Appendix 3

Traffic Impact Assessment

Proposed House Development
At Tuen Mun Town Lot No.550
(TMTL 550), Tuen Mun, N.T.

Traffic Impact Assessment
Final Report
July 2025

Prepared by: CKM Asia Limited

Proposed House Development at Tuen Mun Town Lot No.550 (TMTL 550), Tuen Mun, N.T.

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1.0 INTRODUCTION

Background

1.1 The Subject Site is located at T.M.T.L. 550 near San Shek Wan Road in Tuen Mun. The Owner has the intention to build one 2-storey house with some 370m^2 GFA, at the Subject Site (the "Proposed Development"). The location of the Subject Site is shown in Figure 1.1.

1.2 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a Traffic Impact Assessment ("TIA") in support of the Proposed Development. The report presents the findings of the traffic impact assessment for the Proposed Development.

Scope of the Assessment

1.3 The main objectives of this TIA are as follows:

- To assess the existing traffic issues in the vicinity of the Subject Site;
- To quantify the amount of traffic generated by the Proposed Development; and
- To examine the traffic impact on the local road network in the vicinity of the Subject Site.

Contents of the Report

1.4 After this introduction, the remaining chapters contain the following:

Chapter Two	-	describes the existing situation;
Chapter Three	-	outlines the development proposal;
Chapter Four	-	presents the traffic impact analysis; and
Chapter Five	-	summarises the overall conclusion

2.0 THE EXISTING SITUATION

The Subject Site

2.1 The Subject Site is located some 100m to the south of San Shek Wan Road. At present, there is no vehicular access connecting San Shek Wan Road and the Subject Site.

Existing Road Network

2.2 San Shek Wan Road is a local distributor, and it is of single carriageway 2 lane standard. It connects with Lung Mun Road to the east. The portion of San Shek Wan Road fronting the Subject Site is single track access road which connects with the San Shek Wan San Tsuen to the west.

2.3 Lung Mun Road is district distributor and is of dual carriageway 2/3-lane standard. It connects with Tsing Wun Road to the north and Wu Shan Road to the south.

Traffic Survey

2.4 To quantify the traffic flows at junctions selected for the capacity analysis, manual classified count was conducted on Tuesday, 13th May 2025 during the AM and PM peak periods. The locations of the surveyed junctions are presented in Figure 2.1 and their layouts are shown in Figures 2.2 to 2.4.

2.5 The surveyed junctions include the following:

- J1: Signalised Junction of Lung Mun Road / Light Rail Transit Depot Access;
- J2: Signalised Junction of Lung Mun Road / Tuen Tsing Lane; and
- J3: Signalised Junction of Lung Mun Road / Wu Shan Road

2.6 The counts were classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. From the survey, the AM and PM peak hours were found to be between 0730 – 0830 and 1745 – 1845 hours respectively, and the existing AM and PM peak hour traffic flows are presented in Figure 2.5.

Operational Performance of the Surveyed Junctions

2.7 The existing operational performance of the surveyed junctions is calculated based on the observed traffic counts and the analysis is undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual. The existing operational performance of the junctions are summarised in Table 2.1 and the detailed calculations are found in Appendix 1.

TABLE 2.1 EXISTING JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction	Parameter(1)	AM Peak Hour	PM Peak Hour
J1	Lung Mun Road / Light Rail Transit Depot Access	Signalised	RC	> 100%	> 100%
J2	Lung Mun Road / Tuen Tsing Lane	Signalised	RC	62%	75%
J3	Lung Mun Road / Wu Shan Road	Signalised	RC	84%	> 100%

Notes: (1) RC – reserve capacity

Public Transport Facilities

2.8 The Subject Site is served by various public transport services, including Light Rail Transit ("LRT"), franchised bus and green minibus ("GMB") which is some

600 metres or around 10 minutes' walk away. Details of the public transport services operating in the vicinity of the Subject Site are presented in Figure 2.6 and Table 2.2.

TABLE 2.2 FRANCHISED BUS AND GMB SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (minutes)
KMB 259B	Tuen Mun Pier Head – Tsim Sha Tsui	AM Peak
KMB 259C	Sun Tuen Mun Centre – Tsim Sha Tsui	AM Peak
KMB 259D	Tuen Mun (Lung Mun Oasis) – Lei Yue Mun Estate	7 – 25
KMB 259E	Tuen Mun (Lung Mun Oasis) – Tsuen Wan Station	AM Peak
KMB 259X	Tuen Mun (Lung Mun Oasis) – Kwun Tong Ferry	AM, PM Peak
KMB 59A(1)	Tuen Mun Pier Head – Kwai Fong (Kwai Tsui Estate)	6 – 60
KMB 59M	Tuen Mun Pier Head – Tsuen Wan Station	6 – 20
KMB 59X	Tuen Mun Pier Head – Mong Kok East Station	3 – 15
KMB N260	Tuen Mun Pier Head –Mei Foo	Overnight
CTB 962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	AM, PM Peak
CTB 962C(1)	Tuen Mun (Lung Mun Oasis) – Tai Koo (Kornhill Plaza)	AM, PM Peak
CTB 962G(1)	Admiralty (West) → Tuen Mun (Wu King Road)	PM Peak
CTB 962P	Lung Mun Oasis → Causeway Bay (Moreton Terrace)	AM Peak
CTB 962X	Lung Mun Oasis – Causeway Bay (Moreton Terrace)	11 – 25
CTB B3	Tuen Mun Ferry Pier – Shenzhen Bay Port	15 – 30
CTB N962	Tuen Mun (Lung Mun Oasis) – Causeway Bay (Moreton Terrace)	Overnight
CTB X962(1)	Admiralty (West) → Tuen Mun (Lung Mun Oasis)	PM Peak
LWB A33	Tuen Mun Road Interchange – Airport (Ground Transportation Centre)	20 – 60
LWB A34	Hung Shui Kiu (Hung Yuen Road) – Airport (Ground Transportation Centre)	20 – 60
LWB E33	Tuen Mun Central – Airport (Ground Transportation Centre)	6 – 25
LWB E33P	Siu Hong Station (South) – Airport (Ground Transportation Centre)	12 – 45
LWB E36C	Yuen Long (Tak Yip Street) to Aircraft Maintenance Area	AM, PM Peak
LWB R33	Tuen Mun Station – Disneyland	AM, PM Peak
LWB NA33	Tuen Mun (Fu Tai Estate) –Cathay Pacific City	Overnight
MTRB 506	Tuen Mun Ferry Pier – Siu Lun	4 – 10
MTRB K52	Tuen Mun Station – Lung Kwu Tan	9 – 20
MTRB K52A	Tuen Mun Station – Tsang Tsui	20 – 60
MTRB K52P	Lung Kwu Tan – Tuen Mun Station	AM Peak
GMB 41	Tuen Mun Town Centre (Tuen Fat Road) – Lung Mun Oasis	10 – 20
GMB 44	Tuen Mun Ferry Pier (Public Light Bus (Scheduled Services) Terminus on Wu Shan Road – Sheung Shui Station	2 – 8
GMB 44B1	Lok Ma Chau (San Tin) Public Transport Interchange – Tuen Mun Ferry Pier (Public Light Bus Terminus on Wu Shan Road)	15 – 20
GMB 47S	Tuen Mun Pier-Head – Mong Kok	15 – 20
GMB 48S	Leung King Estate – Mong Kok	15 – 20
GMB N44B	Lok Ma Chau Control Point – Tuen Mun Ferry Pier (Public Light Bus Terminus on Wu Shan Road)	Overnight

Note: KMB – Kowloon Motor Bus CTB – City Bus LWB – Long Win Bus
MTRB – MTR Bus GMB – Green Minibus
(1) Mondays – Fridays only (2) Sunday and Public Holiday

3.0 THE PROPOSED DEVELOPMENT

Proposed Development

3.1 The car parking spaces provided for the Proposed Development, which is one 2-storey house with some 370m^2 GFA, comply with the maximum recommendation of the Hong Kong Planning Standards and Guidelines ("HKPSG").

3.2 The calculation on the provision of internal transport facilities is found in Table 3.1, and the layout of the car park is found in Figure 3.1.

TABLE 3.1 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR THE PROPOSED DEVELOPMENT

Use	HKPSG Recommendation	Proposed Provision
	Car Parking Space	
Residential (I)	Number of space = GPS x R1 x R2 x R3, where: Global Parking Standard (GPS) = 1 space per 4 – 7 flats R1 = 7 for flat size of > 160m^2 R2 = 0.75 for development within 500m of rail station R3 = 1.3 for domestic plot ratio (PR) ≤ 1 Minimum =(1 ÷ 7 x 7 x 0.75 x 1.3) = 0.98, say 1 no. Maximum =(1 ÷ 4 x 7 x 0.75 x 1.3) =1.71, say 2 nos.	2 @ 5m (L) x 2.5m (W) x 2.4m (H); and 1 @ 5m (L) x 3.5m (W) x 2.4m (H) for persons with disabilities = 3 nos. = maximum HKPSG, OK
Visitor (II)	For private residential developments with 75 units or less per block, the visitor car parking provision will be determined by Transport Department on a case-by-case basis. 1 no. visitor car parking spaces are provided	
Total (I) + (II)	Minimum = 1 + 1 = 2 nos. Maximum = 2 + 1 = 3 nos.	
	Motorcycle Parking Space	
Residential	1 motorcycle parking space per 100 – 150 flats, NA	NA
	Loading / Unloading Bay	
Residential	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.	1 LGV loading / unloading bay @ 7.0m (L) x 3.5m (W) x 3.6m (H) (Note: Since vehicles exceeding 10m in length are prohibited from entering San Shek Wan Road, a LGV loading / unloading bay will be provided.)

Proposed Access Road

3.3 As part of the development, an access road connecting San Shek Wan Road and the Proposed Development will be provided (the "Proposed Access Road"). The existing passing at San Shek Wan Road, where the Proposed Access Road is to be provided, is shifted some 20m to the west. The Proposed Access Road and the new location of the passing bay at San Shek Wan Road are found in Figure 3.2.

3.4 The key design features of the Proposed Access Road are:

i) Minimum road width is 4.5m;
ii) 12m-long passing bay at midway of the straight section of Proposed Access Road (the "passing bay of Proposed Access Road");
iii) 50m sight distance at the passing bay of the Proposed Access Road which is found in Figure 3.3;
iv) One footpath along the eastern side with minimum width of 1.6m (the "Proposed Footpath");
v) Road gradient of some 2%, which fulfils the Transport Planning and Design Manual maximum desirable gradient of 16% for small and light vehicles.

Swept Path Analysis

3.5 The CAD-based swept path analysis program, Autodesk Vehicle Tracking, was used to check the ease of vehicle manoeuvring within the Proposed Development and no manoeuvring issue is found. The swept path analysis drawings for critical movements are found in Appendix 2.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed Development is expected to be completed by 2031, and the design year adopted for the capacity analysis is 2034, i.e. 3 years after the completion of the Proposed Development.

Traffic Forecasting

4.2 The 2034 traffic flows used for the junction analysis are produced with reference to the following:

(i) 2031 traffic flows derived with reference to Base District Traffic Model ("BDTM");

(ii) estimated traffic growth from 2031 to 2034 based on the higher of: (a) 2021 – based Territorial Population and Employment Data Matrix ("TPEDM") data produced by Planning Department, (b) Hong Kong Population Projections 2022 – 2046, published by Census and Statistics Department, or (c) historic Annual Average Daily Traffic ("AADT") produced by Transport Department;

(iii) the other developments in the vicinity of the Proposed Development; and

(iv) Traffic generated by the Proposed Development.

4.3 The (ii) estimated traffic growth from 2031 to 2034, (iii) the other development in the vicinity of the Proposed Development, and (iv) traffic generated by the Proposed Development are presented in the paragraphs below.

Estimated Traffic Growth Rate from 2031 to 2034

4.4 The (a) 2021 – based TPEDM data for Tuen Mun District, and the (b) Hong Kong Population Projections 2022 – 2046, and (c) historic AADT are summarised in Tables 4.1 – 4.3 respectively.

TABLE 4.1 2021-BASED TPEDM DATA FOR TUEN MUN DISTRICT

Item	TPEDM Estimation / Projection			Annual Growth Rate		
	2021	2026	2031	2021 to 2026	2026 to 2031	2021 to 2031
Population	506,900	557,650	586,200	1.93%	1.00%	1.46%
Employment	133,400	132,450	152,650	-0.14%	2.88%	1.36%

TABLE 4.2 HONG KONG POPULATION PROJECTIONS 2022 – 2046

Whole Territory Population		Annual Growth Rate
Year 2031	Year 2034	2031 to 2034
7,820,200	7,945,100	0.53%

TABLE 4.3 AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE

Station	5640	5654	5839	6633	Overall
Road	Lung Mun Road	Wu Shan Road	Lung Mun Road	Wu Chui Road	
From	Wu Shan Road	Lung Mun Road	Wong Chu Road	Lung Mun Road	
To	Wu Chui Road	Wu King Road	Wu Shan Road	Wu Shan Road	
2011	12,420	6,410	17,210	8,580	44,620
2012	12,340	6,370	14,530	8,480	41,720
2013	12,440	6,420	14,650	8,060	41,570
2014	12,310	6,350	14,500	7,350	40,510
2015	12,410	6,350	14,380	8,190	41,330

2016	12,090	6,860	17,860	8,340	45,150
2017	11,900	6,750	18,360	8,100	45,110
2018	12,190	6,920	18,810	8,540	46,460
2019	12,100	6,870	18,670	8,710	46,350
2020	12,230	7,100	17,900	7,130	44,360
2021	12,990	7,610	18,940	7,670	47,210
2022	12,600	7,380	19,530	8,190	47,700
2023	12,890	7,550	14,449	9,280	49,710
				Average Annual Growth	0.90%

4.5 Table 4.1 shows that the highest annual growth rate for population is +1.93% and for employment is +2.88%. Table 4.2 shows that the annual growth rate from 2031 to 2034 is +0.53%. Table 4.3 shows that in the historic AADT of the stations between 2011 and 2023 in the vicinity has average annual growth rate of 0.90% per annum. To be conservative, the growth rate of +2.88% per annum is adopted for the traffic growth between 2031 and 2034.

Other developments in the vicinity of the Proposed Development

4.6 The planned development included in the 2034 reference traffic flows are presented in Table 4.4.

TABLE 4.4 PLANNED DEVELOPMENT IN THE VICINITY OF THE PROPOSED DEVELOPMENT

Site	Planning Application No.	Address	Use
1	A/TM/565	Government Land in D.D. 138 and D.D. 300, Tuen Mun	Proposed Bus Depots with Ancillary Public Utility Installation (Electricity Substation)

4.7 In addition, the infrastructure and road network considered in the traffic model include the following:

- Wu Shan Road Public Housing Development
- New Lung Fu Road slip road northbound
- New Lung Fu Road slip road southbound
- New slip road from Tuen Mun Road northbound to Hoi Wing Road westbound
- New Tuen Mun Swimming Pool

Traffic Generated by the Proposed Development

4.8 Traffic generation associated with the Proposed Development is calculated based on the trip rates from theTransport Planning and Design Manual published by Transport Department and is presented in Table 4.5.

TABLE 4.5 TRAFFIC GENERATION OF THE PROPOSED DEVELOPMENT

Item	AM Peak Hour			PM Peak Hour		
	In	Out	2-way	In	Out	2-way
Trip Generation Rates for residential use (pcu/hour/flat)[(1)]						
Private Housing: low-density / R(C) with an average flat size of 300m^2	0.2609	0.3252	NA	0.4074	0.2835	NA
Traffic Generation of Proposed Development (pcu/hour)						
Residential Use: 1 house [a]	1	1	2	1	1	2

Note: [(1)] Mean rates taken from the Transport Planning and Design Manual.

4.9 Table 4.5 shows that the Proposed Development is expected to generate only 2 pcu/hour (2-way) during both the AM and PM peak hours.

2034 Traffic Flows

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

2034 without the Proposed Development [A]	=	(i)2031 traffic flows derived with reference to BDTM + (ii) estimated total growth from 2031 to 2034 + (iii) Other developments in the vicinity of the Proposed Development
2034 with the Proposed Development [B]	=	[A] + (iv) Traffic generated by the Proposed Development (Table 4.5)

4.11 The 2034 peak hour traffic flows for the cases without and with the Proposed Development, are shown in Figures 4.1 – 4.2, respectively.

2034 Junction Operational Performance

4.12 Year 2034 capacity analysis for the cases without and with the Proposed Development are summarised in Table 4.6 and detailed calculations are found in the Appendix 1.

TABLE 4.6 2034 JUNCTION OPERATIONAL PERFORMANCE

Ref.	Junction	Type of Junction / Parameter(1)	Year 2034 without the Proposed Development		Year 2034 with the Proposed Development	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Lung Mun Road / Light Rail Transit Depot Access	Signal / RC	> 100%	> 100%	> 100%	> 100%
J2	Lung Mun Road / Tuen Tsing Lane	Signal / RC	43%	65%	43%	65%
J3	Lung Mun Road / Wu Shan Road	Signal / RC	69%	93%	69%	93%

Notes: (1) RC – reserve capacity

4.13 Table 4.6 shows that the junctions operate with capacities during the AM and PM peak hours for the cases without and with the Proposed Development.

5.0 PEDESTRIAN ASSESSMENT

Location of Surveyed Footpaths

5.1 The pedestrian assessment is undertaken for footpaths likely used by the residents of the Proposed Development. The location of the surveyed footpaths is shown in Figure 5.1.

Estimation of Future Pedestrian Flows

5.2 The year 2034 pedestrian flow is estimated based on the following:
(i) 2025 Existing pedestrian flows;
(ii) Estimated annual pedestrian growth rates from 2025 to 2034; and
(iii) Pedestrians generated by the Proposed Development.

2025 Existing Pedestrian Flows

5.3 To quantify the existing pedestrian flows using the footpaths presented in Figure 5.1, pedestrian counts were conducted during the AM and PM peak periods on Tuesday, 13th May 2025. The existing peak 15-minute two-way pedestrian flows are presented in Figure 5.2.

Estimated Annual Pedestrian Growth Rates from 2025 to 2034

5.4 The 2034 reference pedestrian flow is estimated based on the 2025 observed pedestrian flows and the annual pedestrian growth rate from 2025 to 2034. The pedestrian growth rate from 2025 to 2034 is assumed to be +2.88% per annum which is taken from Table 4.1.

Pedestrian Generated by the Proposed Development

5.5 As stated in the planning statement, the Proposed Development, which is one 2-storey house with some 370m^2 GFA, is expected to have a design population of 3. However, to be conservative, it is assumed that all residents will leave and enter within 15 minutes, a generation of 3 ped/15min (2-way) during the AM and PM peak periods.

2034 Pedestrian Flows

5.6 The 2034 pedestrian flows without and with the Proposed Development are derived using the following method:

2034 without the Proposed Development [A]	=	(i) 2025 existing pedestrian flows + (ii) estimated annual pedestrian growth rates from 2025 to 2034
2034 with the Proposed Development [B]	=	[A] + (iii) pedestrian generated by the Proposed Development

5.7 The 2034 pedestrian flows without and with the Proposed Development are presented in Figures 5.3 and 5.4.

Level-of-Service

5.8 The level-of-service (LOS) of a pedestrian facility is dependent on its width and the number of pedestrians using the facility. Description of the LOS is obtained from the Transport Planning and Design Manual, and is given in Table 5.1.

TABLE 5.1 DESCRIPTION OF PEDESTRIAN FACILITY LOS

LOS	Maximum Pedestrian 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 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 streams. Where reverse directions or crossing movements exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	> 33 - 49	Freedom to select individual walking speed and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however considerable friction and interaction between pedestrians is likely to occur.
E	> 49 – 75	Virtually, all pedestrians would have their normal walking speed restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by "shuffling". There is frequent and unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.

Source: Transport Planning & Design Manual Volume 6, Transport Department

5.9 The effective width of the surveyed footpaths is presented in Table 5.2.

TABLE 5.2 EFFECTIVE WIDTH OF THE SURVEYED FOOTPATHS

Ref.	Location		Footpath Width (m)	Effective Width (m)
1	San Shek Wan Road between Subject Site and Lung Mun Road	Southern footpath	1.6	0.6
2	Lung Mun Road between San Shek Wan and Light Rail Station - Light Rail Depot	Western footpath	3.0	2.0
3	The Proposed Footpath	Eastern footpath	1.6	0.6

5.10 The 2034 weekday LOS at the surveyed footpaths for the cases without and with the Proposed Development is presented in Table 5.3.

TABLE 5.3 2034 LOS WITHOUT AND WITH THE PROPOSED DEVELOPMENT

Ref.	Location		Peak Period	Year 2034 without the Proposed Development			Year 2034 with the Proposed Development		
				Ped / 15min	Ped / min/m	LOS	Ped / 15min	Ped / min/m	LOS
1	San Shek Wan Road between Subject Site and Lung Mun Road	Southern footpath	AM	11	1.2	A	14	1.6	A
			PM	8	0.9	A	11	1.2	A
2	Lung Mun Road between San Shek Wan and Light Rail Station - Light Rail Depot	Western footpath	AM	44	1.5	A	47	1.6	A
			PM	48	1.6	A	51	1.7	A
3	The Proposed Footpath	Eastern footpath	AM	N/A			3	0.3	A
			PM	N/A			3	0.3	A

5.11 Table 5.3 shows that all surveyed footpaths operate with LOS A for the case without and with the Proposed Development. Hence, it can be concluded that the Proposed Development will result in no impact to the footpaths assessed.

6.0 CONCLUSION

6.1 The Subject Site is located at T.M.T.L 550 near San Shek Wan Road in Tuen Mun. The Owner has the intention to to build one 2-storey house with some 370m^2 GFA, at the Subject Site.

6.2 Manual classified counts were conducted at surveyed junctions located in the vicinity of the Proposed Development in order to establish the peak hour traffic flows. Currently, these junctions operate with capacities during the AM and PM peak hours.

6.3 The car parking spaces provided for the Proposed Development comply with the maximum recommendation of the HKPSG. Since the vehicles over 10m in length are prohibited from entering San Shek Wan Road, LGV loading / unloading bay will be provided.

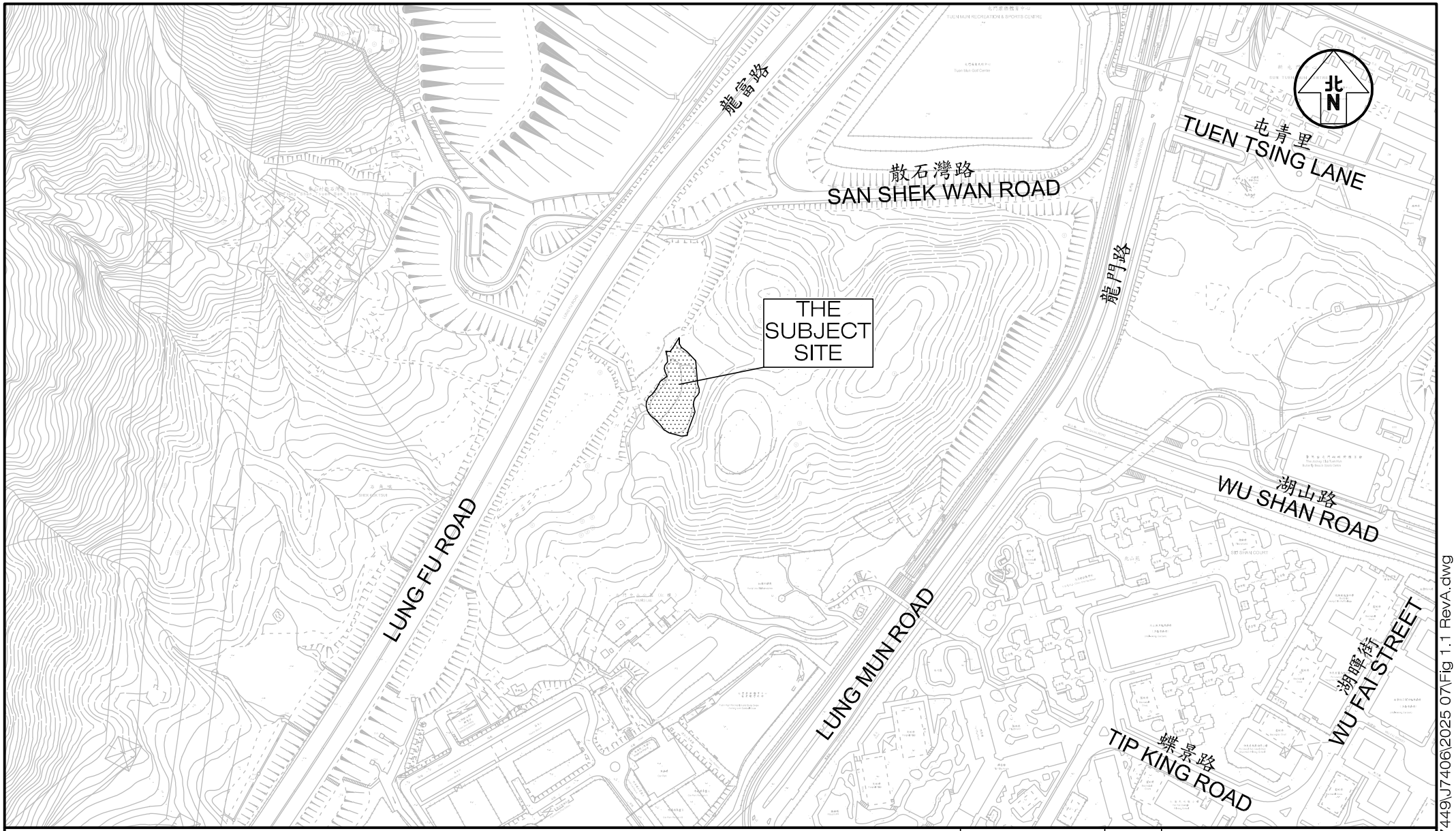
6.4 The Proposed Access Road connects San Shek Wan Road with the Proposed Development. To provide the Proposed Access Road, the existing passing bay at San Shek Wan Road is shifted some 20m to the west.

6.5 The Proposed Development is expected to be completed by 2031, and the junction capacity analysis is undertaken for year 2034. For the design year 2034, the junctions analysed are expected to operate with capacities during the peak hours for the case without and with the Proposed Development.

6.6 The pedestrian assessment conducted found that the surveyed footpaths would operate with LOS A in 2034 for the case without and with the Proposed Development, and the Proposed Development has no adverse impact to the footpaths assessed.

6.7 It is concluded that the Proposed Development will result in no adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed Development is acceptable.

Figures



Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 1.1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: LOCATION OF SUBJECT SITE	Designed by C Y Y	Drawn by N C M	Checked by K C
	Scale in A4 1 : 4,000	Date 31 JUL 2025	

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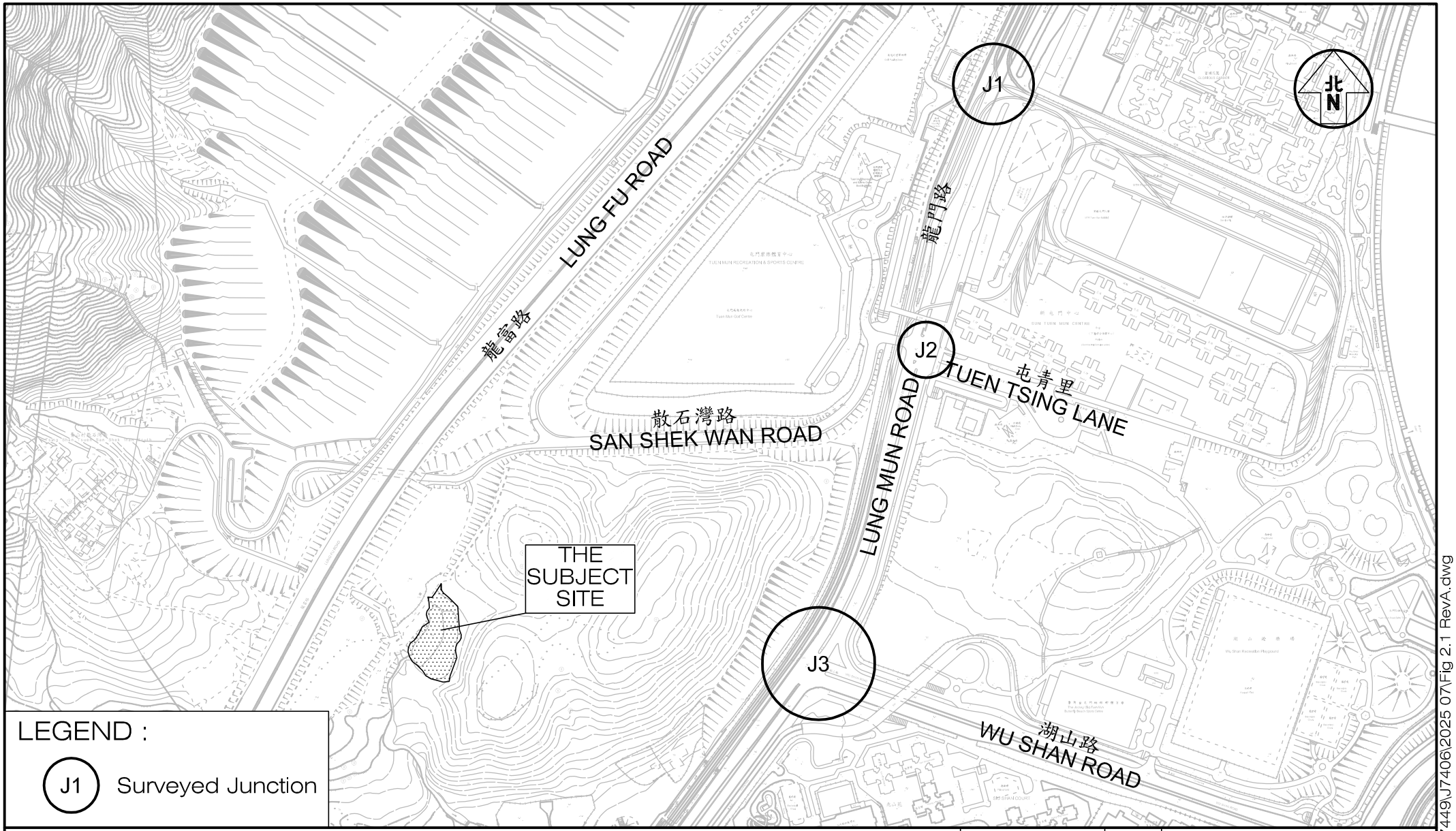

Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 2.1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: LOCATION OF SURVEYED JUNCTIONS	Designed by C Y Y / Drawn by N C M	Checked by K C	
	Scale in A4 1 : 4,000	Date 31 JUL 2025	

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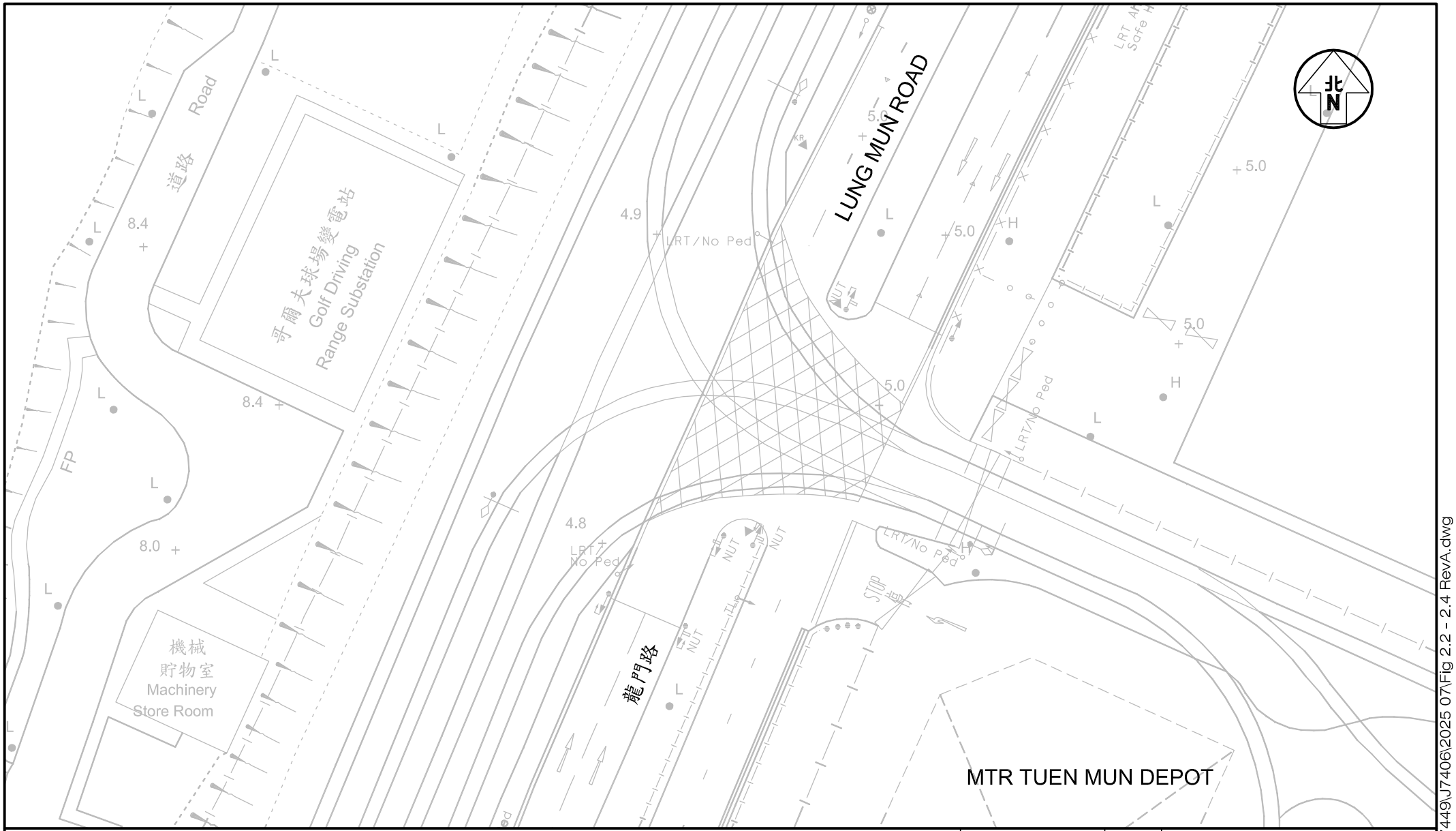
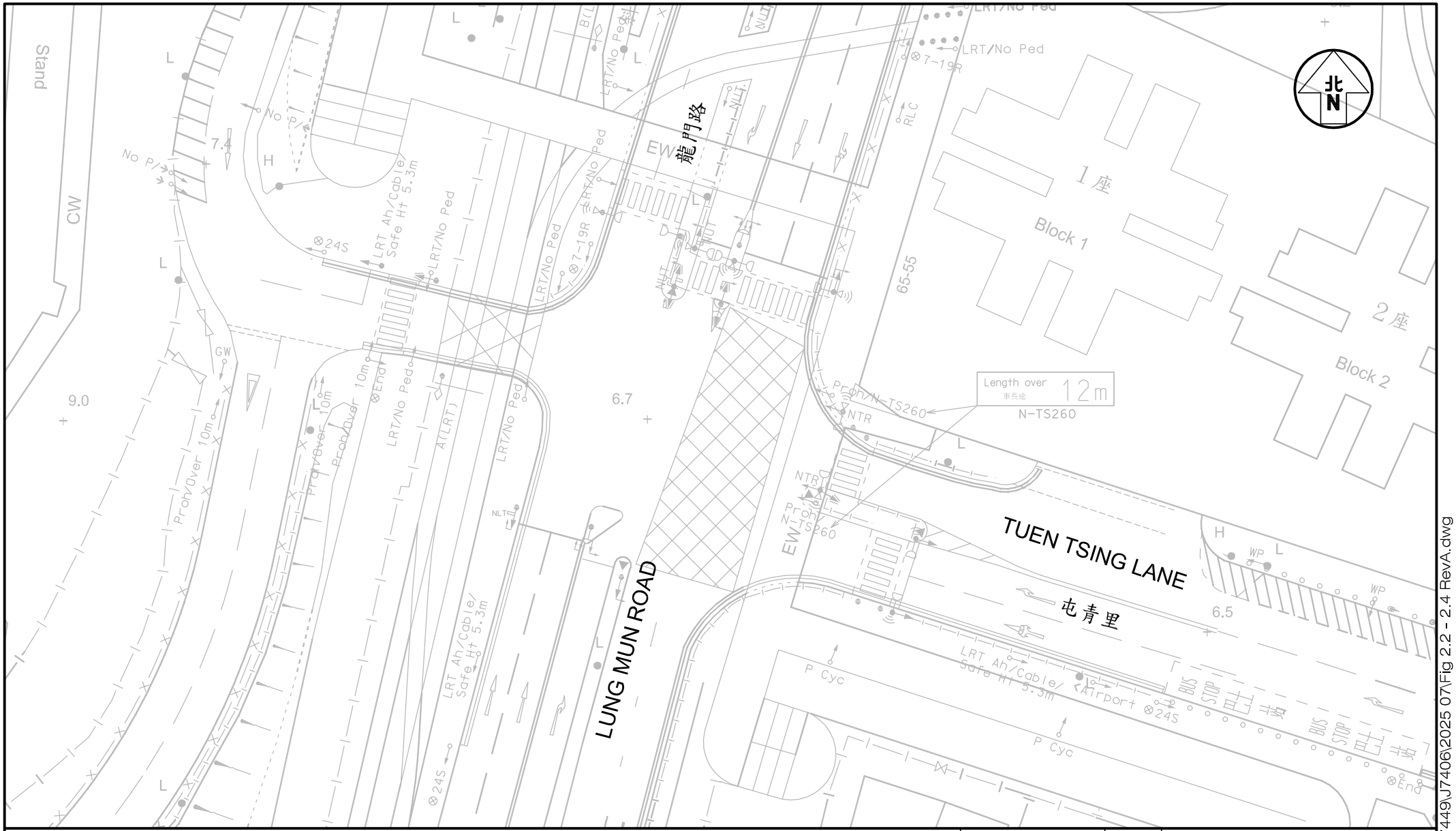


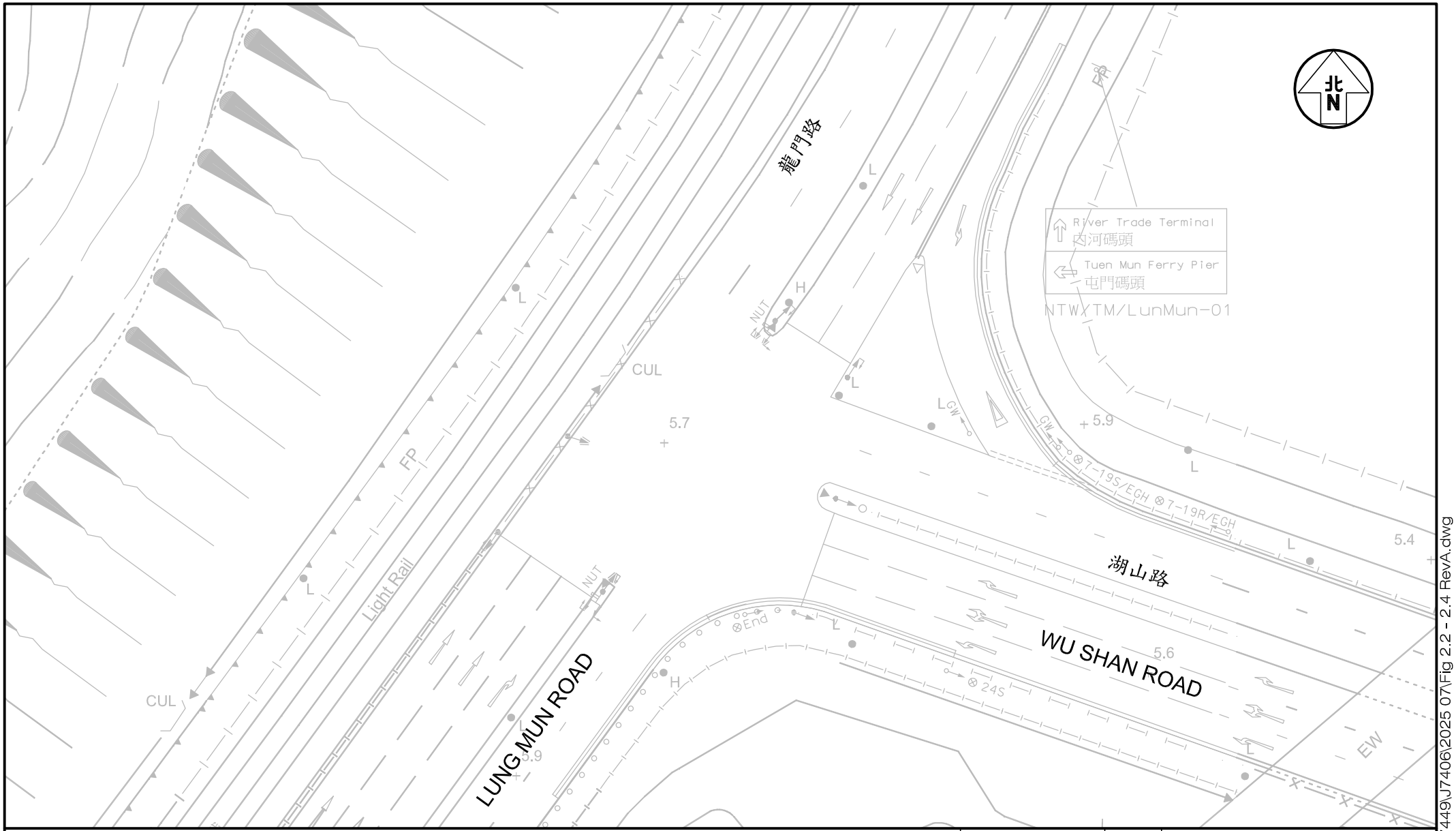
Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 2.2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title	LAYOUT OF JUNCTION OF LUNG MUN ROAD / LIGHT RAIL TRANSIT DEPOT ACCESS	Designed by C Y Y / Drawn by N C M / Checked by K C		[redacted]
		Scale in A4 1 : 500	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 2.2 - 2.4 RevA.dwg



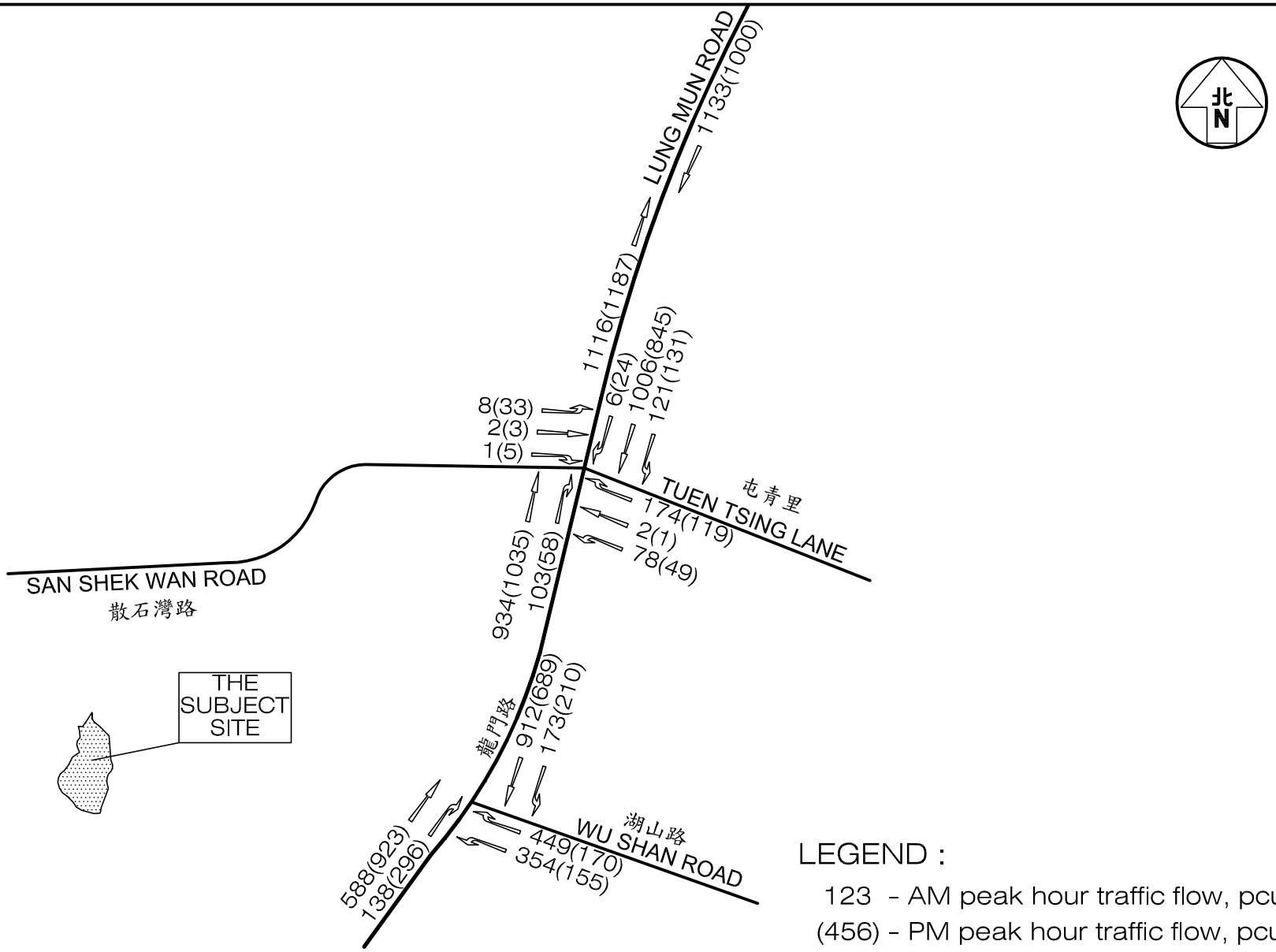
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	Figure No. 2.3	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: LAYOUT OF JUNCTION OF LUNG MUN ROAD / TUEN TSING LANE		Designed by C Y Y	Drawn by N C M	Checked by K C
		Scale in A4 1 : 500	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 2.2 - 2.4 RevA.dwg



Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 2.4	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants	
Figure Title: LAYOUT OF JUNCTION OF LUNG MUN ROAD / WU SHAN ROAD	Designed by C Y Y	Drawn by N C M	Checked by K C	[redacted]
	Scale in A4 1 : 500	Date 31 JUL 2025		

T:\JOB\J7400-J7449\J7406\2025 07\Fig 2.2 - 2.4 RevA.dwg



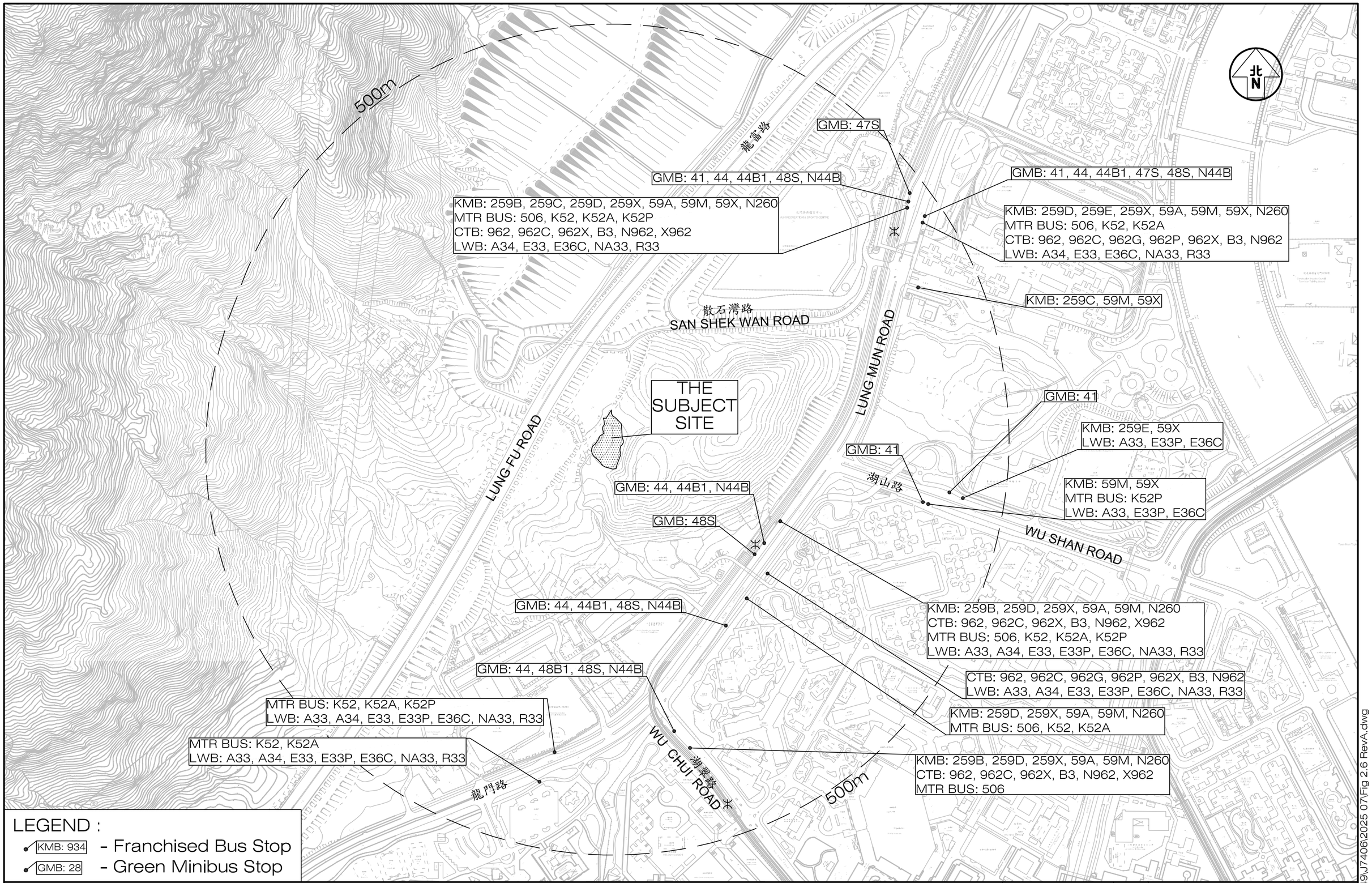
LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr

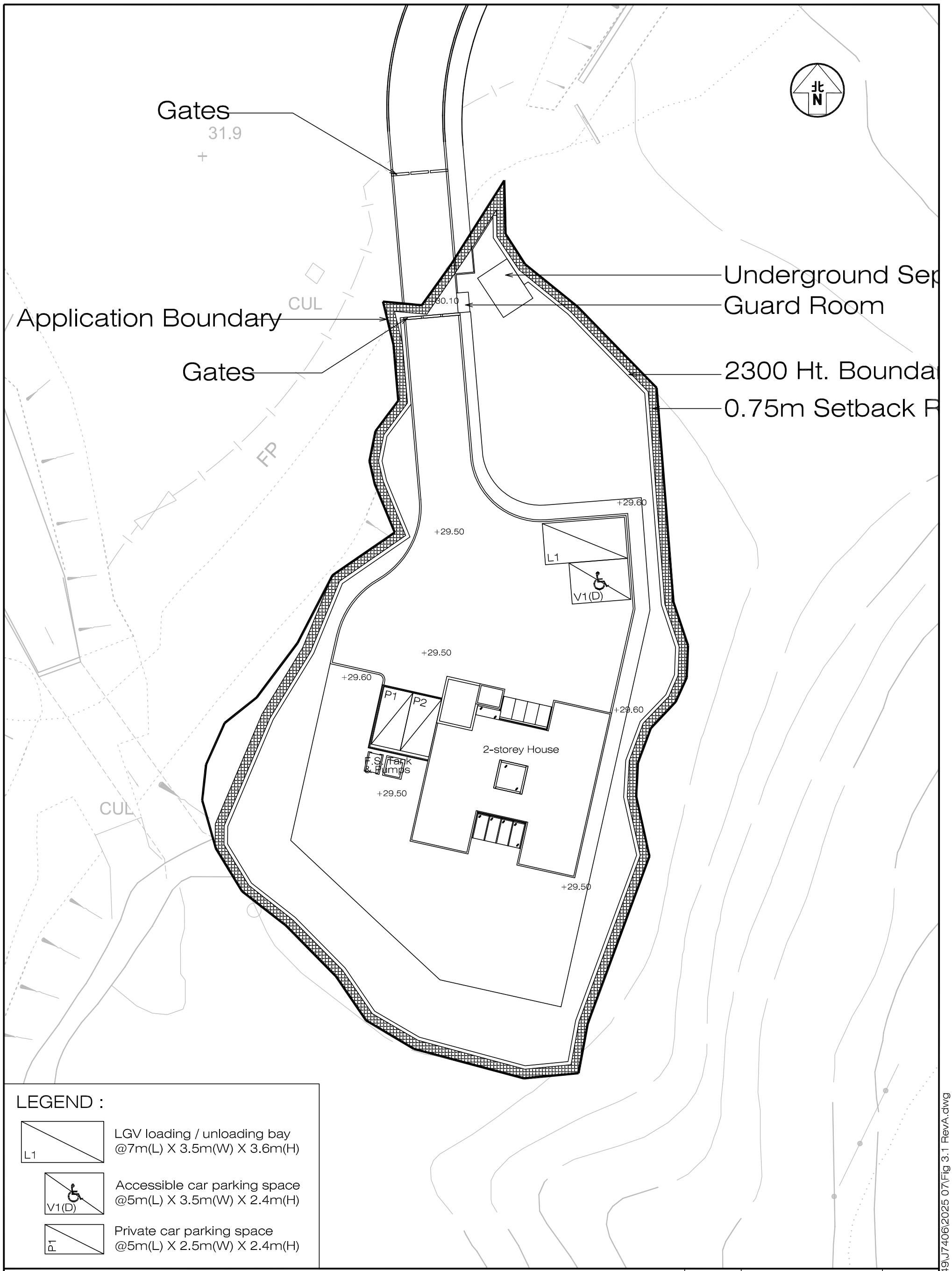
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 2.5	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: EXISTING PEAK HOUR TRAFFIC FLOWS	Designed by C Y Y / Drawn by N C M / Checked by K C		
	Scale in A4 N.T.S.	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 2.5 RevA.dwg



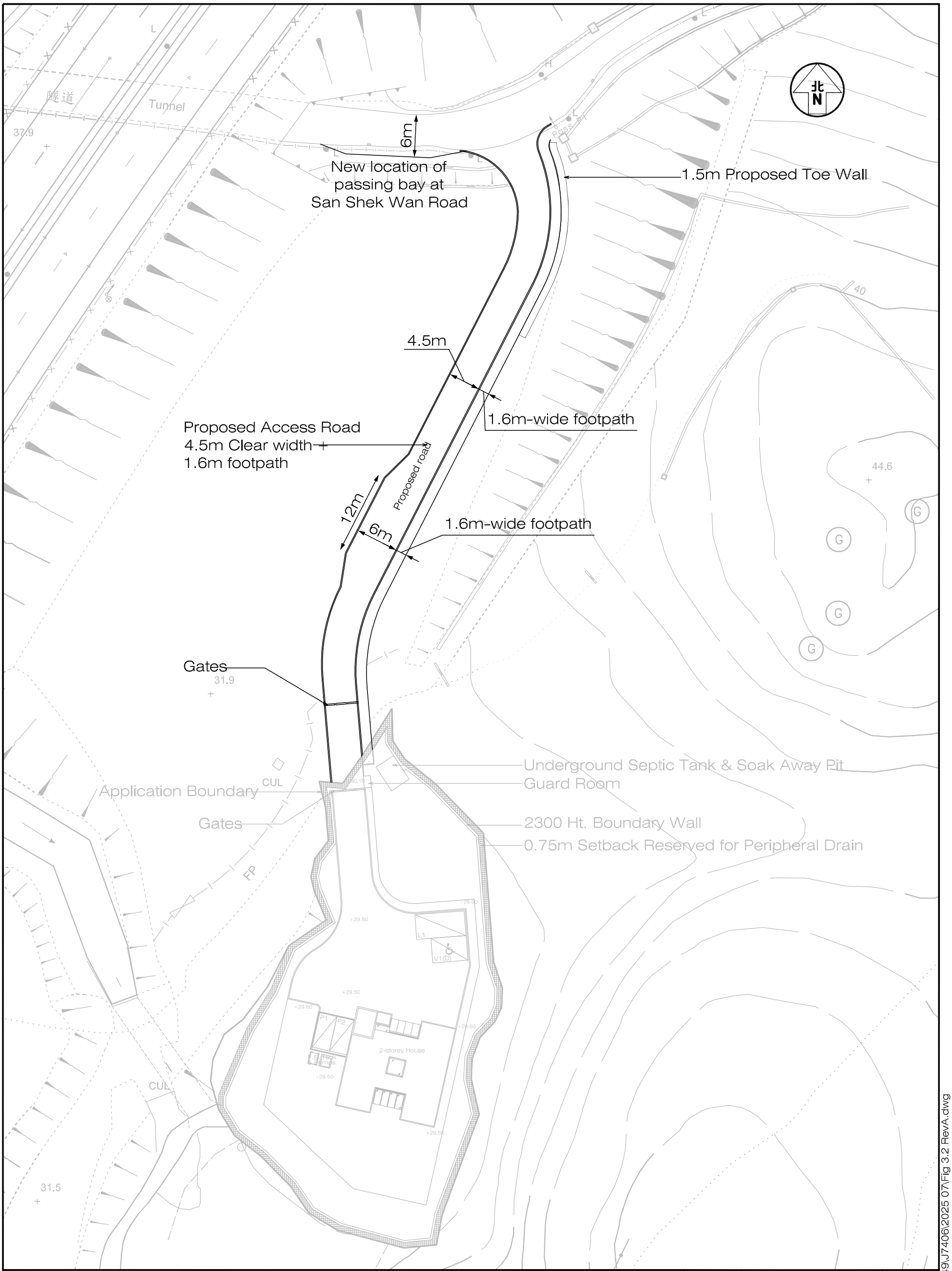
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 2.6	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: THE PUBLIC TRANSPORT SERVICES PROVIDED IN THE VICINITY OF THE SUBJECT SITE	Designed by L C H / Drawn by N C M / Checked by K C		
	Scale in A3 1 : 5000	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 2.6 RevA.dwg



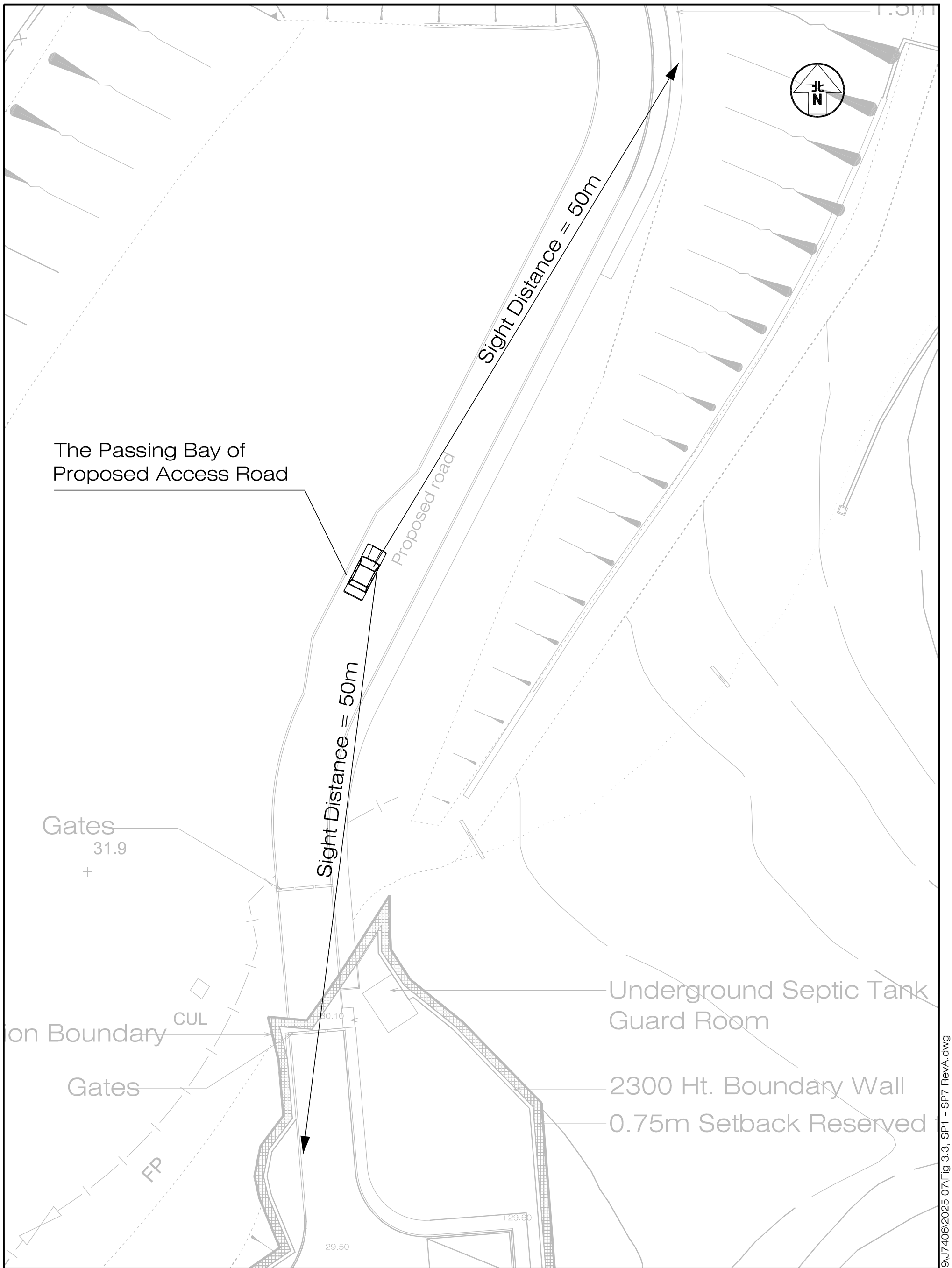
Project Title	Job No.	Figure No.		Scale in A3
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	3.1		1 : 300
	Designed by C Y Y	Drawn by N C M	Checked by K C	Revision A	Date 31 JUL 2025
Figure Title	[redacted]			
CAR PARK LAYOUT				

T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.1 RevA.dwg



Project Title	Job No.	Figure No.			Scale in A3
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	3.2			1 : 500
	Designed by	Drawn by	Checked by	Revision	Date
	C Y Y	N C M	K C	A	31 JUL 2025
Figure Title	[redacted]				
THE PROPOSED ACCESS ROAD AND THE NEW LOCATION OF PASSING BAY AT SAN SHEK WAN ROAD					

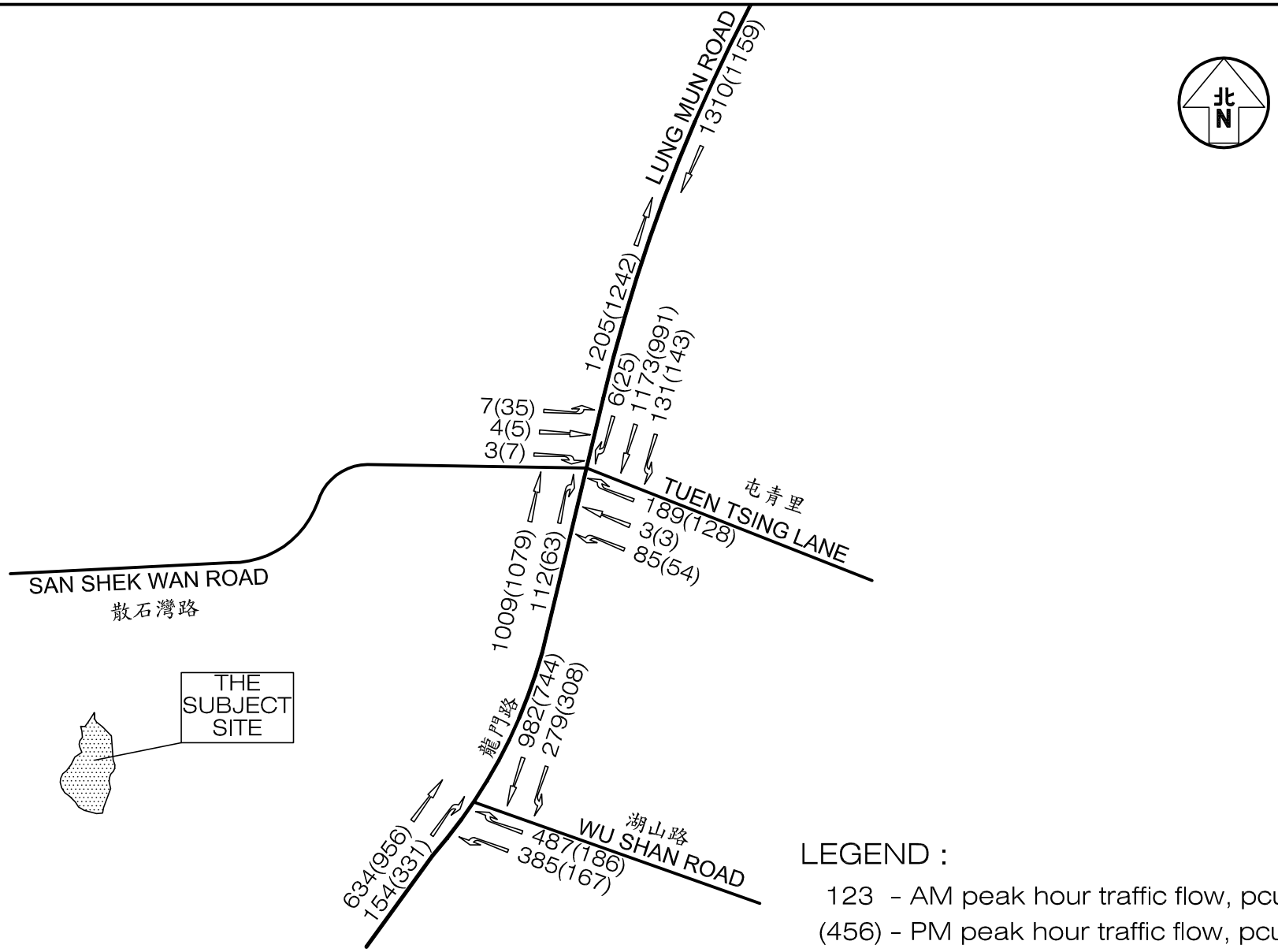
T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.2 RevA.dwg



Project Title	Job No.	Figure No.		Scale in A3
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	3.3		1 : 300
	Designed by: C Y Y	Drawn by: N C M	Checked by: K C	Revision: A / Date: 31 JUL 2025
Figure Title	[redacted]			

SIGHT DISTANCE AT THE PASSING BAY OF PROPOSED ACCESS ROAD

T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.3, SP1 - SP7 RevA.dwg



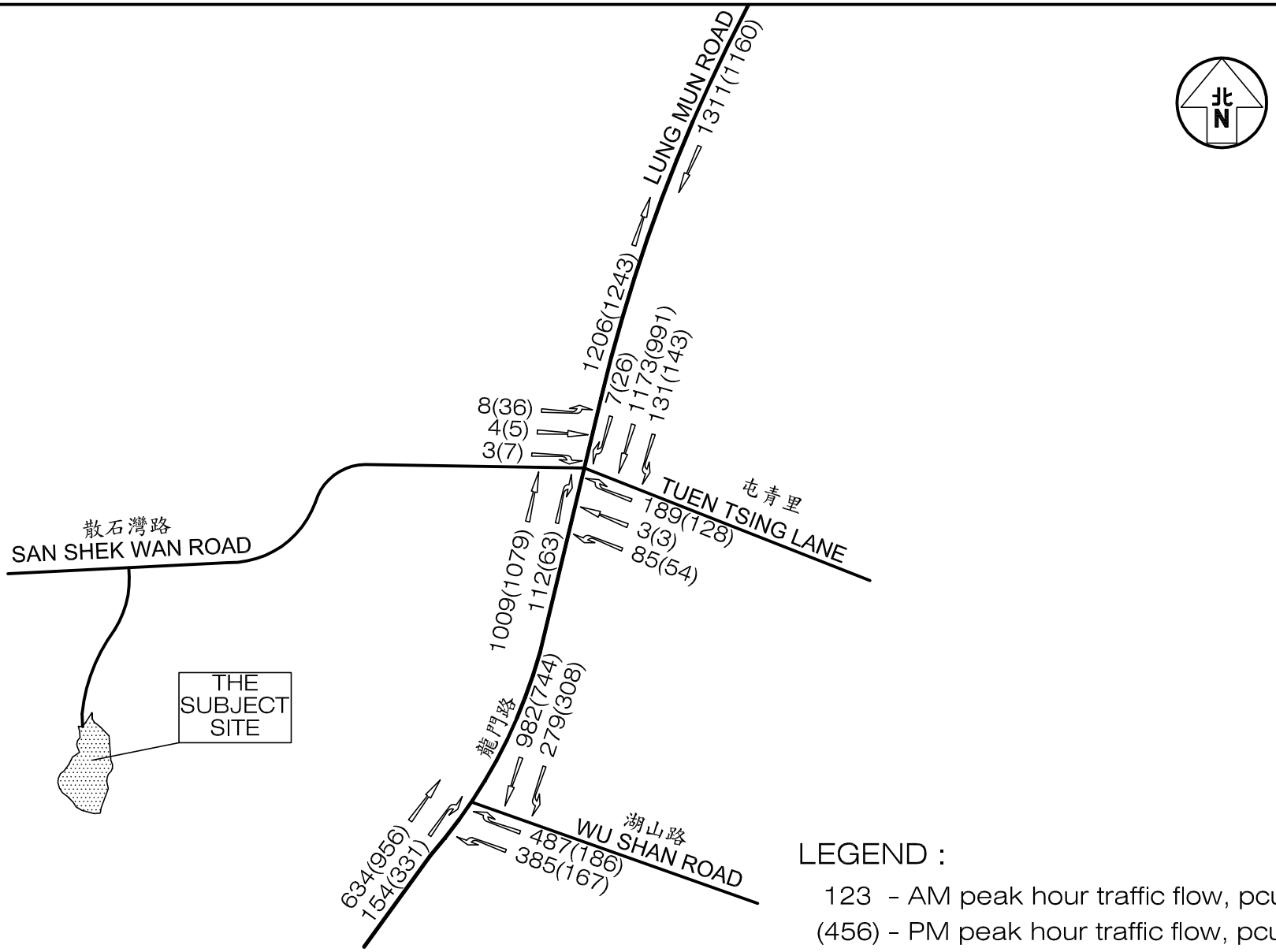
LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr

Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 4.1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title: YEAR 2034 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED DEVELOPMENT	Designed by C Y Y / Drawn by N C M	Checked by K C	[redacted]
	Scale in A4 N.T.S.	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 4.1 RevA.dwg



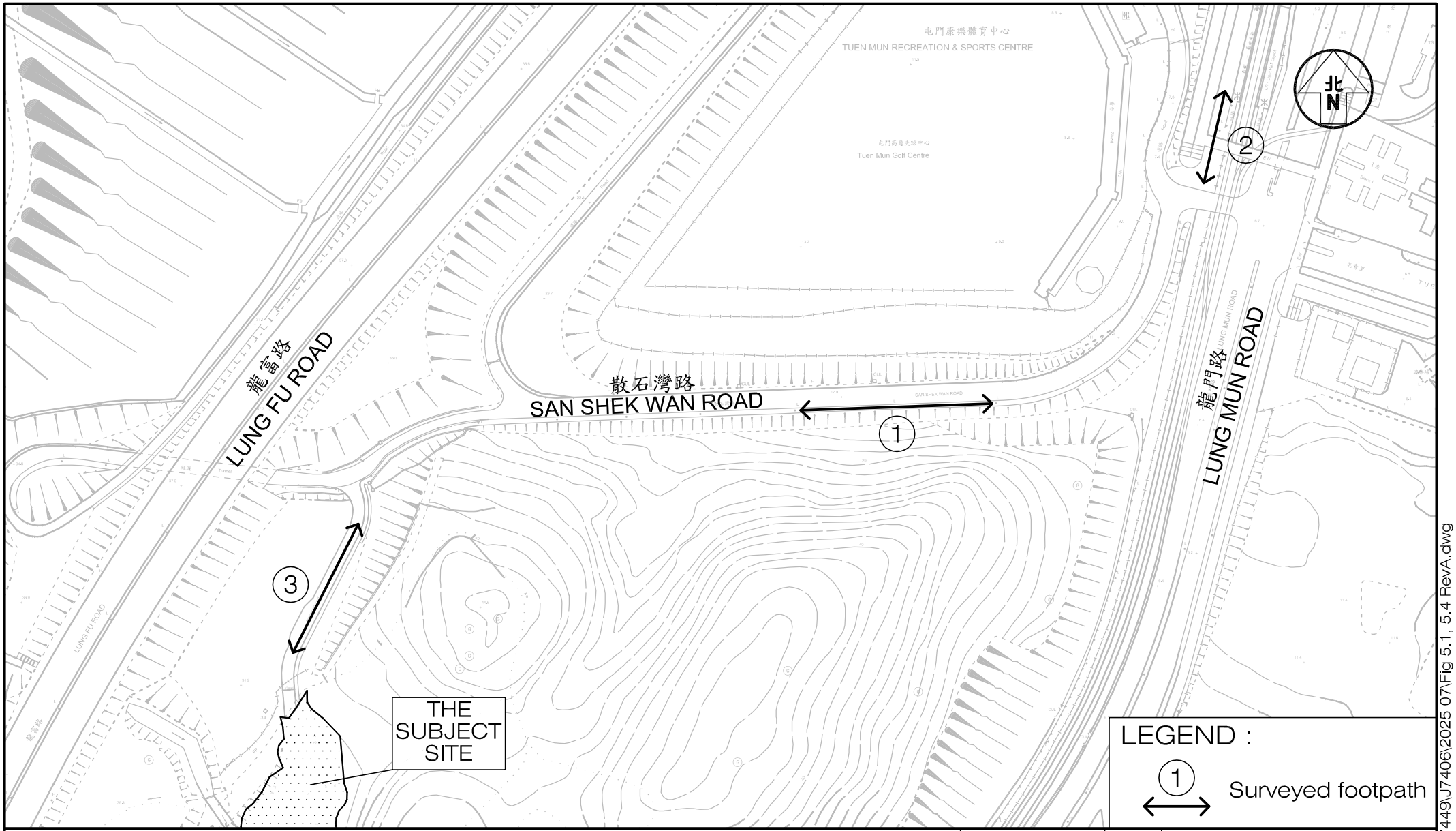
LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr

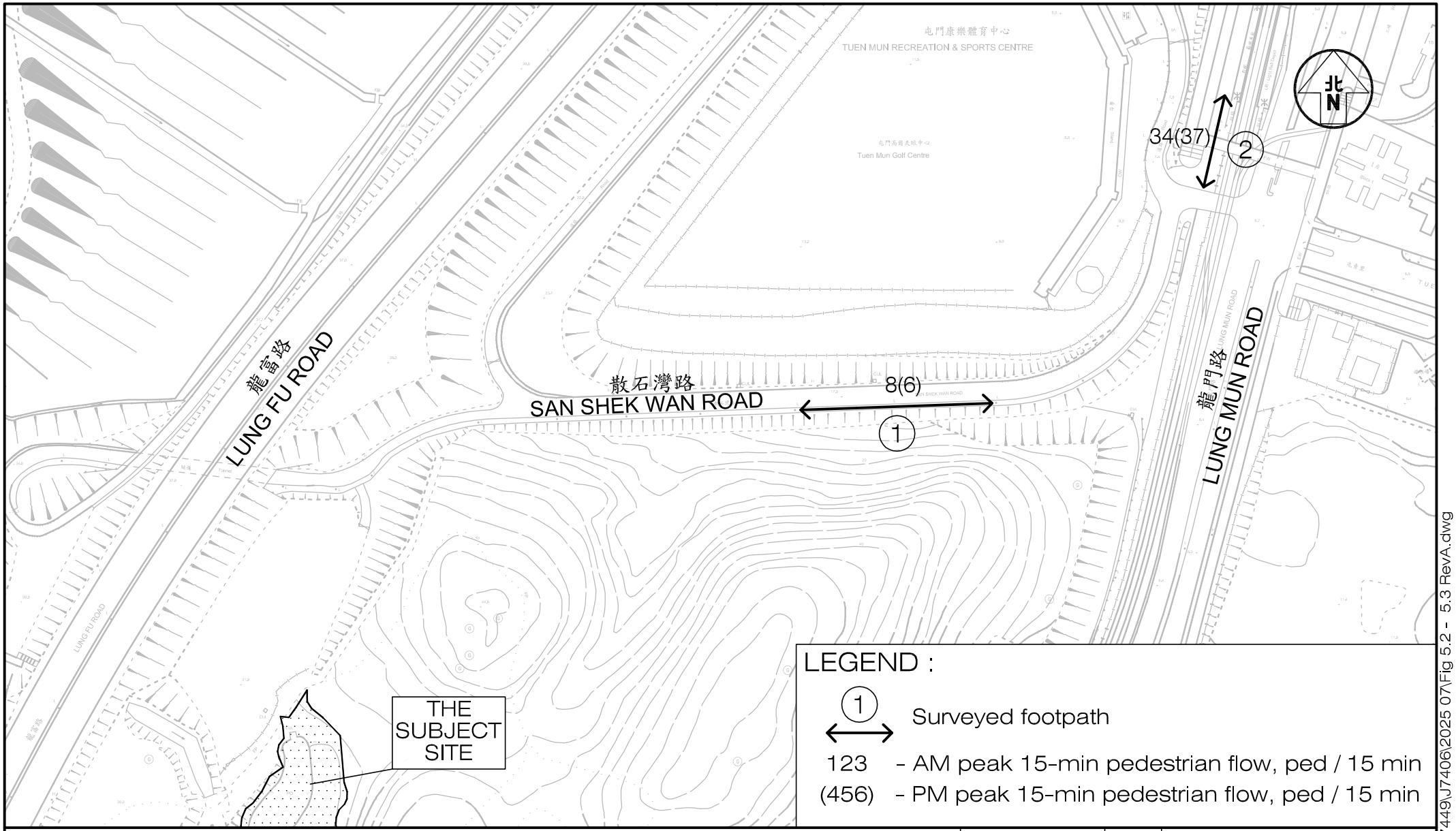
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 4.2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title: YEAR 2034 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED DEVELOPMENT	Designed by C Y Y / Drawn by N C M	Checked by K C	[redacted]
	Scale in A4 N.T.S.	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 4.2 RevA.dwg



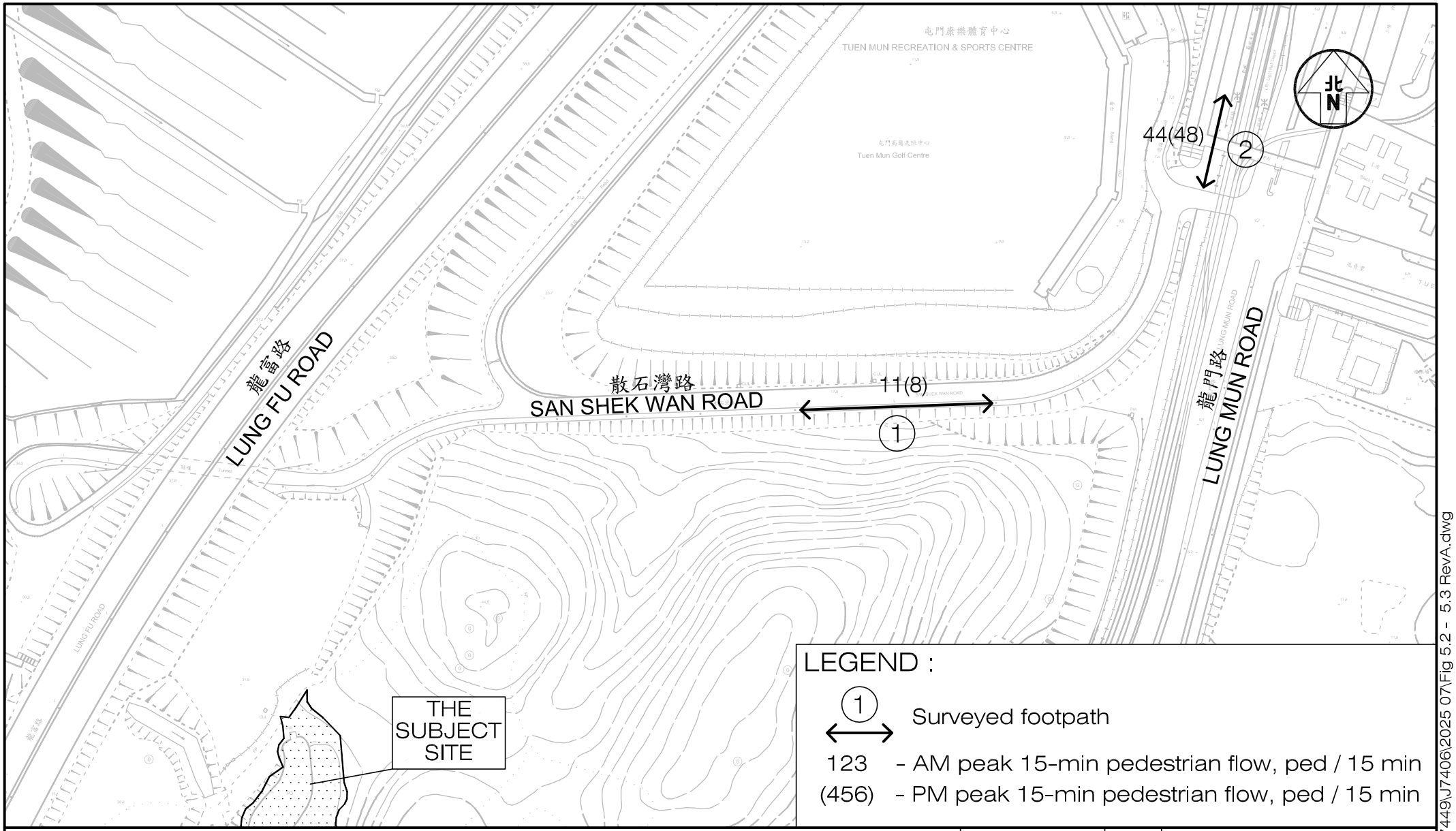
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 5.1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: LOCATION OF THE SURVEYED FOOTPATHS	Designed by C Y Y / Drawn by N C M / Checked by K C		
	Scale in A4 1 : 2000	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 5.1, 5.4 RevA.dwg



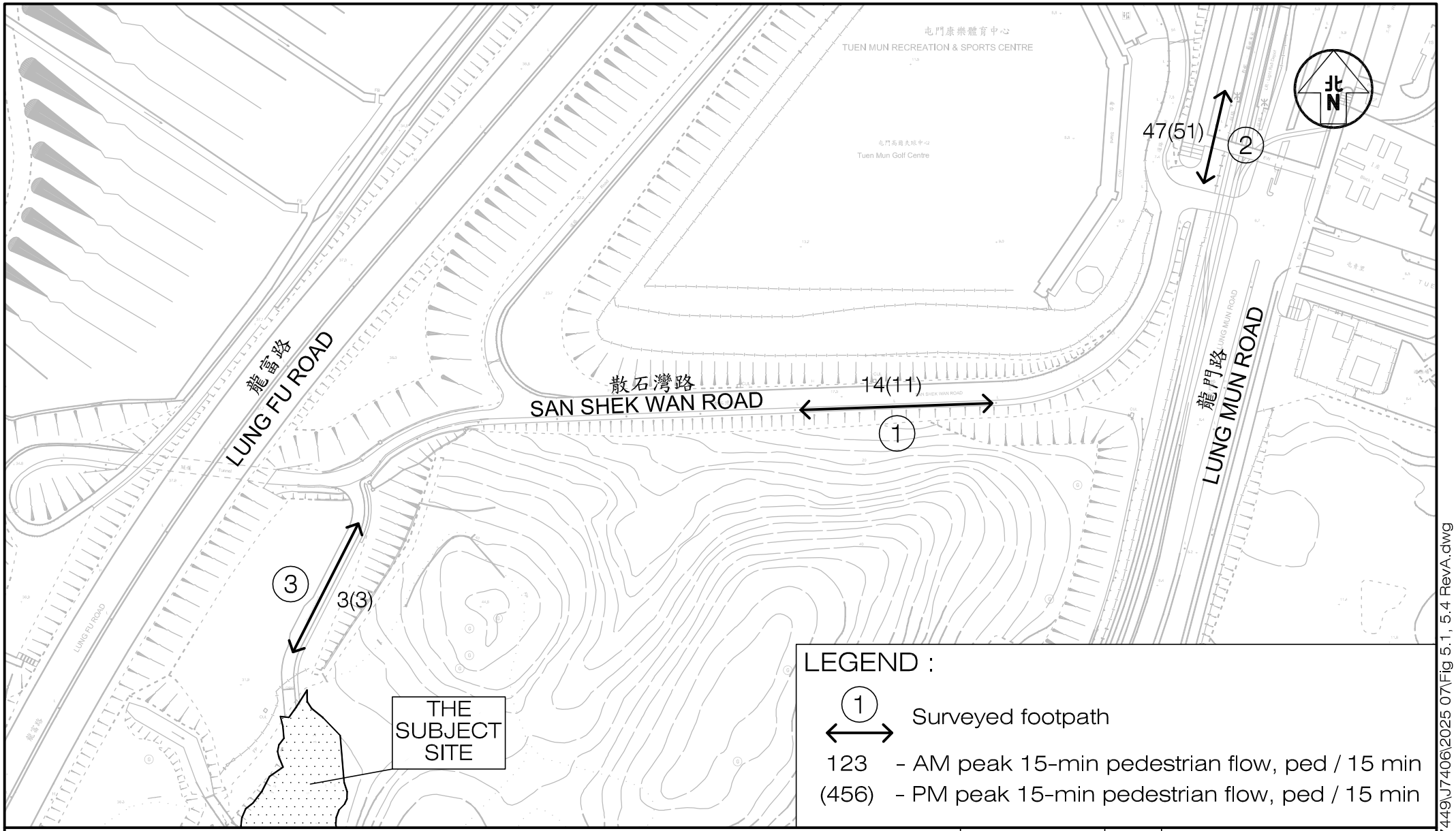
Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 5.2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: EXISTING PEDESTRIAN FLOWS	Designed by C Y Y / Drawn by N C M	Checked by K C	
	Scale in A4 1 : 2000	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 5.2 - 5.3 RevA.dwg



Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 5.3	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: YEAR 2034 PEDESTRIAN FLOWS WITHOUT THE PROPOSED DEVELOPMENT	Designed by C Y Y / Drawn by N C M / Checked by K C		
	Scale in A4 1 : 2000	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 5.2 - 5.3 RevA.dwg



Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. 5.4	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: YEAR 2034 PEDESTRIAN FLOWS WITH THE PROPOSED DEVELOPMENT	Designed by C Y Y / Drawn by N C M / Checked by K C		
	Scale in A4 1 : 2000	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 5.1, 5.4 RevA.dwg

Appendix 1 – Calculation

Signal Junction Analysis

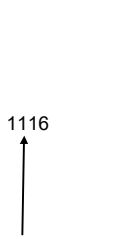
Junction: Lung Mun Road / Light Rail Transit Depot Access — Job Number: J7406

Scenario: Existing Condition — P. 1

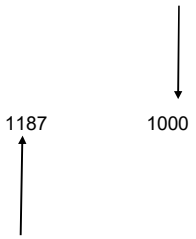
Design Year: 2025 — Designed By: — Checked By: — Date: 15 Jul 2025

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
Lung Mun Road NB	SA	A1	1	3.70				1985	539	0.272			1985	573	0.289	0.289
	SA	A2	1	3.70				2125	577	0.272			2125	614	0.289	
Lung Mun Road SB	SA	B1	1	3.60				1975	547	0.277	0.277		1975	483	0.245	
	SA	B2	1	3.60				2115	586	0.277			2115	517	0.244	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

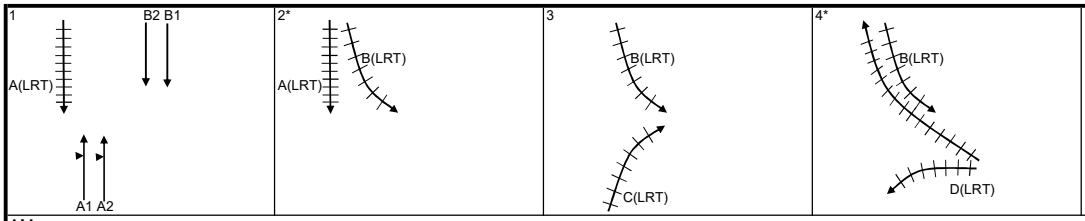


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1		1	
Sum y	0.277		0.289	
L (s)	156		104	
C (s)	3600		3600	
practical y	0.861		0.874	
R.C. (%)	211%		203%	

Note:



	1	2*	3	4*	5
AM	G = I/G =	G = I/G =	G = 5 I/G =	G = 33 I/G =	15 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 = 5 I/G =	G = 33 I/G =	15 G = I/G = G = I/G =
	G = I/G =	G = I/G =	G = I/G =	G = I/G =	G = I/G =

Signal Junction Analysis

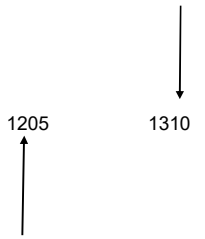
Junction: Lung Mun Road / Light Rail Transit Depot Access — Job Number: J7406

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

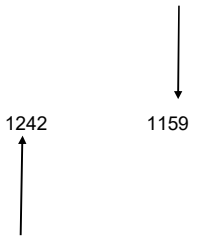
Design Year: 2031 — Designed By: _____ — Checked By: _____ — Date: 15 Jul 2025

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
Lung Mun Road NB	SA	A1	1	3.70				1985	582	0.293			1985	600	0.302	0.302
	SA	A2	1	3.70				2125	623	0.293			2125	642	0.302	
Lung Mun Road SB	SA	B1	1	3.60				1975	633	0.321	0.321		1975	560	0.284	
	SA	B2	1	3.60				2115	677	0.320			2115	599	0.283	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

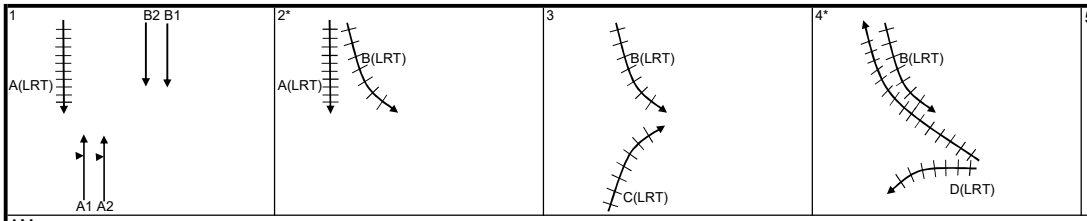


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1		1	
Sum y	0.321		0.302	
L (s)	156		104	
C (s)	3600		3600	
practical y	0.861		0.874	
R.C. (%)	169%		189%	

Note:



AM											
G =	I/G =	G =	I/G =	5	G =	33	I/G =	15	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 =	5	G =	33	I/G =	15	G =	I/G =	G =	I/G =
G =	I/G =	G =	I/G =		G =		I/G =		G =	I/G =	G =	I/G =

Signal Junction Analysis

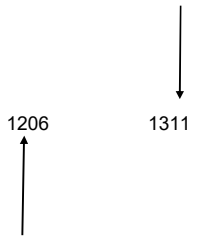
Junction: Lung Mun Road / Light Rail Transit Depot Access — Job Number: J7406

Scenario: Future Condition (With Proposed Development) — P. 3

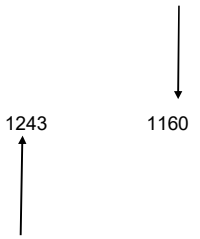
Design Year: 2036 — Designed By: — Checked By: — Date: 15 Jul 2025

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
Lung Mun Road NB	SA	A1	1	3.70				1985	582	0.293			1985	600	0.302	0.302
	SA	A2	1	3.70				2125	624	0.294			2125	643	0.303	
Lung Mun Road SB	SA	B1	1	3.60				1975	633	0.321	0.321		1975	560	0.284	
	SA	B2	1	3.60				2115	678	0.321			2115	600	0.284	
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

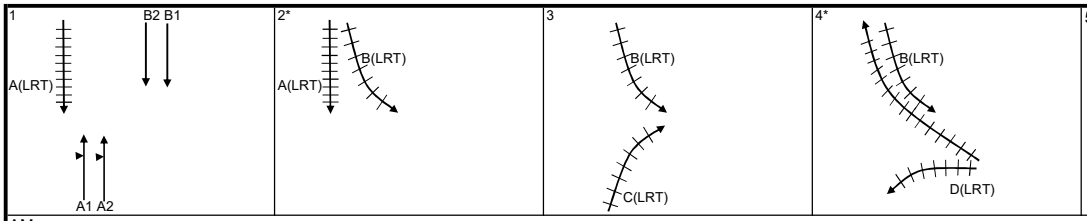


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1		1	
Sum y	0.321		0.302	
L (s)	156		104	
C (s)	3600		3600	
practical y	0.861		0.874	
R.C. (%)	169%		189%	

Note:



AM											
G =	I/G =	G =	I/G =	5	G =	33	I/G =	15	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 =	5	G =	33	I/G =	15	G =	I/G =	G =	I/G =
G =	I/G =	G =	I/G =		G =		I/G =		G =	I/G =	G =	I/G =

Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane — Job Number: J7406

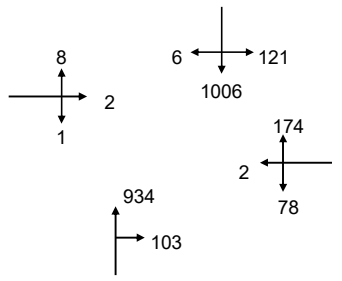
Scenario: Existing Condition — P. 4

Design Year: 2025 — Designed By: — Checked By: — Date: 15 Jul 2025

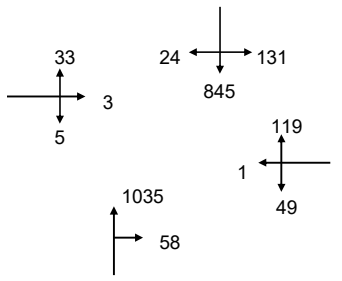
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lung Mun Road NB	SA	A1	2	3.20				2075	468	0.226			2075	519	0.250	0.250
	SA	A2	2	3.10				2065	466	0.226			2065	516	0.250	
	RT	A3	1	3.30	20.0		100	1940	103	0.053	0.053	100	1940	58	0.030	0.030
Access Road to	LT+SA+RT	B1	3	3.50	13.0		78	1803	11	0.006	0.006	92	1776	41	0.023	0.023
Sports Centre EB																
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		22	2037	552	0.271	0.271	30	2020	476	0.236	
	SA	C2	2	3.70				2125	575	0.271			2125	500	0.235	
	RT	C3	1	3.10	12.0		100	1836	6	0.003		100	1836	24	0.013	
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		99	1755	120	0.068		99	1755	80	0.046	
	RT	D2	4	3.40	22.0		100	1961	134	0.068	0.068	100	1961	89	0.045	0.045

pedestrian phase	Ip	1		min crossing time =	7	sec GM +	7	sec FGM =	14	sec	
	Jp	3,4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec	
	Kp	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	Lp	1,2,3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

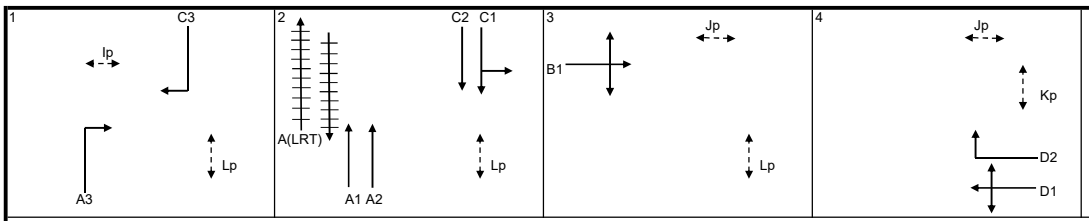


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.399		0.348	
L (s)	1012		1161	
C (s)	3600		3600	
practical y	0.647		0.610	
R.C. (%)	62%		75%	

Note:



AM

G =	I/G = 7	G =	I/G = 14	G =	I/G = 13	G =	I/G = 14	G =	I/G =
G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

PM

G =	I/G = 5	G =	I/G = 15	G =	I/G = 13	G =	I/G = 14	G =	I/G =
G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =

Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane — Job Number: J7406

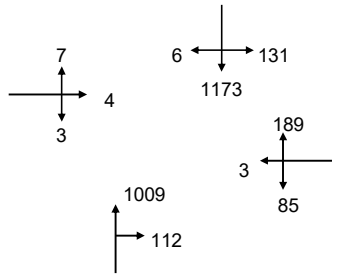
Scenario: Future Condition (Without Proposed Development) — P. 5

Design Year: 2031 — Designed By: — Checked By: — Date: 15 Jul 2025

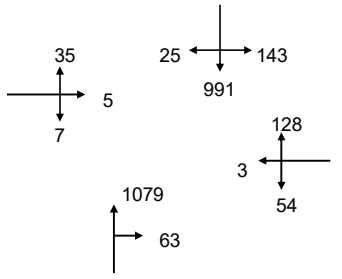
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lung Mun Road NB	SA	A1	2	3.20				2075	506	0.244			2075	541	0.261	0.261
	SA	A2	2	3.10				2065	503	0.244			2065	538	0.261	
	RT	A3	1	3.30	20.0		100	1940	112	0.058	0.058	100	1940	63	0.032	0.032
Access Road to	LT+SA+RT	B1	3	3.50	13.0		83	1793	14	0.008	0.008	93	1775	47	0.026	0.026
Sports Centre EB																
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		21	2039	639	0.313	0.313	27	2026	553	0.273	
	SA	C2	2	3.70				2125	665	0.313			2125	581	0.273	
	RT	C3	1	3.10	12.0		100	1836	6	0.003		100	1836	25	0.014	
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		98	1756	131	0.075		98	1756	87	0.050	
	RT	D2	4	3.40	22.0		100	1961	146	0.074	0.074	100	1961	98	0.050	0.050

pedestrian phase	Ip	1		min crossing time =	7	sec GM +	7	sec FGM =	14	sec	
	Jp	3,4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec	
	Kp	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	Lp	1,2,3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

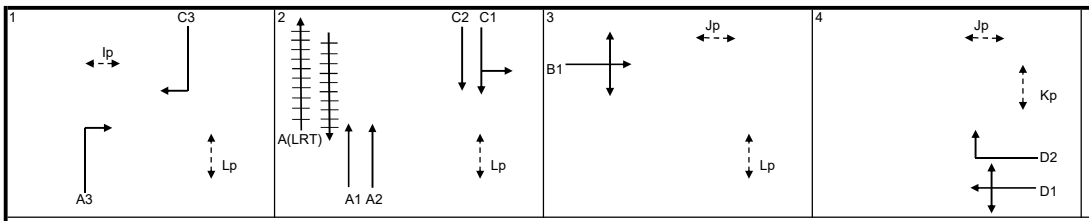


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.453		0.370	
L (s)	1012		1161	
C (s)	3600		3600	
practical y	0.647		0.610	
R.C. (%)	43%		65%	

Note:



AM	G =	I/G =	7	G =	I/G =	14	G =	I/G =	13	G =	I/G =	14	G =	I/G =
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =
PM	G =	I/G =	5	G =	I/G =	15	G =	I/G =	13	G =	I/G =	14	G =	I/G =
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =

Signal Junction Analysis

Junction: Lung Mun Road / Tuen Tsing Lane — Job Number: J7406

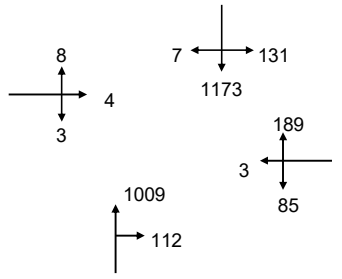
Scenario: Future Condition (With Proposed Development) — P. 6

Design Year: 2036 — Designed By: — Checked By: — Date: 15 Jul 2025

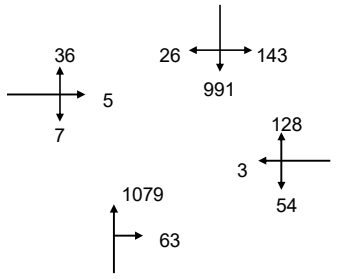
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Lung Mun Road NB	SA	A1	2	3.20				2075	506	0.244			2075	541	0.261	0.261
	SA	A2	2	3.10				2065	503	0.244			2065	538	0.261	
	RT	A3	1	3.30	20.0		100	1940	112	0.058	0.058	100	1940	63	0.032	0.032
Access Road to	LT+SA+RT	B1	3	3.50	13.0		85	1789	15	0.008	0.008	93	1775	48	0.027	0.027
Sports Centre EB																
Lung Mun Road SB	SA+LT	C1	2	4.70	14.0		21	2039	639	0.313	0.313	27	2026	553	0.273	
	SA	C2	2	3.70				2125	665	0.313			2125	581	0.273	
	RT	C3	1	3.10	12.0		100	1836	7	0.004		100	1836	26	0.014	
Tuen Tsing Lane WB	LT+SA+RT	D1	4	3.40	13.0		98	1756	131	0.075		98	1756	87	0.050	
	RT	D2	4	3.40	22.0		100	1961	146	0.074	0.074	100	1961	98	0.050	0.050

pedestrian phase	Ip	1		min crossing time =	7	sec GM +	7	sec FGM =	14	sec	
	Jp	3,4		min crossing time =	10	sec GM +	10	sec FGM =	20	sec	
	Kp	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	Lp	1,2,3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

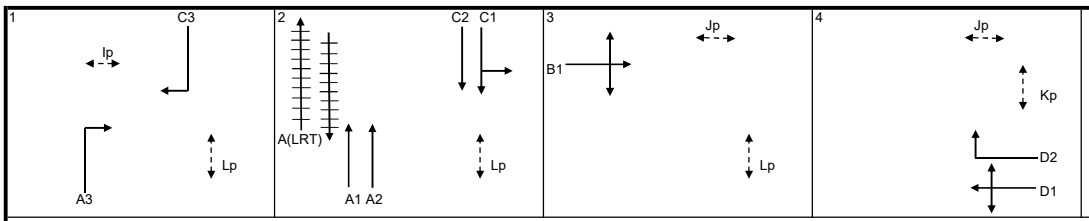


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3+4		1+2+3+4	
Sum y	0.454		0.370	
L (s)	1012		1161	
C (s)	3600		3600	
practical y	0.647		0.610	
R.C. (%)	43%		65%	

Note:



AM	G =	I/G =	7	G =	I/G =	14	G =	I/G =	13	G =	I/G =	14	G =	I/G =
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =
PM	G =	I/G =	5	G =	I/G =	15	G =	I/G =	13	G =	I/G =	14	G =	I/G =
	G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =		G =	I/G =

Signal Junction Analysis

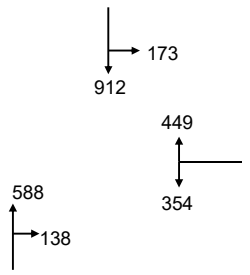
Junction: Lung Mun Road / Wu Shan Road — Job Number: J7406

Scenario: Existing Condition — P. 7

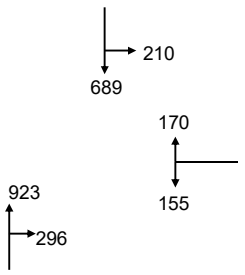
Design Year: 2025 — Designed By: — Checked By: — Date: 15 Jul 2025

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
Lung Mun Road SB	LT*	A1	1,2,3	3.20					173					210		
	SA	A2	1	3.70				2125	456	0.215	0.215		2125	345	0.162	0.162
	SA	A3	1	3.70				2125	456	0.215			2125	344	0.162	
Wu Shan Road WB	LT	B1	3	3.20	10.0		100	1683	250	0.149	0.149	100	1683	101	0.060	0.060
	LT+RT	B2	3	3.20	12.0		100	1844	274	0.149		100	1844	111	0.060	
	RT	B3	3	3.20	15.0		100	1886	279	0.148		100	1886	113	0.060	
Lung Mun Road NB	SA	C1	1,2	3.60				2115	294	0.139			2115	462	0.218	
	SA	C2	1,2	3.60				2115	294	0.139			2115	461	0.218	
	RT	C3	2	3.60	25.0		100	1995	138	0.069	0.069	100	1995	296	0.148	0.148
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



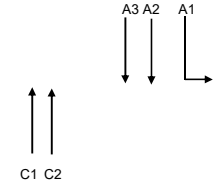
$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3	1,2 + 3	1+2+3	1,2 + 3
Sum y	0.432	0.288	0.371	0.278
L (s)	14	10	14	10
C (s)	120	120	108	108
practical y	0.795	0.825	0.783	0.817
R.C. (%)	84%	187%	111%	193%

Note:

1



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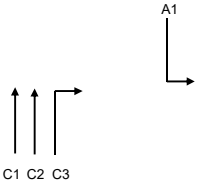

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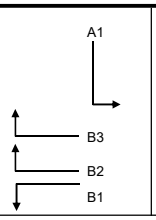


AM																							
G =	I/G =	5	G =	I/G =	7	G =	I/G =	5	G =	I/G =	G =	I/G =	G =	I/G =	7	G =	I/G =	5	G =	I/G =	G =	I/G =	
PM																							
G =	I/G =	5	G =	I/G =	7	G =	I/G =	5	G =	I/G =	G =	I/G =	G =	I/G =	7	G =	I/G =	5	G =	I/G =	G =	I/G =	

Signal Junction Analysis

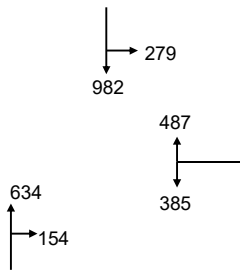
Junction: Lung Mun Road / Wu Shan Road — Job Number: J7406

Scenario: Future Condition (Without Proposed Development) — P. 8

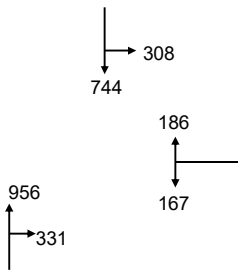
Design Year: 2031 — Designed By: — Checked By: — Date: 15 Jul 2025

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
Lung Mun Road SB	LT*	A1	1,2,3	3.20					279					308		
	SA	A2	1	3.70				2125	491	0.231	0.231		2125	372	0.175	0.175
	SA	A3	1	3.70				2125	491	0.231			2125	372	0.175	
Wu Shan Road WB	LT	B1	3	3.20	10.0		100	1683	271	0.161	0.161	100	1683	110	0.065	0.065
	LT+RT	B2	3	3.20	12.0		100	1844	297	0.161		100	1844	120	0.065	
	RT	B3	3	3.20	15.0		100	1886	304	0.161		100	1886	123	0.065	
Lung Mun Road NB	SA	C1	1,2	3.60				2115	317	0.150			2115	478	0.226	
	SA	C2	1,2	3.60				2115	317	0.150			2115	478	0.226	
	RT	C3	2	3.60	25.0		100	1995	154	0.077	0.077	100	1995	331	0.166	0.166
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



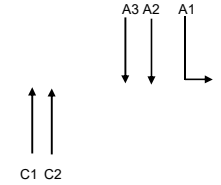
$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3	1,2 + 3	1+2+3	1,2 + 3
Sum y	0.469	0.311	0.406	0.291
L (s)	14	10	14	10
C (s)	120	120	108	108
practical y	0.795	0.825	0.783	0.817
R.C. (%)	69%	165%	93%	180%

Note:

1



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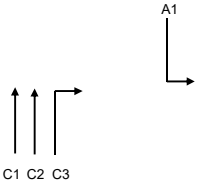

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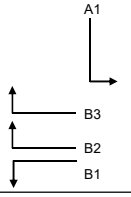


AM

G = I/G = 5 G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

G = I/G = G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

PM

G = I/G = 5 G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

G = I/G = G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

Signal Junction Analysis

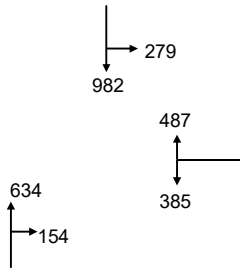
Junction: Lung Mun Road / Wu Shan Road — Job Number: J7406

Scenario: Future Condition (With Proposed Development) — P. 9

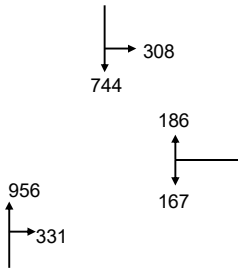
Design Year: 2036 — Designed By: — Checked By: — Date: 15 Jul 2025

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
Lung Mun Road SB	LT*	A1	1,2,3	3.20					279					308		
	SA	A2	1	3.70				2125	491	0.231	0.231		2125	372	0.175	0.175
	SA	A3	1	3.70				2125	491	0.231			2125	372	0.175	
Wu Shan Road WB	LT	B1	3	3.20	10.0		100	1683	271	0.161	0.161	100	1683	110	0.065	0.065
	LT+RT	B2	3	3.20	12.0		100	1844	297	0.161		100	1844	120	0.065	
	RT	B3	3	3.20	15.0		100	1886	304	0.161		100	1886	123	0.065	
Lung Mun Road NB	SA	C1	1,2	3.60				2115	317	0.150			2115	478	0.226	
	SA	C2	1,2	3.60				2115	317	0.150			2115	478	0.226	
	RT	C3	2	3.60	25.0		100	1995	154	0.077	0.077	100	1995	331	0.166	0.166
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



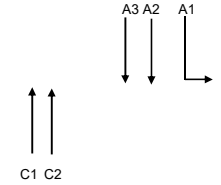
$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

	AM Peak		PM Peak	
Group	1+2+3	1,2 + 3	1+2+3	1,2 + 3
Sum y	0.469	0.311	0.406	0.291
L (s)	14	10	14	10
C (s)	120	120	108	108
practical y	0.795	0.825	0.783	0.817
R.C. (%)	69%	165%	93%	180%

Note:

1



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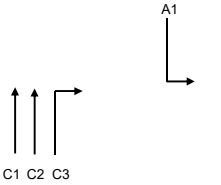

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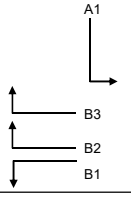


AM

G = I/G = 5 G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

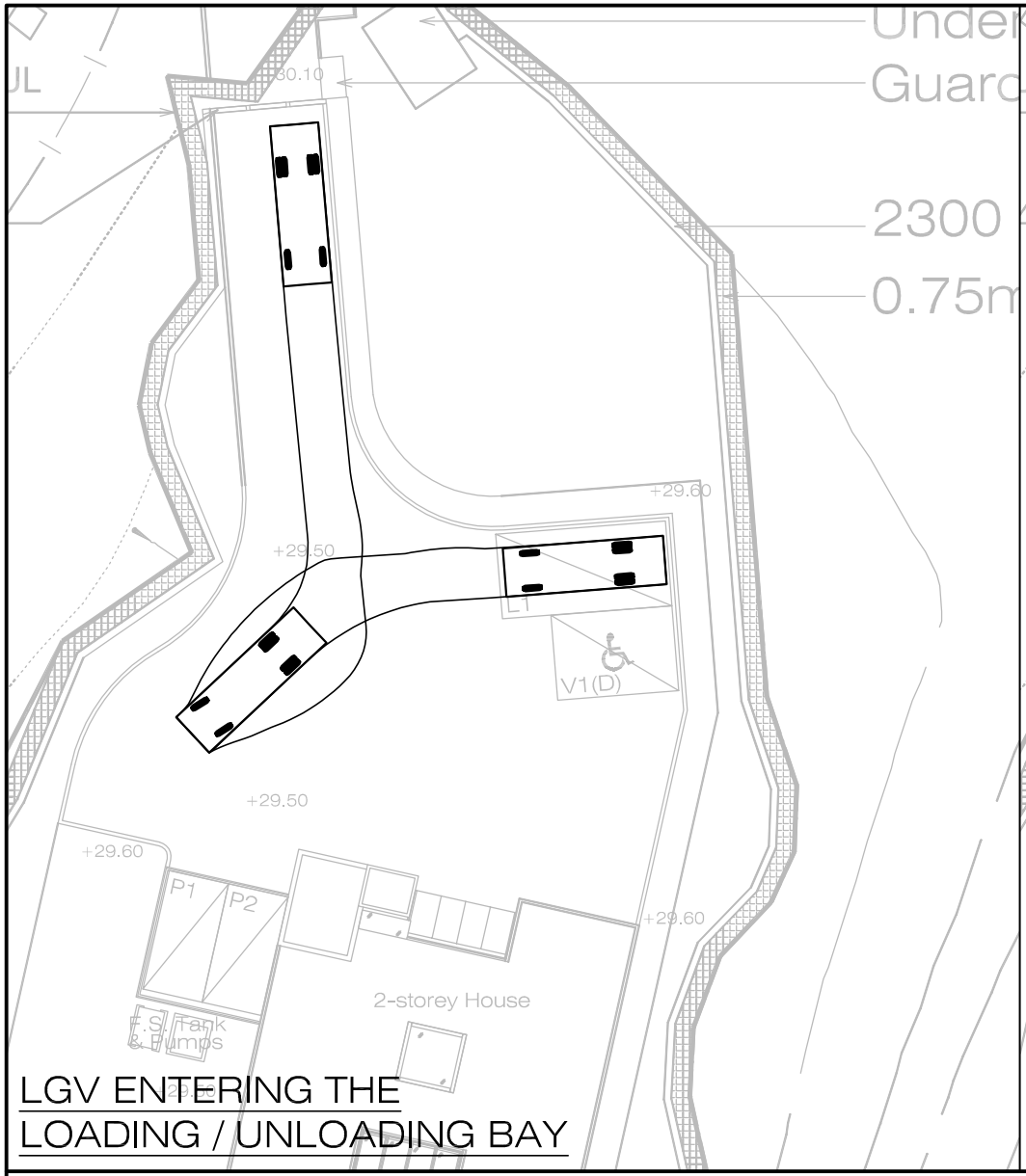
G = I/G = G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

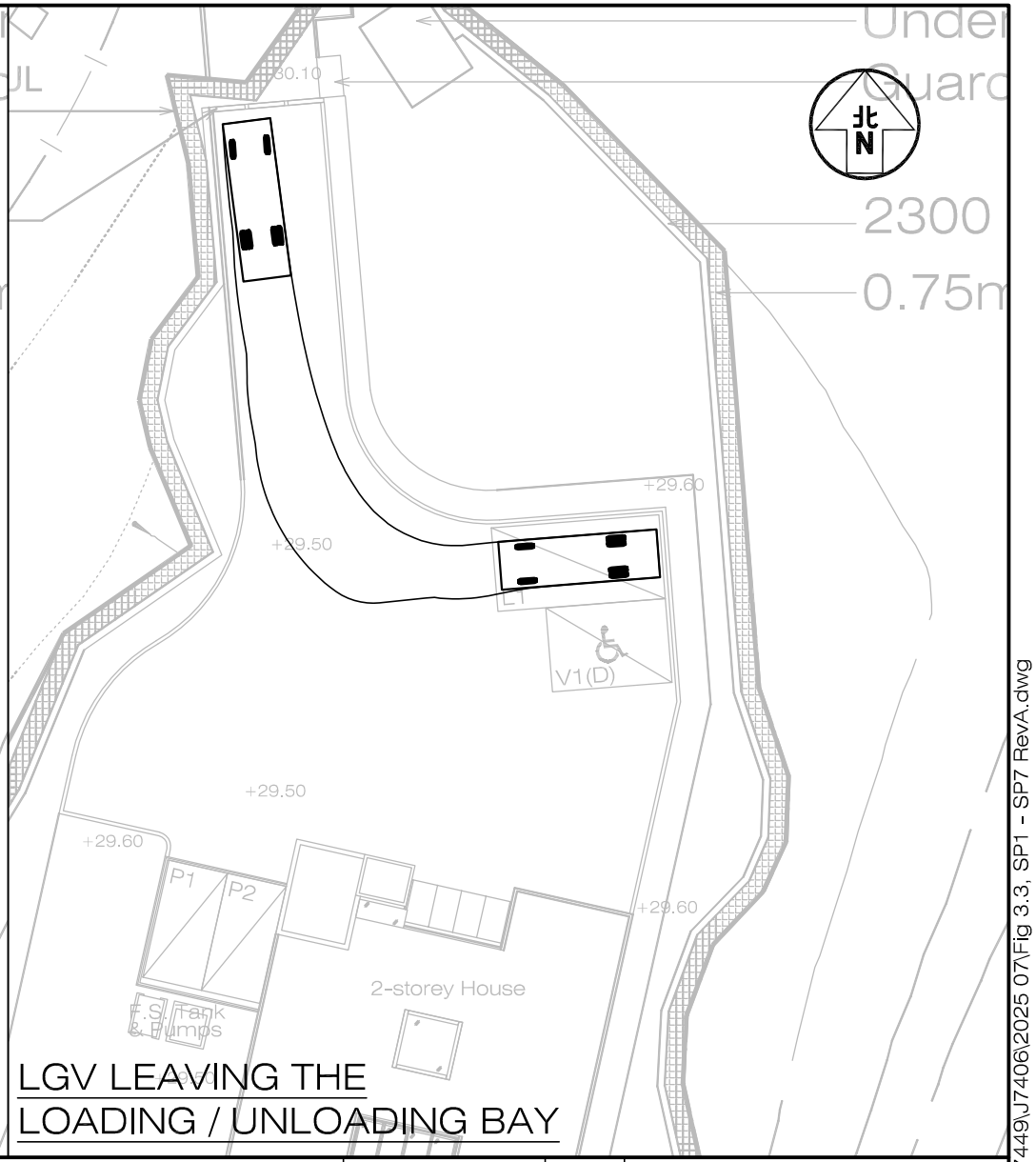
PM

G = I/G = 5 G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

G = I/G = G = I/G = 7 G = I/G = 5 G = I/G = G = I/G =

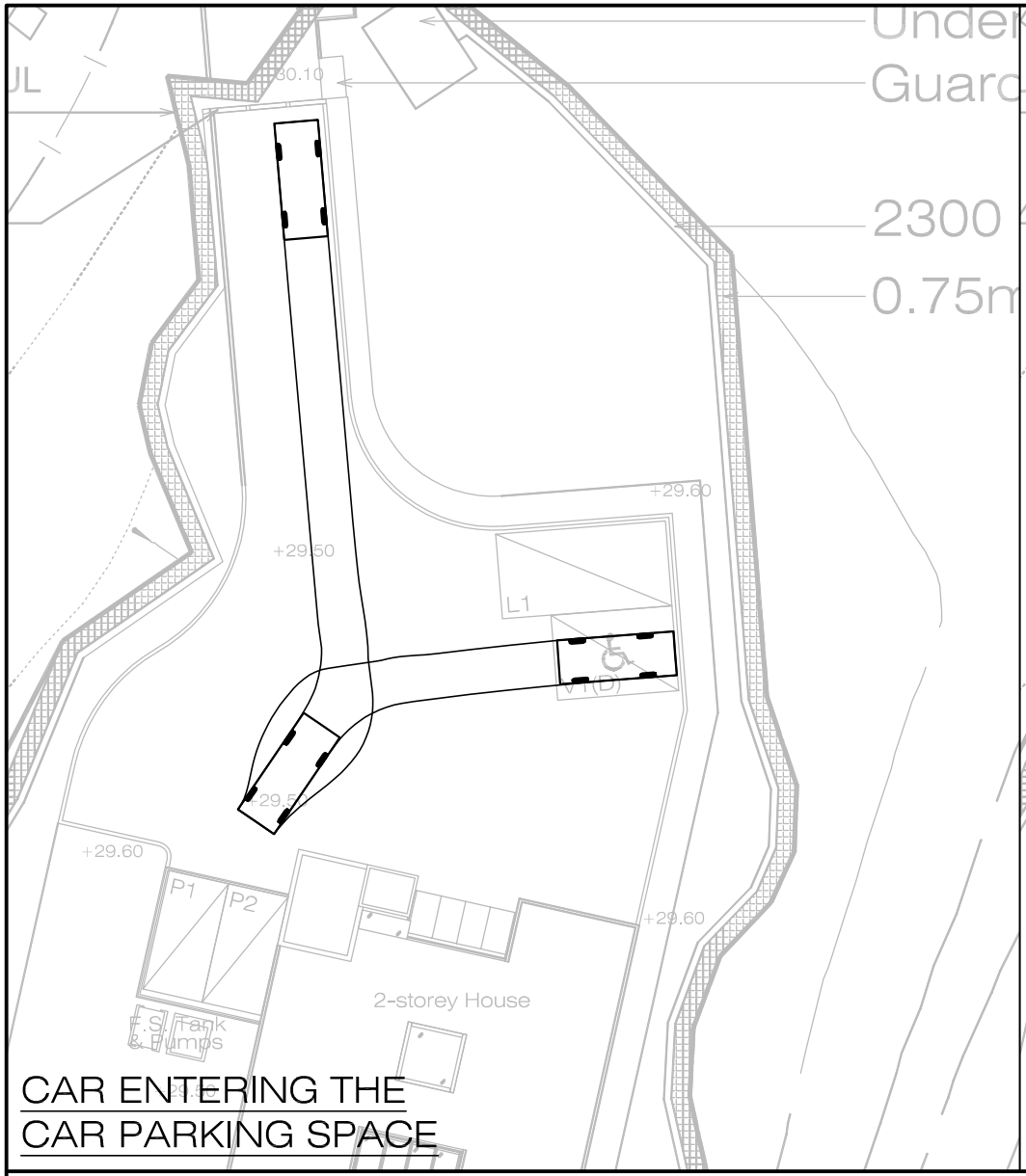
Appendix 2 –
Swept Path Analysis



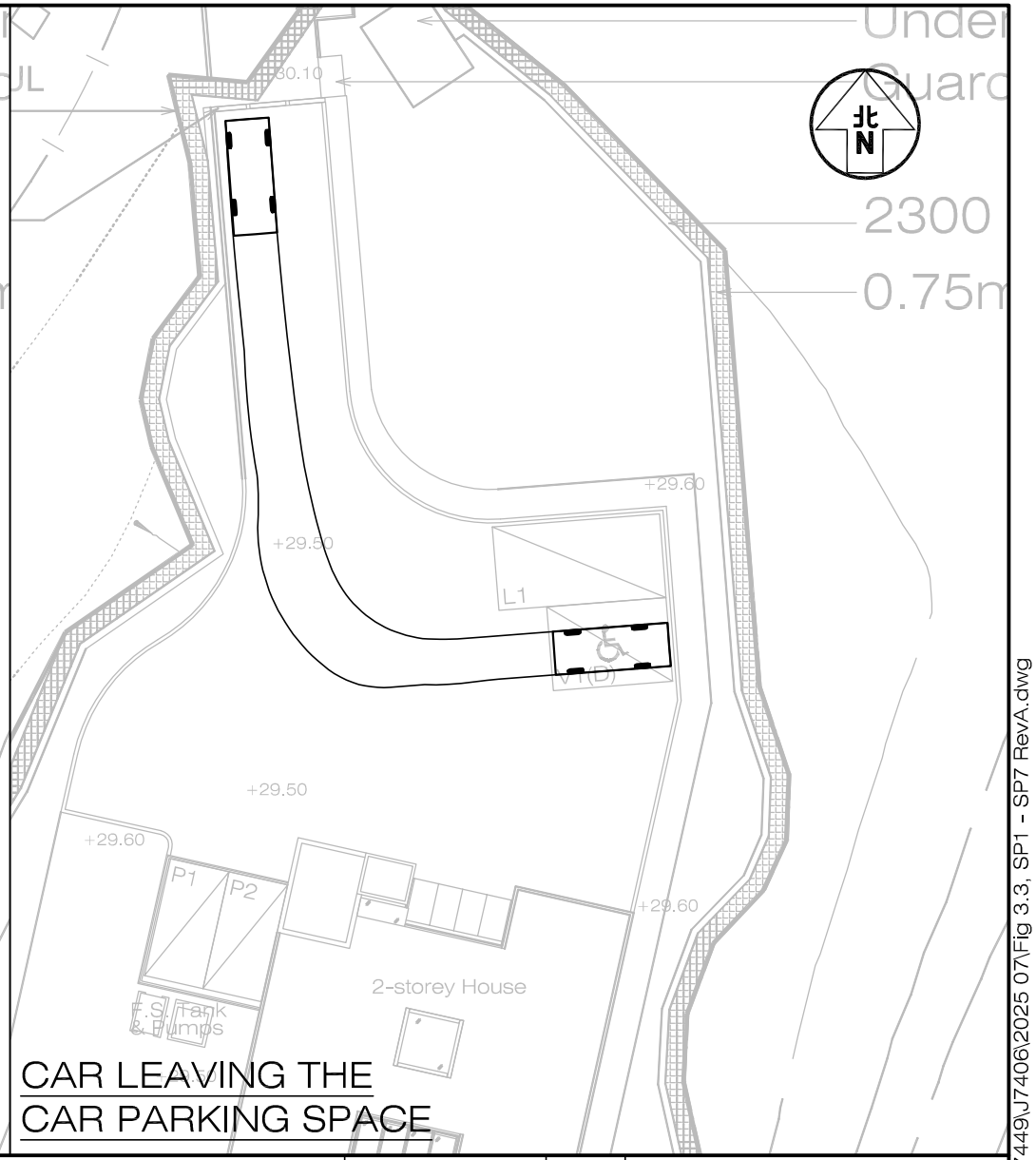


Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. SP1	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: SWEPT PATH OF LGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY L1	Designed by C Y Y	Drawn by N C M	Checked by K C
	Scale in A4 1 : 300	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.3, SP1 - SP7 RevA.dwg



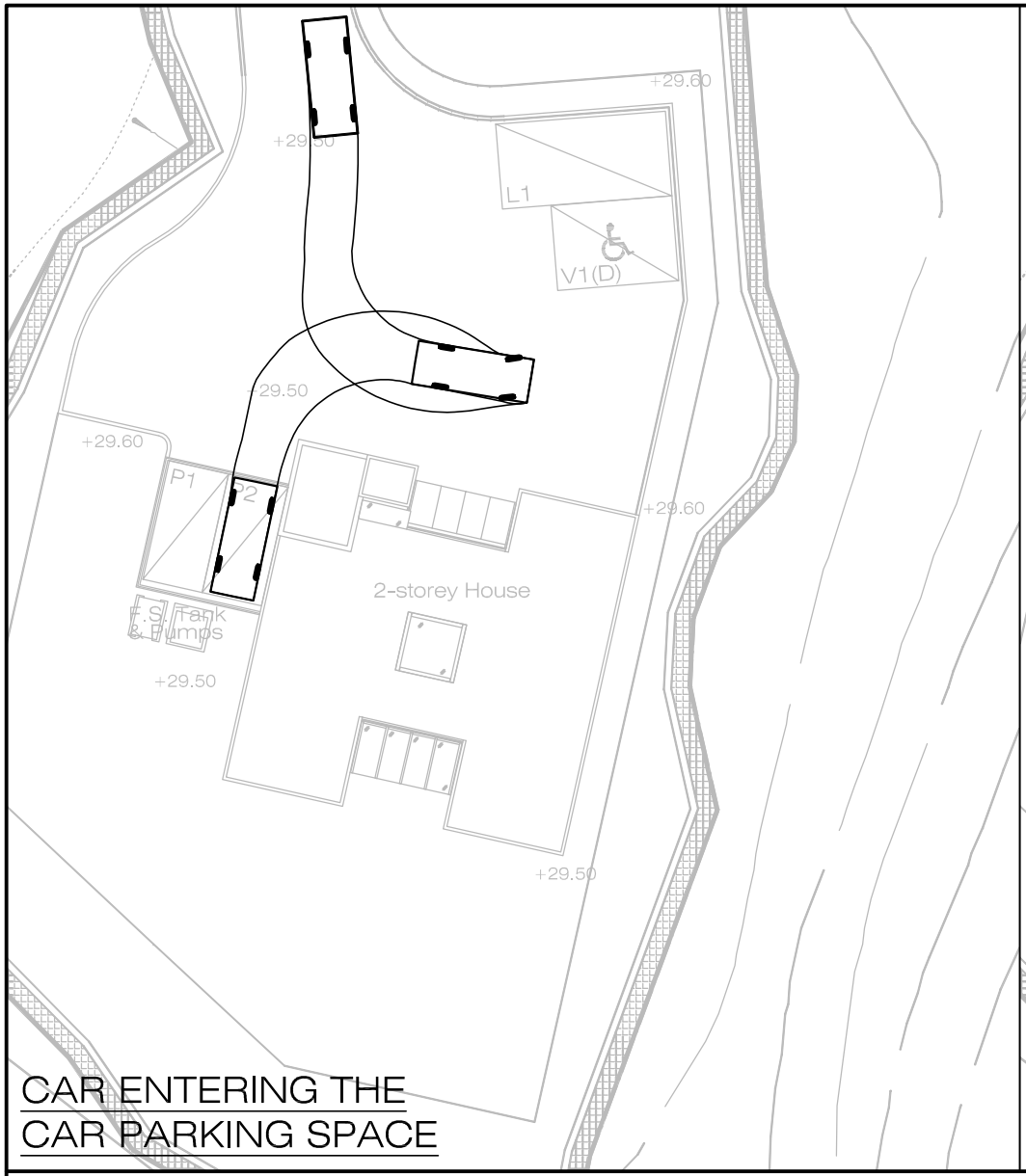
CAR ENTERING THE
CAR PARKING SPACE



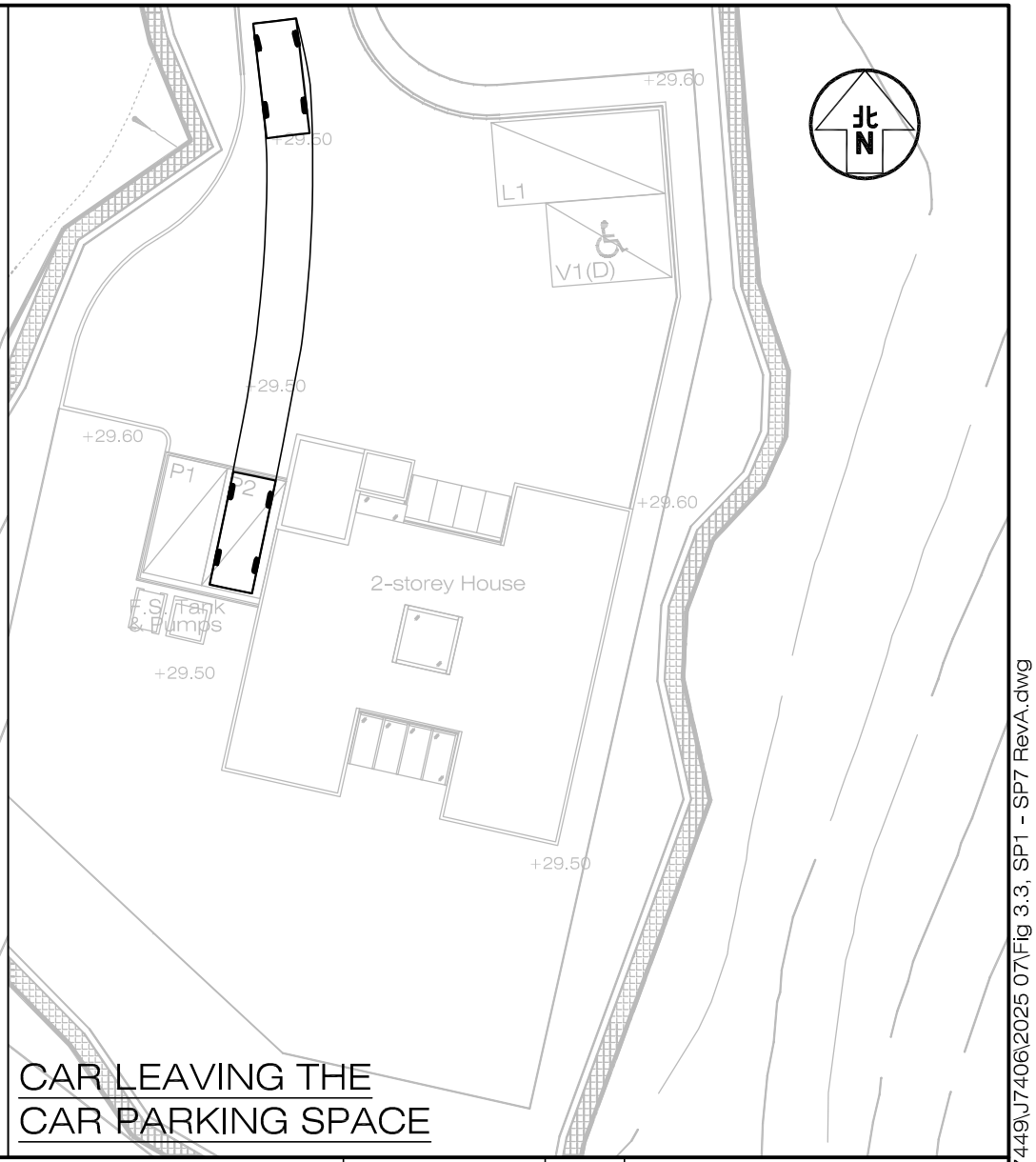
CAR LEAVING THE
CAR PARKING SPACE

Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. SP2	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
Figure Title: SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE V1(D)	Designed by C Y Y / Drawn by N C M	Checked by K C	
	Scale in A4 1 : 300	Date 31 JUL 2025	

T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.3, SP1 - SP7 RevA.dwg



CAR ENTERING THE
CAR PARKING SPACE



CAR LEAVING THE
CAR PARKING SPACE

Project Title: PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. SP3		Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants
Figure Title: SWEPT PATH OF PRIVATE CAR ENTERING AND LEAVING THE CAR PARKING SPACE P2	Designed by C Y Y	Drawn by N C M	Checked by K C	[redacted]
	Scale in A4 1 : 300	Date 31 JUL 2025		

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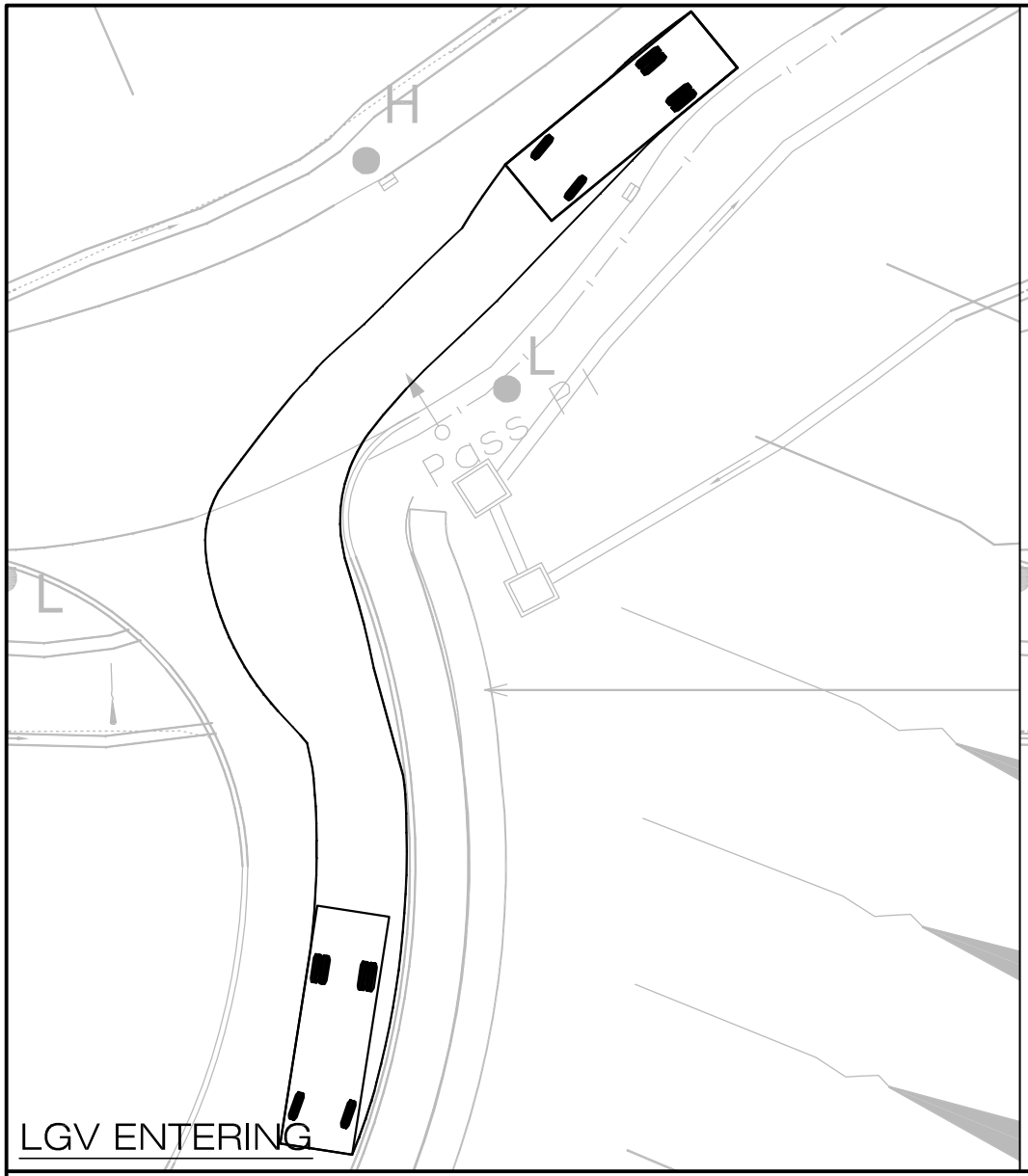

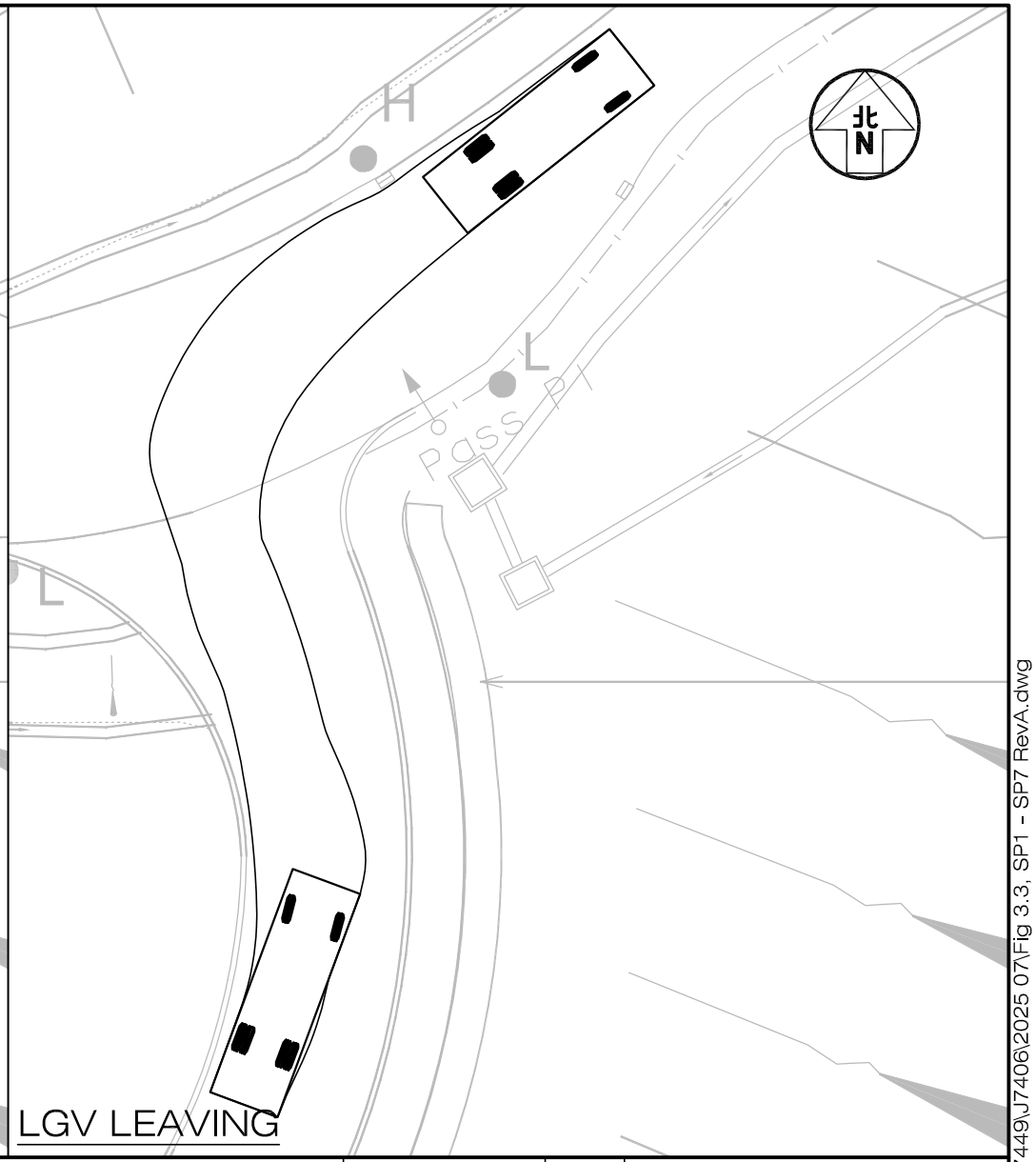

Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. SP4	Revision A
Figure Title	SWEPT PATH OF LGV ENTERING AND LEAVING THE PROPOSED ACCESS ROAD	Designed by C Y Y / Drawn by N C M / Checked by K C	CKM Asia Limited Traffic and Transportation Planning Consultants [redacted]
		Scale in A4 1 : 200 / Date 31 JUL 2025	

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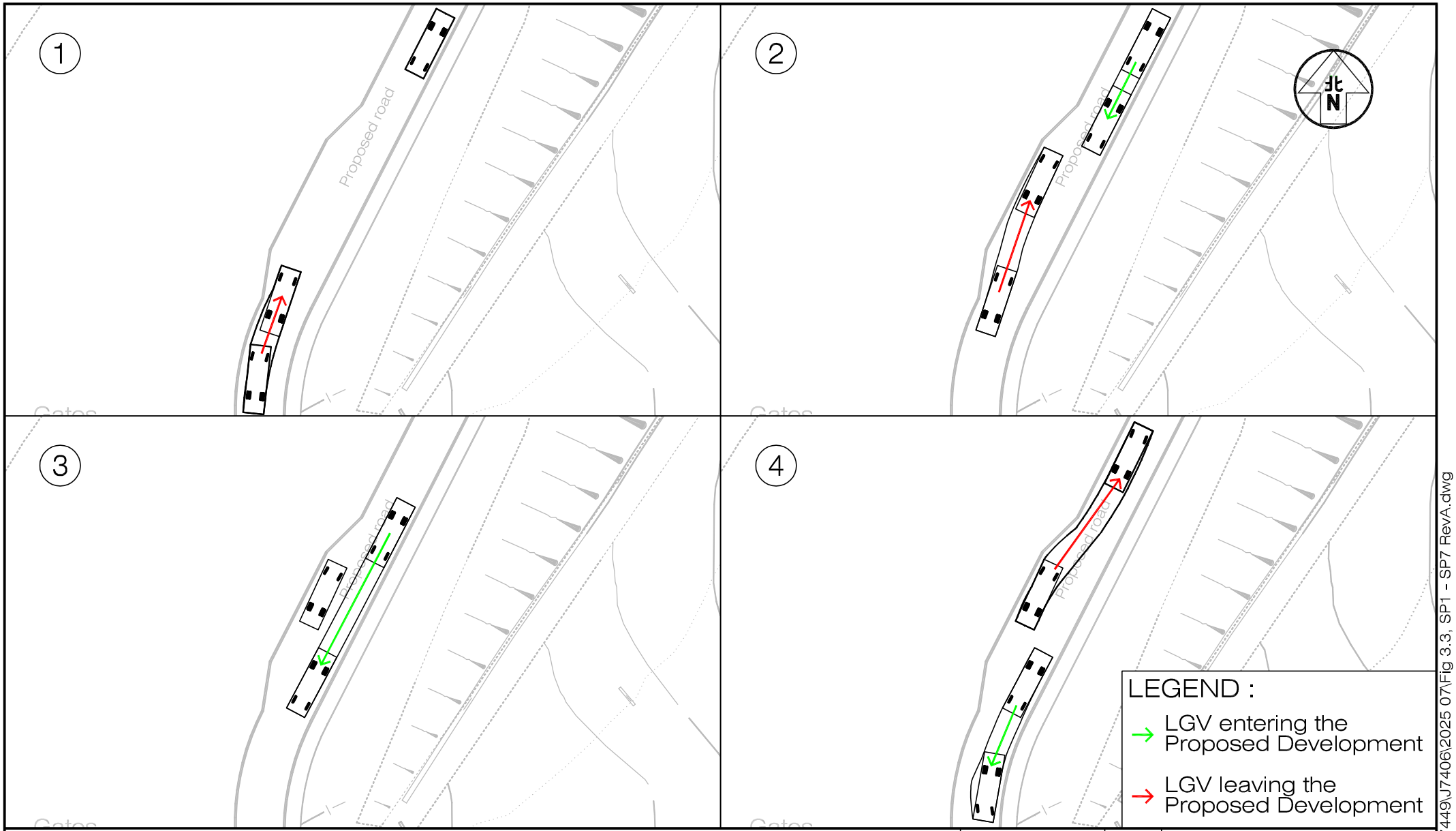

Project Title	PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T. J7406	Figure No. SP5	Revision A
Figure Title	SWEPT PATH OF 2-WAY TRAFFIC OPERATION AT THE PROPOSED ACCESS ROAD	Designed by C Y Y / Drawn by N C M / Checked by K C	
		Scale in A4 1 : 500 / Date 31 JUL 2025	

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[redacted]

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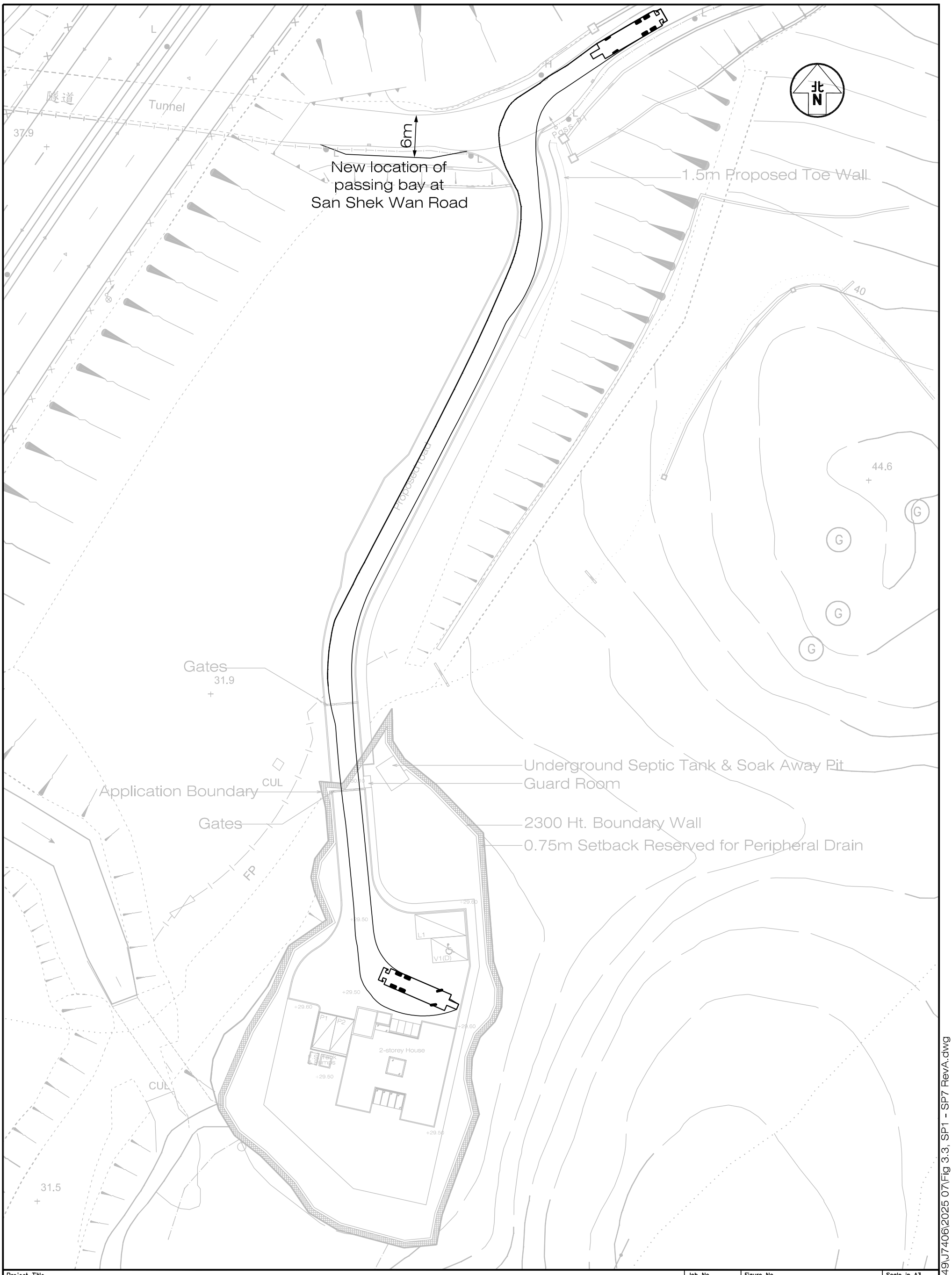
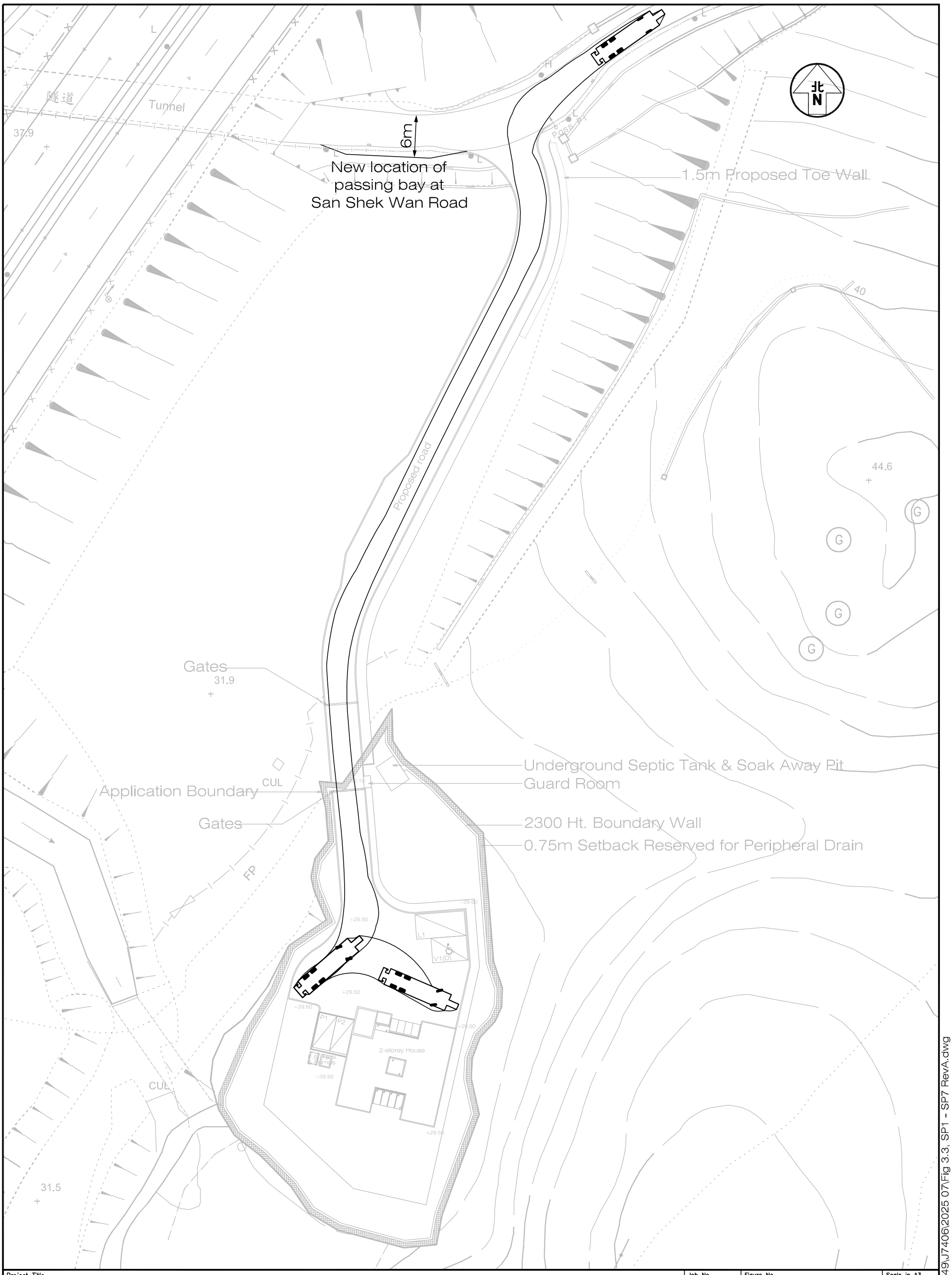


Project Title	Job No.	Figure No.			Scale in A3
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	SP6			1 : 500
	Designed by	Drawn by	Checked by	Revision	Date
	C Y Y	N C M	K C	A	31 JUL 2025
Figure Title	CKM Asia Limited Traffic and Transportation Planning Consultants				
SWEPT PATH OF FIRE APPLIANCE ENTERING THE SUBJECT SITE	[redacted]				

T:\JOB\J7400-J7449\J7406\2025 07\Fig 3.3, SP1 - SP7 RevA.dwg



Project Title	Job No.	Figure No.		Scale in A3
PROPOSED HOUSE DEVELOPMENT AT TUEN MUN TOWN LOT NO.550 (TMTL 550), TUEN MUN, N.T.	J7406	SP7		1 : 500
	Designed by C Y Y	Drawn by N C M	Checked by K C	Revision A	Date 31 JUL 2025
Figure Title	CKM Asia Limited Traffic and Transportation Planning Consultants			
SWEPT PATH OF FIRE APPLIANCE LEAVING THE SUBJECT SITE	[redacted]			

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