103	598	0.284	
Lam Tei Interchange (To YL Hwy) RT	B3	2,3	3.50	25.0		100	1986	707	0.356	0.356	100	1986	565	0.285	0.285
(To CPR) RT	B4	2,3	3.50	20.0		100	1958	284	0.145		100	1958	260	0.133	
Castle Peak Road NB LT	C1	3,4	3.50	14.0		100	1775	566	0.319		100	1775	455	0.256	
LT	C2	3,4	3.50	19.0		100	1951	623	0.319		100	1951	500	0.256	
SA	D1	4	3.50				2105	147	0.070	0.070		2105	160	0.076	0.076
SA	D2	4	3.50				2105	147	0.070			2105	159	0.076	
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)



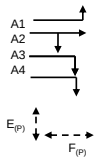
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

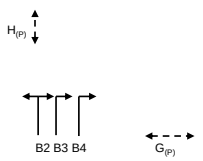
	AM Peak 1+3,4		PM Peak 1 + 2,3 + 4	
Sum y	0.567		0.470	
L (s)	26		26	
C (s)	110		110	
practical y	0.687		0.687	
R.C. (%)	21%		46%	

Note:

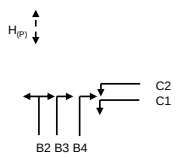
1



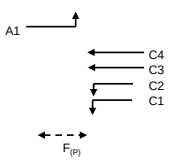
2



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 =						

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street — Job Number: J7463
Scenario: Existing Condition — P. 7
Design Year: 2026 — Designed By: — Checked By: — Date: 16 Apr 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	47	27	143					217	42
From B	0	0	0					0	190
From C	328	42	0					370	47
From D									
From E									
From F									
From G									
Total	375	69	143					587	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	41	41	154					236	36
From B	0	0	0					0	195
From C	241	36	0					277	41
From D									
From E									
From F									
From G									
Total	282	77	154					513	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	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	5.68	0.04	1.48	0.97	1720.91	0.66	1634.27	1638	217	236	0.13	0.14
From B	3.70	0.04	1.48	0.92	1121.10	0.54	932.12	930	0	0	0.00	0.00
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1333.02	1336	370	277	0.28	0.21
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street — Job Number: J7463
Scenario: Future Condition (Without Proposed RCHD) — P. 8
Design Year: 2034 — Designed By: — Checked By: — Date: 16 Apr 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	49	64	167					280	45
From B	0	0	0					0	216
From C	354	45	0					399	49
From D									
From E							0		
From F									
From G									
Total	403	109	167					679	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	43	55	176					274	38
From B	0	0	0					0	219
From C	256	38	0					294	43
From D									
From E									
From F									
From G									
Total	299	93	176					568	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	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	5.68	0.04	1.48	0.97	1720.91	0.66	1632	1637	280	274	0.17	0.17
From B	3.70	0.04	1.48	0.92	1121.10	0.54	919	918	0	0	0.00	0.00
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1332	1335	399	294	0.30	0.22
From D												
From E												
From F												
From G												
From H												

Roundabout Analysis

Junction: Fuk Hang Tsuen Road / Lam Tei Main Street Job Number: J7463
Scenario: Future Condition (With Proposed RCHD) P. 9
Design Year: 2034 Designed By: Checked By: Date: 16 Apr 2026

AM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	49	64	179					292	52
From B	0	0	0					0	228
From C	355	52	0					407	49
From D									
From E									
From F									
From G									
Total	404	116	179					699	

PM Peak

Arm	To A	To B	To C	To D	To E	to F	to G	Total	q_c
From A	43	55	181					279	47
From B	0	0	0					0	224
From C	257	47	0					304	43
From D									
From E									
From F									
From G									
Total	300	102	181					583	

Legend

Arm	Road (in clockwise order)
A	Fuk Hang Tsuen Road SB
B	Lam Tei Main Street EB
C	Fuk Hang Tsuen Road NB
D	
E	
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	6.2	4.4	20.0	15.0	28	40	0.2
From B	3.7	3.7	12.0	15.0	28	45	0.0
From C	6.2	3.0	12.0	15.0	28	45	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

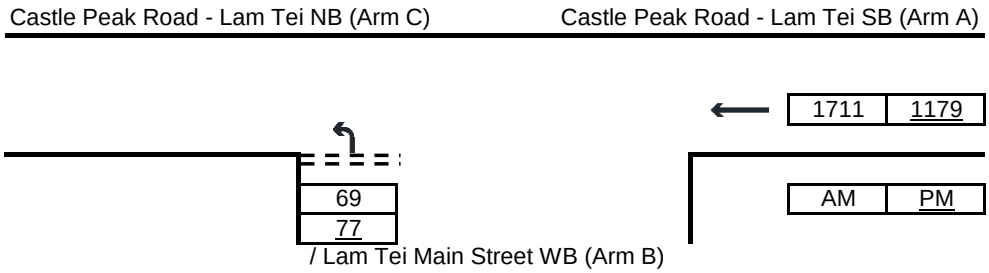
e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

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	5.68	0.04	1.48	0.97	1720.91	0.66	1628	1631	292	279	0.18	0.17
From B	3.70	0.04	1.48	0.92	1121.10	0.54	913	915	0	0	0.00	0.00
From C	4.90	0.04	1.48	0.92	1485.23	0.62	1332	1335	407	304	0.31	0.23
From D												
From E												
From F												
From G												
From H												

Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2026	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Existing Condition				P. 10



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	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rBC	20	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.5757

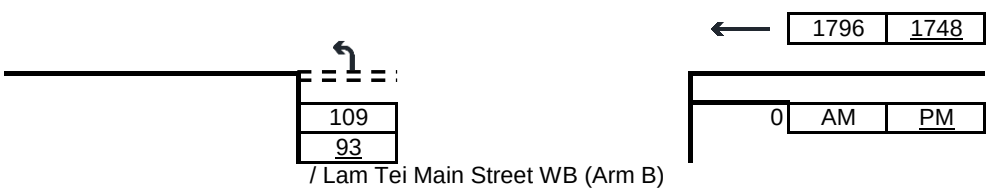
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	148	210
q-CB	0	0	Q-BC	396	511
q-AB	0	0	Q-CB	226	292
q-AC	1711	1179	Q-BAC	396	511
q-BA	0	0			
q-BC	69	77			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.174	0.151
C-B	0.000	0.000
B-AC	0.174	0.151

Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2034	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Future Condition (Without Proposed RCHD)				P. 11



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	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rBC	20	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.5757

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	138	144
q-CB	0	0	Q-BC	378	388
q-AB	0	0	Q-CB	216	222
q-AC	1796	1748	Q-BAC	378	388
q-BA	0	0			
q-BC	109	93			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.288	0.239
C-B	0.000	0.000
B-AC	0.288	0.239

Priority Junction Analysis

Junction:	Castle Peak Road - Lam Tei / Lam Tei Main Street				
Design Year:	2034	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Future Condition (With Proposed RCHD)				P. 12

Castle Peak Road - Lam Tei NB (Arm C) Castle Peak Road - Lam Tei SB (Arm A)

/ Lam Tei Main Street WB (Arm B)

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	12.30	V-rBA	20	w-BA	0.00	D	0.5519
	W-CR	0.00	V-lBA	22	w-BC	5.00	E	1.0255
			V-rBC	20	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.5757

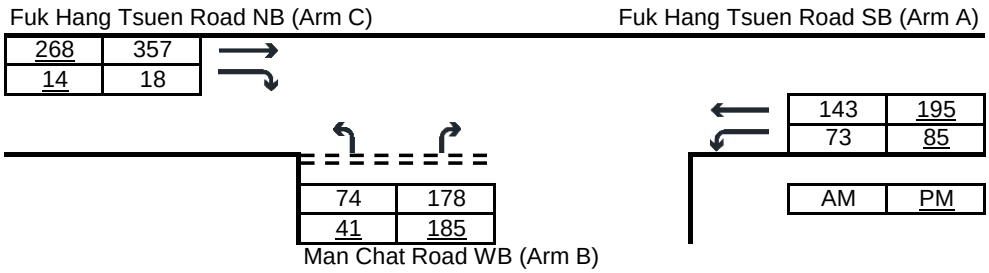
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	138	144
q-CB	0	0	Q-BC	378	388
q-AB	0	0	Q-CB	216	222
q-AC	1796	1748	Q-BAC	378	388
q-BA	0	0			
q-BC	116	102			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.307	0.263
C-B	0.000	0.000
B-AC	0.307	0.263

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road				
Design Year:	2026	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Existing Condition				P. 13



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	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

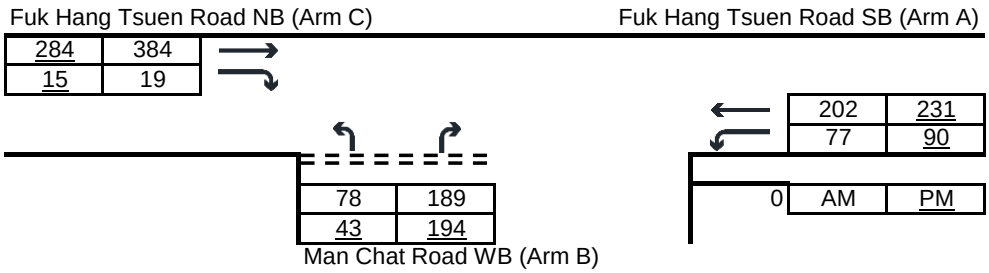
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	357	268	Q-BA	440	440
q-CB	18	14	Q-BC	579	576
q-AB	73	85	Q-CB	635	631
q-AC	143	195	Q-BAC	474	460
q-BA	178	185			
q-BC	74	41			
f	0.294	0.181			

Ratio-of-flow to Capacity	AM	PM
B-A	0.404	0.420
B-C	0.128	0.071
C-B	0.028	0.022
B-AC	0.532	0.491

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road				
Design Year:	2034	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Future Condition (Without Proposed RCHD)				P. 14



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	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

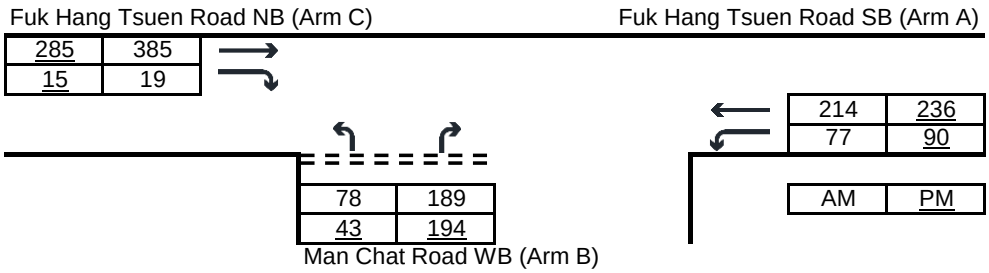
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	384	284	Q-BA	437	438
q-CB	19	15	Q-BC	576	575
q-AB	77	90	Q-CB	631	629
q-AC	202	231	Q-BAC	470	458
q-BA	189	194			
q-BC	78	43			
f	0.292	0.181			

Ratio-of-flow to Capacity	AM	PM
B-A	0.433	0.443
B-C	0.135	0.075
C-B	0.030	0.024
B-AC	0.568	0.518

Priority Junction Analysis

Junction:	Fuk Hang Tsuen Road / Man Chat Road				
Design Year:	2034	Job Number:	J7463	Date:	16 Apr 2026
Scenario:	Future Condition (With Proposed RCHD)				P. 15



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

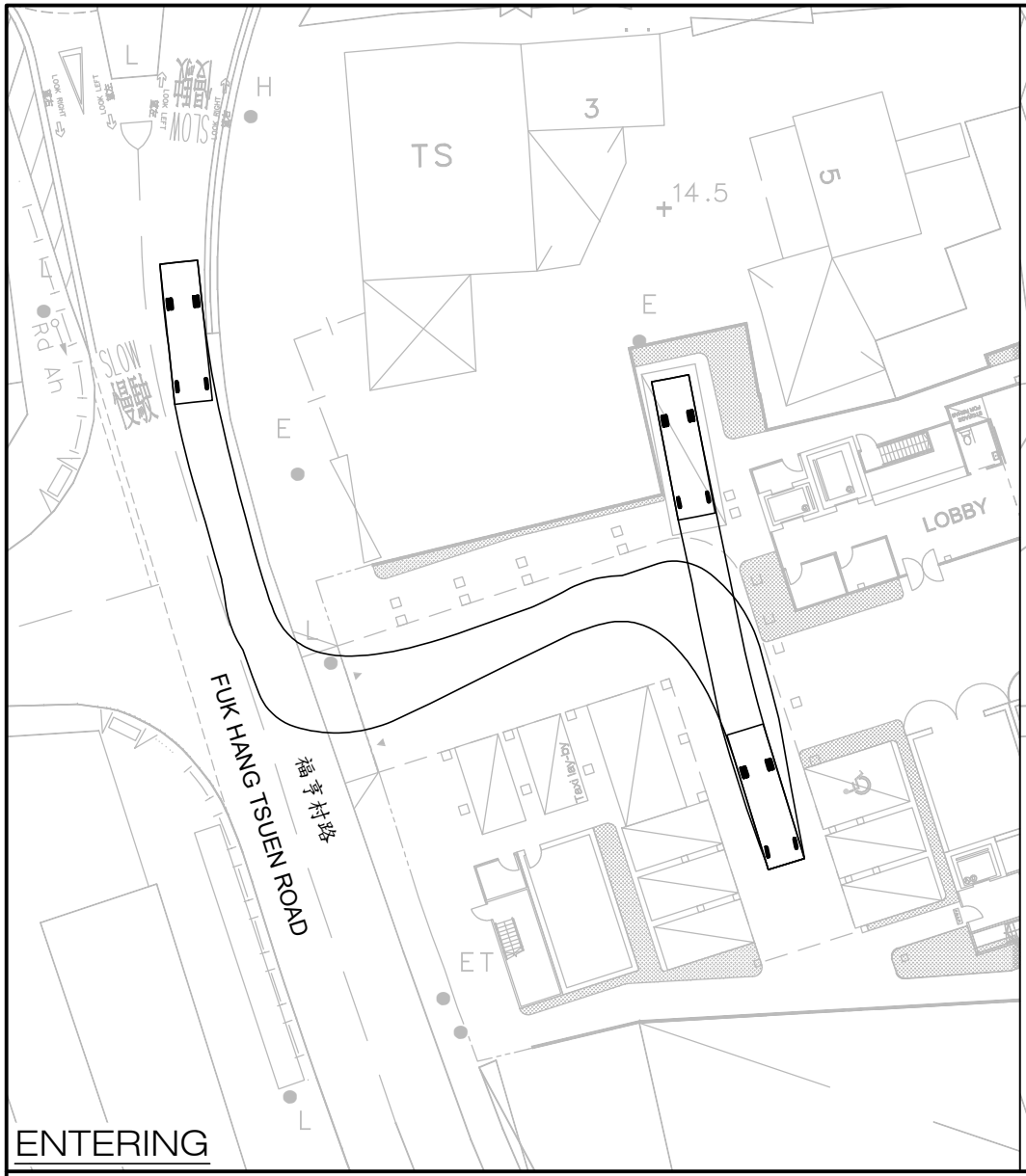
Geometry :	Input		Input		Input		Calculated	
	W	24.00	V-rBA	35	w-BA	2.10	D	0.7331
	W-CR	0.00	V-lBA	32	w-BC	2.10	E	0.7889
			V-rBC	35	w-CB	2.50	F	0.8678
			V-rCB	90			Y	0.1720

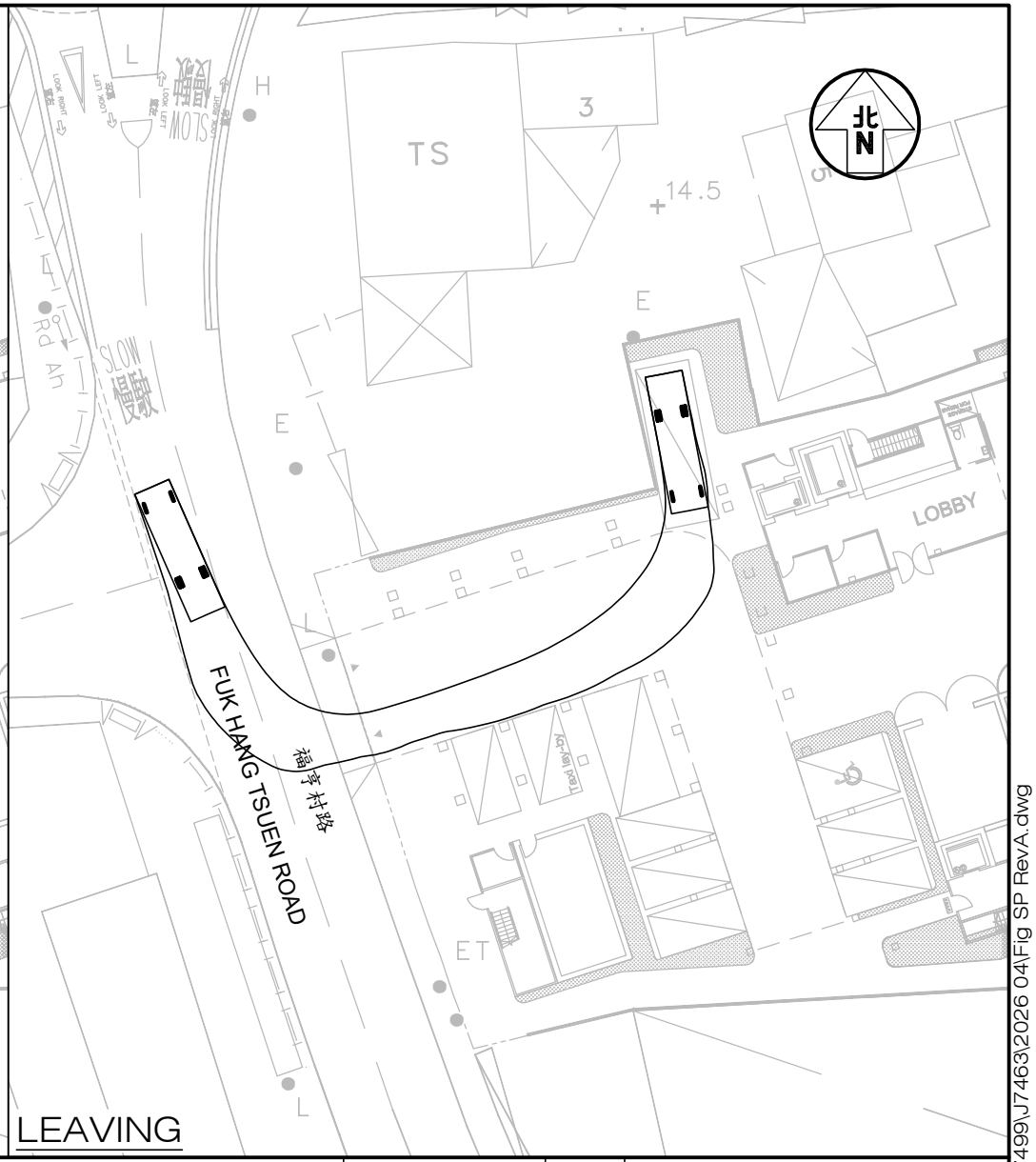
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	385	285	Q-BA	436	438
q-CB	19	15	Q-BC	576	574
q-AB	77	90	Q-CB	631	629
q-AC	214	236	Q-BAC	469	458
q-BA	189	194			
q-BC	78	43			
f	0.292	0.181			

Ratio-of-flow to Capacity	AM	PM
B-A	0.433	0.443
B-C	0.135	0.075
C-B	0.030	0.024
B-AC	0.569	0.518

Appendix B
Swept Path Analysis

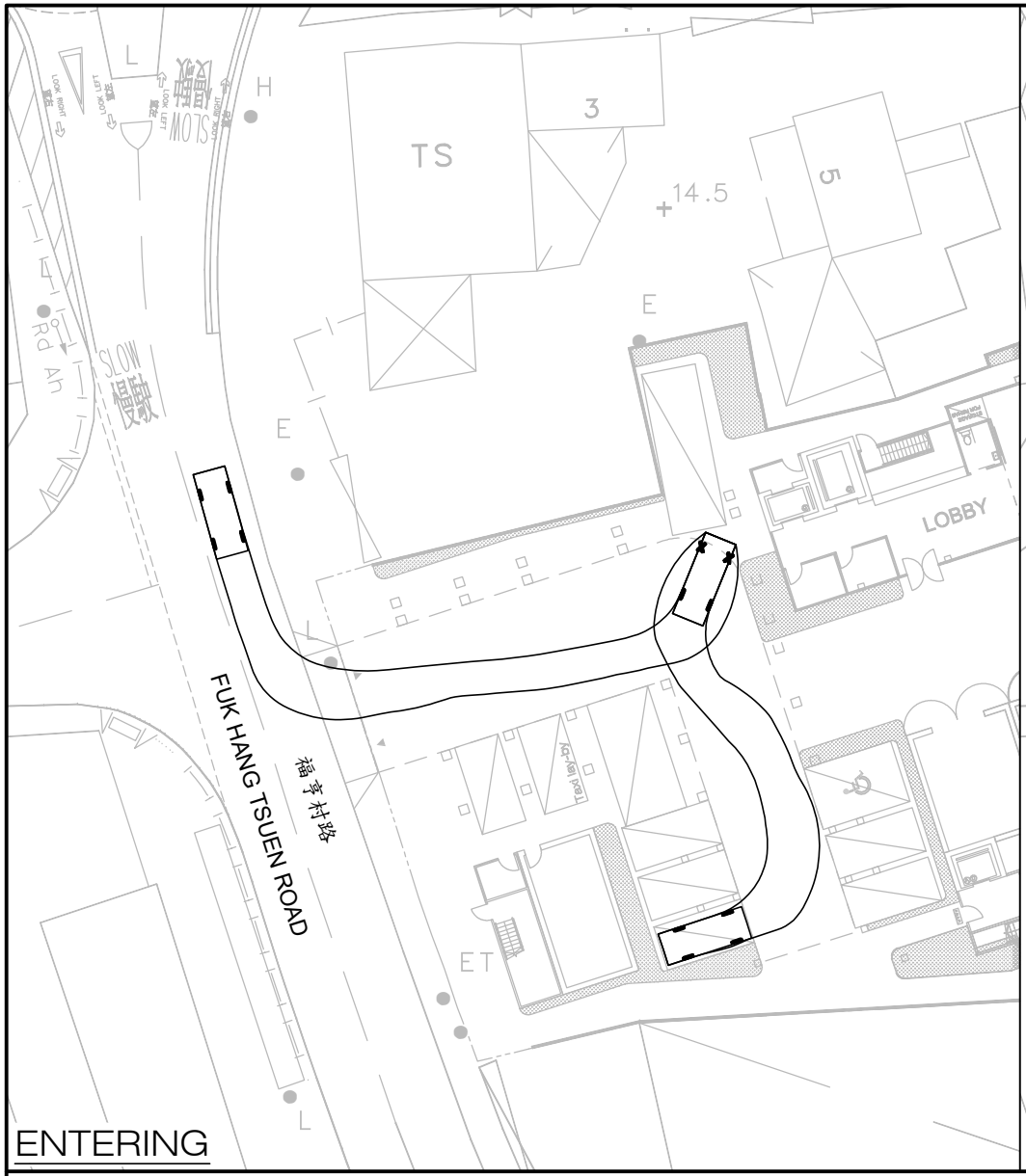


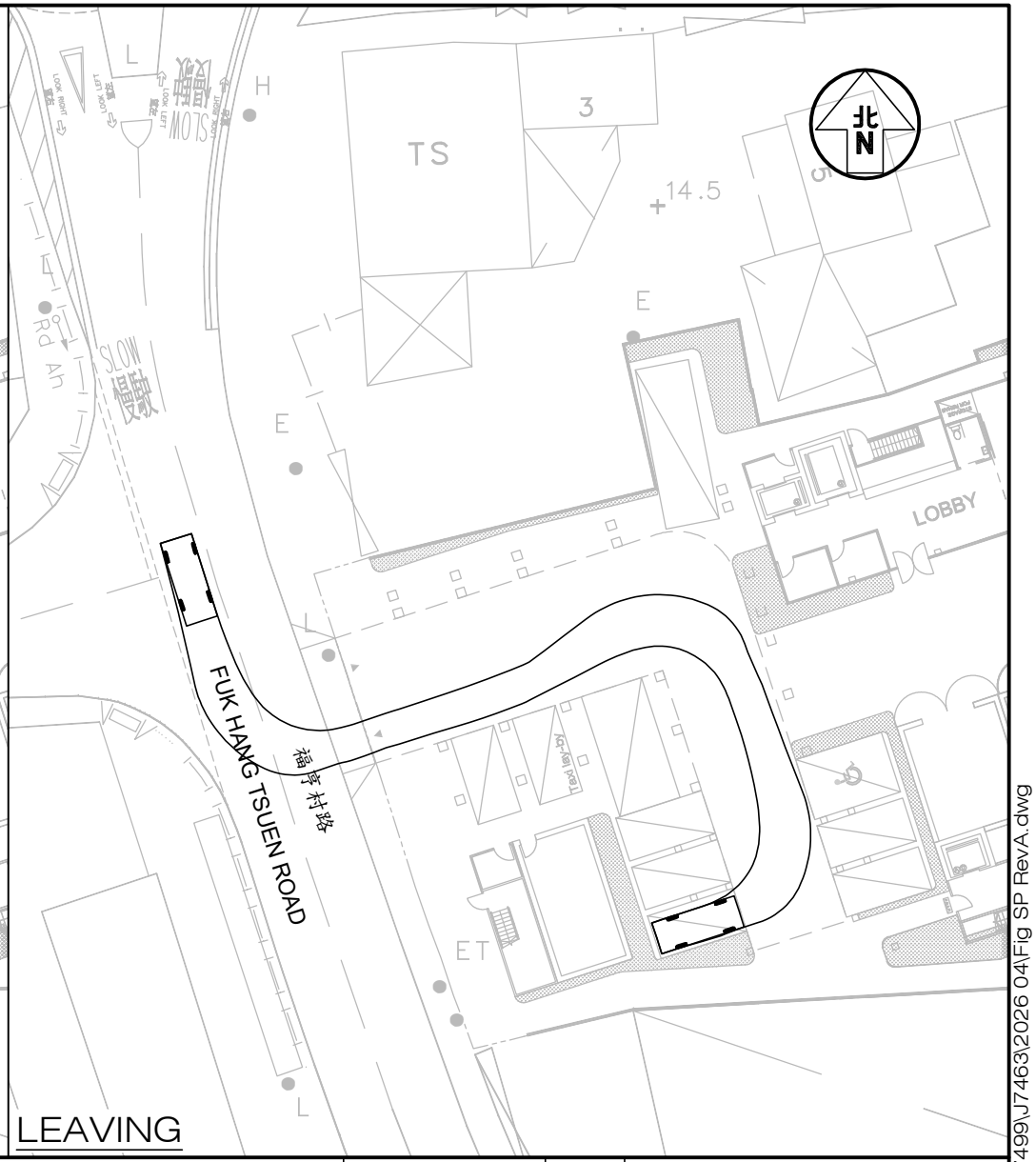


Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	Figure No. SP2 / Revision A
Figure Title	SWEPT PATH OF LIGHT BUS ENTERING & LEAVING THE CAR PARKING SPACE		Designed by L K W / Drawn by S C Y / Checked by K C
			Scale in A4 1 : 400 / Date 15 APR 2026

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\J7450-J7499\J7463\2026 04\Fig SP RevA.dwg

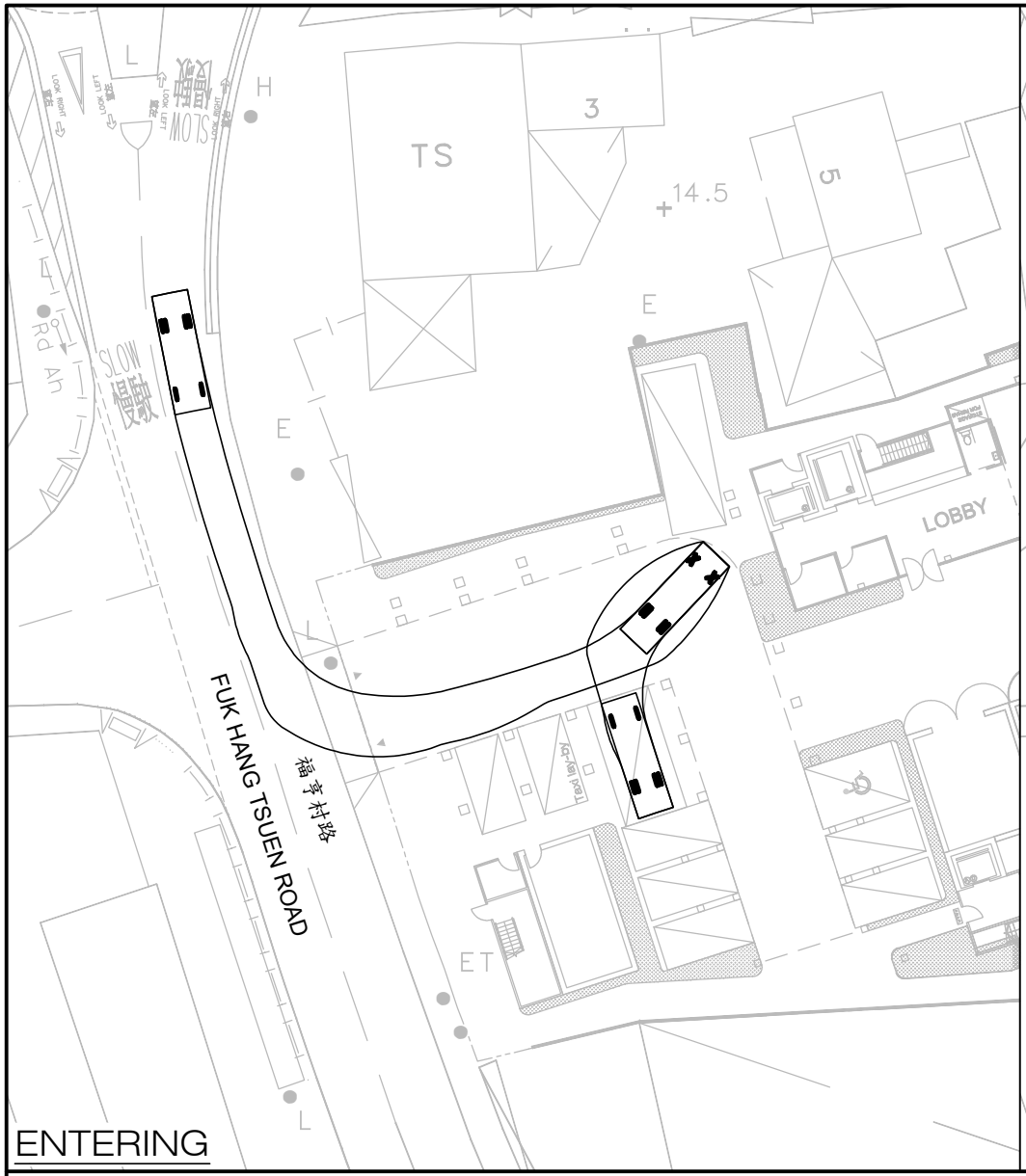


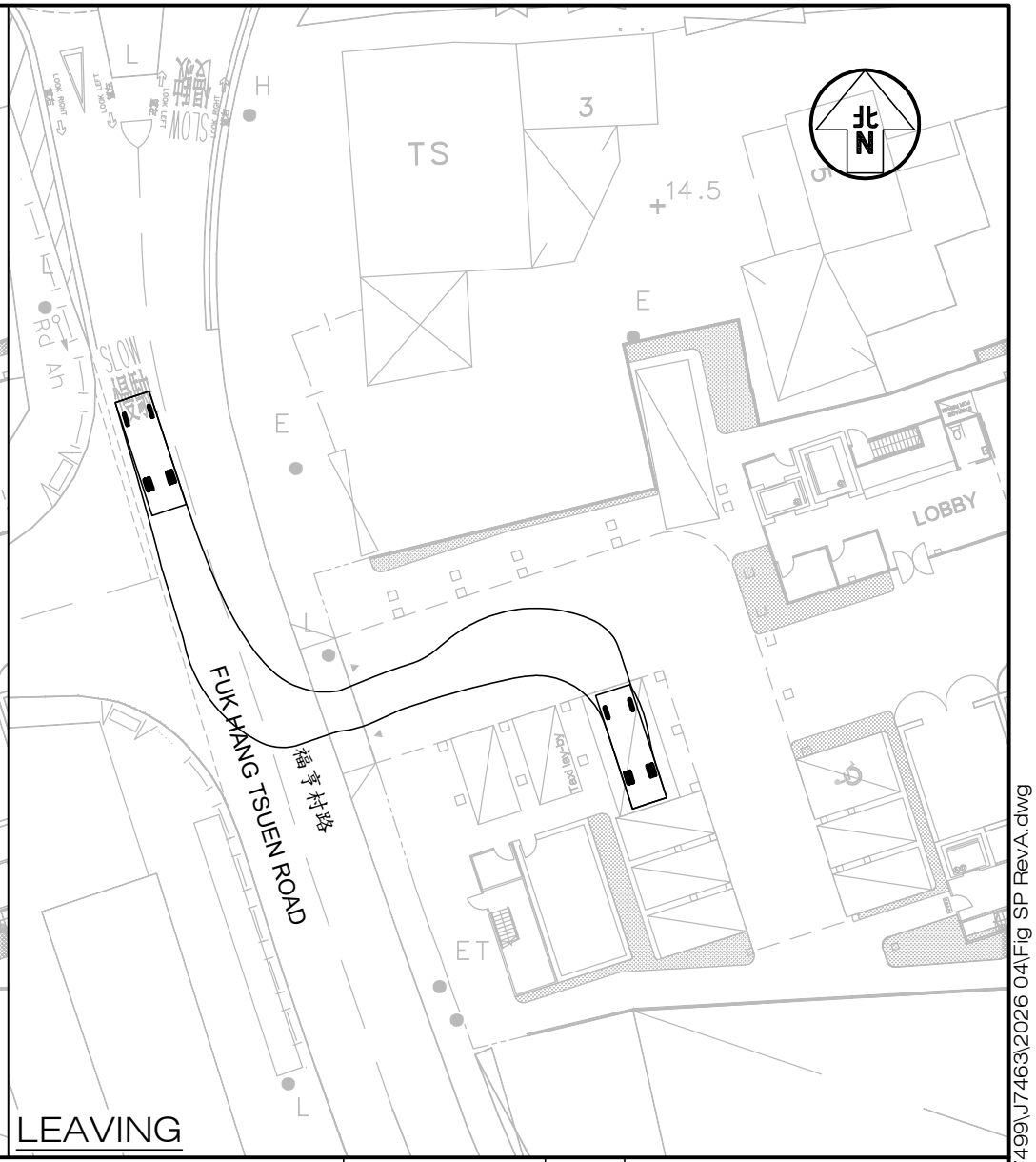


Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	Figure No. SP3 / Revision A
Figure Title	SWEPT PATH OF PRIVATE CAR ENTERING & LEAVING THE CAR PARKING SPACE	Designed by L K W / Drawn by S C Y / Checked by K C	Scale in A4 1 : 400 / Date 15 APR 2026

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\J7450-J7499\J7463\2026 04\Fig SP RevA.dwg



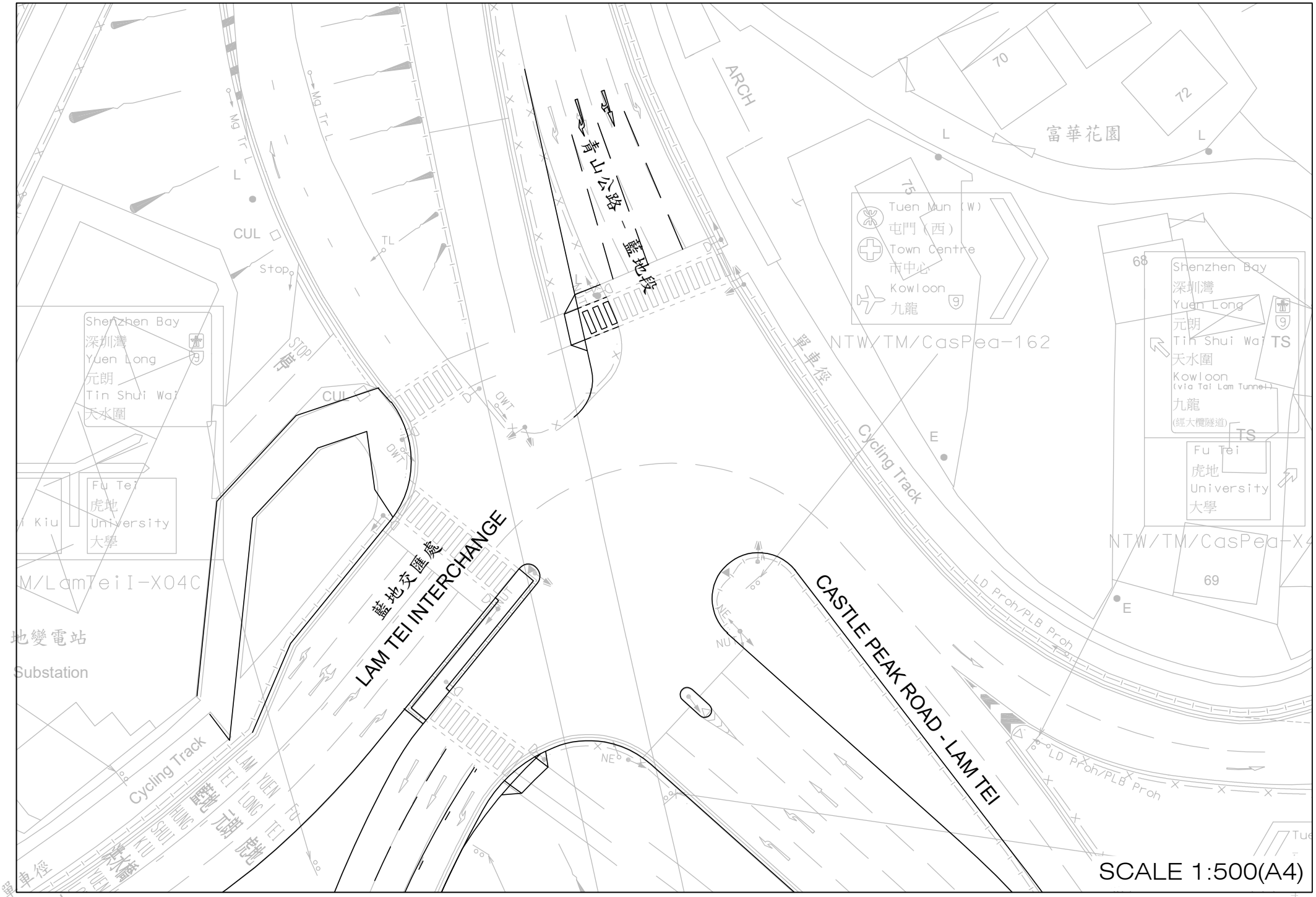


Project Title	PROPOSED RESIDENTIAL CARE HOME FOR PERSONS WITH DISABILITY ("RCHD") AT LOT 827 RP IN D.D.130, FUK HANG TSUEN ROAD, LAM TEI, TUEN MUN	J7463	Figure No. SP1 / Revision A
Figure Title	SWEPT PATH OF LIGHT GOODS VEHICLE ENTERING & LEAVING THE LOADING /UNLOADING BAY		Designed by L K W / Drawn by S C Y / Checked by K C / Scale in A4 1 : 400 / Date 15 APR 2026

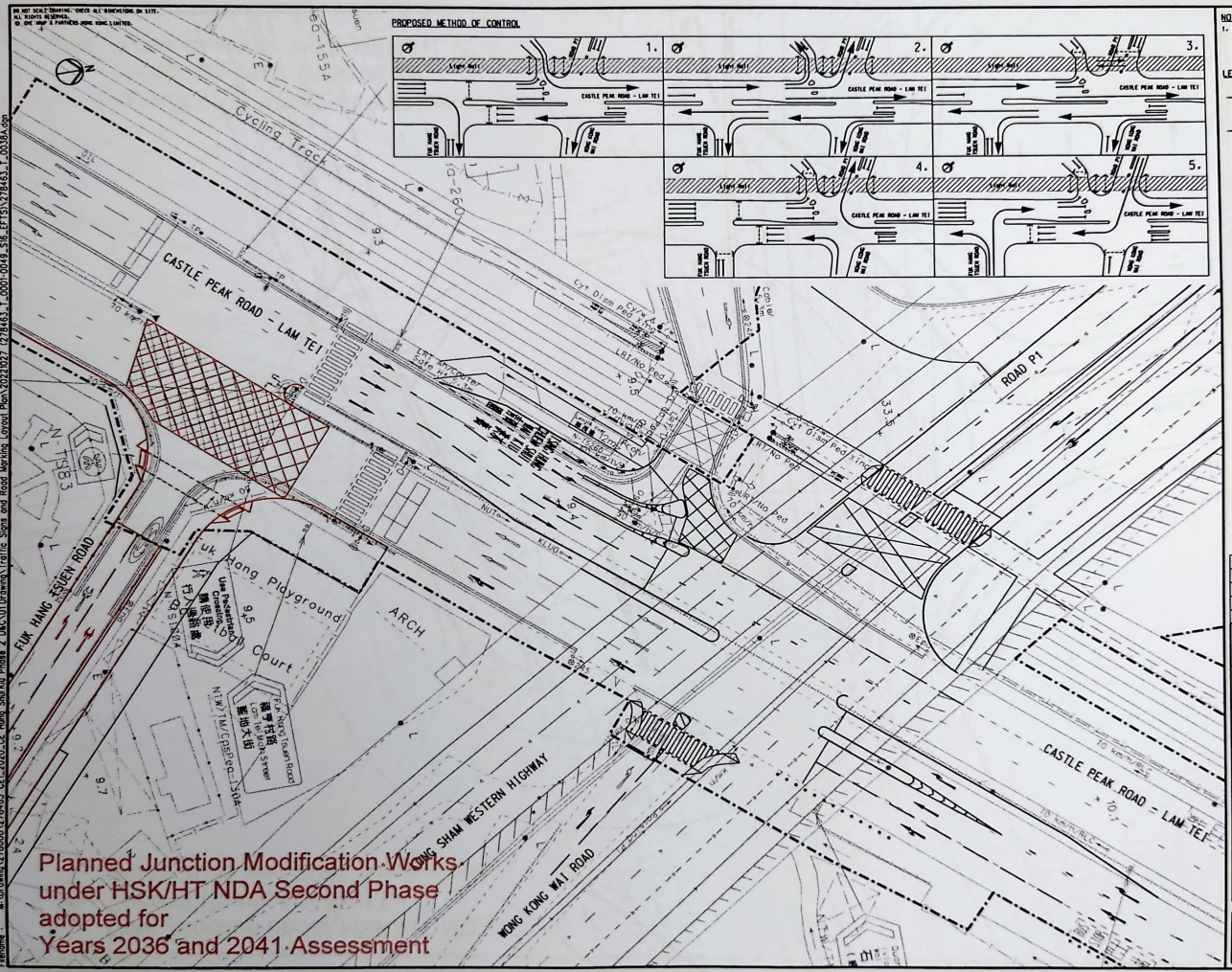
CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7450-J7499\J7463\2026 04\Fig SP RevA.dwg

Appendix C
Extract of Planned Road Works under CE 01/2020 (CE) by CEDD


青山公路 - 藍地段
LAM TEI INTERCHANGE
藍地交匯處
CASTLE PEAK ROAD - LAM TEI
富華花園
Tuen Mun (W)
屯門(西)
Town Centre
市中心
Kowloon
九龍
Shenzhen Bay
深圳灣
Yuen Long
元朗
Tin Shui Wai
天水圍
Fu Tei
虎地
University
大學
Kowloon
(via Tai Lam Tunnel)
(經大欖隧道)
NTW/TM/CasPea-162
M/LamTeiI-X04C
地變電站
Substation
Cycling Track
單車徑
ARCH
CUL
Stop
STOP
停車
Mg Tr L
TL
OWT
LD Proh/PLB Proh
NE
NU
TS
69
70
72
75
68
SCALE 1:500(A4)

Appendix D
Extract of Planned Road Works under CE 39/2021 (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_Drawing\Traffic_Signs_and_Road_Marking_Layout_Plan\20221027_I278463_T_0001-0049_S16_EFTS\I278463_T_0038A.dgn