Appendix 2

Traffic Impact Assessment

Document Status Control Record

Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi)
for a Period of 3 Years
at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land,
Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.

Traffic Impact Assessment Report

Originating Organisation: LLA Consultancy Limited Unit 610, 6/F Island Place Tower 510 King's Road North Point, Hong Kong	Prepared by: SKL	SKL	Date: 23 June 2025
	Approved by: SLN		Date: 23 June 2025
	Revision No.: -		Date of Issue: 23 June 2025

1 INTRODUCTION

1.1 Background

1.1.1 The Applicant proposes to use a piece of land for temporary electric vehicle charging station (for electric taxi) for a period of 3 Years. The piece of land (hereinafter referred to "the Site") is located at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road–Lung Yeuk Tau, Fanling, N.T..

1.1.2 The Site is zoned as "Agriculture" use under the Approved Ping Che and Ta Kwu Ling Outline Zoning Plan (OZP) No. S/NE-TKL/14. A planning application is required for the proposed temporary use.

1.1.3 LLA Consultancy Limited was commissioned to undertake the TIA to support the planning application. This TIA report presents the findings of the study.

1.2 Objectives

1.2.1 The objectives of the study are as follows:

- to review the existing traffic conditions in the vicinity of the Site;
- to estimate the traffic generation and attraction of the proposed temporary use;
- to project the future traffic situations in the surrounding road network;
- to appraise the potential traffic impact of the proposed temporary use; and
- to recommend the internal transport facilities for the proposed temporary use.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 As shown in **Figure 2.1**, the Site is located at Sha Tau Kok Road – Lung Yeuk Tau area. It has a total site area of about 1,143 m^2.

2.2 The Proposed Temporary Use and Internal Transport Facilities Provisions

2.2.1 The Site is used to provide charging facilities for electric taxis. The key development parameters are listed out in **Table 2.1**.

Table 2.1 Key Development Parameters

Use	Quantity
Site Area	1,143 m^2
EV Charging Facilities for Electric Taxi only (2.5m x 5.0m)	12 nos.
Parking Spaces / Waiting Spaces for Electric Taxi only (2.5m x 5.0m)	7 spaces

2.3 Swept Path Analysis

2.3.1 The Site is directly abutted to Sha Tau Kok Road – Lung Yeuk Tau, the development traffic is anticipated to enter and leave the Site with a left-in/left out movement onto Sha Tau Kok Road south-westbound. In order to ensure the safety of pedestrians walking along the public footpath, a standard run-in/out in accordance with Highways Department's standards will be formed and flashing warning lights will be installed at both sides of the run-in/out as shown in **Figure 2.2**.

2.3.2 To ensure smooth manoeuvring of the parking area, swept path analysis was conducted to demonstrate that adequate space is provided for the vehicles for manoeuvring as shown in **Figures SP-01.**

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

3.1.1 The Site has a frontage along Sha Tau Kok Road – Lung Yeuk Tau and an existing run-in/out is provided for the current use of the Site.

3.1.2 Sha Tau Kok Road – Lung Yeuk Tau is a dual two lanes distributor road connecting Fanling and Sha Tau Kok. In 2023, it recorded an AADT of 22,810 vehicles.

3.2 Traffic Count Surveys

3.2.1 In order to appraise the existing traffic conditions, a traffic count survey was carried out on 22 May 2025 (Thursday) for the time periods of 14:30 – 17:30, the peak traffic generation period of the vehicle charging station. More details will be discussed in **Section 4.2**.

3.2.2 The locations of the surveyed junctions are shown in **Figure 3.1**.

J1 – J/O Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road

J2 – J/O Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road

3.2.3 The peak hour identified are 16:30 – 17:30. The observed 2025 traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

3.3.1 Based on the observed traffic flows, the performance of the junctions is assessed. It is calculated that all junctions are operating satisfactorily. The results are presented in **Table 3.1** and the detailed calculation sheets are attached in **Appendix A**.

Table 3.1 Existing Junction Capacity Assessment

Ref.	Junction Location	Type/Index(1)	Peak Hour of the Vehicle Charing Station
J1	Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road	Roundabout /DFC	0.45
J2	Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road	Roundabout /DFC	0.43

Note: (1) DFC = Design Flow to Capacity

3.4 Existing Link Capacity Assessment

3.4.1 The Volume to Capacity (V/C) Ratios of Sha Tau Kok Road – Lung Yeuk Tau is assessed and the results are presented in **Table 3.2**.

Table 3.2 Link Capacity Assessments

Road	Capacity[1] (pcu/hr)	Peak Hour Traffic Volume (pcu/hr)	Peak Hour V/C Ratio
Sha Tau Kok Road E/B (between Lung Ma Road and Lau Shui Heung Road)	3,120	980	0.31
Sha Tau Kok Road W/B (between Lau Shui Heung Road and Lung Ma Road)	3,120	934	0.30

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.

3.4.2 As shown in **Table 3.2**, the concerned road sections are operating with spare capacity during the peak hour.

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The proposed temporary use, if approved by the Town planning Board, will be valid for 3 years until 2028. Hence, Year 2028 is adopted as the design assessment year.

4.2 Traffic Generation of the Proposed Temporary Use

Traffic Generation for Electric Vehicle Charging Station

4.2.1 For the charging facilities, all EV chargers are direct current (DC) quick chargers with output power of 120kW which can provide 600km of mileage when an electric taxi charged for about 30 minutes.

4.2.2 From the taxi trade, the drivers are usually working on two shifts, i.e., the day shift and the night shift. In general, the day shift is 05:00 to 17:00 while the night shift is 17:00 to 05:00. The peak hour usage of charging facilities is expected to be the time periods before the shift such that a fully charged taxi can be passed to the driver in the next shift. As a result, the peak traffic generation of the proposed charging station will be either between 15:00 to 17:00 or after midnight. It is anticipated that minimal drivers will charge their taxis during the normal highway peak hours because these time periods will be the busiest hour in their business.

4.2.3 According to the Hong Kong Planning Standard and Guidelines, Section 3.9.4, a minimum of two waiting spaces should be provided in each EV charging station to avoid the awaiting vehicles to queue on public roads. In view of the size of the Site, 7 waiting spaces can be provided. In addition, to minimize the waiting time of the taxi drivers and hence maximize the available operation hours, a mobile application catered for the taxi drivers will be introduced which will include the payment platform for EV charging and provide real-time availability of EV charging stations at different locations managed by the Applicant.

4.2.4 The estimated traffic generation and attraction for Electric Vehicle Charging Station during the peak operation hour will be a two-way traffic of 24 taxis (24 Nos. of vehicles = 12 EV charging stations x 2 because of 30 minutes charging/servicing time for each taxi).

4.2.5 Based on the above, the traffic generation of the proposed temporary use has been estimated and presented in **Table 4.1**.

Table 4.1 Traffic Generation of Proposed Temporary Use

Proposed Use	Unit /Content	Operation Peak Hour		
		Generation	Attraction	Total
Estimated Traffic Generation/Attraction				
EV Charging Station	12 charging station	24	24	48

4.2.6 As shown in **Table 4.1**, the Site will generate a two-way traffic flows of 48 pcu/hour in the peak hour. The distribution of the development traffic of proposed temporary use is shown in **Figure 4.1**.

4.3 Traffic Growth

Annual Traffic Census (ATC) Data

4.3.1 Reference was made to the 2019 to 2023 Annual Traffic Census Reports, published by the Transport Department, to determine the natural traffic growth. The traffic data recorded at counting station in the vicinity of the Site is shown in **Table 4.2**.

Table 4.2 Annual Traffic Census Data

Stn. No.	Road Section			AADT (vehicle/day)(1)					Average Annual Growth (%)
	Road	From	To	2019	2020	2021	2022	2023	
5660	Sha Tau Kok Rd	On Kui St	Ping Che Rd	33,630	23,740 (-29.4%)	22,980 (-3.2%)	22,280 (-3%)	22,810 (2.4%)	-1.3% (Between 2020 and 2023)

Note: (1) Figures in bracket indicated the % increase between two successive years.

4.3.2 From **Table 4.2**, the recorded traffic flows in 2020 dropped significantly by almost 30% and was due to the opening of Lung Shan Tunnel in 2019. From 2020 to 2023, the recorded traffic flows have been quite steady with only -1.3% decrease annually.

Territorial Population and Employment Data Matrix (TPEDM)

4.3.3 Reference was also made to the 2021–based TPEDM published by Planning Department. The population and employment data of year 2026 and 2031 in Northeast New Territories are summarized in **Table 4.3**.

Table 4.3 Population and Employment Data in Northeast New Territories

Year	Population	Employment	Total
2026	1,361,150	421,350	1,782,500
2031	1,416,800	448,600	1,865,400
		Average Annual Growth Rate	+0.9%

4.3.4 As shown in **Table 4.3**, the projected average annual growth rate of the population and employment total number under the TPEDM in Northeast New Territories is +0.9% between the years 2026 to 2031, which is larger than the annual growth rate derived from ATC. To be conservative, the larger growth rate of +0.9% is adopted for the subsequent assessments.

4.4 Reference and Design Flows

4.4.1 The 2028 Reference Flows, i.e. the future traffic flows in the local road network WITHOUT the development traffic, were estimated based on the following equation:

2028 Reference Flows = 2025 Existing Flows x $(1 + 0.9\%)^3$

4.4.2 The 2028 Design Flows, i.e. the future traffic flows in the local road network WITH the development traffic, are estimated based on the following equations.

2028 Design Flows = 2028 Reference Flows + Traffic generated and attracted by the proposed temporary use

4.4.3 The forecast traffic flows for the two scenarios are shown in **Figures 4.2 and 4.3** respectively.

4.5 Junction Capacity Assessment

4.5.1 Junction capacity analysis is carried out for the assessment year 2028. The assessment results are shown in **Table 4.4** and the detailed calculation sheets are attached in **Appendix B**.

Table 4.4 2028 Junction Capacity Assessment

Ref.	Junction Location	Type/ Index(1)	2028 Reference Peak Hour	2028 Design Peak Hour
J1	Sha Tau Kok Road – Lung Yeuk Tau / Lung Ma Road	Roundabout /DFC	0.46	0.47
J2	Sha Tau Kok Road – Lung Yeuk Tau / Lau Shui Heung Road	Roundabout /DFC	0.44	0.46

Note: (1) DFC = Design Flow to Capacity.

4.5.2 The results in **Table 4.4** show that the assessed junctions will operate satisfactorily in both reference and design scenarios. Therefore, it is anticipated that the proposed temporary use will not induce significant traffic impact to the surrounding road network.

4.6 Link Capacity Assessment

4.6.1 The V/C Ratios of Sha Tau Kok Road were assessed and the results are presented in **Table 4.5**.

Table 4.5 2028 Link Capacity Assessments

Road	Capacity(1) (pcu/hr)	2028 Traffic Volume		2028 V/C Ratio	
		Reference Scenario	Design Scenario	Reference Scenario	Design Scenario
Sha Tau Kok Road E/B (between Lung Ma Road and Lau Shui Heung Road)	3,120	1,007	0.32	1,012	0.32
Sha Tau Kok Road W/B (between Lau Shui Heung Road and Lung Ma Road)	3,120	959	0.31	983	0.32

Note: (1) Capacity refers to TPDM Vol.2 Ch. 2.4. A factor of 1.2 (based on the traffic count survey result) is adopted to convert the capacity from veh/hr to pcu/hr.

4.6.2 As shown in **Table 4.5**, all the concerned road sections will operate with capacity during peak hour in all scenarios. Hence, it can be concluded that the traffic induced by the proposed temporary use will not induce significant traffic impact to the road network.

5 SUMMARY AND CONCLUSION

5.1 Summary

5.1.1 The Applicant proposes to use a piece of land for temporary electric vehicle charging station (for electric taxi) for a period of 3 Years. The piece of land (hereinafter referred to "the Site") is located at Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road–Lung Yeuk Tau, Fanling, N.T. The main function of the Site is to provide charging facilities for electric taxis.

5.1.2 Traffic count survey was carried out on 22 May 2025 (Thursday) for the time periods of 14:30 – 17:30 which the time period will be the peak traffic generation period of the proposed development. Based on the existing traffic flows, the junction and link capacity assessments show that they are operating satisfactorily.

5.1.3 The proposed development is estimated to generate a two-way traffic of 48 pcu/hour in the operation peak hour. Junction and link capacity assessment was carried out for the reference and design scenarios in 2028 and the results revealed that the concerned junctions and road links would perform satisfactorily with spare capacity in 2028. Therefore, it is anticipated that the proposed temporary use will not induce significant traffic impact to the surrounding road network.

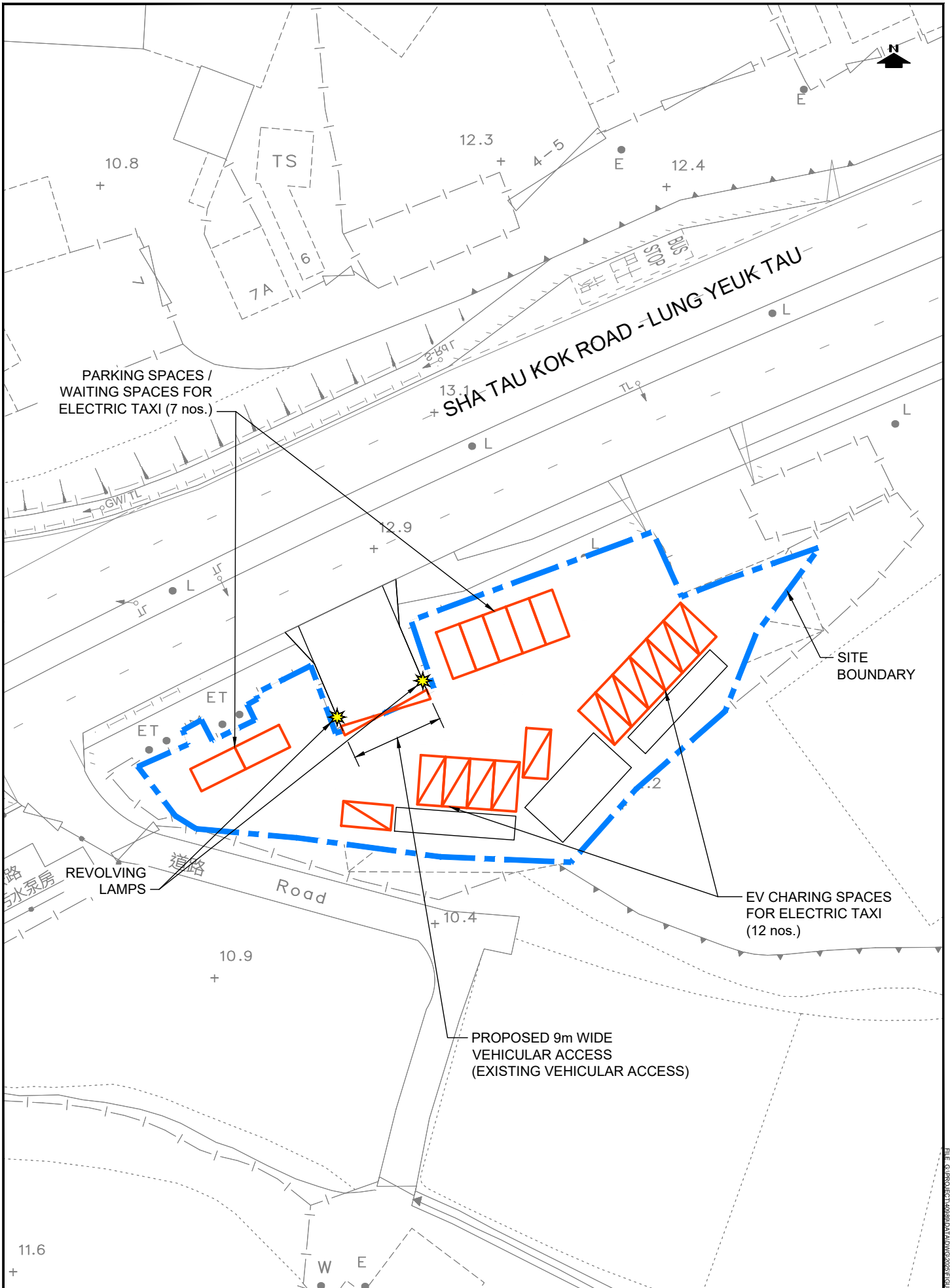
5.1.4 For the 12 nos. of EV charging stations, 7 nos. of waiting spaces can be provided (minimum two spaces in each EV charging station) to avoid the awaiting vehicles to queue on public roads. In addition, to minimize the waiting time of the taxi drivers and hence maximize the available operation hours, a mobile application catered for the taxi drivers will be introduced which will include the payment platform for EV charging and provide real-time availability of EV charging stations at different locations managed by the Applicant.

5.2 Conclusion

5.2.1 This planning application is to allow a temporary vehicle charging station for a period of 3 years. Based on the assessment result, it can be concluded that the proposed use will not induce additional adverse traffic impact on the surrounding road network and it is considered acceptable from traffic engineering point of view.

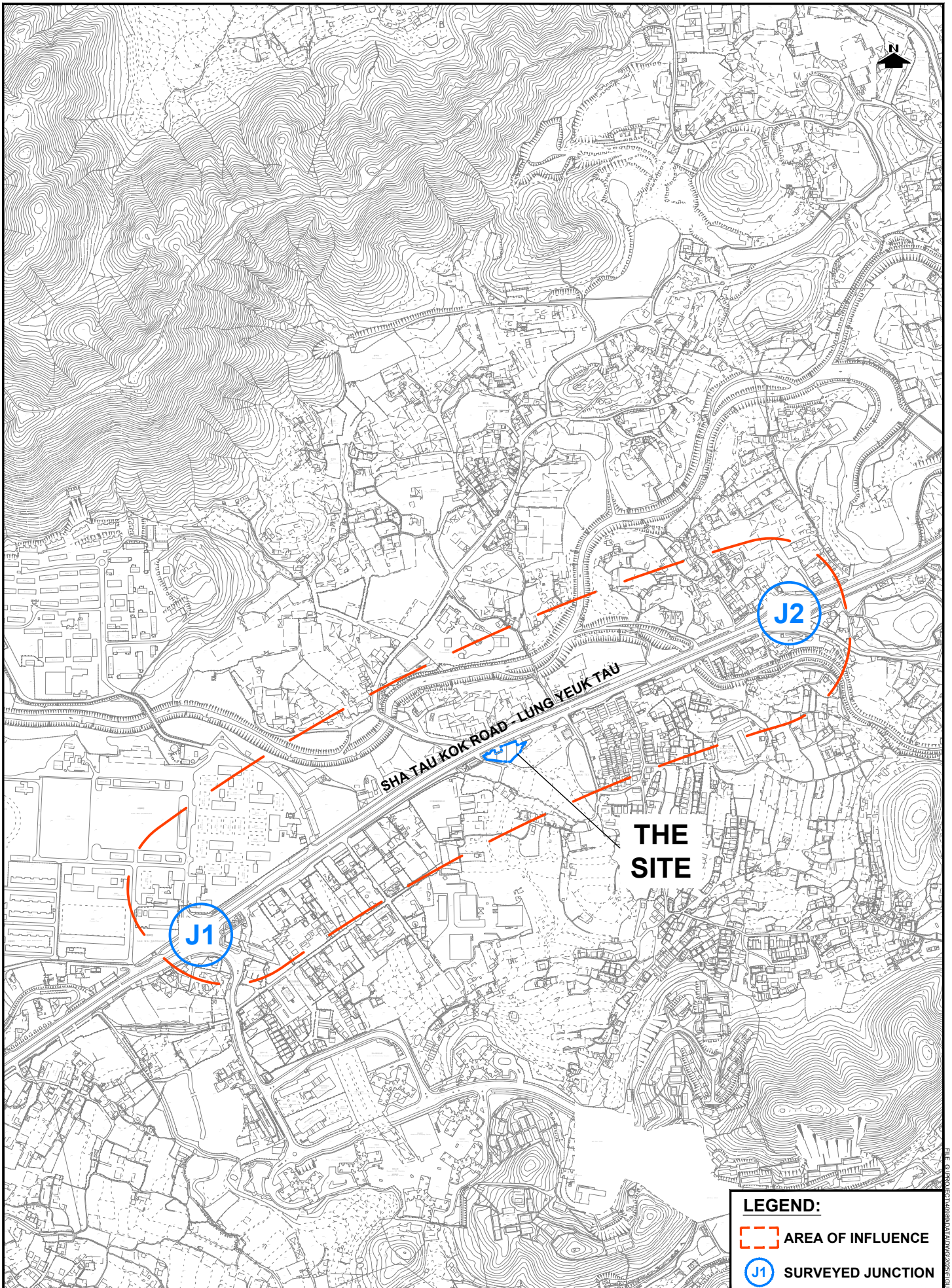
PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 2.1	REV. .
DESIGNED SLN / DATE JUN 2025	DRAWING TITLE: LOCATION PLAN	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL / SCALE 1:5000			
CHECKED SLN			

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE2.1.DWG PLOT SCALE : 1 = 1



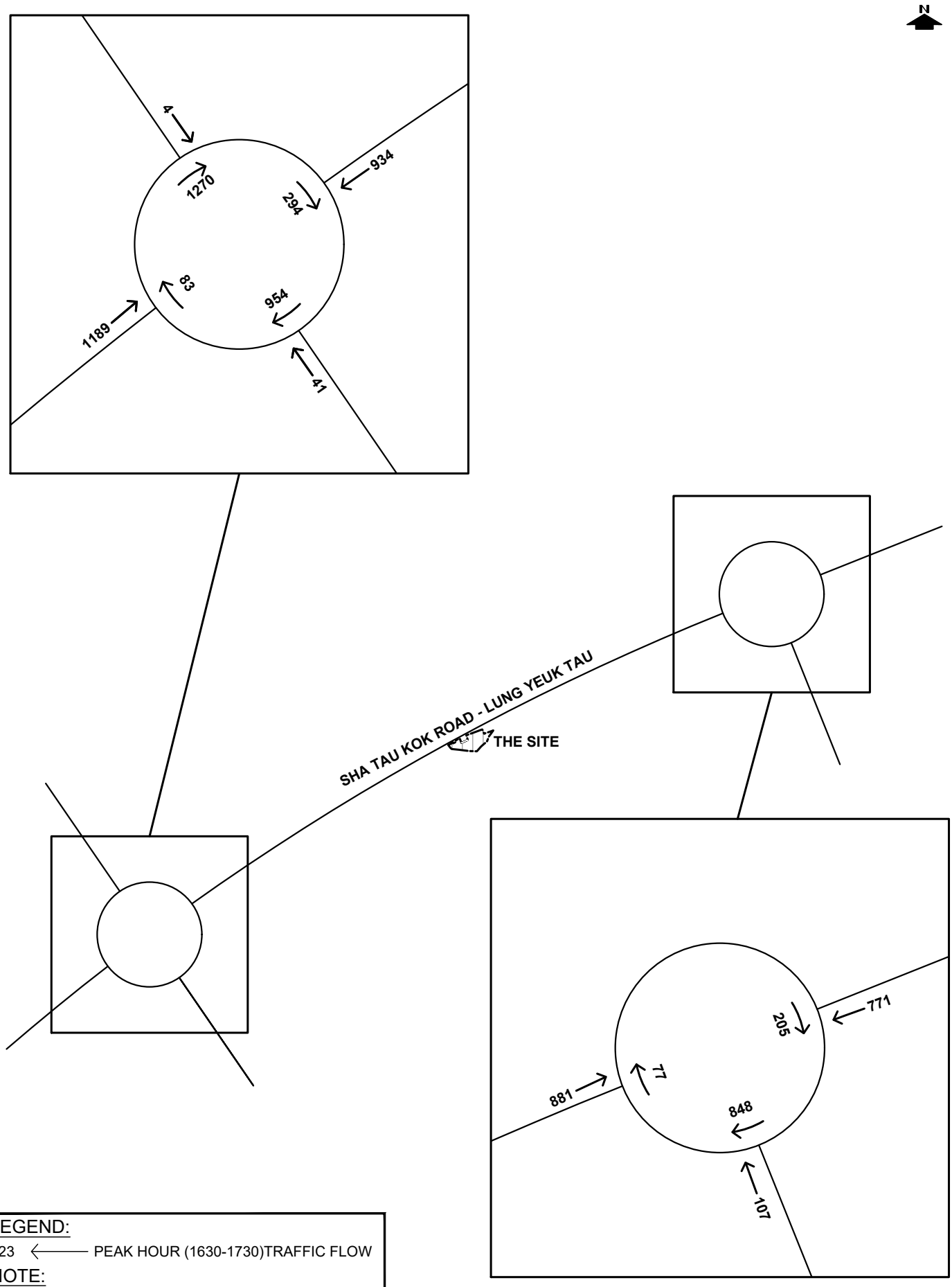
PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 2.2	REV. .
DESIGNED SLN / DATE JUL 2025	DRAWING TITLE: **PROPOSED LAYOUT PLAN**		
DRAWN CLL / SCALE 1:500		LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE2.2.DWG PLOT SCALE : 1 = 1



PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 3.1	REV. .
DESIGNED SLN / DATE JUN 2025	DRAWING TITLE: AREA OF INFLUENCE		
DRAWN CLL / SCALE 1:5000			
CHECKED SLN		LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE3.1.DWG PLOT SCALE : 1 = 1



LEGEND:

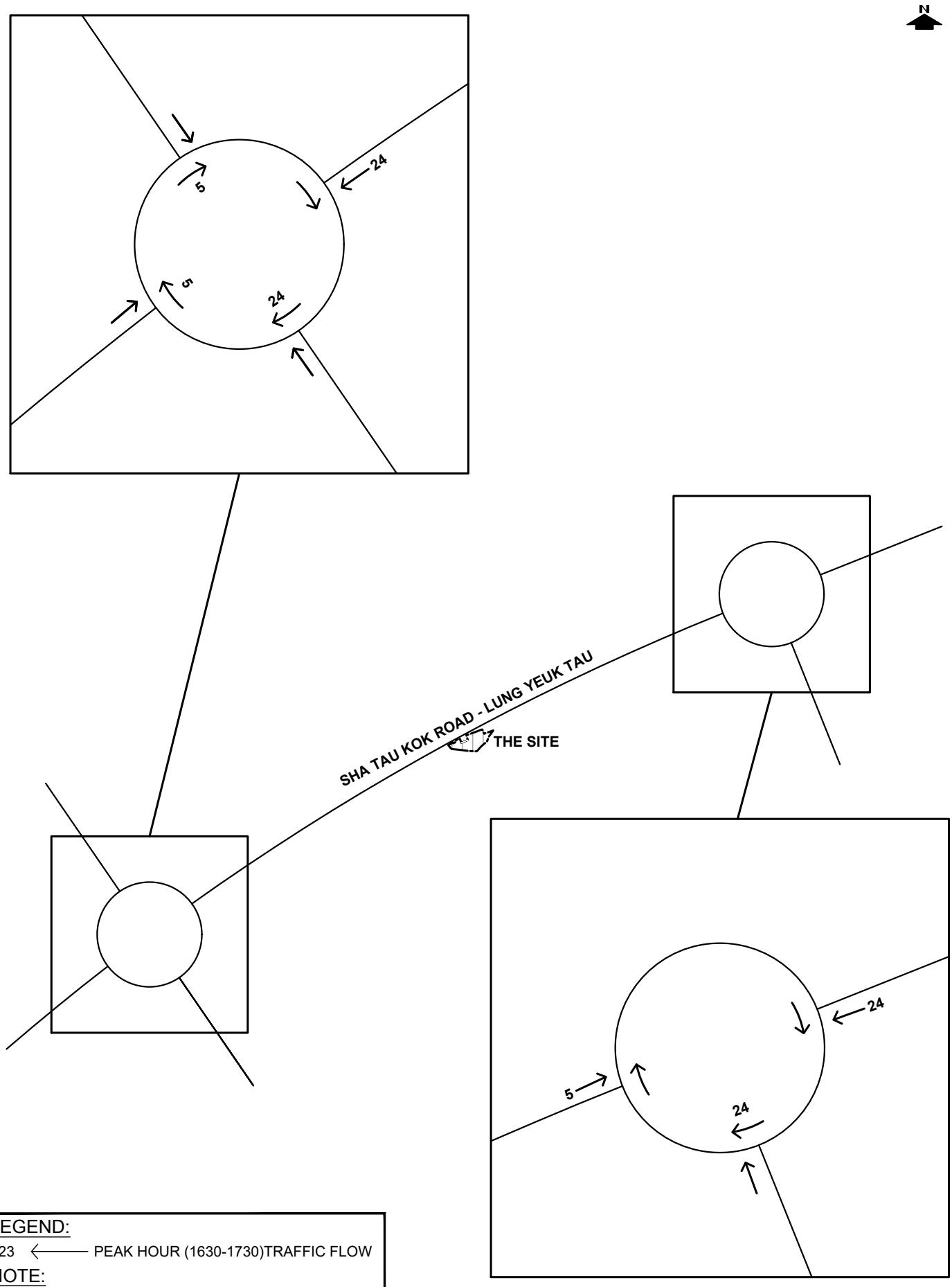
123 ⟵ PEAK HOUR (1630-1730)TRAFFIC FLOW

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.		DRAWING NO. FIGURE 3.2	REV. .
DESIGNED SLN	DATE JUN 2025	DRAWING TITLE: 2025 OBSERVED TRAFFIC FLOWS	LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.			
CHECKED SLN				

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE3.2.DWG PLOT SCALE : 1 = 1



LEGEND:

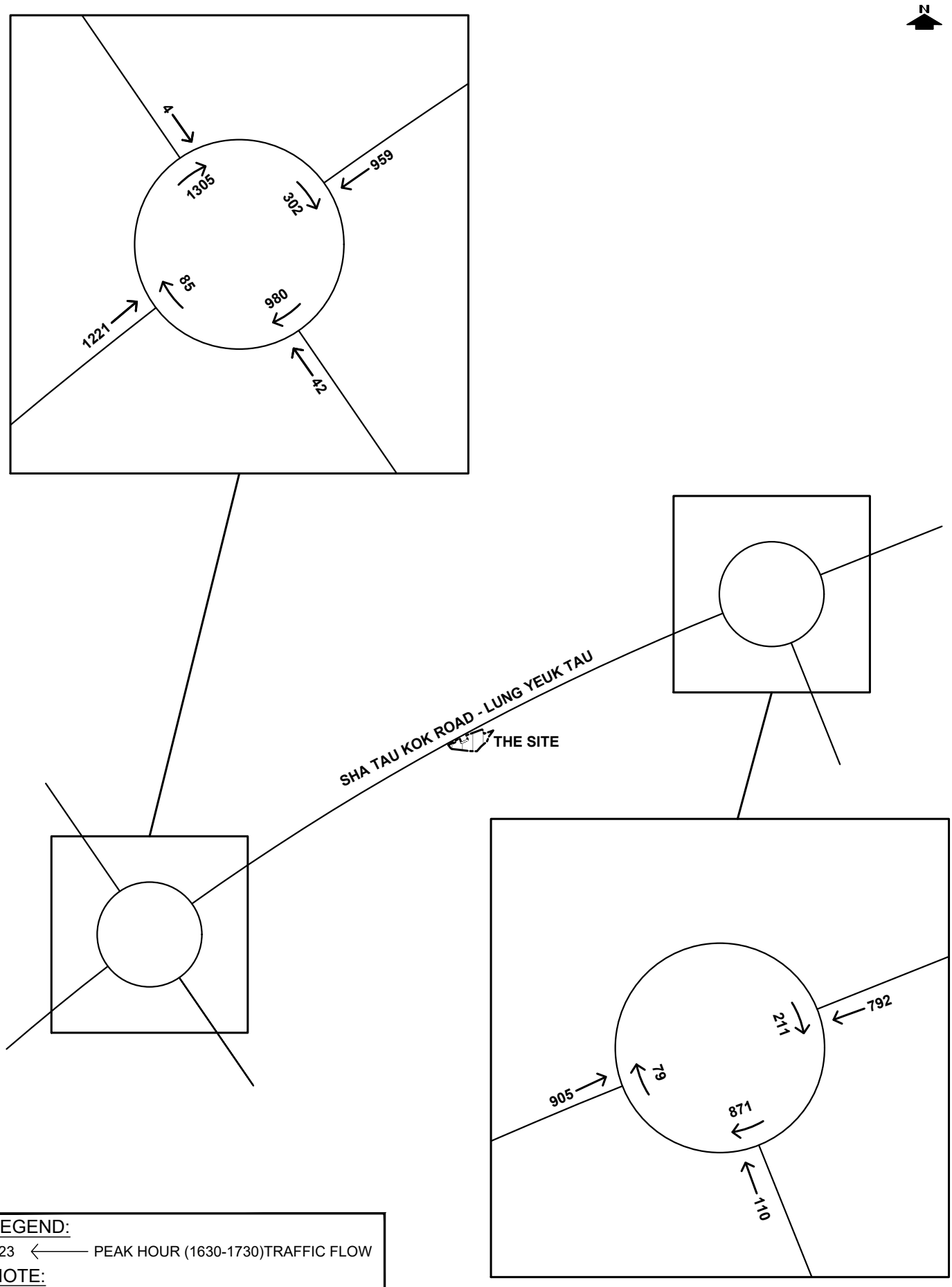
123 ⟵ PEAK HOUR (1630-1730)TRAFFIC FLOW

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 4.1	REV. .
DESIGNED SLN / DATE JUN 2025	DRAWING TITLE: DEVELOPMENT TRAFFIC FLOWS		
DRAWN CLL / SCALE N.T.S.			
CHECKED SLN		LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE4.1.DWG PLOT SCALE : 1 = 1



LEGEND:

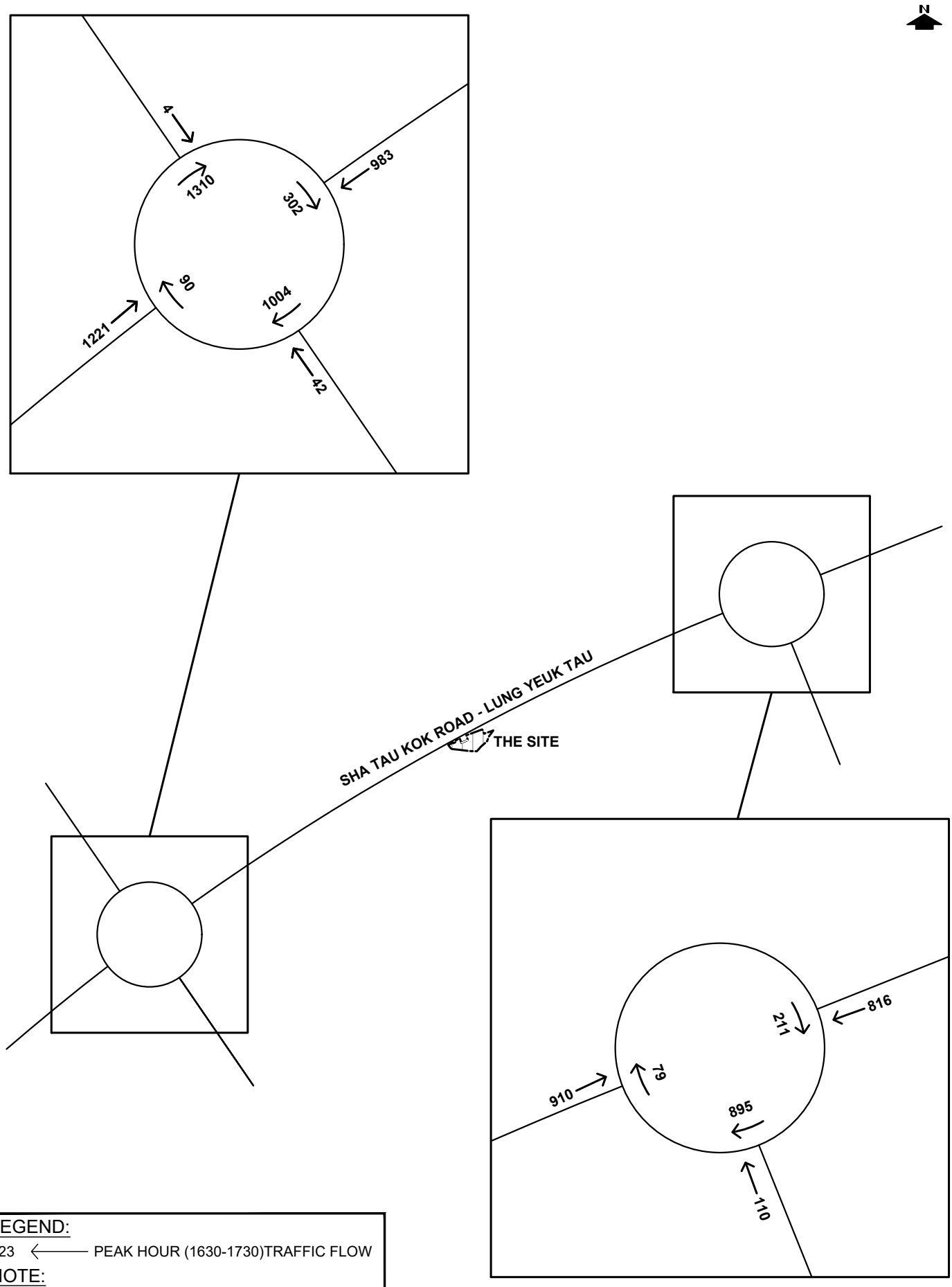
123 ⟵ PEAK HOUR (1630-1730)TRAFFIC FLOW

NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 4.2	REV. .
DESIGNED SLN / DATE JUN 2025	DRAWING TITLE: 2028 REFERENCE TRAFFIC FLOWS		
DRAWN CLL / SCALE N.T.S.		LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE4.2.DWG PLOT SCALE : 1 = 1



LEGEND:

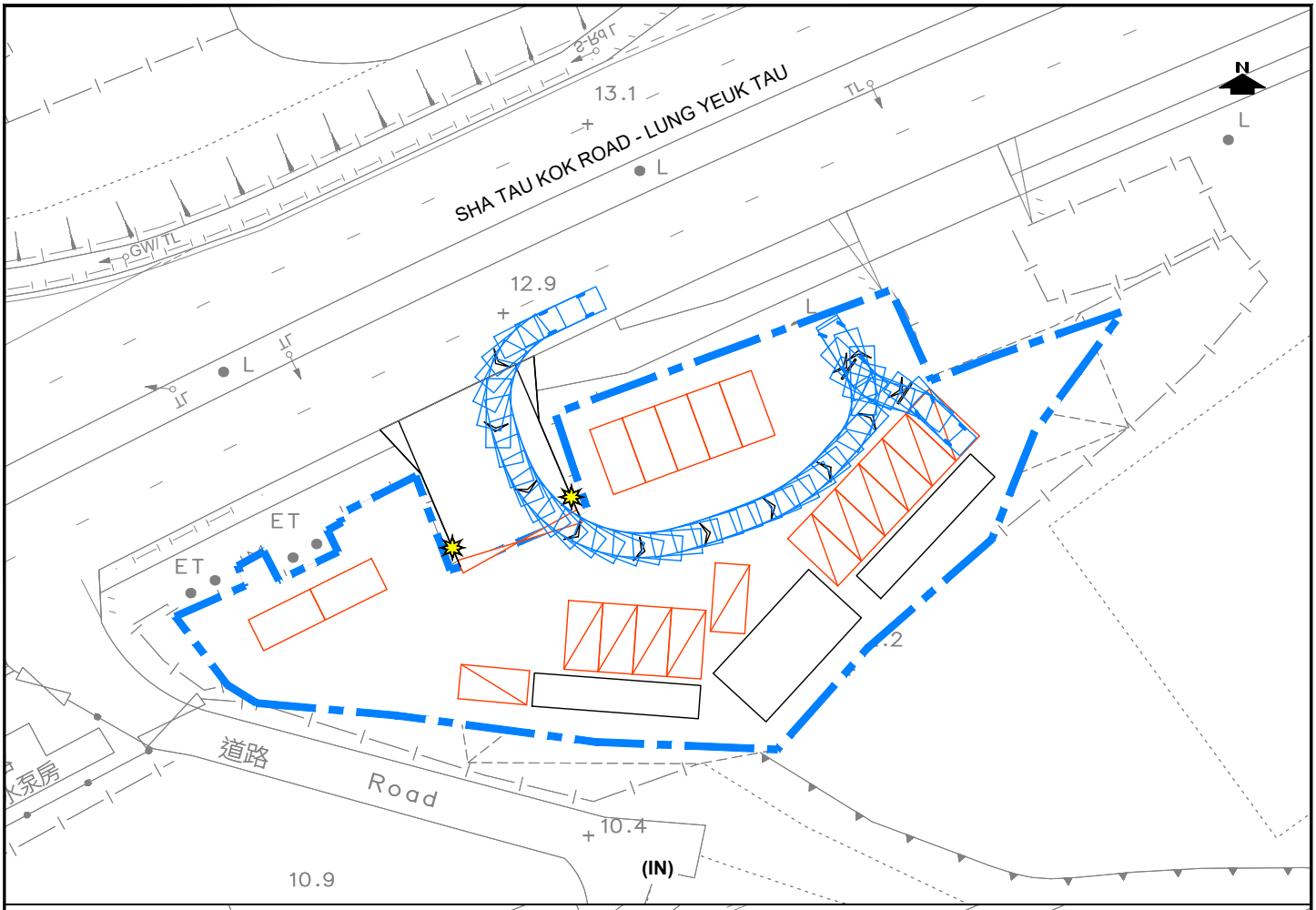
123 ⟵ PEAK HOUR (1630-1730)TRAFFIC FLOW

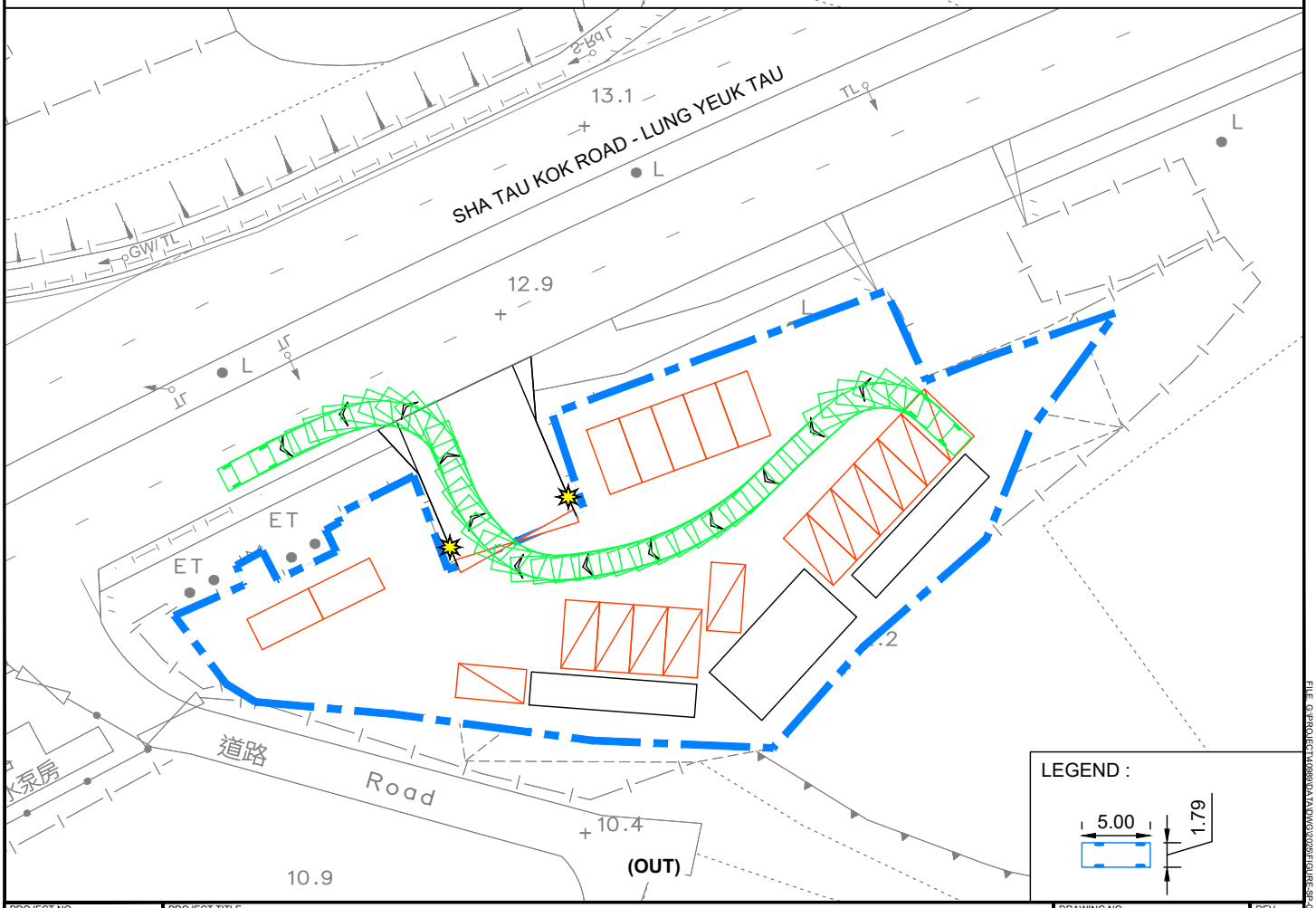
NOTE:

1, ALL TRAFFIC FLOWS ARE IN PCU/HOUR
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY

PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. FIGURE 4.3	REV. .
DESIGNED SLN / DATE JUN 2025	DRAWING TITLE: 2028 DESIGN TRAFFIC FLOWS		
DRAWN CLL / SCALE N.T.S.		LLA 顧問有限公司 Consultancy Limited	
CHECKED SLN			

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE4.3.DWG PLOT SCALE : 1 = 1





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5.00 × 1.79

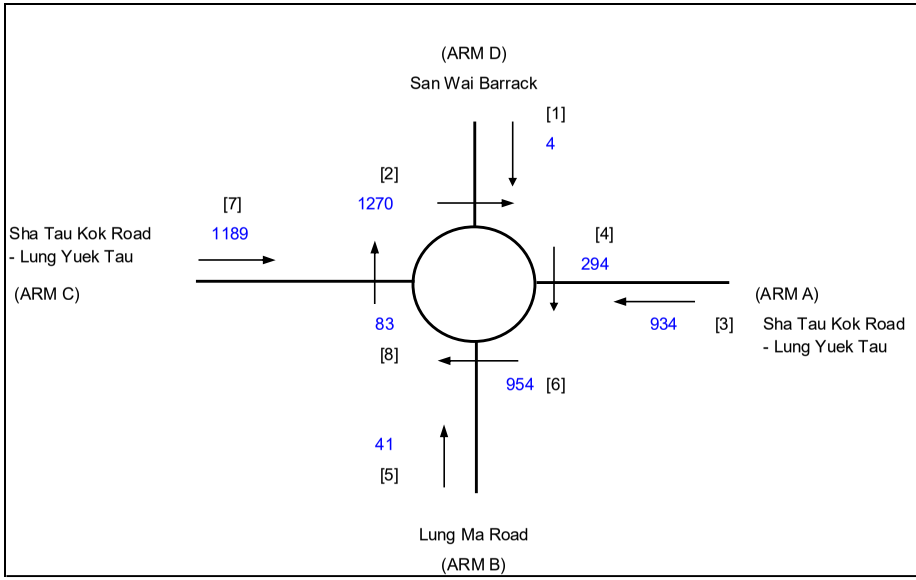
PROJECT NO. 40989	PROJECT TITLE: PROPOSED TEMPORARY ELECTRIC VEHICLE CHARGING STATION (FOR ELECTRIC TAXI) FOR A PERIOD OF 3 YEARS AT TAXLORD LOT 464 S.A RP (PART) IN D.D. 83 AND ADJOINING GOVERNMENT LAND, SHA TAU KOK ROAD – LUNG YEUK TAU, FANLING, N.T.	DRAWING NO. SP-01	REV. .
DESIGNED SLN / DATE JUL 2025	DRAWING TITLE: SWEPT PATH ANALYSIS - PC		
DRAWN CLL / SCALE 1:500			
CHECKED SLN		LLA 顧問有限公司 Consultancy Limited	

FILE: G:\PROJECT\40989\DATA\DWG\2025\FIGURE-SP-01.DWG PLOT SCALE : 1 = 1

Appendix A

Junction Capacity Assessments
- Existing Scenario

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2025 Existing 1630-1730**	PROJECT NO.: 40989	PREPARED BY:	SKL	Jun-25
		FILENAME : J1_STKR_LMR.xl	CHECKED BY:	SLN	Jun-25
J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road		REFERENCE NO.:	REVIEWED BY:	SLN	Jun-25

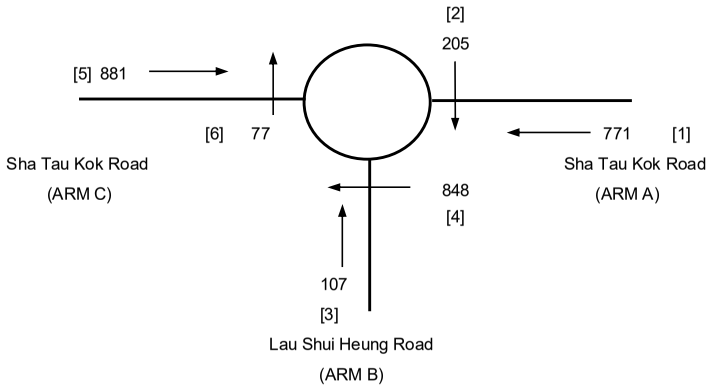


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.10	3.50	7.10	4.20
E	=	Entry width (m)	7.30	5.20	9.50	4.70
L	=	Effective length of flare (m)	1.00	12.00	19.00	9.00
R	=	Entry radius (m)	58.00	69.00	31.00	42.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A	=	Entry angle (degree)	21.00	10.00	32.00	18.00
Q	=	Entry flow (pcu/h)	934	41	1189	4
Qc	=	Circulating flow across entry (pcu/h)	294	954	83	1270
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.32	0.23	0.20	0.09
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.06	1.10	1.01	1.07
X2	=	V + ((E-V)/(1+2S))	7.22	4.67	8.81	4.62
M	=	EXP((D-60)/10)	0.50	0.50	0.50	0.50
F	=	303*X2	2188	1415	2669	1401
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.68	0.54	0.77	0.54
Qe	=	K(F-Fc*Qc)	2113	992	2632	765
DFC	=	Design flow/Capacity = Q/Qe	0.44	0.04	0.45	0.01

Total In Sum = 2168 PCU

DFC of Critical Approach = 0.45

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2025 Existing 1630-1730**	PROJECT NO.: 40989	PREPARED BY:	SKL	Jun-25
		FILENAME : J2_STKR_LSHR.x	CHECKED BY:	SLN	Jun-25
J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Jun-25



ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.80	3.40	6.40
E	=	Entry width (m)	6.90	5.20	6.50
L	=	Effective length of flare (m)	1.00	11.90	1.00
R	=	Entry radius (m)	10.00	60.00	22.00
D	=	Inscribed circle diameter (m)	52.00	52.00	52.00
A	=	Entry angle (degree)	39.00	60.00	4.00
Q	=	Entry flow (pcu/h)	771	107	881
Qc	=	Circulating flow across entry (pcu/h)	205	848	77
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.16	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.92	0.93	1.09
X2	=	V + ((E-V)/(1+2S))	6.88	4.61	6.48
M	=	EXP((D-60)/10)	0.45	0.45	0.45
F	=	303*X2	2083	1398	1962
Td	=	1+(0.5/(1+M))	1.34	1.34	1.34
Fc	=	0.21*Td(1+0.2*X2)	0.67	0.54	0.65
Qe	=	K(F-Fc*Qc)	1790	870	2093
DFC	=	Design flow/Capacity = Q/Qe	0.43	0.12	0.42

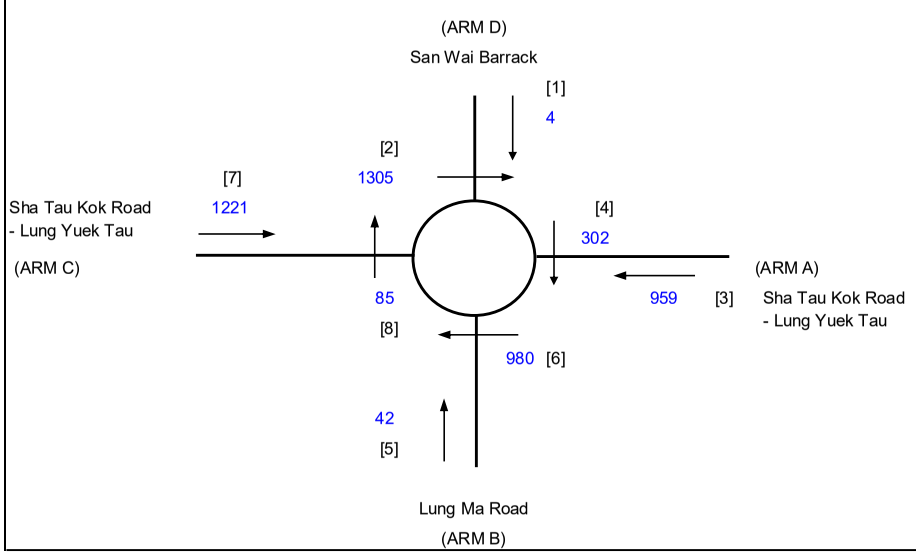
Total In Sum = 1759 PCU

DFC of Critical Approach = 0.43

Appendix B

Junction Capacity Assessments
- Reference & Design Scenarios

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2028 Reference 1630-1730**	PROJECT NO.:	40989	PREPARED BY:	SKL	Jun-25
		FILENAME :	J1_STKR_LMR.xl	CHECKED BY:	SLN	Jun-25
J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road		REFERENCE NO.:		REVIEWED BY:	SLN	Jun-25

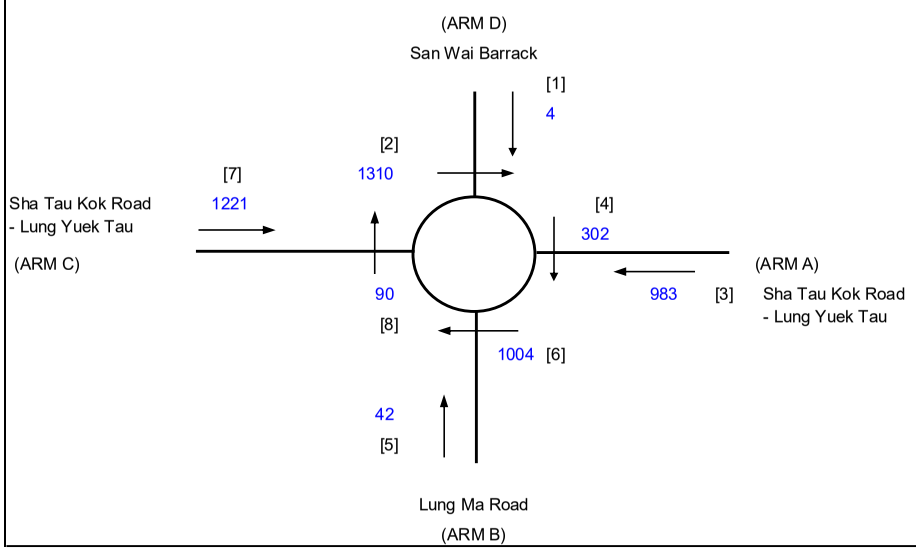


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.10	3.50	7.10	4.20
E	=	Entry width (m)	7.30	5.20	9.50	4.70
L	=	Effective length of flare (m)	1.00	12.00	19.00	9.00
R	=	Entry radius (m)	58.00	69.00	31.00	42.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A	=	Entry angle (degree)	21.00	10.00	32.00	18.00
Q	=	Entry flow (pcu/h)	959	42	1221	4
Qc	=	Circulating flow across entry (pcu/h)	302	980	85	1305
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.32	0.23	0.20	0.09
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.06	1.10	1.01	1.07
X2	=	V + ((E-V)/(1+2S))	7.22	4.67	8.81	4.62
M	=	EXP((D-60)/10)	0.50	0.50	0.50	0.50
F	=	303*X2	2188	1415	2669	1401
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.68	0.54	0.77	0.54
Qe	=	K(F-Fc*Qc)	2107	976	2631	744
DFC	=	Design flow/Capacity = Q/Qe	0.46	0.04	0.46	0.01

Total In Sum = 2226 PCU

DFC of Critical Approach = 0.46

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2028 Design 1630-1730**	PROJECT NO.: 40989	PREPARED BY:	SKL	Jun-25
		FILENAME : J1_STKR_LMR.xl	CHECKED BY:	SLN	Jun-25
J1 Sha Tau Kok Road - Lung Yuek Tau / Lung Ma Road		REFERENCE NO.:	REVIEWED BY:	SLN	Jun-25

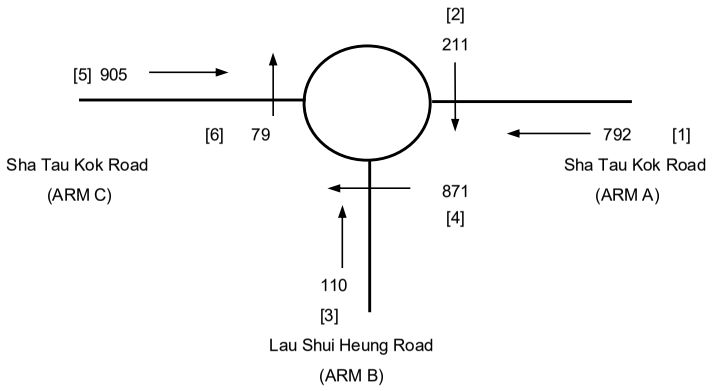


ARM			A	B	C	D
INPUT PARAMETERS:						
V	=	Approach half width (m)	7.10	3.50	7.10	4.20
E	=	Entry width (m)	7.30	5.20	9.50	4.70
L	=	Effective length of flare (m)	1.00	12.00	19.00	9.00
R	=	Entry radius (m)	58.00	69.00	31.00	42.00
D	=	Inscribed circle diameter (m)	53.00	53.00	53.00	53.00
A	=	Entry angle (degree)	21.00	10.00	32.00	18.00
Q	=	Entry flow (pcu/h)	983	42	1221	4
Qc	=	Circulating flow across entry (pcu/h)	302	1004	90	1310
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L	0.32	0.23	0.20	0.09
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	1.06	1.10	1.01	1.07
X2	=	V + ((E-V)/(1+2S))	7.22	4.67	8.81	4.62
M	=	EXP((D-60)/10)	0.50	0.50	0.50	0.50
F	=	303*X2	2188	1415	2669	1401
Td	=	1+(0.5/(1+M))	1.33	1.33	1.33	1.33
Fc	=	0.21*Td(1+0.2*X2)	0.68	0.54	0.77	0.54
Qe	=	K(F-Fc*Qc)	2107	962	2627	742
DFC	=	Design flow/Capacity = Q/Qe	0.47	0.04	0.46	0.01

Total In Sum = 2250 PCU

DFC of Critical Approach = 0.47

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION				INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2028 Reference 1630-1730**	PROJECT NO.:	40989	PREPARED BY:	SKL	Jun-25
		FILENAME :	J2_STKR_LSHR.x	CHECKED BY:	SLN	Jun-25
J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road		REFERENCE NO.:		REVIEWED BY:	SLN	Jun-25

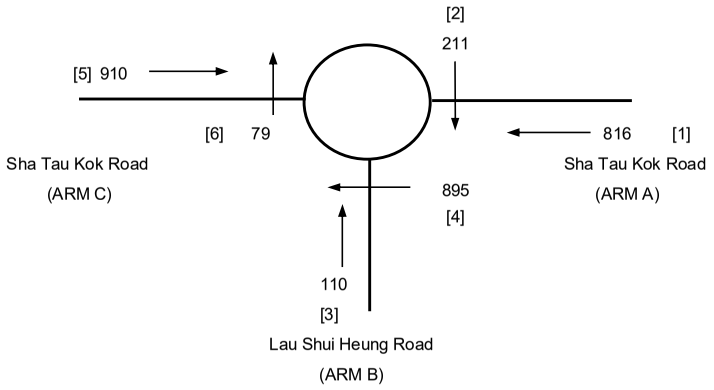


ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.80	3.40	6.40
E	=	Entry width (m)	6.90	5.20	6.50
L	=	Effective length of flare (m)	1.00	11.90	1.00
R	=	Entry radius (m)	10.00	60.00	22.00
D	=	Inscribed circle diameter (m)	52.00	52.00	52.00
A	=	Entry angle (degree)	39.00	60.00	4.00
Q	=	Entry flow (pcu/h)	792	110	905
Qc	=	Circulating flow across entry (pcu/h)	211	871	79
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.16	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.92	0.93	1.09
X2	=	V + ((E-V)/(1+2S))	6.88	4.61	6.48
M	=	EXP((D-60)/10)	0.45	0.45	0.45
F	=	303*X2	2083	1398	1962
Td	=	1+(0.5/(1+M))	1.34	1.34	1.34
Fc	=	0.21*Td(1+0.2*X2)	0.67	0.54	0.65
Qe	=	K(F-Fc*Qc)	1786	859	2092
DFC	=	Design flow/Capacity = Q/Qe	0.44	0.13	0.43

Total In Sum = 1807 PCU

DFC of Critical Approach = 0.44

LLA CONSULTANCY LIMITED	ROUNDABOUT CALCULATION			INITIALS	DATE
Proposed Temporary Electric Vehicle Charging Station (for Electric Taxi) for a Period of 3 Years at Taxlord Lot 464 S.A RP (Part) in D.D. 83 and Adjoining Government Land, Sha Tau Kok Road – Lung Yeuk Tau, Fanling, N.T.	**2028 Design 1630-1730**	PROJECT NO.: 40989	PREPARED BY:	SKL	Jun-25
		FILENAME : J2_STKR_LSHR.x	CHECKED BY:	SLN	Jun-25
J2 Sha Tau Kok Road - Ma Mei Ha / Lau Shui Heung Road		REFERENCE NO.:	REVIEWED BY:	SLN	Jun-25



ARM			A	B	C
INPUT PARAMETERS:					
V	=	Approach half width (m)	6.80	3.40	6.40
E	=	Entry width (m)	6.90	5.20	6.50
L	=	Effective length of flare (m)	1.00	11.90	1.00
R	=	Entry radius (m)	10.00	60.00	22.00
D	=	Inscribed circle diameter (m)	52.00	52.00	52.00
A	=	Entry angle (degree)	39.00	60.00	4.00
Q	=	Entry flow (pcu/h)	816	110	910
Qc	=	Circulating flow across entry (pcu/h)	211	895	79
OUTPUT PARAMETERS:					
S	=	Sharpness of flare = 1.6(E-V)/L	0.16	0.24	0.16
K	=	1-0.00347(A-30)-0.978(1/R-0.05)	0.92	0.93	1.09
X2	=	V + ((E-V)/(1+2S))	6.88	4.61	6.48
M	=	EXP((D-60)/10)	0.45	0.45	0.45
F	=	303*X2	2083	1398	1962
Td	=	1+(0.5/(1+M))	1.34	1.34	1.34
Fc	=	0.21*Td(1+0.2*X2)	0.67	0.54	0.65
Qe	=	K(F-Fc*Qc)	1786	847	2092
DFC	=	Design flow/Capacity = Q/Qe	0.46	0.13	0.44

Total In Sum = 1836 PCU

DFC of Critical Approach = 0.46