

Appendix C Traffic Impact Assessment

DOCUMENT STATUS CONTROL RECORD

**Application for Amendment of Plan under S12A of the
Town Planning Ordinance (Cap. 131), to Rezone the Application Site
from “Open Space” to “Residential (Group A) 11” at
Sha Tin Town Lot 310 in D.D. 184, Sha Tin**

Traffic Impact Assessment Report

Originating Organisation :	Prepared by: SKL	SKL	Date: 14 July 2026
	Approved by: SLN	SLN	Date: 14 July 2026
	Revision No.: -		Date of Issue: 14 July 2026

Note: © – LLA Consultancy Limited. All rights reserved. Except for the internal use by the client for whom this document is prepared by LLA Consultancy Limited. No part of this document, which contains valuable trade secrets of a confidential nature to LLA Consultancy Limited may be (1) reproduced, stored in a retrieval system, or transmitted in any format or by any means, electronic, mechanical, photocopying, recording or otherwise; or (2) disclosed to any third party, without the prior consent of LLA Consultancy Limited.

Table of Contents

	Page
1 INTRODUCTION	1
1.1 Background.....	1
1.2 Objectives.....	1
2 THE PROPOSED DEVELOPMENT	2
2.1 The Site	2
2.2 The Proposed Development Parameters.....	2
3 EXISTING TRAFFIC SITUATION.....	3
3.1 Existing Road Network	3
3.2 Traffic Count Survey.....	3
3.3 Existing Junction Capacity Assessment.....	3
3.4 Existing Public Transport Facilities.....	4
4 FUTURE TRAFFIC SITUATION	6
4.1 Design Year	6
4.2 Traffic Forecast.....	6
4.3 Planned/Committed Developments.....	8
4.4 Proposed Development Traffic Generation.....	9
4.5 Reference and Design Flows	10
4.6 Junction Capacity Assessment	11
5 PROPOSED TRANSPORT FACILITIES PROVISIONS	12
5.1 Access Arrangement	16
5.2 Internal Transport Facilities	16
6 SUMMARY AND CONCLUSION.....	19
6.1 Summary	19
6.2 Conclusion	19

List of Tables

Table 2.1	Key Development Parameters
Table 3.1	Existing Junction Performance
Table 3.2	Existing Public Transport Services
Table 4.1	Annual Traffic Census Data
Table 4.2	Population and Employment Data in Sha Tin District
Table 4.3	Planned / Committed Developments
Table 4.4	Traffic Generation and Attraction of Planned / Committed Developments
Table 4.5	Survey Results at the Existing Buildings
Table 4.6	Development Traffic Generation
Table 4.7	Year 2035 Junction Capacity Assessment
Table 4.8	Estimated Pedestrian Generation for the Residential Component
Table 4.9	Pedestrian Trip Rates from Surveyed Buildings
Table 4.10	Estimated Pedestrian Traffic Generation of the Proposed Development
Table 4.11	Mode of Transport of Building Groups in Sha Tin Area
Table 4.12	Estimated Passenger Demand for the Different Mode of Transport
Table 5.1	Proposed Transport Facilities Provisions
Table 5.2	Summary of Overall Transport Facilities Provisions

List of Figures

Figure 1.1	Location Plan
Figure 3.1	Location of Surveyed Junctions and Area of Influence
Figure 3.2	2025 Existing Traffic Flows
Figure 3.3	Public Transport Facilities in the Vicinity
Figure 4.1	Development Traffic Flows
Figure 4.2	2035 Reference Traffic Flows
Figure 4.3	2035 Design Traffic Flows
Figure 5.1	Access Arrangement

List of Appendices

Appendix A	Junction Capacity Assessments – Existing Scenario
Appendix B	Junction Calculation Assessments – Reference and Design Scenarios
Appendix C	Indicative Ground Floor Layout Plan

1 INTRODUCTION

1.1 Background

- 1.1.1 The owner of the lot in STTL 310 (hereafter referred to "the Site") at Lion Rock Tunnel Road, Sha Tin, intends to develop the Site into a residential development. **Figure 1.1** shows the location of the Site.
- 1.1.2 The Site is zoned as "Open Space" ("O") on the Draft Sha Tin Outline Zoning Plan No. S/ST/39. It is necessary to submit a S12A planning application for the proposed residential development and a traffic impact assessment study is necessary to support the application.
- 1.1.3 LLA Consultancy Limited has been commissioned by the applicant to undertake a Traffic Impact Assessment (TIA) study in support of this rezoning application. This report presents the findings of the study.

1.2 Objectives

- 1.2.1 The objectives of the traffic impact assessment 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 development;
 - to project the future traffic situation in the surrounding road network;
 - to appraise the potential traffic impact of the proposed development and to consider traffic improvement proposals, if required; and
 - to recommend the internal transport facilities for the proposed development.

2 THE PROPOSED DEVELOPMENT

2.1 The Site

2.1.1 The Site is located at STTL 310, Lion Rock Tunnel Road, Sha Tin. It is bounded by Lion Rock Tunnel Road to the west, Shing Mun River to the north and other private lots to the east with some low-rise buildings. At present, the existing building on the Site is a religious institute with living quarters.

2.2 The Proposed Development Parameters

2.2.1 **Table 2.1** summarizes the key development parameters of the proposed rezoning scheme.

Table 2.1 Key Development Parameters

Item	Parameter
Site Area	5,225 m ²
Domestic Use	
• GFA	26,125 m ²
• Plot Ratio	5.0
• Number of Residential Blocks	2
• Number of Residential Flats	About 450
Non-Domestic Use	6,680 m ²
• GFA (Reprovision of Hong Kong Bible Research and Education Centre)	About 2,900 m ²
• GFA (100-place RCHE)	About 2,980 m ²
• GFA (Retail)	About 562 m ²
• GFA (Parents/Relative Resource Centre (PRC))	About 238 m ²
• Plot Ratio (Reprovision of Hong Kong Bible Research and Education Centre)	0.56
• Plot Ratio (100-place RCHE)	0.57
• Plot Ratio (Retail)	0.11
• Plot Ratio (Parents/Relative Resource Centre (PRC))	0.05

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

- 3.1.1 Lion Rock Tunnel Road is a primary distributor linking Tai Po Road - Tai Wai and Sha Tin Centre Street with Lion Rock Tunnel. The section of Lion Rock Tunnel Road fronting the Site is a dual 2-lane carriageway with flare lanes at the approach to the signal junctions. It forms a left-in/left-out priority junction with the existing access road to the Site.
- 3.1.2 Tai Chung Kiu Road is dual 3-lane primary distributor running along the eastern side of the Shing Mun River Channel. It connects with Tate's Cairn Highway to the east and Che Kung Miu Road to the west.

3.2 Traffic Count Survey

- 3.2.1 A traffic count survey was carried out on 11 February 2025 (Tuesday) during the peak hour period from 07:00 to 9:00 and 17:00 to 19:00 at the following junctions. The locations of the key junctions and area of influence (AOI) are shown in **Figure 3.1**.

- J1 – Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street
- J2 – Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road
- J3 – Tai Chung Kiu Road / Sha Kok Street
- J4 – Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road
- J5 – Yuen Wo Road / Sha Tin Rural Committee Road
- J6 – Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road
- J7 – Sha Tin Tau Road / Che Kung Miu Road
- J8 – Chui Tin Street / Che Kung Miu Road
- J9 – Sha Tin Centre Street / Pak Hok Ting Street

- 3.2.2 The identified AM and PM peak hours were 07:30 – 08:30 and 17:45 – 18:45, respectively and the surveyed traffic flows are presented in **Figure 3.2**.

3.3 Existing Junction Capacity Assessment

- 3.3.1 Based on the surveyed traffic flows, the performance of the key junctions were assessed. The assessment results are tabulated in **Table 3.1** and detailed junction capacity calculation sheets are presented in **Appendix A**.

Table 3.1 Existing Junction Performance

No.	Junction	Junction Type/Index ⁽¹⁾	AM Peak	PM Peak
J1	Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street	Signalized /RC	19%	111%
J2	Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road	Signalized /RC	28%	43%
J3	Tai Chung Kiu Road / Sha Kok Street	Signalized /RC	47%	130%
J4	Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road	Signalized /RC	12%	52%
J5	Yuen Wo Road / Sha Tin Rural Committee Road	Signalized /RC	29%	21%

No.	Junction	Junction Type/Index ⁽¹⁾	AM Peak	PM Peak
J6	Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road	Roundabout/DFC	0.60	0.56
J7	Sha Tin Tau Road / Che Kung Miu Road	Signalized /RC	94%	167%
J8	Chui Tin Street / Che Kung Miu Road	Signalized /RC	96%	93%
J9	Sha Tin Centre Street / Pak Hok Ting Street	Priority/DFC	0.38	0.72

Note: (1) RC = Reserve Capacity for signalized junction; DFC = Design Flow to Capacity ratio for priority junction.

3.3.2 It can be seen from **Table 3.2** that all concerned junctions performed satisfactorily during AM and PM peak hours, except J4 is near its capacity during AM peak hour.

3.4 Existing Public Transport Facilities

3.4.1 MTR Che Kung Temple Station is located within 300m from the Site. The MTR Station could be easily accessed via the existing pedestrian subway. Numerous franchised bus and scheduled minibus (GMB) routes operate in the vicinity of the Site along Lion Rock Tunnel Road, Che Kung Miu Road and Tai Chung Kiu Road. **Table 3.2 and Figure 3.3** show the existing bus and minibus routes running in the vicinity of the Site.

Table 3.2 Existing Public Transport Services

Mode	Route No.	Origin-Destination	Frequency (min)
Bus	47X	Chun Shek – Kwai Shing (East)	6 – 25
	72A	Tai Wai Station – Tai Po Industrial Estate	20 – 35
	74A	Tai Po (Tai Wo) – Kai Yip	60
	79	Tai Wai Station – Queen's Hill Fanling	10 – 30
	80X	Chun Shek – Kwun Tong Ferry	10 – 30
	81C	Yiu On – Tsim Sha Tsui East (Mody Road)	10 – 60
	81K	Sun Tin Wai – Sui Wo Court	8 – 25
	82K	Mei Tin – Yu Chui Court	30 – 40
	85A	Kwong Yuen – Kowloon City Ferry	25 – 30
	85B	Chun Shek – Kowloon City Ferry	1 trip per day
	86	Wong Nai Tau – Mei Foo	15 – 25
	86A	Shatin Wai – Cheung Sha Wan (Kom Tsun Street)	20 – 30
	86C	Lee On – Cheung Sha Wan	20 – 30
	87B	Sun Tin Wai – Island Harbourview	15 – 30
	89	Lek Yuen – Kwun Tong (Tsui Ping North Estate)	15 – 30
	89B	Shatin Wai – Ngau Tau Kok	25 – 30
	170	Shatin Station – Wah Fu (Central)	15 – 30
	182	Yu Chui Court – Central (Macau Ferry)	15 – 30
	182X	Central (Macau Ferry) – Yu Chui Court	6 trips per day
	240X	Wong Nai Tau – Kwai Hing Station	12 trips per day

Mode	Route No.	Origin-Destination	Frequency (min)
	249X	Pok Hong – Tsing Yi Station	15 – 30
	281	Tai Wai Station – Sun Tin Wai (Circular)	15 – 25
	281B	Shek Mun Estate – Tsim Sha Tsui East (Mody Road)	20 – 30
	282	Sha Tin Central – Sun Tin Wai (Circular)	10 – 25
	286A	Shatin Wai – Cheung Sha Wan (Circular)	15 – 30
	287P	Shui Chuen O – Yau Ma Tei	3 trips per day
	287X	Shui Chuen O – Jordan (Circular)	9 – 25
	288	Shui Chuen O (Upper) – Sha Tin Central (Circular)	7 – 20
	288C	Shui Chuen O – Hin Keng	2 trips per day
	T80	Mei Tin – Kowloon Bay	3 trips per day
	982C	Shek Mun Estate – Sai Wan Ho	2 trips per day
	982X	Yu Chui Court – Wan Chai (Fleming Road)	13 trips per day
	986	Sha Tin Wai – Sai Wan Ho	4 trips per day
	987	Sai Wan Ho – Fo Tan (Chun Yeung Estate)	15 – 20
	A41	Shek Mun Estate – Airport (Ground Transportation Centre)	15 – 35
	A42	Wong Nai Tau – Airport (Ground Transportation Centre)	30 – 60
	B8	Tai Wai Station – Heung Yuen Wai Boundary Control Point	5 – 30
	E42	Pok Hong – Airport (Ground Transportation Centre)	8 – 20
	E42C	Pok Hong – Aircraft Maintenance Area	4 trips per day
	E42P	Fo Tan (Shan Mei Street) – Tung Chung (Yat Tung)	6 trips per day
	N42	Yiu On Bus Terminus – Tung Chung Station	3 trips per day
	N170	Shatin Central – Wah Fu (Central)	22 – 30
	N182	Kwong Yuen – Central (Macau Ferry)	20 – 30
	N271	Tai Po (Fu Heng) – Hung Hom Station	20 – 30
	N281	Kam Ying Court – Hung Hom Station	25 – 30
	N283	Tsim Sha Tsui East (Mody Road) – Wong Nai Tau	3 trips per day
	R42	Disneyland – Tai Wai Station	1 – 2 trips per day
	NA41	Shui Chuen O – HZMB Hong Kong Port	2 trips per day
GMB	65S	Wong Nai Tau – Mong Kok Station	20 – 25
	68K	Tai Wai Station Public Transport Interchange – Julimount Garden	6 – 15
	403	Shek Lei (Lei Pui Street) – Sha Tin Wai (Circular)	20
	501S	Sheung Shui Station – Yue Man Square	60
	803	Hin Keng – Lee On	5 – 15
	804	Kwong Yuen – Hin Keng	5 – 10
	812	Shui Chuen O – Hin Keng (Che Kung Miu Road)	8 – 20

4 FUTURE TRAFFIC SITUATION

4.1 Design Year

4.1.1 The tentative completion year for the proposed development is 2032. The guidelines from the Transport Department recommends that the traffic impact assessment should be conducted for three years after the completion date. Therefore, the design year adopted for the subsequent traffic analysis is 2035.

4.2 Traffic Forecast

Annual Traffic Census (ATC) – Historical Data

4.2.1 In order to establish the traffic growth rate in the vicinity of the Site, reference was made to the 2018 to 2024 Annual Traffic Census Reports published by the Transport Department, reporting on the AADT at the counting stations in the territory. The details of the counting stations in the study area and the corresponding counts are shown in **Table 4.1**.

Table 4.1 Annual Traffic Census Data

Stn. No.	Road Section			AADT ⁽¹⁾							Avg. Growth %
	Road	From	To	2018	2019	2020	2021	2022	2023	2024	
5211	Tai Chung Kiu Rd	Sha Kok St	Sha Tin Wai Rd	23,190	22,890 (-1.3%)	21,590 (-5.7%)	22,950 (6.3%)	21,510 (-6.3%)	22,580 (5%)	19,940 (-11.7%)	-2.5%
5214	Tai Po Rd - Tai Wai	Shing Ho Rd	Lion Rock Tunnel Rd	9,000	9,430 (4.8%)	8,900 (-5.6%)	9,460 (6.3%)	8,860 (-6.3%)	10,280 (16%)	9,760 (-5.1%)	1.4%
5215	Lion Rock Tunnel Rd	Che Kung Miu Rd	Sha Tin Rd	10,570	11,360 (7.5%)	10,720 (-5.6%)	11,390 (6.3%)	10,680 (-6.2%)	10,070 (-5.7%)	9,390 (-6.8%)	-2.0%
5615	Che Kung Miu Rd	Mei Tin Rd	Sha Tin Tau Rd	21,320	21,300 (-0.1%)	17,820 (-16.3%)	19,130 (7.4%)	17,930 (-6.3%)	18,560 (3.5%)	18,290 (-1.5%)	-2.5%
5815	Che Kung Miu Rd	Lion Rock Tunnel Rd	Sha Tin Tau Rd	22,290	22,260 (-0.1%)	21,000 (-5.7%)	22,900 (9%)	21,840 (-4.6%)	22,610 (3.5%)	22,280 (-1.5%)	0.0%
6011	Tai Chung Kiu Rd	Lion Rock Tunnel Rd	Sha Kok St	30,620	30,590 (-0.1%)	28,850 (-5.7%)	30,660 (6.3%)	30,500 (-0.5%)	30,730 (0.8%)	30,280 (-1.5%)	-0.2%
6015	Lion Rock Tunnel Rd	Tai Po Rd - Shatin	Che Kung Miu Rd	20,910	20,890 (-0.1%)	19,700 (-5.7%)	20,940 (6.3%)	20,350 (-2.8%)	20,610 (1.3%)	20,310 (-1.5%)	-0.5%
Total				137,900	138,720 (0.6%)	128,580 (-7.3%)	137,430 (6.9%)	131,670 (-4.2%)	135,440 (2.9%)	130,250 (-3.8%)	-0.9%

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

4.2.2 **Table 4.1** showed that the recorded average annual growth rate of the concerned counting stations is -0.9% between years 2018 to 2024.

Territorial Population and Employment Data Matrix (TPEDM) – Projection Data

- 4.2.3 Reference was also made to the 2021 based Territorial Population and Employment Data Matrix (TPEDM) published by the Planning Department. The population and employment data of year 2021 and 2031 are summarized in **Table 4.2**.

Table 4.2 Population and Employment Data in Sha Tin District

Year	2021	2026	2031
Population	692,800	687,450	667,750
Employment	222,150	230,600	220,400
Total	914,950	918,050	888,150
Average Annual Growth %		+0.1% (2021 to 2026)	-0.7% (2026 to 2031)

- 4.2.4 As shown in **Table 4.2**, the average annual growth rate for both population and employment of Sha Tin district is +0.1% and -0.7% during 2021–2026 and 2026–2031, respectively. Having considered the rates derived from ATC and TPEDM data, to be conservative, a nominal growth rate of +1.0% will be adopted for the subsequent traffic forecasting.

Future Road Network – Trunk Road T4

- 4.2.5 According to the latest information, the Trunk Road T4 scheme was gazette on 26 November 2021 under gazette number G.N. 7314. The construction works is anticipated to be commenced in Year 2024 and to be completed by Year 2030. Elevated carriageways, footpaths, cycle tracks, underpasses and slip roads will be constructed to connect Sha Tin Road in the east and Shing Mun Tunnel Road and Tsing Sha Highway in the west. This new trunk road can provide an alternative route for traffic between Ma On Shan area and Tsuen Wan/West Kowloon area. The potential traffic implications of Trunk Road T4 are considered in the subsequent assessments.

4.3 Planned/Committed Developments

4.3.1 To estimate the future traffic flows, updated information are being obtained from available information regarding the planned and approved developments in the vicinity of the study area. The details of these developments are given in **Table 4.3**.

Table 4.3 Planned / Committed Developments

Ref.	Reference	Location	Proposed Use	Content
1	A/ST/1008	Lot 479 S.X in D.D. 189 and Adjoining Government Land, South of Hin Keng Street, Tai Wai, New Territories	Public Vehicle Park RCHE	235 spaces 236 beds
2	A/ST/1030	Junction of Tsuen Nam Road and Chik Luk Lane, Tai Wai, New Territories	Public Housing Government Complex Public Vehicle Park	500 flats 6,805 m ² NOFA 135 spaces
3	Pavilia Farm (Phase 3) ⁽¹⁾	18 Che Kung Miu Road, Tai Wai	Private Housing	892 units ⁽²⁾
4	Y/ST/62 ⁽³⁾	Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin	Hotel Retail	443 rooms 800 m ²

Notes: 1. Although the development is completed, it is noted that only 50% of the flats are sold. Therefore, it is still considered as a committed development.
2. According to Monthly Digest (Feb 2026) published by Buildings Department, the total number of units is 892 and the domestic GFA for the development is 63,758.8m². As such, average flat size of 71.4 m²(63,758.8 / 892 = 71.4) is adopted for traffic generation estimation.
3. The development is not yet approved at the time of assessment and is included for conservative assessment purposes.

4.3.2 The traffic flows that would be generated by these developments have been considered, by making reference to the trip generation rates in the Transport Planning and Design Manual ("TPDM"). The traffic generation and attraction numbers are shown in **Table 4.4**.

Table 4.4 Traffic Generation and Attraction of Planned / Committed Developments

Type / Development		Unit / Content	AM Peak Hour			PM Peak Hour		
			Gen.	Att.	2-way	Gen.	Att.	2-way
TPDM Trip Rates								
Private: High Density/R(A): 80m ²		pcu/hr/flat	0.1058	0.0605	-	0.0426	0.0590	-
Traffic Generation of the Planned Developments								
A/ST/1008	RCHE ⁽¹⁾	236 beds	9	10	19	9	9	18
	PVP ⁽¹⁾	235 spaces	27	8	35	15	40	55
A/ST/1030	Subsidised Housing ⁽¹⁾	500 units	14	13	27	10	12	22
	PVP ⁽¹⁾	135 spaces	13	7	20	8	10	18
	Government Complex ⁽¹⁾	6,805 m ²	45	45	90	45	45	90
Pavilia Farm (Phase 3)	Private Housing	892 units	95	54	149	38	53	91
Y/ST/62	Hotel ⁽¹⁾	443 rooms	59	65	124	58	69	127
	Retail ⁽¹⁾	800 m ²	2	2	4	3	3	6
Total			264	204	468	186	241	427

Notes: Gen. – Generation; Att. – Attraction
(1) Traffic generation and attraction from the TIA report of the study are adopted.

4.4 Proposed Development Traffic Generation

4.4.1 In order to examine the traffic impact of the proposed development, additional traffic generated/ attracted by the proposed development should be estimated based on the development parameters as outlined in **Table 2.1** and the trip rates documented in TPDM Volume 1 Chapter 3 – Transport Considerations of Town Plans. However, having considered that the research and education centre is re-provision and the traffic of the existing research and education centre have been reflected in the traffic count survey, it is excluded from the additional traffic estimation.

4.4.2 As there are no established trip rates published in TPDM or other relevant guidelines for the research and education centre and RCHE, trip generation surveys at existing buildings should be arranged to collect trip rates for these uses. The trip generation survey was conducted on 11 February 2025 (Tuesday) during the AM and PM peak hour period. The survey results and the trip rates derived are presented in **Table 4.5**.

Table 4.5 Survey Results at the Existing Buildings

Name	Unit / Content	AM Peak			PM Peak		
		Gen.	Att.	2-way	Gen.	Att.	2-way
Traffic Generation of Existing Research and Education Center (pcu/hr)							
Hong Kong Bible Research and Education Center	2,902 m ²	1	1	2	1	1	2
Traffic Generation of Existing RCHEs (pcu/hr)							
Caritas Harold H.W. LEE Care and Attention Home	276 places	9	10	19	10	9	19
SAGE Kwan Fong Nim Chee Home for the Elderly	204 places	7	8	15	8	7	15
Derived Trip Rates for RCHE (pcu/hr/space)							
Caritas Harold H.W. LEE Care and Attention Home		0.3261	0.3623	-	0.3623	0.3261	-
SAGE Kwan Fong Nim Chee Home for the Elderly		0.3431	0.3922	-	0.3922	0.3431	-
Adopted Trip Rates ⁽¹⁾		0.3431	0.3922	-	0.3922	0.3431	-

Note: Gen. – Generation; Att. – Attraction.

(1) The largest trip rates are adopted for conservative assessment purposes.

4.4.3 Having considered that the PRC is anticipated to serve the local community which is not anticipated to generate traffic during peak hours, it is excluded from the subsequent assessment. Based on the above, the traffic generation of the proposed development has been estimated and presented in **Table 4.6**.

Table 4.6 Development Traffic Generation

Proposed Use	Unit /Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Adopted Trip rates							
Private Housing: High-Density / R(A) (Average Flat Size: 60m ²) ⁽¹⁾	pcu/hr /flat	0.0718	0.0425	-	0.0286	0.037	-
RCHE ⁽²⁾	pcu/hr/10-place	0.3431	0.3922	-	0.3922	0.3431	-
Retail ⁽¹⁾	pcu/hr /100m ²	0.2296	0.2434	-	0.3100	0.3563	-
Estimated Traffic Generation/Attraction							
Residential	450 flats	33	20	53	13	17	30
Research and Education Center ⁽³⁾	About 2,900 m ²	1	1	2	1	1	2
RCHE	100 places	3	4	7	4	3	7
Retail	562 m ²	2	2	4	2	3	5
Total		39	27	66	20	24	44

Notes: Gen. – Generation; Att. – Attraction

(1) TPDM mean trip rates are adopted.

(2) Trip rates derived in Table 4.5.

(3) The surveyed traffic generation and attraction of the existing building in Table 4.5 is adopted for the proposed re-provision.

4.4.4 As shown in **Table 4.6**, the proposed development would generate two-way traffic flows of 66 pcu/hr and 44 pcu/hr during the AM and PM peak hours, respectively. The development traffic was distributed onto the road work with reference to surveyed traffic flows and presented in **Figure 4.1**.

4.5 Reference and Design Flows

4.5.1 The 2035 Reference Flows, i.e., the traffic flows in the vicinity **without** the traffic flows generated by the proposed development, were estimated based on the following equation.

$$\text{2035 Reference Flows} = \text{2025 Existing Flows} \times (1 + 1.0\%)^{10} + \text{Traffic Flows Generated by the Planned/Committed Developments}$$

4.5.2 The 2035 Design Flows, i.e., the traffic flows in the vicinity **with** the traffic flows generated by the proposed development, were estimated based on the following equation:

$$\text{2035 Design Flows} = \text{2035 Reference Flows} + \text{Traffic Flows Generated by the Proposed Development}$$

4.5.3 The 2035 Reference and Design Flows are shown in **Figures 4.2** and **4.3**, respectively.

4.6 Junction Capacity Assessment

4.6.1 Junction capacity analysis was carried out for the assessment year 2035. The assessment results are shown in **Table 4.7** and the detailed calculation sheets are presented in **Appendix B**.

Table 4.7 Year 2035 Junction Capacity Assessment

No.	Junction	Junction Type/Index ⁽¹⁾	2035 Reference		2035 Design	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street	Signalized/ RC	84%	91%	84%	86%
J2	Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road	Signalized/ RC	46%	55%	143%	53%
J3	Tai Chung Kiu Road / Sha Kok Street	Signalized/ RC	47%	145%	46%	143%
J4	Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road	Signalized/ RC	38%	72%	36%	72%
J5	Yuen Wo Road / Sha Tin Rural Committee Road	Signalized/ RC	26%	20%	26%	20%
J6	Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road	Roundabout/ DFC	0.74	0.51	0.75	0.51
J7	Sha Tin Tau Road / Che Kung Miu Road	Signalized /RC	69%	134%	69%	134%
J8	Chui Tin Street / Che Kung Miu Road	Signalized /RC	41%	71%	41%	70%
J9	Sha Tin Centre Street / Pak Hok Ting Street	Priority/DFC	0.42	0.82	0.43	0.82

Note: (1) RC = Reserve Capacity for signalized junction; DFC = Design Flow to Capacity ratio for priority junction.

4.6.2 As shown in **Table 4.7**, the assessed junctions will operate with capacities during the peak hours in 2035 with the expected traffic growth and the additional traffic flows generated by the proposed development.

4.7 Pedestrian Traffic Generation

- 4.7.1 To project the future pedestrian conditions, the pedestrian flows generated by the proposed development were being considered. Since there is no established pedestrian trip rate in TPDM, reference was made to other sources.

Residential Component

- 4.7.2 The pedestrian generation of the residential component of the proposed development (excluding those persons using private vehicles to leave the Site) on the surrounding footpaths is estimated based on the tentative flat mix, the overall population of the development is about 1,260. Reference has been made to the published "Travel Characteristics Survey (TCS) 2022 Final Report".
- 4.7.3 According to the Report, the daily mechanized trip rate per population is 1.69 trips (two-way) and the morning and evening peak hour accounted for about 13% and 14% of the daily trips for the two-way trips. Also, the Report stated that out of the total 12,363,000 mechanized trips, around 11,404,000 trips are home-based trips, which means that around 92% ($11,404,000 / 12,363,000 = 92\%$) are outbound trips, therefore, it is assumed that 92% of the trips are in outbound direction in the AM peak hour, the outbound and inbound trips are swapped for PM peak hour. Based on the above, the estimated outbound and inbound trips are summarized in **Table 4.8**.

Table 4.8 Estimated Pedestrian Generation for the Residential Component

Item	Total
Design Population [a]	1,260 ⁽¹⁾
Daily Mechanized Trips (2-way) [b] = [a] x 1.69	2,130
AM Peak Hour Trips (2-way) [c] = [b] x 13%	277
Outbound Trips [d] = [c] x 92%	255
Inbound Trips [e] = [c] – [d]	22
PM Peak Hour Trips (2-way) [f] = [b] x 14%	299
Outbound Trips [g] = [f] x 8%	24
Inbound Trips [h] = [f] – [g]	275

Notes: (1) 450 units (proposed number of flats) x 2.8 (population per household) = 1,260

RCHE and Retail Component

- 4.7.4 The in-house pedestrian trip generation surveys were retrieved to derive the pedestrian trip rates for each type of development. The survey result and the derived trip rates are presented in **Table 4.9**.

Table 4.9 Pedestrian Trip Rates from Surveyed Buildings

Building (Type of Building)	Address	Unit/ Content	AM Peak Hour			PM Peak Hour		
			Gen.	Att.	2-way	Gen.	Att.	2-way
Pedestrian Generation – RCHE (persons/hr)								
Caritas Harold H.W. LEE Care and Attention Home	17 Kong Pui Street, Shatin	276 places	8	79	87	59	11	70
SAGE Kwan Fong Nim Chee Home for the Elderly	27 Chap Wai Kon Street, Shatin	204 places	9	27	36	49	9	58
Pedestrian Generation – Retail (persons/hr)								
Pok Hong Shopping Centre	Sha Kok St , Shatin	3,300 m ²	126	132	258	191	199	390
Derived Trip Rates for RCHE (persons /hr/10 place)								
Caritas Harold H.W. LEE Care and Attention Home			0.29	2.86	–	2.14	0.40	–
SAGE Kwan Fong Nim Chee Home for the Elderly			0.44	1.32	–	2.40	0.44	–
Largest Trip Rates ⁽¹⁾			0.44	2.86	–	2.40	0.44	–
Derived Trip Rates for Retail (persons /hr/100 m ²)								
Pok Hong Shopping Centre			3.82	4.00	–	5.79	6.03	–

Note: Gen. – Generation; Att. – Attraction.

(1) The largest rates are adopted for conservative assessment purpose.

Research and Education Center and PRC

- 4.7.5 No pedestrian trip is observed at the existing research and education center at the time of survey, a nominal trip of 10 persons is adopted for conservative assessment purpose. Having considered that PRC is anticipated to serve the local community which is not anticipated to generate traffic during peak hours, it is excluded from the subsequent assessment.
- 4.7.6 Based on the above, pedestrian generation and attraction of the proposed development are estimated and tabulated in **Table 4.10**.

Table 4.10 Estimated Pedestrian Traffic Generation of the Proposed Development

Use	Unit/ Content	AM Peak Hour			PM Peak Hour		
		Gen.	Att.	Total	Gen.	Att.	Total
Adopted Pedestrian Trip Rates ⁽¹⁾							
RCHE	persons/hr/10 place	0.44	2.86		2.40	0.44	–
Retail	persons/hr/100m ²	3.82	4.00	–	5.79	6.03	–
Estimated Pedestrian Generation of the Proposed Development							
Residential ⁽²⁾	450 flats	255	22	277	24	275	299
Research and Education Center	About 2,900 m ²	10	10	20	10	10	20
RCHE	100 places	5	29	34	24	5	29
Retail	562 m ²	22	23	45	33	34	67
Total		292	84	376	91	324	415

Notes: Gen. – Generation; Att. – Attraction.

(1) The pedestrian trip rates derived in Table 4.9 are adopted.

(2) Pedestrian generation and attraction estimated in Table 4.8 are adopted.

4.7.7 Based on the above, the proposed development is estimated to generate 2-way pedestrian flows of 376 and 415 persons/ hour during AM and PM peak hours respectively.

4.8 Pedestrian Facilities Review

4.8.1 According to on-site observation, crossings and footpaths (wider than 2m) are provided in the vicinity of the site. Reference was made to TPDM, a footpath of 2m wide can accommodate two-way pedestrian flows of 1,980 ped/hr with a Level Of Service (LOS) C, calculation is shown below.

$[2\text{m (footpath width)} - 0.5\text{m (horizontal clearance)} - 0.5\text{m (horizontal clearance)}] \times 33 \text{ ped/min/m (LOS C)} \times 60 \text{ minutes} = 1,980 \text{ ped/hr.}$

4.8.2 The pedestrian trips (415 ped/hr) generated by the proposed development would only occupy 21% ($415 / 1,980 = 21\%$) of the capacity of the nearby footpaths which is minimal. Based on the above, the pedestrian facilities in the vicinity are considered sufficient to cater the demand of the proposed development.

4.9 Public Transport Services Review

4.9.1 To estimate the pedestrian flows to / from the major public transport facilities, it is assumed that all the above pedestrian flows would take the public transport services.

4.9.2 In order to establish the passenger demand for the different public transport facilities, reference was made to 2021 Population Census. The mode of transport of building groups in Sha Tin area is shown in **Table 4.11**.

Table 4.11 Mode of Transport of Building Groups in Sha Tin Area

Location	Building Group	Type	Population	Mode of Transport						
				Railway	On Foot	Bus	School Bus	Public Light Bus	Others ⁽¹⁾	Total
Sha Tin	ST0062	Work	1,558	538	793	134	-	0	93	1,558
		Study	216	35	121	41	0	-	19	216
	ST0063	Work	929	342	461	89	-	37	0	929
		Study	268	53	91	113	0	-	11	268
	ST0108	Work	1,353	228	813	20	-	16	276	1,353
		Study	547	13	200	134	127	-	73	547
	Total		4,871	1,209	2,479	531	127	53	472	4,871
Existing Split				24.8%	50.9%	10.9%	2.6%	1.1%	9.7%	100.0%
Adjusted split for the proposed development ⁽²⁾				28.6%	58.8%	12.6%	-	-	-	100.0%

Notes: Building Group ST0062 refers to (Tai Wai) Chun Shek Estate - Shek Fai / Shek Ying / Shek Jing House (Shing Tin Street 1980's residential buildings).

Building Group ST0063 refers to (Tai Wai) Chun Shek Estate - Shek Yuk House (Shing Tin Street 1980's residential buildings).

Building Group ST0108 refers to (Tai Wai) The Riverpark (Che Kung Miu Road 2000's private residential buildings).

(1) Others includes private car, company bus/van, taxi or others (for mode of transport to place of work) and public light bus, residential coach service, private car or others (for mode of transport to place of study).

(2) Having considered some of the transport modes are not likely to provide additional service, they are excluded from the split for conservative assessment purpose.

4.9.3 The passenger demand induced by the proposed development of different transport modes is estimated in **Table 4.12**.

Table 4.12 Estimated Passenger Demand for the Different Mode of Transport

Mode of Transport	Modal Split (for the Proposed Development)	Estimated Peak Hour Passenger Demand (pax. / hr)					
		AM Peak			PM Peak		
		Gen.	Att.	Total	Gen.	Att.	Total
Bus	28.6%	83	24	107	26	92	118
Railway	58.8%	172	49	221	54	191	245
On Foot	12.6%	37	11	48	11	41	52
Total	100.00%	292	84	376	91	324	415

Note: Gen. – Generation; Att. – Attraction.

4.9.4 Based on the above, the proposed development will only generate 83 pax. and 26 pax. during AM and PM peak hour, respectively, which can be catered by additional 1 bus trip during AM and PM peak hour.

5 PROPOSED TRANSPORT FACILITIES PROVISIONS

5.1 Access Arrangement

- 5.1.1 There is an existing vehicular access located at Lion Rock Tunnel Road serving the Site and it is a left-in/left-out priority junction arrangement. The existing priority junction will be improved with standard road markings as shown in **Figure 5.1**.
- 5.1.2 In addition, a 5.5m Right of Way is delineated to the northeast of the Application Site connecting the Application Site and a local access road connecting to Tai Chung Kiu Road. The Right of Way can be an alternative access to serve as emergency vehicular access for the proposed development.

5.2 Internal Transport Facilities

Residential & Retail Component

- 5.2.1 The requirements of car parking and loading/unloading facilities for the proposed residential development and retail component should be provided in accordance with the latest Hong Kong Planning Standards and Guidelines (HKPSG) as listed out in **Table 5.1**.

RCHE Component

- 5.2.2 However, there is no specific parking requirement under HKPSG for RCHE use, car parking and loading/unloading facilities are proposed mainly to meet the operational needs. Reference was made to two existing RCHE, namely the Caritas Harold H.W. LEE Care and Attention Home (276 beds and 8 car parking spaces) and the SAGE Kwan Fong Nim Chee Home for the Elderly (204 beds and 6 car parking spaces). According to on-site observation at the public roads near the two existing RCHEs, no illegal parking is observed which implies that the provision of transport facilities is sufficient for the two RCHEs. Taking into consideration of the proposed RCHE with 100 beds is smaller than the two RCHEs, it is suggested to provide 8 car parking spaces for the proposed RCHE.

Research and Education Centre

- 5.2.3 There is no specific parking requirement under HKPSG for research and education centre use. To meet the operational needs, it is suggested to provide 8 car parking spaces for the use.

Parents/Relative Resource Centre (PRC) Component

- 5.2.4 Having considered that PRC is anticipated to serve the local community, the visitors are anticipated travelling by public transport services during non-peak hours which will not induce internal transport facilities demand.

Table 5.1 Proposed Transport Facilities Provisions

Type	HKPSG's Requirements					Required Provision	Proposed Provision
Proposed Residential Development – 450 units							
Car Parking Space	Parking Requirements = GPS x R1 x R2 x R3 where GPS = 1 space per 4 – 7 units					9 – 15 33 – 57 13 – 23	15 57 23
	Flat Size (FS)	No. of Unit	R1	R2	R3		
	FS ≤ 40m ²	150	0.5	0.75	1.0		
	40m ² < FS ≤ 70m ²	250	1.2				
	70m ² < FS ≤ 100m ²	50	2.4				
	For Visitors (2 blocks) 5 spaces per block with more than 75 units					10	10
	TOTAL					65 – 105	105
Loading / Unloading Bay	1 bay per residential block					2	2
Motorcycle Parking Space	1 space per 100 – 150 flats					3 – 5	5
Bicycle Parking Space	1 bicycle parking space per 5 flats for residents; 1 bicycle parking space per 45 flats for visitors.					90 10	90 10
	TOTAL					100	100
Proposed Research and Education Centre							
Car Parking Space	No specific requirements under HKPSG.					-	8
Loading / Unloading Bay	No specific requirements under HKPSG.					-	0
Proposed RCHE (100 places)							
Car Parking Space	No specific requirements under HKPSG.					-	8
Loading / Unloading Bay	No specific requirements under HKPSG.					-	1
Light Bus / Ambulance Parking Space	No specific requirements under HKPSG.					-	2
Proposed Retail (About 562 m ² GFA)							
Car Parking Space	1 car space per 150 - 300m ² GFA					2 – 4	4
Loading / Unloading Bay	1 loading/ unloading bay for goods vehicles for every 800 to 1,200 m ² , or part thereof, GFA					1	1
Motorcycle Parking Space	10% of the total provision for private cars					1	1
Bicycle Parking Space	1 bicycle parking space per 200 – 300 m ² GF					2 – 3	3

Type	HKPSG's Requirements	Required Provision	Proposed Provision
Proposed Parents/Relative Resource Centre (PRC) (About 238 m² GFA)			
Car Parking Space	No specific requirements under HKPSG.	-	0
Loading / Unloading Bay	No specific requirements under HKPSG.	-	0

5.2.5 **Table 5.2** lists out the dimensions required for each type of spaces to follow. The proposed car park layout plan is enclosed in **Appendix C**.

Table 5.2 Summary of Overall Transport Facilities Provisions

Facilities	Dimensions	Proposed Provision					
		Residential	Research and Education Centre	RCHE	Retail	PRC	Total
Car Parking Space	2.5m (W) x 5.0m (L) x 2.4m (H)	103	7	7	3	0	120
Disabled Car Parking Space	3.5m (W) x 5.0m (L) x 2.4m (H)	2	1	1	1	0	5
Motorcycle Parking Space	1.0m (W) x 2.4m (L) x 2.4m (H)	5	-	-	1	0	6
Goods Vehicle Loading / Unloading Bay	3.5m (W) x 11.0m (L) x 4.7m (H)	2	0	1	1	0	4
Light Bus/ Ambulance Parking Space	3.0m (W) x 9.0m (L) x 3.3m (H) ⁽¹⁾	-	-	2	-	0	2
Bicycle Parking Space	-	100	-	-	3	0	103

Note: (1) According to HKPSG, the dimension for light bus space is 3.0m(W) x 8.0m(L) x 3.3m(H), the dimension for ambulance parking space is 3.0m(W) x 9.0m(L). Therefore, it is proposed to provide spaces of 3.0m(W) x 9.0m(L) x 3.3m(H) for share use by both vehicle types.

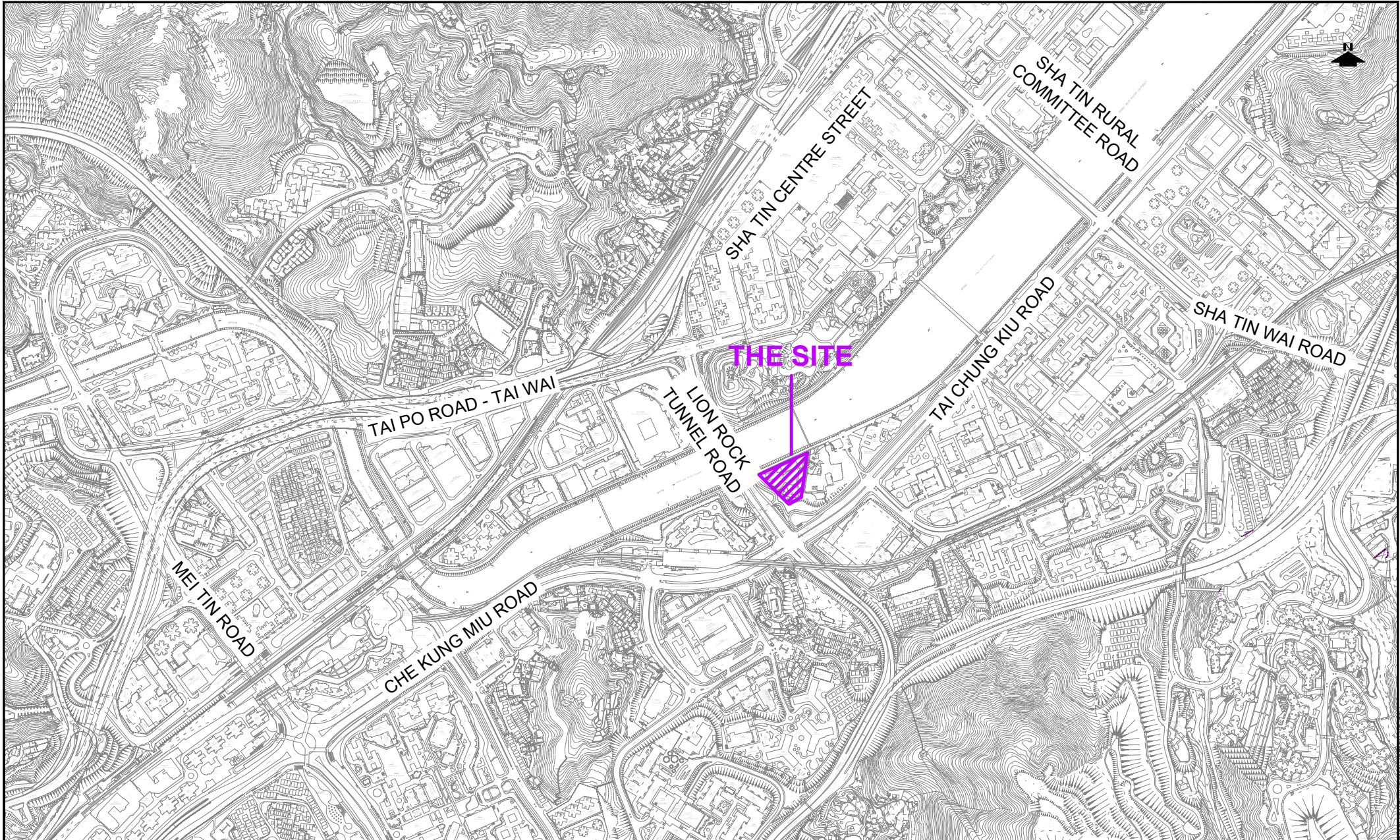
6 SUMMARY AND CONCLUSION

6.1 Summary

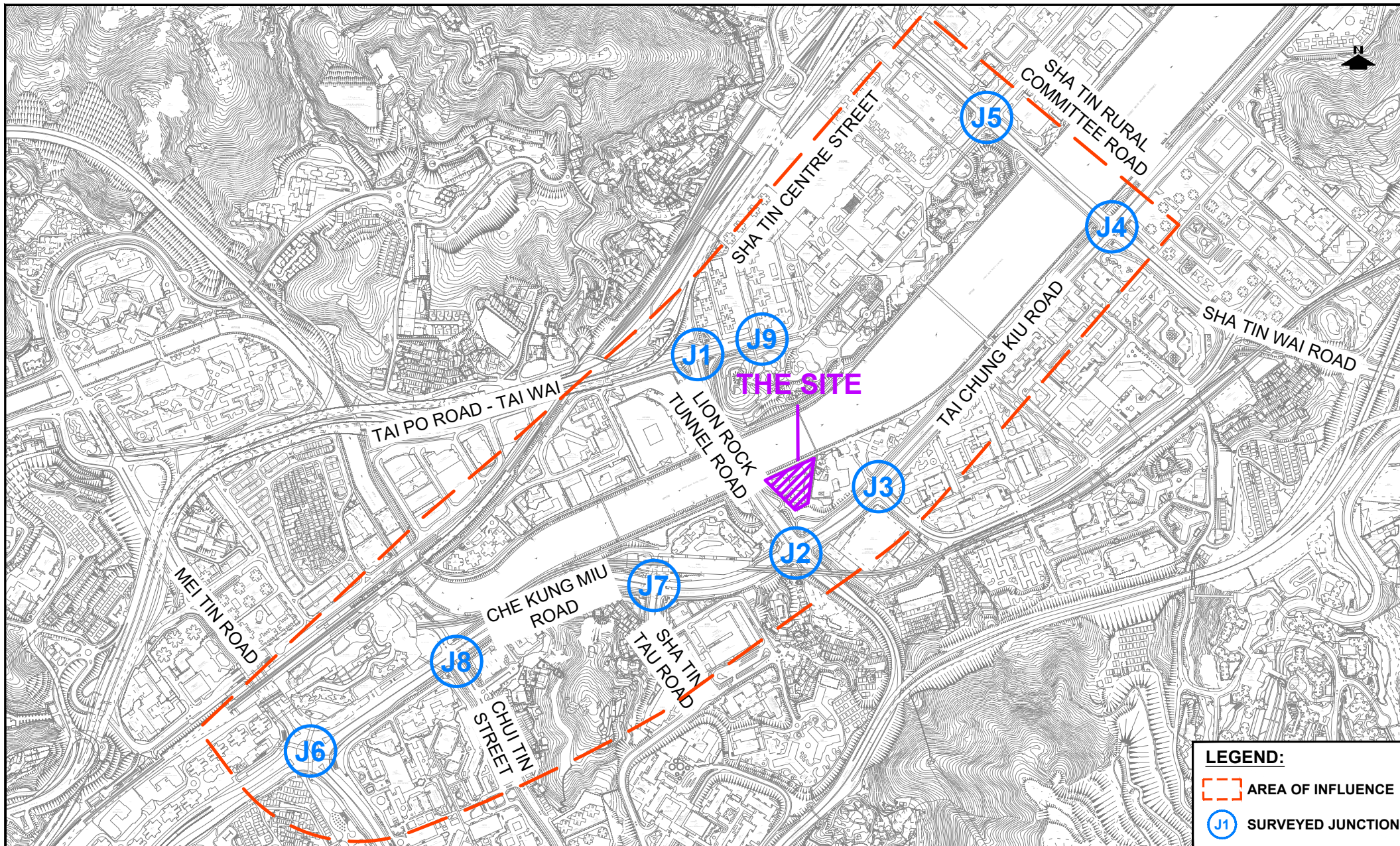
- 6.1.1 The owner of the lot in STTL 310 (hereafter referred to "the Site") at Lion Rock Tunnel Road, Sha Tin, intends to develop the Site into a residential development. The Site is zoned as "Open Space" ("O") on the Draft Sha Tin Outline Zoning Plan No. S/ST/39. It is necessary to submit a S12A planning application for the proposed residential development and a traffic impact assessment study is necessary to support the application.
- 6.1.2 A traffic count survey was carried out on 11 February 2025 (Tuesday) during the peak hour period from 07:00 to 09:00 and 17:00 to 19:00 at the identified key junctions, and the AM and PM peak hours were found to be 07:30 – 08:30 and 17:45 – 18:45, respectively. The capacity of the key junctions in the vicinity of the Site was analysed and they are operating satisfactorily, except J4 is operating near its capacity during AM peak hour.
- 6.1.3 The proposed development would generate two-way traffic flows of 66 pcu/hr in the AM peak, 44 pcu/hr in the PM peak. By assigning the additional development traffic to the 2035 Reference Flows, the 2035 Design Flows were obtained.
- 6.1.4 Junction capacity assessments were carried out at the key junctions in the vicinity for the year 2035. The results have indicated that all junctions will operate satisfactorily for both reference and design scenarios. Therefore, it is anticipated that the proposed development will not induce significant traffic impact to the surrounding road network.
- 6.1.5 There is an existing vehicular access located at Lion Rock Tunnel Road serving the Site and it is a left-in/left-out priority junction arrangement. The existing priority junction will be slightly modified to enhance the junction operation efficiency.
- 6.1.6 It is proposed to provide a total of 125 car parking spaces (including 120 typical car parking spaces and 5 disable car parking spaces), 4 loading/unloading spaces, 6 motorcycle parking spaces, 2 light bus/ambulance parking spaces and 103 bicycle parking spaces within the proposed development. The internal transport facilities of the proposed development can meet the requirements as set out in the latest HKPSG.

6.2 Conclusion

- 6.2.1 From the assessment results, it can be concluded that the proposed development will have no significant adverse traffic impact on the surrounding road network. The development proposal is considered acceptable from the traffic engineering point of view.



PROJECT NO. 40969		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN		DRAWING NO. FIGURE 1.1	REV. .
DESIGNED SKL	DATE JAN 2025	DRAWING TITLE LOCATION PLAN		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE 1:10000 @ A4				
CHECKED SLN					



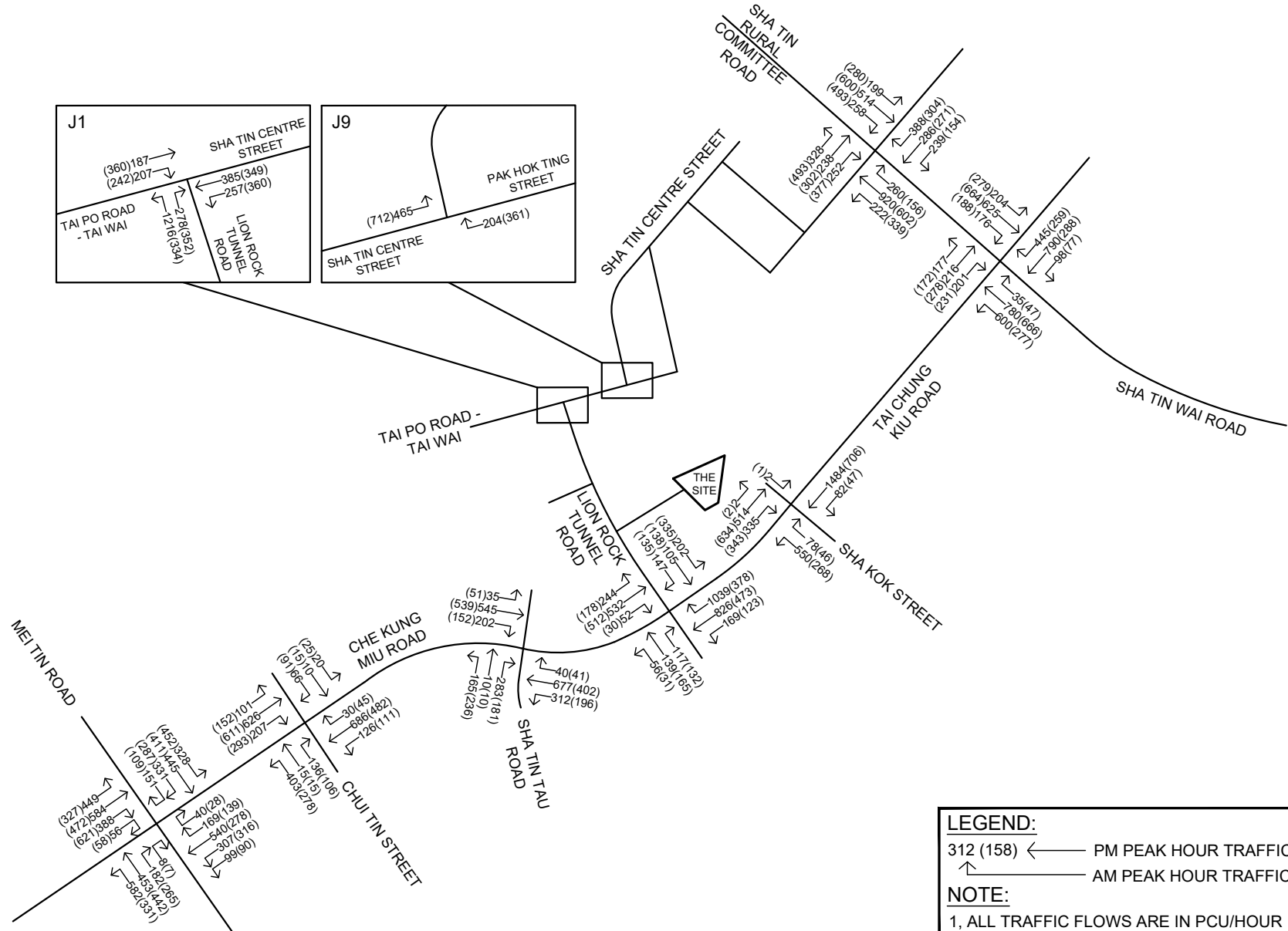
LEGEND:

AREA OF INFLUENCE

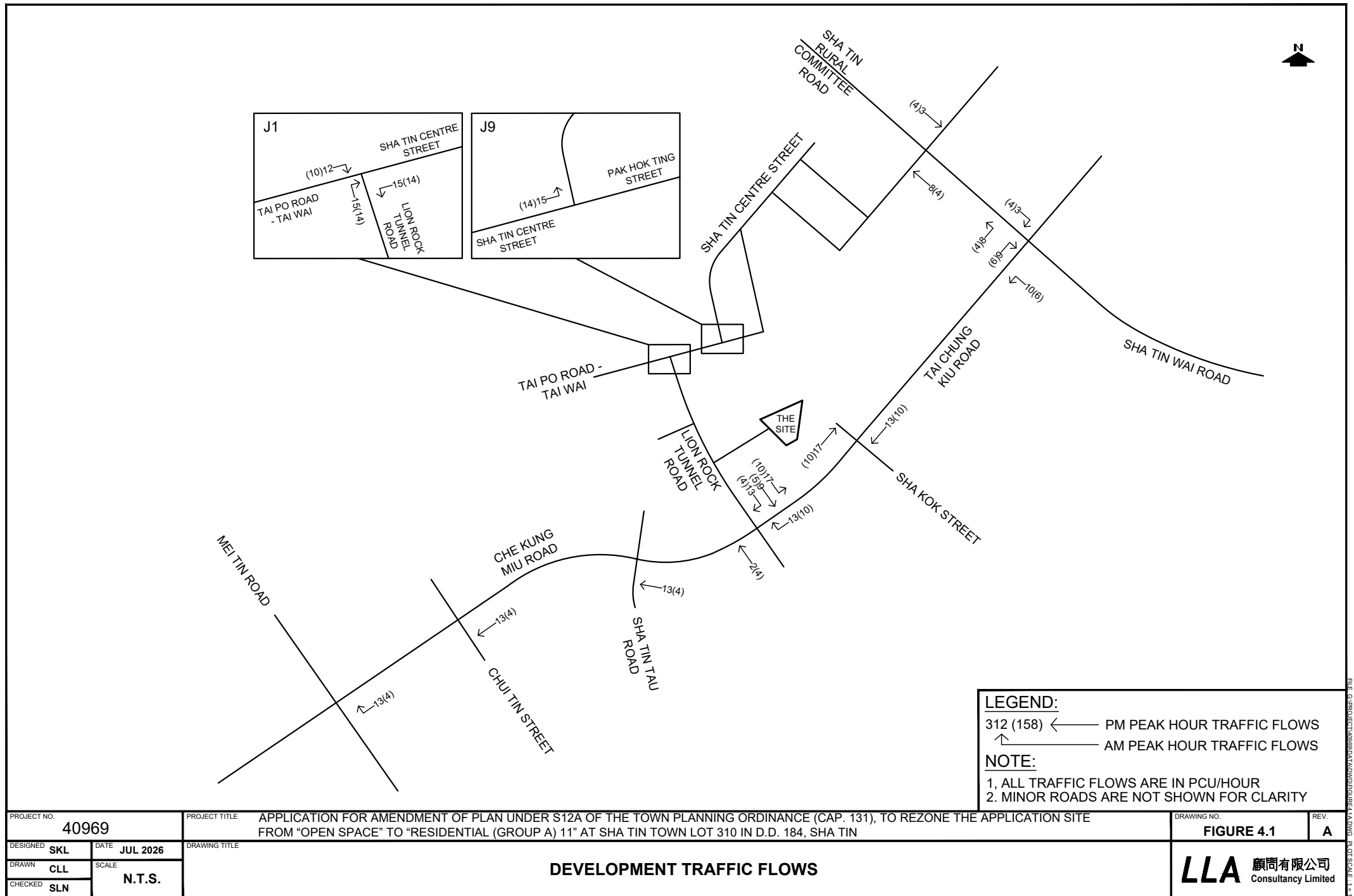
J1

SURVEYED JUNCTION

PROJECT NO. 40969		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN		DRAWING NO. FIGURE 3.1	REV. A
DESIGNED SKL	DATE JUN 2026	DRAWING TITLE LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE 1:10000 @ A4				
CHECKED SLN					



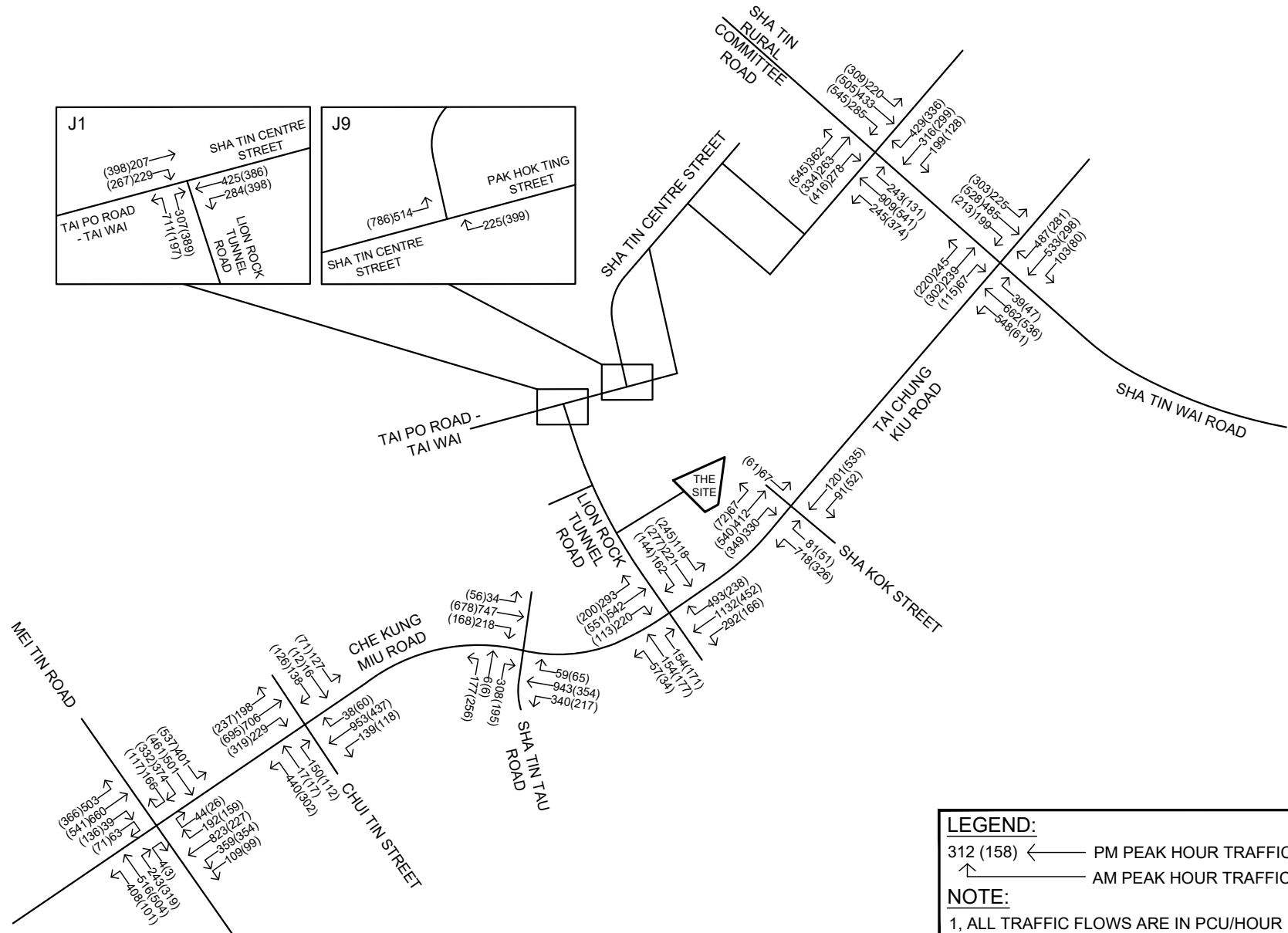
PROJECT NO. 40969		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN		DRAWING NO. FIGURE 3.2	REV. A
DESIGNED SKL	DATE JUL 2026	DRAWING TITLE 2025 EXISTING TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.				
CHECKED SLN					



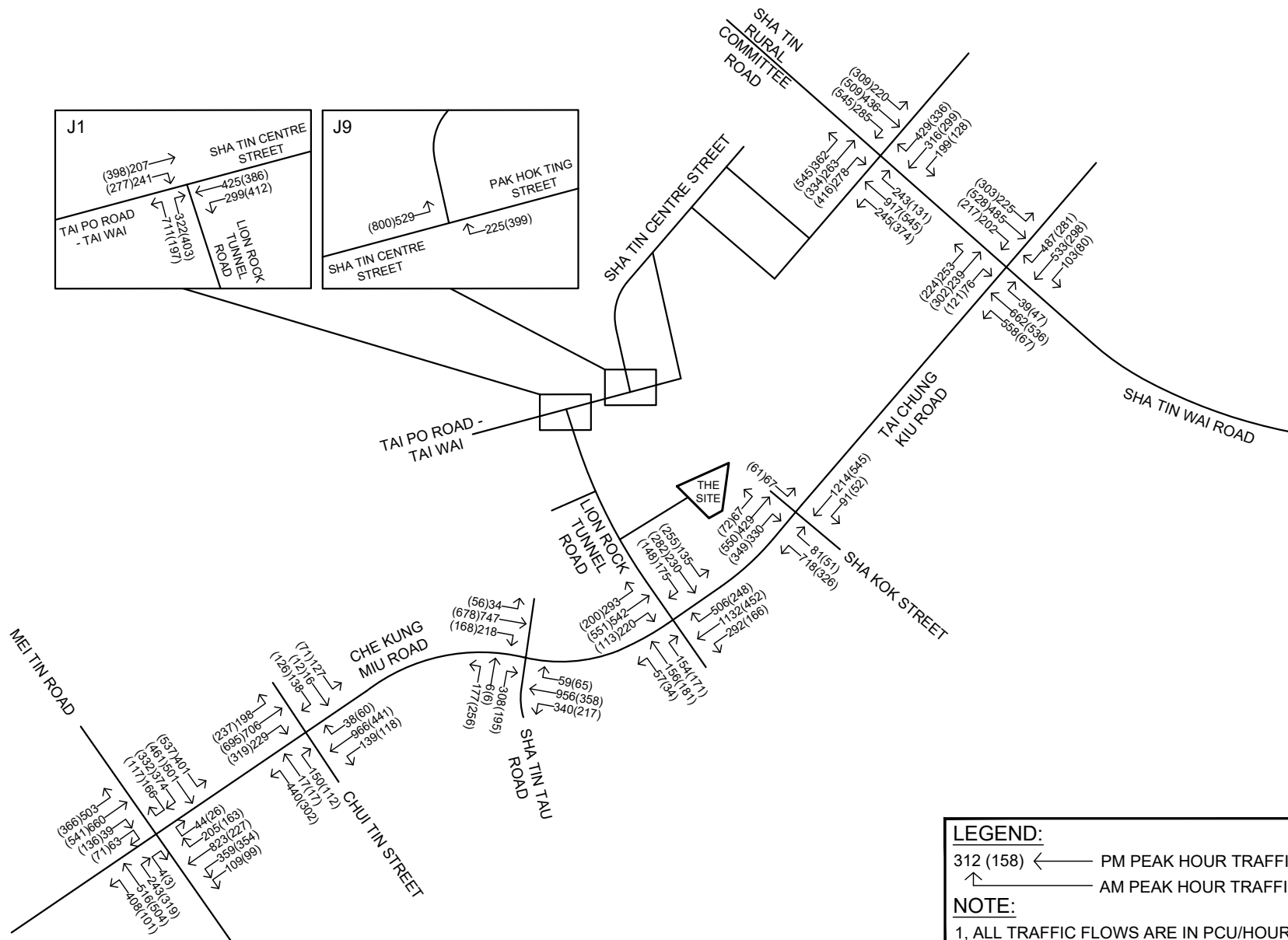
PROJECT NO.		40969
DESIGNED	SKL	DATE JUL 2026
DRAWN	CLL	SCALE N.T.S.
CHECKED	SLN	

PROJECT TITLE		APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN
DRAWING TITLE		DEVELOPMENT TRAFFIC FLOWS

DRAWING NO.	FIGURE 4.1	REV.	A
LLA 顧問有限公司 Consultancy Limited			



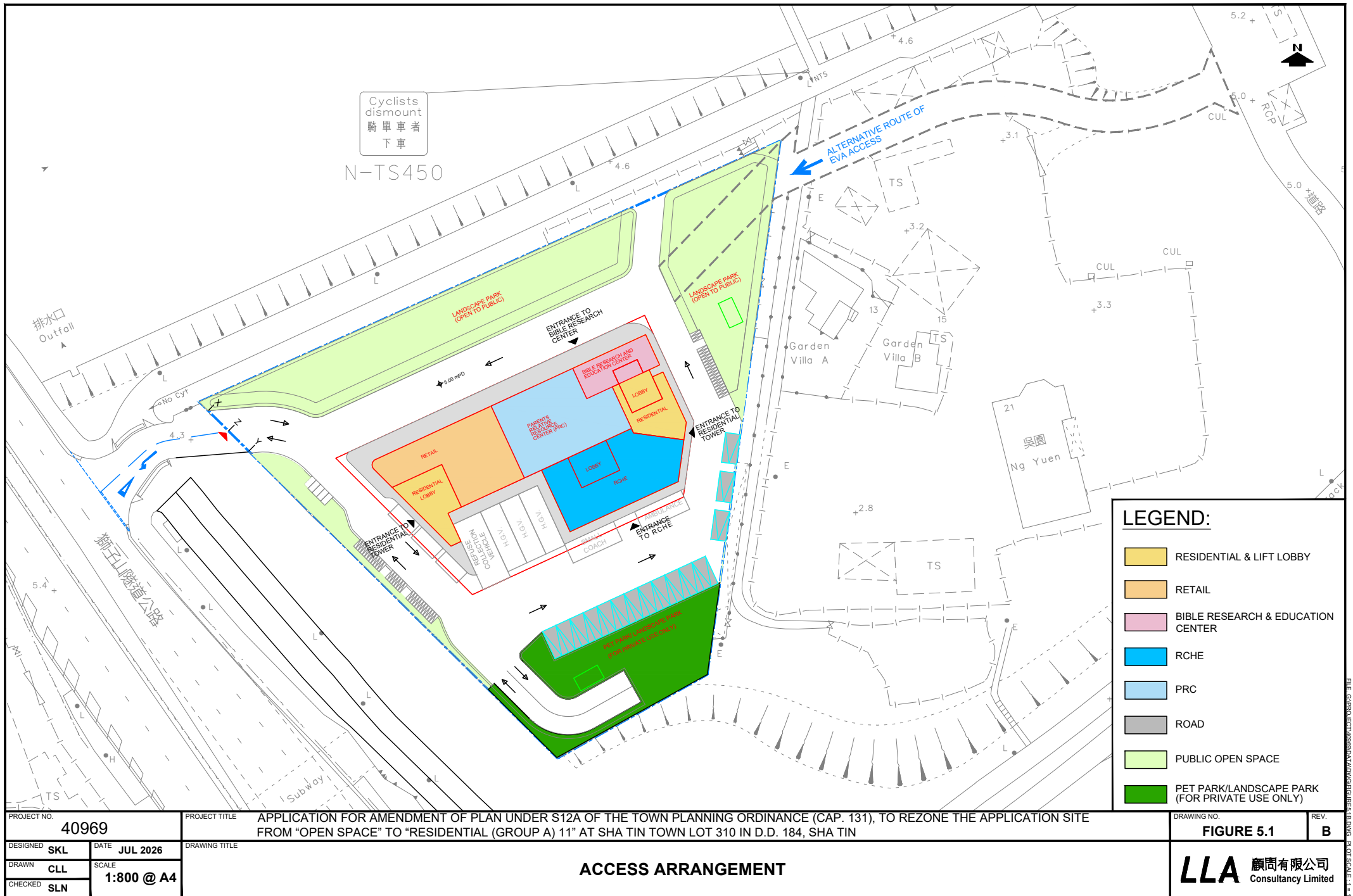
PROJECT NO. 40969		PROJECT TITLE APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN		DRAWING NO. FIGURE 4.2	REV. A
DESIGNED SKL	DATE JUL 2026	DRAWING TITLE 2035 REFERENCE TRAFFIC FLOWS		LLA 顧問有限公司 Consultancy Limited	
DRAWN CLL	SCALE N.T.S.				
CHECKED SLN					



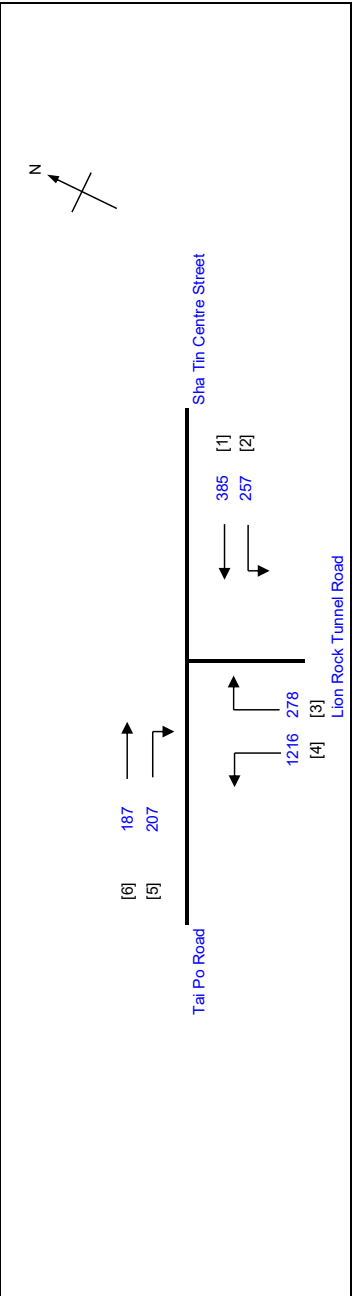
PROJECT NO.		40969
DESIGNED	SKL	DATE JUL 2026
DRAWN	CLL	SCALE
CHECKED	SLN	N.T.S.

PROJECT TITLE		APPLICATION FOR AMENDMENT OF PLAN UNDER S12A OF THE TOWN PLANNING ORDINANCE (CAP. 131), TO REZONE THE APPLICATION SITE FROM "OPEN SPACE" TO "RESIDENTIAL (GROUP A) 11" AT SHA TIN TOWN LOT 310 IN D.D. 184, SHA TIN
DRAWING TITLE		2035 DESIGN TRAFFIC FLOWS

DRAWING NO.	FIGURE 4.3	REV.	A
LLA 顧問有限公司		Consultancy Limited	



Appendix A
Junction Capacity Assessments
- Existing Scenario

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2025 Existing AM		Checked By:	
				FILENAME : J1_LRTR_TPRTW_STCS.xlsx		Reviewed By:	
							

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:		SKL	Jul-26
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2025 Existing PM		Checked By:		SLN	Jul-26
						Reviewed By:		SLN	Jul-26

No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Cm Yult R.C.ult Cp Ymax = 3 = 90 sec = 0.365 = 13 sec = 1997 pcu = 38.6 sec = 20.5 sec = 0.803 = 119.6 % = 21.9 sec = 0.856									
R.C.(C) = (0.9*Ymax-Y)*100% = 111 %									

Pedestrian Phase	Stage	Green Time Required SG	Delay FG	Green Time Provided SG	Delay FG

Movement	Stage	Lane	No. of lane	Radius	O	N	Straight-Ahead	Movement		Proportion of Turning Vehicles	Sat. Flow	Flare Lane	Flare Effect	Site Factor	Site Effect	Gradient Effect	Revised Sat. Flow	y	Greater y	L	g (required)	g (input)	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
6	1	3.70	1			N	1985	196	196	0.00	1985						1985	0.099	0.099	13	21	21	0.427	18	29
5,6	1	3.70	1	30			2125	207	43	0.21	2103						2103	0.098	0.098		21	21	0.427	18	29
5	1	3.70	1	30			2125	199	199	1.00	2024						2024	0.098	0.098		21	21	0.427	18	29
4	1,2	3.70	1	11		N	1985	334	334	1.00	1747	40	407				2154	0.155	0.155		33	59	0.427	30	21
3	2	3.70	1	15			2125	352	352	1.00	1932						1932	0.182	0.182		38	38	0.427	30	18
2	2,3	3.10	2	8		N	3990	360	360	1.00	3360						3360	0.107	0.107		23	56	0.427	18	27
1	3	3.10	2	8			4130	349	349	0.00	4130						4130	0.085	0.085		18	18	0.427	18	30

Stage 1				Stage 2				Stage 3			
G= 20 Int = 6				G= 37 Int = 5				G= 17 Int = 5			
A				B				C			

NOTE :				O - OPPOSING TRAFFIC	N - NEAR SIDE LANE	SG - STEADY GREEN	FG - FLASHING GREEN	PEDESTRAIN WALKING SPEED = 1.2m/s		QUEUEING LENGTH = AVERAGE QUEUE * 6m	
--------	--	--	--	----------------------	--------------------	-------------------	---------------------	-----------------------------------	--	--------------------------------------	--

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J2 Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road

2025 Existing AM

40969

Prepared By:

Checked By:	
-------------	--

Reviewed By:

SKL

[illegible]

NTS	
-----	--

NTS	
-----	--

[illegible]

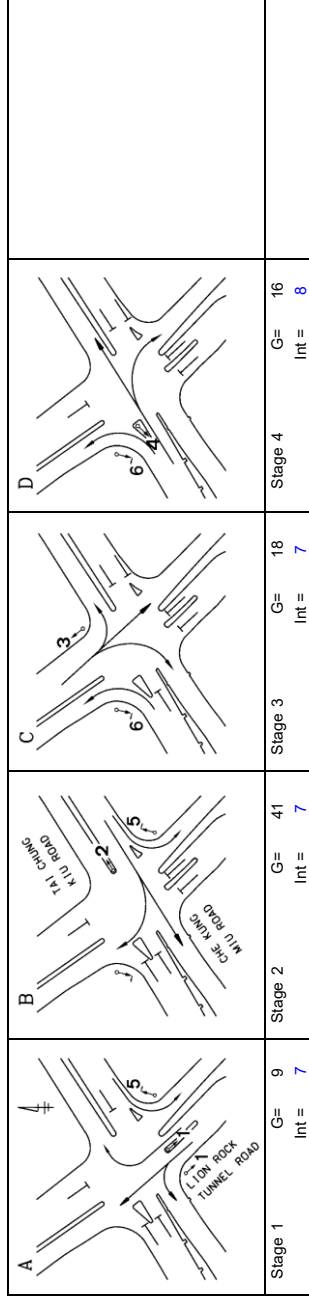
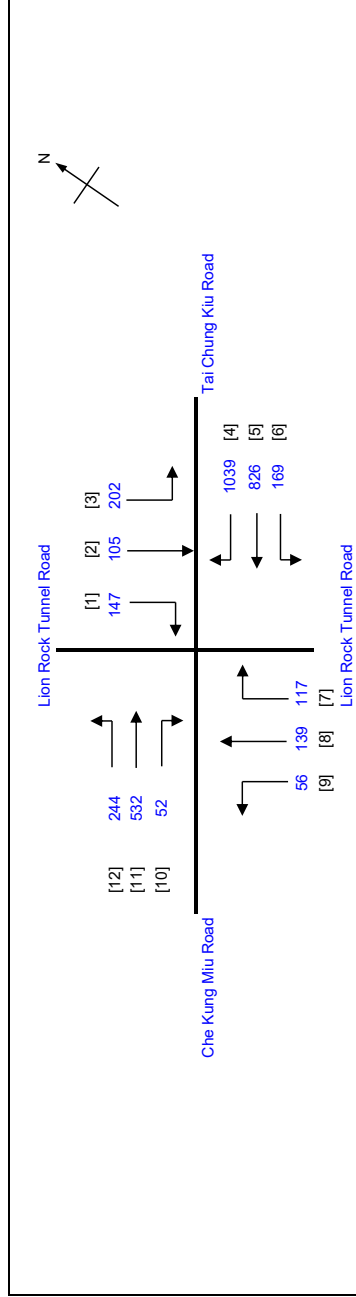
--	--

41-26

4-26

	2
--	---

3	2



Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m / lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9	1	3.40	1	12		N	1955	56		56	1.00	1738							1738	0.032		25	5	10	0.704	12	96	
8	1	3.40	2				4190	139		139	0.00	4190							4190	0.033			5	10	0.704	12	67	
7	1	3.10	1	18			2065		117	117	1.00	1906							1906	0.061	0.061		10	10	0.704	18	68	
6	1,2	3.00	1	13		N	1915	169		169	1.00	1717							1717	0.098			16	52	0.704	24	58	
5	2	3.00	2				4110	826		826	0.00	4110							4110	0.201			32	42	0.704	54	36	
4,5	2	3.00	1	33			2055			520	1.00	1966							1966	0.265	0.265		42	42	0.704	60	32	
4	2	3.00	1	33			2055		519	519	1.00	1966							1966	0.264			42	42	0.704	60	32	
3	3	3.30	1	13		N	1945	202		202	1.00	1744							1744	0.116	0.116		19	19	0.704	30	54	
2	3	3.30	2				4170	105		105	0.00	4170							4170	0.025			4	19	0.704	9	74	
1	3	3.30	1	21			2085		147	147	1.00	1946							1946	0.076			12	19	0.704	24	62	
12	3,4	3.20	2	16		N	4010	244		244	1.00	3666							3666	0.067			11	36	0.704	21	56	
11	4	3.20	2				4150	439		439	0.00	4150							4150	0.106			17	17	0.704	33	47	
10,11	4	3.20	1	16			2075		117	93	0.56	1972							1972	0.106	0.106		17	17	0.704	30	54	

NOTE :

O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J3 Tai Chung Kiu Road / Sha Kok Street

2025 Existing AM

40969

Prepared By:

FILENAME:	J3_RC
-----------	-------

Checked By:

Reviewed By

INITIALS	
----------	--

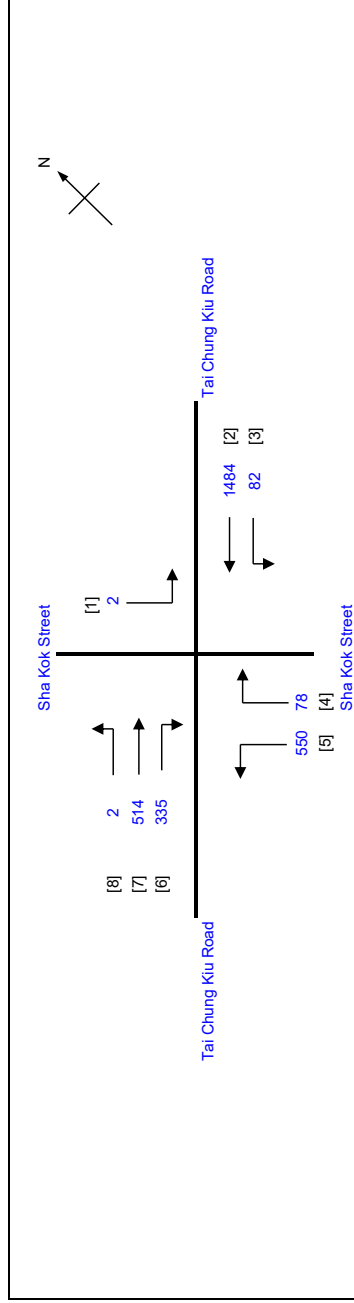
SKL	
-----	--

NTS	
-----	--

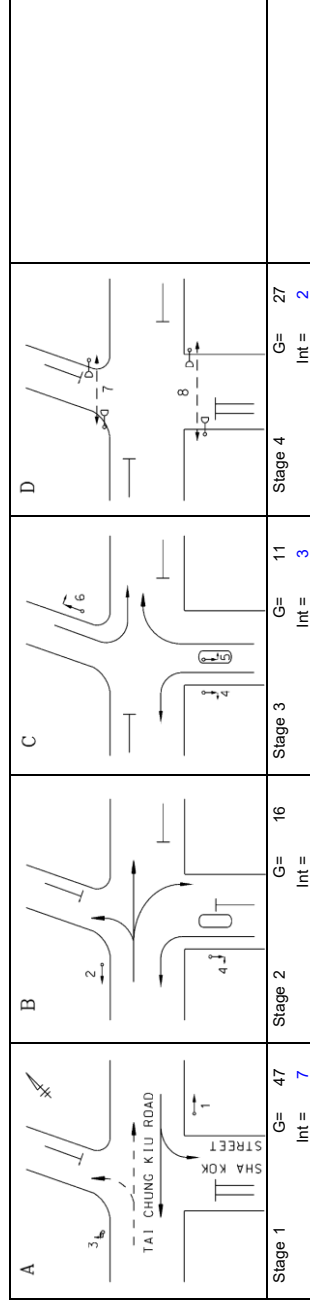
NTS	
-----	--

--

4



No. of stages per cycle	N =	4
Cycle time	C =	113 sec
Sum(y)	Y =	0.411
Loss time	L =	37 sec
Total Flow		3047 pcu
Co	= $(1.5 \cdot L + 5) / (1 - Y)$	102.8 sec
Cm	= $L / (1 - Y)$	62.8 sec
Yult	=	0.623
R.C. ult	= $(Yult \cdot Y) / Y^{**100\%}$	51.4 %
Cp	= $0.9 \cdot L / (0.9 - Y)$	68.1 sec
Ymax	= $1 - L/C$	0.673
R.C.(C)	= $(0.9 \cdot Ymax \cdot Y) / Y^{**100\%}$	47 %



Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
7,8 7	1,2	3.30	1	15		N	1945	2	247	249	0.01	1943								1943	0.128		10	24	64	0.611	36	43
	1,2	3.30	1				2085		267	267	0.00	2085								2085	0.128			24	64	0.611	36	42
2,3 2	1	3.20	1	13		N	1935	82	409	491	0.17	1898								1898	0.259			48	48	0.611	48	26
	1	3.20	2				4150		1075	1075	0.00	4150								4150	0.259	0.259		48	48	0.611	57	24
6	2	3.30	2	16			4170			335	1.00	3813								3813	0.088			16	16	0.611	27	46
5	2,3	3.30	2	13		N	4030	550		550	1.00	3613								3613	0.152	0.152		28	28	0.611	36	37
4 1	3	3.30	1	15			2085			78	1.00	1895								1895	0.041			8	12	0.611	12	66
	3	3.00	1	14		N	1915	2		2	1.00	1730								1730	0.001			0	12	0.611	0	830
PED	4																					27						

NOTE: O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S 2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184. Sha Tin

J3 Tai Chung Kiu Road / Sha Kok Street

2025 Existing PM

40969

Prepared By:

Checked By:

Reviewed By

Jul-2	
-------	--

Jul-2

Jul-2	
-------	--

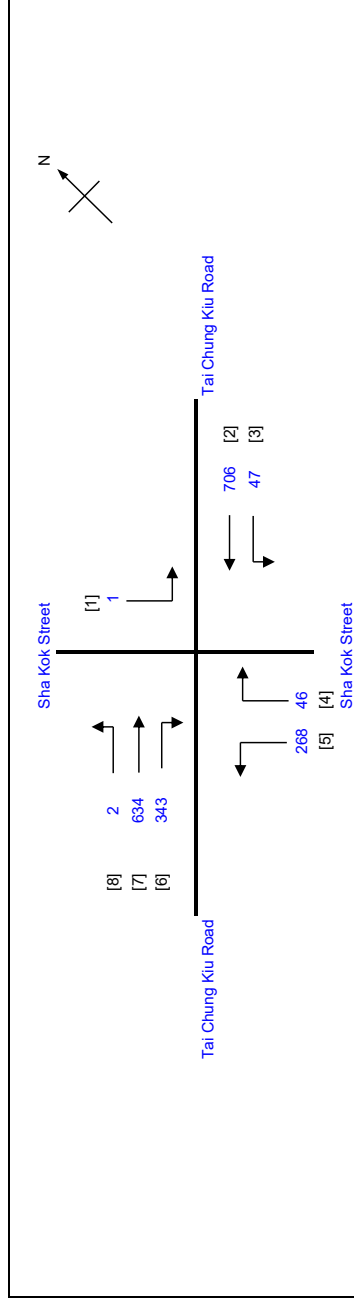
[illegible]

Jul-2	
-------	--

Jul-2

Jul-2	
-------	--

--	--



No. of stages per cycle	N =	4
Cycle time	C =	100 sec
Sum(y)	Y =	0.239
Loss time	L =	39 sec
Total Flow		2047 pcu
Co	= $(1.5L+5)/(1-Y)$	83.4 sec
Cm	= $L/(1-Y)$	51.2 sec
Yult		0.608
R.C.ult	= $(Yult-Y)*100\%$	154.2 %
Cp	= $0.9L/(0.9-Y)$	53.1 sec
Ymax	= $1-L/C$	0.610
R.C.(C)	= $(0.9-Ymax-Y)*100\%$	130 %

A	B	C	D	Stage 1 G= 31 Int= 5	Stage 2 G= 22 Int= 5	Stage 3 G= 5 Int= 3	Stage 4 G= 27 Int= 2
-----------------	-----------------	-----------------	-----------------	--	--	---------------------------------------	--

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m /lane)	Average Delay (seconds)
7,8 7	1,2	3.30	1	15		N	1945	2	305	307	0.01	1944								1944	0.158		12	40	55	0.392	30	20
	1,2	3.30	1				2085		329	329	0.00	2085								2085	0.158			40	55	0.392	30	20
2,3 2	1	3.20	1	13		N	1935	47	189	236	0.20	1892								1892	0.125	0.125		32	32	0.392	24	26
	1	3.20	2				4150		517	517	0.00	4150								4150	0.125	0.125		32	32	0.392	27	25
6	2	3.30	2	16			4170			343	1.00	3813								3813	0.090	0.090		23	23	0.392	21	31
5	2,3	3.30	2	13		N	4030	268		268	1.00	3613								3613	0.074			19	29	0.392	18	33
4 1	3	3.30	1	15			2065			46	1.00	1895								1895	0.024	0.024		6	6	0.392	6	49
	3	3.00	1	14		N	1915	1		1	1.00	1730								1730	0.001			0	6	0.392	0	454
PED	4																					27						

NOTE: O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J4 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road				2025 Existing AM		Checked By:	
				FILENAME : J4_TCKR_STWR_STOR.xlsx		Reviewed By:	
						INITIALS	
						DATE	
						SKL	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	
						SLN	

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J4 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road				2025 Existing PM		Checked By:	
				FILENAME : J4_TCKR_STWR_STCR.xlsx		Reviewed By:	
				INITIALS		DATE	
				SKL		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN		Jul-26	
				SLN			

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J6 Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road

ROUNDABOUT CALCULATION

2025 Existing AM

PROJECT NO.: 40969

FILENAME : J6 CKMR HMKR

REFERENCE NO.:

INITIALS

SKL

SLN

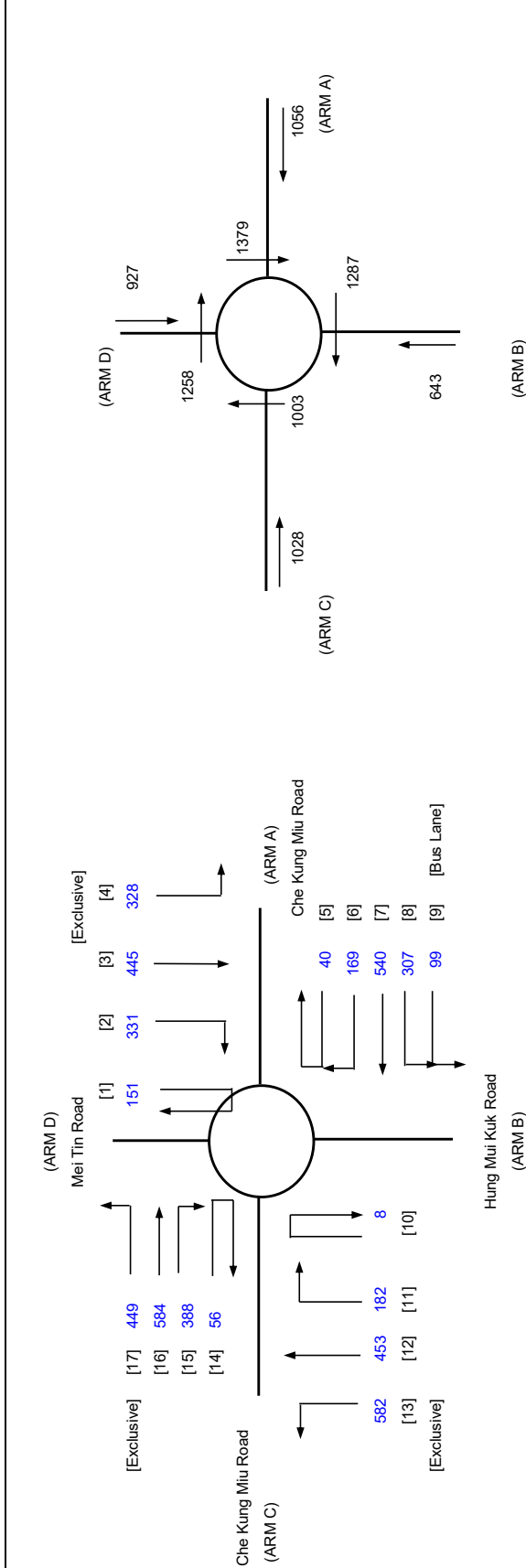
SLN

DATE

Jul-26

Jul-26

Jul-26



ARM

INPUT PARAMETERS:

V	=	Approach half width (m)	6.90	6.60	6.75	6.30
E	=	Entry width (m)	9.80	9.40	9.50	9.20
L	=	Effective length of flare (m)	28.00	19.00	41.00	22.00
R	=	Entry radius (m)	41.00	55.00	37.00	36.00
D	=	Inscribed circle diameter (m)	66.00	66.00	66.00	66.00
A	=	Entry angle (degree)	42.00	46.00	35.00	39.00
Q	=	Entry flow (pcu/h)	1056	643	1028	927
Qc	=	Circulating flow across entry (pcu/h)	1379	1287	1003	1258

OUTPUT PARAMETERS:

S	=	Sharpness of flare = $1.6(E-V)/L$	0.17	0.24	0.11	0.21
K	=	$1-0.00347(A-30)-0.978(1/R-0.05)$	0.98	0.98	1.01	0.99
X2	=	$V + ((E-V)/(1+2S))$	9.08	8.50	9.01	8.34
M	=	$EXP((D-60)/10)$	1.82	1.82	1.82	1.82
F	=	$303 \times X2$	2751	2576	2731	2527
Td	=	$1+(0.5/(1+M))$	1.18	1.18	1.18	1.18
Fc	=	$0.21 \times Td(1+0.2 \times X2)$	0.70	0.67	0.69	0.66
Qe*	=	$K(F-Fc \times Qc)$	1761	1675	2047	1681

DFC = Design flow/Capacity = Q/Qe

Total In Sum =

2363 PCU

DFC of Critical Approach = 0.60

LLA CONSULTANCY LIMITED

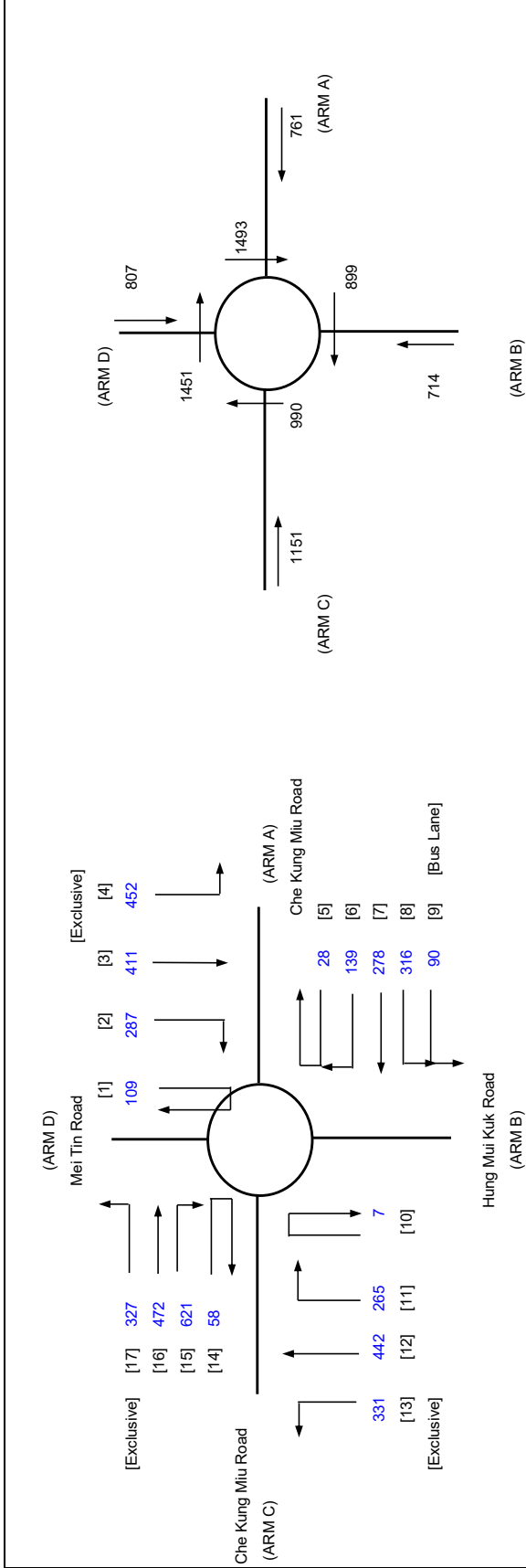
ROUNDABOUT CALCULATION

INITIALS			DATE		
SKL			Jul-26		
SLN			Jul-26		
SLN			Jul-26		
PREPARED BY:			40969		
CHECKED BY:			J6 CKMR HMKR		
REVIEWED BY:			REFERENCE NO.:		

J6 Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road

2025 Existing PM

PROJECT NO.: 40969
FILENAME : J6 CKMR HMKR
REFERENCE NO.:



ARM		A	B	C	D
INPUT PARAMETERS:					
V	= Approach half width (m)	6.90	6.60	6.75	6.30
E	= Entry width (m)	9.80	9.40	9.50	9.20
L	= Effective length of flare (m)	28.00	19.00	41.00	22.00
R	= Entry radius (m)	41.00	55.00	37.00	36.00
D	= Inscribed circle diameter (m)	66.00	66.00	66.00	66.00
A	= Entry angle (degree)	42.00	46.00	35.00	39.00
Q	= Entry flow (pcu/h)	761	714	1151	807
Qc	= Circulating flow across entry (pcu/h)	1493	899	990	1451
OUTPUT PARAMETERS:					
S	= Sharpness of flare = 1.6(E-V)/L	0.17	0.24	0.11	0.21
K	= 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	1.01	0.99
X2	= V + ((E-V)/(1+2S))	9.08	8.50	9.01	8.34
M	= EXP((D-60)/10)	1.82	1.82	1.82	1.82
F	= 303*X2	2751	2576	2731	2527
Td	= 1+(0.5/(1+M))	1.18	1.18	1.18	1.18
Fc	= 0.21*Td(1+0.2*X2)	0.70	0.67	0.69	0.66
Qe*	= K(F-Fc*Qc)	1683	1928	2056	1555
DFC = Design flow/Capacity = Q/Qe		0.45	0.37	0.56	0.52
Total In Sum =		2368		PCU	
DFC of Critical Approach =		0.56			

LLA CONSULTANCY LIMITED										TRAFFIC SIGNAL CALCULATION										INITIALS		DATE							
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin										PROJECT NO.: 40969										Prepared By:		SKL		Jul-26					
										2025 Existing AM										FILENAME : J7_STTR_CKMR.xlsx		Checked By:		SLN		Jul-26			
										J7 Sha Tin Tau Road / Che Kung Miu Road												Reviewed By:		SLN		Jul-26			
										No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Crm Yult R.C.ult Cp Ymax										N = C = Y = L = = (1.5*L+5)/(1-Y) = L/(1-Y) = (Yult-Y)*100% = 0.9*L/(0.9-Y) = 1-L/C		4 120 sec 0.386 20 sec 2269 pcu 57.0 sec 32.6 sec 0.750 94.4 % 35.0 sec 0.833							
										R.C.(C) = 0.9*Ymax-Y/Y*100%										= 94 %									
										Pedestrian Phase										Stage		Green Time Required SG FG Delay		Green Time Provided SG FG					
										Fp Gp Hp										4 1,2,4 3		5 5 5		9 11 9		18 53 47		9 11 9	
</																													

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J8 Chui Tin Street / Che Kung Miu Road				FILENAME : J8_CTS_CKMR.xlsx		Checked By:	
						Reviewed By:	

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J9 Sha Tin Centre Street / Pak Hok Ting Street

PRIORITY JUNCTION CALCULATION

2025 Existing AM

PROJECT NO.: 40969

FILENAME: J9 STCS PHTS.x

REFERENCE NO.:

INITIALS | DATE

SKL	Jul-26
-----	--------

SLN	Jul-26
-----	--------

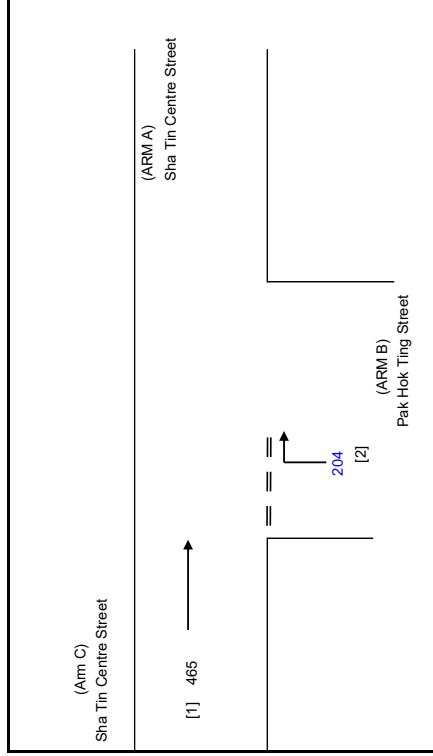
SLN	Jul-26
-----	--------

DATE _____

Jul-26

Jul-26

Jul-26



NOTES: (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
W b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
W b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
W b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
W c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.40	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b =	0.00	(metres)
Vr c-b =	0	(metres)
q c-a =	465	(pcu/hr)
q c-b =	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a =	5.00	(metres)
W b-c =	0.00	(metres)
V l b-a =	100	(metres)
V r b-a =	0	(metres)
V r b-c =	0	(metres)
q b-a =	204	(pcu/hr)
q b-c =	0	(pcu/hr)

D	=	0.97504
E	=	0.58595
F	=	0.58595
Y	=	0.71020

F for (Qb-ac) = 0

GEOMETRIC FACTORS :

Q b-a =	538	
Q b-c =	437	Q b-c (O) = 395.6
Q c-b =	437	
Q b-ac =	538	

α b-a =	500	
Q b-c =	437	Q b-c (O) = 395.6

TOTAL FLOW	=	669	(PCU/HR)
------------	---	-----	----------

COMPARISON OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.3792
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFC b-ac (share lane)	=	0.3792

CRITICAL DFC = 0.38

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J9 Sha Tin Centre Street / Pak Hok Ting Street

PRIORITY JUNCTION CALCULATION

2025 Existing PM

PROJECT NO.: 40969

FILENAME: J9 STCS PHTS.x

REFERENCE NO.:

DATE _____

INITIALS

Jul-26

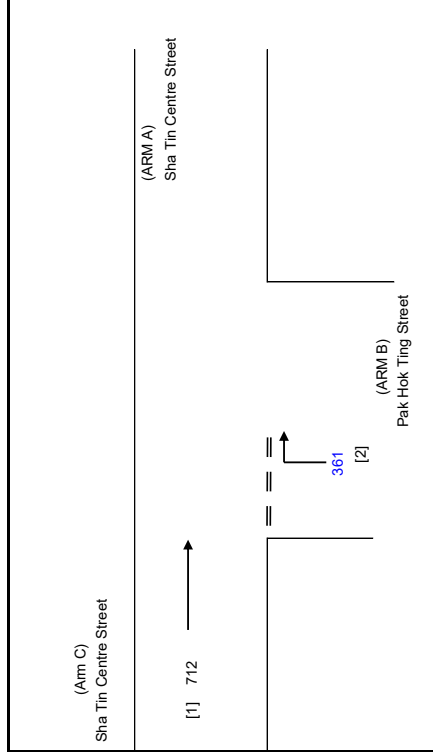
SKL

Jul-26

NTS

Jul-26

NTS



NOTES: (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
V l-b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
V l-b-c	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
V l-c-b	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.40	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b =	0.00	(metres)
Vr c-b =	0	(metres)
q c-a =	712	(pcu/hr)
q c-b =	0	(pcu/hr)

MINOR ROAD (ARM B)

W b-a =	5.00	(metres)
W b-c =	0.00	(metres)
V l-b-a =	100	(metres)
V r-b-a =	0	(metres)
V r-b-c =	0	(metres)
q b-a =	361	(pcu/hr)
q b-c =	0	(pcu/hr)

D	=	0.97504
E	=	0.58595
F	=	0.58595
Y	=	0.71020

F for (Qb-ac) = 0

GEOMETRIC FACTORS :

Q b-a =	498
Q b-c =	437
Q c-b =	437
Q b-ac =	498

$Q_{b-c} =$	437	$Q_{b-c}(O) =$	357.8
-------------	-----	----------------	-------

TOTAL FLOW = 1073 (PCU/HR)

THE CAPACITY OF MOVEMENT :

**COMPARISON OF DESIGN FLOW
TO CAPACITY:**

DFC b-a	=	0.7249
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFC b-ac (share lane)	=	0.7249

CRITICAL DFC = 0.72

Appendix B
Junction Capacity Assessments
- Reference & Design Scenarios

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:		SKL	Jul-26
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2035 Reference AM		Checked By:		SLN	Jul-26
						Reviewed By:		SLN	Jul-26

No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Cm Yult R.C.ult Cp Ymax		N = 3 C = 85 sec Y = 0.431 L = 10 sec = 2163 pcu = 35.1 sec = 17.6 sec = 0.825 = 91.5 % = 19.2 sec = 0.882
R.C.(C) = (0.9*Ymax-Y)*100%		= 84 %

Pedestrian Phase	Stage	Green Time Required SG	Delay FG	Green Time Provided SG	FG

Movement	Stage	Lane	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
6	1	3.70	1			N	1985		142	84	142	0.00	1985							1985	0.072		10	12	29	0.488	12	35
5.6	1	3.70	1	30			2125		149	145	145	0.56	2067							2067	0.072			13	29	0.488	12	35
5	1	3.70	1	30			2125		145	145	145	1.00	2024							2024	0.072			12	29	0.488	12	35
4	1,2	3.70	1	11		N	1985	711	307	307	711	1.00	1747	40	421					2168	0.328	0.328		57	57	0.488	30	7
3	2	3.70	1	15			2125		307	307	307	1.00	1932							1932	0.159			28	28	0.488	24	23
2	2,3	3.10	2	8		N	3990	284	425	425	284	1.00	3360							3360	0.085			15	46	0.488	15	31
1	3	3.10	2	8			4130				425	0.00	4130							4130	0.103	0.103		18	18	0.488	21	28

NOTE :				O - OPPOSING TRAFFIC	N - NEAR SIDE LANE	SG - STEADY GREEN	FG - FLASHING GREEN	PEDESTRAIN WALKING SPEED = 1.2m/s		QUEUEING LENGTH = AVERAGE QUEUE * 6m	
--------	--	--	--	----------------------	--------------------	-------------------	---------------------	-----------------------------------	--	--------------------------------------	--

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2035 Reference PM		Checked By:	
						Reviewed By:	
						</	

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:		SKL	Jul-26
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2035 Design AM		Checked By:		SLN	Jul-26
						Reviewed By:		SLN	Jul-26

Diagram illustrating the intersection layout and traffic flow. The intersection involves Tai Po Road, Sha Tin Centre Street, and Lion Rock Tunnel Road. Traffic flow directions and lane counts are indicated for each approach.

No. of stages per cycle		N =	3
Cycle time	Sum(y)	C =	85 sec
Loss time		Y =	0.431
		L =	10 sec
Total Flow			2205 pcu
Co		= $(1.5L+5)/(1-Y)$	35.1 sec
Cm		= $L/(1-Y)$	17.6 sec
Yult			0.825
R.C.ult		= $(Yult-Y)/Y*100\%$	91.5 %
Cp		= $0.9L/(0.9-Y)$	19.2 sec
Ymax		= $1-L/C$	0.882
R.C.(C)		= $(0.9*Ymax-Y)/Y*100\%$	
		=	
		84 %	

Pedestrian Phase	Stage	Green Time Required SG	Delay FG	Green Time Provided SG	FG

Movement	Stage	Lane	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement Left pcu/h	Movement Straight pcu/h	Movement Right pcu/h	Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient Effect %	Revised Sat. Flow pcu/hr	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
6	1	3.70	1			N	1985		146		146	0.00	1985						1985	0.074		10	13	28	0.488	12	35
5.6	1	3.70	1	30			2125		152	91	152	0.60	2063						2063	0.074			13	28	0.488	18	35
5	1	3.70	1	30			2125		150		150	1.00	2024						2024	0.074			13	28	0.488	18	35
4	1,2	3.70	1	11		N	1985	711			711	1.00	1747	40	421				2168	0.328	0.328		57	57	0.488	30	7
3	2	3.70	1	15			2125		322	322	322	1.00	1932						1932	0.167			29	29	0.488	30	22
2	2,3	3.10	2	8		N	3990	299			299	1.00	3360						3360	0.089			15	47	0.488	15	31
1	3	3.10	2	8			4130	425			425	0.00	4130						4130	0.103	0.103		18	18	0.488	21	28

NOTE :				O - OPPOSING TRAFFIC	N - NEAR SIDE LANE	SG - STEADY GREEN	FG - FLASHING GREEN	PEDESTRAIN WALKING SPEED = 1.2m/s		QUEUEING LENGTH = AVERAGE QUEUE * 6m	
--------	--	--	--	----------------------	--------------------	-------------------	---------------------	-----------------------------------	--	--------------------------------------	--

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:		SKL	Jul-26
J1 Lion Rock Tunnel Road / Tai Po Road - Tai Wai / Sha Tin Centre Street				2035 Design PM		Checked By:		SLN	Jul-26
						Reviewed By:		SLN	Jul-26

No. of stages per cycle		N =	3
Cycle time		C =	90 sec
Sum(y)		Y =	0.413
Loss time		L =	13 sec
Total Flow		=	2073 pcu
Co		= (1.5*L+5)/(1-Y)	41.7 sec
Cm		= L/(1-Y)	22.1 sec
Yult		=	0.803
R.C.ult		= (Yult-Y)/Y*100%	94.4 %
Cp		= 0.9*L/(0.9-Y)	24.0 sec
Ymax		= 1-L/C	0.856
R.C.(C)		= (0.9*Ymax-Y)/Y*100%	86 %

Pedestrian Phase	Stage	Green Time Required SG	Delay FG	Green Time Provided SG	FG

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement			Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
								Left	Straight	Right																	
6	1	3.70	1			N	1985			220	0.00	1985							1985	0.111	0.111	13	21	21	0.483	24	30
5.6	1	3.70	1	30			2125			232	0.23	2101							2101	0.110	0.110		21	21	0.483	24	30
5	1	3.70	1	30			2125			223	1.00	2024							2024	0.110	0.110		21	21	0.483	24	30
4	1,2	3.70	1	11		N	1985			197	1.00	1747	40	400					2147	0.092	0.209		17	60	0.483	18	33
3	2	3.70	1	15			2125			403	1.00	1932							1932	0.209	0.209		39	39	0.483	30	18
2	2,3	3.10	2	8		N	3990			412	1.00	3360							3360	0.123	0.093		23	56	0.483	21	27
1	3	3.10	2	8			4130			386	0.00	4130							4130	0.093	0.093		17	17	0.483	21	31

Stage 1				G= 20 Int = 6	Stage 2				G= 38 Int = 5	Stage 3				G= 16 Int = 5
A					B					C				

NOTE :

O - OPPOSING TRAFFIC N - NEAR SIDE LANE SG - STEADY GREEN FG - FLASHING GREEN PEDESTRAIN WALKING SPEED = 1.2m/s QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S/2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 In D.D. 184, Sha Tin

J2	Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road
----	--

2035 Reference AM

40969

Prepared By:

Checked By:	
-------------	--

Reviewed By:

Jul-26

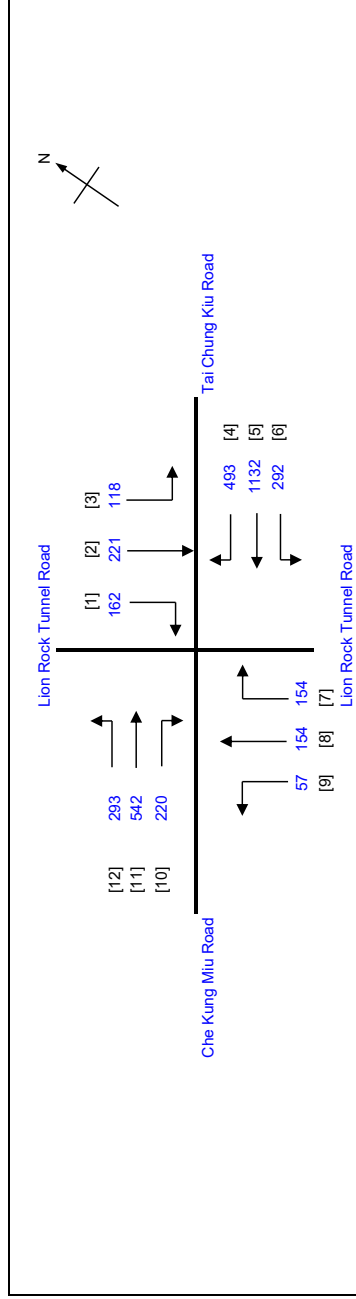
Jul-26

Jul-26

1111

sec

sec



No. of stages per cycle	N =	4
Cycle time	C =	113 sec
Sum(y)	Y =	0.479
Loss time	L =	25 sec
Total Flow		3772 pcu
Co	= $(1.5^L + 5)/(1 - Y)$	81.6 sec
Cm	= $L/(1 - Y)$	48.0 sec
Yult		0.713
R.C.ult	= $(Yult - Y)/Y * 100\%$	48.8 %
Cp	= $0.9^L L / (0.9 - Y)$	53.4 sec
Ymax	= $1 - L/C$	0.779
R.C.(C)	= $(0.9^Y Ymax - Y)/Y * 100\%$	46 %

A	Stage 1	G = 14 Int = 7
B	Stage 2	G = 36 Int = 7
C	Stage 3	G = 14 Int = 7
D	Stage 4	G = 20 Int = 8

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m / lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9	1	3.40	1	12		N	1955	57		57	1.00	1738							1738	0.033		25	6	15	0.615	12	75	
8	1	3.40	2				4190	154	154	154	0.00	4190							4190	0.037			7	15	0.615	12	57	
7	1	3.10	1	18			2065			154	1.00	1906							1906	0.081	0.081		15	15	0.615	24	52	
6	1,2	3.00	1	13		N	1915	292		292	1.00	1717							1717	0.170			31	52	0.615	36	38	
5	2	3.00	2				4110	824	824	824	0.00	4110							4110	0.200	0.200		37	37	0.615	51	31	
4,5	2	3.00	1	33			2055		308	407	0.24	2033							2033	0.200			37	37	0.615	48	33	
4	2	3.00	1	33			2055		394	394	1.00	1966							1966	0.200			37	37	0.615	48	33	
3	3	3.30	1	13		N	1945	118		118	1.00	1744							1744	0.068			12	15	0.615	18	57	
2	3	3.30	2				4170	221	221	221	0.00	4170							4170	0.053			10	15	0.615	18	52	
1	3	3.30	1	21			2085			162	1.00	1946							1946	0.083	0.083		15	15	0.615	24	51	
12	3,4	3.20	2	16		N	4010	293		293	1.00	3666							3666	0.080			15	36	0.615	24	47	
11	4	3.20	2				4150	473	473	473	0.00	4150							4150	0.114			21	21	0.615	36	41	
10,11	4	3.20	1	16			2075		69	223	0.69	1949							1949	0.114	0.114		21	21	0.615	30	45	

NOTE : O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969			
J2 Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road				2035 Reference PM			
				Prepared By: _____ Checked By: J2_LRTR_TOKR_CKMR.xlsx Reviewed By: _____			
				INITIALS SKL SLN SLN			
				DATE Jul-26 Jul-26 Jul-26			

				No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Crm Yult R.C.ult Cp Ymax			
N = 4 C = 100 sec Y = 0.434 L = 25 sec = 2826 pcu = 75.1 sec = 44.2 sec = 0.713 = 64.1 % = 48.3 sec = 0.750							
				R.C.(C) = (0.9*Ymax-Y)*100% = 55 %			

				Pedestrian Phase Stage Green Time Required SG Delay FG			
				Green Time Provided SG Delay FG			

Stage 1 G= 14 Int = 7				Stage 2 G= 14 Int = 7				Stage 3 G= 23 Int = 7				Stage 4 G= 19 Int = 8			

Move-ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
								Left	Straight	Right																		
9	1	3.40	1	12		N	1955	34	177		34	1.00	1738						1738	0.020			25	3	15	0.579	6	81
8	1	3.40	2	18			4190				177	0.00	4190						4190	0.042				7	15	0.579	12	48
7	1	3.10	1				2065				171	1.00	1906						1906	0.090	0.090			15	15	0.579	24	43
6	1,2	3.00	1	13		N	1915	166			166	1.00	1717						1717	0.097				17	30	0.579	18	42
5	2	3.00	2				4110		350		350	0.00	4110						4110	0.085				15	15	0.579	24	39
4,5	2	3.00	1	33			2055		102	70	172	0.41	2018						2018	0.085				15	15	0.579	24	43
4	2	3.00	1	33			2055				168	1.00	1966						1966	0.085	0.085			15	15	0.579	24	43
3	3	3.30	1	13		N	1945	245			245	1.00	1744						1744	0.140	0.140			24	24	0.579	30	35
2	3	3.30	2				4170		277		277	0.00	4170						4170	0.066				11	24	0.579	18	42
1	3	3.30	1	21			2085				144	1.00	1946						1946	0.074				13	24	0.579	18	46
12	3,4	3.20	2	16		N	4010	200			200	1.00	3666						3666	0.055				9	45	0.579	15	45
11	4	3.20	2				4150		492		492	0.00	4150						4150	0.119				20	20	0.579	30	35
10,11	4	3.20	1	16			2075		59	171	230	0.74	1940						1940	0.119	0.119			20	20	0.579	30	38

NOTE :				O - OPPOSING TRAFFIC	N - NEAR SIDE LANE	SG - STEADY GREEN	FG - FLASHING GREEN	PEDESTRAIN WALKING SPEED = 1.2m/s				QUEUEING LENGTH = AVERAGE QUEUE * 6m			
--------	--	--	--	----------------------	--------------------	-------------------	---------------------	-----------------------------------	--	--	--	--------------------------------------	--	--	--

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969			
J2 Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road				2035 Design AM			
				Prepared By: SKL			
				Checked By: SLN			
				Reviewed By: SLN			
				DATE: Jul-26			

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969			
J2 Lion Rock Tunnel Road / Tai Chung Kiu Road / Che Kung Miu Road				2035 Design PM			
				Prepared By: SKL			
				Checked By: SLN			
				Reviewed By: SLN			
				DATE			
				Jul-26			
				Jul-26			
				Jul-26			

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				DATE	
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.:		40969		Prepared By:	
				FILENAME :		J3_RCKR_SKS.xlsx		Checked By:	
J3 Tai Chung Kiu Road / Sha Kok Street								Reviewed By:	

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

TRAFFIC SIGNAL CALCULATION

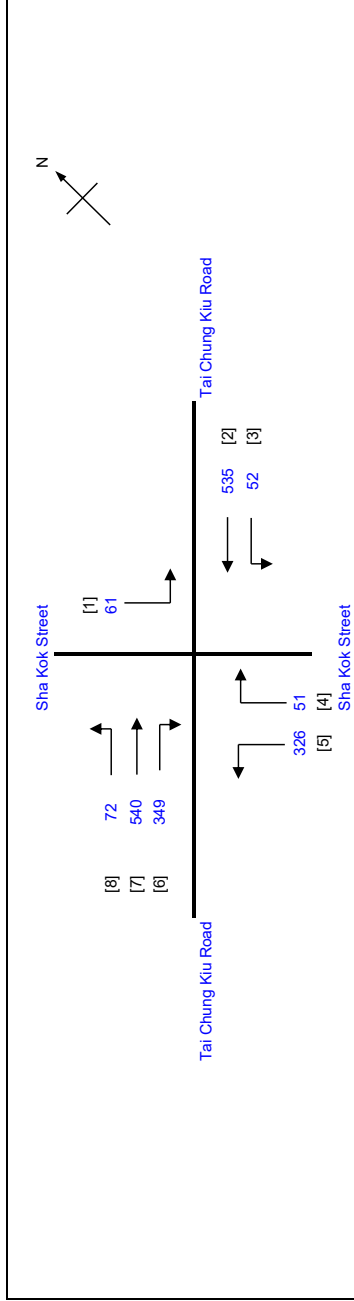
2035 Reference PM

PROJECT NO.:	40969
FILENAME:	J3_RC

Prepared By:
Checked By:
Reviewed By:

SKL		
SLN		
NLS		

ul-26	ul-26	ul-26
-------	-------	-------



A 3 TAI CHUNG KIU ROAD SHA KOK STREET	B 2 4	C 6 7	D 7 8	<table><tr><th>Stage</th><th>G=</th><th>Int=</th></tr><tr><td>Stage 1</td><td>26</td><td>5</td></tr><tr><td>Stage 2</td><td>24</td><td>5</td></tr><tr><td>Stage 3</td><td>9</td><td>3</td></tr><tr><td>Stage 4</td><td>27</td><td>2</td></tr></table>	Stage	G=	Int=	Stage 1	26	5	Stage 2	24	5	Stage 3	9	3	Stage 4	27	2
Stage	G=	Int=																	
Stage 1	26	5																	
Stage 2	24	5																	
Stage 3	9	3																	
Stage 4	27	2																	

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m /lane)	Average Delay (seconds)
								Sat. Flow	Left pcu/h	Straight pcu/h																		
7.8 7	1,2	3.30	1	15		N	1945	72	220	292	0.25	1898							1898	0.154		12	42	51	0.368	24	19	
	1,2	3.30	1				2085		320	320	0.00	2085							2085	0.153			42	51	0.368	30	19	
2,3 2	1	3.20	1	13		N	1935	52	131	183	0.28	1874							1874	0.098	0.098		27	27	0.368	18	29	
	1	3.20	2				4150		404	404	0.00	4150							4150	0.097			26	27	0.368	24	28	
6	2	3.30	2	16			4170			349	1.00	3813							3813	0.092	0.092		25	25	0.368	21	29	
5	2,3	3.30	2	13		N	4030	326		326	1.00	3613							3613	0.090			25	34	0.368	18	29	
4 1	3	3.30	1	15			2085			51	1.00	1895							1895	0.027			7	10	0.368	6	47	
	3	3.00	1	14		N	1915	61		61	1.00	1730							1730	0.035	0.035		10	10	0.368	6	44	
PED	4																					27						

NOTE : O - OPPOSING TRAFFIC
N - NEAR SIDE LANE
SG - STEADY GREEN
FG - FLASHING GREEN
PEDESTRIAN WALKING SPEED = 1.2m/s
QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J3 Tai Chung Kiu Road / Sha Kok Street

2035 Design AM

40969

Prepared By:

J3 RCKR SKS.xlsx

Checked By:	
-------------	--

Reviewed By

NTS	
-----	--

Jul-26

Jul-26

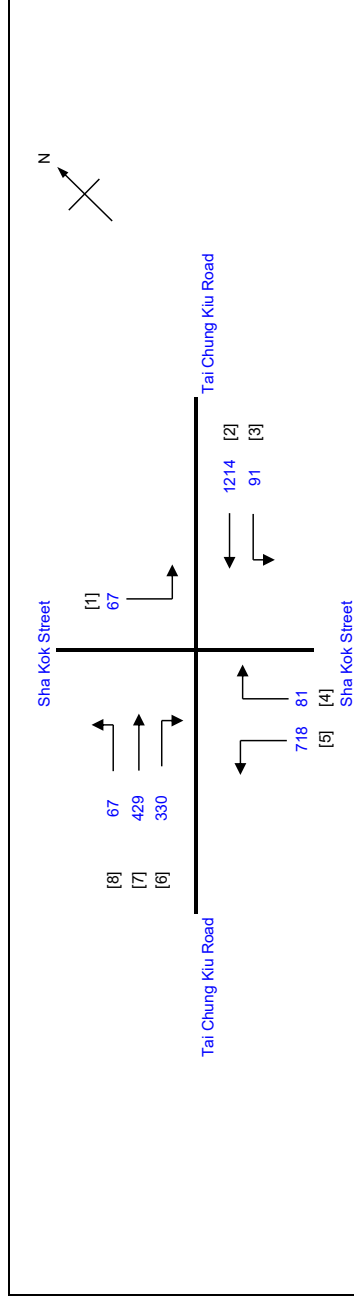
Jul-26

Jul-26

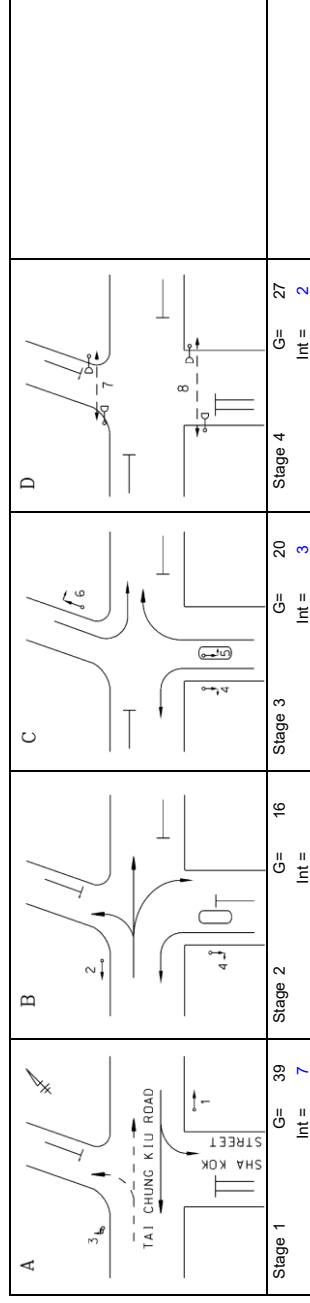
Jul-26

Jul-26

Jul-26



No. of stages per cycle	N =	4
Cycle time	C =	113 sec
Sum(y)	Y =	0.415
Loss time	L =	37 sec
Total Flow		2997 pcu
Co	$= (1.5 * L + 5) / (1 - Y)$	103.4 sec
Cm	$= L / (1 - Y)$	63.2 sec
Yult		0.623
R.C.ult	$= (Yult - Y) / Y * 100\%$	50.0 %
Cp	$= 0.9 * L / (0.9 - Y)$	68.7 sec
Ymax	$= 1 - L / C$	0.673
R.C.(C)	$= (0.9 * Ymax - Y) / Y * 100\%$	46 %



Pedestrian Phase	Stage	Green Time Required		Green Time Provided	
		SG	FG	SG	FG
P1	4	10	5	21	5
P2	4	13	12	15	12

[illegible]

NOTE : O - OPPOSING TRAFFIC

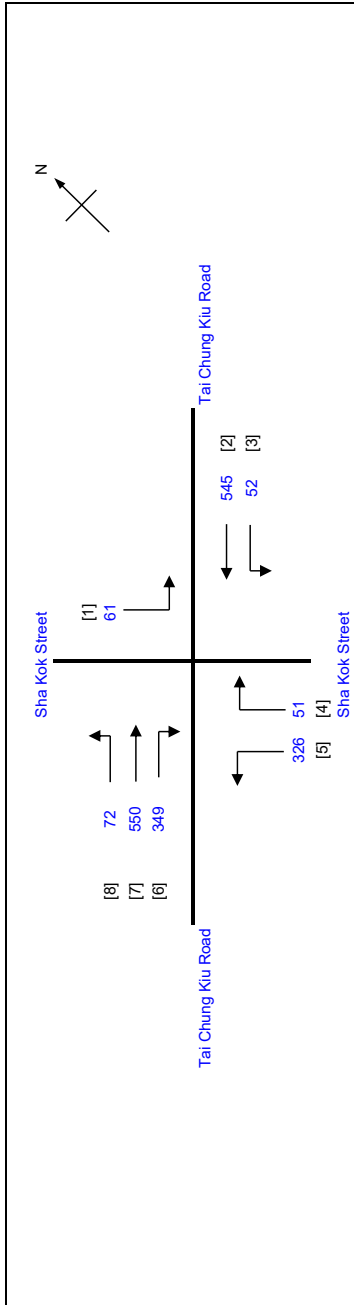
N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE																			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO. : 40969		Prepared By:		SKL	Jul-26																			
				2035 Design PM		Checked By:		SLN	Jul-26																			
				J3 Tai Chung Kiu Road / Sha Kok Street		Reviewed By:		SLN	Jul-26																			
				No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Crm Yult R.C.ult Cp Ymax		N = 4 C = 100 sec Y = 0.226 L = 39 sec = 2006 pcu = 82.1 sec = 50.4 sec = 0.608 = 168.7 % = 52.1 sec = 0.610																						
				R.C.(C) = 0.9*Ymax-Y/Y*100%		= 143 %																						
				Pedestrian Phase	Stage	Green Time Required SG	Delay FG	Green Time Provided SG	FG																			
				P1	4	10	5	21	5																			
				P2	4	13	12	15	12																			
Movement 7,8 7 2,3 2 6 5 4 1 PED	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Stage 1 G= 26 Int= 5	Stage 2 G= 24 Int= 5	Stage 3 G= 9 Int= 3	Stage 4 G= 27 Int= 2	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
	1,2	3.30	1	15		N	1945					0.24	1899							1899	0.156		12	42	51	0.371	24	19
	1,2	3.30	1				2085					0.00	2085							2085	0.156			42	51	0.371	30	19
	1	3.20	1	13		N	1935					0.28	1874							1874	0.099	0.099		27	27	0.371	18	29
	1	3.20	2				4150					0.00	4150							4150	0.099	0.099		27	27	0.371	24	28
	2	3.30	2	16			4170					1.00	3813							3813	0.092	0.092		25	25	0.371	21	29
	2,3	3.30	2	13		N	4030					1.00	3613							3613	0.090			24	34	0.371	18	29
	3	3.30	1	15			2085					1.00	1895							1895	0.027			7	10	0.371	6	47
	3	3.00	1	14		N	1915					1.00	1730							1730	0.035	0.035	27	10	10	0.371	6	44
	4																											
NOTE :				O - OPPOSING TRAFFIC	N - NEAR SIDE LANE	SG - STEADY GREEN	FG - FLASHING GREEN	PEDESTRAIN WALKING SPEED = 1.2m/s		QUEUEING LENGTH = AVERAGE QUEUE * 6m																		

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969		Prepared By:	
J4 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road				2035 Reference AM		Checked By:	
						Reviewed By:	
						</	

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S 2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184. Sha Tin

2035 Reference PM

969

Prepared By:

"Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

FILENAME :	.J4	TCKR	STWR	STCR	XLSX
------------	-----	------	------	------	------

Checked By:

NTS

	1980	1985	1990	1995	2000	2005	2010	2015	2020
Population	76.0	80.0	84.0	88.0	92.0	96.0	100.0	104.0	108.0
GDP	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Exports	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Imports	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Government Expenditure	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Private Investment	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Household Consumption	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Business Investment	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Government Investment	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Total Investment	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Exports	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Current Account Balance	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Capital Account Balance	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Trade Balance	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Balance of Payments	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Foreign Reserves	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Public Debt	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Private Debt	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Total Debt	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Government Revenue	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Private Savings	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Business Savings	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Government Savings	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Total Savings	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Capital Flows	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Financial Flows	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Current Transfers	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Income from Abroad	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Factor Income	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Primary Income	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Secondary Income	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Tertiary Income	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Quaternary Income	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Income from Overseas	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0
Net Income from Foreign Direct Investment	100.0	110.0	120.0	130.0	140.0	150.0	160.		

14 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin

3-5-2019

1

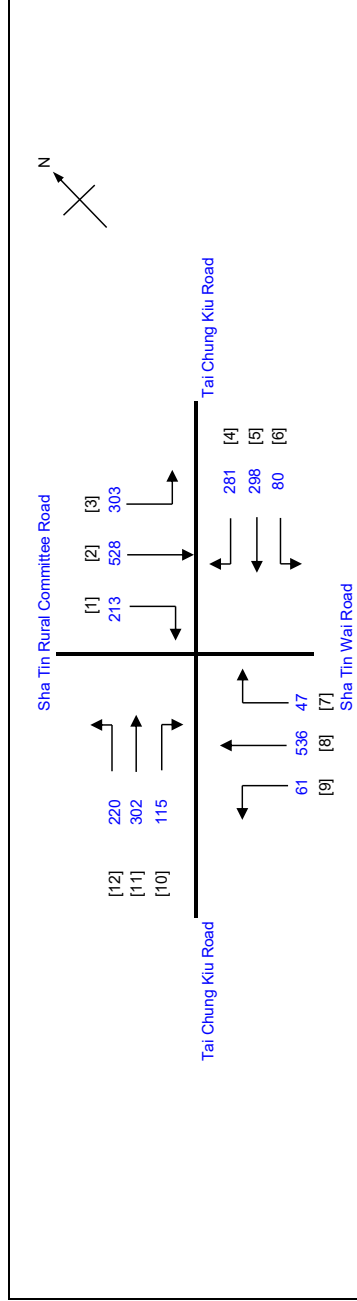
Reviewed By:

Table 1

Reviewed By:

NS	
----	--

--	--



A TAI CHUNG KIU ROAD SHATIN WAI ROAD	Stage 1 G= 14 Int= 6	B SHATIN COMLITTEE ROAD SHATIN WAI ROAD	Stage 2 G= 29 Int= 7	C	Stage 3 G= 14 Int= 6	D	Stage 4 G= 26 Int= 7
--	---	---	---	-----------------	---	-----------------	---

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m / lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
12	1,4	3.00	1	14		N	1915	220		220	1.00	1730							1730	0.127		22	27	58	0.522	30	37	
11	1	3.00	2				4110	302	302	302	0.00	4110							4110	0.073	0.073		15	15	0.522	21	43	
10	1	3.00	2	16			4110		115	115	1.00	3758							3758	0.031			6	15	0.522	9	53	
9	1,2	3.00	1	16		N	1915	61		61	1.00	1751							1751	0.035			7	46	0.522	6	60	
8	2	3.00	1				2055	293	293	293	0.00	2055							2055	0.143			30	30	0.522	36	34	
7,8	2	3.00	1	21			2055		47	290	0.16	2031							2031	0.143	0.143		30	30	0.522	36	34	
6	2,3	3.00	1	13		N	1915	80		80	1.00	1717							1717	0.047			10	45	0.522	12	55	
5	3	3.00	2				4110	298	298	298	0.00	4110							4110	0.073			15	15	0.522	21	43	
4	3	3.00	2	21			4110		281	281	1.00	3836							3836	0.073	0.073		15	15	0.522	21	43	
3	3,4	3.00	1	12		N	1915	303		303	1.00	1702							1702	0.178			37	42	0.522	36	29	
2	4	3.00	1				2055	264	264	264	0.00	2055							2055	0.128	0.128		27	27	0.522	36	36	
1,2	4	3.00	1	21			2055		0	264	0.00	2055							2055	0.128			27	27	0.522	36	36	
1	4	3.00	1	21			2055		213	213	1.00	1918							1918	0.111			23	27	0.522	30	39	

NOTE: O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

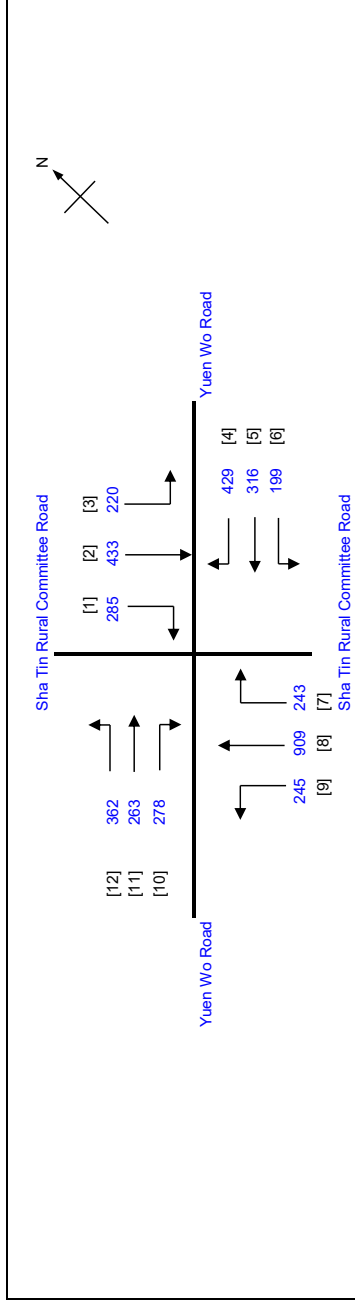
LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969			
J4 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road				FILENAME : J4_TCKR_STWR_STCR.xlsx			
				Prepared By:			
				Checked By:			
				Reviewed By:			
				INITIALS			
				DATE			
				SKL			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			
				SLN			

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION			
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969			
J4 Tai Chung Kiu Road / Sha Tin Wai Road / Sha Tin Rural Committee Road				FILENAME : J4_TCKR_STWR_STOR.xlsx			
				Prepared By:			
				Checked By:			
				Reviewed By:			
				INITIALS			
				DATE			
				SKL			
				SLN			
				SLN			
				Jul-26			
				Jul-26			
				Jul-26			

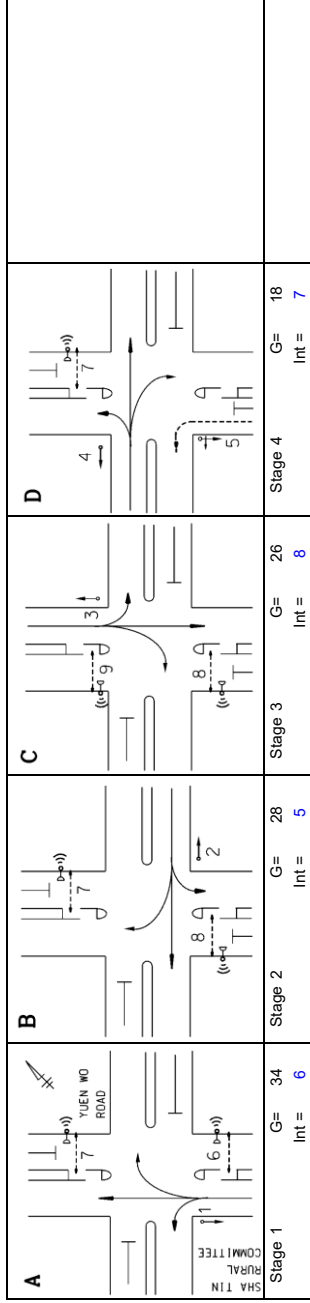
LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PROJECT NO.: 40969		Prepared By:	SKL	Jul-26
J5 Yuen Wo Road / Sha Tin Rural Committee Road		2035 Reference AM		Checked By:	SLN	Jul-26
		FILENAME: J5_YWR_STRCR.xlsx		Reviewed By:	SLN	Jul-26



No. of stages per cycle	N =	4
Cycle time	C =	132 sec
Sum(y)	Y =	0.594
Loss time	L =	22 sec
Total Flow	=	4182 pcu
Go	= $(1.5 \cdot L + 5) / (1 - Y)$	93.6 sec
Cm	= $L / (1 - Y)$	54.2 sec
Yult	=	0.735
R.C. ult	= $(Y_{ult} - Y) / Y \cdot 100\%$	23.7 %
Cp	= $0.9 \cdot L / (0.9 - Y)$	64.7 sec
Ymax	= $1 - L / C$	0.833
R.C.(C)	= $(0.9 \cdot Y_{max} - Y) / Y \cdot 100\%$	26 %



Pedestrian Phase	Stage	Green Time Required			Green Time Provided	
		SG	FG	Delay	SG	FG
P1	1	8	9	9	22	9
P2	1,2	6	12	0	61	12
P3	2,3	10	19	0	48	19
P4	3	5	10	10	14	10

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9 8 7.8	1,4	3.00	1	11		N	1915	245		245	1.00	1685							1685	0.145		22	27	54	0.713	42	56	
	1	3.00	2				4110	782		782	0.00	4110							4110	0.190			35	0.713	63	43		
	1	3.00	1				2055		243		370	0.66	1942						1942	0.190	0.190		35	0.713	54	47		
5,6 5 4	2	3.10	1	15			2065	199			0.80	1912							1912	0.130			24	29	0.713	42	57	
	2	3.10	1				2065	267		267	0.00	2065							2065	0.129			24	29	0.713	48	56	
	2	3.10	1	19			2065		429		429	1.00	1914	40	828				2741	0.156	0.156		29	29	0.713	72	50	
3 2 1,2	3	3.20	1	15		N	1935	220			1.00	1759							1759	0.125			23	27	0.713	36	59	
	3	3.20	1	15			2075	301		301	0.00	2075							2075	0.145	0.145		27	27	0.713	48	54	
	3	3.20	1	23			2075		285		417	0.68	1986	40	889				2875	0.145			27	27	0.713	72	51	
12 11,12 11 10	4	3.00	1	13		N	1915	175			1.00	1717							1717	0.102	0.102		19	19	0.713	30	65	
	4	3.00	1	13			2055	187		187	1.00	1842							1842	0.101			19	19	0.713	36	64	
	4	3.00	2				4110	263		263	0.00	4110							4110	0.064	0.064		12	19	0.713	27	63	
10	4	3.00	2	16			4110		278		1.00	3758							3758	0.074			14	19	0.713	27	62	

NOTE : O - OPPOSING TRAFFIC
N - NEAR SIDE LANE
SG - STEADY GREEN
FG - FLASHING GREEN
PEDESTRIAN WALKING SPEED = 1.2m/s
QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

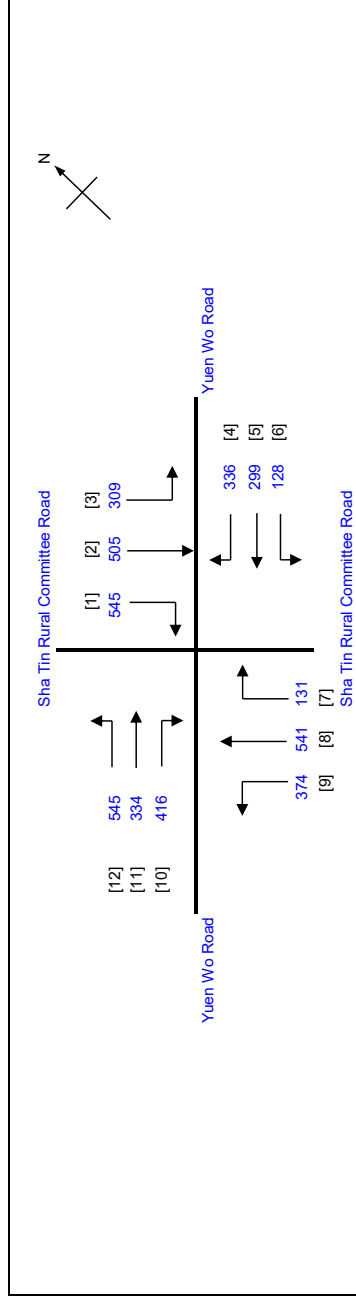
Application for Amendment of Plan under S/2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J5 Yuen Wo Road / Sha Tin Rural Committee Road

2035 Reference PM

Prepared By:	
Checked By:	
Reviewed By:	

SKL	Jul-2017
SLN	Jul-2017
SLN	Jul-2017



A	B	C	D
SHA TIN RURAL COMMITTEE ROAD YUEN WO ROAD 1 6 7	2 8 9	3 8 9	4 5 7
Stage 1	Stage 2	Stage 3	Stage 4
G = 20 Int = 6	G = 17 Int = 5	G = 36 Int = 8	G = 24 Int = 7

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9 8 7.8	1,4	3.00	1	11		N	1915	374		374	1.00	1685							1685	0.222		22	37	46	0.748	54	45	
	1	3.00	2				4110	456		456	0.00	4110							4110	0.111	0.111	3	18	21	0.748	39	53	
	1	3.00	1	17			2055			131	0.61	1951							1951	0.111			18	21	0.748	36	62	
5.6 5 4	2	3.10	1	15			2065	128		208	0.62	1945							1945	0.107	0.107		18	18	0.748	36	63	
	2	3.10	1				2065	219		219	0.00	2065							2065	0.106			17	18	0.748	36	62	
	2	3.10	1	19			2065			336	1.00	1914	40	1333					3247	0.103			17	18	0.748	60	57	
3 2 1.2	3	3.20	1	15		N	1935	309		309	1.00	1759							1759	0.176			29	37	0.748	48	51	
	3	3.20	1	15			2075	466		466	0.00	2075							2075	0.225	0.225		37	37	0.748	66	43	
	3	3.20	1	23			2075			545	0.93	1956	40	649					2605	0.224			37	37	0.748	78	41	
12 11,12 11 10	4	3.00	1	13		N	1915	263		263	1.00	1717							1717	0.153	0.153		25	25	0.748	42	55	
	4	3.00	1	13			2055			282	1.00	1842							1842	0.153			25	25	0.748	48	54	
	4	3.00	2				4110	334		334	0.00	4110							4110	0.081			13	25	0.748	30	59	
	4	3.00	2	16			4110			416	1.00	3758							3758	0.111			18	25	0.748	36	54	

NOTE :

O - OPPOSING TRAFFIC

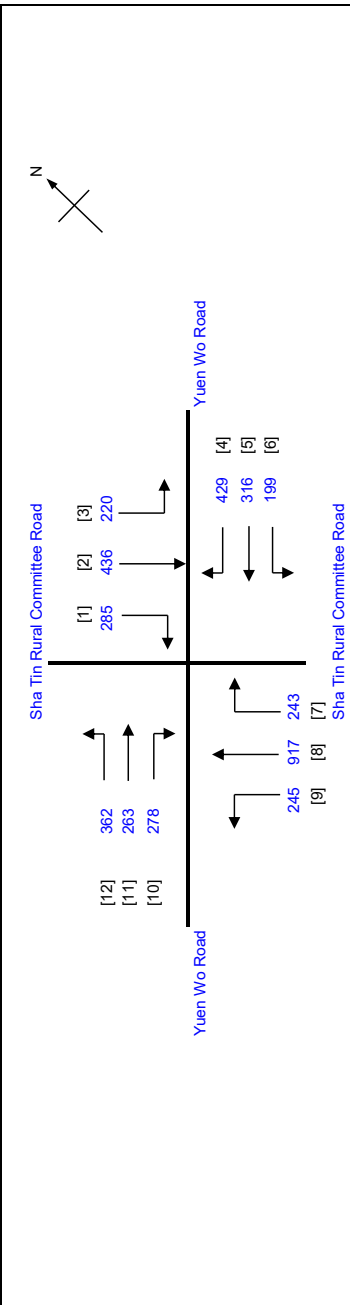
N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

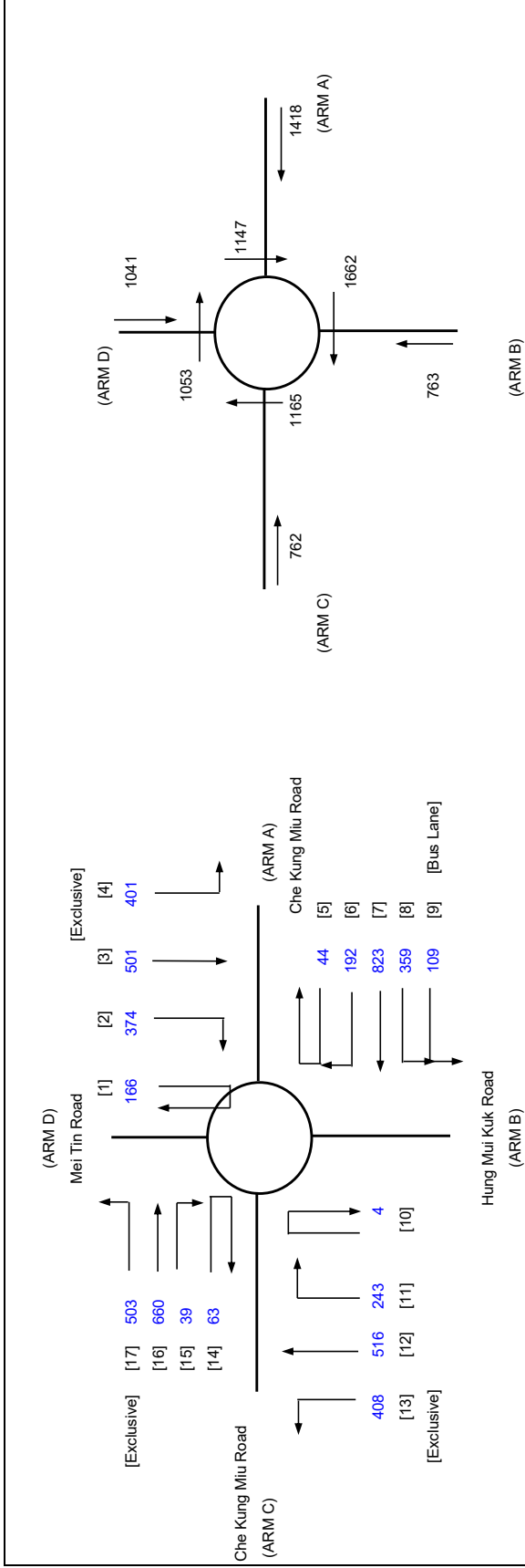
QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED				TRAFFIC SIGNAL CALCULATION				INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin				PROJECT NO.: 40969				Prepared By:	SKL
				2035 Design AM				Checked By:	SLN
J5 Yuen Wo Road / Sha Tin Rural Committee Road				FILENAME : J5_YWR_STRCR.xlsx				Reviewed By:	SLN
									Jul-26
									Jul-26
								No. of stages per cycle Cycle time Sum(y) Loss time Total Flow Co Cm Yult R.C.ult Cp Ymax R.C.(C) = (0.9*Ymax-Y)/Y*100% = 26 %	
								Green Time Provided SG FG	
								Green Time Required SG Delay FG Delay	
								Stage Pedestrian Phase L g (required) sec g (input) sec g Degree of Saturation X Queue Length (m / lane) Average Delay (seconds)	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 63 60 47 57 57 50 59 54 51 65 64 64 62	
								P1 P2 P3 P4 1 1,2 2,3 3 22 27 35 35 54 0.715 0.715 0.715 0.715 42 56 	

LLA CONSULTANCY LIMITED

ROUNDABOUT CALCULATION

LLA CONSULTANCY LIMITED			ROUNDABOUT CALCULATION			INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin			PROJECT NO.: 40969		PREPARED BY:	SKL	Jul-26
			FILENAME : J6 CKMR HMKR		CHECKED BY:	SLN	Jul-26
J6 Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road			REFERENCE NO.:		REVIEWED BY:	SLN	Jul-26



ARM		A	B	C	D
INPUT PARAMETERS:					
V	= Approach half width (m)	6.90	6.60	6.75	6.30
E	= Entry width (m)	9.80	9.40	9.50	9.20
L	= Effective length of flare (m)	28.00	19.00	41.00	22.00
R	= Entry radius (m)	41.00	55.00	37.00	36.00
D	= Inscribed circle diameter (m)	66.00	66.00	66.00	66.00
A	= Entry angle (degree)	42.00	46.00	35.00	39.00
Q	= Entry flow (pcu/h)	1418	763	762	1041
Qc	= Circulating flow across entry (pcu/h)	1147	1662	1165	1053
OUTPUT PARAMETERS:					
S	= Sharpness of flare = 1.6(E-V)/L	0.17	0.24	0.11	0.21
K	= 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	1.01	0.99
X2	= V + ((E-V)/(1+2S))	9.08	8.50	9.01	8.34
M	= EXP((D-60)/10)	1.82	1.82	1.82	1.82
F	= 303*X2	2751	2576	2731	2527
Td	= 1+(0.5/(1+M))	1.18	1.18	1.18	1.18
Fc	= 0.21*Td(1+0.2*X2)	0.70	0.67	0.69	0.66
Qe	= K(F-Fc*Qc)	1920	1431	1934	1815
DFC = Design flow/Capacity = Q/Qe		0.74	0.53	0.39	0.57
Total In Sum =		2529		PCU	
DFC of Critical Approach =		0.74			

LLA CONSULTANCY LIMITED

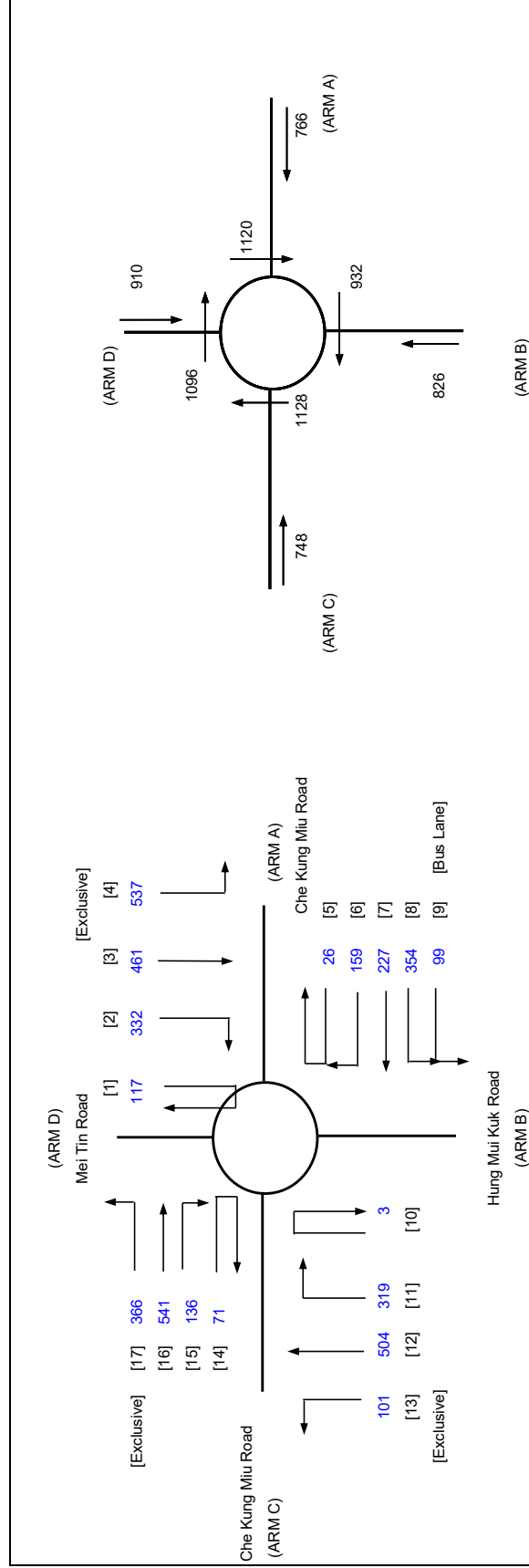
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

ROUNDAABOUT CALCULATION

2035 Reference PM	PROJECT NO.: 40969	PREPARED BY:
	FILENAME: J6_CKMR_HMKR	CHECKED BY:
	REFERENCE NO.:	REVIEWED BY:

INITIALS	DATE
----------	------

SKL	Jul-26
SLN	Jul-26
SLN	Jul-26

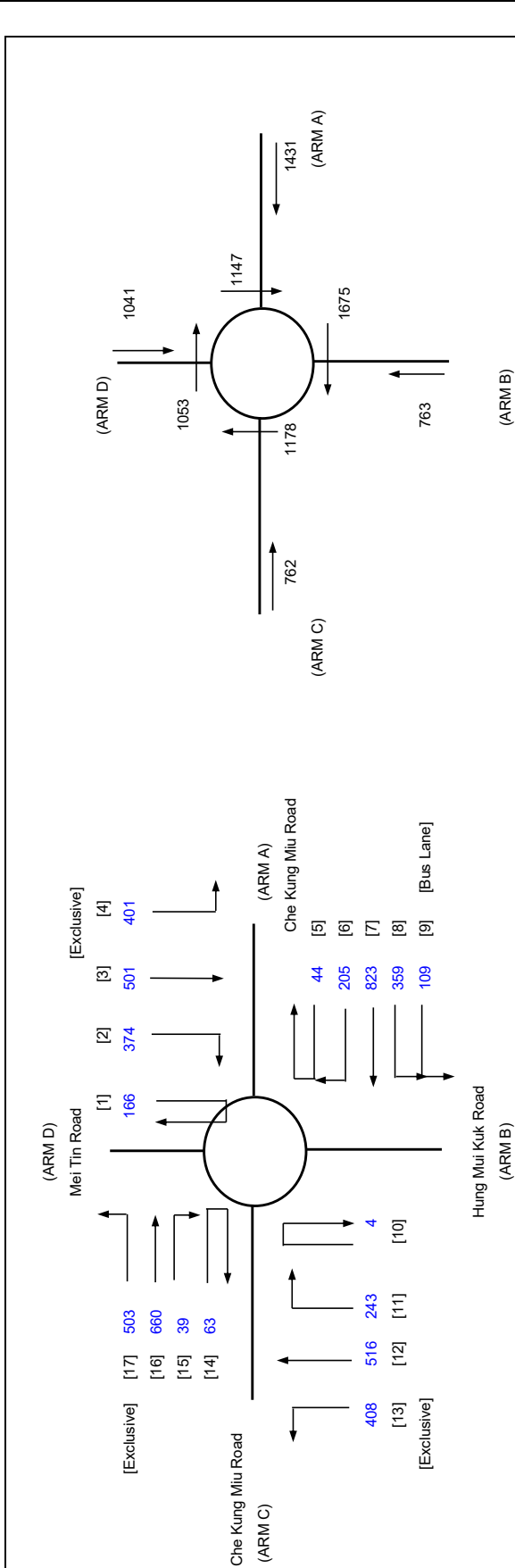


ARM				
A	B	C	D	
INPUT PARAMETERS:				
V	=	Approach half width (m)	6.90	6.60
E	=	Entry width (m)	9.80	9.40
L	=	Effective length of flare (m)	28.00	19.00
R	=	Entry radius (m)	41.00	55.00
D	=	Inscribed circle diameter (m)	66.00	66.00
A	=	Entry angle (degree)	42.00	46.00
Q	=	Entry flow (pcuh)	766	826
Qc	=	Circulating flow across entry (pcu/h)	1120	932
OUTPUT PARAMETERS:				
S	=	Sharpness of flare = $1.6(E-V)/L$	0.17	0.24
K	=	$1-0.00347(A-30)-0.978(1/R-0.05)$	0.98	0.98
X2	=	$V + ((E-V)/(1+2S))$	9.08	8.50
M	=	$EXP((D-60)/10)$	1.82	1.82
F	=	$303 \times X2$	2751	2576
Td	=	$1+(0.5/(1+M))$	1.18	1.18
Fc	=	$0.21 \times Td(1+0.2 \times X2)$	0.70	0.69
Qe	=	$K(F-Fc \times Qc)$	1938	1906
Total In Sum =			2030	PCU
DFC	=	Design flow/Capacity = Q/Qe	0.40	0.43
DFC of Critical Approach =			0.51	

LLA CONSULTANCY LIMITED

ROUNDABOUT CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PROJECT NO.: 40969		INITIALS	DATE
J6 Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road		2035 Design AM		SKL	Jul-26
		FILENAME : J6 CKMR HMKR		SLN	Jul-26
		REFERENCE NO.:		SLN	Jul-26

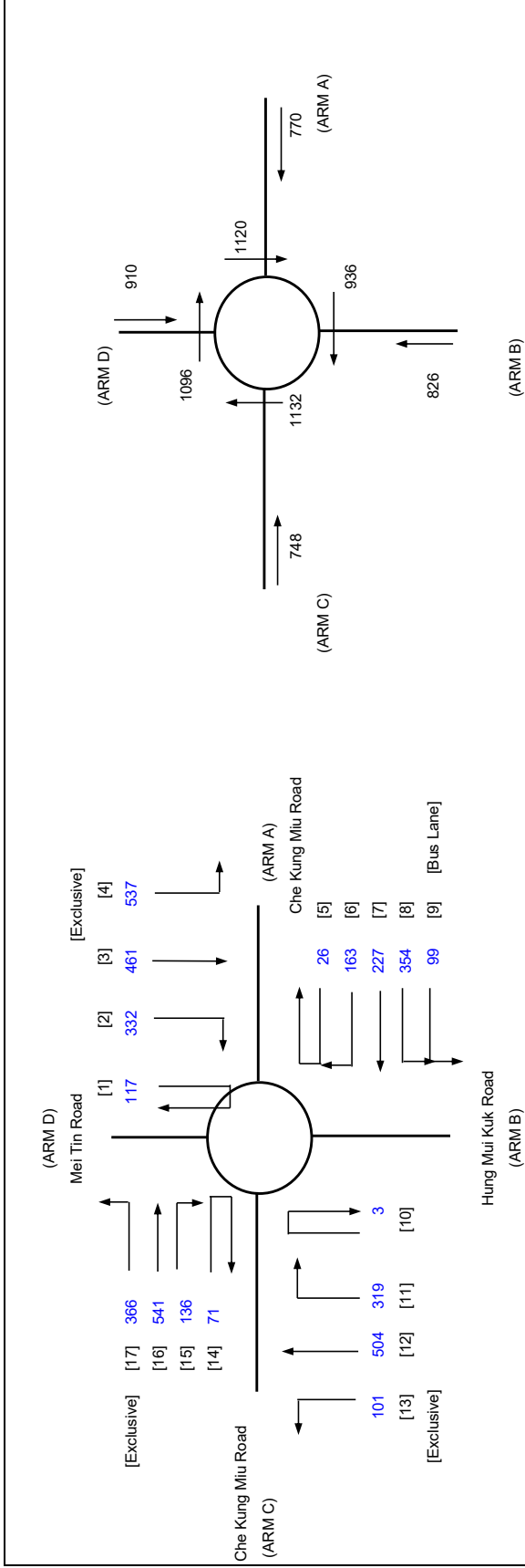


ARM		A	B	C	D
INPUT PARAMETERS:					
V	= Approach half width (m)	6.90	6.60	6.75	6.30
E	= Entry width (m)	9.80	9.40	9.50	9.20
L	= Effective length of flare (m)	28.00	19.00	41.00	22.00
R	= Entry radius (m)	41.00	55.00	37.00	36.00
D	= Inscribed circle diameter (m)	66.00	66.00	66.00	66.00
A	= Entry angle (degree)	42.00	46.00	35.00	39.00
Q	= Entry flow (pcu/h)	1431	763	762	1041
Qc	= Circulating flow across entry (pcu/h)	1147	1675	1178	1053
OUTPUT PARAMETERS:					
S	= Sharpness of flare = 1.6(E-V)/L	0.17	0.24	0.11	0.21
K	= 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	1.01	0.99
X2	= V + ((E-V)/(1+2S))	9.08	8.50	9.01	8.34
M	= EXP((D-60)/10)	1.82	1.82	1.82	1.82
F	= 303*X2	2751	2576	2731	2527
Td	= 1+(0.5/(1+M))	1.18	1.18	1.18	1.18
Fc	= 0.21*Td(1+0.2*X2)	0.70	0.67	0.69	0.66
Qe	= K(F-Fc*Qc)	1920	1423	1925	1815
Total In Sum =					
				2529	PCU
DFC = Design flow/Capacity = Q/Qe					
				DFC of Critical Approach = 0.75	

LLA CONSULTANCY LIMITED

ROUNDABOUT CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PROJECT NO.: 40969		INITIALS	DATE
J6 Che Kung Miu Road / Mei Tin Road / Hung Mui Kuk Road		2035 Design PM		SKL	Jul-26
		FILENAME : J6 CKMR HMKR		SLN	Jul-26
		REFERENCE NO.:		SLN	Jul-26
		PREPARED BY:			
		CHECKED BY:			
		REVIEWED BY:			



ARM		A	B	C	D
INPUT PARAMETERS:					
V	= Approach half width (m)	6.90	6.60	6.75	6.30
E	= Entry width (m)	9.80	9.40	9.50	9.20
L	= Effective length of flare (m)	28.00	19.00	41.00	22.00
R	= Entry radius (m)	41.00	55.00	37.00	36.00
D	= Inscribed circle diameter (m)	66.00	66.00	66.00	66.00
A	= Entry angle (degree)	42.00	46.00	35.00	39.00
Q	= Entry flow (pcu/h)	770	826	748	910
Qc	= Circulating flow across entry (pcu/h)	1120	936	1132	1096
OUTPUT PARAMETERS:					
S	= Sharpness of flare = 1.6(E-V)/L	0.17	0.24	0.11	0.21
K	= 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	1.01	0.99
X2	= V + ((E-V)/(1+2S))	9.08	8.50	9.01	8.34
M	= EXP((D-60)/10)	1.82	1.82	1.82	1.82
F	= 303*X2	2751	2576	2731	2527
Td	= 1+(0.5/(1+M))	1.18	1.18	1.18	1.18
Fc	= 0.21*Td(1+0.2*X2)	0.70	0.67	0.69	0.66
Qe	= K(F-Fc*Qc)	1938	1904	1957	1787
DFC = Design flow/Capacity = Q/Qe		0.40	0.43	0.38	0.51
Total In Sum =		2030		PCU	
DFC of Critical Approach =		0.51			

LLA CONSULTANCY LIMITED										TRAFFIC SIGNAL CALCULATION									
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin										PROJECT NO.: 40969									
J7 Sha Tin Tau Road / Che Kung Miu Road										2035 Reference AM									
										Prepared By: J7_STTR_CKMR.xlsx									
										Checked By:									
										Reviewed By:									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									
										J7									

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S 2A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184. Sha Tin

J7 Sha Tin Tau Road / Che Kung Miu Road

2035 Reference PM

40969

Prepared By:

Checked By:	
-------------	--

Reviewed By:

SKL	Ju
-----	----

SLN	Jr.
-----	-----

SLN	JU
-----	----

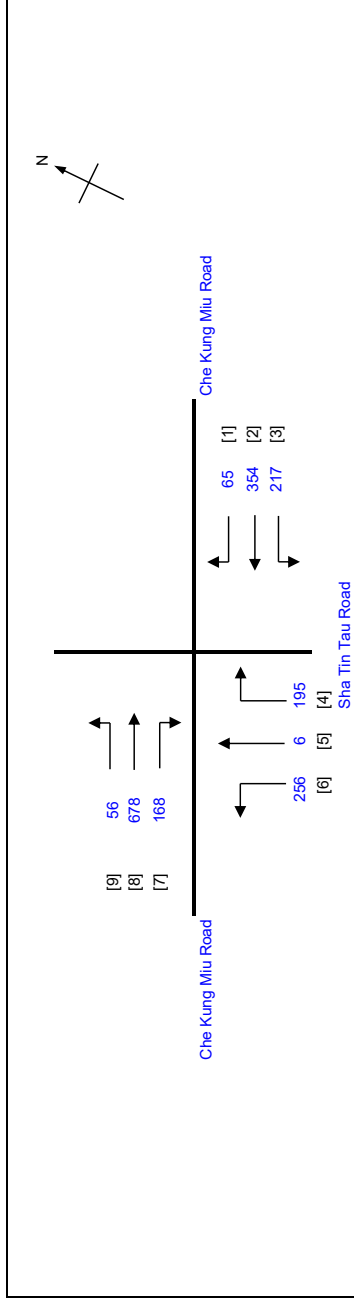
--

SKL	Ju
-----	----

SLN	Jr.
-----	-----

SLN	JU
-----	----

--



No. of stages per cycle	N	4
Cycle time	C	120 sec
Sum(y)	Y	0.321
Loss time	L	20 sec
Total Flow		1995 pcu
Co		51.5 sec
Cm		29.4 sec
Yult		0.750
R.C.ult		133.8 %
Cp		31.1 sec
Ymax		0.833
R.C.(C)		134 %

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Movement	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation	Queue Length (m / lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9 8 7.8	1	3.08	1	17		N	1923	56		56	1.00	1767							1767	0.032		20	10	10	0.385	6	54	
	1,4	3.08	2				4126	574		574	0.00	4126							4126	0.139	0.139		43	43	0.385	36	26	
	1,4	3.08	1	17			2063		168		0.62	1956							1956	0.139	0.139		43	43	0.385	30	27	
6 4.5 4	1,2,4	3.00	2	12		N	3970	256		256	1.00	3529							3529	0.073			23	60	0.385	18	40	
	2	3.00	1	17			2055		6	102	0.94	1897							1897	0.054	0.054		17	17	0.385	12	46	
	2	3.00	1	12			2055		99	99	1.00	1827							1827	0.054	0.054		17	17	0.385	12	46	
3 2 1,2	3	3.00	1	12		N	1915	217		217	1.00	1702							1702	0.127	0.127		40	40	0.385	24	29	
	3	3.00	2				4110	283		283	0.00	4110							4110	0.069	0.069		21	40	0.385	21	40	
	3	3.00	1	17			2055		65	136	0.48	1972							1972	0.069	0.069		21	40	0.385	18	42	

NOTE :

O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED										TRAFFIC SIGNAL CALCULATION									
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin										PROJECT NO.: 40969									
J7 Sha Tin Tau Road / Che Kung Miu Road										2035 Design AM									
J7										FILENAME : J7_STTR_CKMR.xlsx									
										Prepared By:									
										Checked By:									
										Reviewed By:									

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J7 Sha Tin Tau Road / Che Kung Miu Road

2035 Design PM

40969

Prepared By:

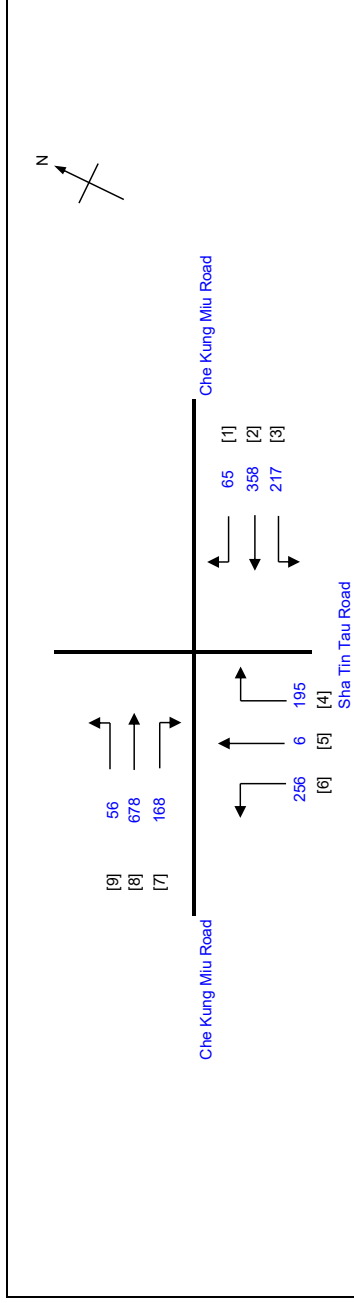
Checked By:	
-------------	--

Reviewed By

SKL	
-----	--

NTS	
-----	--

NTS	
-----	--



No. of stages per cycle	N	4
Cycle time	C	120 sec
Sum(y)	Y	0.321
Loss time	L	20 sec
Total Flow		1999 pcu
Co		51.5 sec
Cm		29.4 sec
Yult		0.750
R.C.ult		133.8 %
Cp		31.1 sec
Ymax		0.833
R.C.(C)		134 %

				Stage 1 G = 9 Int = 8	Stage 2 G = 16 Int = 5	Stage 3 G = 39 Int = 10	Stage 4 G = 33 Int =
--	--	--	--	---	--	---	--

Move- ment	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight- Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	y	Greater y	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m / lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																	
9	1	3.08	1	17		N	1923	56			1.00	1767							1767	0.032		20	10	10	0.385	6	54
8	1,4	3.08	2				4126	574	574		0.00	4126							4126	0.139	0.139		43	43	0.385	36	26
7,8	1,4	3.08	1	17			2063		104	168	0.62	1956							1956	0.139			43	43	0.385	30	27
6	1,2,4	3.00	2	12		N	3970	256			1.00	3529							3529	0.073			23	60	0.385	18	40
4,5	2	3.00	1	17			2055		6		0.94	1897							1897	0.054			17	17	0.385	12	46
4	2	3.00	1	12			2055			99	1.00	1827							1827	0.054	0.054		17	17	0.385	12	46
3	3	3.00	1	12		N	1915	217			1.00	1702							1702	0.127	0.127		40	40	0.385	24	29
2	3	3.00	2				4110		285		0.00	4110							4110	0.069			22	40	0.385	21	40
1,2	3	3.00	1	17			2055		73	65	0.47	1973							1973	0.070			22	40	0.385	18	42

NOTE :

O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

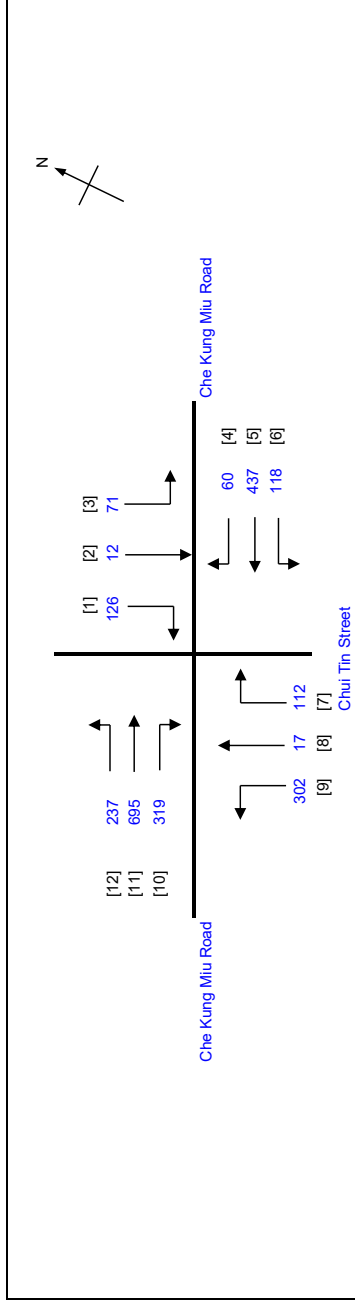
QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED										TRAFFIC SIGNAL CALCULATION									
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 1" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin										PROJECT NO.: 40969									
J8 Chui Tin Street / Che Kung Miu Road										2035 Reference AM									
										Prepared By:									
										Checked By:									
										Reviewed By:									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									
										SLN									

LLA CONSULTANCY LIMITED

TRAFFIC SIGNAL CALCULATION

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PROJECT NO.: 40969	Prepared By:	SKL	Jul-26
		FILENAME: J8_CTS_CKMR.xlsx	Checked By:	SLN	Jul-26
J8 Chui Tin Street / Che Kung Miu Road			Reviewed By:	SLN	Jul-26



No. of stages per cycle	N	5
Cycle time	C	120 sec
Sum(y)	Y	0.404
Loss time	L	28 sec
Total Flow	=	2506 pcu
Co	= $(1.5^*L+5)/(1-Y)$	78.9 sec
Cm	= $L/(1-Y)$	47.0 sec
Yult	=	0.690
R.C.ult	= $(Yult-Y)/Y^*100\%$	70.6 %
Cp	= $0.9^*L/(0.9-Y)$	50.8 sec
Ymax	= $1-L/C$	0.767
R.C.(C)	= $(0.9^*Ymax-Y)/Y^*100\%$	71 %

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	G= 12 Int = 8
[Gp]	[5] [6]	[12] [11] [10] [9]	[9][8][7]	[1][2][3]	

Pedestrian Phase	Stage	Green Time Required		Green Time Provided	
		SG	FG Delay	SG	FG
Gp	1	9	7 0	10	7

Movement	Stage	Lane Width m.	No. of lane	Radius m.	O	N	Straight-Ahead Sat. Flow	Movement			Total Flow pcu/h	Proportion of Turning Vehicles	Sat. Flow pcu/h	Flare Lane m.	Flare Effect pcu/hr	Site Factor	Site Effect pcu/hr	Gradient %	Gradient Effect pcu/hr	Revised Sat. Flow pcu/h	γ	Greater γ	L sec	g (required) sec	g (input) sec	Degree of Saturation X	Queue Length (m /lane)	Average Delay (seconds)
								Left pcu/h	Straight pcu/h	Right pcu/h																		
9 7.8	3.4 4	3.50	2	10		N	4070	302		302	1.00	3539								3539	0.085		25	19	57	0.527	24	45
		3.50	1	12	2105	17	112													1899	0.068	0.068			15	15	0.527	18
11,12 11 10	3	3.38	1	10		N	1953	237	35	272	0.87	1727							1727	0.157			36	42	0.527	36	35	
	3	3.38	2				4186	660	660	660	0.00	4186							4186	0.158			36	42	0.527	45	33	
	3	3.38	1	12		N	1953	319	319		1.00	1736							1736	0.184	0.184		42	42	0.527	36	31	
12,3 1	5	3.50	1	11		N	1965	71	12	103	0.88	1754							1754	0.059	0.059		13	13	0.527	18	55	
	5	3.50	1	17		N	1965	106	106		1.00	1806							1806	0.059			13	13	0.527	18	54	
5.6 5 4	1.2	3.30	1	10		N	1945	118	47	165	0.72	1757							1757	0.094	0.094	3	21	24	0.527	24	46	
	1.2	3.30	2				4170	390	390	390	0.00	4170							4170	0.094			21	21	0.527	30	43	
	2	3.50	1	16		N	1965	60	60		1.00	1797							1797	0.033			8	8	0.527	12	65	

NOTE :

O - OPPOSING TRAFFIC

N - NEAR SIDE LANE

SG - STEADY GREEN

FG - FLASHING GREEN

PEDESTRAIN WALKING SPEED = 1.2m/s

QUEUING LENGTH = AVERAGE QUEUE * 6m

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J9 Sha Tin Centre Street / Pak Hok Ting Street

PRIORITY JUNCTION CALCULATION

2035 Reference AM

PROJECT NO.: 40969

FILENAME: J9 STCS PHTS.x

REFERENCE NO.:

DATE _____

INITIALS

Jul-26

PREPARED BY:

SKL

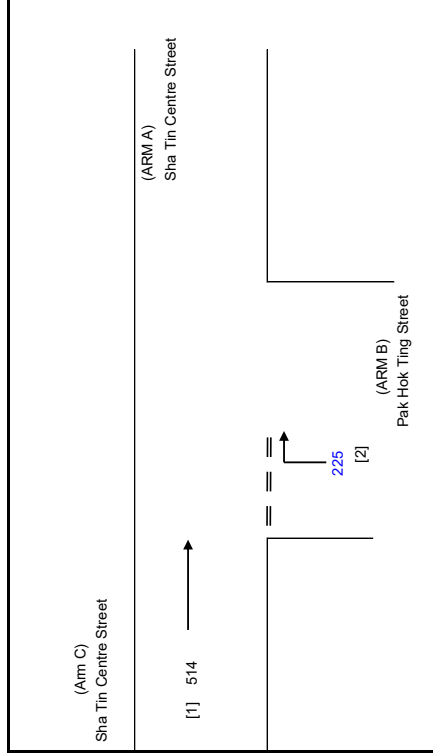
CHECKED BY:

NTS

REVIEWED BY:

NTS

Jul-26



NOTES: (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
V l-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
V l-b	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
V l-c	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-c
V r-c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.40	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

D	=	0.97504
E	=	0.58595
F	=	0.58595
Y	=	0.71020

MAJOR ROAD (ARM C)

W c-b =	0.00	(metres)
Vr c-b =	0	(metres)
q c-a =	514	(pcu/hr)
q c-b =	0	(pcu/hr)

F for (Qb-ac) = 0

MINOR ROAD (ARM B)

W b-a =	5.00	(metres)
W b-c =	0.00	(metres)
V l b-a =	100	(metres)
V r b-a =	0	(metres)
V r b-c =	0	(metres)
q b-a =	225	(pcu/hr)
q b-c =	0	(pcu/hr)

THE CAPACITY OF MOVEMENT :

Q b-a =	530
Q b-c =	437
Q c-b =	437
Q b-ac =	530

DFC b-a	=	0.4245
DFC b-c	=	0.0000
DFC c-b	=	0.0000
DFC b-ac (share lane)	=	0.4245

TOTAL FLOW = 739 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

CRITICAL DFC = 0.42

LLA CONSULTANCY LIMITED

Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin

J9 Sha Tin Centre Street / Pak Hok Ting Street

PRIORITY JUNCTION CALCULATION

2035 Reference PM

PROJECT NO.: 40969

FILENAME: J9 STCS PHTS.x

REFERENCE NO.:

DATE _____ INITIALS _____

DATE _____

SKL	Jul-26
-----	--------

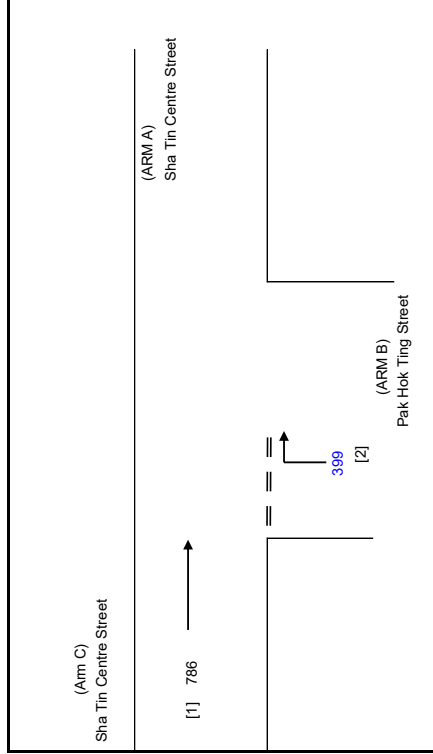
Jul-26

SLN Jul-26

Jul-26

SLN Jul-26

Jul-26



NOTES: (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W α	=	CENTRAL RESERVE WIDTH
W α -a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM α -a
W α -b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM α -b
W β -c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM β -c
W β -b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM β -a
W β -a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM β -a
V α -b	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM α -a
V α -a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM α -a
V α -c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM α -c
V α -b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM α -b
D	=	STREAM-SPECIFIC β -A
E	=	STREAM-SPECIFIC β -C
F	=	STREAM-SPECIFIC β -B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.40	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	0	(pcu/hr)

D	=	0.97504
E	=	0.58595
F	=	0.58595
Y	=	0.71020

MAJOR ROAD (ARM C)

W c-b =	0.00	(metres)
Vr c-b =	0	(metres)
q c-a =	786	(pcu/hr)
q c-b =	0	(pcu/hr)

F for (Qb-ac) = 0

MINOR ROAD (ARM B)

W b-a =	5.00	(metres)
W b-c =	0.00	(metres)
V l-b-a =	100	(metres)
V r-b-a =	0	(metres)
V r-b-c =	0	(metres)
q b-a =	399	(pcu/hr)
q b-c =	0	(pcu/hr)

THE CAPACITY OF MOVEMENT :

Q b-a =	487
Q b-c =	437
Q c-b =	437
Q b-ac =	487

DFC b-a	=
DFC b-c	=
DFC c-b	=
DFC b-ac (share lane)	=

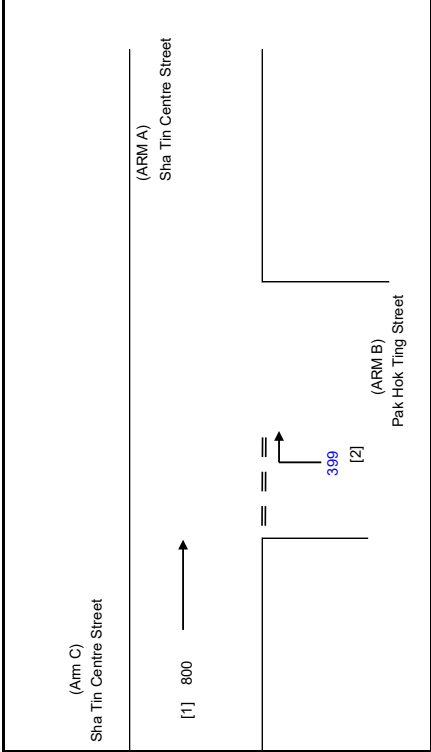
TOTAL FLOW = 1185 (PCU/HR)

COMPARISON OF DESIGN FLOW TO CAPACITY:

CRITICAL DFC = 0.82

LLA CONSULTANCY LIMITED Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PRIORITY JUNCTION CALCULATION		INITIALS DATE	
J9 Sha Tin Centre Street / Pak Hok Ting Street		2035 Design AM		PROJECT NO.: 40969 PREPARED BY: SKL FILENAME : J9_STCS_PHTS.x CHECKED BY: SLN REFERENCE NO.: REVIEWED BY: SLN	Jul-26 Jul-26 Jul-26
(Arm C) Sha Tin Centre Street [1] 529 (Arm A) Sha Tin Centre Street (Arm B) Pak Hok Ting Street 225 [2]		NOTES : (GEOMETRIC INPUT DATA) W = MAJOR ROAD WIDTH W cr = CENTRAL RESERVE WIDTH W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b Vi b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b D = STREAM-SPECIFIC B-A E = STREAM-SPECIFIC B-C F = STREAM-SPECIFIC C-B Y = (1-0.0345W)			
GEOMETRIC DETAILS: MAJOR ROAD (ARM A) W = 8.40 (metres) W cr = 0 (metres) q a-b = 0 (pcu/hr) q a-c = 0 (pcu/hr) MAJOR ROAD (ARM C) W c-b = 0.00 (metres) Vr c-b = 0 (metres) q c-a = 529 (pcu/hr) q c-b = 0 (pcu/hr) MINOR ROAD (ARM B) W b-a = 5.00 (metres) W b-c = 0.00 (metres) Vi b-a = 100 (metres) Vr b-a = 0 (metres) Vr b-c = 0 (metres) q b-a = 225 (pcu/hr) q b-c = 0 (pcu/hr)		THE CAPACITY OF MOVEMENT : Q b-a = 527 Q b-c = 437 Q c-b = 437 Q b-ac = 527 TOTAL FLOW = 754 (PCU/HR)		COMPARISON OF DESIGN FLOW TO CAPACITY: DFC b-a = 0.4269 DFC b-c = 0.0000 DFC c-b = 0.0000 DFC b-ac (share lane) = 0.4269 CRITICAL DFC = 0.43	

LLA CONSULTANCY LIMITED		PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Application for Amendment of Plan under S12A of the Town Planning Ordinance (Cap. 131), to Rezone the Application Site from "Open Space" to "Residential (Group A) 11" at Sha Tin Town Lot 310 in D.D. 184, Sha Tin		PROJECT NO.: 40969		PREPARED BY:	SKL	Jul-26
		FILENAME : J9_STCS_PHTS.x		CHECKED BY:	SLN	Jul-26
J9 Sha Tin Centre Street / Pak Hok Ting Street		REFERENCE NO.:		REVIEWED BY:	SLN	Jul-26



NOTES : (GEOMETRIC INPUT DATA)

W = MAJOR ROAD WIDTH

W cr = CENTRAL RESERVE WIDTH

W b-a = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a

W b-c = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c

W c-b = LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b

Vi b-a = VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a

Vr b-a = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a

Vr b-c = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c

Vr c-b = VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b

D = STREAM-SPECIFIC B-A

E = STREAM-SPECIFIC B-C

F = STREAM-SPECIFIC C-B

Y = (1-0.0345W)

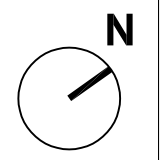
GEOMETRIC DETAILS:		GEOMETRIC FACTORS :		THE CAPACITY OF MOVEMENT :		COMPARISON OF DESIGN FLOW TO CAPACITY:	
MAJOR ROAD (ARM A)							
W	= 8.40 (metres)	D	= 0.97504	Q b-a =	484	DFC b-a	= 0.8244
W cr	= 0 (metres)	E	= 0.58595	Q b-c =	437	DFC b-c	= 0.0000
q a-b	= 0 (pcu/hr)	F	= 0.58595	Q c-b =	437	DFC c-b	= 0.0000
q a-c	= 0 (pcu/hr)	Y	= 0.71020	Q b-ac =	484	DFC b-ac (share lane)	= 0.8244
MAJOR ROAD (ARM C)		F for (Qb-ac) = 0		TOTAL FLOW = 1199 (PCU/HR)			
W	c-b = 0.00 (metres)						
Vr	c-b = 0 (metres)						
q	c-a = 800 (pcu/hr)						
q	c-b = 0 (pcu/hr)						
MINOR ROAD (ARM B)							
W	b-a = 5.00 (metres)						
W	b-c = 0.00 (metres)						
Vi	b-a = 100 (metres)						
Vr	b-a = 0 (metres)						
Vr	b-c = 0 (metres)						
q	b-a = 399 (pcu/hr)						
q	b-c = 0 (pcu/hr)						
CRITICAL DFC						=	0.82

Appendix C

Indicative Ground Floor Layout Plan



NOTES:
DO NOT SCALE DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED.
READ THIS DRAWING IN CONNECTION WITH GENERAL ARCHITECTURAL PLANS, STRUCTURAL PLANS AND OTHER RELATED DRAWINGS. THE ARCHTIECT/ ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
COPYRIGHT OF THIS DRAWING RESERVED BY ARCHITECT.



KEY PLAN SCALE 1:2000

01	SECOND SUBMISSION	FH	07/26
-	FIRST SUBMISSION	FH	09/25
Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

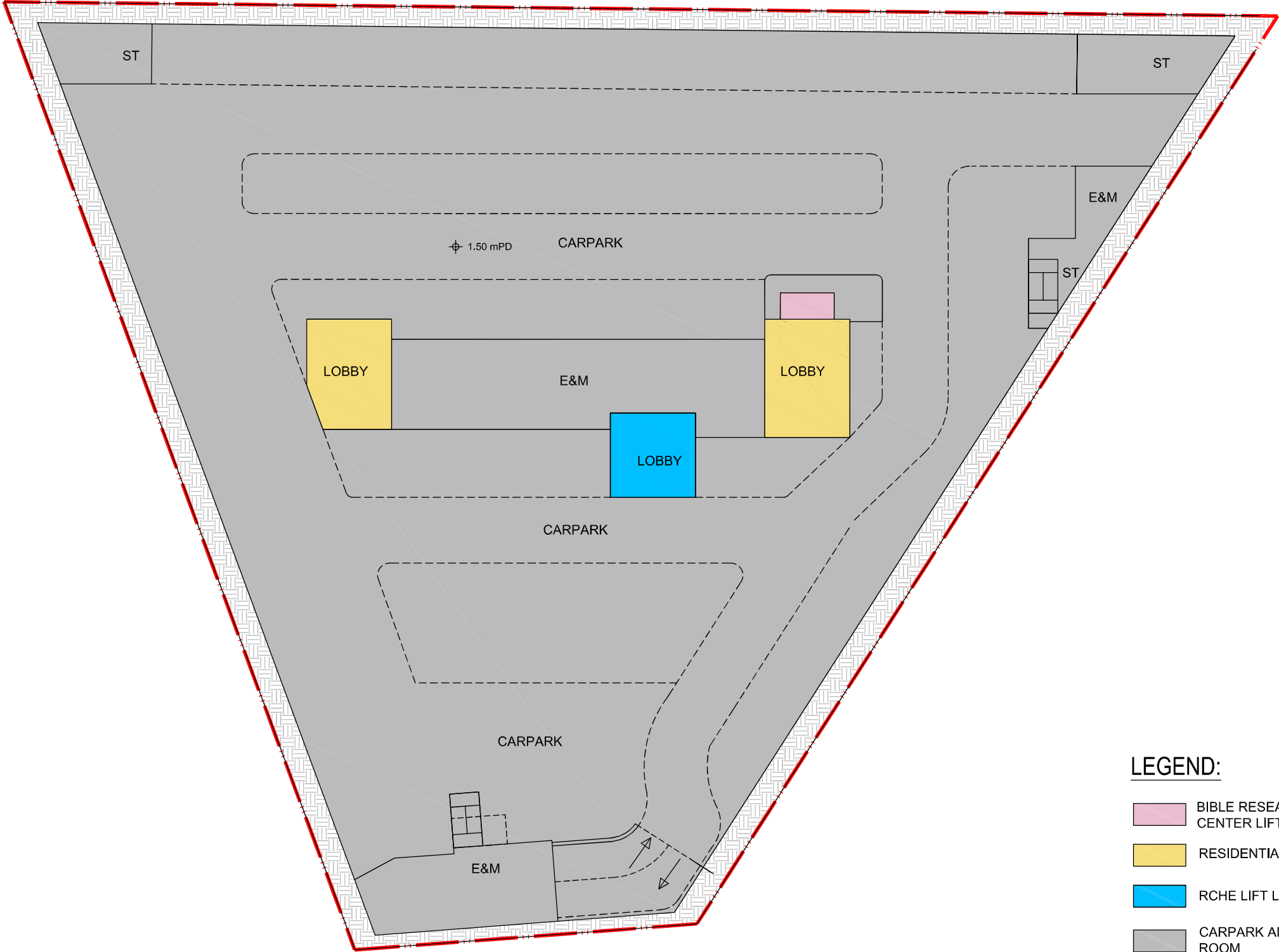
SHATIN TOWN LOT 310

Drawing Title

GROUND FLOOR PLAN

Drawing no. 299123/22/S12A_1001 (2)		Rev. 01	
Drawn RH	Date 07/26	Checked FY	Approved FH
Scale 1: 400		Status	

COPYRIGHT RESERVED



LEGEND:

- BIBLE RESEARCH AND EDUCATION CENTER LIFT LOBBY
- RESIDENTIAL LIFT LOBBY
- RCHE LIFT LOBBY
- CARPARK AND E&M PLANT ROOM

SCALE BAR



NOTES:
DO NOT SCALE DRAWING, FIGURED DIMENSIONS ARE TO BE FOLLOWED.
READ THIS DRAWING IN CONNECTION WITH GENERAL ARCHITECTURAL PLANS, STRUCTURAL PLANS AND OTHER RELATED DRAWINGS, THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FOUND THEREIN.
COPYRIGHT OF THIS DRAWING RESERVED BY ARCHITECT.



KEY PLAN SCALE 1:2000

01	SECOND SUBMISSION	FH	07/26
-	FIRST SUBMISSION	FH	09/25
Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title
SHATIN TOWN LOT 310

Drawing Title
BASEMENT FLOOR PLAN

Drawing no. 299123/22/S12A_1002			Rev. 01
Drawn RH	Date 07/26	Checked FY	Approved FH
Scale 1:400		Status	

COPYRIGHT RESERVED