

S12A Amendment of Plan Application
Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/20
Proposed Re-zoning from “AGR” to “G/IC” for a
Proposed “Social Welfare Facilities”
Residential Care Home for the Elderly (RCHE)
At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T

Revised TIA Report

September 2026



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1. INTRODUCTION

1.1 Background

1.1.1 CTA Consultants Limited was commissioned as the traffic consultant to prepare a Traffic Impact Assessment Report for proposed re-zoning from “AGR” to “G/IC” for a Proposed “Social Welfare Facilities” Residential Care Home for the Elderly (RCHE) at various lots in D.D. 23, Tung Tsz, Tai Po, New Territories (hereafter called “proposed development”).

1.1.2 The location of the proposed development is shown in **Figure 1.1**.

1.2 Study Objectives

1.2.1 The main objectives of this study are as follows:

- To assess the existing traffic conditions in the vicinity of the proposed development;
- To forecast traffic demands on the adjacent road network in the design year;
- To estimate the likely traffic generated by the proposed development;
- To assess the impacts of traffic generated by the proposed development on the adjacent road network; and
- To recommend improvement measures, if necessary, to alleviate any traffic problems on the road network



2. THE DEVELOPMENT

2.1 Site Location

- 2.1.1 The proposed development is located at various lots in D.D. 23, Tung Tsz, Tai Po which is bounded by Treasure Spot Garden II to the west as shown in **Figure 1.1**.

2.2 Proposed Development

- 2.2.1 Development parameters of the proposed development are summarized in **Table 2.1**.

Table 2.1 Development Parameters of the Proposed Development

Site Location	At various lots in D.D. 23, Tung Tsz, Tai Po, New Territories
Site Area	1,476.48 m ²
No. of Blocks	1
No. of Storeys	8
No. of Staff	120 (60 per shift)
No. of Suites and Beds	Total: 152 beds (29 nos. of suites, 123 nos. of beds and 6 isolated rooms ⁽¹⁾)

Note:

(1) Isolated rooms will be for contingency use only, normally will not be in used.

- 2.2.2 The proposed development is anticipated to be completed by year 2030 tentatively. As the completion year may need to defer to year 2031, therefore year 2034 (i.e. 3 years after the planned commencement year of the proposed development) is therefore adopted as the design year for assessment purpose as a conservative approach.

2.3 Proposed Access Road and Vehicular Access

- 2.3.1 With consideration of existing road configuration, no proper footpath from the proposed development to Tung Tsz Road, minor road improvement of 3.5m wide

single track for two-way traffic with widening at turning area together with a minimum 1.3m wide footpath is proposed.

- 2.3.2 The local access road connecting Tung Tsz Road and the proposed development is narrow and private lots are located on both sides of the road. As shown in **Figure SP-01**, should 11m HGV be required for accessing the proposed development, road is not wide enough for manoeuvring of 11m vehicle and footpath could not be provided along the access road, therefore it is proposed to provide 9m MGW to cater future operation need. Drawing on the proposed minor road improvement of access road between the Site and Tung Tsz Road, and the relevant swept path are shown in **Figure 2.1 (Rev B)** and **Figure SP-02**.
- 2.3.3 The proposed vehicular access of ~6.5m wide is located at the southwest of the proposed development. Location and the sightline assessment of the proposed vehicular access is shown diagrammatically in **Figure 2.2 (Rev B)** and **Figure 2.3 (Rev C)** respectively, and **Figure SP-03 (Rev A)** to **Figure SP-06 (Rev A)** demonstrating vehicles can be manoeuvred within the site. Since the visibility splay for southbound vehicles does not fulfil TPDM requirement of 60m sight distance, it is proposed to add flashing alarm lights as safety measure to alert pedestrians and drivers that vehicle is going out.
- 2.3.4 The management and maintenance parties of the local access road connecting Tung Tsz Road and the proposed development would be Lands Department (LandsD) (**Appendix E**).

2.4 Internal Transport Facilities Provision

- 2.4.1 It is noted that the requirement of provision of internal transport facilities for “Residential Home for Elderly” are not specified in Hong Kong Planning Standards and Guidelines (HKPSG). Therefore, parking provision has been reference to other existing RCHE sites at remote area and summarized in **Table 2.2**.

Table 2.2 Examples of Existing RCHE

RCHE	Location	No. of beds	No. of Parking	Parking rate no. per bed
Ching Chung Taoist Association of Hong Kong Limited Ching Chung Care and Attention Home for the Aged	57 Sha Chau Lei Chuen, Ping Ha Road, Yuen Long	120	1 car parking space + 1 light bus parking space	0.008
Approved Y/YL-NTM/9	81 San Tam Road, Yuen Long	142	2 car parking spaces + 1 light bus parking space + 1 LGV + 1 Ambulance	0.014
Tung Wah Group of Hospitals Shuen Wan Complex for the Elderly	93 Sam Mun Tsai Road, Shuen Wan, Tai Po	649	24 car parking spaces	0.037
Yan Chai Hospital Tai Po Fu Tip Elderly Home	2/F (Portion), 3/F and 4/F, Social Service Building, Fu Tip Estate, 11 Chung Nga Road, Tai Po, New Territories	100	_(1)	-
Ho Shin Home for the Elderly	G/F & 1/F, Shin King House, Fu Shin Estate, Tai Po, New Territories	90	_(1)	-

Note:

(1) Located within public housing estate with carpark, no parking spaces could be distinguished for RCHE.

2.4.2 With reference to **Table 2.2**, the maximum parking rate number for private car per bed of other RCHE, Tung Wah Group of Hospitals Shuen Wan Complex for the Elderly, is 0.037. Based on the maximum parking rate number for private car per bed, taking into consideration that a total of 152 nos. of beds will be provided, the private car parking provision of the proposed development would be 6 nos. (i.e. 0.037 x 152). Taking into consideration the site constraints, it is revealed that the size of the site is small (approx. 42m x approx. 27m). In view that shuttle service will only be provided by the operator for both staff and visitors (to be discussed in **Section 2.6**), 4 nos. of private car parking spaces is proposed.

2.4.3 The overall parking provision is summarized in **Table 2.3**, which should be sufficient for the daily operation needs of the proposed development, including the parking need of their staff and visitors.

2.4.4 The ground floor layout plan of the proposed development showing the internal transport provision is shown in **Figure 2.2 (Rev B)** and **Figure SP-03 (Rev A)** to **Figure SP-06(Rev A)** demonstrating vehicles can be manoeuvred within the site.

Table 2.3 Proposed Parking Provision

Parking Spaces	Dimensions	Proposed
Motorcycle	2.4m(L) x 1m(W)	1 no.
Private Car	5m(L) x 2.5m(W)	3 nos.
Private Car for Accessible	5m(L) x 3.5m(W)	1 no.
Loading/Unloading	Dimensions	Proposed
Light bus	8m(L) x 3m(W)	1 no.
Ambulance	9m(L) x 3m(W)	1 no.
MGV ⁽¹⁾	9m(L) x 3.5m(W)	1 no.

Note:

(1) Refer to **Section 2.3.3**.

2.4.5 2 nos. of private car parking spaces at the site would be for staff, 1 no. of private car parking spaces for visitors, and 1 no. of private car parking spaces for persons with disabilities. Booking in advance is required for staff, visitors or persons with disabilities.

2.5 Public Transport Services in the Vicinity

2.5.1 Numerous road-based public transport services are provided in vicinity of the proposed development. Details of the current services of franchised buses and GMB routes are listed in **Table 2.4** and the service points are demonstrated in **Figure 2.4**. It is revealed that the site is well-served by public transport services in the vicinity.



Table 2.4 Road-Based Public Transport Services in the Vicinity

Service	Route	Origin – Destination	Frequency (Mins)
Franchised Bus	73P ⁽¹⁾	Nina Tower – Tai Mei Tuk	From Nina Tower: 2 Dep; From Tai Mei Tuk: 2 Dep
	74E ⁽¹⁾	Kwun Tong – Tai Mei Tuk	From Kwun Tong: 3 Dep; From Tai Mei Tuk: 3 Dep
	75K	Tai Mei Tuk – Tai Po Market Station	10-20
	275R	Wu Kau Tang – Tai Po Market Station	10-20
	72C ⁽¹⁾	Tai Mei Tuk – Tai Po Market Station	1 Dep
	75P ⁽¹⁾	Tai Mei Tuk – Tai Po Market Station	1 Dep
GMB	20B	Tung Tsz – Tai Po Market Station	10-20
	20C	Tai Mei Tuk – Tai Po Market Station	4-10
		Tai Mei Tuk – Tai Po Market Station (via Tai Po Tai Wo Road)	12-15
	20C ⁽²⁾	Tai Mei Tuk – Tai Po Market Station (via Shan Liu Road)	4-10
	20E ⁽³⁾	Shan Liu Road, Elle Villas – Tai Po Market Station	30
	20R	Wu Kau Tang – Tai Po Market Station	60
	20T ⁽⁴⁾	Tsz Shan Monastery – Tai Po Market Station	From Tai Po Market Station: 9:15am - 9:45am and 1:15pm - 1:45pm; From Tsz Shan Monastery: 11:30am - 1:30pm and 3:30pm - 5pm

Notes:

(1) Peak hour service only.

(2) Special Route during special traffic and transport arrangements (STTA) days.

(3) Circular Route.

(4) Weekday service only.

2.6 Shuttle Service to be Provided

2.6.1 The public could access to Tung Tsz Road by NT GMB Route Nos. 20B and 20T, and to Ting Kok Road by NT GMB Route Nos. 20C, 20E, 20R and Bus Route Nos. 73P, 74E, 75K and 275R, and then walk for about 8 min to the Site.

2.6.2 To reduce the impact of public transport during daytime, shuttle service using 19-seater light bus is proposed for staff and visitors to/from Tai Po Market. The boarding



and alighting point for the shuttle service is proposed at the layby at Nam Wan Road (westbound) (close to Wan Tau Tong Estate) near Tai Po Market Station. The proposed routing of shuttle service is shown in **Figure 2.5 (Rev A)**. Swept path analysis demonstrates it is feasible to maneuver light bus is shown in **Figure SP-02**.

Staff

- 2.6.3 The operator will arrange the working hours of the staff such that public transport during daytime will not be affected. It is proposed 4 frequencies of 19-seater light buses shuttle service for staff (~60 staff per shift) to/from Tai Po Market, and will arrive/leave before 6:45am and after 6:45pm (i.e. non-peak hours), therefore shuttle services will not be included for assessment purpose which was for peak hours.

Visitors

- 2.6.4 The operator would maintain sufficient flexibility in the visitor policy to facilitate regular family contact and community integration, as required under the Code of Practice for Residential Care Homes (Elderly Persons). Being a RCHE, the number of visitors is very little. Nonetheless, visitors are suggested to enter the proposed development during non-peak hours.
- 2.6.5 To avoid overload the nearby public transport by visitors coming/leaving the proposed development it is proposed to provide shuttle service (19-seater light bus) by the Applicant for the visitors with 1 veh/bound/hr (60min headway) to/from the proposed development so as to minimize traffic impact to the surrounding road network especially Ting Kok Road.



3. THE EXISTING TRAFFIC CONDITIONS

3.1 Critical Junctions

3.1.1 As shown in **Figure 3.1 (Rev A)**, 11 junctions were identified to be critical for assessment of traffic impact due to the proposed development. They are listed in **Table 3.1** and their existing junction layout arrangements are shown in **Figures 3.2 to 3.11** respectively.

Table 3.1 Identified Critical Junctions

Ref.	Junction	Method of Control	Figure No.
A	Tung Tsz Road/ Universal Gate Road	Priority	3.2
B	Ting Kok Road/ Tung Tsz Road	Priority	3.3
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	3.4
D	Ting Kok Road/ Lo Fai Road	Signal	3.5
E	Ting Kok Road/ Dai Kwai Street	Signal	3.6
F	Ting Kok Road/ Dai Fat Street	Signal	3.7
G	Ting Kok Road/ Fung Yuen Road	Signal	3.8
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	3.9
I	Yuen Shin Road/ Dai Fat Street	Signal	3.10
J	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	3.11



- 3.1.2 In order to establish the existing traffic condition in the above-mentioned critical junctions, traffic survey in form of manual classified count was conducted on a typical weekday (7:30am to 9:30am and 5:00pm to 7:00pm), 14 April 2025 and weekend (10am to 7pm), 21 March 2026. Analysis of the existing traffic data indicates that the AM and PM peak hour flows occurred from 8:30am to 9:30am and 5:30pm to 6:30pm respectively, and peak hour flows occurred from 5pm to 6pm during weekend. The existing traffic flows during peak hours of weekday and weekend are presented in **Figure 3.12 (Rev C)** and **Figure 3.13** respectively.
- 3.1.3 Existing operational performance of the identified critical junctions and road links were assessed. The results are summarized in **Table 3.2** to **Table 3.5** and the junction calculation sheets are attached in **Appendix A**.

**Table 3.2 Junction Performance of Identified Critical Junctions in Year 2025
- Weekday**

Junction	Junction Location	Method of Control	Year 2025 - Weekday RC/RFC ⁽¹⁾	
			AM Peak	PM Peak
A	Tung Tsz Road/ Universal Gate Road	Priority	0.06	0.06
B	Ting Kok Road/ Tung Tsz Road	Priority	0.67	0.32
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	>100%	>100%
D	Ting Kok Road/ Lo Fai Road	Signal	50%	90%
E	Ting Kok Road/ Dai Kwai Street	Signal	39%	43%
F	Ting Kok Road/ Dai Fat Street	Signal	31%	51%
G	Ting Kok Road/ Fung Yuen Road	Signal	36%	30%
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	41%	44%
I	Yuen Shin Road/ Dai Fat Street	Signal	40%	81%
J	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	30%	56%

Note:

(1) RC = Reserve Capacity for Signalized Junction

RFC = Ratio of Flow to Capacity for Priority Junction



**Table 3.3 Junction Performance of Identified Critical Junctions in Year 2026
- Weekend**

Junction	Junction Location	Method of Control	Year 2026 - Weekend RC/RFC ⁽¹⁾
			Peak Hour
A	Tung Tsz Road/ Universal Gate Road	Priority	0.05
B	Ting Kok Road/ Tung Tsz Road	Priority	0.4
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	>100%
D	Ting Kok Road/ Lo Fai Road	Signal	47%
E	Ting Kok Road/ Dai Kwai Street	Signal	26%
F	Ting Kok Road/ Dai Fat Street	Signal	33%
G	Ting Kok Road/ Fung Yuen Road	Signal	34%
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	38%
I	Yuen Shin Road/ Dai Fat Street	Signal	67%
J	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	59%

Note:

(1) RC = Reserve Capacity for Signalized Junction

RFC = Ratio of Flow to Capacity for Priority Junction

- 3.1.4 The assessment results in **Table 3.2** and **Table 3.3** indicate that all critical junctions are at present operating within their capacities during peak hours of weekday and weekend.



Table 3.4 Traffic Flows and Volume to Capacity (V/C) Ratio Assessment of Identified Road Links in Year 2025 - Weekday

Road Link	Dir	Road Type	No. of Lanes	Capacity (pcu/hr)	Year 2025 Existing - Weekday			
					AM Peak		PM Peak	
					Flow (pcu/hr)	V/C	Flow (pcu/hr)	V/C
Tung Tsz Road	EB	LD	1	460	270	0.59	130	0.28
	WB	LD	1	460	150	0.33	150	0.33
Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	EB	PD	2	3,220	1,270	0.39	1,250	0.39
	WB	PD	2	3,220	1,360	0.42	1,045	0.32
Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	EB	PD	2	3,220	1,365	0.42	1,400	0.43
	WB	PD	2	3,220	1,515	0.47	1,160	0.36
Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	EB	PD	2	3,220	745	0.23	840	0.26
	WB	PD	2	3,220	1,100	0.34	835	0.26
Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	EB	PD	2	3,220	1,615	0.50	1,155	0.36
	WB	PD	2	3,220	1,660	0.52	1,415	0.44

Notes:

- (1) Capacity based on Table 2.4.1.1 of Section 2.4, Chapter 2, Volume 2, T.P.D.M.
- (2) PCU factor of 1.15 has been derived from the result of traffic count survey. Tung Tsz Road is single-2-lane local road of ~7m wide, therefore capacity per direction = $800 \div 2 \times 1.15 = 460$ pcu/hr. Ting Kok Road and Yuen Shin Road are dual-2 primary distributor of ~8m wide, therefore capacity per direction = $2,800 \times 1.15 = 3,220$ pcu/hr.



Table 3.5 Traffic Flows and Volume to Capacity (V/C) Ratio Assessment of Identified Road Links in Year 2026 - Weekend

Road Link	Dir	Road Type	No. of Lanes	Capacity (pcu/hr)	Year 2026 Existing - Weekend	
					Peak Hour	
					Flow (pcu/hr)	V/C
Tung Tsz Road	EB	LD	1	460	155	0.34
	WB	LD	1	460	165	0.36
Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	EB	PD	2	3,220	1,190	0.37
	WB	PD	2	3,220	1,350	0.42
Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	EB	PD	2	3,220	1,335	0.41
	WB	PD	2	3,220	1,490	0.46
Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	EB	PD	2	3,220	835	0.26
	WB	PD	2	3,220	985	0.31
Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	EB	PD	2	3,220	1,080	0.34
	WB	PD	2	3,220	1,290	0.40

Notes:

- (3) Capacity based on Table 2.4.1.1 of Section 2.4, Chapter 2, Volume 2, T.P.D.M.
- (4) PCU factor of 1.15 has been derived from the result of traffic count survey. Tung Tsz Road is single-2-lane local road of ~7m wide, therefore capacity per direction = $800 \div 2 \times 1.15 = 460$ pcu/hr. Ting Kok Road and Yuen Shin Road are dual-2 primary distributor of ~8m wide, therefore capacity per direction = $2,800 \times 1.15 = 3,220$ pcu/hr.

3.1.5 The assessment results in **Table 3.4** and **Table 3.5** indicate that all critical road links have adequate road link capacity during peak hours of weekday and weekend.



4. THE FUTURE TRAFFIC CONDITIONS

4.1 Design Year

- 4.1.1 The proposed development is anticipated to be completed by year 2030 tentatively. As the completion year may need to defer to year 2031, therefore year 2034 (i.e. 3 years after completion) is therefore adopted as the design year for assessment purpose as a conservative approach.

4.2 Traffic Forecasts

- 4.2.1 The traffic growth can be estimated by applying growth factor, based on the following information source:
- I. Historical traffic growth in Annual Traffic Census (ATC) published by the Transport Department (TD).
 - II. 2021-Based Territorial Population and Employment Data Matrices (TPEDM) published by the Planning Department.

Annual Traffic Census

- 4.2.2 Numerous traffic count stations are located in the vicinity of the proposed development and the traffic counts of the concerned stations reported in the Annual Traffic Census (ATC) between 2015 and 2024 are summarized in **Table 4.1**.



Table 4.1 Historical Traffic Data from Annual Traffic Census (ATC)

ATC Stn	Road Name	Annual Average Daily Traffic (AADT)							Avg. Annual Growth Rate
		2015	2016	2017	2018	2022	2023	2024	
5006	Ting Kok Rd (from Nam Wan Rd to Dai Kwai St)	26,760	29,650	30,680	30,900	30,440	29,190	28,500	0.70%
6211	Ting Kok Rd (from Dai Kwai St to Tai Mei Tuk)	25,240	27,230	27,110	29,580	28,760	28,620	25,640	0.17%
6608	Ting Kok Rd (from Tai Mei Tuk to Bride's Pool Rd)	1,350	1,390	1,520	1,400	1,290	1,240	1,090	-2.35%
6619	Dai Kwai St (from Ting Kok Rd to Dai Chong St)	3,970	4,110	4,270	3,880	3,780	4,240	3,880	-0.25%
Total		57,320	62,380	63,580	65,760	64,270	63,290	59,110	0.34%

Note:

- (1) Traffic volumes for Year 2019 to Year 2021 may be suppressed by the special working arrangement implemented during the COVID-19 outbreak period and/or social event outbreak, therefore AADT from Year 2019 to Year 2021 are not adopted.

Planning Data

4.2.3 Reference has also been made to the 2021-Based Territorial Population Employment Data Matrices (TPEDM) planning data published by the Planning Department for projection of population and employment within the study district from years 2021 to 2031. The average annual growth rates in terms of population and employment from 2021 to 2031 are tabulated in **Table 4.2**.

Table 4.2 TPEDM Planning Data from 2021 to 2031

Zone	Population			Avg. Annual Growth Rate	Employment			Avg. Annual Growth Rate
	2021	2026	2031		2021	2026	2031	
Tai Po	316,450	348,900	343,250	0.82%	96,600	94,800	89,800	-0.73%



Adopted Growth Rate

- 4.2.4 A.A.D.T. of ATC indicates that the traffic flows in the local road network has an average annual growth rate of +0.34% from 2015 to 2024.
- 4.2.5 Whilst, the planning data indicates that the population and employment data of the study area are expected to grow with an average annual growth rate of +0.82% and -0.73% respectively from 2021 to 2031.
- 4.2.6 As a conservative approach, annual growth rate of **+0.82%** p.a. is adopted.

4.3 Traffic Generations of Adjacent New Developments

- 4.3.1 To fully reflect the growth traffic, peak hour trip generation of the future vicinity developments have been taken into consideration. The major planned development is detailed in **Figure 4.1 (Rev B)** and the estimated trip rate with reference to TPDM and trips of the adjacent planned developments are shown in **Table 4.3** and **Table 4.4** respectively.

Table 4.3 Estimated Trip Rates of Planned Adjacent Developments

Approved Planning Application No.	Location	Use	Assumed GFA & Flat no.	Units	Trip Rates			
					AM Peak		PM Peak	
					Gen.	Att.	Gen.	Att.
A/TP/672	Government land at Area and Chung Nga Road East, Tai Po, New Territories	Public Housing	~316, 519m ² 7,431 flats (av. flat size: 40m ²)	pcu/hr/flat	Already near to full population in-take at the time of survey (Appendix B).			
		Retail / Shopping Complex	~5,160m ²	pcu/hr/100 sq m GFA				
A/TP/700	Chung Nga Road West	Public Housing	1,547 flats (av. flat size: 40m ²)	pcu/hr/flat	0.0432 ⁽¹⁾	0.0326 ⁽¹⁾	0.0237 ⁽¹⁾	0.0301 ⁽¹⁾
		Retail / Shopping Complex	~409m ²	pcu/hr/100 sq m GFA	0.2296	0.2434	0.3100	0.3563
A/NE-TK/753	Government Land in D.D 26, Shuen	Proposed Temporary Residential	~ 6082.4 m ² 276 flats	pcu/hr	1 ⁽³⁾	3 ⁽³⁾	2 ⁽³⁾	3 ⁽³⁾



Approved Planning Application No.	Location	Use	Assumed GFA & Flat no.	Units	Trip Rates			
					AM Peak		PM Peak	
					Gen.	Att.	Gen.	Att.
	Wan, Tai Po, New Territories	Institution (Transitional Housing) for a period of 5 years						
A/NE-TK/850	Various Lots in D.D.26, Wong Yue Tan	Proposed Temporary Residential Institution (Transitional Housing) with Filing and Excavation Land for a period of 5 years	~ 20,333 m ² 1,236 flats	pcu/hr	Already near to full population in-take at the time of survey (Appendix C).			
-	Area 33, Tai Po	Construction Industry Council Training Academy Tai Po Training Ground	-	pcu/hr	23 ⁽⁴⁾	23 ⁽⁴⁾	23 ⁽⁴⁾	23 ⁽⁴⁾
-	Tai Po Town Lot 246 (Ex-Shuen Wan Landfill Site)	Golf Course	-	pcu/hr	8 ⁽³⁾	32 ⁽³⁾	50 ⁽³⁾	26 ⁽³⁾
-	Area 33, Tai Po	Football-cum-rugby pitch/underground public vehicle park 400 car spaces	-	pcu/hr/ parking space	0.0771 ⁽⁵⁾	0.0907 ⁽⁵⁾	0.0493 ⁽⁵⁾	0.0811 ⁽⁵⁾
-	On Pong Road	Community health centre	31,580m ²	pcu/hr/100 sq m GFA	0.235 ⁽⁶⁾	0.235 ⁽⁶⁾	0.23 ⁽⁶⁾	0.115 ⁽⁶⁾
Y/TP/40	Tai Po Town Lot 183 S.A ss.1 (Part) and 183 S.A ss.2 (Part), Various Lots in D.D. 11 and Adjoining Government Land, Fung	Private Housing	1,988 flats	pcu/hr	155 ⁽³⁾	125 ⁽³⁾	125 ⁽³⁾	118 ⁽³⁾
		Commercial	Not more than 800m ²	pcu/hr/100 sq m GFA	2 ⁽³⁾	2 ⁽³⁾	2 ⁽³⁾	2 ⁽³⁾



Approved Planning Application No.	Location	Use	Assumed GFA & Flat no.	Units	Trip Rates			
					AM Peak		PM Peak	
					Gen.	Att.	Gen.	Att.
	Yuen, Tai Po	RCHE	150 beds	pcu/hr/bed	4 ⁽³⁾	5 ⁽³⁾	9 ⁽³⁾	7 ⁽³⁾
		Day Care Unit	30 places	-	_(³⁾	_(³⁾	_(³⁾	_(³⁾
-	Villa Lucca, 36 Lo Fai Road, Tai Po	Private Housing	262 flats	pcu/hr/flat	0.3252 ⁽⁷⁾	0.2609 ⁽⁷⁾	0.2835 ⁽⁷⁾	0.4074 ⁽⁷⁾
-	Tai Po Sewage Treatment Works	PWP No. 5191DR Upgrading of Tai Po Sewage Treatment Works and Organic Waste and Sewage Sludge Co-digestion Facilities	-	pcu/hr	25 ⁽⁸⁾	25 ⁽⁸⁾	25 ⁽⁸⁾	25 ⁽⁸⁾

Notes:

- (1) Trip rates for public housing development of 40m² is adopted.
- (2) Adopted trip generations and attractions from TIA report of the relevant planning application.
- (3) Adopted trip generations and attractions from TIA report of the relevant planning application.
- (4) Based on previous study on Construction Industry Council Training Academy.
- (5) Based on surveyed trip rate at Tai Po Tung Cheong Street Sports Centre Public Vehicle Park.
- (6) Adopted trip rate of community health centre in the approved TIA report for Queen's Hill, Fanling, which has similar nature and proximity to public transport.
- (7) Trip rates for private housing development of 300m² is adopted.
- (8) Information not disclosed to for private project planning application use. Assumptions have been made.
- (9) For the planned bus depot at Dai Fuk Street (A/TP/685), the approved TIA report stated that most of the buses leave and return to the depot between 12am and 6am for daily operation, therefore will not be included in the assessment during peak hours.



Table 4.4 Estimated Trip Generations and Attractions of Planned Adjacent Developments

Approved Planning Application No.	Location	Development	Assumed GFA & Flat no.	Trips			
				AM Peak (pcu/hr)		PM Peak (pcu/hr)	
				Gen.	Att.	Gen.	Att.
A/TP/672	Government land at Area and Chung Nga Road East, Tai Po, New Territories	Public Housing	~316, 519m ² 7,431 flats (av. flat size: 40m ²)	Already near to full population in-take at the time of survey (Appendix B).			
		Retail / Shopping Complex	~5,160m ²				
A/TP/700	Chung Nga Road West	Public Housing	1,547 flats (av. flat size: 40m ²)	67	51	37	47
		Retail / Shopping Complex	~409m ²	1	1	2	2
A/NE-TK/753	Government Land in D.D 26, Shuen Wan, Tai Po, New Territories	Proposed Temporary Residential Institution (Transitional Housing) for a period of 5 years	~ 6082.4 m ² 276 flats	1 ⁽¹⁾	3 ⁽¹⁾	2 ⁽¹⁾	3 ⁽¹⁾
A/NE-TK/850	Various Lots in D.D.26, Wong Yue Tan	Proposed Temporary Residential Institution (Transitional Housing) with Filing and Excavation Land for a period of 5 years	~ 20,333 m ² 1,236 flats	Already near to full population in-take at the time of survey (Appendix C).			
-	Area 33, Tai Po	Construction Industry Council Training Academy Tai Po Training Ground	-	23 ⁽²⁾	23 ⁽²⁾	23 ⁽²⁾	23 ⁽²⁾
-	Tai Po Town Lot 246 (Ex-Shuen Wan Landfill Site)	Golf Course	-	8 ⁽¹⁾	32 ⁽¹⁾	50 ⁽¹⁾	26 ⁽¹⁾
-	Area 33, Tai Po	Football-cum-rugby pitch/underground	-	31	37	20	33



Approved Planning Application No.	Location	Development	Assumed GFA & Flat no.	Trips			
				AM Peak (pcu/hr)		PM Peak (pcu/hr)	
				Gen.	Att.	Gen.	Att.
		public vehicle park 400 car spaces					
-	On Pong Road	Community health centre	31,580m ²	75	75	73	37
Y/TP/40	Tai Po Town Lot 183 S.A ss.1 (Part) and 183 S.A ss.2 (Part), Various Lots in D.D. 11 and Adjoining Government Land, Fung Yuen, Tai Po	Private Housing	1,988 flats	155	125	125	118
		Commercial	Not more than 800m ²	2	2	2	3
		RCHE	150 beds	4	5	9	7
		Day Care Unit	30 places	-	-	-	-
-	Villa Lucca, 36 Lo Fai Road, Tai Po	Private Housing	262 flats (Assume 40% Occupancy ⁽⁴⁾)	86 (52 ⁽⁴⁾)	69 (41 ⁽⁴⁾)	75 (45 ⁽⁴⁾)	107 (64 ⁽⁴⁾)
-	Tai Po Sewage Treatment Works	PWP No. 5191DR Upgrading of Tai Po Sewage Treatment Works and Organic Waste and Sewage Sludge Co-digestion Facilities	-	25 ⁽³⁾	25 ⁽³⁾	25 ⁽³⁾	25 ⁽³⁾

Notes:

- (1) Based on the approved TIA.
- (2) Based on previous study on Construction Industry Council Training Academy.
- (3) Information not disclosed to for private project planning application use. Assumptions have been made.
- (4) Based on the information from the website of real estate agent, about 56% of Villa Lucca was sold. With further checking by on-site observation, 40% occupancy is adopted for the assessment as a conservative approach.



4.4 Planned Junction Layout under Planned Project

- 4.4.1 Junction Fung Yuen Road / Ting Kok Road (G) will be modified according to the TIA report (January 2021) of approved A/NE-TK/850 at Wong Yue Tan, Tai Po and the latest drawing for A/NE-TK/753 at Shuen Wan, Tai Po as shown in **Figure 4.2**. It is anticipated that the planned junction layout would be in place for reference and design year 2034 for the assessments.
- 4.4.2 It is noted that Fung Yuen CDA (1) (planning application no. Y/TP/40) of about 1,988 units is undergoing planning application, scheduled to be completed by year 2030 tentatively. Based on the approved traffic generation and attraction of 161 pcu/hr and 132 pcu/hr during AM peak hour and traffic generation and attraction of 136 pcu/hr and 128 pcu/hr during PM peak hour, sensitivity assessment would be carried out.
- 4.4.3 It is noted that Fung Yuen CDA (1) (planning application no. Y/TP/40) of about 1,988 units is undergoing planning application, scheduled to be completed by year 2030 tentatively. Based on the approved traffic generation and attraction of 161 pcu/hr and 132 pcu/hr during AM peak hour and traffic generation and attraction of 136 pcu/hr and 128 pcu/hr during PM peak hour, sensitivity assessment would be carried out with their planned junction layouts as shown in **Table 4.5**.

Table 4.5 Planned Junction Layouts under planning application no. Y/TP/40

Ref.	Junction	Detail	Anticipated Completion Year
F	Ting Kok Road/ Dai Fat Street	As shown in Figure 4.3	By 2030
G	Ting Kok Road/ Fung Yuen Road	As shown in Figure 4.4	By 2030
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	As shown in Figure 4.5	By 2030
I	Yuen Shin Road/ Dai Fat Street	As shown in Figure 4.6	By 2030
J	Yuen Shin Road/ Tai Po Tai Wo Road	As shown in Figure 4.7	By 2030



4.5 Reference Traffic Flows

- 4.5.1 2034 reference traffic flows on weekday and on weekend are then derived by the following and presented diagrammatically in **Figure 4.8** and **Figure 4.9** respectively.

Weekday

$$\begin{array}{c} \text{2034} \\ \text{Reference Traffic Flows} \\ \text{(Without Proposed} \\ \text{Development)} \end{array} = \left(\begin{array}{c} \text{2025} \\ \text{Observed} \\ \text{Traffic} \\ \text{Flows} \end{array} \times \begin{array}{c} \text{Adopted} \\ \text{Growth} \\ \text{Factor} \\ \text{(i.e. +0.82\%} \\ \text{for 9 years)} \end{array} \right) + \begin{array}{c} \text{Traffic Flows of} \\ \text{Planned} \\ \text{Adjacent} \\ \text{Developments} \end{array}$$

Weekend

$$\begin{array}{c} \text{2034} \\ \text{Reference Traffic Flows} \\ \text{(Without Proposed} \\ \text{Development)} \end{array} = \left(\begin{array}{c} \text{2026} \\ \text{Observed} \\ \text{Traffic} \\ \text{Flows} \end{array} \times \begin{array}{c} \text{Adopted} \\ \text{Growth} \\ \text{Factor} \\ \text{(i.e. +0.82\%} \\ \text{for 8 years)} \end{array} \right) + \begin{array}{c} \text{Traffic Flows of} \\ \text{Planned} \\ \text{Adjacent} \\ \text{Developments} \end{array}$$

4.6 Traffic Generations and Attractions of Proposed Development

- 4.6.1 To estimate the trip generations of the proposed development, reference has been made to the trip generation rates of the existing Tung Wah Group of Hospitals Shuen Wan Complex for the Elderly which comprises Pao Siu Loong Care and Attention Home, Wu York Yu Care and Attention Home, and Wu Chiang Wai Fong Care and Attention Home in the same district, and sites of similar nature at remote area. The adopted trip generation rates are summarized in **Table 4.6**.



Table 4.6 Adopted Generation and Attraction Trip Rates of Proposed Development

Reference Sites	Approx. No. of Beds	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Tung Wah Group of Hospitals Shuen Wan Complex for the Elderly, 93 Sam Mun Tsai Road, Shuen Wan, Tai Po, N.T.	649	pcu/hr	7	10	13	9
		pcu/hr/bed	0.011	0.016	0.020	0.014
Pok Oi Hospital Yeung Chun Pui Care and Attention Home, Lot No. 2273 & Ext. in DD 125, Ping Ha Road, Ping Shan, Yuen Long, N.T.	143	pcu/hr	2	2	3	2
		pcu/hr/bed	0.014	0.014	0.021	0.014
Ching Chung Taoist Association of Hong Kong Limited Ching Chung Care and Attention Home for the Aged, 57 Sha Chau Lei Chuen, Ping Ha Road, Yuen Long, N. T.	120	pcu/hr	2	0	0	0
		pcu/hr/bed	0.017	0.000	0.000	0.000
Hong Kong Bodhi Siksa Society Limited Care and Attention Home for the Aged, No. 38 Lo Wai Road, Tsuen Wan, N.T.	150	pcu/hr	5	5	3	3
		pcu/hr/bed	0.030	0.030	0.020	0.020
Adopted Rate	-	pcu/hr/bed	0.030	0.030	0.021	0.020

4.6.2 Based on **Section 2.6**, **Table 2.1** and **Table 4.6**, the estimated traffic generation and attraction due to the proposed development are summarized in **Table 4.7**.



Table 4.7 Estimated Traffic Generation and Attraction of Proposed Development

	AM		PM	
	Generation (pcu/hr)	Attraction (pcu/hr)	Generation (pcu/hr)	Attraction (pcu/hr)
Proposed Development (152 beds)	5	5	4	4
Shuttle service for visitor	1.5	1.5	1.5	1.5
Total	6.5 (say 10)	6.5 (say 10)	5.5 (say 10)	5.5 (say 10)

Note:

(1) From **Section 2.6**, shuttle service will be provided to staff during before AM and after PM peak hours; therefore will not be included for the above assessment.

4.6.3 It is anticipated that the proposed development would generate and attract 10 pcu/hr each during AM peak hour and PM peak hour. The peak traffic generated by the proposed development is small and would induce insignificant impact on the surrounding road network.

4.7 Design Traffic Flows

4.7.1 The future traffic generations of the proposed development were then assigned onto the road network and superimposed onto the 2034 reference traffic flows (without proposed development) to derive the 2034 design traffic forecasts (with proposed development).

$$\begin{array}{l} \text{2034 Design Traffic Flows} \\ \text{(With Proposed Development)} \end{array} = \begin{array}{l} \text{2034 Reference Traffic Flows} \\ \text{(Without Proposed Development)} \end{array} + \begin{array}{l} \text{Proposed Development} \\ \text{Traffic Flows} \end{array}$$

4.7.2 Year 2034 development traffic flows and design traffic flows (with proposed development) on weekday and on weekend are shown in **Figure 4.10** to **Figure 4.12** respectively.



5. TRAFFIC IMPACT ASSESSMENT

5.1 Operational Assessment

5.1.1 To assess the potential traffic impact due to the proposed development, capacity analysis of the identified critical junction and road links for both reference (without proposed development) and design scenarios (with proposed development) in year 2034 were carried out. The results are summarized in **Table 5.1** to **Table 5.4** and the junction calculation sheets are attached in **Appendix A**.

**Table 5.1 Junction Performance of Identified Critical Junctions in Year 2034
(With and Without Proposed Development) - Weekday**

Ref.	Junction	Method of Control	Year 2034 - Weekday RC/RFC ⁽¹⁾			
			Reference Scenario (Without Proposed Development)		Design Scenario (With Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
A	Tung Tsz Road/ Universal Gate Road	Priority	0.07	0.06	0.07	0.06
B	Ting Kok Road/ Tung Tsz Road	Priority	0.75	0.36	0.77	0.38
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	95%	>100%	94%	>100%
D	Ting Kok Road/ Lo Fai Road	Signal	33%	62%	32%	61%
E	Ting Kok Road/ Dai Kwai Street	Signal	23%	23%	22%	22%
F	Ting Kok Road/ Dai Fat Street	Signal	16%	30%	15%	29%
G ⁽²⁾	Ting Kok Road/ Fung Yuen Road	Signal	21%	14%	20%	14%
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	23%	20%	21%	20%
I	Yuen Shin Road/ Dai Fat Street	Signal	23%	56%	23%	55%
J	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	15%	35%	14%	34%

Notes:

(1) RC = Reserve Capacity for Signalized Junction

RFC = Ratio of Flow to Capacity for Priority Junction

(2) Reference has been made to the planned junction improvement works mentioned in **Section 4.4**.



**Table 5.2 Junction Performance of Identified Critical Junctions in Year 2034
(With and Without Proposed Development) - Weekend**

Junction	Junction Location	Method of Control	Year 2034 - Weekend RC/RFC ⁽¹⁾	
			Reference Scenario (Without Proposed Development)	Design Scenario (With Proposed Development)
			Peak Hour	Peak Hour
A	Tung Tsz Road/ Universal Gate Road	Priority	0.05	0.06
B	Ting Kok Road/ Tung Tsz Road	Priority	0.44	0.47
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	>100%	>100%
D	Ting Kok Road/ Lo Fai Road	Signal	30%	29%
E	Ting Kok Road/ Dai Kwai Street	Signal	13%	12%
F	Ting Kok Road/ Dai Fat Street	Signal	16%	15%
G ⁽²⁾	Ting Kok Road/ Fung Yuen Road	Signal	19%	19%
H	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	17%	16%
I	Yuen Shin Road/ Dai Fat Street	Signal	46%	44%
J	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	39%	38%

Notes:

(1) RC = Reserve Capacity for Signalized Junction

RFC = Ratio of Flow to Capacity for Priority Junction

(2) Reference has been made to the planned junction improvement works mentioned in **Section 4.4**.

5.1.2 The assessment results in **Table 5.1** and **Table 5.2** revealed that all critical junctions would still operate within their capacities in both reference scenario (without proposed development) and design scenario (with proposed development) in 2034 during peak hours of weekday and weekend except the following junctions:

- Junction Ting Kok Road/ Dai Kwai Street (E) with RC <15% but still positive during peak hour at weekend without and with the proposed development;
- Junction Ting Kok Road/ Fung Yuen Road (G) with RC <15% but still positive during PM peak hour at weekday without and with the proposed development; and
- Junction Yuen Shin Road/ Tai Po Tai Wo Road (J) with RC <15% but still positive during AM peak hour at weekday with the proposed development.



5.1.3 It is anticipated that the proposed development would generate and attract 10 pcu/hr each during AM peak hour and PM peak hour. The peak traffic generated by the proposed development is small and would induce insignificant impact on the surrounding road network.

5.1.4 Junctions F, G, H, I and J have improvement schemes under planning application no. Y/TP/40 of about 1,988 units, tentatively scheduled to be completed by 2030.

Table 5.3 Traffic Flows and Volume to Capacity (V/C) Ratio Assessment of Identified Road Links in 2034 (With and Without Proposed Development) - Weekday

Road Link	Dir	Road Type	No. of Lanes	Capacity (pcu/hr)	Year 2034 - Weekday Reference Scenario (Without Proposed Development)				Year 2034 - Weekday Design Scenario (With Proposed Development)			
					AM Peak		PM Peak		AM Peak		PM Peak	
					Flow (pcu/hr)	V/C	Flow (pcu/hr)	V/C	Flow (pcu/hr)	V/C	Flow (pcu/hr)	V/C
Tung Tsz Road	EB	LD	1	460	290	0.63	145	0.32	300	0.65	155	0.34
	WB	LD	1	460	165	0.36	160	0.35	175	0.38	170	0.37
Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	EB	PD	2	3,220	1,445	0.45	1,435	0.45	1,455	0.45	1,445	0.45
	WB	PD	2	3,220	1,525	0.47	1,220	0.38	1,535	0.48	1,230	0.38
Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	EB	PD	2	3,220	1,550	0.48	1,600	0.50	1,560	0.48	1,610	0.50
	WB	PD	2	3,220	1,695	0.53	1,345	0.42	1,705	0.53	1,355	0.42
Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	EB	PD	2	3,220	840	0.26	950	0.30	850	0.26	960	0.30
	WB	PD	2	3,220	1,245	0.39	990	0.31	1,255	0.39	1,000	0.31
Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	EB	PD	2	3,220	1,825	0.57	1,335	0.41	1,835	0.57	1,345	0.42
	WB	PD	2	3,220	1,890	0.59	1,645	0.51	1,900	0.59	1,655	0.51

Notes:

(1) Capacity based on Table 2.4.1.1 of Section 2.4, Chapter 2, Volume 2, T.P.D.M.

(2) PCU factor of 1.15 has been derived from the result of traffic count survey. Tung Tsz Road is single-2-lane local road of ~7m wide, therefore capacity per direction = $800 \div 2 \times 1.15 = 460$ pcu/hr.



Ting Kok Road and Yuen Shin Road are dual-2 primary distributor of ~8m wide, therefore capacity per direction = $2,800 \times 1.15 = 3,220$ pcu/hr.

Table 5.4 Traffic Flows and Volume to Capacity (V/C) Ratio Assessment of Identified Road Links in 2034 (With and Without Proposed Development) - Weekend

Road Link	Dir	Road Type	No. of Lanes	Capacity (pcu/hr)	Year 2034 - Weekend Reference Scenario (Without Proposed Development)		Year 2034 - Weekend Design Scenario (With Proposed Development)	
					Peak Hour		Peak Hour	
					Flow (pcu/hr)	V/C	Flow (pcu/hr)	V/C
Tung Tsz Road	EB	LD	1	460	165	0.36	175	0.38
	WB	LD	1	460	180	0.39	190	0.41
Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	EB	PD	2	3,220	1,365	0.42	1,375	0.43
	WB	PD	2	3,220	1,535	0.48	1,545	0.48
Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	EB	PD	2	3,220	1,520	0.47	1,530	0.48
	WB	PD	2	3,220	1,690	0.52	1,700	0.53
Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	EB	PD	2	3,220	935	0.29	945	0.29
	WB	PD	2	3,220	1,145	0.36	1,155	0.36
Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	EB	PD	2	3,220	1,240	0.39	1,250	0.39
	WB	PD	2	3,220	1,505	0.47	1,515	0.47

Notes:

- (1) Capacity based on Table 2.4.1.1 of Section 2.4, Chapter 2, Volume 2, T.P.D.M.
- (2) PCU factor of 1.15 has been derived from the result of traffic count survey. Tung Tsz Road is single-2-lane local road of ~7m wide, therefore capacity per direction = $800 \div 2 \times 1.15 = 460$ pcu/hr. Ting Kok Road and Yuen Shin Road are dual-2 primary distributor of ~8m wide, therefore capacity per direction = $2,800 \times 1.15 = 3,220$ pcu/hr.

5.1.5 The assessment results in **Table 5.3** and **Table 5.4** indicate that all critical road links will have adequate road link capacity in 2034 during peak hours of weekday and weekend.



5.2 Proposed Improvement Scheme of Critical Junctions

5.2.1 Improvement scheme is proposed on Junction Ting Kok Road/ Dai Kwai Street (E), Junction Ting Kok Road/ Fung Yuen Road (G) and Junction Yuen Shin Road/ Tai Po Tai Wo Road (J). The details of improvement scheme and operational performance are summarized in **Table 5.5**.

Table 5.5 Junction Performance of Key Junctions With Proposed Improvement Schemes in Year 2034 (With and Without Proposed Development)

Ref.	Improvement Details	Method of Control	Year 2034 Design Scenario RC ⁽¹⁾					
			Weekday				Weekend	
			Without Proposed Improvement Scheme		With Proposed Improvement Scheme		Without Proposed Improvement Scheme	With Proposed Improvement Scheme
			AM Peak	PM Peak	AM Peak	PM Peak	Peak Hour	
E	Modify the cycle time from 100s to 106s for peak hour at Weekend	Signal	N/A	N/A	N/A	N/A	12%	15%
G	Modify the cycle time from 96s to 98s for PM peak hour at Weekday	Signal	20%	14%	20%	16%	N/A	N/A
J	Modify the cycle time from 104s to 108s for AM peak hour at Weekday	Signal	14%	34%	15%	34%	N/A	N/A

Note: (1) RC = Reserve Capacity for Signalized Junction

5.2.2 **Table 5.5** revealed that Junction Ting Kok Road/ Dai Kwai Street (E), Junction Ting Kok Road/ Fung Yuen Road (G) and Junction Yuen Shin Road/ Tai Po Tai Wo Road (J) would operate within their capacities in design year 2034 with the proposed improvement schemes.

5.2.3 Nonetheless, the proposed development would only generate limited volume of traffic to the junctions, the traffic impact to these junctions are insignificant.



5.2.4 The peak traffic generated by the proposed development is small and would induce insignificant impact on the surrounding road network.

5.3 Sensitivity Test With Fung Yuen CDA (1) (Planning Application No. Y/TP/40)

5.3.1 As mentioned in **Section 4.4**, it is noted that Fung Yuen CDA (1) (planning application no. Y/TP/40) of about 1,988 units is undergoing planning application, scheduled to be completed by year 2030 tentatively. Sensitivity test with consideration of Fung Yuen CDA (1) (planning application no. Y/TP/40) for design scenarios (with proposed development) in year 2032 were carried out and the traffic flows is shown in **Figure 5.1**.

5.3.2 The results are summarized in **Table 5.6**, and the junction calculation sheets are attached in **Appendix A**.

**Table 5.6 Junction Performance of Identified Critical Junctions in Year 2034
Sensitivity Test with Fung Yuen CDA (1) (Planning Application
No. Y/TP/40) (With and Without Proposed Development)**

Ref.	Junction	Method of Control	Year 2034 RC/RFC ⁽¹⁾ Sensitivity Test with Fung Yuen CDA (1) Planning Application No. Y/TP/40			
			Reference Scenario (Without Proposed Development)		Design Scenario (With Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
A	Tung Tsz Road/ Universal Gate Road	Priority	0.07	0.06	0.07	0.06
B	Ting Kok Road/ Tung Tsz Road	Priority	0.75	0.36	0.78	0.38
C	Ting Kok Road/ Sam Mun Tsai Road	Signal	94%	>100%	93%	>100%
D	Ting Kok Road/ Lo Fai Road	Signal	32%	61%	31%	60%
E	Ting Kok Road/ Dai Kwai Street	Signal	22%	23%	22%	22%
F ⁽²⁾	Ting Kok Road/ Dai Fat Street	Signal	62%	93%	61%	91%
G ⁽²⁾	Ting Kok Road/ Fung Yuen Road	Signal	57%	52%	56%	51%



Ref.	Junction	Method of Control	Year 2034 RC/RFC ⁽¹⁾ Sensitivity Test with Fung Yuen CDA (1) Planning Application No. Y/TP/40			
			Reference Scenario (Without Proposed Development)		Design Scenario (With Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
H ⁽²⁾	Ting Kok Road/ Yuen Shin Road/ Dai Fuk Street	Signal	46%	48%	45%	48%
I ⁽²⁾	Yuen Shin Road/ Dai Fat Street	Signal	37%	58%	37%	57%
J ⁽²⁾	Yuen Shin Road/ Tai Po Tai Wo Road	Signal	32%	56%	32%	55%

Notes:

(1) RC = Reserve Capacity for Signalized Junction

RFC = Ratio of Flow to Capacity for Priority Junction

(2) Reference has been made to the planned junction improvement works mentioned in Planning Application No. Y/TP/40 TIA report.

5.3.3 The assessment results in **Table 5.6** revealed that all critical junctions would still operate within their capacities for sensitivity test with consideration of Fung Yuen CDA (1) (planning application no. Y/TP/40) in both reference scenario (without proposed development) and design scenario (with proposed development) in 2034 during peak hours.



6. PICK-UP/DROP-OFF LAYBY

6.1 Queuing assessment

- 6.1.1 The boarding and alighting point for the shuttle service is proposed at the layby at Nam Wan Road (westbound) (close to Wan Tau Tong Estate) near Tai Po Market Station as shown in **Figure 6.1**. The concerned layby can cater ~2 nos. of 8m light bus. Arrival Rate and servicing rate refer to the total number of shuttle bus arrival and average pick-up/drop-off time at the pick-up/drop-off layby per hour. The peak hour arrival rate and service rate are summarized in **Table 6.1**.

Table 6.1 Peak Hour Traffic Trips at Pick-up/Drop-off Layby

	Peak Hour
Existing Arrival Rate (veh/hr)	54 ⁽¹⁾
Additional Services due to Proposed Development (veh/hr)	1 ⁽²⁾
Number of Pick-up/Drop-off Bays	2
Servicing Rate per Bay (veh/hr)	60 ⁽³⁾
Servicing Rate of Pick-up/Drop-off Layby	120

Notes:

- (1) From survey.
(2) From **Section 2.6.2**.
(3) Reference has been made to our on-site observation, the average duration is 1 min/shuttle bus (i.e. $60\text{min} \div 1\text{min} = 60$ shuttle bus/hr) as a conservative approach.

- 6.1.2 To understand the pick-up/drop-off condition at concerned pick-up/drop-off layby, queuing assessment is carried out.
- 6.1.3 From the survey, the maximum arrival rate at peak is 55 veh/hr (54 + 1).
- 6.1.4 Average pick-up/drop-off time at the stop is 1min for each shuttle bus, servicing rate of the pick-up/drop-off layby = 120 veh/hr.
- 6.1.5 Therefore the probability of having a queue of more than 3 shuttle buses at the concerned pick-up/drop-off layby is considered negligible.



6.1.6 Analysis of the existing traffic data indicates that the peak hour of the concerned pick-up/drop-off layby occurred from 7:45am to 8:45am. **Table 6.2** summarized the minute-by-minute breakdown of lay-by occupancy of the peak period.

Table 6.2 Minute-by-minute Breakdown at Pick-up/Drop-off Layby During Peak Hour

Time	Pick-up/Drop-off Bay 1	Pick-up/Drop-off Bay 2
0745-0746	Available	Available
0746-0747	Available	Available
0747-0748	Occupied	Available
0748-0749	Occupied	Occupied
0749-0750	Occupied	Occupied
0750-0751	Available	Occupied
0751-0752	Available	Occupied
0752-0753	Available	Available
0753-0754	Available	Occupied
0754-0755	Available	Available
0755-0756	Available	Occupied
0756-0757	Available	Occupied
0757-0758	Available	Occupied
0758-0759	Available	Occupied
0759-0800	Available	Occupied
0800-0801	Occupied	Available
0801-0802	Available	Available
0802-0803	Available	Occupied
0803-0804	Available	Occupied
0804-0805	Available	Occupied
0805-0806	Available	Occupied
0806-0807	Available	Occupied



Time	Pick-up/Drop-off Bay 1	Pick-up/Drop-off Bay 2
0807-0808	Available	Occupied
0808-0809	Available	Occupied
0809-0810	Available	Occupied
0810-0811	Available	Occupied
0811-0812	Available	Occupied
0812-0813	Available	Occupied
0813-0814	Available	Available
0814-0815	Available	Available
0815-0816	Available	Available
0816-0817	Available	Occupied
0817-0818	Available	Occupied
0818-0819	Available	Available
0819-0820	Available	Available
0820-0821	Available	Available
0821-0822	Available	Available
0822-0823	Occupied	Occupied
0823-0824	Occupied	Occupied
0824-0825	Occupied	Occupied
0825-0826	Available	Occupied
0826-0827	Available	Occupied
0827-0828	Available	Occupied
0828-0829	Available	Occupied
0829-0830	Available	Occupied
0830-0831	Available	Occupied
0831-0832	Available	Occupied
0832-0833	Available	Occupied
0833-0834	Available	Occupied



Time	Pick-up/Drop-off Bay 1	Pick-up/Drop-off Bay 2
0834-0835	Available	Occupied
0835-0836	Available	Occupied
0836-0837	Available	Occupied
0837-0838	Available	Available
0838-0839	Available	Occupied
0839-0840	Available	Occupied
0840-0841	Available	Available
0841-0842	Available	Available
0842-0843	Available	Available
0843-0844	Available	Occupied
0844-0845	Available	Occupied

- 6.1.7 Therefore at least one pick-up/drop-off layby is available most of the time, therefore the concerned pick-up/drop-off layby can cater the shuttle service of the proposed development, i.e. 1 veh/bound/hr (60min headway) during peak hour.



7. PUBLIC TRANSPORT ASSESSMENT

7.1 Public Transport Demand in Year 2034

- 7.1.1 Reference is made to the modal split from Travel Characteristics Survey (TCS) 2022 as shown in **Table 7.1** to derive the estimated public transport demand due to the proposed development.

Table 7.1 Distribution of Boardings by Public Transport Mode

Mode	%
MTR	35%
Bus	26%
PLB	11%

- 7.1.2 With consideration that the site is located at a distance from Tai Po Market MTR station, therefore passengers taking MTR are expected to take bus/GMB then interchange with MTR station and would take into account in calculation of public transport service for the proposed development.

7.2 Pedestrian Generations and Attractions of Proposed Redevelopment

- 7.2.1 The trip generation rates of RCHE are considered as low. As a conservative approach, assumptions are made based on the policy of general RCHE. Based on the policy of limiting 2 visitors per bed under normal visiting arrangement, the total estimated visitor generation and attraction is about 304 visitors/hr (152 x 2).
- 7.2.2 Based on **Table 7.1**, the calculation of peak hour trips for public transport services by mode is summarized in **Table 7.2**. Since bus and PLB of the surveyed bus stops for public transport assessment have similar destination groups, passengers tend to board the public transport mode whichever arrive first, therefore bus and PLB are assessed as one category.



Table 7.2 Calculation of Peak Hour Trips of Public Transport Services by Mode

Transport Mode	%(1)	AM Peak Hour		PM Peak Hour	
		GEN	ATT	GEN	ATT
Bus and PLB	72%	= 304 x 72% = 219	= 304 x 72% = 219	= 304 x 72% = 219	= 304 x 72% = 219

Notes:

(1) From **Table 7.1**, MTR 35% + bus 26% + PLB 11% = 72%.

7.3 Survey on Existing Public Transport Service in the Vicinity

- 7.3.1 Existing bus stops to be assessed on impacts due to the proposed development is shown in **Figure 2.4**, which is expected to serve the users of the proposed development.
- 7.3.2 A preliminary and localized public transport survey was carried out. The survey was carried out during the morning peak period and evening peak periods (7:30am to 9:30am and 5:00pm to 7:00pm) on a typical weekday on 4 September 2026 (Friday).
- 7.3.3 The bus stops information and finding are presented **Table 7.3** and **Table 7.4**. The surveyed bus frequencies as in **Table 7.3** have been checked and are within the normal schedule range during peak periods listed in bus company’s website.



Table 7.3 Bus/PLB Stops Information

Bus/PLB Stop 1: San Tau Kok Tung Tsz Road NB			
Mode	Route No.	Origin	Destination
Bus	73P	Tsuen Wan (Nina Tower)	Tai Mei Tuk
	74E	Kwun Tong Ferry	Tai Mei Tuk
	75K	Tai Po Market Station	Tai Mei Tuk
	275R	Tai Po Market Station	Wu Kau Tang
PLB	20C	Tai Po Market Station	Tai Mei Tuk
	20E	Tai Po Market Station	Shan Liu
	20R	Tai Po Market Station	Wu Kau Tang

Bus/PLB Stop 2: San Tau Kok Tung Tsz Road SB			
Mode	Route No.	Origin	Destination
Bus	72C	Tai Mei Tuk	Tai Po Market Station
	73P	Tai Mei Tuk	Tsuen Wan (Nina Tower)
	74E	Tai Mei Tuk	Kwun Tong Ferry
	75K	Tai Mei Tuk	Tai Po Market Station
	75P	Tai Mei Tuk	Tai Po Market Station
	275R	Wu Kau Tang	Tai Po Market Station
PLB	20C	Tai Mei Tuk	Tai Po Market Station
	20E	Shan Liu	Tai Po Market Station
	20R	Wu Kau Tang	Tai Po Market Station



Table 7.4 Observed Occupancy of Existing Bus Stops during AM and PM Peak Hours

AM Peak Hour									
Bus Destination Location Group	Mode	Route No.	Observed Vehicular Trips/hr [A]	Total Approx. passengers on board arriving bus stop/hr [B]	Boarding			Total No. of Alighting Passengers/ hr (by route) [D]	Total Surplus Capacity/ hr ⁽¹⁾⁽²⁾
					Total No. of Boarding Passengers/ hr (by route)	Total No. of Boarding Passengers/ hr (by Bus Destination Location Group) [C]	% [C]÷244		
Bus/PLB Stop 1: San Tau Kok Tung Tsz Road NB									
Tai Mei Tuk	Bus	75K	7	144	0	4	1.7%	6	895
	PLB	20C	14	61	4			9	
		20E	1	2	0			0	
		20R	1	5	0			0	
Sub-total		-	-	-	4	4	1.7%	-	-
Bus/PLB Stop 2: San Tau Kok Tung Tsz Road SB									
Tai Po	Bus	72C	1	24	7	208	85.2%	0	552
		75K	12	876	169			2	
		75P	2	120	18			0	
	PLB	20C	16	270	14			0	
		20E	3	56	0			0	
Sub-total		-	-	-	208	208	85.2%	-	-
Others	Bus	73P	2	72	3	32	13.1%	3	343
		74E	3	156	29			0	
Sub-total		-	-	-	32	32	13.1%	-	-
Total	-	-	-	-	244	244	100%	-	-



PM Peak Hour									
Bus Destination Location Group	Mode	Route No.	Observed Vehicular Trips/hr [A]	Total Approx. passengers on board arriving bus stop/hr [B]	Boarding			Total No. of Alighting Passengers/hr (by route) [D]	Total Surplus Capacity/hr ⁽¹⁾⁽²⁾
					Total No. of Boarding Passengers/hr (by route)	Total No. of Boarding Passengers/hr (by Bus Destination Location Group) [C]	% [C]÷33		
Bus/PLB Stop 1: San Tau Kok Tung Tsz Road NB									
Tai Mei Tuk	Bus	73P	1	60	0	6	18.2%	3	584
		74E	1	48	0			6	
		75K	9	792	2			91	
	PLB	20C	19	270	3			22	
		20E	1	10	0			0	
		20R	1	8	1			0	
		Sub-total		-	-			-	
Bus/PLB Stop 2: San Tau Kok Tung Tsz Road SB									
Tai Po	Bus	75K	6	204	16	27	81.8%	1	620
	PLB	20C	19	189	11			3	
		20E	1	4	0			0	
	Sub-total		-	-	-	27	27	81.8%	-
Total	-	-	-	-	33	33	100%	-	-

Note:

- (1) Assumed 120-seat for franchised bus. Bus total capacity/hr = [A]x120-[B]-[C]+[D].
(2) Assumed 16-seat for all GMB service. GMB total capacity/hr = [A]x16-[B]-[C]+[D].



7.4 Future Public Transport Service in the Vicinity

7.4.1 Based on the observed passenger flows, the adopted growth rate of +0.82% as in **Section 4.2**, future reference passenger flows (without proposed development) in Year 2034 are estimated and summarized in the equation below:

$$\begin{array}{l} \text{2034 Reference} \\ \text{Passenger Flows} \\ \text{(Without Proposed} \\ \text{Development)} \end{array} = \begin{array}{l} \text{2026 Passenger} \\ \text{Flows} \end{array} \times \begin{array}{l} \text{Adopted Growth Factor} \\ \text{(i.e. +0.82\%}^{(1)} \text{ p.a. for 8 years)} \end{array}$$

Notes:

(1) From **Section 4.2**.

7.4.2 The passenger flows generated by the proposed development was then superimposed onto the 2034 reference passenger flows (without proposed development) to derive the 2034 design passenger flows (with proposed development).

$$\begin{array}{l} \text{2034 Design} \\ \text{Passenger Flows} \\ \text{(With Proposed} \\ \text{Development)} \end{array} = \begin{array}{l} \text{2034 Reference} \\ \text{Passenger Flows} \\ \text{(without proposed} \\ \text{development)} \end{array} + \begin{array}{l} \text{Proposed Development} \\ \text{Passenger Flows} \end{array}$$

7.4.3 Based on **Table 7.2** and assuming the percentage split of the proposed development same as that of boarding passenger of surveyed bus stops as in **Table 7.4**, the anticipated number of boarding passengers from the proposed development is shown in **Table 7.5**.

Table 7.5 Estimated Boarding Passengers of Proposed Development

Bus Destination Location Group	AM Peak Hour		PM Peak Hour	
	%	Gen	%	Gen
Bus/PLB Stop 1: A Kung Ngam Road, Chai Wan Road SB				
Tai Mei Tuk	1.7%	4	18.2%	40
<i>Sub-total</i>	<i>1.7%</i>	<i>4</i>	<i>18.2%</i>	<i>40</i>
Bus Stop 2: A Kung Ngam Road, Chai Wan Road NB				
Tai Po	85.2%	186	81.8%	179
Others	13.1%	29	-	-
<i>Sub-total</i>	<i>98.3%</i>	<i>215</i>	<i>81.8%</i>	<i>179</i>
Total	100%	219	100%	219



7.4.4 Based on **Table 7.4** and **Table 7.5**, the expected demand of public transport in Year 2034 without and with proposed development is shown in **Table 7.6**.

Table 7.6 Expected Occupancy of Bus Stops during 2034 AM and PM Peak Hours in Reference Scenario (Without Proposed Development) and Design Scenario (With Proposed Development)

AM Peak Hour									
Bus Destination Location Group	Mode	Route No.	Observed Vehicular Trips/hr [A]	Reference Scenario (Without Proposed Development)				Design Scenario (With Proposed Development)	
				Total Approx. passengers on board arriving bus stop/hr [E]= [B]x(1+0.82%) ⁸	Total No. of Boarding Passengers/ hr (by Bus Destination Location Group) [F]= [C]]x(1+0.82%) ⁸	Total No. of Alighting Passengers/ hr (by route) [G]= [D]x(1+0.82%) ⁸	Total Surplus Capacity/ hr [H] ⁽¹⁾⁽²⁾	No. of Boarding Passengers from Proposed Development [I] ⁽³⁾	Total Surplus Capacity/ hr [H]-[I]
Bus/PLB Stop 1: San Tau Kok Tung Tsz Road NB									
Tai Mei Tuk	Bus	75K	7	154	5	7	879	4	875
	PLB	20C	14	66		10			
		20E	1	3		0			
		20R	1	6		0			
Sub-total		-	-	-	5	-	-	4	-
Bus/PLB Stop 2: San Tau Kok Tung Tsz Road SB									
Tai Po	Bus	72C	1	26	224	0	443	186	257
		75K	12	936		3			
		75P	2	129		0			
	PLB	20C	16	289		0			
		20E	3	60		0			
Sub-total		-	-	-	224	-	-	186	-
Others	Bus	73P	2	77	35	4	325	29	296
		74E	3	167		0			
Sub-total		-	-	-	35	-	-	29	-
Total	-	-	-	-	264	-	-	219	-



PM Peak Hour									
Bus Destination Location Group	Mode	Route No.	Observed Vehicular Trips/hr [A]	Reference Scenario (Without Proposed Development)				Design Scenario (With Proposed Development)	
				Total Approx. passengers on board arriving bus stop/hr [E]= [B]x(1+0.82%) ¹²	Total No. of Boarding Passengers/ hr (by Bus Destination Location Group) [F]= [C]]x(1+0.82%) ¹²	Total No. of Alighting Passengers/ hr (by route) [G]= [D]x(1+0.82%) ¹²	Total Surplus Capacity/ hr [H] ⁽¹⁾⁽²⁾	No. of Boarding Passengers from Proposed Development [I] ⁽³⁾	Total Surplus Capacity/ hr [H]-[I]
Bus/PLB Stop 1: San Tau Kok Tung Tsz Road NB									
Tai Mei Tuk	Bus	73P	1	65	9	4	508	40	468
		74E	1	52		7			
		75K	9	846		98			
	PLB	20C	19	289		24			
		20E	1	11		0			
		20R	1	9		0			
Sub-total		-	-	-	9	-	-	40	-
Bus/PLB Stop 2: San Tau Kok Tung Tsz Road SB									
Tai Po	Bus	75K	6	218	30	2	591	179	412
	PLB	20C	19	202		4			
		20E	1	5		0			
Sub-total		-	-	-	30	-	-	179	-
Total	-	-	-	-	39	-	-	219	-

Note:

- (1) Assumed 120-seat for franchised bus. Bus total capacity/hr = [A]x120-[E]-[F]+[G].
- (2) Assumed 16-seat for all GMB service. GMB total capacity/hr = [A]x16-[E]-[F]+[G].
- (3) From **Table 7.5**.

7.4.5 Assessments in **Table 7.6** indicate that there are surplus capacities for the bus/PLB stop during AM and PM peak hours in 2034 and it is anticipated there will be surplus capacities with the proposed development.



8. PEDESTRIAN ASSESSMENT

8.1 Survey on Pedestrian Flows

- 8.1.1 Sections for assessment at the pedestrian facilities (footpath and crossing facilities) along the pedestrian routing to major public transport facilities is shown in **Figure 8.1**.
- 8.1.2 In order to establish the existing pedestrian condition in the above-mentioned critical section, pedestrian surveys were carried out during AM and PM peak periods (7:30am to 9:30am and 5:00pm to 7:00pm) on a typical weekday, 4 September 2026 (Friday).
- 8.1.3 The concept of Minimum Width of Footways and Level-of-service (LOS) in accordance with T.P.D.M. Volume 2 Chapter 3.4.11 and Volume 6 Chapter 10 have been applied for assessing the concerned walkways. The Minimum Width of Footways refers to the desirable minimum effective widths of footways according to pedestrian volume and type of land use. LOS directly relates to the pedestrian comfort and ease with which pedestrians queued and proceed at the walkway.
- 8.1.4 The related assessment of pedestrian is based on Level-of-Service (LOS) approach, which is stipulated in T.P.D.M. (Volume 6, Chapter 10, Section 10.4.2), defines the service level of walkway in terms of several parameters such as pedestrian flow rate, pedestrian space, walking speed, etc. The standard with relevant descriptions for cautionary crossing and footpath are summarized in **Table 8.1** and **Table 8.2** respectively. In general, LOS C is desirable for most design at streets with dominant ‘living’ pedestrian activities under T.P.D.M. Volume 6, Chapter 10.



Table 8.1 Descriptions of Level-of-Service (LOS) for Footpath

LOS	Flow Rate (ped/min/meter)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 - 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exists, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 - 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 - 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.



Table 8.2 Descriptions of Level-of-Service (LOS) for Cautionary Crossing

LOS	Average Pedestrian Delay (s)	Likelihood of Risk-taking Behaviour
A	≤5	Low
B	5-10	Low
C	10-20	Moderate
D	20-30	Moderate
E	30-45	High
F	>45	Very High

8.1.5 The observed pedestrian flows is presented in **Figure 8.2**.

8.1.6 The level-of-service (LOS) for existing operational performances of the identified critical sections for cautionary crossings and footpaths are listed in **Table 8.3** and **Table 8.4** respectively.

Table 8.3 Operational Performance of Critical Cautionary Crossing in Year 2026

Input Parameters			Year 2026 Existing	
			AM Peak	PM Peak
P4				
Sp	= average pedestrian walking speed (m/s)		1.2	1.2
ts	= pedestrian start-up time and end clearance time (s)		3	3
L	= crosswalk length (m)		5.5	5.5
vp	= pedestrian flow rate (p/hr)		35	10
	= pedestrian flow rate (p/s)		0.04	0.01
v	= vehicular flow rate (veh/h)		280	355
	= vehicular flow rate (veh/s)		0.08	0.1
WE	= effective crosswalk (m)		2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	8	8
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.1	1
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	8	8
5	dp	= average pedestrian delay (s)	3.2	4.3
6	LOS	= Level of Services	<u>A</u>	<u>A</u>
P5				



Input Parameters			Year 2026 Existing	
			AM Peak	PM Peak
Sp	= average pedestrian walking speed (m/s)		1.2	1.2
ts	= pedestrian start-up time and end clearance time (s)		3	3
L	= crosswalk length (m)		5	5
vp	= pedestrian flow rate (p/hr)		35	10
	= pedestrian flow rate (p/s)		0.04	0.01
v	= vehicular flow rate (veh/h)		540	295
	= vehicular flow rate (veh/s)		0.15	0.08
WE	= effective crosswalk (m)		2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	7	7
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.2	1
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	7	7
5	dp	= average pedestrian delay (s)	5.4	2.4
6	LOS	= Level of Services	<u>B</u>	<u>A</u>

Table 8.4 Operational Performance of Critical Footpath in Year 2026

Critical Section	Total Footpath Width (m) ⁽¹⁾	Effective Width (m) ⁽²⁾	Observed Scenario (Year 2026)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS	Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS
			(ped/15 mins)	(ped/min/m) ⁽³⁾		(ped/15 mins)	(ped/min/m) ⁽³⁾	
P1	2.8	1.8	10	0.4	A	15	0.6	A
P2	2.7	1.7	20	0.8	A	30	1.2	A
P3	2.8	1.8	40	1.5	A	30	1.1	A
P6	1.8	0.8	10	0.8	A	10	0.8	A
P7	1.3	0.3	5	1.1	A	15	3.3	A
P8	2.5	1.5	5	0.2	A	10	0.4	A

Notes:

(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls).

(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 15 min / Effective Width.

(3) LOS details extracted from the HCM are tabulated in TPDM Volume 6 Chapter 10 Clause 10.4.2.3.



8.1.7 The results of assessment shown in **Table 8.3** and **Table 8.4** indicate that the critical sections were operating with ample reserved capacity during peak 15-min.

8.2 Future Pedestrian Condition

8.2.1 Reference has been made to the growth rate of 0.82% from **Section 4.2** for the background pedestrian growth from 2026 to 2034.

8.2.2 The 2034 reference pedestrian flows are presented in **Figure 8.3**.

8.2.3 The level-of-service (LOS) for reference scenario (without proposed development) operational performances of the identified critical sections for cautionary crossings and footpaths are listed in **Table 8.5** and **Table 8.6**.

Table 8.5 Operational Performance of Critical Cautionary Crossing in Year 2034 (Without Proposed Development)

Input Parameters			Year 2034 Reference Scenario (Without Proposed Development)	
			AM Peak	PM Peak
P4				
Sp	= average pedestrian walking speed (m/s)		1.2	1.2
ts	= pedestrian start-up time and end clearance time (s)		3	3
L	= crosswalk length (m)		5.5	5.5
vp	= pedestrian flow rate (p/hr)		35	10
	= pedestrian flow rate (p/s)		0.04	0.01
v	= vehicular flow rate (veh/h)		305	390
	= vehicular flow rate (veh/s)		0.08	0.11
WE	= effective crosswalk (m)		2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	8	8
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.1	1
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	8	8
5	dp	= average pedestrian delay (s)	3.2	4.8
6	LOS	= Level of Services	<u>A</u>	<u>A</u>



Input Parameters			Year 2034 Reference Scenario (Without Proposed Development)	
			AM Peak	PM Peak
P5				
Sp	= average pedestrian walking speed (m/s)		1.2	1.2
ts	= pedestrian start-up time and end clearance time (s)		3	3
L	= crosswalk length (m)		5	5
vp	= pedestrian flow rate (p/hr)		35	10
	= pedestrian flow rate (p/s)		0.04	0.01
v	= vehicular flow rate (veh/h)		585	320
	= vehicular flow rate (veh/s)		0.16	0.09
WE	= effective crosswalk (m)		2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	7	7
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.2	1
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	7	7
5	dp	= average pedestrian delay (s)	5.9	2.8
6	LOS	= Level of Services	<u>B</u>	<u>A</u>

**Table 8.6 Operational Performance of Critical Footpath in Year 2034
(Without Proposed Development)**

Critical Section	Total Footpath Width (m) ⁽¹⁾	Effective Width (m) ⁽²⁾	Reference Scenario (Year 2034)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS	Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS
			(ped/15 mins)	(ped/min/m) ⁽³⁾		(ped/15 mins)	(ped/min/m) ⁽³⁾	
P1	2.8	1.8	10	0.1	A	15	0.1	A
P2	2.7	1.7	20	0.2	A	30	0.3	A
P3	2.8	1.8	45	0.4	A	30	0.3	A
P6	1.8	0.8	10	0.2	A	10	0.2	A
P7	1.3	0.3	5	0.3	A	20	1.1	A
P8	2.5	1.5	5	0.1	A	10	0.1	A

Notes:

(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls).

(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 15 min / Effective Width.

(3) LOS details extracted from the HCM are tabulated in TPDM Volume 6 Chapter 10 Clause 10.4.2.3.



8.3 Pedestrian Generations and Attractions of Proposed Redevelopment

- 8.3.1 The trip generation rates of RCHE are considered as low. As a conservative approach, assumptions are made based on the policy of general RCHE. Based on the policy of limiting 2 visitors per bed under normal visiting arrangement, the total estimated visitor generation and attraction is about 304 visitors/hr (152 x 2).
- 8.3.2 The pedestrian flows from the proposed development was then superimposed onto the 2034 reference pedestrian flows to derive the 2034 design pedestrian flows.
- 8.3.3 The 2034 design pedestrian flows are presented in **Figure 8.4**.
- 8.3.4 The level-of-service (LOS) for design scenario (with proposed development) operational performances of the identified critical sections cautionary crossing and footpaths are listed in **Table 8.7** and **Table 8.8**.

**Table 8.7 Operational Performance of Critical Cautionary Crossing in Year 2034
(With Proposed Development)**

Input Parameters			Year 2034 Design Scenario (With Proposed Development)	
			AM Peak	PM Peak
P4				
Sp	= average pedestrian walking speed (m/s)		1.2	1.2
ts	= pedestrian start-up time and end clearance time (s)		3	3
L	= crosswalk length (m)		5.5	5.5
vp	= pedestrian flow rate (p/hr)		90	65
	= pedestrian flow rate (p/s)		0.1	0.07
v	= vehicular flow rate (veh/h)		305	390
	= vehicular flow rate (veh/s)		0.08	0.11
WE	= effective crosswalk (m)		2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	8	8
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.3	1.3
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	8	8
5	dp	= average pedestrian delay (s)	3.2	4.8



Input Parameters			Year 2034 Design Scenario (With Proposed Development)	
			AM Peak	PM Peak
6	LOS	= Level of Services	<u>A</u>	<u>A</u>
P5				
Sp		= average pedestrian walking speed (m/s)	1.2	1.2
ts		= pedestrian start-up time and end clearance time (s)	3	3
L		= crosswalk length (m)	5	5
vp		= pedestrian flow rate (p/hr)	90	65
		= pedestrian flow rate (p/s)	0.1	0.07
v		= vehicular flow rate (veh/h)	585	320
		= vehicular flow rate (veh/s)	0.16	0.09
WE		= effective crosswalk (m)	2.6	2.6
Steps				
1	tc	= single pedestrian critical gap	7	7
2	Nc	= total number of pedestrian in the crossing platoon (p)	1.5	1.2
3	Np	= spatial distribution of pedestrian (p)	1	1
4	tG	= group critical gap (s)	7	7
5	dp	= average pedestrian delay (s)	5.9	2.8
6	LOS	= Level of Services	<u>B</u>	<u>A</u>

Table 8.8 Operational Performance of Critical Footpath in Year 2034 (With Proposed Development)

Critical Section	Total Footpath Width (m) ⁽¹⁾	Effective Width (m) ⁽²⁾	Design Scenario (Year 2034)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS	Two-way Pedestrian Flow	Two-way Pedestrian Flow Rate	LOS
			(ped/15 mins)	(ped/min/m) ⁽³⁾		(ped/15 mins)	(ped/min/m) ⁽³⁾	
P1	2.8	1.8	120	1.1	A	125	1.2	A
P2	2.7	1.7	130	1.3	A	140	1.4	A
P3	2.8	1.8	100	0.9	A	85	0.8	A
P6	1.8	0.8	120	2.5	A	120	2.5	A
P7	1.3	0.3	115	6.4	A	130	7.2	A
P8	2.5	1.5	5	0.1	A	10	0.1	A

Notes:

(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls).

(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 15 min / Effective Width.



(3) LOS details extracted from the HCM are tabulated in TPD Volume 6 Chapter 10 Clause 10.4.2.3.

8.3.5 It is revealed from the assessment results in **Table 8.7** and **Table 8.8** that critical sections of pedestrian facilities along the pedestrian routing to public transport facilities would be able to attain the acceptable LOS with additional pedestrian flows arising from the proposed development during peak hours in the design year 2034.



9. SUMMARY AND CONCLUSION

9.1 Summary

- 9.1.1 CTA Consultants Limited (CTA) is commissioned as the traffic consultant to prepare the Traffic Impact Assessment Report and provide technical justifications in supporting the proposed development from traffic engineering point of view.
- 9.1.2 To appraise the existing traffic condition, manual-classified counting surveys were conducted at critical junctions in 2025. Current operational performance of the critical junctions has been assessed. The results reveal all critical junctions are at present operating within their capacities during peak hours of weekday and weekend.
- 9.1.3 The assessment results revealed that all critical junctions would still operate within their capacities in both reference scenario (without proposed development) and design scenario (with proposed development) in 2034 during peak hours of weekday and weekend except the following junctions:
- Junction Ting Kok Road/ Dai Kwai Street (E) with RC <15% but still positive during peak hour at weekend without and with the proposed development;
 - Junction Ting Kok Road/ Fung Yuen Road (G) with RC <15% but still positive during PM peak hour at weekday without and with the proposed development; and
 - Junction Yuen Shin Road/ Tai Po Tai Wo Road (J) with RC <15% but still positive during AM peak hour at weekday with the proposed development.
- 9.1.4 Improvement schemes are proposed for Junction E, Junction G and Junction J.
- 9.1.5 It is revealed that Junction Ting Kok Road/ Dai Kwai Street (E), Junction Ting Kok Road/ Fung Yuen Road (G) and Junction Yuen Shin Road/ Tai Po Tai Wo Road (J) would operate within their capacities in design year 2034 with the proposed improvement schemes.
- 9.1.6 Nonetheless, the proposed development would only generate limited volume of traffic to the junctions, the traffic impact to these junctions are insignificant.



- 9.1.7 The peak traffic generated by the proposed development is small and would induce insignificant impact on the surrounding road network.
- 9.1.8 Assessments indicate that there are surplus capacities for the bus/PLB stop during AM and PM peak hours in 2034 and it is anticipated there will be surplus capacities with the proposed development.
- 9.1.9 The assessment results revealed that critical sections of pedestrian facilities along the pedestrian routing to public transport facilities would be able to attain the acceptable LOS with additional pedestrian flows arising from the proposed development during peak hours in the design year 2034.

9.2 Conclusion

- 9.2.1 In conclusion, this Traffic Impact Assessment Report has demonstrated that the related traffic trips related to the proposed development can be absorbed by the nearby road network and no significant traffic impact will be induced.
- 9.2.2 Therefore, the proposed development is reckoned feasible from traffic engineering point of view.

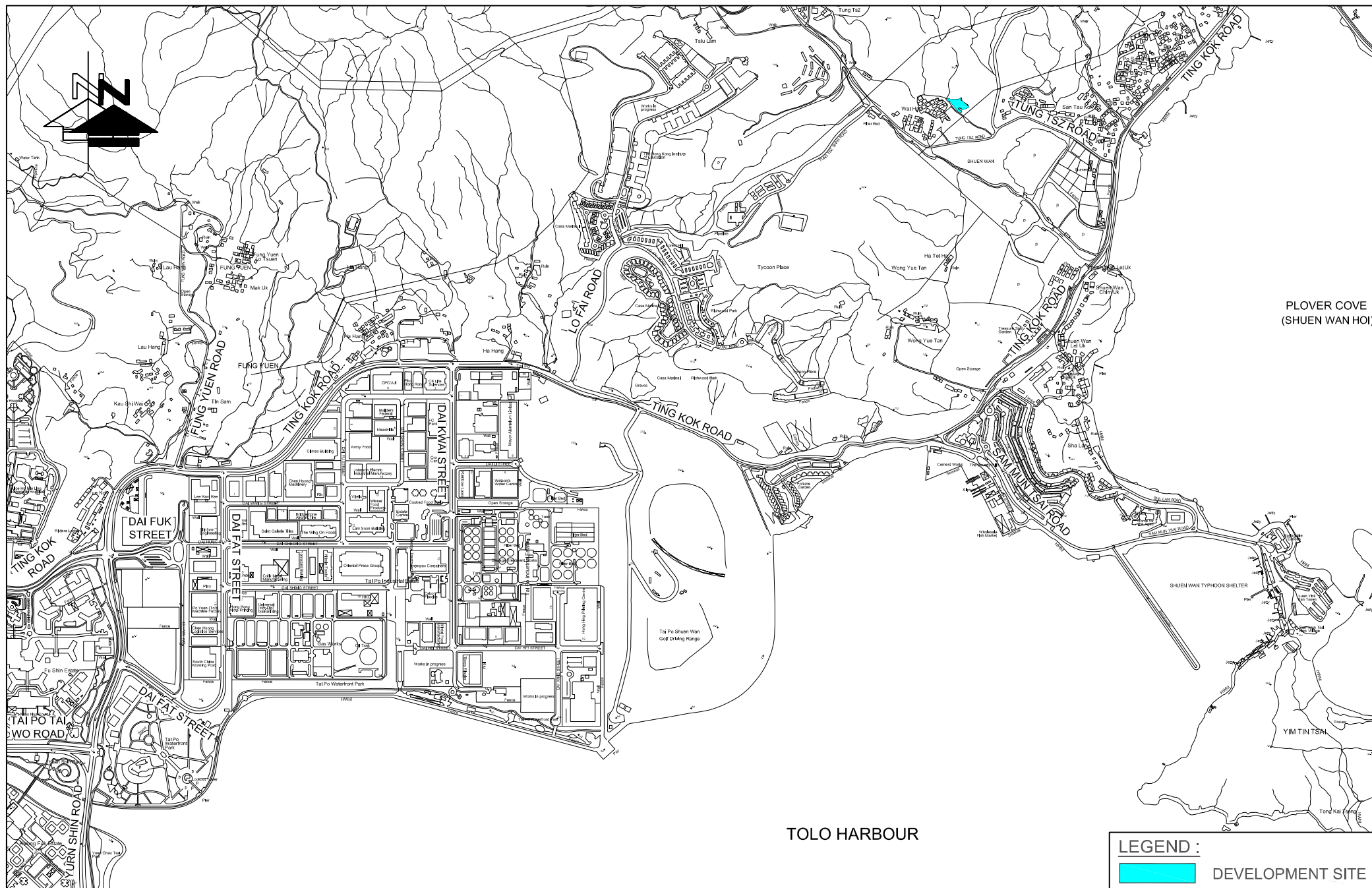


FIGURE NO.: 1.1	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	LEGEND :  DEVELOPMENT SITE  CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE:	
SCALE: 1 : 16000 @A4	DATE: 03 DEC 2024	

SITE LOCATION PLAN

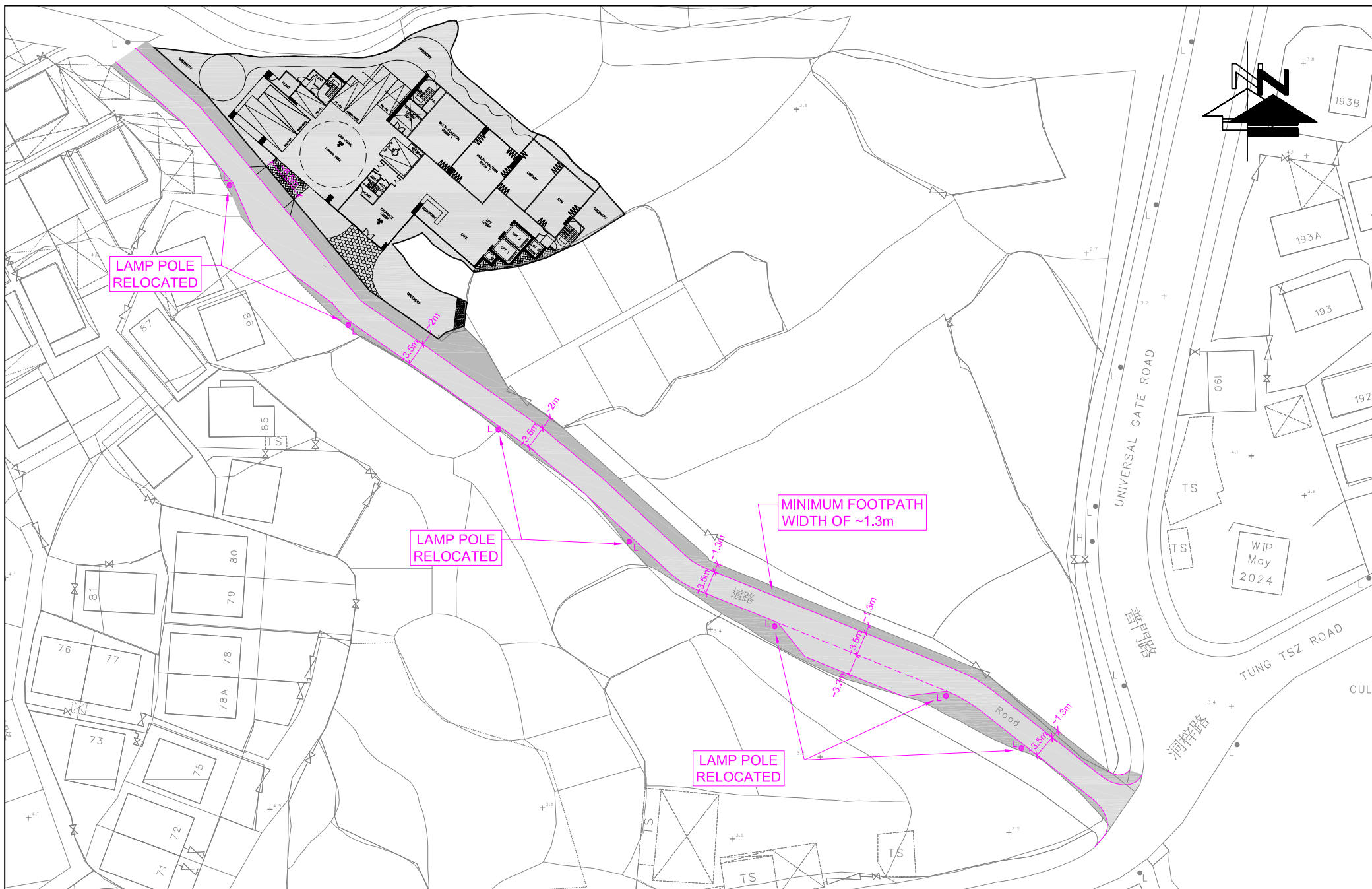


FIGURE NO.: **2.1(REV B)**

PROJECT NO.: 24093HK

SCALE: 1: 750 @A4
DATE: 05 NOV 2025

PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T

DRAWING TITLE: **PROPOSED MINOR ROAD IMPROVEMENT OF ACCESS ROAD
BETWEEN THE SITE AND TUNG TSZ ROAD**



FIGURE NO.: 2.2(REV B)	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE:	
SCALE: 1 : 275 @A4	DATE: 05 NOV 2025	

LAYOUT PLAN OF PROPOSED DEVELOPMENT

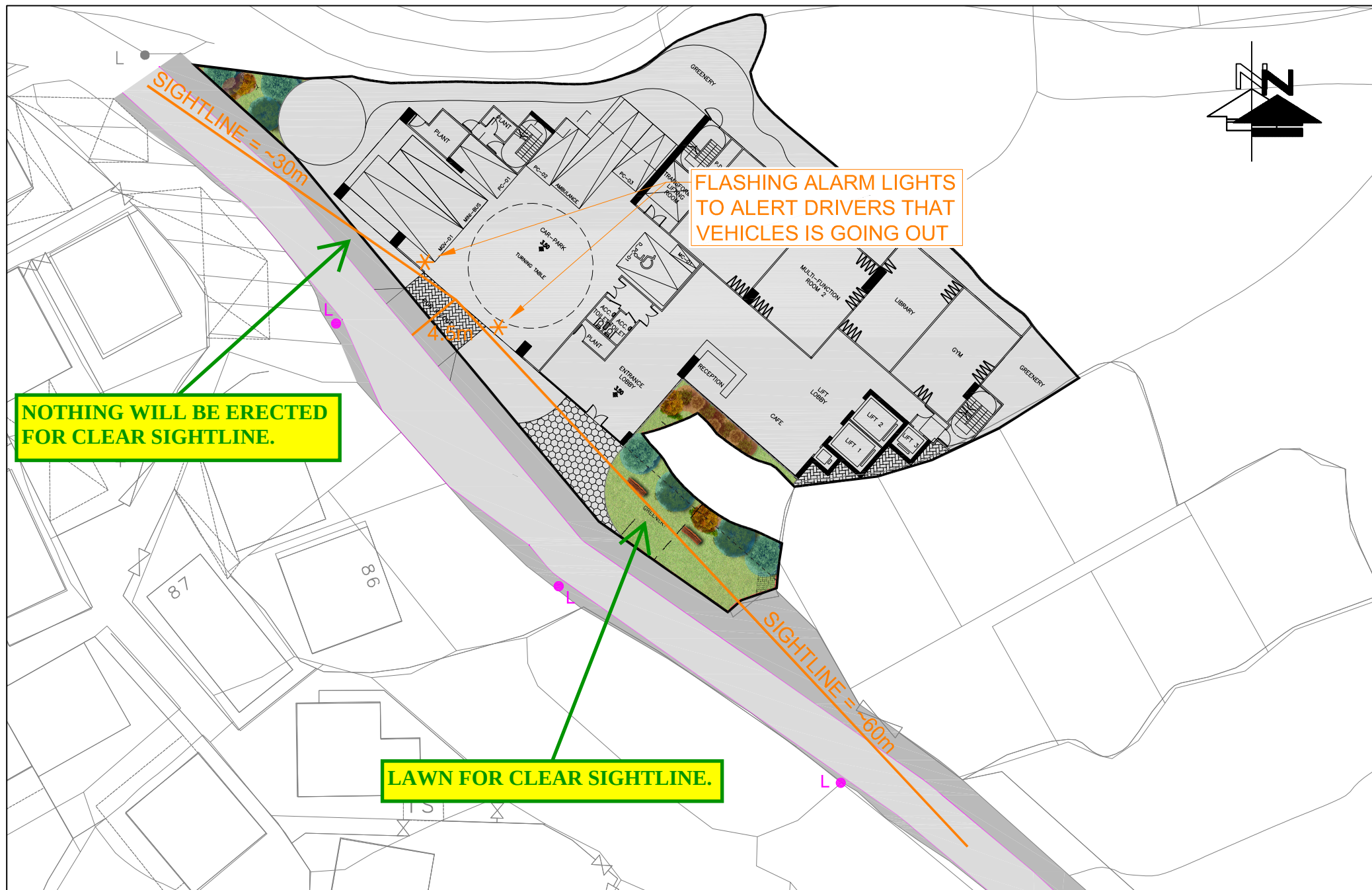


FIGURE NO.: 2.3(REV C)	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: SIGHTLINE ASSESSMENT OF PROPOSED VEHICULAR ACCESS	
SCALE: 1 : 400 @A4	DATE: 08 MAY 2026	

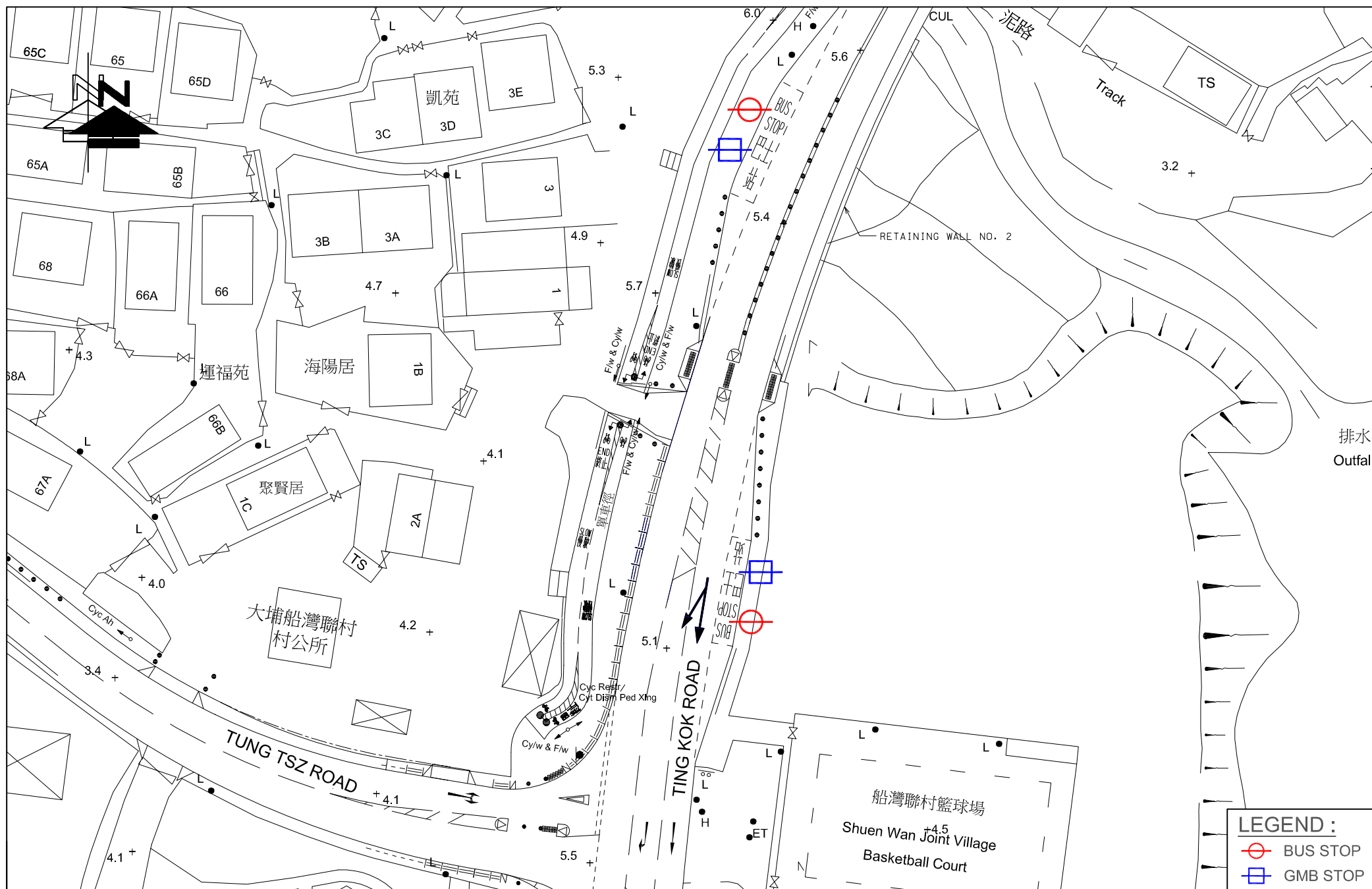


FIGURE NO.: 2.4	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING PUBLIC TRANSPORT FACILITIES	
SCALE: 1 : 600 @A4	DATE: 13 DEC 2024	

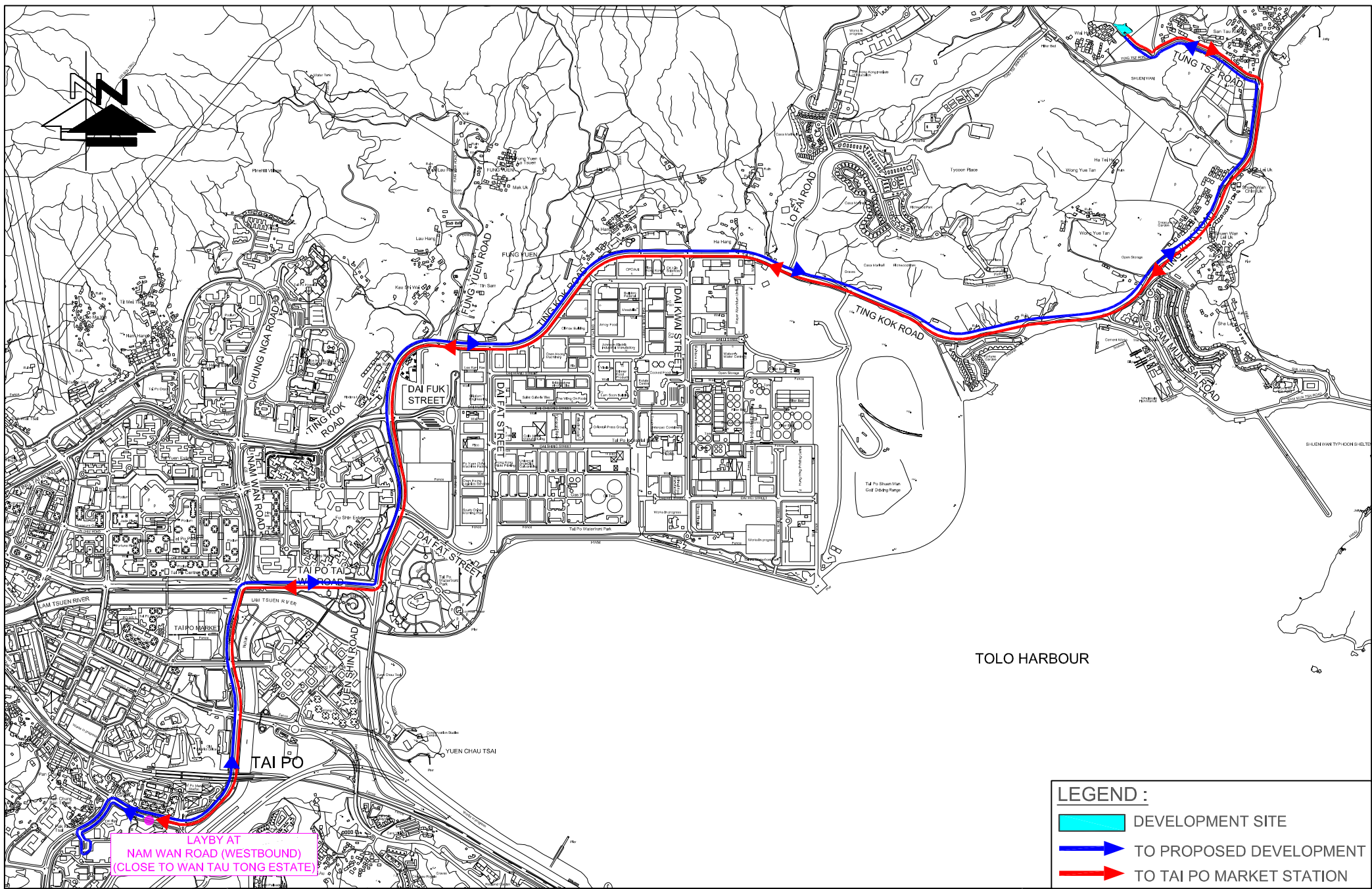


FIGURE NO.:	2.5(REV A)	PROJECT TITLE:	S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.
PROJECT NO.:	24093HK	DRAWING TITLE:	PROPOSED ROUTING OF SHUTTLE SERVICE
SCALE:	1: 18500 @A4	DATE:	25 JUN 2025

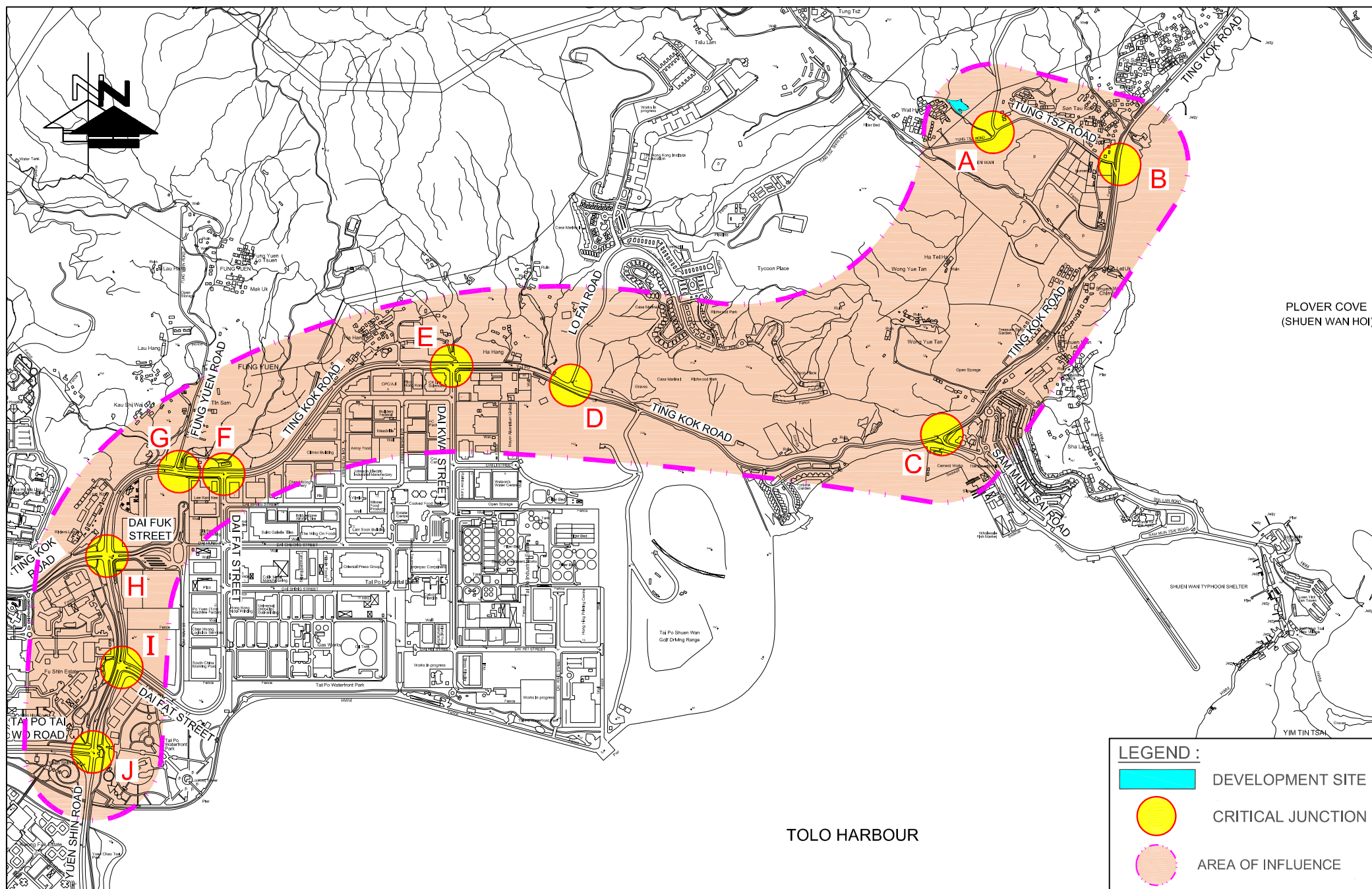


FIGURE NO.: 3.1(REV A)	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: AREA OF INFLUENCE	
SCALE: 1 : 16000 @A4	DATE: 25 JUN 2025	

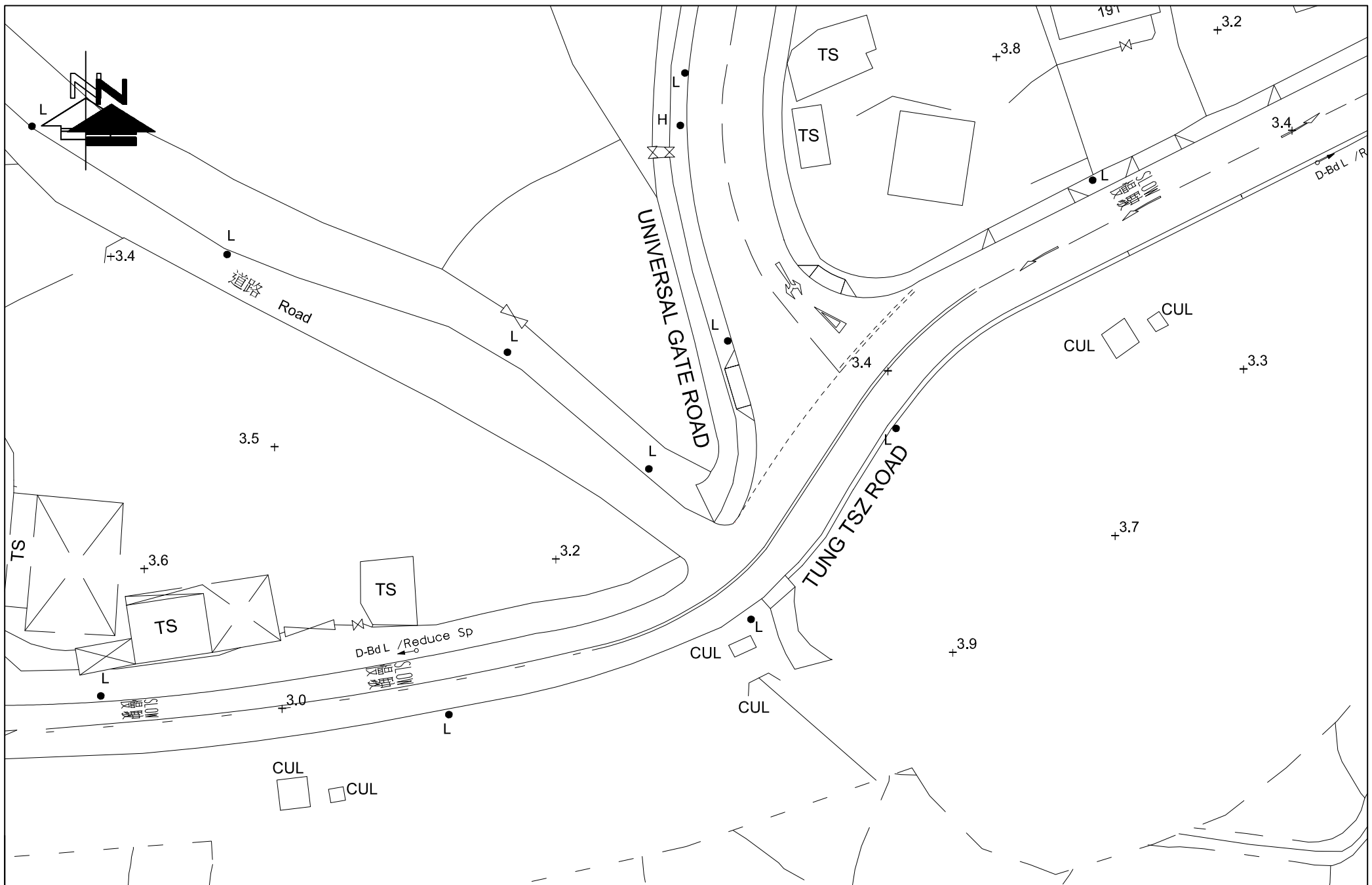


FIGURE NO.: 3.2	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TUNG TSZ ROAD / UNIVERSAL GATE ROAD (A)	
SCALE: 1 : 500 @A4 DATE: 04 DEC 2024		

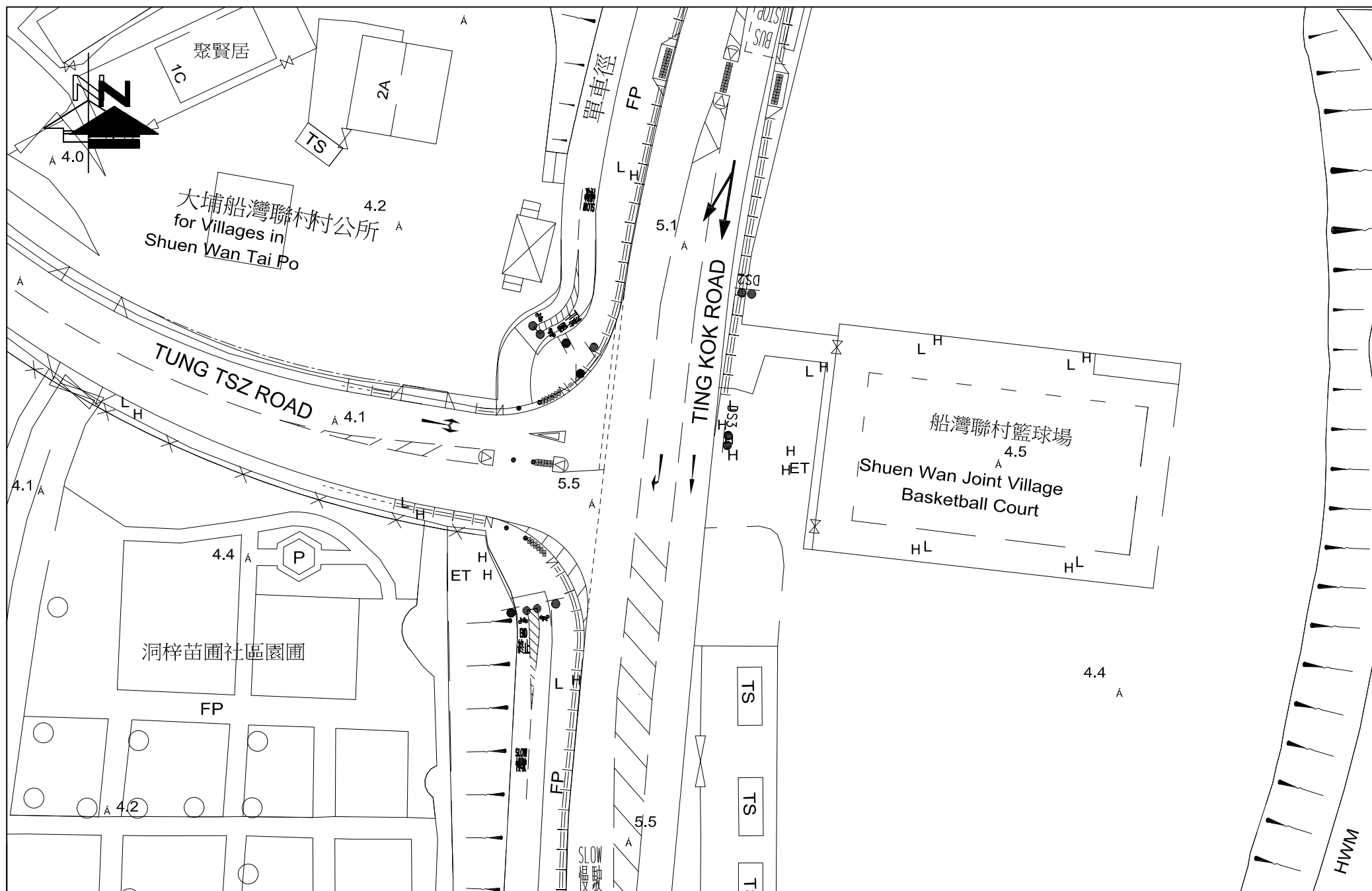


FIGURE NO.: 3.3		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T		 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / TUNG TSZ ROAD (B)		
SCALE: 1 : 500 @A4	DATE: 03 DEC 2024			

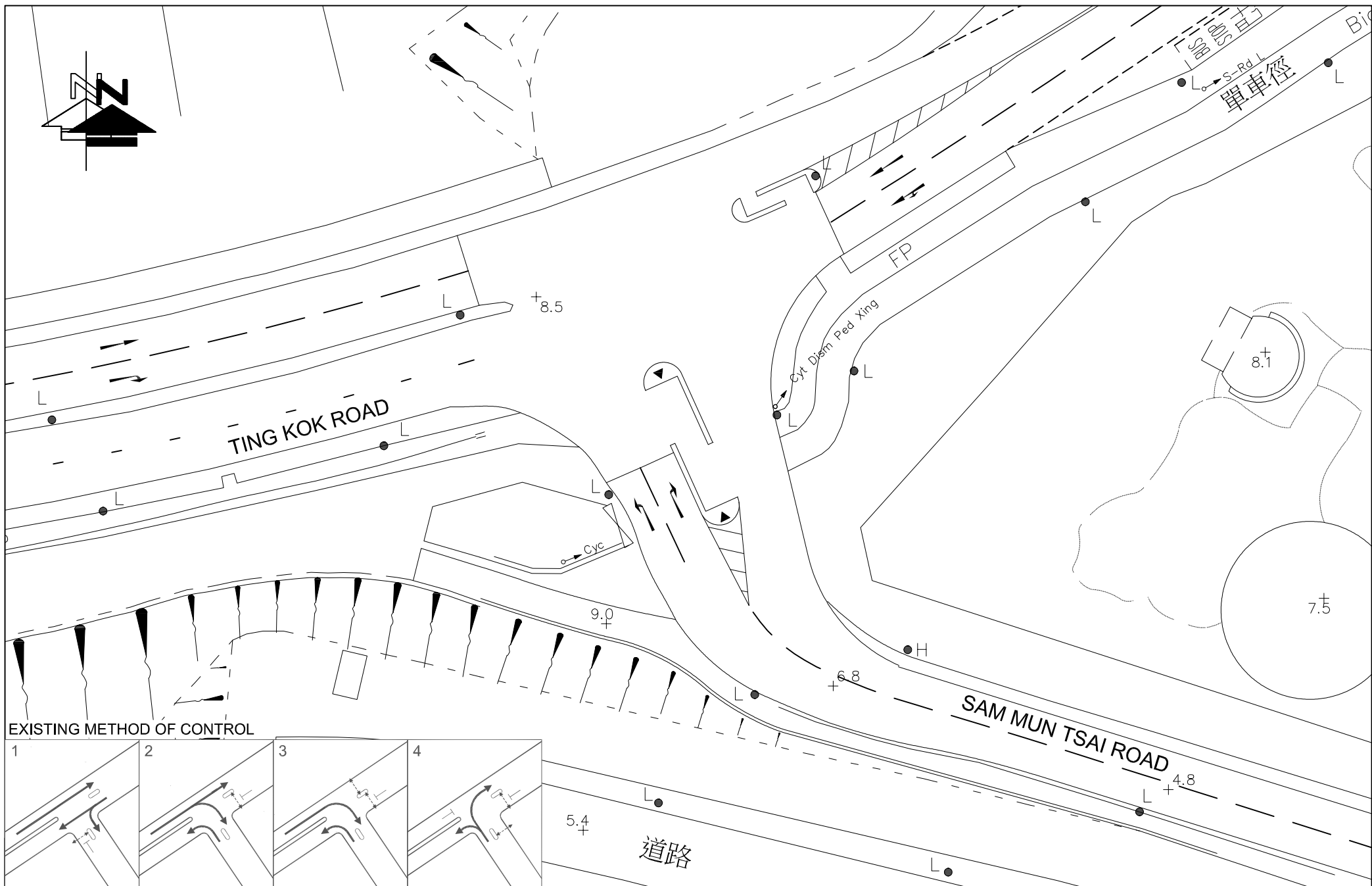


FIGURE NO.: 3.4	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / SAM MUN TSAI ROAD (C)	
SCALE: 1 : 500 @A4 DATE: 03 DEC 2024		

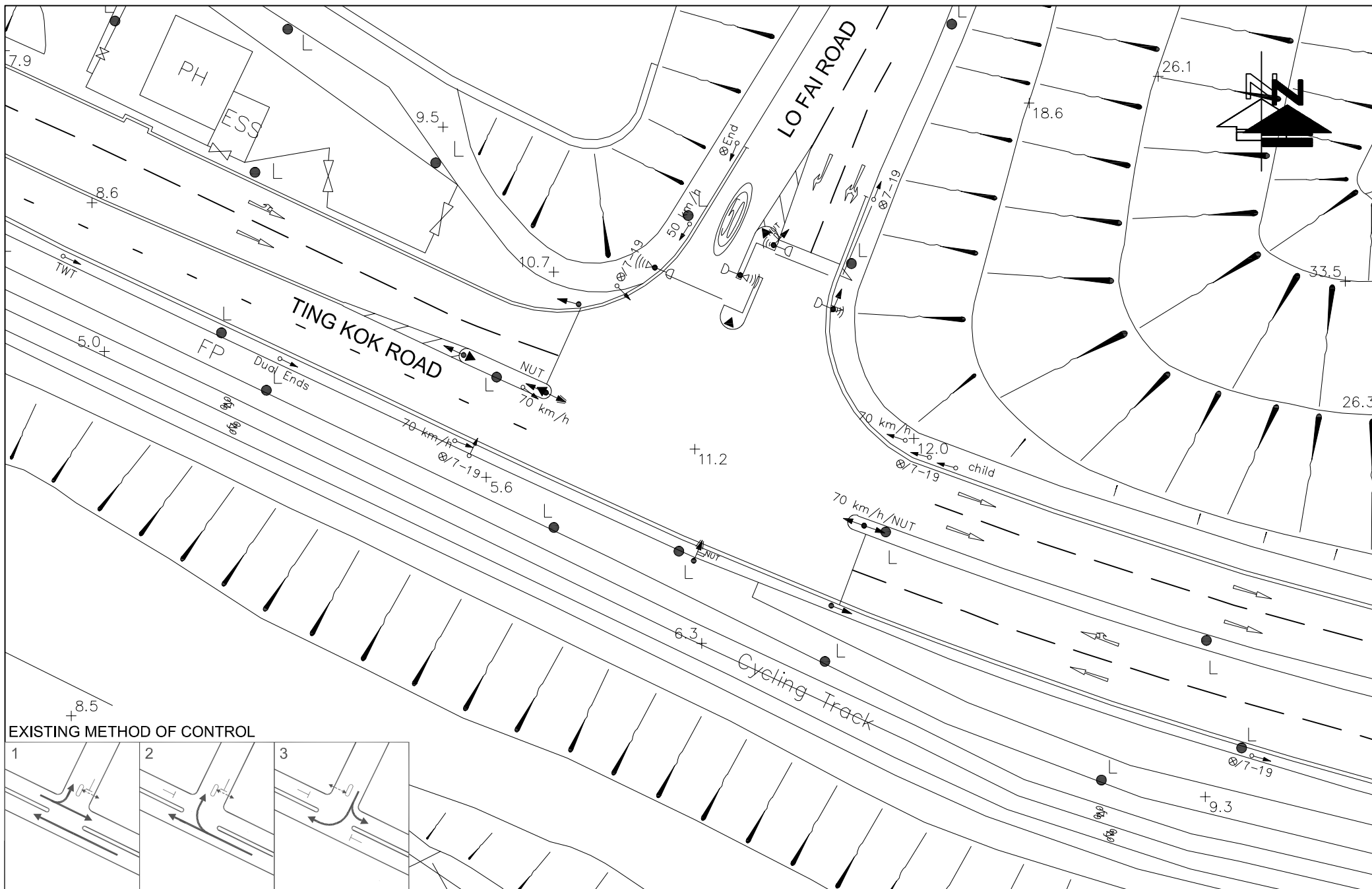


FIGURE NO.: 3.5	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / LO FAI ROAD (D)	
SCALE: 1 : 500 @A4 DATE: 03 DEC 2024		

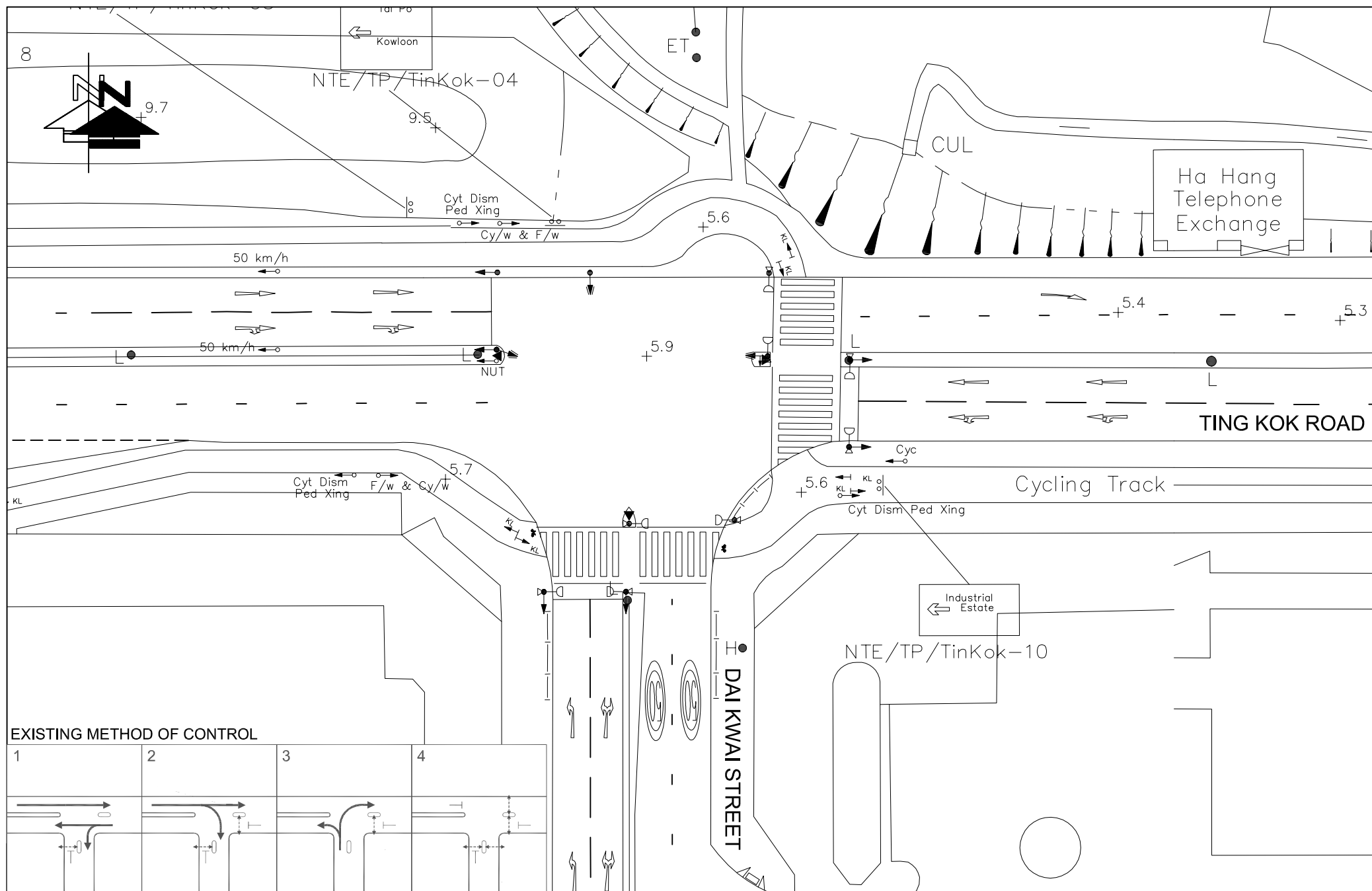


FIGURE NO.: 3.6		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	
PROJECT NO.: 24093HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / DAI KWAI STREET (E)	
SCALE: 1 : 500 @A4	DATE: 03 DEC 2024		

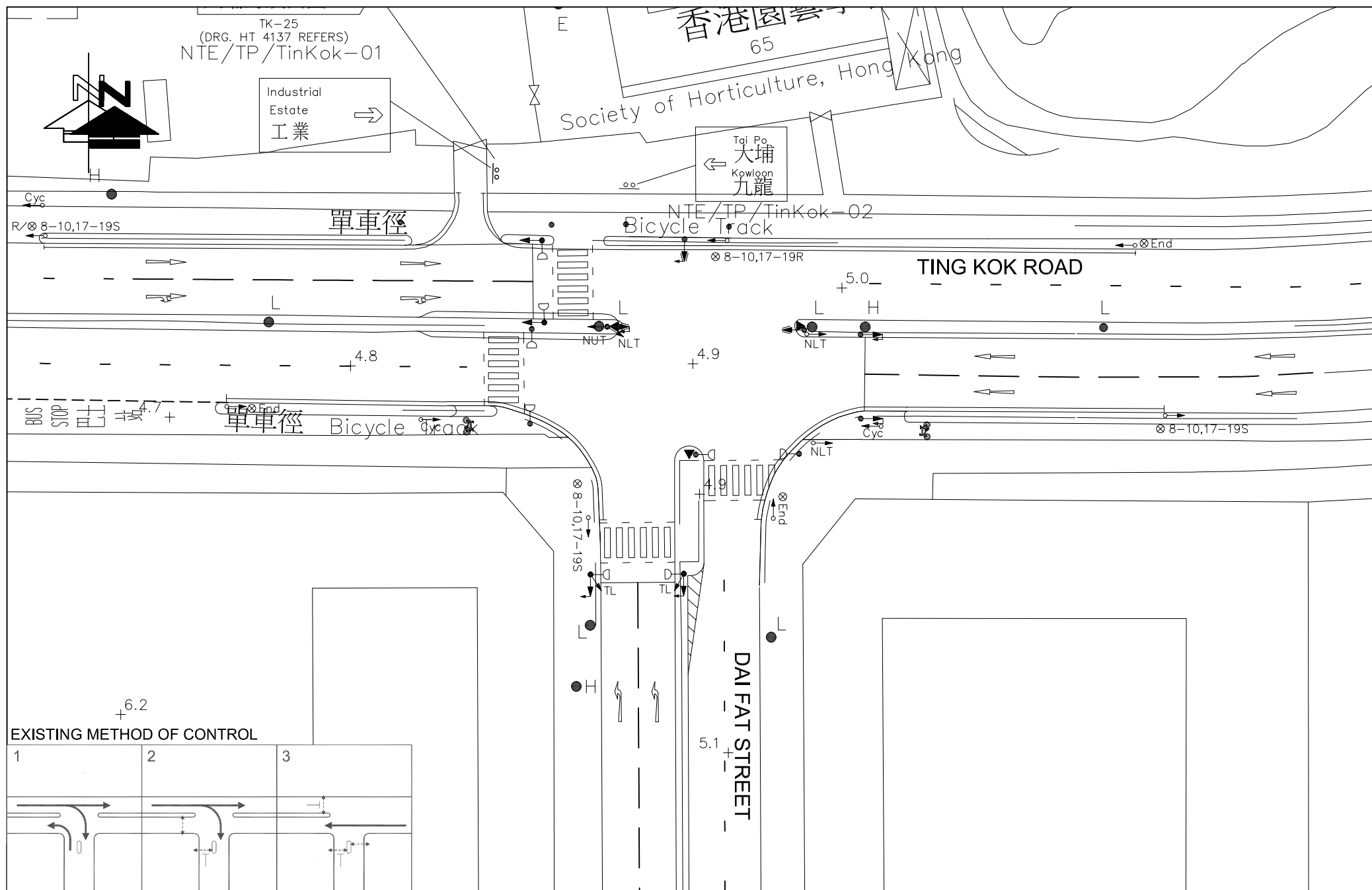


FIGURE NO.: 3.7		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	
PROJECT NO.: 24093HK		DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (F)	
SCALE: 1 : 500 @A4	DATE: 03 DEC 2024	 CTA Consultants Limited 志達顧問有限公司	

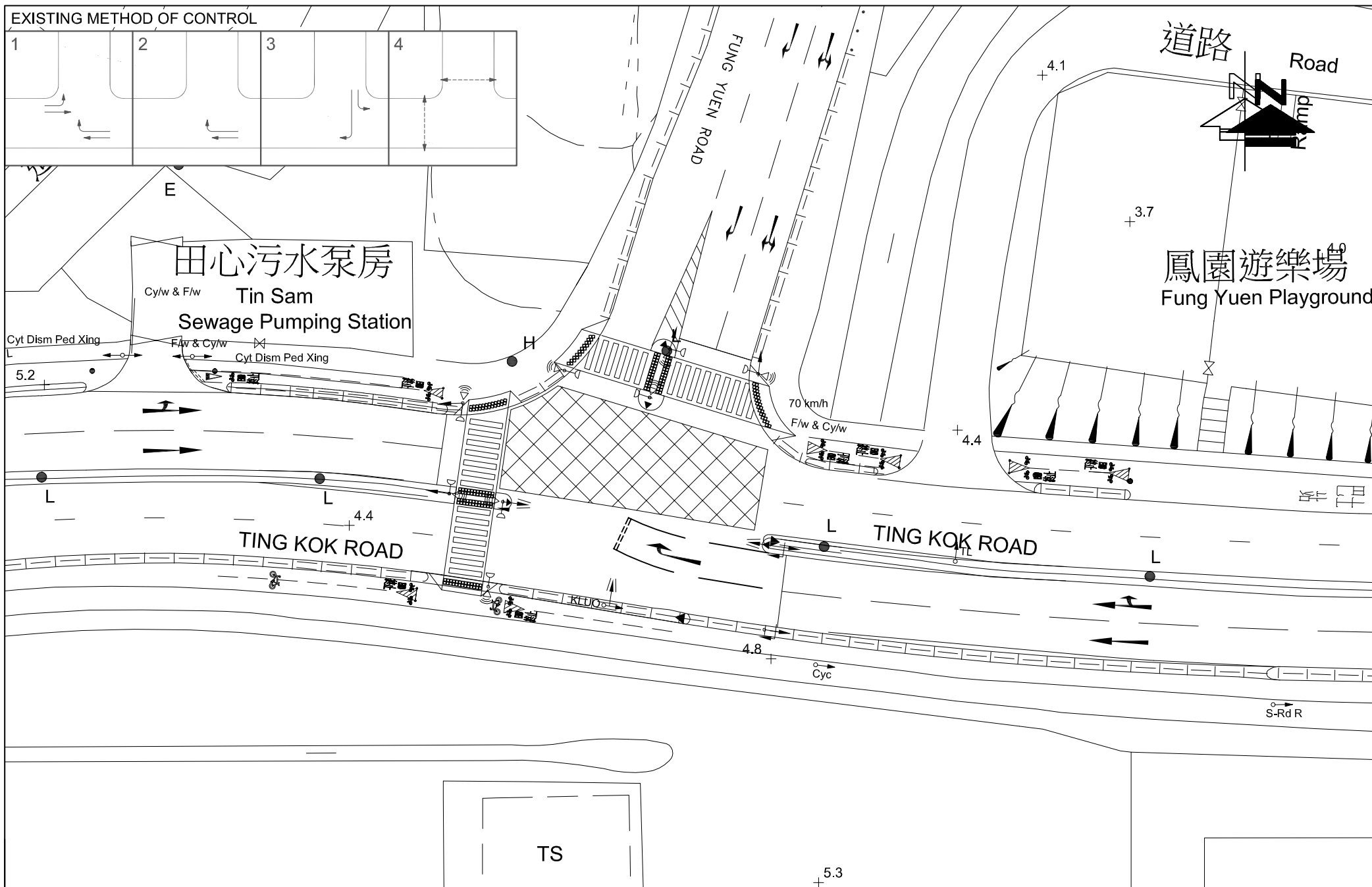


FIGURE NO.:
3.8

PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T

PROJECT NO.:
24093HK

DRAWING TITLE:

**EXISTING JUNCTION LAYOUT OF
TING KOK ROAD / FUNG YUEN ROAD (G)**

SCALE:
1 : 500 @A4

DATE:
03 DEC 2024

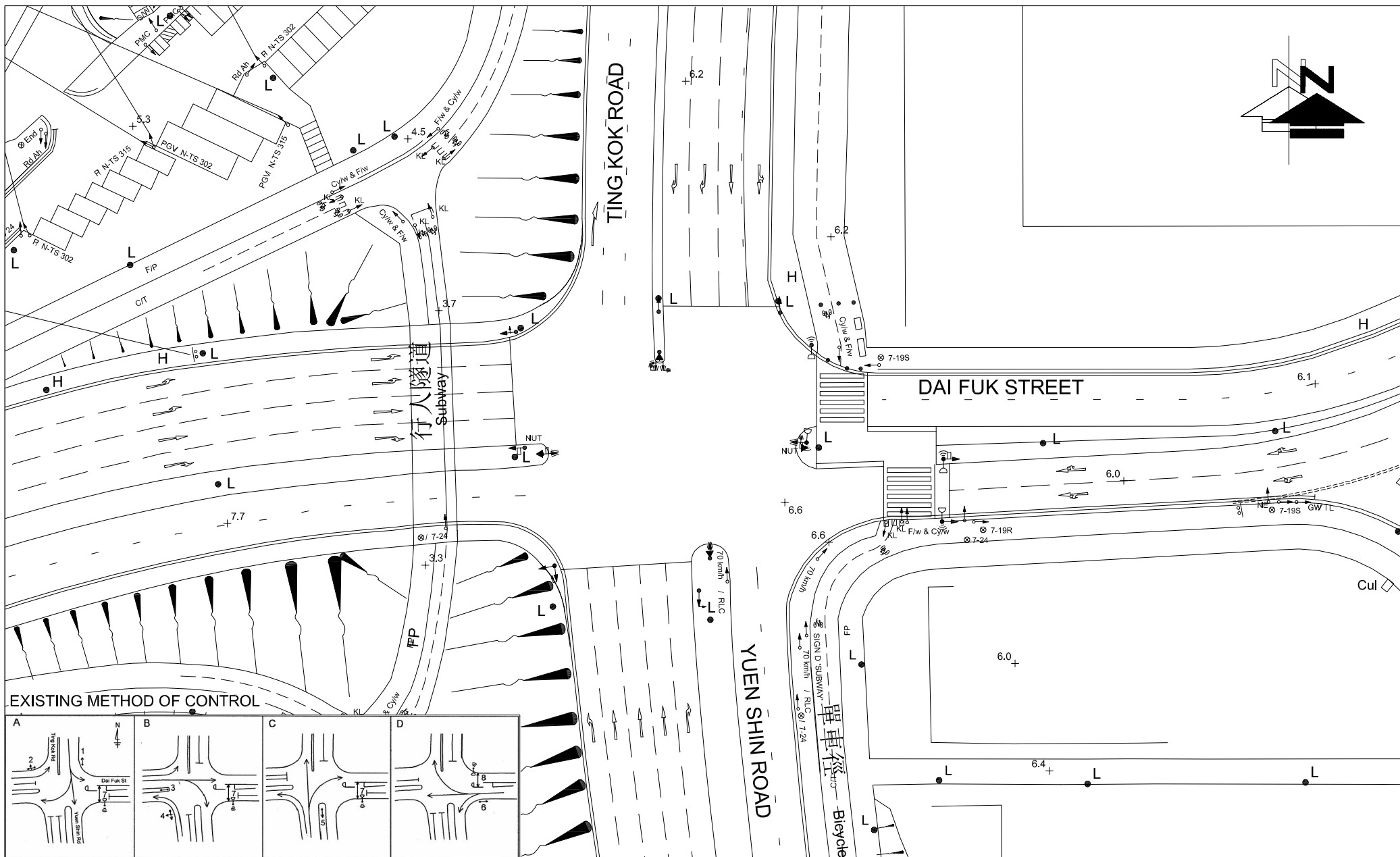


FIGURE NO.: 3.9	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / YUEN SHIN ROAD / DAI FUK STREET (H)	
SCALE: 1 : 700 @ A4	DATE: 16 DEC 2024	

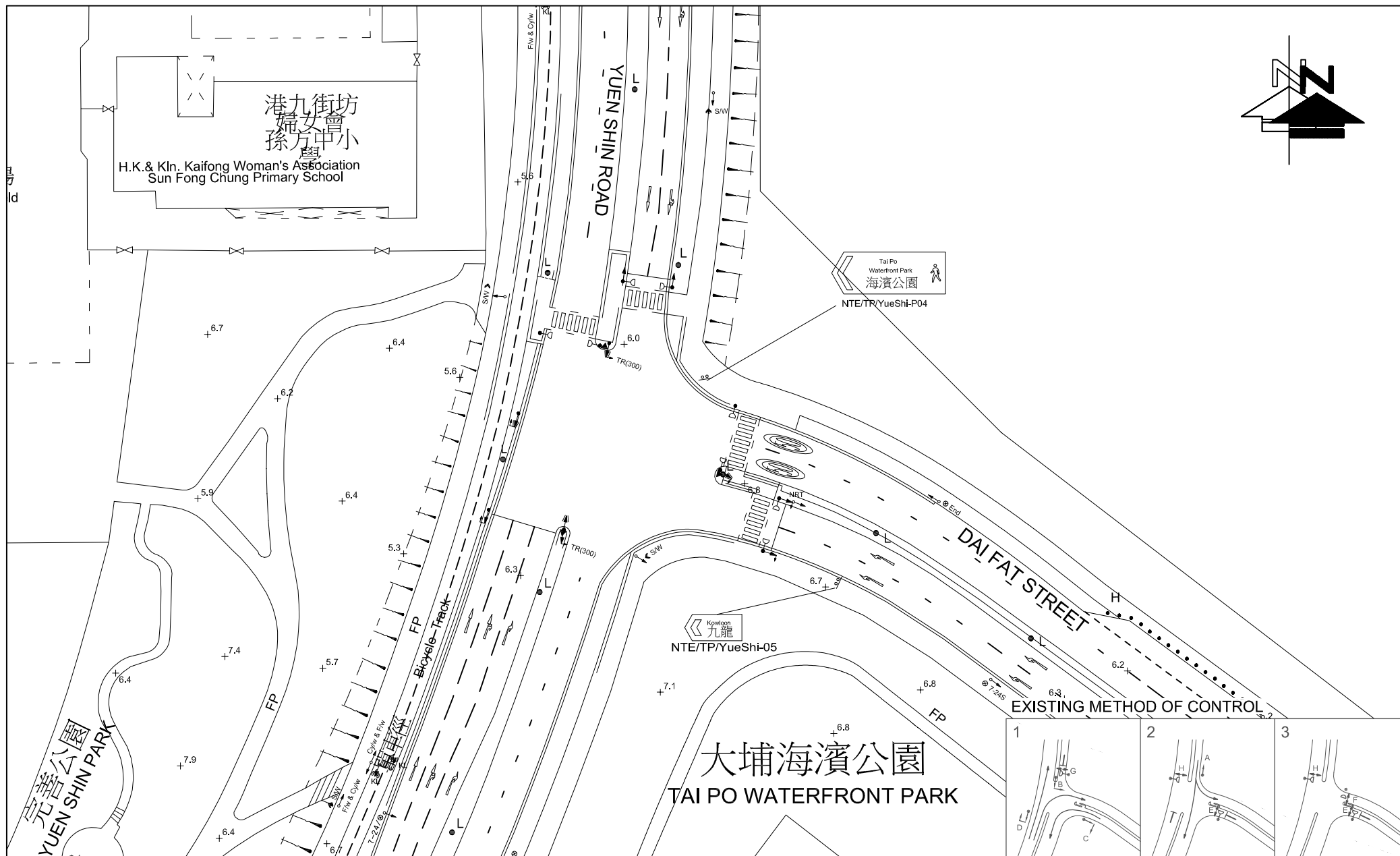


FIGURE NO.: 3.10	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (I)	
SCALE: 1 : 800 @A4	DATE: 16 DEC 2024	

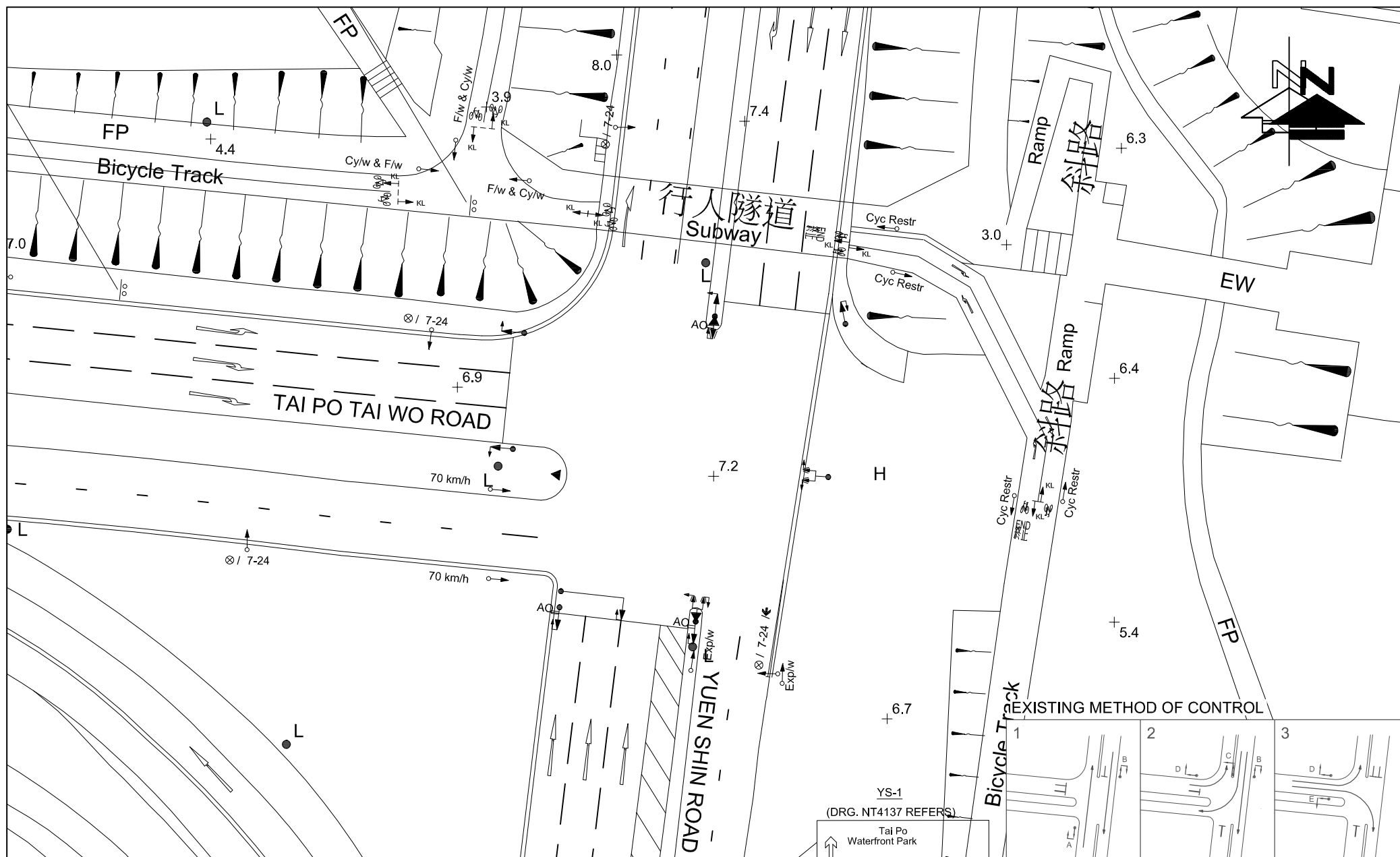
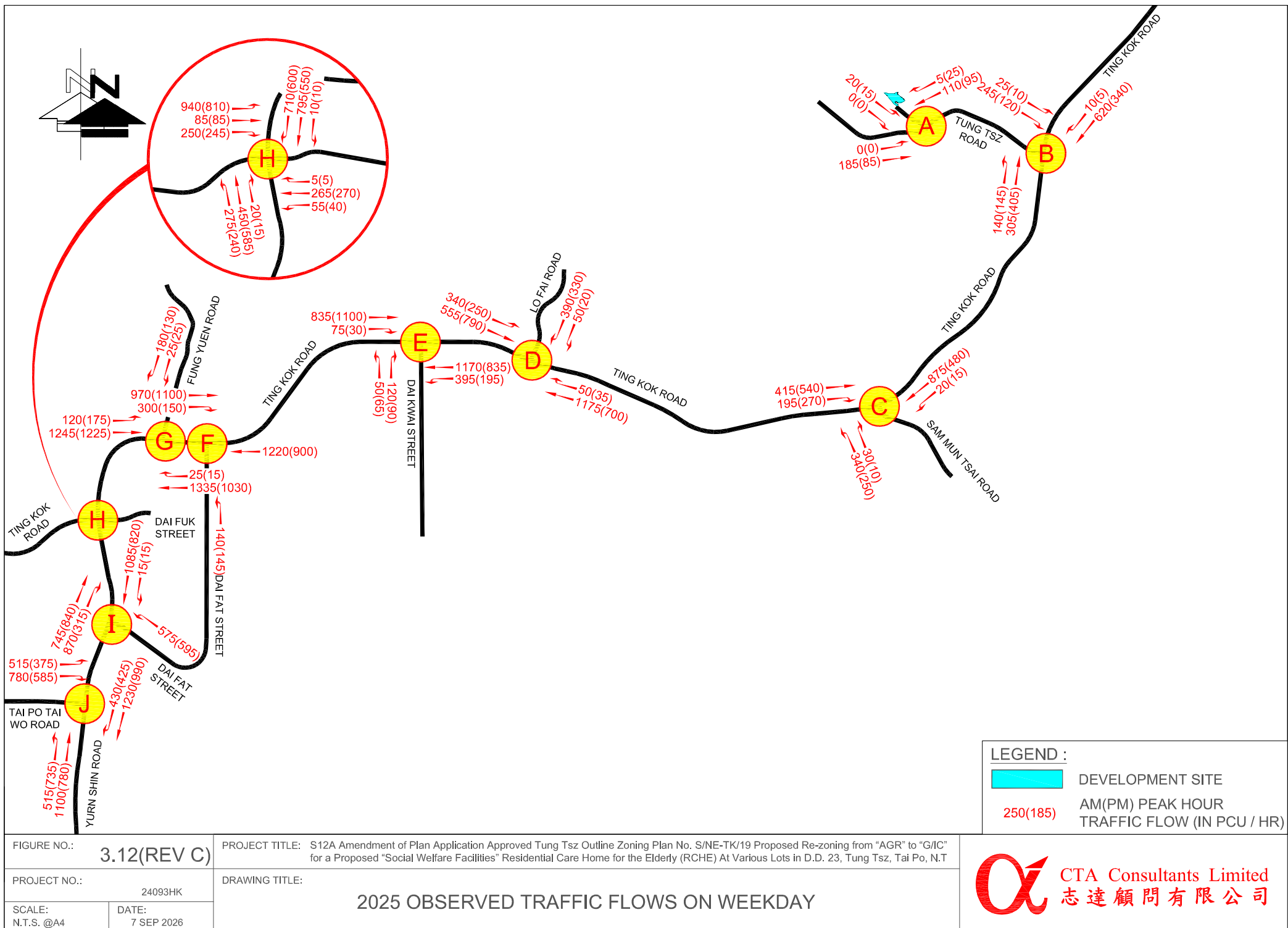
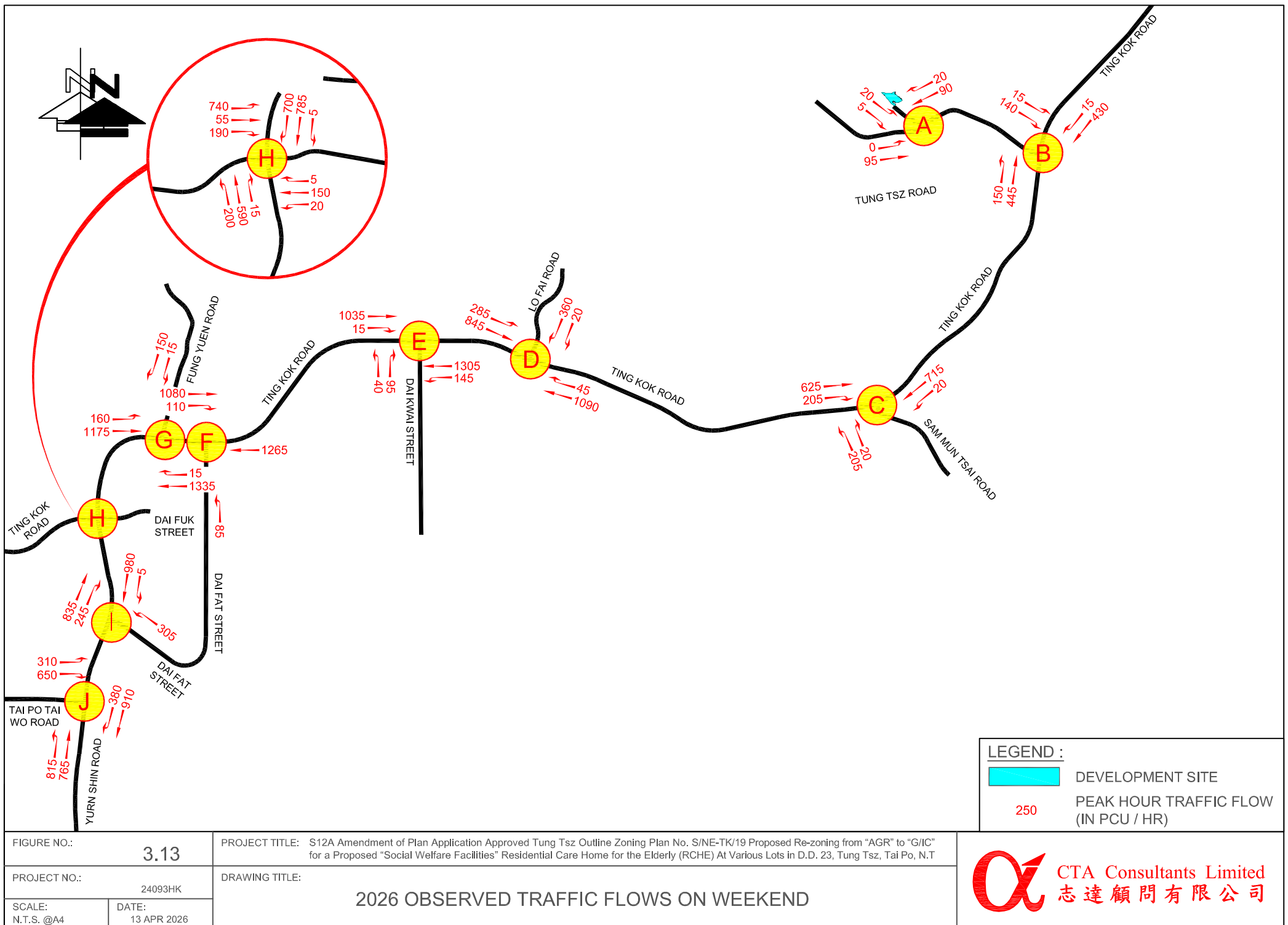


FIGURE NO.: 3.11	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YUEN SHIN ROAD / TAI PO TAI WO ROAD (J)	
SCALE: 1 : 500 @ A4 DATE: 16 DEC 2024		





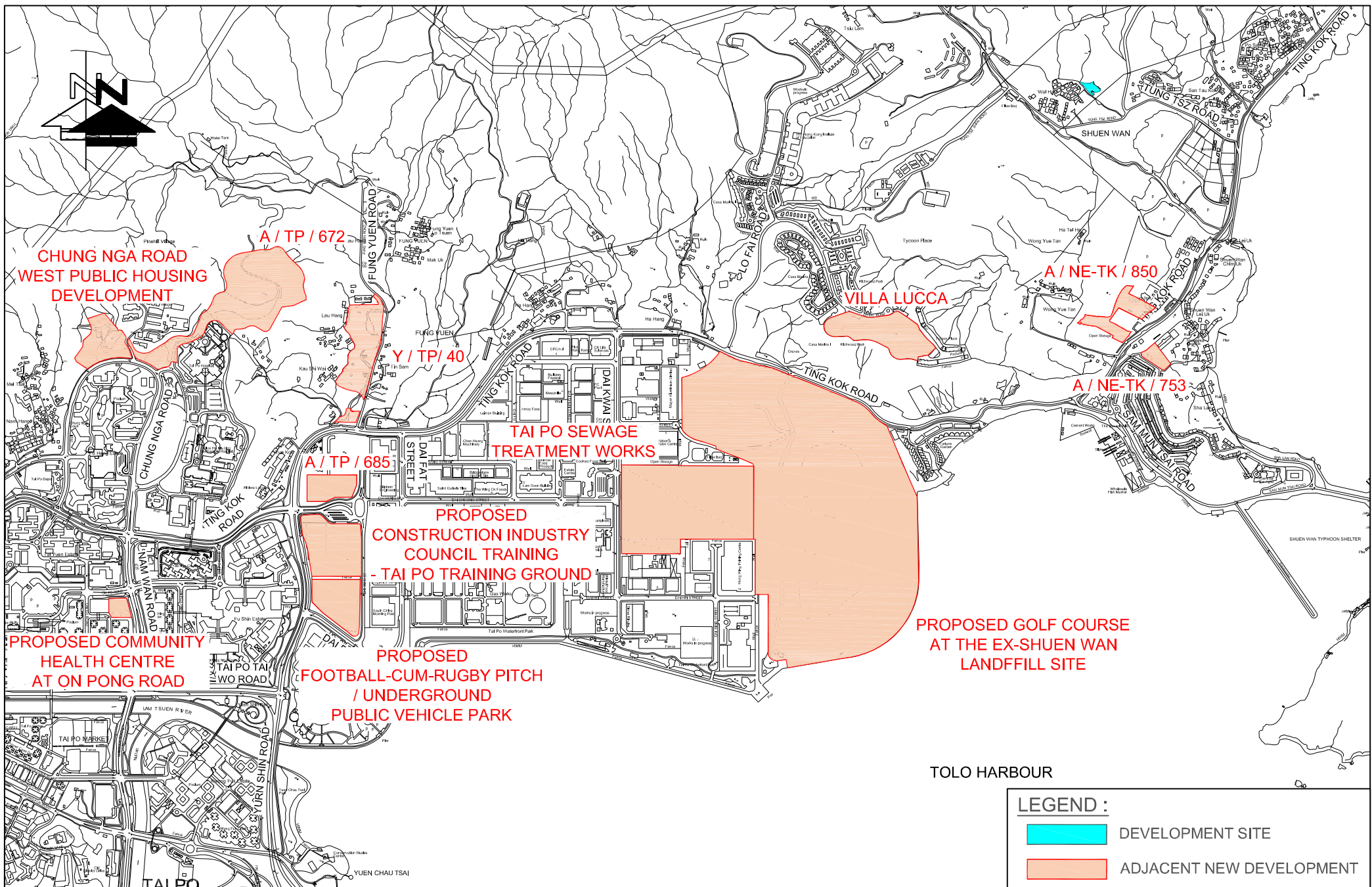
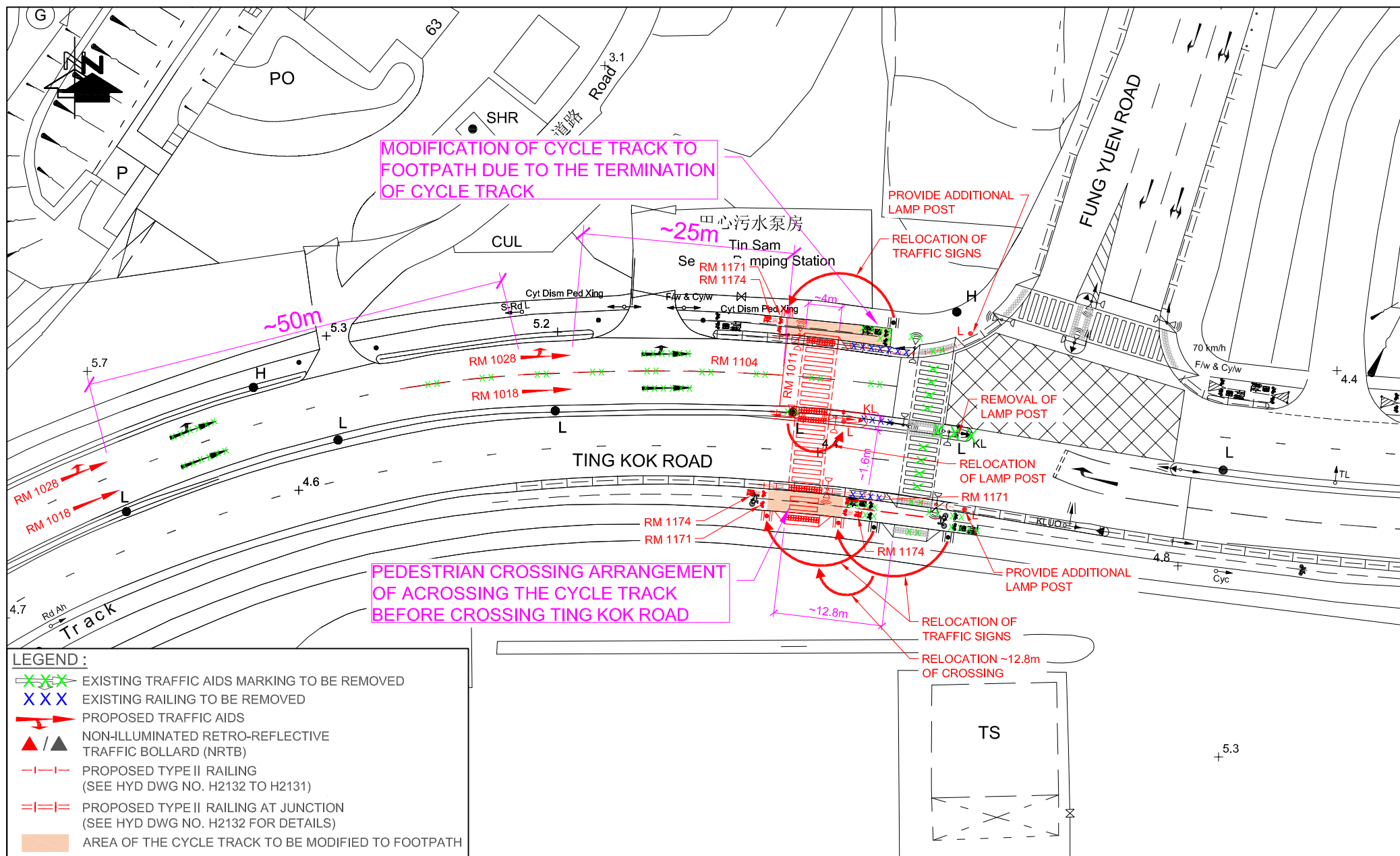


FIGURE NO.: 4.1(REV B)	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: PLANNED MAJOR DEVELOPMENTS IN THE VICINITY	
SCALE: 1 : 20000 @A4	DATE: 2 SEP 2026	



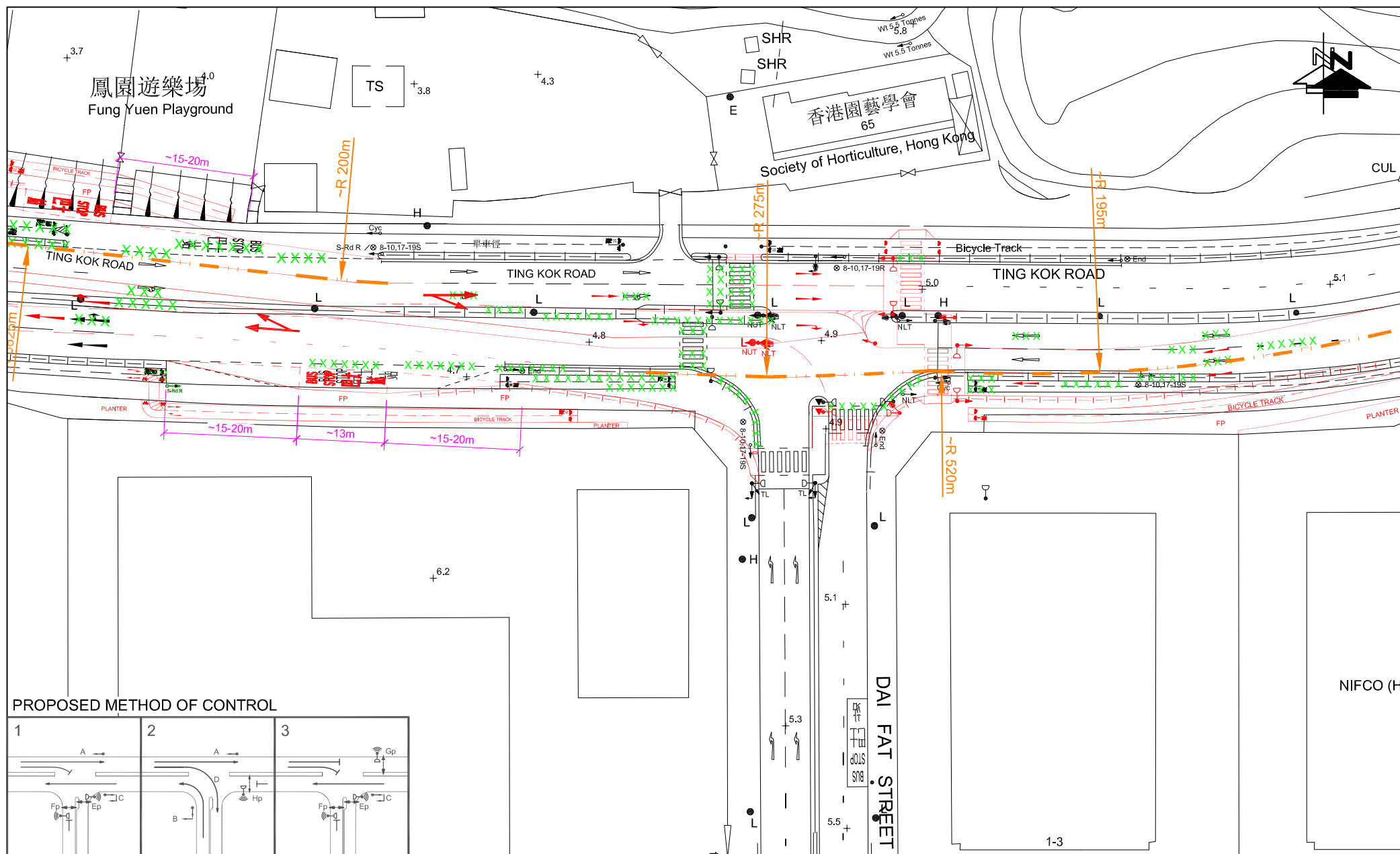


FIGURE NO.: 4.3	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: PLANNED JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (F) UNDER PLANNING APPLICATION No. Y / TP / 40	
SCALE: 1 : 750 @A4	DATE: 9 SEP 2026	

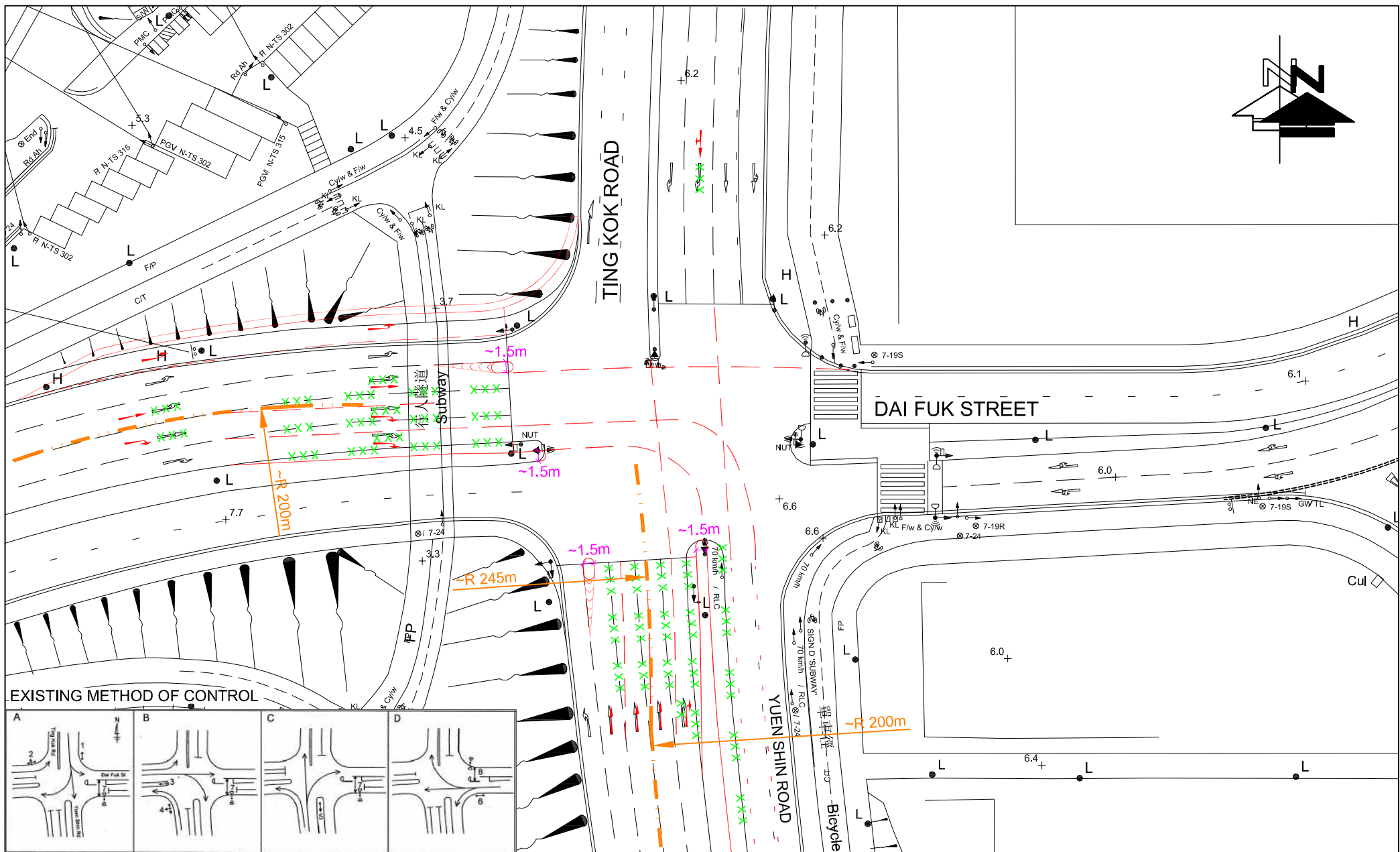


FIGURE NO.: 4.5	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: PLANNED JUNCTION LAYOUT OF TING KOK ROAD / YUEN SHIN ROAD / DAI FUK STREET (H) UNDER PLANNING APPLICATION No. Y / TP / 40	
SCALE: 1 : 700 @A4	DATE: 9 SEP 2026	

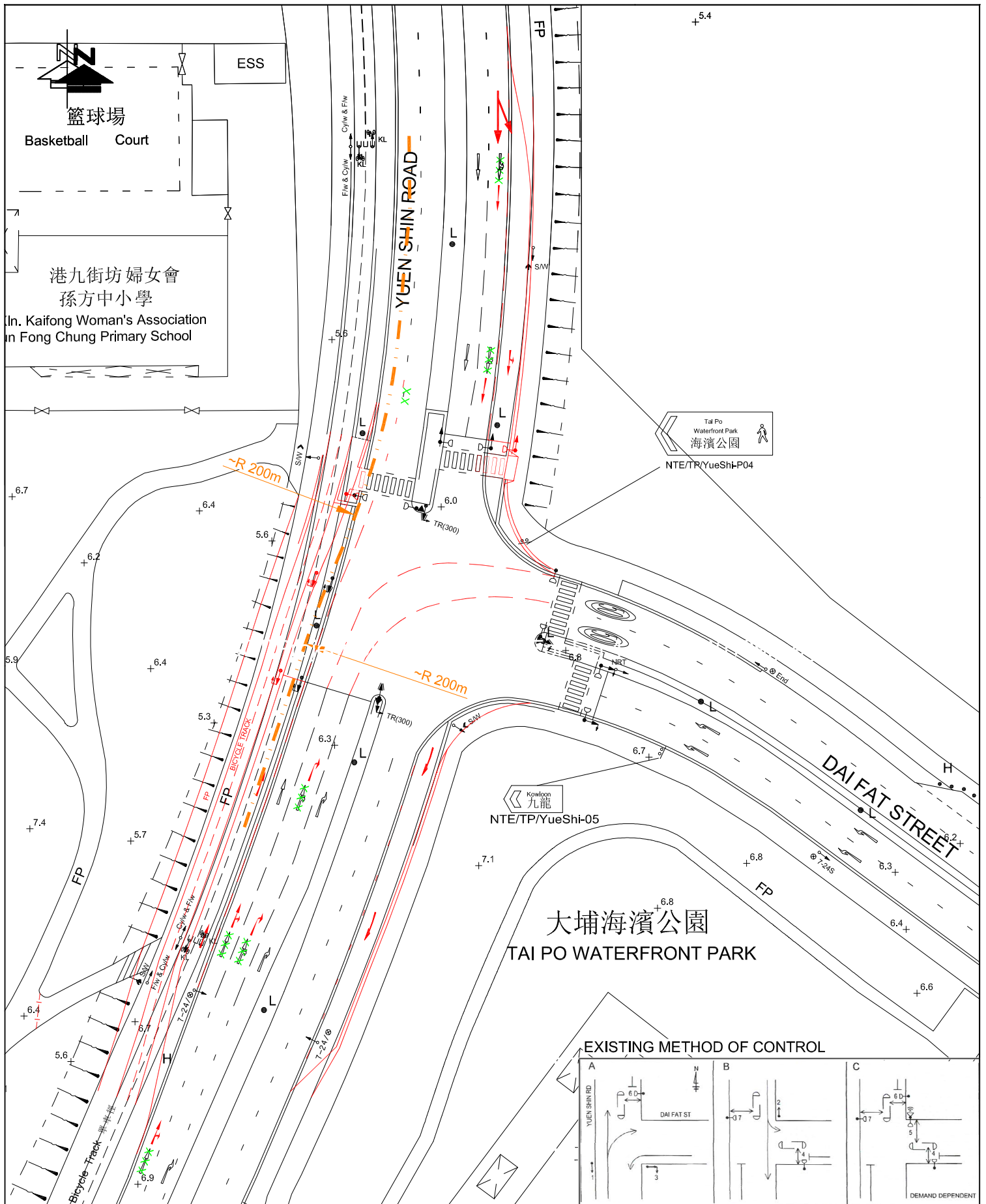


FIGURE NO.:		4.6	PROJECT TITLE:		S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.
PROJECT NO.:		24093HK	DRAWING TITLE:		
SCALE:		1 : 750 @A4	PLANNED JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (I) UNDER PLANNING APPLICATION No. Y / TP / 40		
DATE:		9 SEP 2026	 CTA Consultants Limited 志達顧問有限公司		

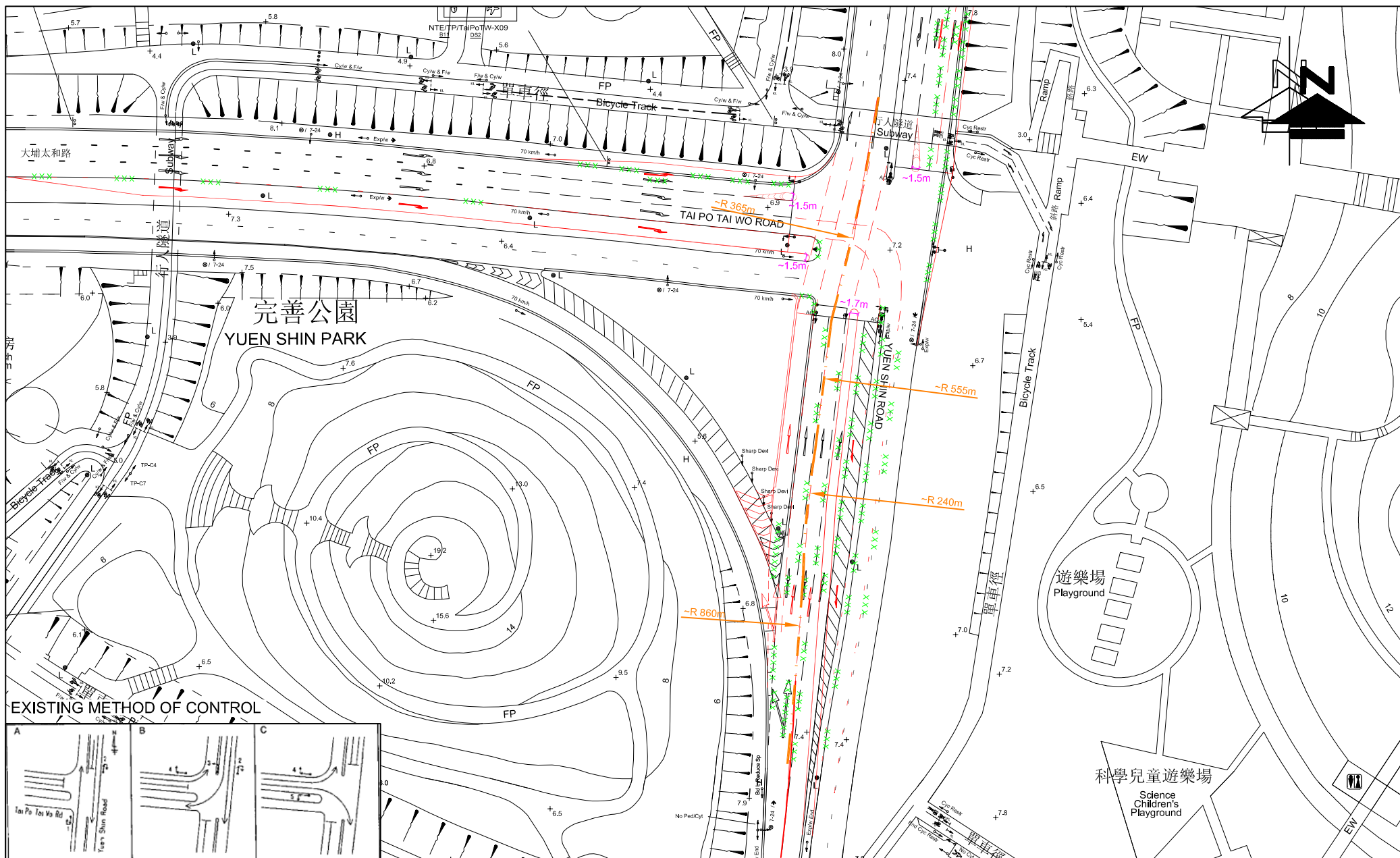
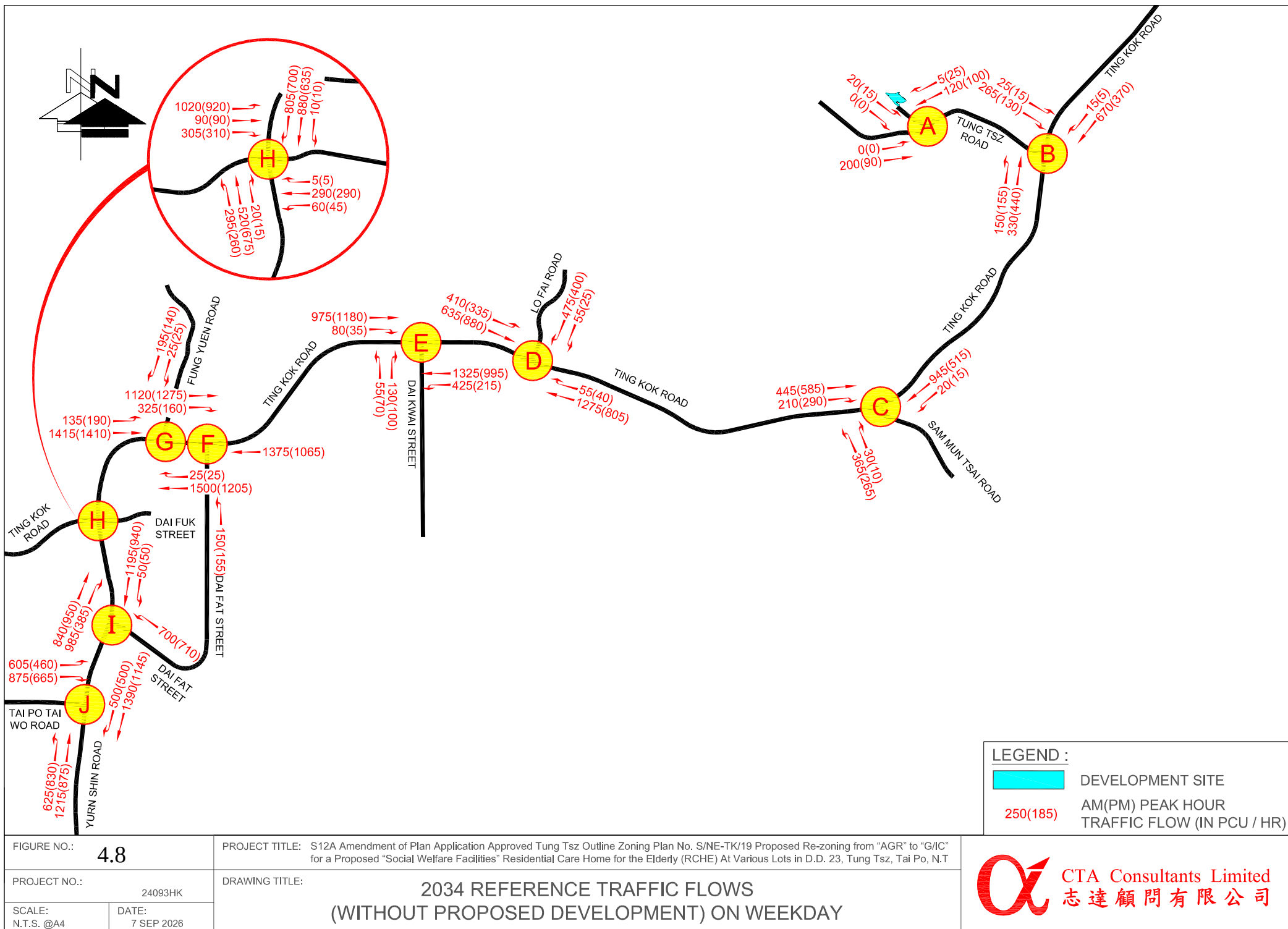
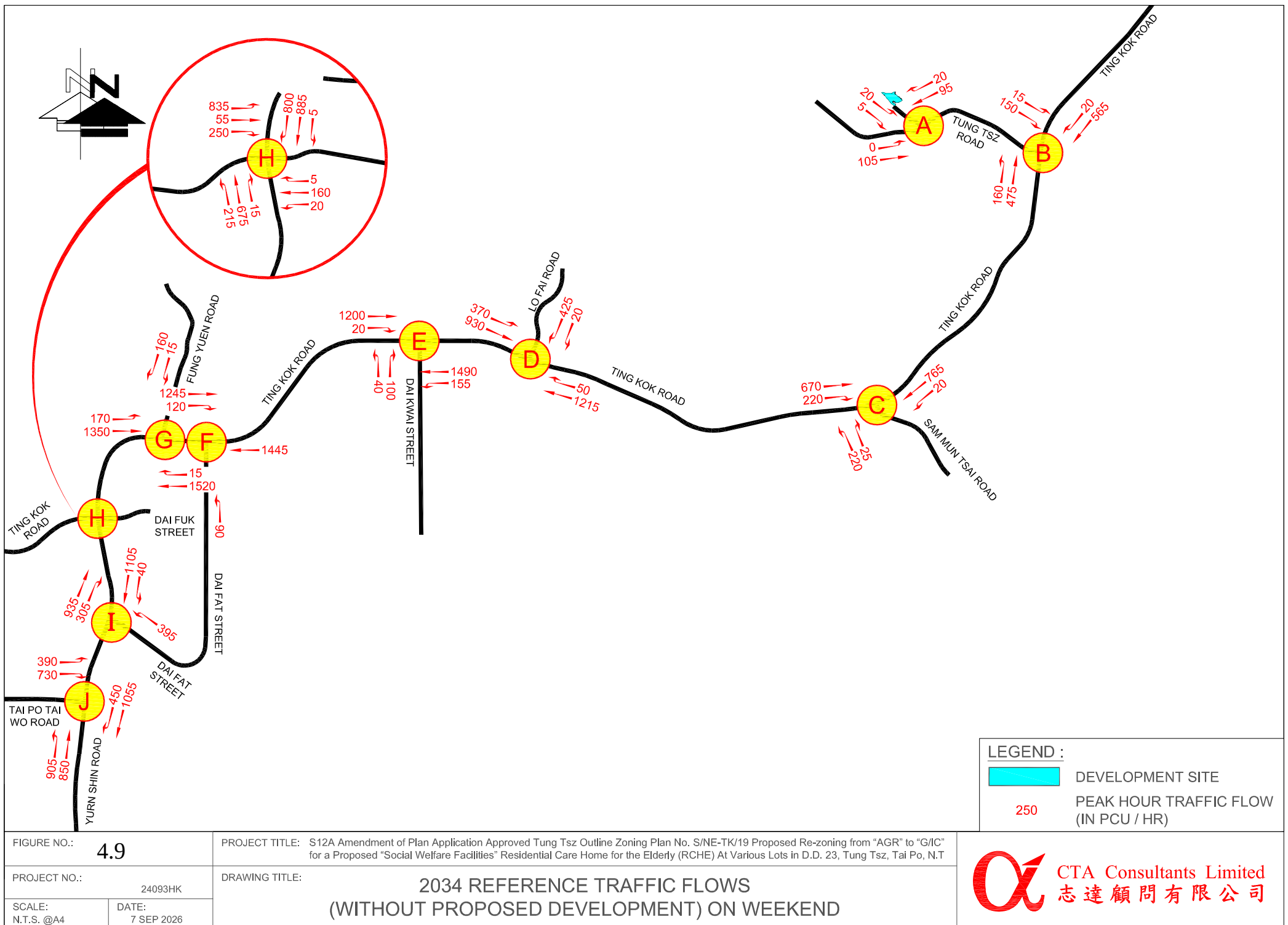
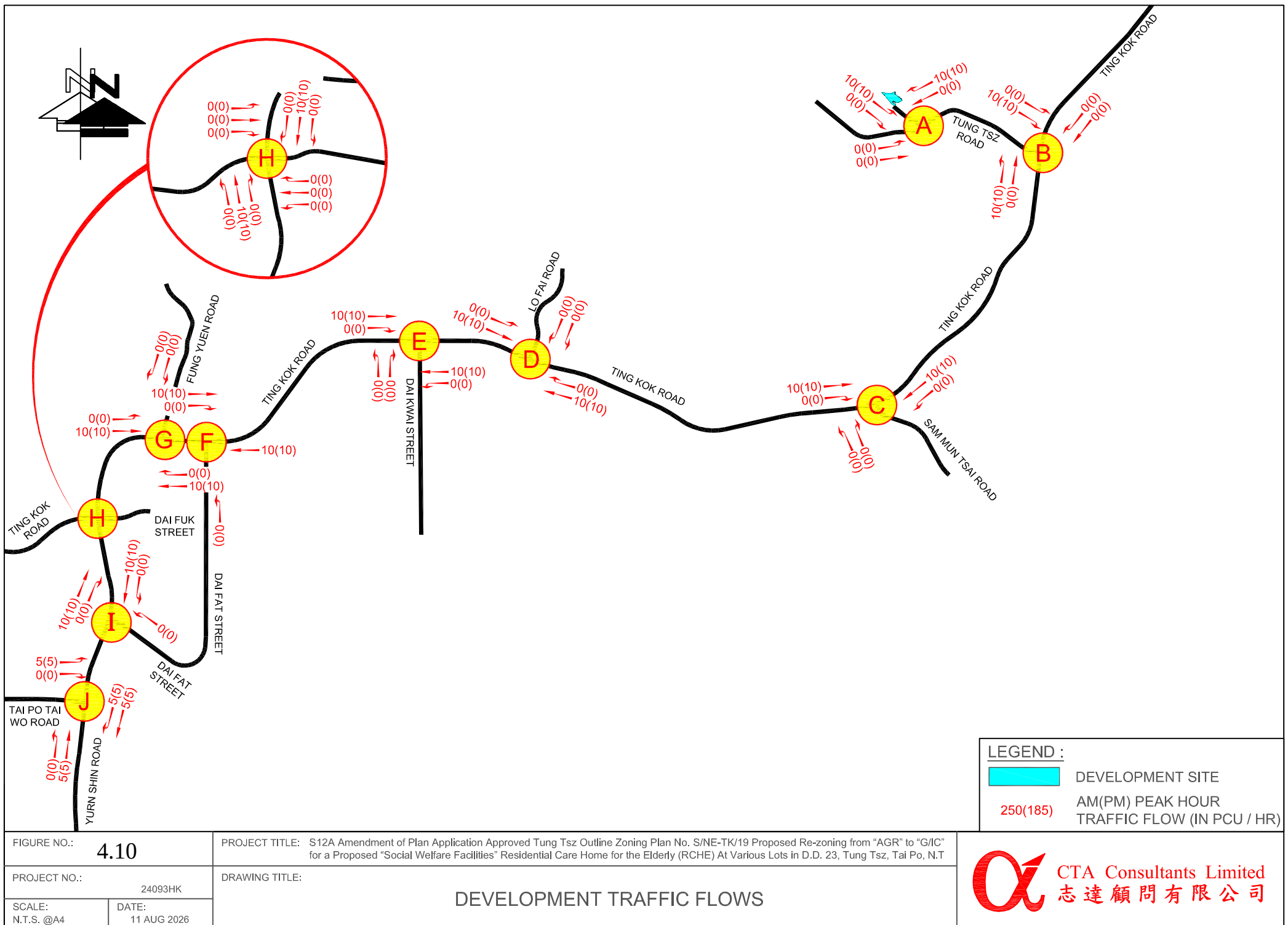
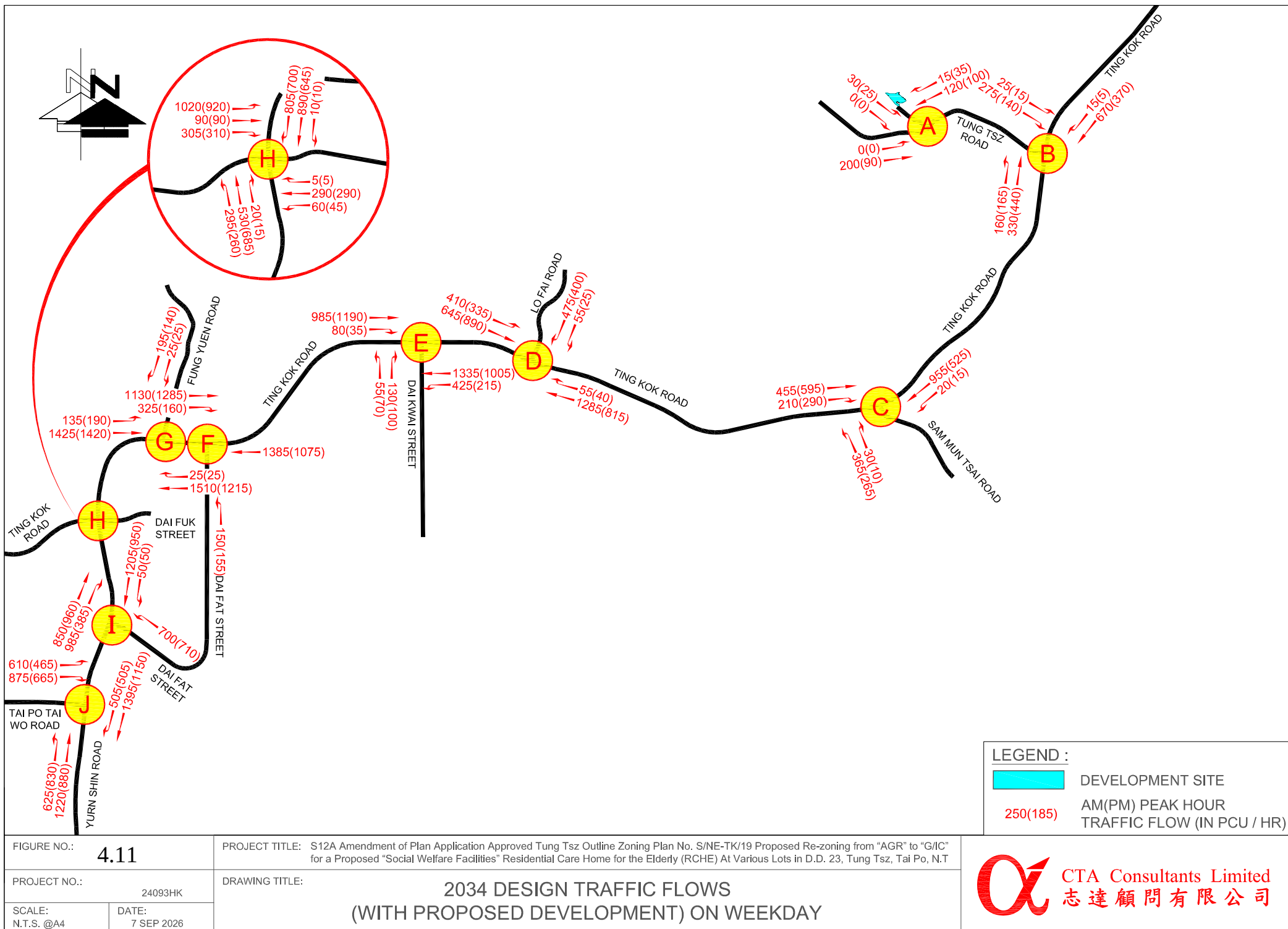


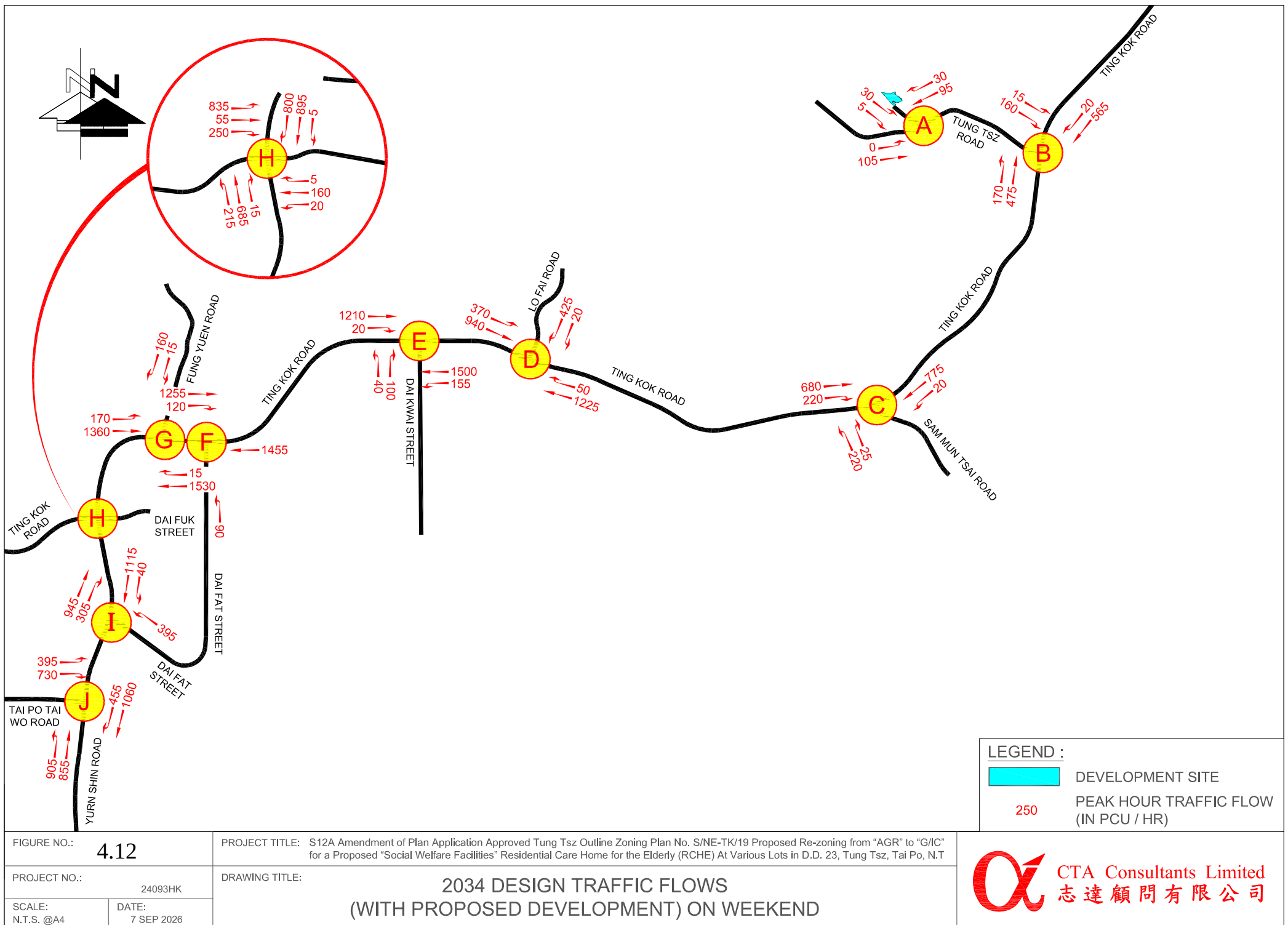
FIGURE NO.: 4.7	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: PLANNED JUNCTION LAYOUT OF YUEN SHIN ROAD / TAI PO TAI WO ROAD (J)	
SCALE: 1 : 1050 @A4 DATE: 9 SEP 2026	UNDER PLANNING APPLICATION No. Y / TP / 40	

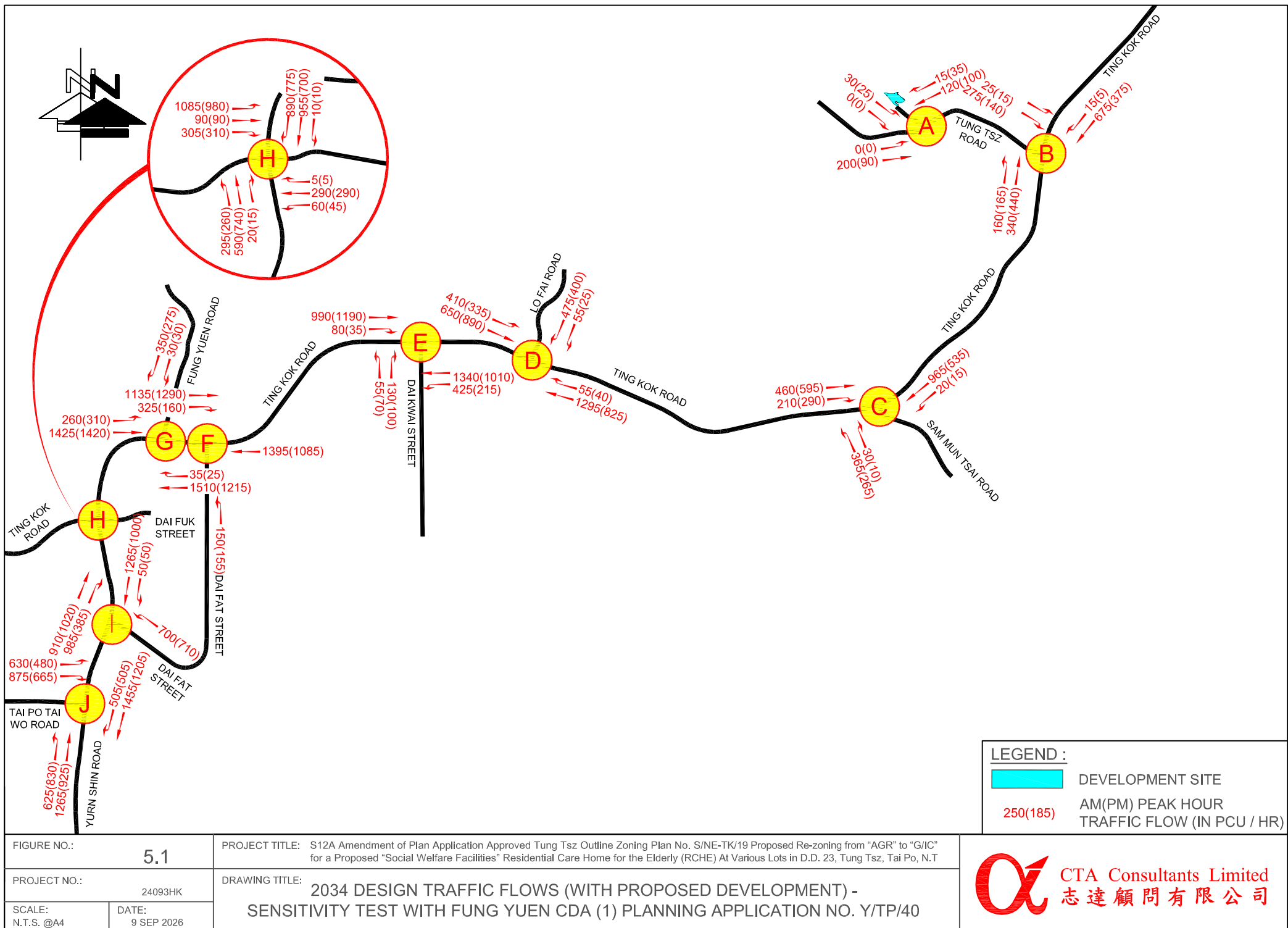












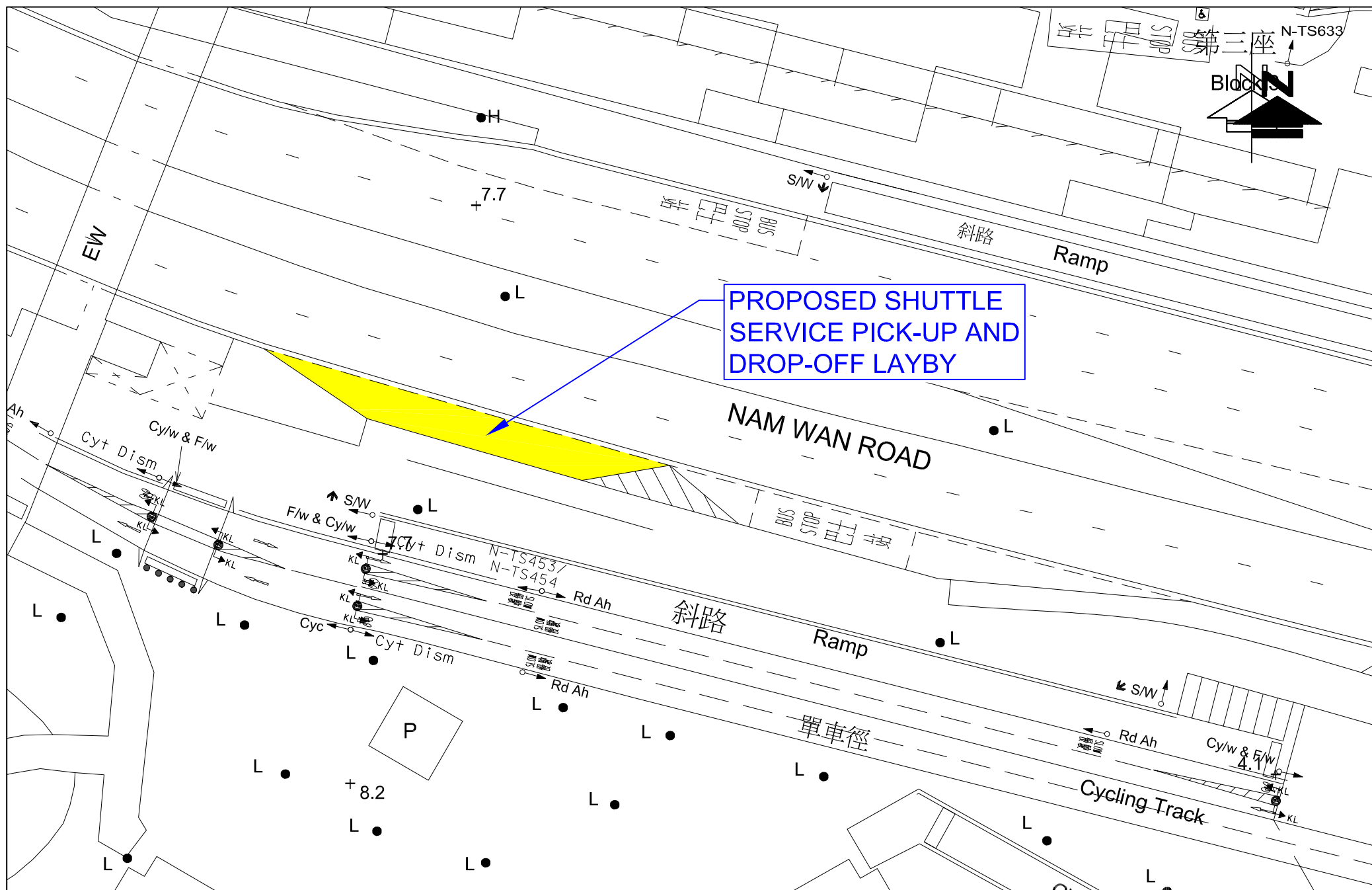
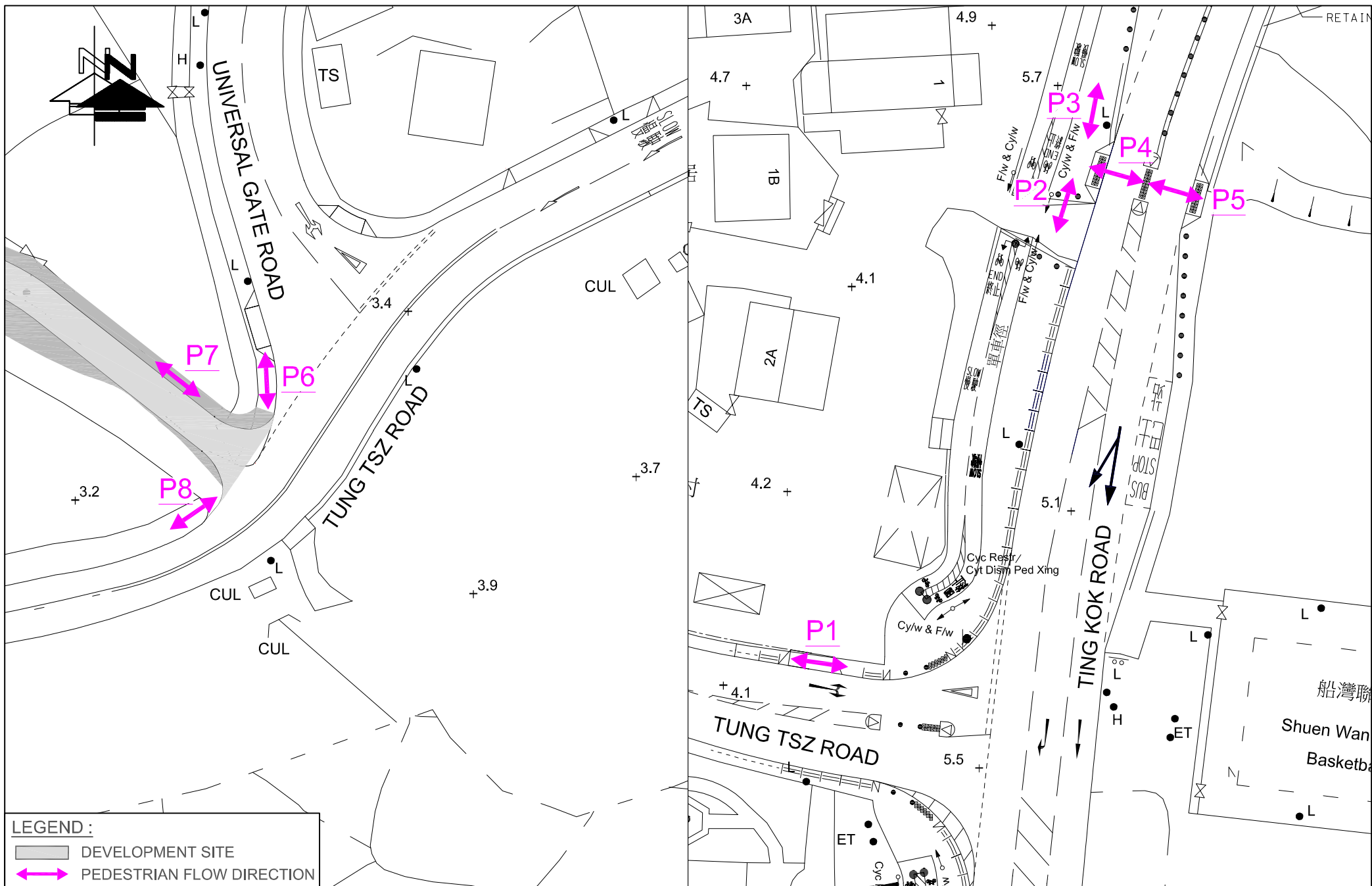


FIGURE NO.: 6.1	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: PROPOSED SHUTTLE SERVICE PICK-UP AND DROP-OFF LAYBY	
SCALE: 1 : 400 @A4	DATE: 23 JUL 2025	



LEGEND :

DEVELOPMENT SITE

PEDESTRIAN FLOW DIRECTION

FIGURE NO.: 8.1

PROJECT NO.: 24093HK

SCALE: 1 : 500 @A4

DATE: 08 SEP 2026

PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T

DRAWING TITLE:

INDEX PLAN OF PEDESTRIAN ASSESSMENT

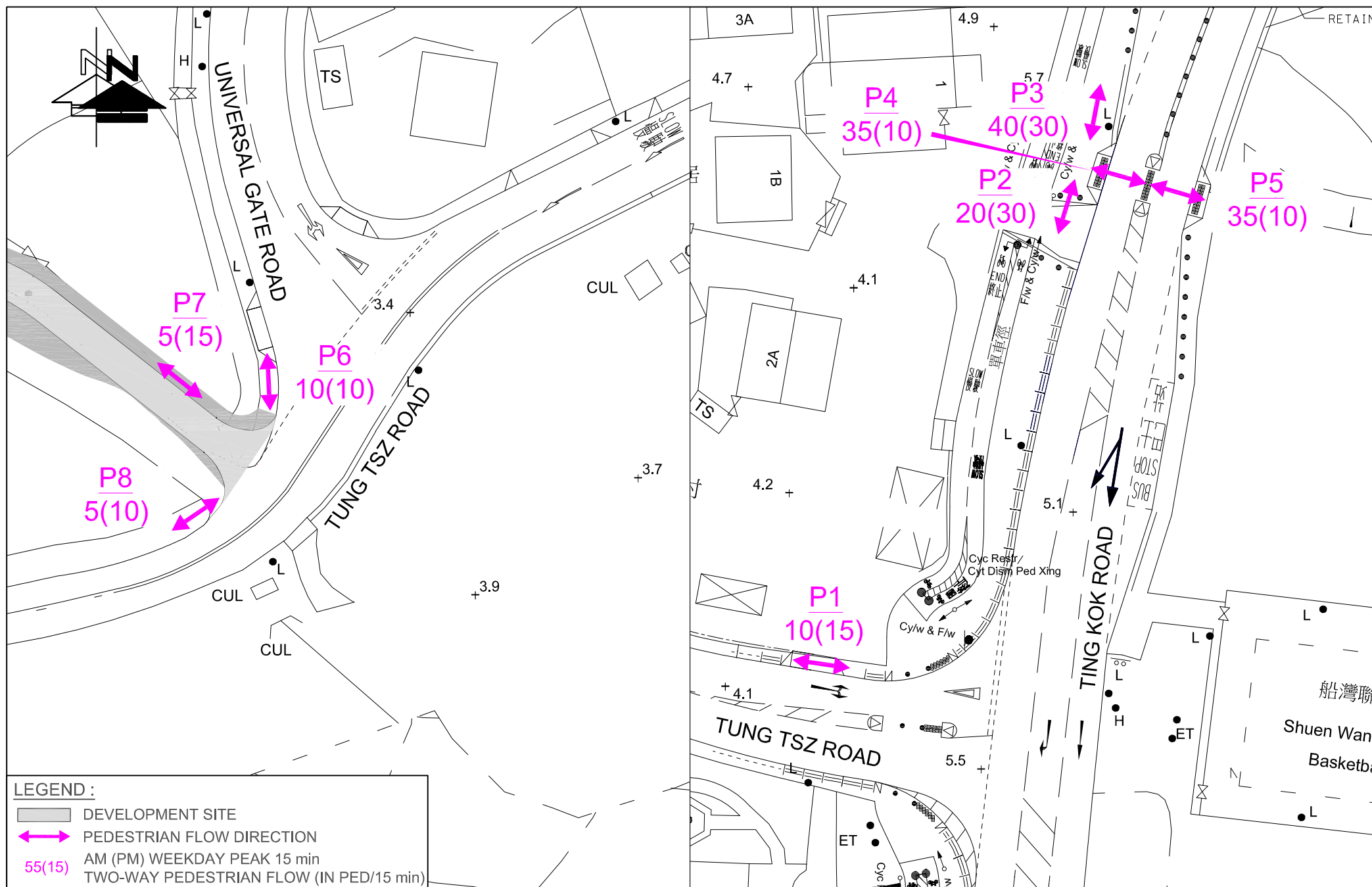


FIGURE NO.: 8.2	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE:	
SCALE: 1 : 500 @A4	DATE: 08 SEP 2026	

2026 OBSERVED PEDESTRIAN FLOWS

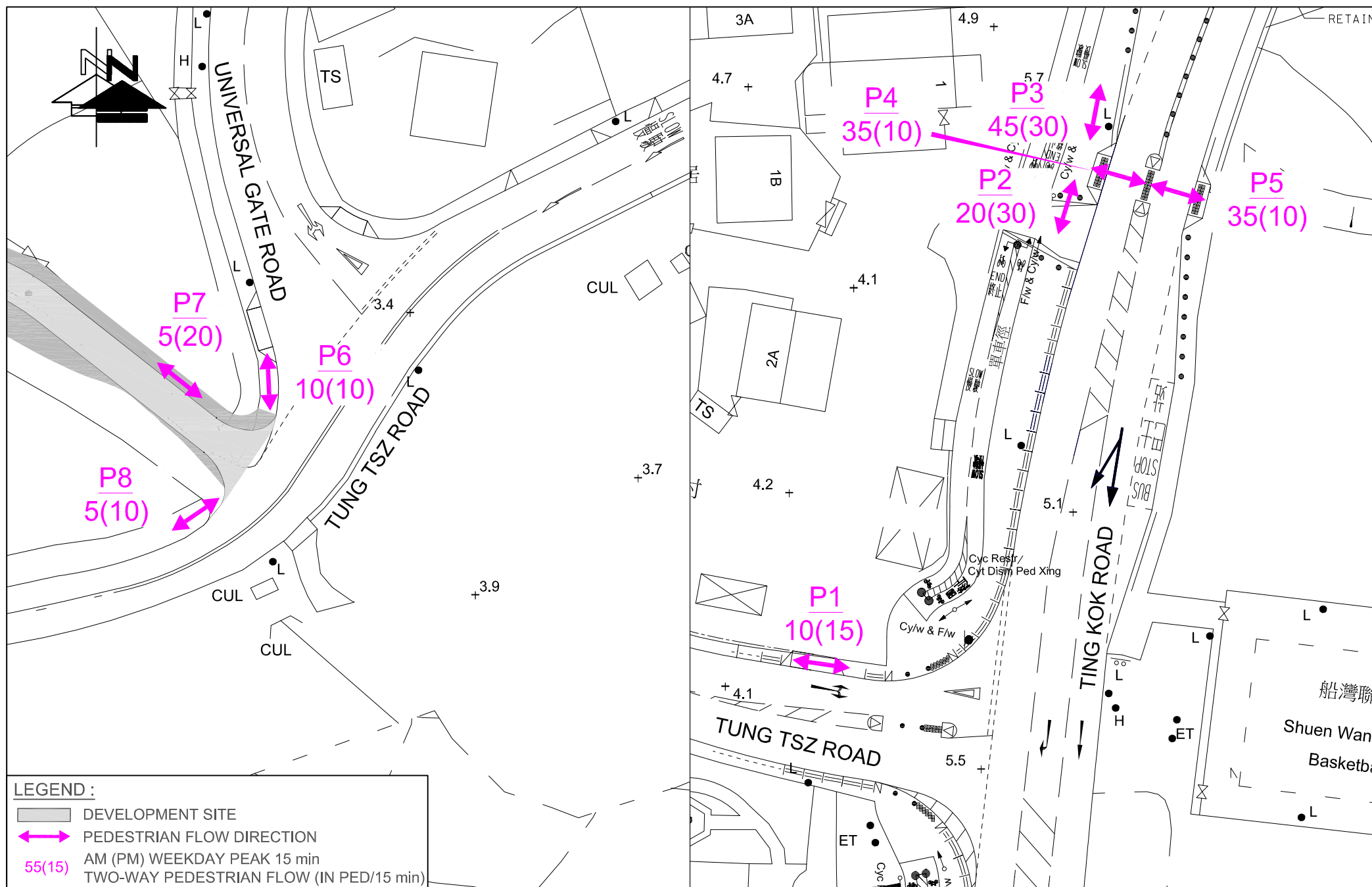
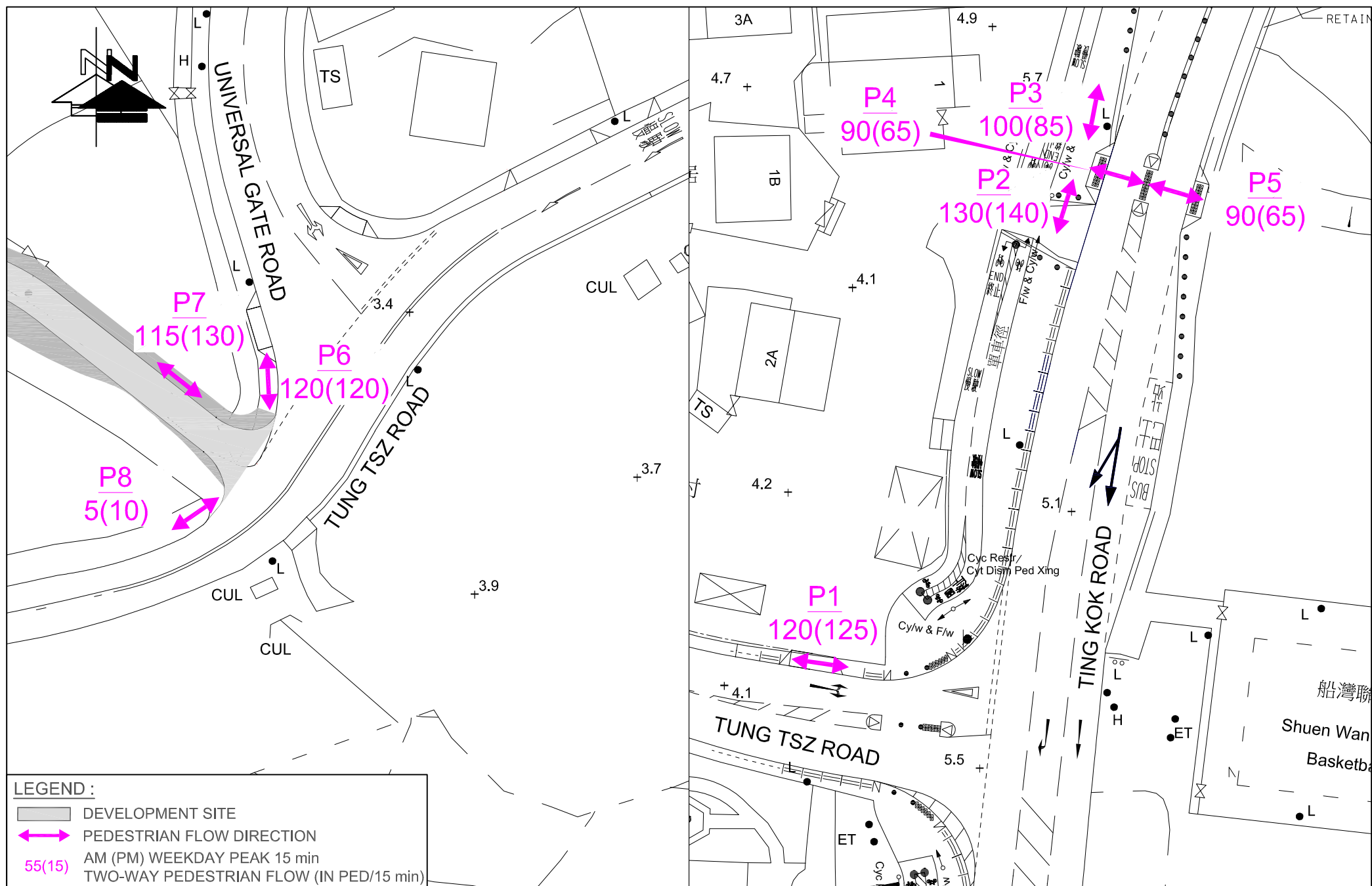
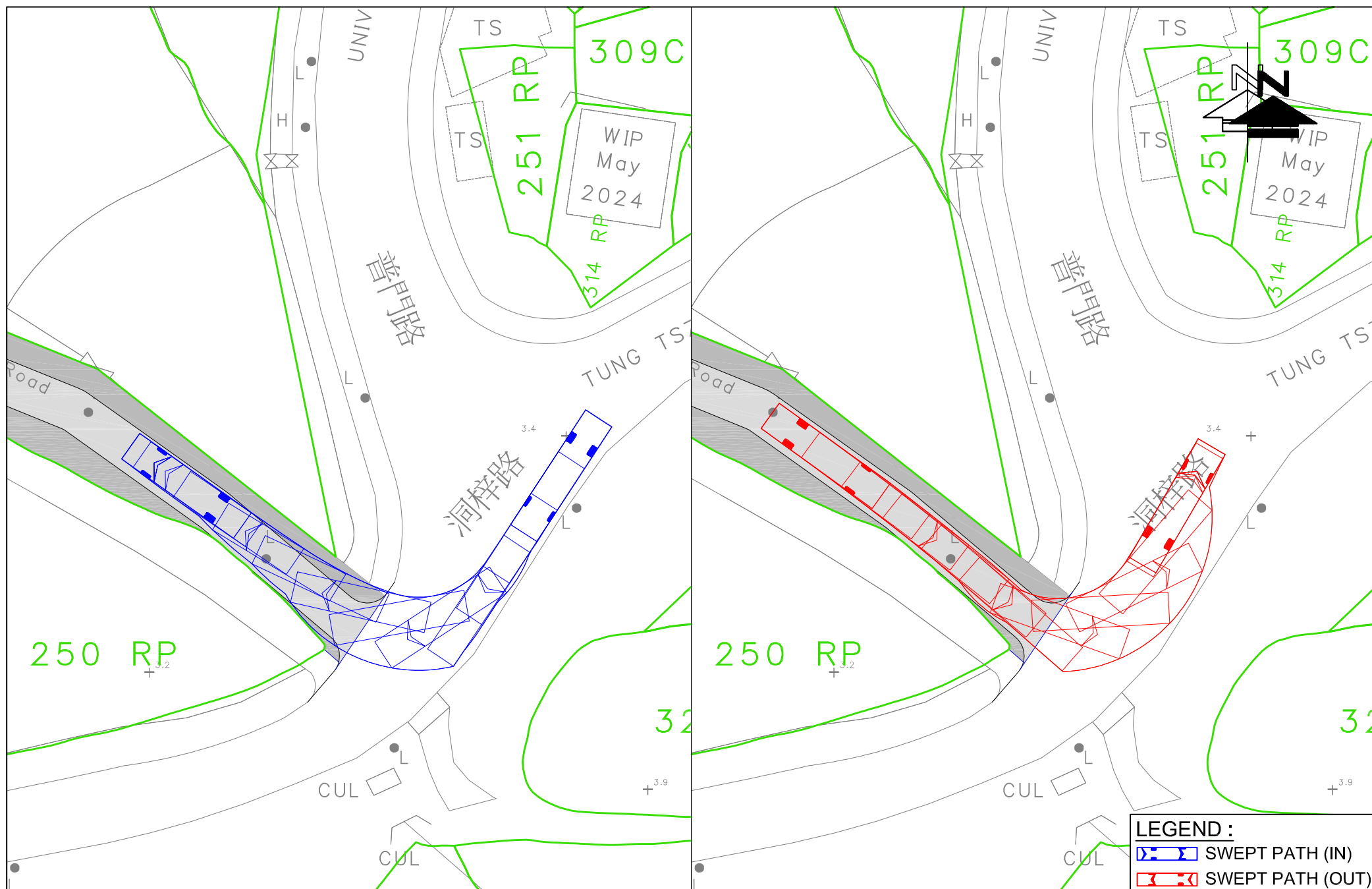


FIGURE NO.: 8.3		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	
PROJECT NO.: 24093HK		DRAWING TITLE:	
SCALE: 1 : 500 @A4	DATE: 08 SEP 2026	2034 REFERENCE PEDESTRIAN FLOWS	



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LEGEND :

- SWEEP PATH (IN)
- SWEEP PATH (OUT)

FIGURE NO.: **SP-01**

PROJECT NO.: 24093HK

SCALE: 1 : 400 @A4
DATE: 03 JUL 2025

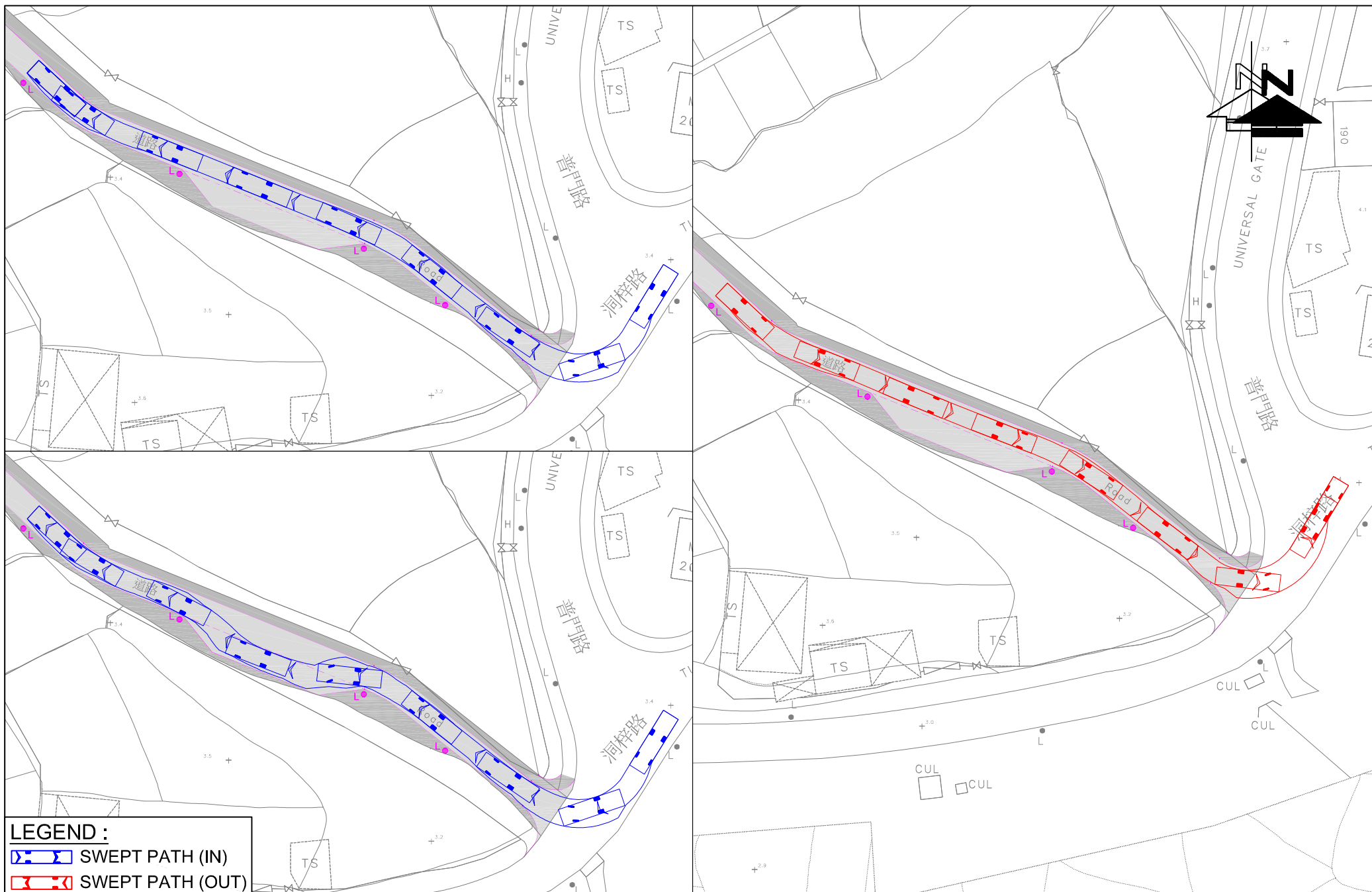
PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T

DRAWING TITLE:

**SWEPT PATH ANALYSIS OF 11m VEHICLE
ALONG ACCESS ROAD TO TUNG TSZ ROAD**

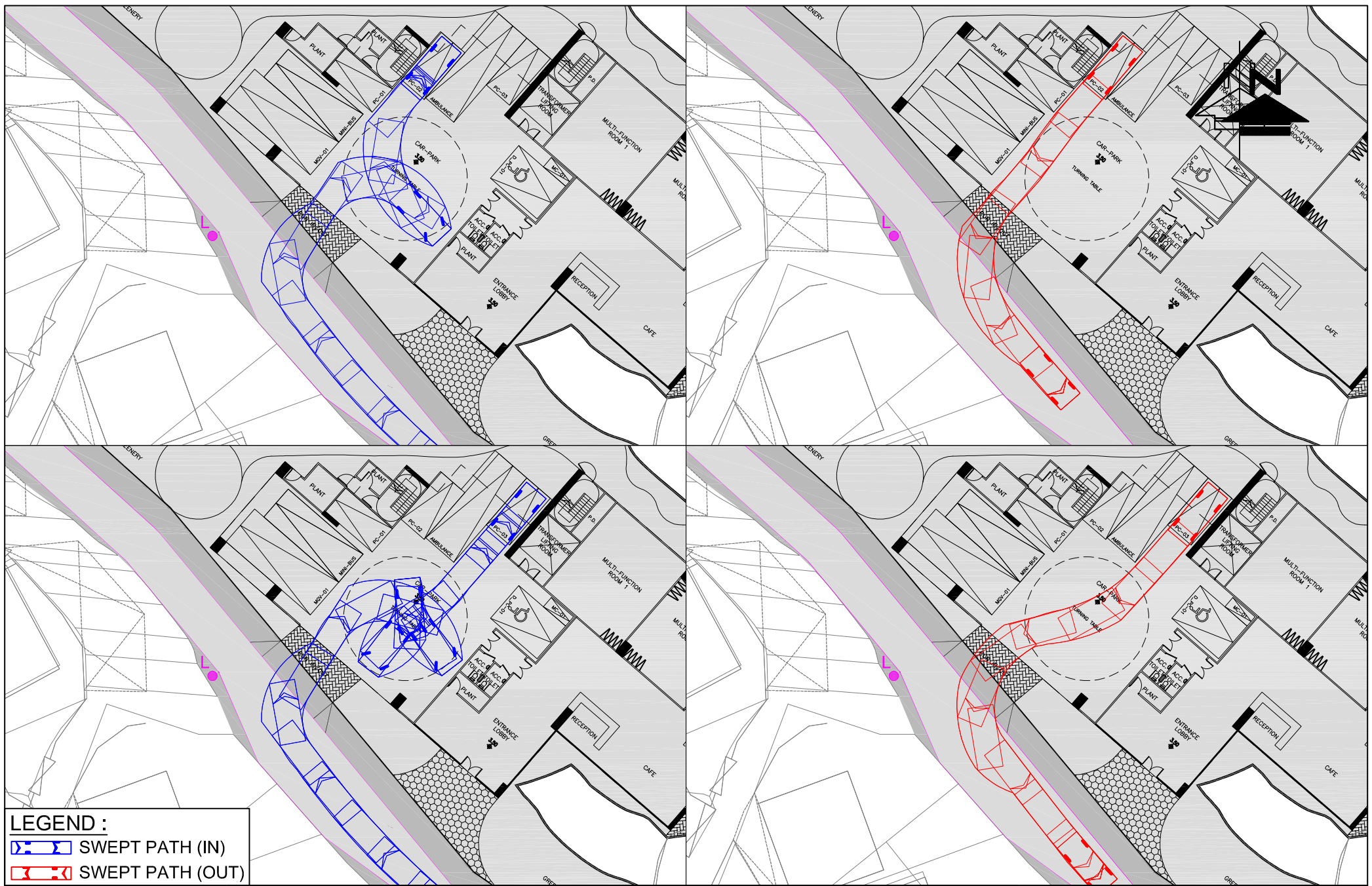


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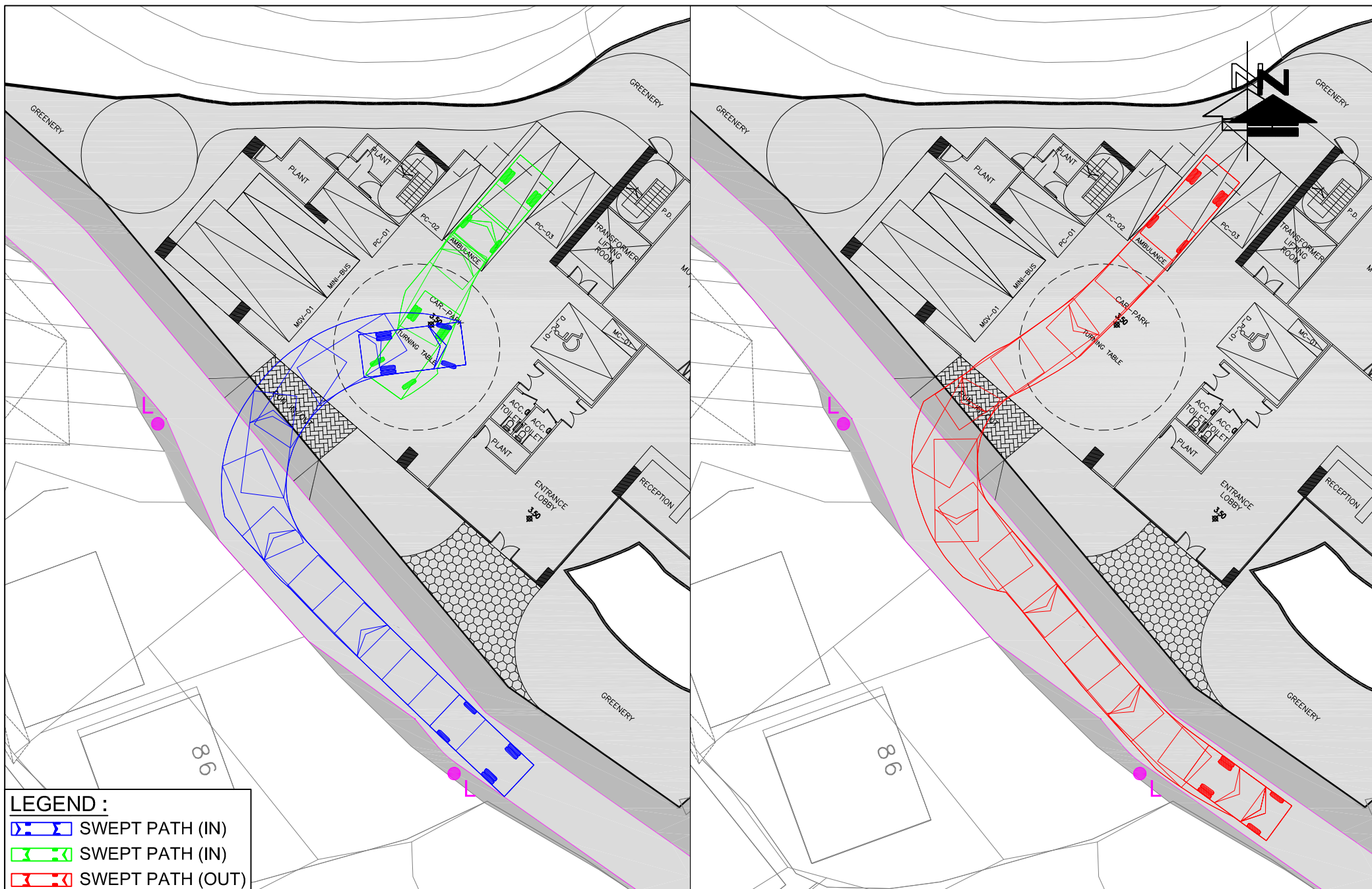
LEGEND :
 SWEPT PATH (IN)
 SWEPT PATH (OUT)

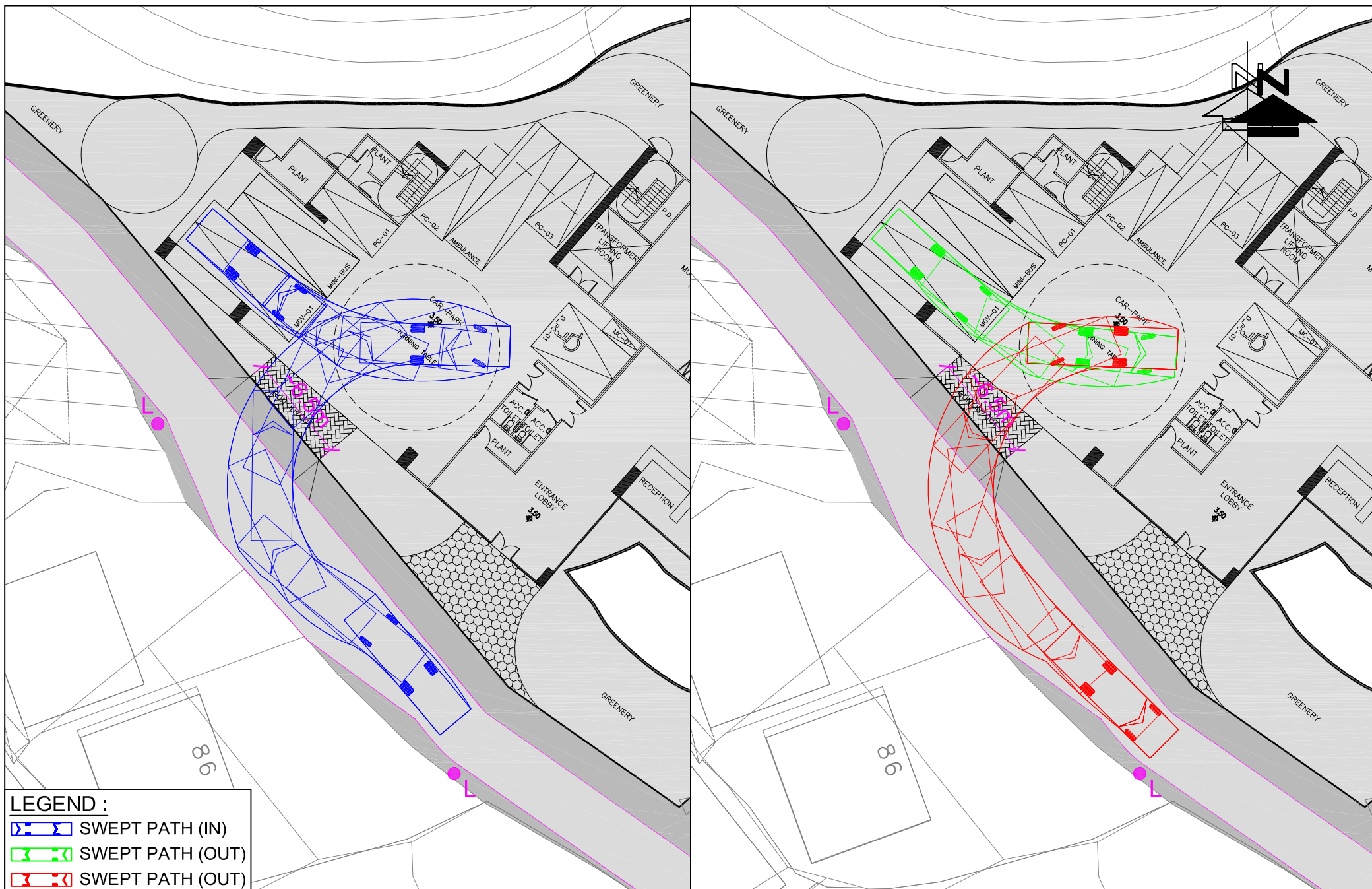
FIGURE NO.: SP-02	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T.	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF 9m VEHICLE ALONG ACCESS ROAD TO TUNG TSZ ROAD	
SCALE: 1 : 700 @A4	DATE: 31 JUL 2025	



LEGEND :
 SWEPT PATH (IN)
 SWEPT PATH (OUT)

FIGURE NO.: SP-03(REV A)		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	
PROJECT NO.: 24093HK		DRAWING TITLE: SWEPT PATH ANALYSIS OF PRIVATE VEHICLE	
SCALE: 1 : 400 @A4	DATE: 05 NOV 2025		





LEGEND :	
	SWEPT PATH (IN)
	SWEPT PATH (OUT)
	SWEPT PATH (OUT)

FIGURE NO.: SP-05(REV A)		PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	
PROJECT NO.: 24093HK		DRAWING TITLE: SWEPT PATH ANALYSIS OF MGV	
SCALE: 1 : 300 @A4	DATE: 05 NOV 2025		



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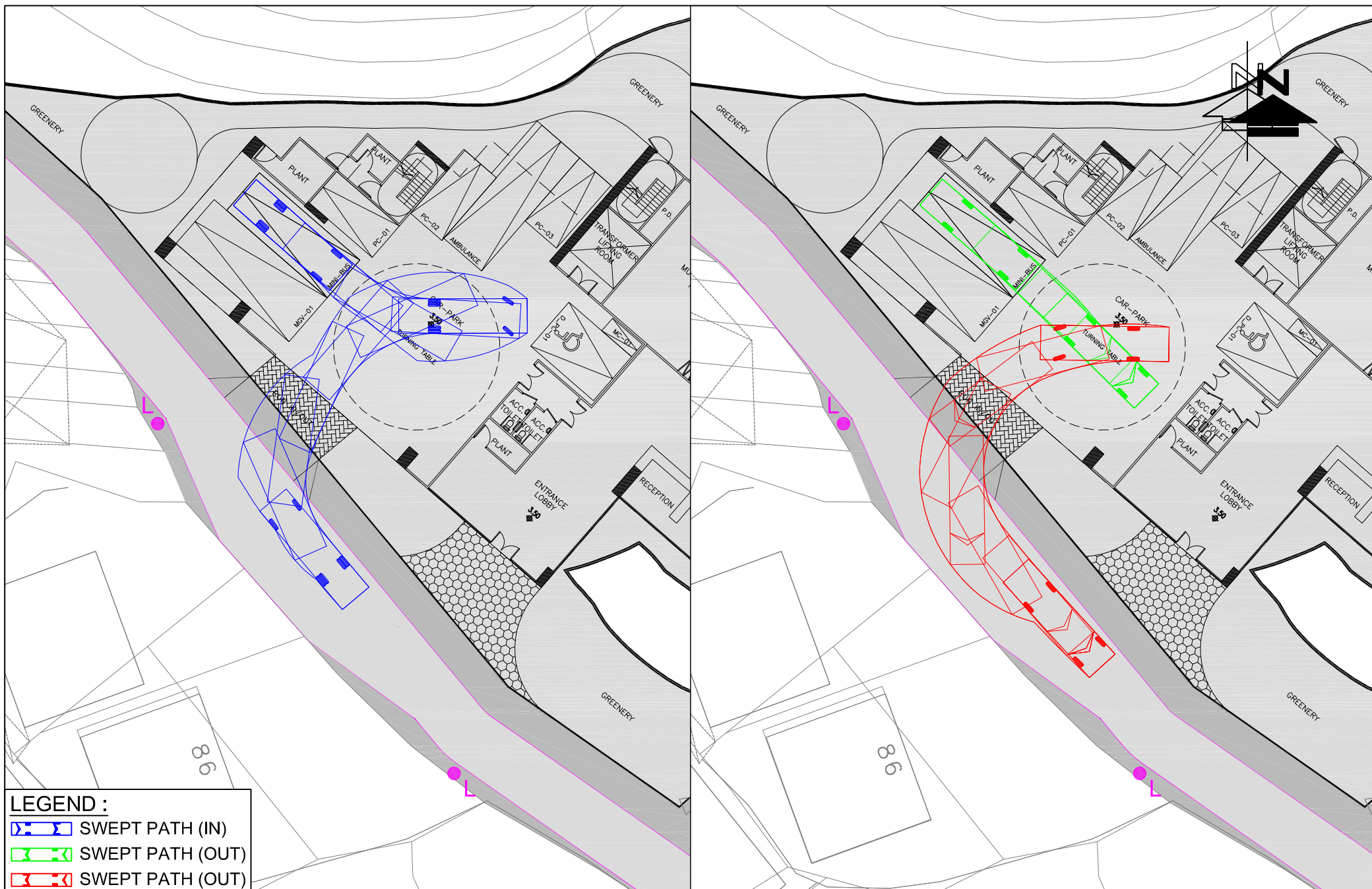


FIGURE NO.: SP-06(REV A)	PROJECT TITLE: S12A Amendment of Plan Application Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19 Proposed Re-zoning from "AGR" to "G/IC" for a Proposed "Social Welfare Facilities" Residential Care Home for the Elderly (RCHE) At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T	 CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 24093HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF LIGHT BUS	
SCALE: 1 : 300 @A4	DATE: 05 NOV 2025	



APPENDIX A

Junction Calculation Sheets

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2025 Observed Traffic Flows (Weekday)		

Arm C Tung Tsz Road	
110	(95)
5	(25)

Arm A Tung Tsz Road	
185	(85)
0	0

20	0
(15)	(0)

AM	PM
(PM)	

Arm B Access Road

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input					Calculated		
	W	7.3	V-rBA	50	w-BA	2.5	D	0.786
	W-CR	0	V-IBA	50	w-BC	2.5	E	0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		1	V-rBC	50	w-CB	2.1	F	0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)		1	V-rCB	50			Y	0.748

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM	
	pcu/hr			pcu/hr			
	q-CA	110	95	Q-BA	437	454	
	q-CB	5	25	Q-BC	581	603	
	q-AB	0	0	Q-CB	556	578	
	q-AC	185	85	Q-CA	1784	1722	
	q-BA	0	0	Q-BAC	581	603	(If C-B blocked C- (If Minor Road Share LT&RT))
	q-BC	20	15				
	f	1.000	1.000				

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.01	0.04
	C-A	0.06	0.06
	B-AC	0.03	0.02
	Critical DFC	0.06	0.06

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Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2025 Observed Traffic Flows (Weekday)		

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621

Analysis :	Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM
q-CA	620	340		Q-BA	390	404
q-CB	10	5		Q-BC	555	535
q-AB	140	145		Q-CB	516	497
q-AC	305	405		Q-CA	N/A	N/A
q-BA	245	120		Q-BAC	401	412
q-BC	25	10				
f	0.093	0.077				

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.02	0.01
	C-A	N/A	N/A
	B-AC	0.67	0.32

Critical DFC	0.67	0.32
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TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**
Description: **2025 Observed Traffic Flows (Weekday)**

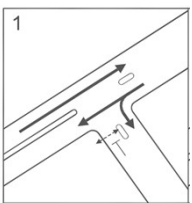
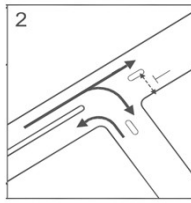
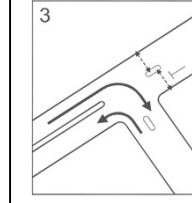
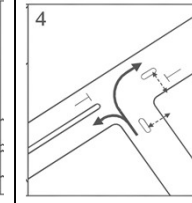
Approach	Direction	Movement notation	Phase	Stage	Width (m)		Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
					Left	Right				A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%		1965	1965	1965	1965	1965	1965	415	0.211		540	0.275	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	100%		2072.3	2072.3	1945	1945	1945	1945	195	0.100		270	0.139	
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%		2123.7	0	2125	2125	0	0	464	0.218	0.218	257	0.121	0.121
Ting Kok Road	W	↙	C	1	3.7	15	0	1	5%	6%		1983.7	4107.4	1975	1970	4100	4095	431	0.218		238	0.121	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	100%		2065	2065	1985	1985	1985	1985	340	0.171	0.171	250	0.126	0.126
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	100%		1965	1965	1800	1800	1800	1800	30	0.017		10	0.006	

Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.390	εy	0.247
			L (sec)	8	L (sec)	8
			C (sec)	88	C (sec)	88
			y pract.	0.818	y pract.	0.818
			R.C. (%)	110%	R.C. (%)	231%

415(540) →
195(270) ↘

← 875(480)
↘ 20(15)

↙ 340(250) ↘ 30(10)

Stage / Phase Diagrams					
					
L/G = 5s	L/G = 0s	L/G = 0s	L/G = 5s		

Junction: **Ting Kok Road / Lo Fai Road (D)**

Description: **2025 Observed Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	4.0	15	0	1	81%	50%	2018	4113	1865	1920	3960	4015	422	0.226	0.226	498	0.259	0.259
Ting Kok Road	E		A	1	3.4	0	0	0	0%	0%	2095	0	2095	2095	0	0	473	0.226		542	0.259	
Ting Kok Road	W		B	1	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	444	0.226		509	0.259	
Ting Kok Road	W		C	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	379	0.193		111	0.056	
Ting Kok Road	W		C	2	3.5	0	15	0	12%	30%	2105	0	2080	2045	0	0	401	0.193	0.193	115	0.056	0.056
Lo Fai Road	S		D	3	3.5	15	25	0	9% / 77% / 89		2105	4210	1970	1975	3930	3935	221	0.112	0.112	176	0.089	0.089
Lo Fai Road	S		D	3	3.5	0	20	0	100%	100%	2105	0	1960	1960	0	0	219	0.112		174	0.089	

Notes:

Traffic Flow (pcu / hr)

AM(PM)

340(250)
555(790)




390(330)
50(20)




50(35)
1175(700)

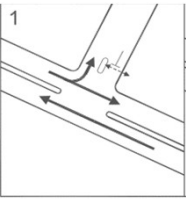
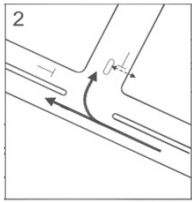
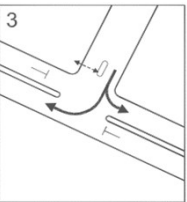



A.M. Check Phase

εy 0.531
L (sec) 14
C (sec) 120
y pract. 0.795
R.C. (%) 50%

P.M. Check Phase

εy 0.404
L (sec) 14
C (sec) 96
y pract. 0.769
R.C. (%) 90%

Stage / Phase Diagrams					
1 	2 	3 			
I/G =5s	I/G =6s	I/G =6s			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2025 Observed Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	0	0	762	0.388	0.388	500	0.254	0.254
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3970	4060	73	0.037		261	0.133	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	100%	11%	2105	0	2005	2095	0	0	75	0.037	0.037	279	0.133	0.133
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%	2125	0	2125	2125	0	0	824	0.388		540	0.254	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	53%	40%	1985	4110	1910	1925	4035	4050	741	0.388		490	0.254	
Dai Kwai Street	N	↗	D	3	3.5	25	30	0	0% / 100%	0% / 100%	2105	0	2005	2005	0	0	120	0.060	0.060	90	0.045	0.045
Dai Kwai Street	N	↘	D	3	3.5	20	0	1	100%	100%	1965	4070	1830	1830	3835	3835	50	0.027		65	0.036	

Notes:

Traffic Flow (pcu / hr)

AM(PM)

835(1010) →

75(30) ↘

← 1170(835)

↙ 395(195)

↖ 50(65)

↗ 120(90)

A.M. Check Phase

εy 0.485

L (sec) 30

C (sec) 120

y pract. 0.675

R.C. (%) 39%

P.M. Check Phase

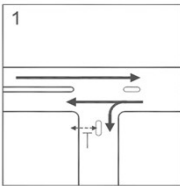
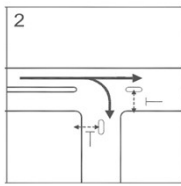
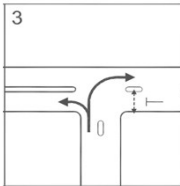
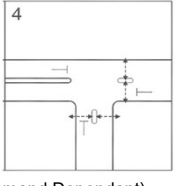
εy 0.432

L (sec) 30

C (sec) 96

y pract. 0.619

R.C. (%) 43%

Stage / Phase Diagrams					
					
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s		

Description: **2025 Observed Traffic Flows (Weekday)**

Stage / Phase Diagrams			
A 1 ← Tin Koi Road 2 ↓ Dafat Street	B 1 ← Tin Koi Road 2 ↓ Dafat Street 3 ← Tin Koi Road 4 ↓ Dafat Street	C 1 ← Tin Koi Road 2 ↓ Dafat Street 3 ← Tin Koi Road 4 ↓ Dafat Street 5 ← Tin Koi Road 6 ↓ Dafat Street	
I/G=6s		I/G=6s	

Description: **2025 Observed Traffic Flows (Weekday)**

Stage / Phase Diagrams

Figure 10 displays four Stage / Phase Diagrams (A, B, C, D) for a T-junction intersection, showing the sequence of traffic movements and the corresponding I/G (Intersection/Green) times.

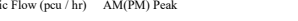
- A:** T-junction with left-turning traffic. I/G = 4s.
- B:** T-junction with left-turning traffic and a cycle lane. I/G = 6s+5s.
- C:** T-junction with left-turning traffic and a cycle lane. I/G = 6s.
- D:** T-junction with left-turning traffic and a cycle lane. I/G = 11s+16s.

Description: **2025 Observed Traffic Flows (Weekday)**

Notes:	Traffic Flow (pcu / hr)				AM(PM) Peak		AM Peak Check Phase		PM Peak Check Phase					
(Nil)	910(810) 85(85) 250(245)				710(600)				795(550)		10(10)		Eγ0.393 L (sec)40 C (sec)104 y pract.0.554 R.C. (%)41%	Eγ0.365 L (sec)40 C (sec)96 y pract.0.525 R.C. (%)44%

$$I/G = 11s + 15s$$

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Neaside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y

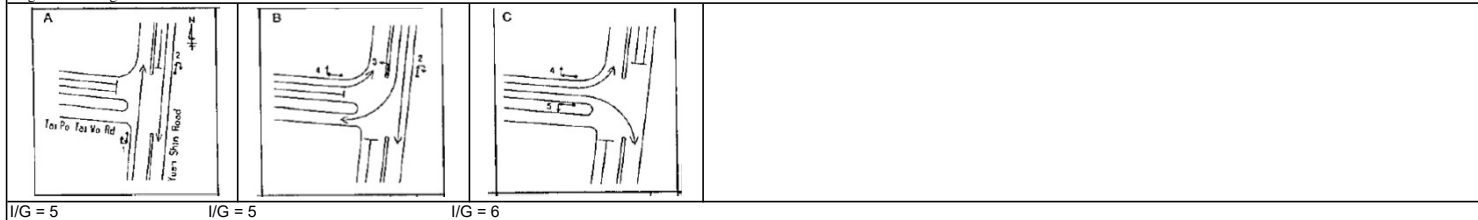
Notes: (Nil)		Traffic Flow (pcu / hr)		AM(PM) Peak		AM Peak Check Phase		PM Peak Check Phase	

Junction: **Tai Po Tai Wo Road / Yuen Shin Road (J)**

Description: **2025 Observed Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	0%	1945	4030	1945	1945	4030	4030	594	0.305		478	0.246	
	S	↓	2	A,B	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	636	0.305		512	0.246	
	S	↶	3	B	3.6	0	15	0	100%	100%	2115	2115	1925	1925	1925	1925	430	0.223	0.223	425	0.221	0.221
Tai Po Tai Wo Road	E	↷	4	B,C	3.3	15	0	1	100%	100%	1945	1945	1770	1770	1770	1770	515	0.291		375	0.212	
	E	↷	5	C	3.3	0	23	0	100%	100%	2085	4170	1955	1955	3895	3895	392	0.200	0.200	294	0.150	0.150
	E	↷	5	C	3.3	0	20	0	100%	100%	2085	0	1940	1940	0	0	388	0.200		291	0.150	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	0%	1945	6115	1945	1945	6115	6115	350	0.180	0.180	248	0.128	0.128
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	375	0.180		266	0.128	
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	375	0.180		266	0.128	

Notes: (Nil)		Traffic Flow (pcu / hr)		AM(PM) Peak		AM Peak Check Phase		PM Peak Check Phase	
				430(425) 1230(990)		ey 0.604		ey 0.499	
						L (sec) 13		L (sec) 13	
						C (sec) 104		C (sec) 96	
						y pract. 0.788		y pract. 0.778	
				510(735) 1100(780)		R.C. (%) 30%		R.C. (%) 56%	

[illegible]

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2026 Observed Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	7.3	D 0.786
W-CR	0	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.748
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow pcu/hr	Weekend	Capacity pcu/hr	Weekend
	q-CA	90	Q-BA	454
	q-CB	20	Q-BC	601
	q-AB	0	Q-CB	576
	q-AC	95	Q-CA	1737
	q-BA	5	Q-BAC	564
	q-BC	20		
	f	0.800		

(If C-B blocked C-
(If Minor Road Share LT&RT)

Results :	Ratio of Flow-to-Capacity	Weekend
	B-A	N/A
	B-C	N/A
	C-B	0.03
	C-A	0.05
	B-AC	0.04

Critical DFC	0.05
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Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2026 Observed Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow pcu/hr	Capacity pcu/hr	Weekend
q-CA	530	Q-BA	373
q-CB	15	Q-BC	527
q-AB	150	Q-CB	489
q-AC	445	Q-CA	N/A
q-BA	140	Q-BAC	384
q-BC	15		
f	0.097		

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	Weekend
	B-A	N/A
	B-C	N/A
	C-B	0.03
	C-A	N/A
	B-AC	0.40

Critical DFC	0.40
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CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	1965	1965	1965	625	0.318	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	2072.3	2072.3	1945	1945	205	0.105	0.105
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2123.7	0	2125	0	381	0.179	0.179
Ting Kok Road	W	↙	C	1	3.7	15	0	1	6%	1983.7	4107.4	1975	4100	354	0.179	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	2065	2065	1985	1985	205	0.103	
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	1965	1965	1800	1800	20	0.011	

Notes:

Traffic Flow (pcu / hr)

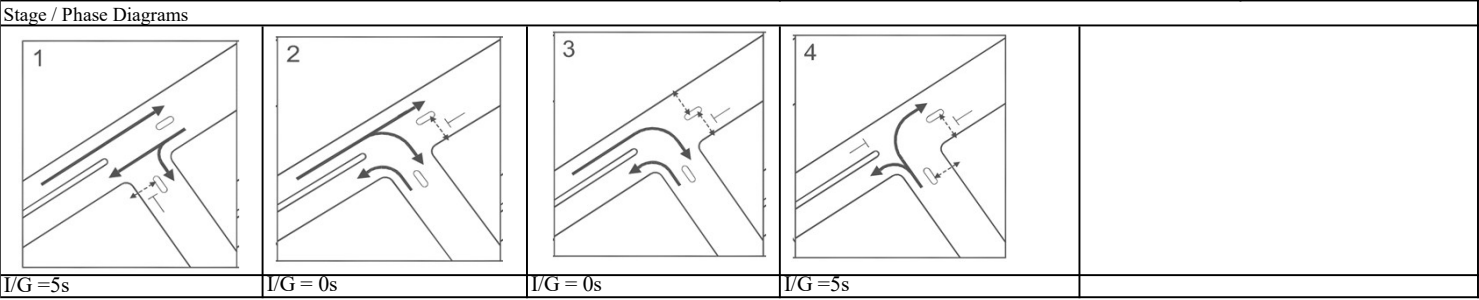
625 →
205 ↘

← 715
↙ 20

← 205 → 20

Weekend Check Phase

εy 0.285
L (sec) 8
C (sec) 88
y pract. 0.818
R.C. (%) 187%



Junction: **Ting Kok Road / Lo Fai Road (D)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	4.0	15	0	1	53%	2018	4113	1915	4010	540	0.282	0.282
Ting Kok Road	E		A	1	3.4	0	0	0	0%	2095	0	2095	0	590	0.282	
Ting Kok Road	W		B	1	3.5	0	0	1	0%	1965	4070	1965	4040	554	0.282	
Ting Kok Road	W		C	2	3.5	0	0	1	0%	1965	4070	1965	4040	283	0.144	
Ting Kok Road	W		C	2	3.5	0	15	0	15%	2105	0	2075	0	298	0.144	0.144
Lo Fai Road	S		D	3	3.5	15	25	0	10% / 90%	2105	4210	1980	3940	191	0.096	0.096
Lo Fai Road	S		D	3	3.5	0	20	0	100%	2105	0	1960	0	189	0.096	

Notes:

Traffic Flow (pcu / hr)

Weekend Check Phase

ϵ_y

0.522

L (sec)

14

C (sec)

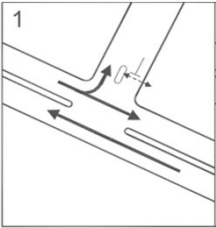
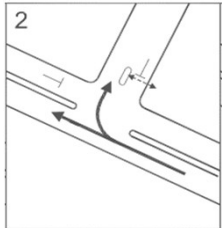
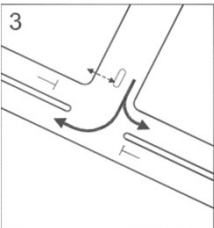
96

y pract.

0.769

R.C. (%)

47%

Stage / Phase Diagrams					
1 	2 	3 			
L/G =5s	L/G =6s	L/G =6s			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	4070	1965	0	698	0.355	0.355
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	1965	4070	1965	0	170	0.087	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	8%	2105	0	2095	0	182	0.087	0.087
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2125	0	2125	0	755	0.355	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	21%	1985	4110	1955	0	695	0.355	
Dai Kwai Street	N	↕	D	3	3.5	25	30	0	0% / 100%	2105	0	2005	0	95	0.047	0.047
Dai Kwai Street	N	↕	D	3	3.5	20	0	1	100%	1965	4070	1830	0	40	0.022	

Notes:

Traffic Flow (pcu / hr)

1035 →
15 ↘

← 1305
↙ 145

↖ 40 ↗ 95

Weekend Check Phase

εy 0.489

L (sec) 30

C (sec) 96

y pract. 0.619

R.C. (%) 26%

Stage / Phase Diagrams					
1	2	3	4		
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s		

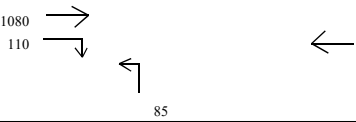
TRAFFIC SIGNALS CALCULATION

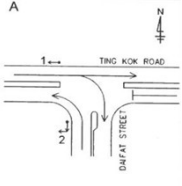
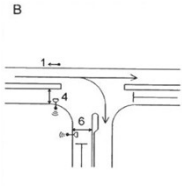
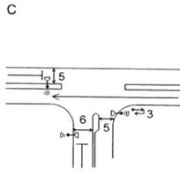
Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Dai Fat Street (F)**
Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	1955	4050	3321	3321	582	0.298	0.298
	E	↘	1	A,B	3.4	0.0	10	0	18%	2095	0	0	0	608	0.298	
Dai Fat Street	N	↙	2	A	3.7	10.0	0	1	100%	1980	4100	3362	3362	40	0.024	
	N	↖	2	A	3.7	12.5	0	0	100%	2120	0	0	0	45	0.024	
Ting Kok Road	W	←	3	C	3.7	0.0	0	1	0%	1980	4100	3362	3362	611	0.309	0.309
	W	←	3	C	3.7	0.0	0	0	0%	2120	0	0	0	654	0.309	
Pedestrian crossing		↕	4	B		Min. Crossing Time = 5Gm + 7FGm =12s										
		↕	5	C		Min. Crossing Time = 6Gm + 7FGm =13s										
		↔	6	B,C		Min. Crossing Time = 10Gm + 7FGm =17s										

Notes: (Nil)	Traffic Flow (pcu / hr) 	Weekend Peak Check Phase S y 0.606 L (sec) 10 C (sec) 96 y pract. 0.806 R.C. (%) 33%
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Stage / Phase Diagrams			
			
I/G=6s		I/G=6s	

Junction: **Ting Kok Road / Fung Yuen Road (G)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right					Weekend		Weekend	Weekend	Flow (pcu/hr)
Ting Kok Road	E	↗	1	A	3.5	15.0	0	1	25%	1965	4070	1915	4020	636	0.332	0.332
	E	→	1	A	3.5	0.0	0	0	0%	2105	0	2105	0	699	0.332	
Ting Kok Road	W	←	2	A,B	3.5	0.0	0	1	0%	1965	3840	1965	3835	692	0.352	
	W	↖	2	A,B	3.5	0.0	15	0	2%	1875	0	1870	0	658	0.352	
	W	↖	3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s											
Fung Yuen Road	S	↘	4	C	3.5	0.0	15	0	100%	2105	0	1915	0	85	0.044	
	S	↙	4	C	3.5	13.0	18	1	19% / 81%	1965	4070	1805	3720	80	0.044	0.044
Pedestrian crossing		↕	5	D	Min. Crossing Time = 8Gm + 8FGm = 16s											
		↔	6	D	Min. Crossing Time = 11Gm + 10FGm = 21s											

Notes:

Traffic Flow (pcu / hr)

Weekend Peak Check Phase

Ey	0.377
L (sec)	42
C (sec)	96
y pract.	0.506
R.C. (%)	34%

Stage / Phase Diagrams

A

I/G = 4s

B

I/G = 6s+5s

C

I/G = 6s

D

I/G = 11s+16s

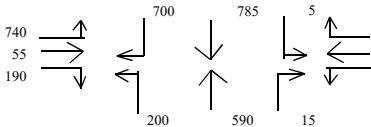
Junction: **Ting Kok Road / Yuen Shin Road / Dai Fuk Street (H)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	S		1	A	3.6	12.5	0	1	1%	1975	4090	1970	4085	381	0.193	
	S		1	A	3.6	0.0	0	0	0%	2115	0	2115	0	409	0.193	
	S		1	A	3.6	0.0	25	0	100%	2115	4230	1995	4000	349	0.175	0.193
	S		1	A	3.6	0.0	27.5	0	100%	2115	0	2005	0	351	0.175	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	1965	4070	1785	3725	355	0.199	
	E		2	A,B	3.5	17.5	0	0	100%	2105	0	1940	0	385	0.199	
	E		3	B	3.5	0.0	0	0	0%	2105	2105	2105	2105	55	0.026	
	E		3	B	3.5	0.0	32.5	0	100%	2105	2105	2010	2010	190	0.095	0.095
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	1965	1965	1785	1785	200	0.112	
	N		5	C	3.5	0.0	0	0	0%	2105	6315	2105	6315	197	0.093	0.093
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	197	0.093	
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	197	0.093	
	N		5	C	3.5	0.0	25	0	100%	2105	2105	1985	1985	15	0.008	
Dai Fuk Street	W		6	D	3.7	0.0	22.5	0	5%	2120	0	2110	0	91	0.043	
	W		6	D	3.7	15.0	0	1	24%	1980	4100	1935	4045	84	0.043	
Pedestrian crossing			7	A,B,C	Min. Crossing Time = 9Gm + 7FGm = 16s											
			8	D	Min. Crossing Time = 5Gm + 10FGm = 15s											

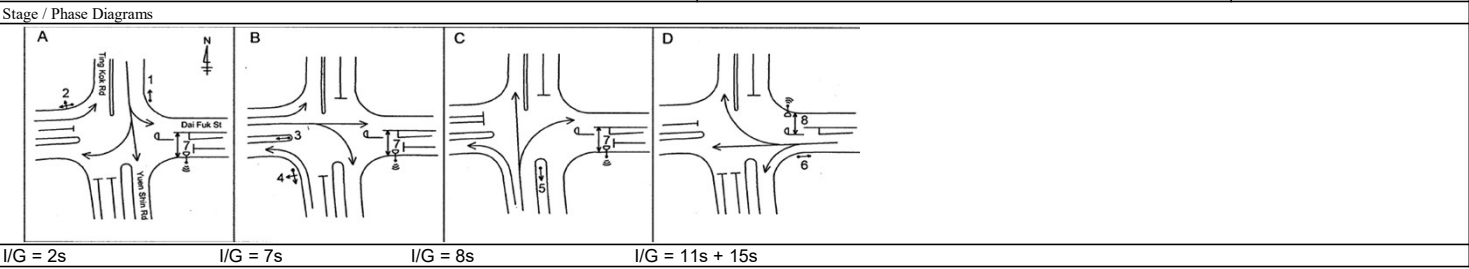
Notes:
(Nil)

Traffic Flow (pcu / hr)



Weekend Peak Check Phase

Ev	0.381
L (sec)	40
C (sec)	96
y pract.	0.525
R.C. (%)	38%



TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Yuen Shin Road / Dai Fat Street (I)**
Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↵	2	B	3.3	15.0	0	1	1%	1945	4030	1945	4030	475	0.244	0.245
	S	↓	2	B	3.3	0.0	0	0	0%	2085	0	2085	0	510	0.245	
Yuen Shin Road	N	↑	1	A	3.5	0.0	0	1	0%	1965	6175	1965	6030	403	0.205	0.205
	N	↗	1	A	3.5	0.0	22.5	0	0%	2105	0	2105	0	432	0.205	
	N	↘	1	A	3.5	0.0	20	0	100%	2105	0	1960	0	245	0.125	
Dai Fat Street	W	↵	3	A	3.8	20.0	0	1	100%	1990	4120	1850	3845	147	0.079	
	W	↵	3	A	3.8	22.5	0	0	100%	2130	0	1995	0	158	0.079	
Pedestrian crossing		↕	4	B,C	Min. Crossing Time = 5Gm + 6FGm = 11s											
		↕	5	C	Min. Crossing Time = 5Gm + 8FGm = 13s											
		↔	6	A,C	Min. Crossing Time = 5Gm + 6FGm = 11s											
		↔	7	B,C	Min. Crossing Time = 5Gm + 7FGm = 12s											

Notes: (Nil)	Traffic Flow (pcu / hr)		Weekend Peak Check Phase	
			Ex	0.450
			L (sec)	16
			C (sec)	96
			y pract.	0.750
			R.C. (%)	67%

Stage / Phase Diagrams				
I/G = 7		I/G = 10		

Junction: **Tai Po Tai Wo Road / Yuen Shin Road (J)**

Description: **2026 Observed Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	1945	4030	1945	4030	439	0.226	
	S	↓	2	A,B	3.3	0	0	0	0%	2085	0	2085	0	471	0.226	
	S	↙	3	B	3.6	0	15	0	100%	2115	2115	1925	1925	380	0.197	0.197
Tai Po Tai Wo Road	E	↗	4	B,C	3.3	15	0	1	100%	1945	1945	1770	1770	310	0.175	
	E	↘	5	C	3.3	0	23	0	100%	2085	4170	1955	3895	326	0.167	0.167
	E	↘	5	C	3.3	0	20	0	100%	2085	0	1940	0	324	0.167	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	1945	6115	1945	6115	243	0.125	0.125
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	261	0.125	
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	261	0.125	

Notes:
(Nil)

Traffic Flow (pcu / hr)

Weekend Peak Check Phase
ey 0.489
L (sec) 13
C (sec) 96
y pract. 0.778
R.C. (%) 59%

Stage / Phase Diagrams

I/G = 5

I/G = 5

I/G = 6

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Weekday)		

Arm C Tung Tsz Road	
120	(100)
5	(25)

Arm A Tung Tsz Road	
200	(90)
0	0

Arm B Access Road	
20	0
(15)	(0)

AM (PM)	

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input					Calculated		
	W	7.3	V-rBA	50	w-BA	2.5	D	0.786
	W-CR	0	V-IBA	50	w-BC	2.5	E	0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		1	V-rBC	50	w-CB	2.1	F	0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)		1	V-rCB	50			Y	0.748

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM
	pcu/hr			pcu/hr		
	q-CA	120	100	Q-BA	432	452
	q-CB	5	25	Q-BC	577	602
	q-AB	0	0	Q-CB	553	577
	q-AC	200	90	Q-CA	1784	1722
	q-BA	0	0	Q-BAC	577	602
	q-BC	20	15			
	f	1.000	1.000			

(If C-B blocked C-
(If Minor Road Share
LT&RT)

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.01	0.04
	C-A	0.07	0.06
	B-AC	0.03	0.02
	Critical DFC	0.07	0.06

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Weekday)		

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621

Analysis :	Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM
q-CA	670	370		Q-BA	378	394
q-CB	15	5		Q-BC	549	528
q-AB	150	155		Q-CB	510	489
q-AC	330	440		Q-CA	N/A	N/A
q-BA	265	130		Q-BAC	388	405
q-BC	25	15				
f	0.086	0.103				

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.01
	C-A	N/A	N/A
	B-AC	0.75	0.36

Critical DFC	0.75	0.36
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TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**
Description: **2034 Reference Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)		Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
																		Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
					Left	Right				A.M.	P.M.			A.M.	P.M.	A.M.	P.M.						
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%		1965	1965	1965	1965	1965	1965	445	0.226		585	0.298	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	100%		2072.3	2072.3	1945	1945	1945	1945	210	0.108		290	0.149	
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%		2123.7	0	2125	2125	0	0	500	0.235	0.235	275	0.129	0.130
Ting Kok Road	W	↙	C	1	3.7	15	0	1	4%	6%		1983.7	4107.4	1975	1970	4100	4095	465	0.235		255	0.130	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	100%		2065	2065	1985	1985	1985	1985	365	0.184	0.184	265	0.134	0.134
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	100%		1965	1965	1800	1800	1800	1800	30	0.017		10	0.006	

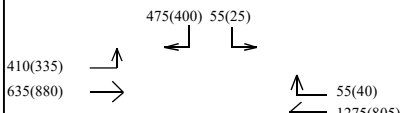
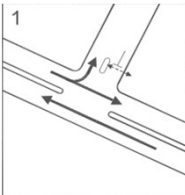
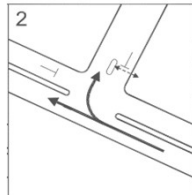
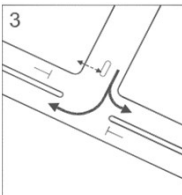
Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.419	εy	0.263
			L (sec)	8	L (sec)	8
			C (sec)	88	C (sec)	88
			y pract.	0.818	y pract.	0.818
			R.C. (%)	95%	R.C. (%)	211%

445(585) →
210(290) ↘

← 945(515)
↙ 20(15)

↖ 365(265) ↗ 30(10)

Stage / Phase Diagrams					
L/G = 5s	L/G = 0s	L/G = 0s	L/G = 5s		

TRAFFIC SIGNALS CALCULATION												Job No: 24093HK										CTA Consultants Ltd.									
Junction: Ting Kok Road / Lo Fai Road (D)																															
Description: 2034 Reference Traffic Flows (Weekday)																															
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.											
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y									
Ting Kok Road	E		A	1	4.0	15	0	1	83%	58%	2018	4113	1865	1910	3960	4005	492	0.264	0.264	579	0.303	0.304									
Ting Kok Road	E		A	1	3.4	0	0	0	0%	0%	2095	0	2095	2095	0	0	553	0.264		636	0.304										
Ting Kok Road	W		B	1	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4005	518	0.264		596	0.303										
Ting Kok Road	W		C	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4005	395	0.201		122	0.062										
Ting Kok Road	W		C	2	3.5	0	15	0	13%	31%	2105	0	2080	2040	0	0	417	0.201	0.201	127	0.062	0.062									
Lo Fai Road	S		D	3	3.5	15	25	0	1% / 79%	88	2105	4210	1970	1975	3930	3935	266	0.135	0.135	213	0.108	0.108									
Lo Fai Road	S		D	3	3.5	0	20	0	100%	100%	2105	0	1960	1960	0	0	264	0.135		212	0.108										
Notes:												Traffic Flow (pcu / hr) AM(PM) 										A.M. Check Phase ϵ_y 0.600 L (sec) 14 C (sec) 120 y pract. 0.795 R.C. (%) 33%					P.M. Check Phase ϵ_y 0.474 L (sec) 14 C (sec) 96 y pract. 0.769 R.C. (%) 62%				
Stage / Phase Diagrams																															
1 						2 						3 																			
I/G =5s						I/G =6s						I/G =6s																			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Reference Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	0	0	853	0.434	0.434	587	0.298	0.298
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3990	4060	100	0.051		304	0.155	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	78%	11%	2105	0	2025	2095	0	0	103	0.051	0.051	324	0.155	0.155
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%	2125	0	2125	2125	0	0	921	0.434		634	0.298	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	51%	37%	1985	4110	1910	1930	4035	4055	829	0.434		576	0.298	
Dai Kwai Street	N	↗	D	3	3.5	25	30	0	0% / 100%	0% / 100%	2105	0	2005	2005	0	0	130	0.065	0.065	100	0.050	0.050
Dai Kwai Street	N	↘	D	3	3.5	20	0	1	100%	100%	1965	4070	1830	1830	3835	3835	55	0.030		70	0.038	

Notes:

Traffic Flow (pcu / hr)

AM(PM)

975(1180) →

80(35) ↘

← 1325(995)

↙ 425(215)

↖ 55(70)

↗ 130(100)

A.M. Check Phase

εy 0.549

L (sec) 30

C (sec) 120

y pract. 0.675

R.C. (%) 23%

P.M. Check Phase

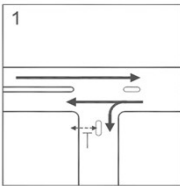
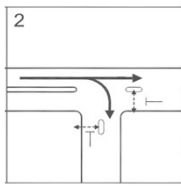
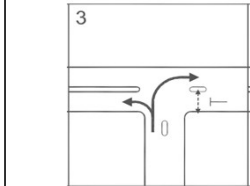
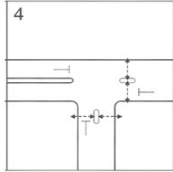
εy 0.503

L (sec) 30

C (sec) 96

y pract. 0.619

R.C. (%) 23%

Stage / Phase Diagrams					
					
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s		

Description: **2034 Reference Traffic Flows (Weekday)**

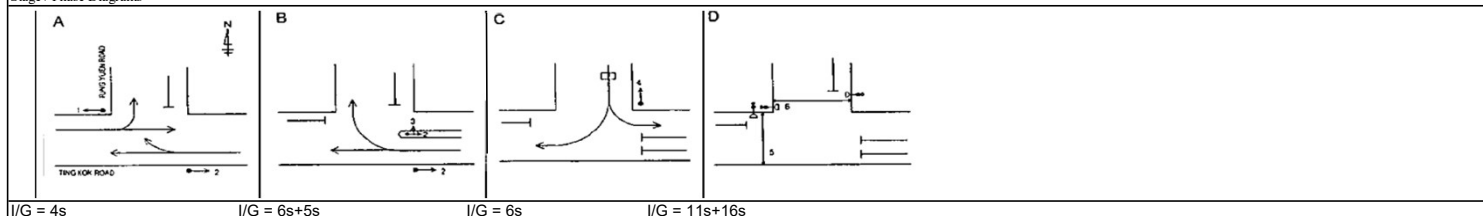
Notes: (Nil)	Traffic Flow (pcu / hr)	AM(PM) Peak	AM Peak Check Phase		PM Peak Check Phase	
	1120(1275) →		Ey	0.704	Ey	0.620
	325(160) ↓		L (sec)	10	L (sec)	10
			C (sec)	104	C (sec)	96
			y pract.	0.813	y pract.	0.806
			R.C. (%)	16%	R.C. (%)	30%

A	B	C	
I/G=6s	I/G=6s		

Description: **2034 Reference Traffic Flows (Weekday)**

Notes:		Traffic Flow (pcu / hr) AM(PM) Peak 195(140) 25(25) 135(190) 1415(1410) 25(15) 1500(1205)	AM Peak Check Phase Ey 0.443 L (sec) 42 C (sec) 104 y pract. 0.537 R.C. (%) 21%	PM Peak Check Phase Ey 0.443 L (sec) 42 C (sec) 96 y pract. 0.506 R.C. (%) 14%

Stage / Phase Diagrams



Description: **2034 Reference Traffic Flows (Weekday)**

Notes:					Traffic Flow (pcu / hr)		AM(PM) Peak				AM Peak Check Phase				PM Peak Check Phase			
(Nil)									Eγ L (sec) C (sec) y pract. R.C. (%) 0.452 40 104 0.554 23%				Eγ L (sec) C (sec) y pract. R.C. (%) 0.436 40 96 0.525 20%					

$$I/G = 11s + 15s$$

TRAFFIC SIGNALS CALCULATION

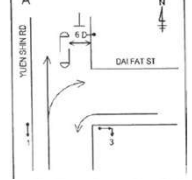
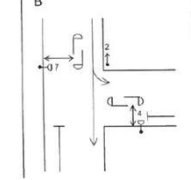
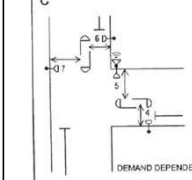
Job No: 24093HK

CTA Consultants Ltd.

Junction: **Yuen Shin Road / Dai Fat Street (I)**
Description: **2034 Reference Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S		2	B	3.3	15.0	0	1	8%	11%	1945	4030	1930	1925	4015	4010	598	0.310	0.310	475	0.247	0.247
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	647	0.310		515	0.247	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	5945	6030	603	0.307	0.307	459	0.233	0.233
	N		1	A	3.5	0.0	22.5	0	62%	0%	2105	0	2020	2105	0	0	620	0.307		491	0.233	
	N		1	A	3.5	0.0	20	0	100%	100%	2105	0	1960	1960	0	0	602	0.307		385	0.196	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	100%	1990	4120	1850	1850	3845	3845	337	0.182		342	0.185	
	W		3	A	3.8	22.5	0	0	100%	100%	2130	0	1995	1995	0	0	363	0.182		368	0.185	
Pedestrian crossing			4	B,C	Min. Crossing Time = 5Gm + 6FGm =11s																	
			5	C	Min. Crossing Time = 5Gm + 8FGm =13s																	
			6	A,C	Min. Crossing Time = 5Gm + 6FGm =11s																	
			7	B,C	Min. Crossing Time = 5Gm + 7FGm =12s																	

Notes: (Nil)	Traffic Flow (pcu / hr)	AM(PM) Peak	AM Peak Check Phase		PM Peak Check Phase	
			Ey	0.617	Ey	0.480
			L (sec)	16	L (sec)	16
			C (sec)	104	C (sec)	96
			y pract.	0.762	y pract.	0.750
			R.C. (%)	23%	R.C. (%)	56%

Stage / Phase Diagrams					
					
I/G = 7		I/G = 10			

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	0%	1945	4030	1945	1945	4030	4030	671	0.345		553	0.284	
	S	↓	2	A,B	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	719	0.345		592	0.284	
	S	↙	3	B	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	500	0.264	0.264	500	0.264	0.264
Tai Po Tai Wo Road	E	↗	4	B,C	3.6	15	0	1	100%	100%	1975	1975	1795	1795	1795	1795	605	0.337		460	0.256	
	E	↘	5	C	3.3	0	23	0	100%	100%	2085	4170	1955	1955	3895	3895	439	0.225	0.225	334	0.171	0.171
	E	↘	5	C	3.3	0	20	0	100%	100%	2085	0	1940	1940	0	0	436	0.225		331	0.171	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	0%	1945	6115	1945	1945	6115	6115	386	0.199	0.199	278	0.143	0.143
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	414	0.199		298	0.143	
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	414	0.199		298	0.143	

Notes: (Nil)		AM(PM) Peak 500(500) 1390(1145) 625(830) 1215(875)	AM Peak Check Phase		PM Peak Check Phase	
			ey	0.687	ey	0.578
			L (sec)	13	L (sec)	13
			C (sec)	104	C (sec)	96
			y pract.	0.788	y pract.	0.778
			R.C. (%)	15%	R.C. (%)	35%

$$I/G = 6$$

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

$Y = 1 - 0.0345W$
 $q\text{-AB, etc}$ = the design flow of movement AB, etc
 W = major road width
 $W\text{-CR}$ = central reserve width
 $w\text{-BA, etc}$ = lane width to vehicle
 $v\text{-rBA, etc}$ = visibility to the right for waiting vehicles in stream BA, etc
 $v\text{-IBA}$ = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Calculated					
W	7.3	V-rBA	50	w-BA	2.5	D	0.786
W-CR	0	V-IBA	50	w-BC	2.5	E	0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	50	w-CB	2.1	F	0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.748

Analysis :	Traffic Flow pcu/hr	Weekend	Capacity pcu/hr	Weekend	
	q-CA	95	Q-BA	451	
	q-CB	20	Q-BC	599	
	q-AB	0	Q-CB	573	
	q-AC	105	Q-CA	1737	
	q-BA	5	Q-BAC	562	(If C-B blocked C-A) (If Minor Road Share LT&RT)
	q-BC	20			
	f	0.800			

Results :	Ratio of Flow-to-Capacity	Weekend
	B-A	N/A
	B-C	N/A
	C-B	0.03
	C-A	0.05
	B-AC	0.04

Critical DFC	0.05
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CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow pcu/hr	Weekend	Capacity pcu/hr	Weekend
	q-CA	565	Q-BA	362
	q-CB	20	Q-BC	521
	q-AB	160	Q-CB	482
	q-AC	475	Q-CA	N/A
	q-BA	150	Q-BAC	372
	q-BC	15		
	f	0.091		

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	Weekend
	B-A	N/A
	B-C	N/A
	C-B	0.04
	C-A	N/A
	B-AC	0.44

Critical DFC	0.44
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Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**

Description: **2034 Reference Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	1965	1965	1965	670	0.341	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	2072.3	2072.3	1945	1945	220	0.113	0.113
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2123.7	0	2125	0	407	0.191	0.191
Ting Kok Road	W	↙	C	1	3.7	15	0	1	5%	1983.7	4107.4	1975	4100	378	0.191	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	2065	2065	1985	1985	220	0.111	
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	1965	1965	1800	1800	25	0.014	

Notes:

Traffic Flow (pcu / hr)

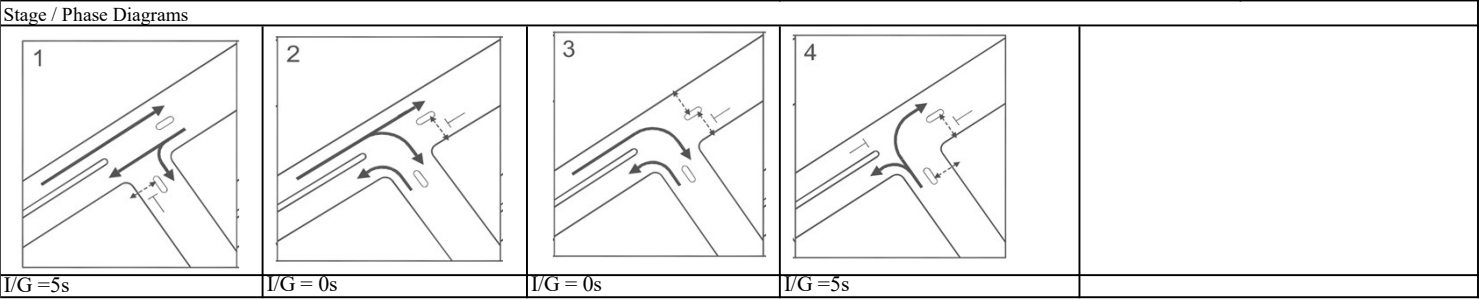
670 →
220 ↘

← 765
↙ 20

← 220 ↘ 25

Weekend Check Phase

εy 0.305
L (sec) 8
C (sec) 88
y pract. 0.818
R.C. (%) 169%



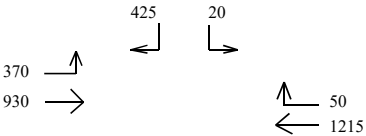
Junction: **Ting Kok Road / Lo Fai Road (D)**

Description: **2034 Reference Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	4.0	15	0	1	60%	2018	4113	1905	4000	619	0.325	0.325
Ting Kok Road	E		A	1	3.4	0	0	0	0%	2095	0	2095	0	681	0.325	
Ting Kok Road	W		B	1	3.5	0	0	1	0%	1965	4070	1965	4040	638	0.325	
Ting Kok Road	W		C	2	3.5	0	0	1	0%	1965	4070	1965	4040	305	0.155	
Ting Kok Road	W		C	2	3.5	0	15	0	16%	2105	0	2075	0	322	0.155	0.155
Lo Fai Road	S		D	3	3.5	15	25	0	9% / 91%	2105	4210	1980	3940	224	0.113	0.113
Lo Fai Road	S		D	3	3.5	0	20	0	100%	2105	0	1960	0	221	0.113	

Notes:

Traffic Flow (pcu / hr)



Weekend Check Phase

εy

0.593

L (sec)

14

C (sec)

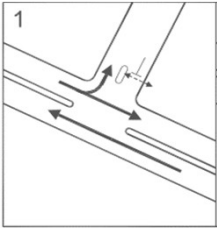
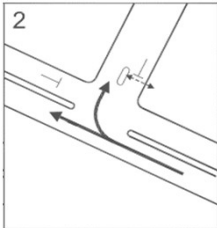
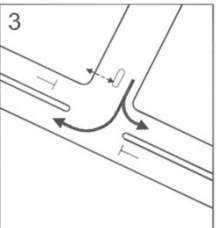
96

y pract.

0.769

R.C. (%)

30%

Stage / Phase Diagrams					
					
L/G =5s	L/G =6s	L/G =6s			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Reference Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	4070	1965	0	793	0.403	0.403
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	1965	4070	1965	0	207	0.105	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	9%	2105	0	2095	0	221	0.105	0.105
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2125	0	2125	0	857	0.403	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	20%	1985	4110	1955	0	788	0.403	
Dai Kwai Street	N	↕	D	3	3.5	25	30	0	0% / 100%	2105	0	2005	0	100	0.050	0.050
Dai Kwai Street	N	↕	D	3	3.5	20	0	1	100%	1965	4070	1830	0	40	0.022	

Notes:

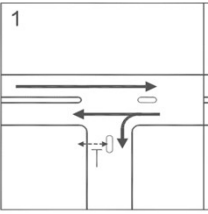
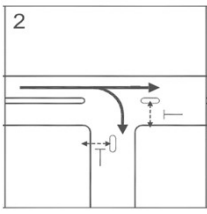
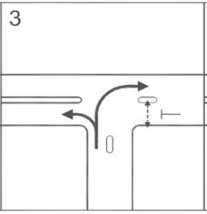
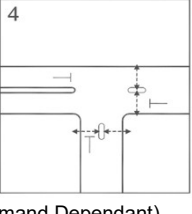
Traffic Flow (pcu / hr)

1200 →
20 ↘

← 1490
↙ 155

↖ 40 ↗ 100

Weekend Check Phase
εy 0.558
L (sec) 30
C (sec) 100
y pract. 0.630
R.C. (%) 13%

Stage / Phase Diagrams					
1 	2 	3 	4 		
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s		

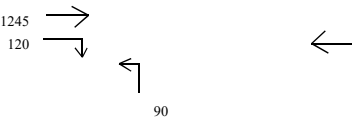
TRAFFIC SIGNALS CALCULATION

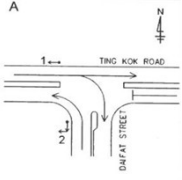
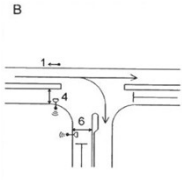
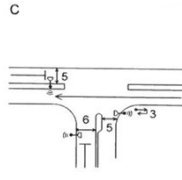
Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Dai Fat Street (F)**
Description: **2034 Reference Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend	Weekend		Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	1955	4050	3321	3321	668	0.341	0.342
	E	↘	1	A,B	3.4	0.0	10	0	17%	2095	0	0	0	697	0.342	
Dai Fat Street	N	↙	2	A	3.7	10.0	0	1	100%	1980	4100	3362	3362	43	0.025	
	N	↖	2	A	3.7	12.5	0	0	100%	2120	0	0	0	47	0.025	
Ting Kok Road	W	←	3	C	3.7	0.0	0	1	0%	1980	4100	3362	3362	698	0.352	0.352
	W	←	3	C	3.7	0.0	0	0	0%	2120	0	0	0	747	0.352	
Pedestrian crossing		↕	4	B		Min. Crossing Time = 5Gm + 7FGm =12s										
		↕	5	C		Min. Crossing Time = 6Gm + 7FGm =13s										
		↔	6	B,C		Min. Crossing Time = 10Gm + 7FGm =17s										

Notes: (Nil)	Traffic Flow (pcu / hr) 	Weekend Peak Check Phase S y 0.694 L (sec) 10 C (sec) 96 y pract. 0.806 R.C. (%) 16%
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Stage / Phase Diagrams			
			
I/G=6s		I/G=6s	

TRAFFIC SIGNALS CALCULATION	Job No: 24093HK	CTA Consultants Ltd.
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TRAFFIC SIGNALS CALCULATION Job No: 24093HK **CTA Consultants Ltd.**

TRAFFIC SIGNALS CALCULATION	Job No: 24093HK	CTA Consultants Ltd.
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Junction: **Ting Kok Road / Fung Yuen Road (G)**

Description:	2034 Reference Traffic Flows (Weekend)
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Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Neurside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	23%	1965	4070	1920	4025	725	0.378	0.378
	E		1	A	3.5	0.0	0	0	0%	2105	0	2105	0	795	0.378	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	1965	3840	1965	3835	786	0.400	
	W		2	A,B	3.5	0.0	15	0	2%	1875	0	1870	0	749	0.400	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s											
Fung Yuen Road	S		4	C	3.5	0.0	15	0	100%	2105	0	1915	0	90	0.047	
	S		4	C	3.5	13.0	18	1	18% / 82%	1965	4070	1805	3720	85	0.047	0.047
Pedestrian crossing			5	D Min. Crossing Time = 8Gm + 8FGm = 16s												
			6	D Min. Crossing Time = 11Gm + 10FGm = 21s												

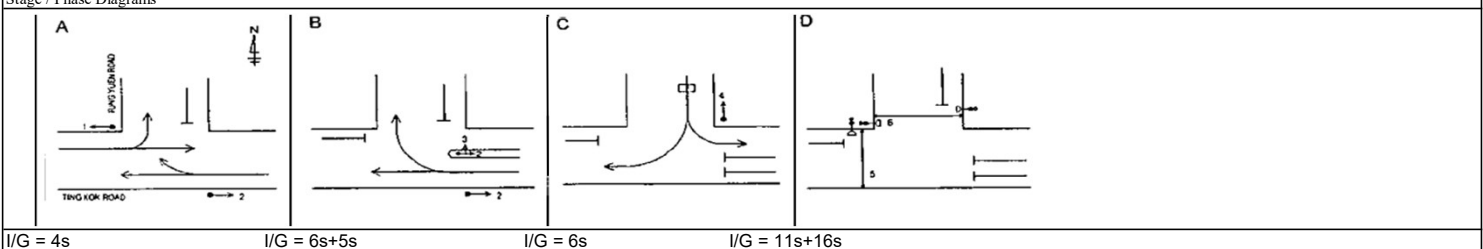
Notes:

Traffic Flow (pcu / hr)

170 1350 160 15 15 1520

Weekend Peak Check Phase	
Ey	0.425
L (sec)	42
C (sec)	96
y pract.	0.506
R.C. (%)	19%

Stage / Phase Diagrams		
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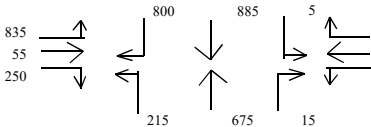
Junction: **Ting Kok Road / Yuen Shin Road / Dai Fuk Street (H)**

Description: **2034 Reference Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	S		1	A	3.6	12.5	0	1	1%	1975	4090	1970	4085	429	0.218	
	S		1	A	3.6	0.0	0	0	0%	2115	0	2115	0	461	0.218	
	S		1	A	3.6	0.0	25	0	100%	2115	4230	1995	4000	399	0.200	0.218
	S		1	A	3.6	0.0	27.5	0	100%	2115	0	2005	0	401	0.200	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	1965	4070	1785	3725	400	0.224	
	E		2	A,B	3.5	17.5	0	0	100%	2105	0	1940	0	435	0.224	
	E		3	B	3.5	0.0	0	0	0%	2105	2105	2105	2105	55	0.026	
	E		3	B	3.5	0.0	32.5	0	100%	2105	2105	2010	2010	250	0.124	0.124
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	1965	1965	1785	1785	215	0.120	
	N		5	C	3.5	0.0	0	0	0%	2105	6315	2105	6315	225	0.107	0.107
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	225	0.107	
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	225	0.107	
	N		5	C	3.5	0.0	25	0	100%	2105	2105	1985	1985	15	0.008	
Dai Fuk Street	W		6	D	3.7	0.0	22.5	0	5%	2120	0	2115	0	97	0.046	
	W		6	D	3.7	15.0	0	1	23%	1980	4100	1935	4050	88	0.046	
Pedestrian crossing			7	A,B,C	Min. Crossing Time = 9Gm + 7FGm = 16s											
			8	D	Min. Crossing Time = 5Gm + 10FGm = 15s											

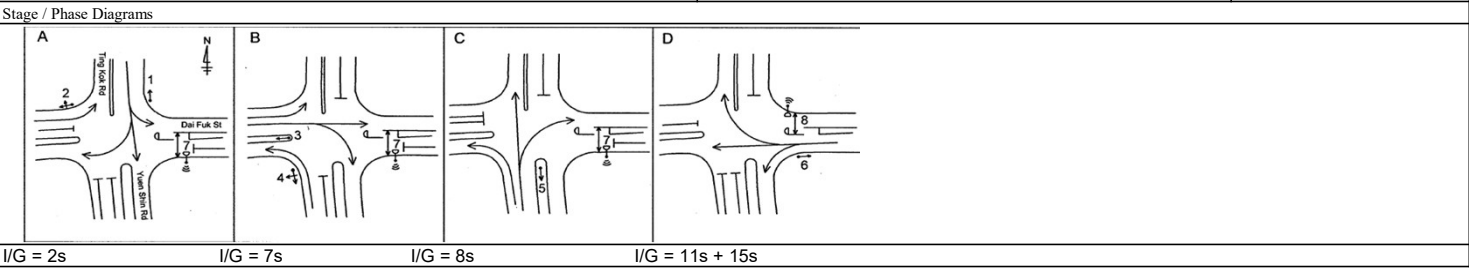
Notes:
(Nil)

Traffic Flow (pcu / hr)



Weekend Peak Check Phase

Ev	0.449
L (sec)	40
C (sec)	96
y pract.	0.525
R.C. (%)	17%



Junction: **Yuen Shin Road / Dai Fat Street (I)**

Description: **2034 Reference Traffic Flows (Weekend)**

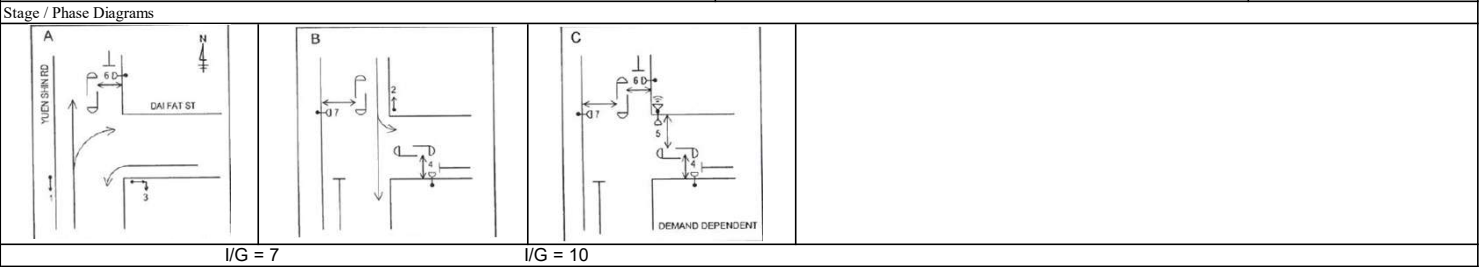
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right					Weekend		Weekend	Flow (pcu/hr)	y Value
Yuen Shin Road	S		2	B	3.3	15.0	0	1	7%	1945	4030	1930	4015	551	0.285	0.285
	S		2	B	3.3	0.0	0	0	0%	2085	0	2085	0	594	0.285	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	1965	6175	1965	6030	451	0.230	0.230
	N		1	A	3.5	0.0	22.5	0	0%	2105	0	2105	0	484	0.230	
	N		1	A	3.5	0.0	20	0	100%	2105	0	1960	0	305	0.156	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	1990	4120	1850	3845	190	0.103	
	W		3	A	3.8	22.5	0	0	100%	2130	0	1995	0	205	0.103	
Pedestrian crossing			4	B,C	Min. Crossing Time = 5Gm + 6FGm =11s											
			5	C	Min. Crossing Time = 5Gm + 8FGm =13s											
			6	A,C	Min. Crossing Time = 5Gm + 6FGm =11s											
			7	B,C	Min. Crossing Time = 5Gm + 7FGm =12s											

Notes:
(Nil)

Traffic Flow (pcu / hr)

Weekend Peak Check Phase

Ex	0.515
L (sec)	16
C (sec)	96
y pract.	0.750
R.C. (%)	46%



Junction: **Tai Po Tai Wo Road / Yuen Shin Road (J)**

Description: **2034 Reference Traffic Flows (Weekend)**

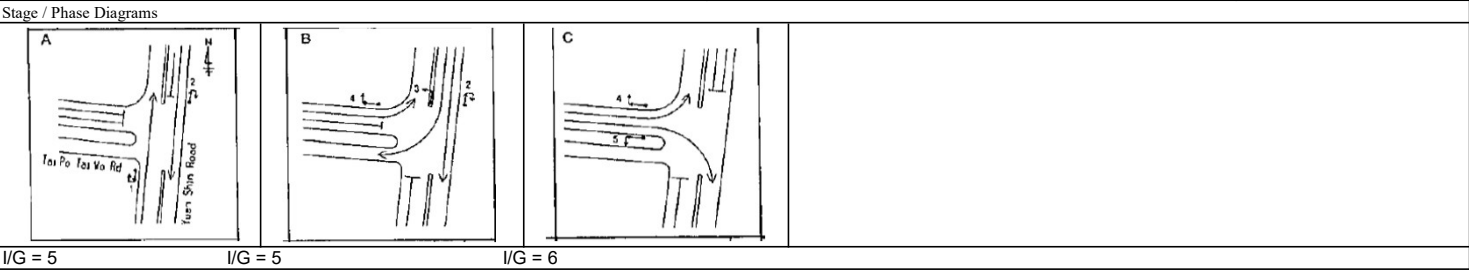
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	1945	4030	1945	4030	509	0.262	
	S	↓	2	A,B	3.3	0	0	0	0%	2085	0	2085	0	546	0.262	
	S	↙	3	B	3.6	0	15	0	100%	2115	2115	1925	1925	450	0.234	0.234
Tai Po Tai Wo Road	E	↗	4	B,C	3.3	15	0	1	100%	1945	1945	1770	1770	390	0.220	
	E	↘	5	C	3.3	0	23	0	100%	2085	4170	1955	3895	366	0.187	0.187
	E	↘	5	C	3.3	0	20	0	100%	2085	0	1940	0	364	0.187	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	1945	6115	1945	6115	270	0.139	0.139
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	290	0.139	
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	290	0.139	

Notes:
(Nil)

Traffic Flow (pcu / hr)

Weekend Peak Check Phase

ey	0.560
L (sec)	13
C (sec)	96
y pract.	0.778
R.C. (%)	39%



Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Weekday)		

Arm C Tung Tsz Road	
120	(100)
15	(35)

Arm A Tung Tsz Road	
200	(90)
0	0

30	0		AM	(PM)
(25)	(0)		(PM)	

Arm B Access Road

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	7.3	D 0.786
W-CR	0	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.748
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM
	pcu/hr			pcu/hr		
q-CA	120	100	Q-BA	429	449	
q-CB	15	35	Q-BC	577	602	
q-AB	0	0	Q-CB	553	577	
q-AC	200	90	Q-CA	1751	1691	
q-BA	0	0	Q-BAC	577	602	
q-BC	30	25				
f	1.000	1.000				

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.06
	C-A	0.07	0.06
	B-AC	0.05	0.04

Critical DFC	0.07	0.06
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Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Weekday)		

Arm C Ting Kok Road	
670	(370)
15	(5)

Arm A Ting Kok Road	
330	(440)
160	(165)

Arm B Tung Tsz Road	
25	275
(15)	(140)

AM	PM
(PM)	

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM
	pcu/hr			pcu/hr		
	q-CA	670	370	Q-BA	377	393
	q-CB	15	5	Q-BC	548	527
	q-AB	160	165	Q-CB	508	487
	q-AC	330	440	Q-CA	N/A	N/A
	q-BA	275	140	Q-BAC	387	403
	q-BC	25	15			
	f	0.083	0.097			

(If C-B blocked C- (If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.01
	C-A	N/A	N/A
	B-AC	0.77	0.38

Critical DFC	0.77	0.38
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TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**
Description: **2034 Design Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)		Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
					Left	Right				A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%		1965	1965	1965	1965	1965	1965	455	0.232		595	0.303	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	100%		2072.3	2072.3	1945	1945	1945	1945	210	0.108		290	0.149	
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%		2123.7	0	2125	2125	0	0	505	0.238	0.238	280	0.132	0.132
Ting Kok Road	W	↙	C	1	3.7	15	0	1	4%	6%		1983.7	4107.4	1975	1970	4100	4095	470	0.238		260	0.132	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	100%		2065	2065	1985	1985	1985	1985	365	0.184	0.184	265	0.134	0.134
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	100%		1965	1965	1800	1800	1800	1800	30	0.017		10	0.006	

Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.422	εy	0.265
			L (sec)	8	L (sec)	8
			C (sec)	88	C (sec)	88
			y pract.	0.818	y pract.	0.818
			R.C. (%)	94%	R.C. (%)	208%

455(595)
210(290)

→
↘

←
↙

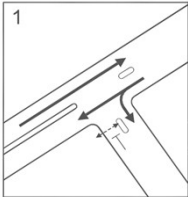
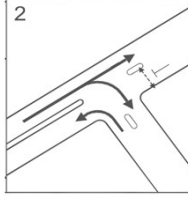
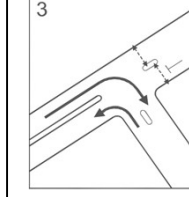
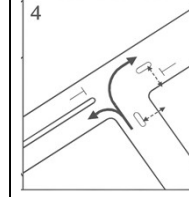
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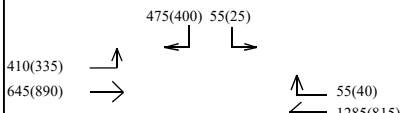
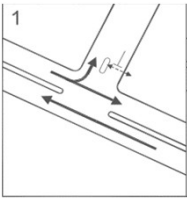
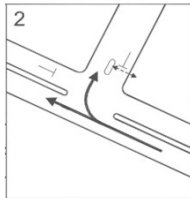
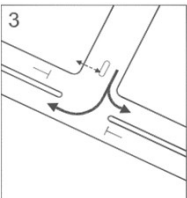
365(265)
30(10)

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↘

955(525)
20(15)

Stage / Phase Diagrams

					
L/G = 5s	L/G = 0s	L/G = 0s	L/G = 5s		

TRAFFIC SIGNALS CALCULATION												Job No: 24093HK										CTA Consultants Ltd.									
Junction: Ting Kok Road / Lo Fai Road (D)																															
Description: 2034 Design Traffic Flows (Weekday)																															
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.											
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y									
Ting Kok Road	E		A	1	4.0	15	0	1	83%	57%	2018	4113	1865	1910	3960	4005	497	0.266	0.266	584	0.306	0.306									
Ting Kok Road	E		A	1	3.4	0	0	0	0%	0%	2095	0	2095	2095	0	0	558	0.266		641	0.306										
Ting Kok Road	W		B	1	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4005	523	0.266		601	0.306										
Ting Kok Road	W		C	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4005	397	0.202		125	0.063										
Ting Kok Road	W		C	2	3.5	0	15	0	13%	31%	2105	0	2080	2040	0	0	420	0.202	0.202	130	0.064	0.064									
Lo Fai Road	S		D	3	3.5	15	25	0	1% / 79%	88	2105	4210	1970	1975	3930	3935	266	0.135	0.135	213	0.108	0.108									
Lo Fai Road	S		D	3	3.5	0	20	0	100%	100%	2105	0	1960	1960	0	0	264	0.135		212	0.108										
Notes:												Traffic Flow (pcu / hr) AM(PM) 										A.M. Check Phase εy 0.603 L (sec) 14 C (sec) 120 y pract. 0.795 R.C. (%) 32%					P.M. Check Phase εy 0.478 L (sec) 14 C (sec) 96 y pract. 0.769 R.C. (%) 61%				
Stage / Phase Diagrams																															
																															
I/G =5s						I/G =6s						I/G =6s																			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Design Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)			Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
								Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	0	0	858	0.436	0.436	591	0.301	0.301		
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3995	4060	102	0.052		307	0.156			
Ting Kok Road	E	↘	B	2	3.5	0	30	0	76%	11%	2105	0	2030	2095	0	0	105	0.052	0.052	327	0.156	0.156		
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%	2125	0	2125	2125	0	0	926	0.436		639	0.301			
Ting Kok Road	W	↙	C	1	3.7	20	0	1	51%	37%	1985	4110	1910	1930	4035	4055	834	0.436		581	0.301			
Dai Kwai Street	N	↕	D	3	3.5	25	30	0	0% / 100%	0% / 100%	2105	0	2005	2005	0	0	130	0.065	0.065	100	0.050	0.050		
Dai Kwai Street	N	↗	D	3	3.5	20	0	1	100%	100%	1965	4070	1830	1830	3835	3835	55	0.030		70	0.038			

Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.553	εy	0.507
			L (sec)	30	L (sec)	30
			C (sec)	120	C (sec)	96
			y pract.	0.675	y pract.	0.619
			R.C. (%)	22%	R.C. (%)	22%

985(1190) →

80(35) ↘

← 1335(1005)

↙ 425(215)

↖ 55(70)

↗ 130(100)

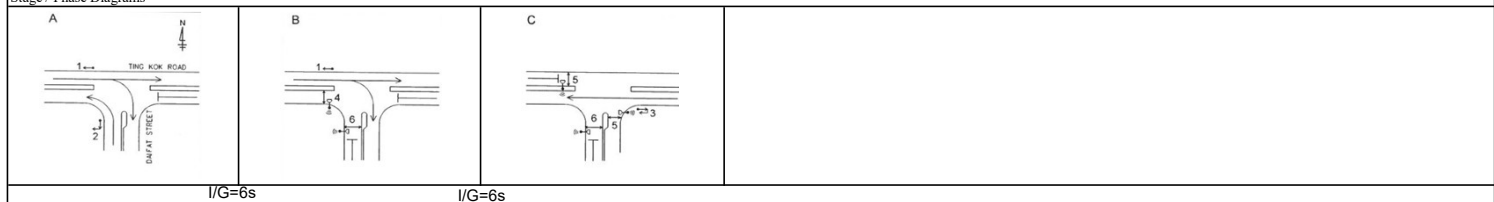
Stage / Phase Diagrams					
1	2	3	4		
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s		

Description: **2034 Design Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	0%	1955	4050	1603	3321	1603	3321	726	0.371	0.371	709	0.363	0.363
	E	↻	1	A,B	3.4	0.0	10	0	45%	22%	2095	0	1718	0	1718		729	0.371		736	0.363	
Dai Fat Street	N	↵	2	A	3.7	10.0	0	1	100%	100%	1980	4100	1624	3362	1624	3362	71	0.041		74	0.043	
	N	↵	2	A	3.7	12.5	0	0	100%	100%	2120	0	1738	0	1738	0	79	0.041		81	0.043	
Ting Kok Road	W	←	3	C	3.7	0.0	0	1	0%	0%	1980	4100	1624	3362	1624	3362	669	0.338	0.338	519	0.262	0.262
	W	←	3	C	3.7	0.0	0	0	0%	0%	2120	0	1738	0	1738	0	716	0.338		556	0.262	
Pedestrian crossing		↕	4	B	Min. Crossing Time = 5Gm + 7FGm =12s																	
		↕	5	C	Min. Crossing Time = 6Gm + 7FGm =13s																	
		↔	6	B,C	Min. Crossing Time = 10Gm + 7FGm =17s																	

Notes: (Nil)	Traffic Flow (pcu / hr)		AM(PM) Peak		AM Peak Check Phase		PM Peak Check Phase	
	1130(1285)	→	← 1385(1075)	↙	Ey	0.709	Ey	0.625
	325(160)	↓			L (sec)	10	L (sec)	10
					C (sec)	104	C (sec)	96
					y pract.	0.813	y pract.	0.806
		150(155)		R.C. (%)	15%	R.C. (%)	29%	

Stage / Phase Diagrams

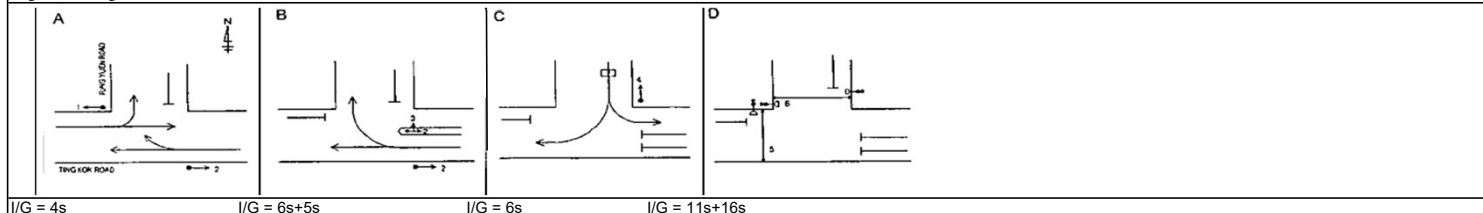


Junction: Ting Kok Road / Fung Yuen Road (G)
Description: 2034 Design Traffic Flows (Weekday)

[illegible]

Notes:		Traffic Flow (pcu / hr) AM(PM) Peak	AM Peak Check Phase	PM Peak Check Phase
		195(140) 25(25) 135(190) 25(15) 1425(1420) 1510(1215)	Ey 0.446 L (sec) 42 C (sec) 104 y pract. 0.537 R.C. (%) 20%	Ey 0.445 L (sec) 42 C (sec) 96 y pract. 0.506 R.C. (%) 14%

Stage / Phase Diagrams				
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TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

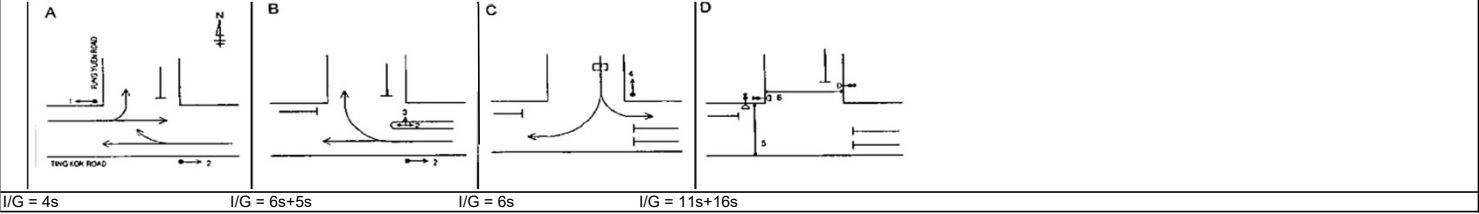
CTA Consultants Ltd.

Junction: **Ting Kok Road / Fung Yuen Road (G)**
Description: **2034 Design Traffic Flows (Weekday) (With Proposed Junction Improvement PM Cycle Time +2s)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	18%	25%	1965	4070	1930	1920	4035	4025	746	0.387	0.387	767	0.400	0.400
	E		1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	814	0.387		843	0.400	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	0%	1965	3840	1965	1965	3835	3835	787	0.400		630	0.321	
	W		2	A,B	3.5	0.0	15	0	3%	3%	1875	0	1870	1870	0	0	748	0.400		600	0.321	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s																	
Fung Yuen Road	S		4	C	3.5	0.0	15	0	100%	100%	2105	0	1915	1915	0	0	113	0.059		85	0.044	
	S		4	C	3.5	13.0	18	1	23% / 77%	31% / 69%	1965	4070	1800	1795	3715	3710	107	0.059	0.059	80	0.045	0.045
Pedestrian crossing			5	D	Min. Crossing Time = 8Gm + 8FGm = 16s																	
			6	D	Min. Crossing Time = 11Gm + 10FGm = 21s																	

Notes:	Traffic Flow (pcu / hr)	AM(PM) Peak	AM Peak Check Phase		PM Peak Check Phase	
			εy	0.446	εy	0.445
			L (sec)	42	L (sec)	42
			C (sec)	104	C (sec)	98
			y pract.	0.537	y pract.	0.514
			R.C. (%)	20%	R.C. (%)	16%

Stage / Phase Diagrams



Description: **2034 Design Traffic Flows (Weekday)**

Stage / Phase Diagrams

Diagram A: $I/G = 2s$

Diagram B: $I/G = 7s$

Diagram C: $I/G = 8s$

Diagram D: $I/G = 11s + 15s$

$l/G = 2s$	$l/G = 7s$	$l/G = 8s$	$l/G = 11s + 15s$
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Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Neaside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y

Notes:	Traffic Flow (pcu / hr)	AM(PM) Peak	AM Peak Check Phase	PM Peak Check Phase
(Nil)		1205(950) ↓ 850(960) 50(50) → 985(385) 700(710) ↘	ay L (sec) C (sec) y pract. R.C. (%) 0.621 16 104 0.762 23%	ay L (sec) C (sec) y pract. R.C. (%) 0.485 16 96 0.750 55%

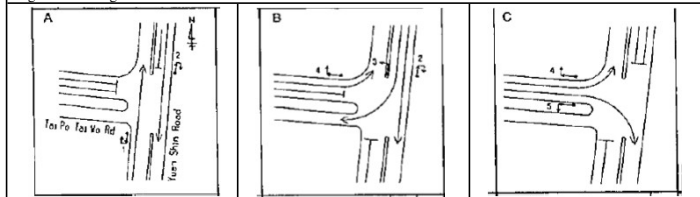
Description: **2034 Design Traffic Flows (Weekday)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Neuside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	0%	1945	4030	1945	1945	4030	4030	673	0.346		555	0.285	
	S	↓	2	A,B	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	722	0.346		595	0.285	
	S	↙	3	B	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	505	0.266	0.266	505	0.266	0.266
Tai Po Tai Wo Road	E	↗	4	B,C	3.6	15	0	1	100%	100%	1975	1975	1795	1795	1795	1795	610	0.340		465	0.259	
	E	↓	5	C	3.3	0	23	0	100%	100%	2085	4170	1955	1955	3895	3895	439	0.225	0.225	334	0.171	0.171
	E	↘	5	C	3.3	0	20	0	100%	100%	2085	0	1940	1940	0	0	436	0.225		331	0.171	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	0%	1945	6115	1945	1945	6115	6115	388	0.200	0.200	280	0.144	0.144
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	416	0.200		300	0.144	
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	416	0.200		300	0.144	

(Nil)

Traffic Flow (pcu / hr)	AM(PM) Peak
610(465)  	505(505)  
875(665) 	1395(1150) 
	625(830)
	1220(880)  

AM Peak Check Phase		PM Peak Check Phase	
ey	0.691	ey	0.581
L (sec)	13	L (sec)	13
C (sec)	104	C (sec)	96
y pract.	0.788	y pract.	0.778
R.C. (%)	14%	R.C. (%)	34%


$$1/G = 6$$

Description: **2034 Design Traffic Flows (Weekday) (With Proposed Junction Improvement AM Cycle Time +4s)**

Notes: (Nil)		AM(PM) Peak		AM Peak Check Phase		PM Peak Check Phase	
		505(505) 1395(1150)		ey	0.691	ey	0.581
				L (sec)	13	L (sec)	13
				C (sec)	108	C (sec)	96
				y pract.	0.792	y pract.	0.778
				R.C. (%)	15%	R.C. (%)	34%

$$I/G = 5 \qquad I/G = 5 \qquad I/G = 6$$

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

$Y = 1 - 0.0345W$
 $q-AB$, etc = the design flow of movement AB, etc
 W = major road width
 $W-CR$ = central reserve width
 $w-BA$, etc = lane width to vehicle
 $v-rBA$, etc = visibility to the right for waiting vehicles in stream BA, etc
 $v-IBA$ = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Calculated					
W	7.3	V-rBA	50	w-BA	2.5	D	0.786
W-CR	0	V-IBA	50	w-BC	2.5	E	0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	50	w-CB	2.1	F	0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.748

Analysis :	Traffic Flow	Weekend	Capacity	Weekend	
	pcu/hr		pcu/hr		
	q-CA	95	Q-BA	448	
	q-CB	30	Q-BC	599	
	q-AB	0	Q-CB	573	
	q-AC	105	Q-CA	1706	
	q-BA	5	Q-BAC	571	(If C-B blocked C-A)
	q-BC	30			(If Minor Road Share LT&RT)
	f	0.857			

Results :	Ratio of Flow-to-Capacity	Weekend	
		B-A	N/A
		B-C	N/A
		C-B	0.05
		C-A	0.06
		B-AC	0.06

Critical DFC	0.06
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CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Weekend)		

The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

$Y = 1 - 0.0345W$
 $q-AB$, etc = the design flow of movement AB, etc
 W = major road width
 $W-CR$ = central reserve width
 $w-BA$, etc = lane width to vehicle
 $v-rBA$, etc = visibility to the right for waiting vehicles in stream BA, etc
 $v-IBA$ = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Calculated
W	11	D 0.786
W-CR	3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow pcu/hr	Weekend	Capacity pcu/hr	Weekend
	q-CA	565	Q-BA	361
	q-CB	20	Q-BC	520
	q-AB	170	Q-CB	480
	q-AC	475	Q-CA	N/A
	q-BA	160	Q-BAC	371
	q-BC	15		
	f	0.086		

(If C-B blocked C-
(If Minor Road Share LT&RT))

Results :	Ratio of Flow-to-Capacity	Weekend
	B-A	N/A
	B-C	N/A
	C-B	0.04
	C-A	N/A
	B-AC	0.47

Critical DFC	0.47
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Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	1965	1965	1965	680	0.346	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	2072.3	2072.3	1945	1945	220	0.113	0.113
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2123.7	0	2125	0	412	0.194	0.194
Ting Kok Road	W	↙	C	1	3.7	15	0	1	5%	1983.7	4107.4	1975	4100	383	0.194	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	2065	2065	1985	1985	220	0.111	
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	1965	1965	1800	1800	25	0.014	

Notes:

Traffic Flow (pcu / hr)

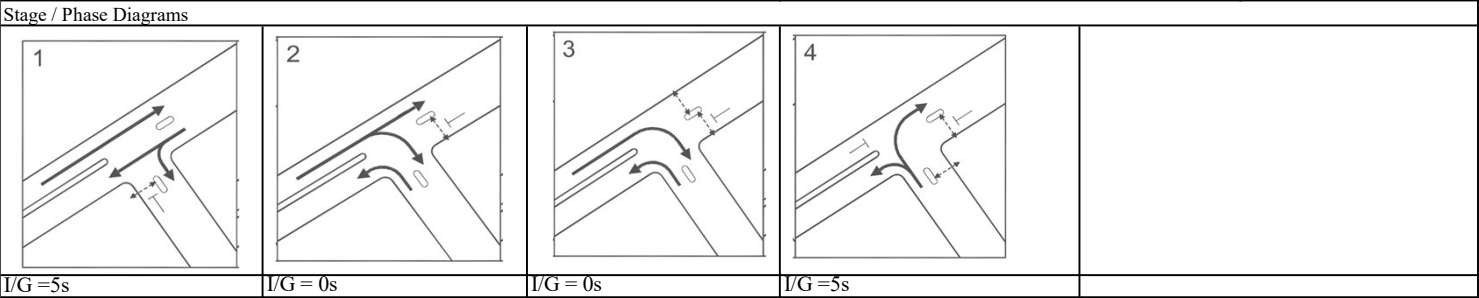
680 →
220 ↘

↙ 220 ↘ 25

← 775
↓ 20

Weekend Check Phase

εy 0.307
L (sec) 8
C (sec) 88
y pract. 0.818
R.C. (%) 166%



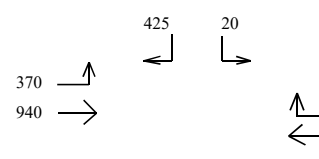
Junction: **Ting Kok Road / Lo Fai Road (D)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	4.0	15	0	1	59%	2018	4113	1905	4000	624	0.328	0.328
Ting Kok Road	E		A	1	3.4	0	0	0	0%	2095	0	2095	0	686	0.327	
Ting Kok Road	W		B	1	3.5	0	0	1	0%	1965	4070	1965	4040	644	0.328	
Ting Kok Road	W		C	2	3.5	0	0	1	0%	1965	4070	1965	4040	307	0.156	
Ting Kok Road	W		C	2	3.5	0	15	0	15%	2105	0	2075	0	324	0.156	0.156
Lo Fai Road	S		D	3	3.5	15	25	0	9% / 91%	2105	4210	1980	3940	224	0.113	0.113
Lo Fai Road	S		D	3	3.5	0	20	0	100%	2105	0	1960	0	221	0.113	

Notes:

Traffic Flow (pcu / hr)



Weekend Check Phase

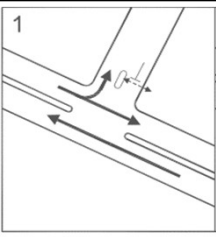
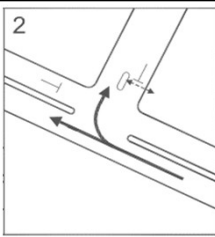
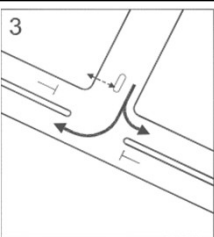
ϵ_y 0.597

L (sec) 14

C (sec) 96

y pract. 0.769

R.C. (%) 29%

Stage / Phase Diagrams					
1 	2 	3 			
L/G =5s	L/G =6s	L/G =6s			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	4070	1965	0	797	0.406	0.406
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	1965	4070	1965	0	209	0.107	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	9%	2105	0	2095	0	223	0.107	0.107
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2125	0	2125	0	862	0.406	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	20%	1985	4110	1955	0	793	0.406	
Dai Kwai Street	N	↕	D	3	3.5	25	30	0	0% / 100%	2105	0	2005	0	100	0.050	0.050
Dai Kwai Street	N	↕	D	3	3.5	20	0	1	100%	1965	4070	1830	0	40	0.022	

Notes:

Traffic Flow (pcu / hr)

1210 →
20 ↘

← 1500
↙ 155

↖ 40 ↗ 100

Weekend Check Phase

εy 0.562
L (sec) 30
C (sec) 100
y pract. 0.630
R.C. (%) 12%

Stage / Phase Diagrams						
1	2	3	4			
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s			

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Design Traffic Flows (Weekend) (With Proposed Junction Improvement Cycle Time +6s)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	1965	4070	1965	0	797	0.406	0.406
Ting Kok Road	E	→	B	2	3.5	0	0	1	0%	1965	4070	1965	0	209	0.107	
Ting Kok Road	E	↘	B	2	3.5	0	30	0	9%	2105	0	2095	0	223	0.107	0.107
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	2125	0	2125	0	862	0.406	
Ting Kok Road	W	↙	C	1	3.7	20	0	1	20%	1985	4110	1955	0	793	0.406	
Dai Kwai Street	N	↕	D	3	3.5	25	30	0	0% / 100%	2105	0	2005	0	100	0.050	0.050
Dai Kwai Street	N	↕	D	3	3.5	20	0	1	100%	1965	4070	1830	0	40	0.022	

Notes:

Traffic Flow (pcu / hr)

1210 →
20 ↘

← 1500
↙ 155

↖ 40 ↗ 100

Weekend Check Phase
εy 0.562
L (sec) 30
C (sec) 106
y pract. 0.645
R.C. (%) 15%

Stage / Phase Diagrams						
1	2	3	4			
I/G = 6s	I/G = 6s	I/G = 12s	(Demand Dependant) I/G = 14s + 4s			

TRAFFIC SIGNALS CALCULATION										Job No: 24093HK		CTA Consultants Ltd.				
Junction: Ting Kok Road / Dai Fat Street (F)																
Description: 2034 Design Traffic Flows (Weekend)																
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Weekend	Flow (pcu/hr)	y Value
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	1955	4050	3321	3321	672	0.344	0.344
	E	↘	1	A,B	3.4	0.0	10	0	17%	2095	0	0	0	703	0.344	
Dai Fat Street	N	↙	2	A	3.7	10.0	0	1	100%	1980	4100	3362	3362	43	0.025	
	N	↙	2	A	3.7	12.5	0	0	100%	2120	0	0	0	47	0.025	
Ting Kok Road	W	←	3	C	3.7	0.0	0	1	0%	1980	4100	3362	3362	703	0.355	0.355
	W	←	3	C	3.7	0.0	0	0	0%	2120	0	0	0	752	0.355	
Pedestrian crossing		↕	4	B		Min. Crossing Time = 5Gm + 7FGm =12s										
		↕	5	C		Min. Crossing Time = 6Gm + 7FGm =13s										
		↔	6	B,C		Min. Crossing Time = 10Gm + 7FGm =17s										
Notes: (Nil)										Traffic Flow (pcu / hr)					Weekend Peak Check Phase	
										1255 → 120 ↘ ↙ 90					← 1455 Ey 0.699 L (sec) 10 C (sec) 96 y pract. 0.806 R.C. (%) 15%	
Stage / Phase Diagrams																
A					B					C						
I/G=6s					I/G=6s											

Junction: **Ting Kok Road / Fung Yuen Road (G)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	23%	1965	4070	1920	4025	730	0.380	0.380
	E		1	A	3.5	0.0	0	0	0%	2105	0	2105	0	800	0.380	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	1965	3840	1965	3835	791	0.403	
	W		2	A,B	3.5	0.0	15	0	2%	1875	0	1870	0	754	0.403	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s											
Fung Yuen Road	S		4	C	3.5	0.0	15	0	100%	2105	0	1915	0	90	0.047	
	S		4	C	3.5	13.0	18	1	18% / 82%	1965	4070	1805	3720	85	0.047	0.047
Pedestrian crossing			5	D Min. Crossing Time = 8Gm + 8FGm = 16s												
			6	D Min. Crossing Time = 11Gm + 10FGm = 21s												

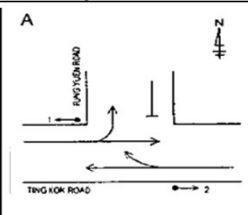
Notes:

Traffic Flow (pcu / hr)

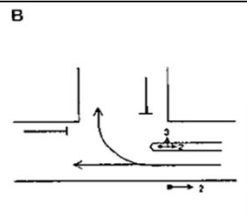
Weekend Peak Check Phase

Ey	0.427
L (sec)	42
C (sec)	96
y pract.	0.506
R.C. (%)	19%

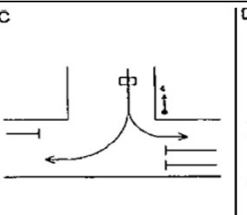
Stage / Phase Diagrams



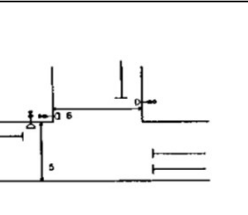
I/G = 4s



I/G = 6s+5s



I/G = 6s



I/G = 11s+16s

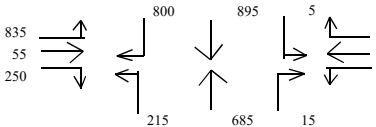
Junction: **Ting Kok Road / Yuen Shin Road / Dai Fuk Street (H)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	S		1	A	3.6	12.5	0	1	1%	1975	4090	1970	4085	434	0.220	
	S		1	A	3.6	0.0	0	0	0%	2115	0	2115	0	466	0.220	
	S		1	A	3.6	0.0	25	0	100%	2115	4230	1995	4000	399	0.200	0.220
	S		1	A	3.6	0.0	27.5	0	100%	2115	0	2005	0	401	0.200	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	1965	4070	1785	3725	400	0.224	
	E		2	A,B	3.5	17.5	0	0	100%	2105	0	1940	0	435	0.224	
	E		3	B	3.5	0.0	0	0	0%	2105	2105	2105	2105	55	0.026	
	E		3	B	3.5	0.0	32.5	0	100%	2105	2105	2010	2010	250	0.124	0.124
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	1965	1965	1785	1785	215	0.120	
	N		5	C	3.5	0.0	0	0	0%	2105	6315	2105	6315	228	0.108	0.108
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	228	0.108	
	N		5	C	3.5	0.0	0	0	0%	2105	0	2105	0	228	0.108	
	N		5	C	3.5	0.0	25	0	100%	2105	2105	1985	1985	15	0.008	
Dai Fuk Street	W		6	D	3.7	0.0	22.5	0	5%	2120	0	2115	0	97	0.046	
	W		6	D	3.7	15.0	0	1	23%	1980	4100	1935	4050	88	0.046	
Pedestrian crossing			7	A,B,C	Min. Crossing Time = 9Gm + 7FGm =16s											
			8	D	Min. Crossing Time = 5Gm + 10FGm =15s											

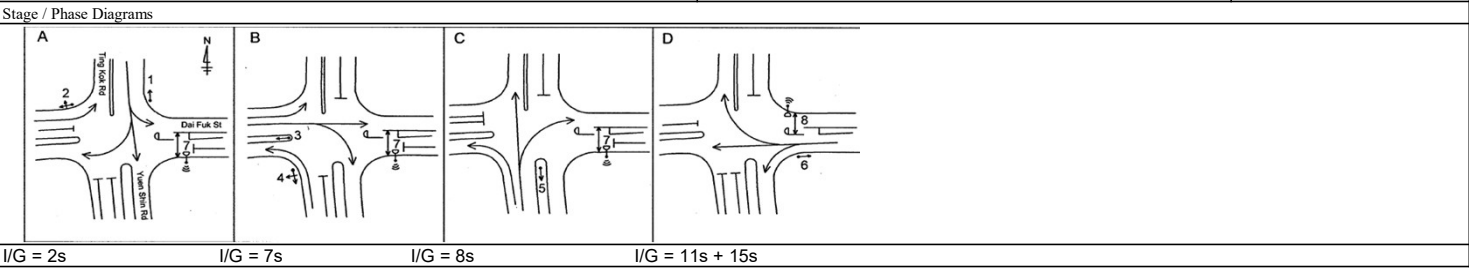
Notes:
(Nil)

Traffic Flow (pcu / hr)



Weekend Peak Check Phase

Ev	0.453
L (sec)	40
C (sec)	96
y pract.	0.525
R.C. (%)	16%



Junction: **Yuen Shin Road / Dai Fat Street (I)**

Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right					Weekend		Weekend	Weekend	Flow (pcu/hr)
Yuen Shin Road	S		2	B	3.3	15.0	0	1	7%	1945	4030	1930	4015	555	0.288	0.288
	S		2	B	3.3	0.0	0	0	0%	2085	0	2085	0	600	0.288	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	1965	6175	1965	6030	456	0.232	0.232
	N		1	A	3.5	0.0	22.5	0	0%	2105	0	2105	0	489	0.232	
	N		1	A	3.5	0.0	20	0	100%	2105	0	1960	0	305	0.156	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	1990	4120	1850	3845	190	0.103	
	W		3	A	3.8	22.5	0	0	100%	2130	0	1995	0	205	0.103	
Pedestrian crossing			4	B,C	Min. Crossing Time = 5Gm + 6FGm =11s											
			5	C	Min. Crossing Time = 5Gm + 8FGm =13s											
			6	A,C	Min. Crossing Time = 5Gm + 6FGm =11s											
			7	B,C	Min. Crossing Time = 5Gm + 7FGm =12s											

Notes:
(Nil)

Traffic Flow (pcu / hr)

Weekend Peak Check Phase

Σy

L (sec)

C (sec)

y pract.

R.C. (%)

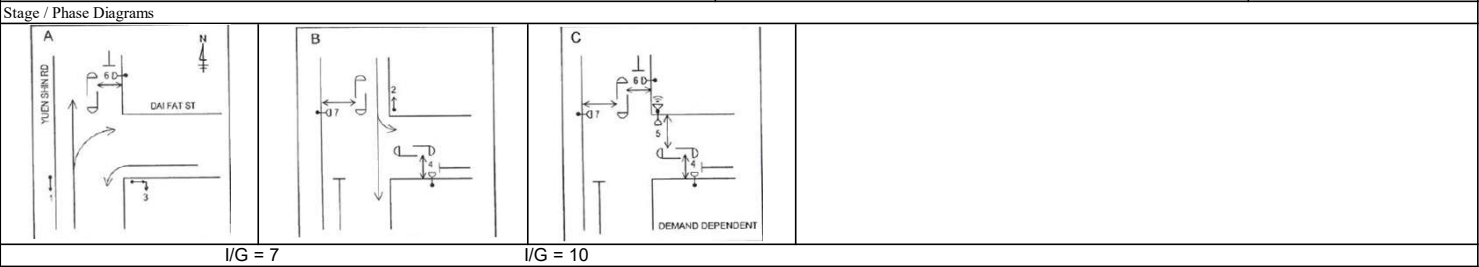
0.520

16

96

0.750

44%



Junction: **Tai Po Tai Wo Road / Yuen Shin Road (J)**

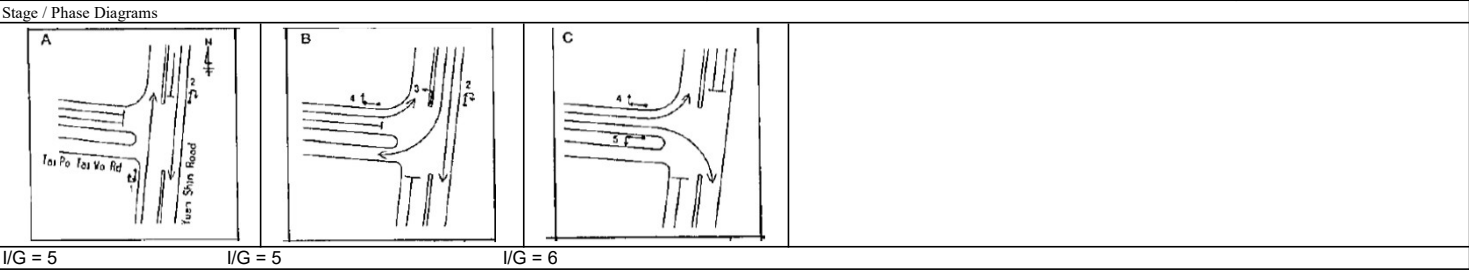
Description: **2034 Design Traffic Flows (Weekend)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)	Total Revised Saturation Flow (pcu/hr)	Weekend		
						Left	Right		Weekend			Weekend	Weekend	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	1945	4030	1945	4030	512	0.263	
	S	↓	2	A,B	3.3	0	0	0	0%	2085	0	2085	0	548	0.263	
	S	↙	3	B	3.6	0	15	0	100%	2115	2115	1925	1925	455	0.236	0.236
Tai Po Tai Wo Road	E	↗	4	B,C	3.3	15	0	1	100%	1945	1945	1770	1770	395	0.223	
	E	↘	5	C	3.3	0	23	0	100%	2085	4170	1955	3895	366	0.187	0.187
	E	↘	5	C	3.3	0	20	0	100%	2085	0	1940	0	364	0.187	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	1945	6115	1945	6115	272	0.140	0.140
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	292	0.140	
	N	↑	1	A	3.3	0	0	0	0%	2085	0	2085	0	292	0.140	

Notes:
(Nil)

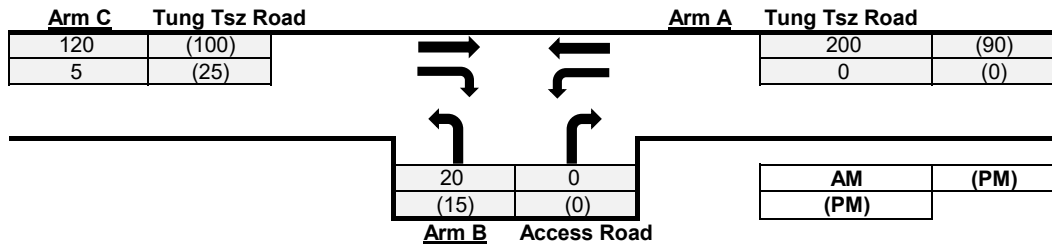
Traffic Flow (pcu / hr)

Weekend Peak Check Phase
ey 0.564
L (sec) 13
C (sec) 96
y pract. 0.778
R.C. (%) 38%



Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Sensitivity Test Y/TP/40)		



The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

$$Y = 1 - 0.0345W$$

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :				Input		Calculated			
	W	7.3	V-rBA	50	w-BA	2.5	D	0.786	
	W-CR	0	V-IBA	50	w-BC	2.5	E	0.836	
C-B blocked C-A, residual width			V-rBC	50	w-CB	2.1	F	0.800	
<2.5m? (Yes: 1, No: 0)	1		V-rCB	50			Y	0.748	
Minor Road Share LT&RT?	1								
(Yes: 1, No: 0)									

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM	
	pcu/hr			pcu/hr			
	q-CA	120	100	Q-BA	432	452	
	q-CB	5	25	Q-BC	577	602	
	q-AB	0	0	Q-CB	553	577	
	q-AC	200	90	Q-CA	1784	1722	
	q-BA	0	0	Q-BAC	577	602	(If C-B blocked C-A) (If Minor Road Share LT&RT)
	q-BC	20	15				
	f	1.000	1.000				

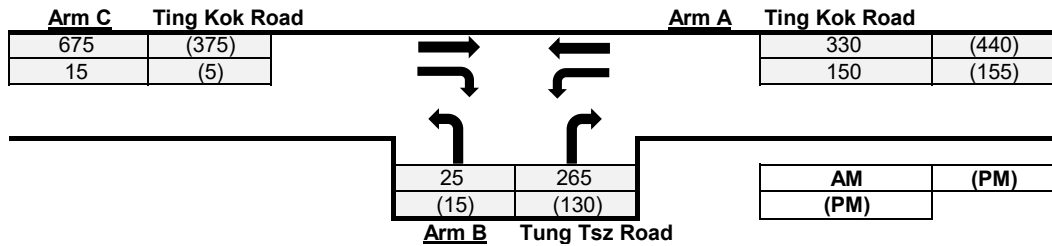
Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.01	0.04
	C-A	0.07	0.06
	B-AC	0.03	0.02

Critical DFC	0.07	0.06
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CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Reference Traffic Flows (Sensitivity Test Y/TP/40)		



The predictive equations of capacity of movement are:

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

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

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

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

$$D = (1 + 0.094(w-BA - 3.65))(1 + 0.0009(V-rBA - 120))(1 + 0.0006(V-IBA - 150))$$

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

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

where

$$Y = 1 - 0.0345W$$

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :				Input				Calculated	
	W	11	V-rBA	50	w-BA	2.5	D	0.786	
	W-CR	3	V-IBA	50	w-BC	2.5	E	0.836	
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)		0	V-rBC	50	w-CB	2.1	F	0.800	
Minor Road Share LT&RT? (Yes: 1, No: 0)		1	V-rCB	50			Y	0.621	

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM	
	pcu/hr			pcu/hr			
	q-CA	675	375	Q-BA	377	393	
	q-CB	15	5	Q-BC	549	528	
	q-AB	150	155	Q-CB	510	489	
	q-AC	330	440	Q-CA	N/A	N/A	(If C-B blocked C-A)
	q-BA	265	130	Q-BAC	388	404	(If Minor Road Share LT&RT)
	q-BC	25	15				
	f	0.086	0.103				

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.01
	C-A	N/A	N/A
	B-AC	0.75	0.36
	Critical DFC	0.75	0.36

CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**
Description: **2034 Reference Traffic Flows (Sensitivity Test Y/TP/40)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%	1965	1965	1965	1965	1965	1965	450	0.229		585	0.298	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	100%	2072.3	2072.3	1945	1945	1945	1945	210	0.108		290	0.149	
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%	2123.7	0	2125	2125	0	0	505	0.238	0.238	280	0.132	0.132
Ting Kok Road	W	↙	C	1	3.7	15	0	1	4%	6%	1983.7	4107.4	1975	1970	4100	4095	470	0.238		260	0.132	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	100%	2065	2065	1985	1985	1985	1985	365	0.184	0.184	265	0.134	0.134
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	100%	1965	1965	1800	1800	1800	1800	30	0.017		10	0.006	

Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.422	εy	0.265
			L (sec)	8	L (sec)	8
			C (sec)	88	C (sec)	88
			y pract.	0.818	y pract.	0.818
			R.C. (%)	94%	R.C. (%)	208%

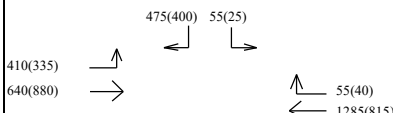
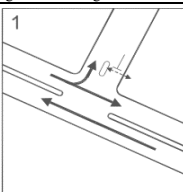
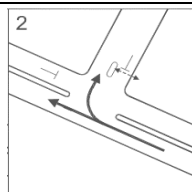
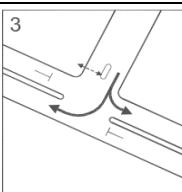
450(585)
210(290)

→
↘

← 955(525)
↘ 20(15)

↙ 365(265)
↘ 30(10)

Stage / Phase Diagrams					
1	2	3	4		
I/G = 5s	I/G = 0s	I/G = 0s	I/G = 5s		

TRAFFIC SIGNALS CALCULATION												Job No: 24093HK				CTA Consultants Ltd.								
Junction: Ting Kok Road / Lo Fai Road (D)																								
Description: 2034 Reference Traffic Flows (Sensitivity Test Y/TP/40)																								
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.				
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y		
Ting Kok Road	E		A	1	4.0	15	0	1	83%	58%	2018	4113	1865	1910	3960	4005	494	0.265	0.265	579	0.303	0.304		
Ting Kok Road	E		A	1	3.4	0	0	0	0%	0%	2095	0	2095	2095	0	0	556	0.265		636	0.304			
Ting Kok Road	W		B	1	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	521	0.265		596	0.303			
Ting Kok Road	W		C	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	398	0.203		127	0.065			
Ting Kok Road	W		C	2	3.5	0	15	0	13%	30%	2105	0	2080	2045	0	0	421	0.202	0.203	132	0.065	0.065		
Lo Fai Road	S		D	3	3.5	15	25	0	1% / 79	2% / 88'	2105	4210	1970	1975	3930	3935	266	0.135	0.135	213	0.108	0.108		
Lo Fai Road	S		D	3	3.5	0	20	0	100%	100%	2105	0	1960	1960	0	0	264	0.135		212	0.108			
Notes:												Traffic Flow (pcu / hr)					AM(PM)				A.M. Check Phase		P.M. Check Phase	
																	εy 0.603				εy 0.476			
																	L (sec) 14				L (sec) 14			
																C (sec) 120				C (sec) 96				
																y pract. 0.795				y pract. 0.769				
																R.C. (%) 32%				R.C. (%) 61%				
Stage / Phase Diagrams																								
																								
I/G =5s			I/G =6s			I/G =6s																		

Junction: **Ting Kok Road / Dai Kwai Street (E)**

Description: **2034 Reference Traffic Flows (Sensitivity Test Y/TP/40)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1,2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	0	0	855	0.435	0.435	589	0.300	0.300
Ting Kok Road	E		B	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3990	4060	101	0.051	0.435	303	0.154	
Ting Kok Road	E		B	2	3.5	0	30	0	77%	11%	2105	0	2025	2095	0	0	104	0.051	0.051	323	0.154	0.154
Ting Kok Road	W		C	1	3.7	0	0	0	0%	0%	2125	0	2125	2125	0	0	924	0.435		637	0.300	
Ting Kok Road	W		C	1	3.7	20	0	1	51%	37%	1985	4110	1910	1930	4035	4055	831	0.435		578	0.300	
Dai Kwai Street	N		D	3	3.5	25	30	0	0% / 100%	0% / 100%	2105	0	2005	2005	0	0	130	0.065	0.065	100	0.050	0.050
Dai Kwai Street	N		D	3	3.5	20	0	1	100%	100%	1965	4070	1830	1830	3835	3835	55	0.030		70	0.038	

Notes:

Traffic Flow (pcu / hr)

AM(PM)

A.M. Check Phase

P.M. Check Phase

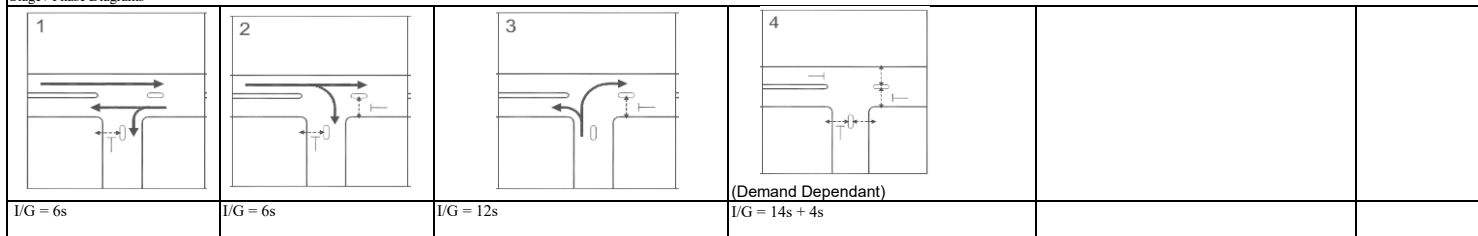
Ey	0.551
L (sec)	30
C (sec)	120
y pract.	0.675
R.C. (%)	22%

ϵy	0.504
L (sec)	30
C (sec)	96
y pract.	0.619
R.C. (%)	23%

$$\begin{array}{l} 980(1180) \rightarrow \\ 80(35) \rightarrow \downarrow \end{array}$$
$$\begin{array}{r} \leftarrow 1330(1000) \\ \sqrt{} 425(215) \end{array}$$

55(70) 130(100)

Stage / Phase Diagrams



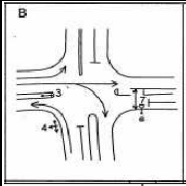
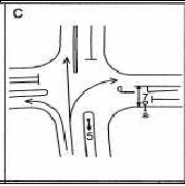
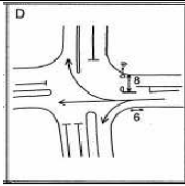
TRAFFIC SIGNALS CALCULATION										Job No: 24093HK										CTA Consultants Ltd.											
Junction: Ting Kok Road / Dai Fat Street (F)																															
Description: 2034 Reference Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)																															
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Site Factor	Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.										
						Left	Right			AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y								
Ting Kok Road	E	→	A	1,2	3.3	0.0	0		1	0%	0%	1945	3196	1595	2621	3196	3196	685	0.352		779	0.401	0.401								
	E	→	A	1,2	3.3	0.0	0	0.6	0	0%	0%	1251	0	1251	1251	0	0	440	0.352		501	0.401									
	E	↘	D	2	3.3	0.0	24		0	100%	100%	2085	2085	1960	1960	1960	1960	325	0.166	0.166	160	0.082									
Dai Fat Street	N	↙	B	2	3.5	22.0	0		1	100%	100%	1965	4070	1840	1840	3840	3840	72	0.039		74	0.040									
	N	↙	B	2	3.5	28.0	0		0	100%	100%	2105	0	2000	2000	0	0	78	0.039		81	0.040									
Ting Kok Road	W	←	C	1,3	3.5	0.0	0		1	0%	0%	1965	4070	1965	1965	4070	4070	669	0.340	0.340	519	0.264									
	W	←	C	1,3	3.5	0.0	0		0	0%	0%	2105	0	2105	2105	0	0	716	0.340		556	0.264									
Pedestrian crossing																															
		→	Ep	1,3	Min. Crossing Time = 10Gm + 7FGm =17s																										
		↗	Fp	1,3	Min. Crossing Time = 10Gm + 8FGm =18s																										
		↘	Gp	3	Min. Crossing Time = 5Gm + 7FGm =12s																										
		↖	Hp	2	Min. Crossing Time = 5Gm + 6FGm =11s																										
Notes:												Traffic Flow (pcu / hr)				AM(PM) Peak				AM Check Phase				PM Check Phase							
(Nil)												1125(1280) 325(160)				→ ↘ ↖ 150(155)				← 1385(1075)				Ey 0.506 L (sec) 11 C (sec) 120 y pract. 0.818 R.C. (%) 62%				Ey 0.401 L (sec) 17 C (sec) 120 y pract. 0.773 R.C. (%) 93%			
Stage / Phase Diagrams																															
AM:						I/G = 8s						I/G = 5s																			
PM: I/G = 3s												I/G = 3s + 12s																			

Junction: Ting Kok Road / Yuen Shin Road / Dai Fuk Street (H)

Description: 2034 Reference Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	S		1	A	3.8	15.0	0	1	2%	3%	1995	8400	1990	1990	7945	7945	461	0.232		338	0.170	
	S		1	A	3.8	0.0	0	0	0%	0%	2135	0	2135	2135	0	0	494	0.231		362	0.170	
	S		1	A	3.8	0.0	13.5	0	100%	100%	2135	0	1920	1920	0	0	448	0.233		390	0.203	
	S		1	A	3.8	0.0	12	0	100%	100%	2135	0	1900	1900	0	0	442	0.233	0.233	385	0.203	0.203
Ting Kok Road	E		1,2	A,B	3.5	20.0	0	1	100%	100%	1965	4070	1830	1830	3815	3815	520	0.284		470	0.257	
	E		1,2	A,B	3.5	25.0	0	0	100%	100%	2105	0	1985	1985	0	0	565	0.284		510	0.257	
	E		2	B	2.6	0.0	0	0	0%	0%	2015	2015	2015	2015	2015	2015	90	0.045		90	0.045	
	E		2	B	3.5	0.0	35	0	100%	100%	2105	4210	2020	2020	4045	4045	152	0.075	0.075	155	0.077	0.077
	E		2	B	3.5	0.0	38.5	0	100%	100%	2105	0	2025	2025	0	0	153	0.075		155	0.077	
Yuen Shin Road	N		2,3	B,C	3.5	23.8	0	1	100%	100%	1965	1965	1850	1850	1850	1850	295	0.159		260	0.141	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	193	0.092	0.092	243	0.116	0.116
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	193	0.092		243	0.116	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	193	0.092		243	0.116	
	N		3	C	3.5	0.0	32	0	100%	100%	2105	2105	2010	2010	2010	2010	20	0.010		15	0.007	
Dai Fuk Road	W		4	D	3.5	15.0	0	1	36%	28%	1965	4070	1895	1910	3995	4010	169	0.089	0.089	162	0.085	0.085
	W		4	D	3.5	0.0	15	0	3%	3%	2105	0	2100	2100	0	0	186	0.089		178	0.085	
Pedestrian crossing			7	A,B,C	Min. Crossing Time = 5Gm + 6FGm = 11s																	
			8	D	Min. Crossing Time = 5Gm + 8FGm = 13s																	

Notes:		Traffic Flow (pcu / hr)			AM(PM) Peak			AM Check Phase			PM Check Phase		
(Nil)													
	</												

Stage / Phase Diagrams						
						
PM: I/G = 9s	I/G = 7s	I/G = 8s	I/G = 5s			
AM: I/G = 9s	I/G = 7s	I/G = 8s	I/G = 5s			

Description: **2034 Reference Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)**

Stage / Phase Diagrams			
I/G = 2	I/G = 7	I/G = 10+14=24	

$$I/G = 10 + 14 = 24$$

TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Tai Po Tai Wo Road / Yuen Shin Road (J)**

Description: **2034 Reference Traffic Flows (Sensitivity Test V/TP/40) (Planned Junction Improvement)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Yuen Shin Road	S	↓	2	A,B	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	700	0.356		579	0.295	
	S	↓	2	A,B	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	750	0.356		621	0.295	
	S	↙	3	B	3.5	0.0	32	0	100%	100%	2105	2105	2010	2010	2010	2010	500	0.249	0.249	500	0.249	0.249
Tai Po Tai Wo Road	E	↗	4	B,C	3.5	24.0	0	1	100%	100%	1965	1965	1850	1850	1850	1850	625	0.338		475	0.257	
	E	↘	5	C	3.5	0.0	16	0	100%	100%	2105	6315	1925	1925	5695	5695	296	0.154	0.154	225	0.117	0.117
	E	↘	5	C	3.5	0.0	14	0	100%	100%	2105	0	1900	1900	0	0	292	0.154		222	0.117	
	E	↘	5	C	3.5	0.0	12	0	100%	100%	2105	0	1870	1870	0	0	287	0.154		218	0.117	
Yuen Shin Road	N	↑	1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	401	0.204	0.204	293	0.149	0.149
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	430	0.204		314	0.149	
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	430	0.204		314	0.149	

Notes:

(Nil)

Traffic Flow (pcu / hr)

AM(PM) Peak

500(500) 1450(1200)

625(475) 875(665)

625(830) 1260(920)

AM Check Phase

Ey 0.606

L (sec) 13

C (sec) 120

y pract. 0.803

R.C. (%) 32%

PM Check Phase

Ey 0.515

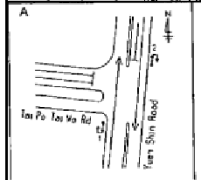
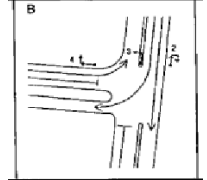
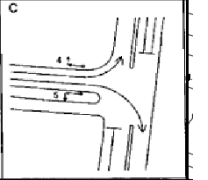
L (sec) 13

C (sec) 120

y pract. 0.803

R.C. (%) 56%

Stage / Phase Diagrams

						
I/G = 5s	I/G = 5s	I/G = 6s				

Priority Junction Calculation

Junction :	Tung Tsz Road / Access Road (Jn A)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Sensitivity Test Y/TP/40)		

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
W	7.3	D 0.786
W-CR	0	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.748
V-rBA	50	
V-IBA	50	
V-rBC	50	
V-rCB	50	
w-BA	2.5	
w-BC	2.5	
w-CB	2.1	

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM	
	pcu/hr			pcu/hr			
	q-CA	120	100	Q-BA	429	449	
	q-CB	15	35	Q-BC	577	602	
	q-AB	0	0	Q-CB	553	577	
	q-AC	200	90	Q-CA	1751	1691	
	q-BA	0	0	Q-BAC	577	602	(If C-B blocked C-A) (If Minor Road Share LT&RT)
	q-BC	30	25				
	f	1.000	1.000				

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.06
	C-A	0.07	0.06
	B-AC	0.05	0.04

Critical DFC	0.07	0.06
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CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Tung Tsz Road / Ting Kok Road (Jn B)	Job No.:	24093HK
Scenario :	2034 Design Traffic Flows (Sensitivity Test Y/TP/40)		

The predictive equations of capacity of movement are:

$$Q\text{-BA} = D(627 + 14W\text{-CR} - Y(0.364q\text{-AC} + 0.144q\text{-AB} + 0.229q\text{-CA} + 0.52q\text{-CB}))$$

$$Q\text{-BC} = E(745 - Y(0.364q\text{-AC} + 0.144q\text{-AB}))$$

$$Q\text{-CB} = F(745 - 0.364Y(q\text{-AC} + q\text{-AB}))$$

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

$$D = (1 + 0.094(w\text{-BA} - 3.65))(1 + 0.0009(V\text{-rBA} - 120))(1 + 0.0006(V\text{-IBA} - 150))$$

$$E = (1 + 0.094(w\text{-BC} - 3.65))(1 + 0.0009(V\text{-rBC} - 120))$$

$$F = (1 + 0.094(w\text{-CB} - 3.65))(1 + 0.0009(V\text{-rCB} - 120))$$

where

Y = 1 - 0.0345W

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

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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

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

Geometry :	Input	Calculated
	W 11	D 0.786
	W-CR 3	E 0.836
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	F 0.800
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	Y 0.621

Analysis :	Traffic Flow	AM	PM	Capacity	AM	PM
	pcu/hr			pcu/hr		
	q-CA	675	375	Q-BA	377	393
	q-CB	15	5	Q-BC	548	527
	q-AB	160	165	Q-CB	508	487
	q-AC	330	440	Q-CA	N/A	N/A
	q-BA	275	140	Q-BAC	387	403
	q-BC	25	15			
	f	0.083	0.097			

(If C-B blocked C-A)
(If Minor Road Share LT&RT)

Results :	Ratio of Flow-to-Capacity	AM	PM
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.03	0.01
	C-A	N/A	N/A
	B-AC	0.78	0.38

Critical DFC	0.78	0.38
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CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION

Job No: 24093HK

CTA Consultants Ltd.

Junction: **Ting Kok Road / Sam Mun Tsai Road (C)**

Description: **2034 Design Traffic Flows (Sensitivity Test Y/TP/40)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)		Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
					Left	Right				A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E	→	A	1,2	3.5	0	0	1	0%	0%		1965	1965	1965	1965	1965	1965	460	0.234		595	0.303	
Ting Kok Road	E	↘	B	2,3	3.2	0	23	0	100%	100%		2072.3	2072.3	1945	1945	1945	1945	210	0.108		290	0.149	
Ting Kok Road	W	←	C	1	3.7	0	0	0	0%	0%		2123.7	0	2125	2125	0	0	510	0.240	0.240	285	0.134	0.134
Ting Kok Road	W	↙	C	1	3.7	15	0	1	4%	6%		1983.7	4107.4	1975	1975	4100	4100	475	0.240		265	0.134	
Sam Mun Tsai Road	N	↗	D	2,3,4	4.5	38	0	1	100%	100%		2065	2065	1985	1985	1985	1985	365	0.184	0.184	265	0.134	0.134
Sam Mun Tsai Road	N	↘	E	4	3.5	0	17	1	100%	100%		1965	1965	1800	1800	1800	1800	30	0.017		10	0.006	

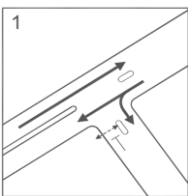
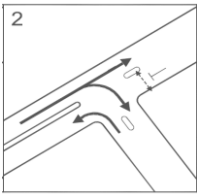
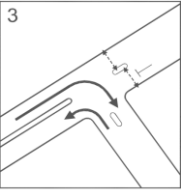
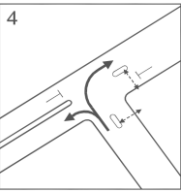
Notes:	Traffic Flow (pcu / hr)	AM(PM)	A.M. Check Phase		P.M. Check Phase	
			εy	0.424	εy	0.268
			L (sec)	8	L (sec)	8
			C (sec)	88	C (sec)	88
			y pract.	0.818	y pract.	0.818
			R.C. (%)	93%	R.C. (%)	206%

460(595)
210(290)

→
↘

← 965(535)
↘ 20(15)

↙ 365(265)
→ 30(10)

Stage / Phase Diagrams					
					
I/G = 5s	I/G = 0s	I/G = 0s	I/G = 5s		

Junction: **Ting Kok Road / Lo Fai Road (D)**

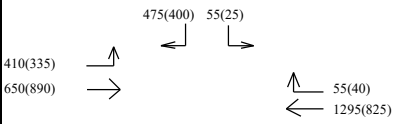
Description: **2034 Design Traffic Flows (Sensitivity Test V/TP/40)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside O/I	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.		
						Left	Right		A.M.	P.M.			A.M.	P.M.	A.M.	P.M.	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	4.0	15	0	1	82%	57%	2018	4113	1865	1910	3960	4005	499	0.268	0.268	584	0.306	0.306
Ting Kok Road	E		A	1	3.4	0	0	0	0%	0%	2095	0	2095	2095	0	0	561	0.268		641	0.306	
Ting Kok Road	W		B	1	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	526	0.268		601	0.306	
Ting Kok Road	W		C	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	4045	4010	401	0.204		129	0.066	
Ting Kok Road	W		C	2	3.5	0	15	0	13%	30%	2105	0	2080	2045	0	0	424	0.204	0.204	135	0.066	0.066
Lo Fai Road	S		D	3	3.5	15	25	0	1% / 79	2% / 88'	2105	4210	1970	1975	3930	3935	266	0.135	0.135	213	0.108	0.108
Lo Fai Road	S		D	3	3.5	0	20	0	100%	100%	2105	0	1960	1960	0	0	264	0.135		212	0.108	

Notes:

Traffic Flow (pcu / hr)

AM(PM)



A.M. Check Phase

εy

0.606

L (sec)

14

C (sec)

120

y pract.

0.795

R.C. (%)

31%

P.M. Check Phase

εy

0.480

L (sec)

14

C (sec)

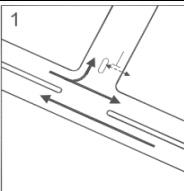
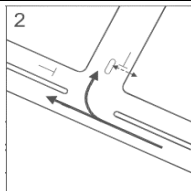
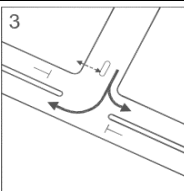
96

y pract.

0.769

R.C. (%)

60%

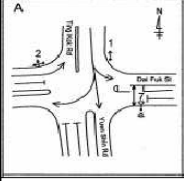
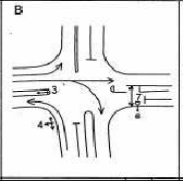
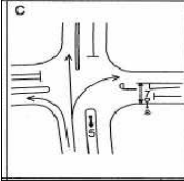
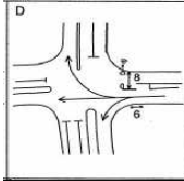
Stage / Phase Diagrams						
						
I/G =5s	I/G =6s	I/G =6s				

Junction: Ting Kok Road / Yuen Shin Road / Dai Fuk Street (H)

Description: 2034 Design Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	S		1	A	3.8	15.0	0	1	2%	3%	1995	8400	1990	1990	7945	7945	465	0.233		342	0.172	
	S		1	A	3.8	0.0	0	0	0%	0%	2135	0	2135	2135	0	0	498	0.233		368	0.172	
	S		1	A	3.8	0.0	13.5	0	100%	100%	2135	0	1920	1920	0	0	449	0.234		390	0.203	
	S		1	A	3.8	0.0	12	0	100%	100%	2135	0	1900	1900	0	0	443	0.233	0.234	385	0.203	0.203
Ting Kok Road	E		1,2	A,B	3.5	20.0	0	1	100%	100%	1965	4070	1830	1830	3815	3815	520	0.284		470	0.257	
	E		1,2	A,B	3.5	25.0	0	0	100%	100%	2105	0	1985	1985	0	0	565	0.284		510	0.257	
	E		2	B	2.6	0.0	0	0	0%	0%	2015	2015	2015	2015	2015	2015	90	0.045		90	0.045	
	E		2	B	3.5	0.0	35	0	100%	100%	2105	4210	2020	2020	4045	4045	152	0.075	0.075	155	0.077	0.077
	E		2	B	3.5	0.0	38.5	0	100%	100%	2105	0	2025	2025	0	0	153	0.075		155	0.077	
Yuen Shin Road	N		2,3	B,C	3.5	23.8	0	1	100%	100%	1965	1965	1850	1850	1850	1850	295	0.159		260	0.141	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	197	0.093	0.093	247	0.117	0.117
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	197	0.093		247	0.117	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	197	0.093		247	0.117	
	N		3	C	3.5	0.0	32	0	100%	100%	2105	2105	2010	2010	2010	2010	20	0.010		15	0.007	
Dai Fuk Road	W		4	D	3.5	15.0	0	1	36%	28%	1965	4070	1895	1910	3995	4010	169	0.089	0.089	162	0.085	0.085
	W		4	D	3.5	0.0	15	0	3%	3%	2105	0	2100	2100	0	0	186	0.089		178	0.085	
Pedestrian crossing		7	A,B,C	Min. Crossing Time = 5Gm + 6FGm =11s																		
		8	D	Min. Crossing Time = 5Gm + 8FGm =13s																		

Notes:	Traffic Flow (pcu / hr)					AM(PM) Peak		AM Check Phase		PM Check Phase															
(Nil)	1085(980)	90(90)	305(310)				890(775)	955(700)	10(10)				5(5)	290(290)	60(45)	εy 0.491	L (sec) 25	C (sec) 120	y pract. 0.713	R.C. (%) 45%	εy 0.482	L (sec) 25	C (sec) 120	y pract. 0.713	R.C. (%) 48%
							295(260)	590(740)	20(15)																

Stage / Phase Diagrams											
											
PM: I/G = 9s			I/G = 7s			I/G = 8s			I/G = 5s		
AM: I/G = 9s			I/G = 7s			I/G = 8s			I/G = 5s		

Description: **2034 Design Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)**

[illegible]
$$I/G = 10 + 14 = 24$$

TRAFFIC SIGNALS CALCULATION													Job No: 24093HK										CTA Consultants Ltd.					
Junction: Tai Po Tai Wo Road / Yuen Shin Road (J)																												
Description: 2034 Design Traffic Flows (Sensitivity Test Y/TP/40) (Planned Junction Improvement)																												
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		A.M.			P.M.								
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y						
Yuen Shin Road	S	↓	2	A,B	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	702	0.357		582	0.296							
	S	↓	2	A,B	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	753	0.357		623	0.296							
	S	↙	3	B	3.5	0.0	32	0	100%	100%	2105	2105	2010	2010	2010	2010	505	0.251	0.251	505	0.251	0.251						
Tai Po Tai Wo Road	E	↗	4	B,C	3.5	24.0	0	1	100%	100%	1965	1965	1850	1850	1850	1850	630	0.341		480	0.259							
	E	↘	5	C	3.5	0.0	16	0	100%	100%	2105	6315	1925	1925	5695	5695	296	0.154	0.154	225	0.117	0.117						
	E	↘	5	C	3.5	0.0	14	0	100%	100%	2105	0	1900	1900	0	0	292	0.154		222	0.117							
	E	↘	5	C	3.5	0.0	12	0	100%	100%	2105	0	1870	1870	0	0	287	0.154		218	0.117							
Yuen Shin Road	N	↑	1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	403	0.205	0.205	294	0.150	0.150						
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	431	0.205		315	0.150							
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	431	0.205		315	0.150							
Notes: (Nil)										Traffic Flow (pcu / hr) AM(PM) Peak 505(505) 1455(1205) 630(480) 875(665) 625(830) 1265(925)										AM Check Phase Ey 0.610 L (sec) 13 C (sec) 120 y pract. 0.803 R.C. (%) 32%				PM Check Phase Ey 0.518 L (sec) 13 C (sec) 120 y pract. 0.803 R.C. (%) 55%				
Stage / Phase Diagrams																												
I/G = 5s						I/G = 5s						I/G = 6s																



APPENDIX B

Fu Tip Estate (A/TP/672)

Population Intake as of December 2024

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Estate Locator

Property Type

PRH/TPS Estates ▼

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Enter Keyword

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Fu Tip Estate, Tai Po, New Territories



Type of Estate:	Public Rental Housing
-----------------	-----------------------

Year of Intake:	2021/2024
-----------------	-----------

Type(s) of Block(s):	Non-Standard Block
----------------------	--------------------

No. of Blocks:	9
Name of Block(s):	Ban Tip House Chun Tip House Fan Tip House Fung Tip House Gaap Tip House Hei Tip House Hin Tip House Tsz Tip House Wong Tip House
No. of Rental Flats#:	7 400 As at 31.12.2024
Flat Size (m²):	14.05-30.73
No. of Households#:	7 300 As at 31.12.2024
Authorised Population#:	17 400 As at 31.12.2024
District Tenancy Management Office/Estate Office:	Tai Po, North & Shatin District Tenancy Management Office (12) Unit 221 - 240, 2/F, Shek Yuk House, Chun Shek Estate, Shatin, N.T. Telephone : 2694 4408 Fax : 2647 1930
Property Management:	Pioneer Management Limited G/F, Tsz Tip House, Fu Tip Estate, 11 Choi Tip Street, Tai Po, N.T. Telephone: 2617 8033 Fax: 2617 8183
Carpark Management:	Pioneer Management Limited (for Ban Tip House Carpark) G/F, Tsz Tip House, Fu Tip Estate, 11 Choi Tip Street, Tai Po, N.T. Telephone: 2617 8033 Fax: 2617 8183 Yue Xiu APT Parking Limited (Excluding Ban Tip House Carpark) 27/F, Seabright Plaza, 9-23 Shell Street, North Point, H.K.

Telephone: 2512 9611

Fax: 2512 9617

Estate Website:

Further Information:

#Rounded to the nearest hundred

Quick Links

Learn More About

Typical floor plans

Other estates in the same district

Other districts

Access Co-ordinator and Access Officer Scheme

SITEMAP 



APPENDIX C

Lok Sin Village (A/NE-TK/850) Population Intake as of July 2024



九龍樂善堂

The Lok Sin Tong Benevolent Society, Kowloon

Since 1880 成立

Donation Hotline **2382 1576**



Latest News

Home > Latest News > Press Release > 樂善堂過渡性房屋計劃「樂屋」- 大埔「樂善村」第二期入伙

樂善堂過渡性房屋計劃「樂屋」- 大埔「樂善村」第二期入伙

樂善堂過渡性房屋計劃「樂屋」- 大埔「樂善村」第二期入伙

由房屋局資助、會德豐地產以\$1象徵式租金租出土地、樂善堂負責興建和營運的「大埔樂善村」，提供1,236個過渡性房屋單位，據數據顯示，大埔有4,000多戶的劏房家庭，2021年7月大埔劏房發生的3死1傷火警，不少當區的劏房住戶表示仍有餘悸，加上大埔樂善村是目前大埔唯一一個最大型的過渡性房屋，因此反應踴躍，由開始招募至今，共收到近2,400份申請，並於2024年4月開始陸續讓合資格的申請人入伙，項目分下台及上台位置，目前下台入住率超過95%，上台完成環境優化工程及單位裝修後，將陸續開放予申請人入伙，預計3個月內會完成入伙。

樂善堂的「大埔樂善村」不僅提供住房，更發揮樂善堂一向服務基層的用心，提供多元化配套服務。專業的社工、輔導員、物管等同工為居民提供入住適應的安排及地區導賞，包括聯繫大埔區社會福利署舉辦區內服務簡介，以及「樂善行」活動，帶樂善村居民參觀社區設施，如街市、公園、政府合署等。由於「大埔樂善村」正對慈山寺，只要安在家中，便能遠眺觀音像，不少居民均表示入住後，這樣寧靜及清幽的環境，讓他們能放下生活的繁瑣，身心狀況得以改善。有見及此，樂善堂同事亦為居民安排慈山寺遊覽團，透過山林療癒體驗和導賞，讓他們擁抱大自然，從山林找到心中的平靜。

除了地區導賞，樂善堂為居民籌辦不同活動，在居民入住後過的第一個「端午節」，樂善堂常務總理贊助每戶端陽福袋，內有美味粽子及節日禮品。聯繫大埔工業邨商戶，如奇華，為有意重投勞動市場的居民，提供在職培訓及全職／兼職工作轉介。本堂亦善用活動室安排健康講座、安排專車接送居民到紅磡香港體育館免費欣賞世界女排聯賽香港2024、製作防蚊膏工作坊、派發洗手液等。此外，樂善村每月定期舉辦不同類型活動，如防止電話騙案講座及身心健康講座、健康檢查活動、疫苗注射等，節目豐富。

居民亦讚賞本堂到戶醫療服務，本堂於5月份在大埔寶湖道1號地舖開啟「藥健同心樂善堂社區藥房」後，定期派出註冊藥劑師到「大埔樂善村」提供藥物教育講座，並為有慢性疾病和輕微病患需要的居民提供免費藥物諮詢、用藥評估，並以可負擔的價錢作配藥服務。另在同一位置設有「樂善堂鄭溫文蕙醫療中心」提供專業並價錢相宜的中醫和牙科服務，樂善村居民更享有醫療優惠。

樂善村座落生活及交通配套成熟的大埔區內，居民如要上班上學和外出，交通十分便捷，步行約5分鐘便可到達汀角路巴士站。而在房屋局以及運輸署協助下，村口特設小巴士，可以讓小巴進入，並增設小巴班次於早上繁忙時間6:30至9:00由樂善村到大埔墟站，方便居民出入。

樂善村居民余先生年逾65歲，任職兼職小巴車長，每月收入約\$6,500-\$7,500，之前居於大埔劏房，環境狹窄，衛生惡劣，更要行4層樓，每月租金連水電費約\$4,500。余先生4月遷入樂善村，租金減少近50%，大大減輕經濟壓力，而村內環境優美，空氣非常好，認為這樣的生活環境，能改善身心健康。而交通方面，他認為村口小巴士十分便利，每朝都有不少返工返學的街坊乘搭其出大埔墟港鐵站。余先生除積極參與本堂舉辦的活動外，更會擔當義工的角色，幫助職員派發及收拾物資，希望略盡綿力，回饋社會。





APPENDIX D

Email reply from Planning Department on Potential/Committed Developments in the Vicinity of the Proposed Development

Horace Mak

寄件者: Charlotte Tsz Wing WUN/PLAND <ctwwun@pland.gov.hk>
寄件日期: Monday, July 27, 2026 4:39 PM
收件者: Catherina Chu
副本: Ka Fai CHAN/TD; rlee(01); 'Edmond Chan'; 'Horace Mak'; [REDACTED]; Kevin
Ka Wing LAU/PLAND; Iris Lai Sheung LEUNG/PLAND
主旨: Re: Planning Application No. Y/NE-TK/20 - Departmental Comments

Dear Catherina,

Further to my email below dated 6.7.2026 regarding application No. Y/NE-TK/20, please find the further comments from this Office below.

1. Tables 4.3 and 4.4 – As Villa Lucca and Fu Tip Estate (application No. A/TP/672) have been completed, please remove them from the tables.
2. Table 4.6 – Improvement works at eight junctions have been proposed under LSPS/001, which are available at https://www.devb.gov.hk/en/issues_in_focus/land_sharing_pilot_scheme/land_sharing_pilot_scheme_applications/application_received/application-no-lsps-001-final-report-by-applica/appendix-5/index.html. Please check if they have been taken into account.

Please contact the undersigned if you have any questions. Thank you.

Regards,
Charlotte WUN
TP/TP2
Sha Tin, Tai Po and North District Planning Office
Planning Department
Tel: 2158 6018

From: Charlotte Tsz Wing WUN/PLAND
Sent: Monday, July 6, 2026 9:30 PM
To: [REDACTED]
Cc: Ka Fai CHAN/TD <kafaichan@td.gov.hk>; [REDACTED]; Kevin Ka Wing LAU/PLAND <kkwlau@pland.gov.hk>; Iris Lai Sheung LEUNG/PLAND <ilsleung@pland.gov.hk>
Subject: Re: Planning Application No. Y/NE-TK/20 - Departmental Comments

Dear Catherina,

I refer to your email dated 15.6.2026 regarding application No. Y/NE-TK/20. Please find the comments from this Office below.

1. Tables 4.3 and 4.4 – Lok Sin Village is subject to application No. A/NE-TK/850 for renewal of planning approval for temporary residential institution (transitional housing) with filling and excavation of land for a period of **three** years (i.e. until 26.3.2029), which was approved with conditions by the Rural and New Town Planning Committee of the Town Planning Board on 27.2.2026. It involves **a total gross floor area (GFA) of about 20,332.914m² (including domestic GFA of about 20,221.643m² and non-domestic GFA of about 111.271m²)**. Please update.

2. Tables 4.3 and 4.4 and Figure 4.1 (Rev A) – For the development parameters of Chung Nga Road West, please refer to the latest planning brief published by the Hong Kong Housing Authority available at https://www.pland.gov.hk/file/resources/approved_pb/hd_pb/pdf/Chung_Nga_Road_West_Tai_Po.pdf.
3. Figure 4.1 (Rev A) – Please update the site boundaries of Site A and Site B under LSPS/001 in the Town Planning Board's website available at https://www.tpb.gov.hk/uploads/page/meetings/20250818/R_S_TP_31_Plan.pdf.

Please contact the undersigned if you have any question. Thank you.

Regards,
Charlotte WUN
TP/TP2
Sha Tin, Tai Po and North District Planning Office
Planning Department
Tel: 2158 6018

From: [REDACTED]
Sent: Monday, June 15, 2026 11:40 AM
To: Charlotte Tsz Wing WUN/PLAND <ctwwun@pland.gov.hk>
Cc: Ka Fai CHAN/TD <kafaichan@td.gov.hk>; [REDACTED]
Subject: RE: Planning Application No. Y/NE-TK/19 - Departmental Comments

Dear Charlotte,

We, CTA Consultants Limited, are commissioned as the traffic consultant of the captioned project.

As per comments (#v of Revised TIA Report) from TD, confirmation from PlanD regarding the adjacent committed and planned developments in the vicinity of the proposed development should be sought. We shall be grateful if you could assist to provide information of the adjacent committed and planned developments in the vicinity of the site.

Should you have any queries or require further information, please do not hesitate to contact Mr. Horace Mak or the undersigned at [REDACTED].

Thank you very much for your kind attention and we are looking forward to your favourable reply at your earliest convenience.

Best Regards,

Catherina Chu
Chief Transport Planner

CTA Consultants Limited

[REDACTED]



APPENDIX E

Confirmation of Management and Maintenance of the Local Access Road by HAD

Application No. Y/NE-TK/19

To Rezone the Site from Agriculture” and “Green Belt” to “Government, Institution or Community”

Various Lots in DD. 23, Tung Tsz, Tai Po, New Territories

1. Comments of the Director of Environmental Protection

(Contact Person: Ms. Abbey LAU, Tel: 2835 1300)

Please refer to **Attachment 1**.

2. District Officer (Tai Po) of Home Affairs Department

(Contact Person: Miss TANG Hiu Yan, Hilary, Tel: 2654 1233)

Regarding previous inquiries, please find our reply as follows:

- (a) this office has no objection in principle to the proposed works including the amendment to the access road and footpaths provided they fully comply with Government standards, including the provision of an adequate drainage system for eliminating the risk of flooding in the vicinity;
- (b) this office has no adverse comment on taking over the ad-hoc maintenance responsibility for the proposed works. Nonetheless, the structure, thickness, and anti-slip coefficient of the access road and footpath must comply with Government standards and the works shall be situated on unleased Government land to facilitate future maintenance consideration, if any;
- (c) due to the limited details provided in Figure 4 of the submission, we are unable to offer specific comment(s) on the compliance of the proposed access road and footpaths with relevant standards at this juncture;
- (d) the proposed access road should comply with the standards of the Highways Department (HyD). Specifically, the road should be constructed in accordance with HyD’s standard drawings for Typical Bituminous Pavement Construction (**Attachment 2 – Drawing No. H1101e**) and Typical Concrete Pavement Construction (**Attachment 3 – Drawing No. H1102c**) as attached for your reference. Details of drawings include material specification, layer thickness, and construction methodologies to ensure compliance with HyD’s structural and safety requirements; and
- (e) for village footpath, the design should utilise Grade C30 concrete, known for its



APPENDIX F

Summary of ‘Responses to Comments’ (September 2026)



S12A Amendment of Plan Application
Approved Tung Tsz Outline Zoning Plan No. S/NE-TK/19
Proposed Re-zoning from “AGR” to “G/IC” for a Proposed “Social Welfare Facilities”
Residential Care Home for the Elderly (RCHE)
At Various Lots in D.D. 23, Tung Tsz, Tai Po, N.T
TIA Report
“Summary of “Responses to Comments”
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Summary of ‘Responses to Comments’ (September 2026)

Comments of Traffic Engineering (NTE) Division, Transport Department dated 31 August 2026 (Mr. CHAN Ka Fai, Issac, 2399 2406)	Responses
i. Para. 2.3.2 – The local access road connecting the Site is not managed by TD. The relevant management and maintenance departments shall be consulted.	Noted, the relevant management and maintenance departments of the local access road connecting the Site shall be consulted accordingly.
ii. Para. 2.6.3 – Please state the frequency of the shuttle service.	Please refer to Para. 2.6.5 of the revised TIA report for the frequency of the shuttle service.
iii. Table 4.3 & 4.4 – Please check the latest status of the developments, e.g. the total flat no. and the primary school of Chung Nga Road West development (Planning Application No. A/TP/700).	Noted and please note that the development parameters of Chung Nga Road West has been checked and revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
iv. Table 4.3 & 4.4 – Please review the population intake status of those developments at the time of traffic survey. For instance, the transitional housing project at Wong Yue Tan (Planning Application No. A/NE-TK/850) was commissioned in 2024 and Villa Lucca was completed before the traffic survey. The applicant may want to review the development traffic trips adopted in accordance with the population intake status.	Noted and please note that the population intake status of the adjacent developments at the time of traffic survey have been revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
v. Para. 4.4.2 – A sensitivity analysis shall be included for a scenario where Planning Application No. Y/TP/40 (and its associated road improvement works) is not completed prior to the commissioning of the subject	Noted and please note that Section 4.4 has been revised and sensitivity analysis with Planning Application No. Y/TP/40 (and its associated road improvement works) has been added, please refer to Section 5.2 of the revised TIA report for details.



Comments of Traffic Engineering (NTE) Division, Transport Department dated 31 August 2026 (Mr. CHAN Ka Fai, Issac, 2399 2406)	Responses
development.	
vi. Para. 4.4.3 – The LSPS/001 development is scheduled for completion in 2033, whereas the subject development is anticipated to be completed in 2031. Because the proposed improvement scheme for LSPS/001 may not be in place by 2031, the validity of the traffic assessment must be reviewed.	Noted and please note that LSPS/001 development in Section 4.4 has been removed, please refer to the revised TIA report for details.
vii. Para. 6.1.1 and Table 6.1 – A minute-by-minute breakdown of lay-by occupancy shall be provided to identify the peak period and estimate the probability of two or more vehicles occupying the lay-by, which would prevent proposed new shuttle buses from boarding or alighting at the lay-by.	Noted and please note that a minute-by-minute breakdown of lay-by occupancy has been added, please refer to Chapter 6 of the revised TIA report for details.
viii. The pedestrian assessment and public transport services assessment shall be included.	Please refer to Chapter 8 and Chapter 7 of the revised TIA report for the pedestrian assessment and public transport services assessment.
ix. This TIA incorporates traffic surveys conducted on 30 September 2025 (weekday) and 21 March 2026 (weekend). An earlier traffic survey was conducted on 14 April 2025 for a separate planning application, covering junctions along Ting Kok Road and Yuen Shin Road from Dai Fat Street to Tai Po Tai Wo Road. A comparison of these surveys reveals significant discrepancies in junction traffic flows - particularly at Junctions F, G, I, and J. The applicant must review and reconcile the differences between the 2025 and 2026 dataset.	Noted and please note that the dataset of traffic survey conducted on 14 April 2025 which has the highest total traffic flows among datasets has been adopted, please refer to Section 3.1 of the revised TIA report for details.



Comments of Planning Department dated 6 July 2026 (Ms. WUN Tsz Wing, Charlotte, 2158 6018)	Responses
1) Tables 4.3 and 4.4 – Lok Sin Village is subject to application No. A/NE-TK/850 for renewal of planning approval for temporary residential institution (transitional housing) with filling and excavation of land for a period of three years (i.e. until 26.3.2029), which was approved with conditions by the Rural and New Town Planning Committee of the Town Planning Board on 27.2.2026. It involves a total gross floor area (GFA) of about 20,332.914m² (including domestic GFA of about 20,221.643m² and non-domestic GFA of about 111.271m²). Please update.	Noted and please note that Lok Sin Village has been included, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
2) Tables 4.3 and 4.4 and Figure 4.1 (Rev A) – For the development parameters of Chung Nga Road West, please refer to the latest planning brief published by the Hong Kong Housing Authority available at https://www.pland.gov.hk/file/resources/approved_pb/hd_pb/pdf/Chung_Nga_Road_West_Tai_Po.pdf .	Noted and please note that the development parameters of Chung Nga Road West has been revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
3) Figure 4.1 (Rev A) – Please update the site boundaries of Site A and Site B under LSPS/001 in the Town Planning Board’s website available at https://www.tpb.gov.hk/uploads/page/meetings/20250818/R_S_TP_31_Plan.pdf .	Please note that LSPS/001 development is scheduled for completion in 2033, whereas the subject development is anticipated to be completed in 2031, therefore consideration for LSPS/001 development has been removed.



Comments of Planning Department dated 27 July 2026 (Ms. WUN Tsz Wing, Charlotte, 2158 6018)	Responses
1) Tables 4.3 and 4.4 – As Villa Lucca and Fu Tip Estate (application No. A/TP/672) have been completed, please remove them from the tables.	Noted and please note that the population intake status of the adjacent developments at the time of traffic survey have been revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
2) Table 4.6 – Improvement works at eight junctions have been proposed under LSPS/001, which are available at https://www.devb.gov.hk/en/issues_in_focus/land_sharing_pilot_scheme/land_sharing_pilot_scheme_applications/application_received/application-no-lsps-001-final-report-by-applica/appendix-5/index.html . Please check if they have been taken into account.	Please note that LSPS/001 development is scheduled for completion in 2033, whereas the subject development is anticipated to be completed in 2031, therefore consideration for LSPS/001 development has been removed.

Comments of Planning Department dated 2 September 2026 (Ms. WUN Tsz Wing, Charlotte, 2158 6018)	Responses
<u>Appendix 2 – Traffic Impact Assessment</u> 10. Section 2.6 – Please confirm whether shuttle bus services for visitors will involve peak hours, and shuttle bus services for staff will only involve non-peak hours. Please advise the servicing hours of shuttle bus services for visitors, and frequency of shuttle bus service for visitors and staff respectively.	Please be advised that shuttle bus services for visitors will be provided at the servicing hours of the proposed development, at 1 veh/bound/hr. The shuttle bus services for staff will only involve non-peak hours (arrive/leave before 6:45am and after 6:45pm), at 4 veh/bound, details could be provided at detailed design stage.
11. Section 2.6.4 – Please advise whether the pick-up/drop-off point for shuttle bus services for staff will also be Nam Wan Road near Tai Po Market Station, i.e. same as shuttle bus services for visitors.	Please be advised that shuttle bus services for staff will also be Nam Wan Road near Tai Po Market Station, i.e. same as shuttle bus services for visitors.



Comments of Planning Department dated 2 September 2026 (Ms. WUN Tsz Wing, Charlotte, 2158 6018)	Responses
12. Tables 4.3 and 4.4 – For Lok Sin Village under application No. A/NE-TK/850, Fu Tip Estate under application No. A/TP/672 and Villa Lucca, if their traffic generations have already been taken into account in the traffic survey (i.e. full population intake before the traffic survey was conducted), please consider remove them from the tables.	Noted and please note that the population intake status of the adjacent developments at the time of traffic survey have been revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
13. Tables 4.3 and 4.4 and Figure 4.1 (Rev A) – For the development parameters of Chung Nga Road West, please refer to the latest planning brief published by the Hong Kong Housing Authority available at https://www.pland.gov.hk/file/resources/approved_pb/hd_pb/pdf/Chung Nga Road West Tai Po.pdf .	Noted and please note that the development parameters of Chung Nga Road West has been revised, please refer to Tables 4.3 and 4.4 of the revised TIA report for details.
14. Tables 4.3 and 4.4 – Please be advised that the completion year of developments under LSPS/001 is 2033 tentatively, which will be later than the completion year of the proposed RCHE under the current application (i.e. 2030).	Please note that LSPS/001 development is scheduled for completion in 2033, whereas the subject development is anticipated to be completed in 2031, therefore consideration for LSPS/001 development has been removed.