Annex D

Revised Traffic Impact Assessment

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories

December 2025

CTA Consultants Limited
志達顧問有限公司

1. INTRODUCTION

1.1 Background

1.1.1 CTA Consultants Limited ("CTA") was commissioned by the Applicant to carry out a Traffic Impact Assessment Report in supporting the S.12A application.

1.1.2 This S.12A application is to seek the Town Planning Board's approval for the proposed amendments to the Draft Tai Po Outline Zoning Plan No. S/TP/31 ("the OZP") for the proposed development at various lots and adjoining Government land at Fung Yuen, Tai Po, New Territories ("the Development Site").

1.1.3 The proposed development will include residential development(s) with supporting retail and public vehicle park facilities in Area (A); and a social welfare complex comprising a Residential Care Home for the Elderly ("RCHE") and a Day Care Unit ("DCU") for the Elderly in Area (B).

1.1.4 The Applicant submitted an s.12A Planning Application (No. Y/TP/38) to TPB in 2022 to rezone the current western portion of the "CDA(1)" zone to "R(B)13" zone to enable a proposed residential development with retail facilities and public vehicle park, and amending the maximum building height restriction of the "G/IC" zone from 2 storeys to 8 storeys to the south of the "CDA(1)" zone for a proposed 8-storey Social Welfare Complex. While tremendous effort has been put to address and resolve the comments from Planning Department and relevant Government departments during circulation of the application, it is noted that majority of the Government departments have no further adverse comment on the technical assessments attached to Application No. Y/TP/38 since almost 3 years efforts being put by the Applicant & consultancy team.

1.1.5 Taking into account comments received from relevant Government departments and in order to achieve a wholistic planning scheme for the entire "CDA(1)" zone, the Applicant has put forward to include the CDA(1) Future Phase proposed in Application No. Y/TP/38 into the Development Site of this Application. The Proposed Development Proposal in this Application is largely the same as that under Application No. Y/TP/38.

1.1.6 The Development Site of this Application is solely formed by the previous development sites, i.e. Area (A), Area(B) and the "CDA(1)" Future Phase. The total GFA, PR, building height, no. of units and estimated population of the Development Proposal is almost exactly the same as that under Application No. Y/TP/38.

1.2 Study Objectives

1.2.1 The main objectives of this study are listed below:

- 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 2033;
- To estimate the likely traffic generated by the proposed development;
- To appraise the traffic impact induced by the proposed development on the adjacent road network;
- To recommend traffic improvement measures to alleviate any foreseeable traffic problems to the surrounding road network, if any.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The proposed development is located at Fung Yuen, Tai Po as shown in **Figure 2.1**.

2.2 Development Proposal

2.2.1 The proposed development will include residential development(s) with supporting retail and public vehicle park facilities in Area (A); and a social welfare complex comprising a Residential Care Home for the Elderly ("RCHE") and a Day Care Unit ("DCU") for the Elderly in Area (B). Parameters of the proposed development are listed in **Table 2.1**.

Table 2.1 Parameters of the Proposed Development

Residential Development	
Nos. of Blocks	6 Residential Tower + Clubhouse + Retail and PVP (Phase I) 1 Residential Tower (Phase II)
No. of Units	1,988 (Phase I: 1,718; Phase II: 270)
Total GFA	110,377 m^2 (Phase I: 92,190 m^2; Phase II: 18,187 m^2)
Proposed Domestic GFA	109,577 m^2 (Phase I: 91,390 m^2; Phase II: 18,187 m^2)
Proposed Non-domestic GFA	800 m^2 (Phase I: 800 m^2; Phase II: 0 m^2)
Total Plot Ratio	3.47 (Phase I: 3.47; Phase II: 3.44)
Domestic Plot Ratio	3.44 (Phase I: 3.44; Phase II: 3.44)
Non-Domestic Plot Ratio	0.03 (Phase I: 0.03; Phase II: 0)
Average Flat Size	55.1 m^2 (Phase I: 53.2 m^2; Phase II: 67.4 m^2)
Estimated population	5,169* (Phase I: 4,467: Phase II: 702)
Social Welfare Complex ["G/IC" Zone]	
Nos. of Blocks	1
Total GFA	4,782 m^2
No. of Place: **Residential Care Home for the Elderly** **Day Care Unit**	 150 30

**Average household size 2.6 in 2024 from Census and Statistic Department.*

2.2.2 It is anticipated that the proposed development will be commissioned in year 2030. Therefore, design year 2033 (i.e. 3 years after the planned commencement year of the proposed development) is adopted for the Traffic Impact Assessment.

2.3 Internal Transport Facilities Provisions

2.3.1 The parking provision for the proposed development is set out in **Table 2.2 and Table 2.3.**

Table 2.2 Internal Transport Facilities Provision required under the HKPSG (Area (A))

Proposed Development			Parking Requirement						Loading/Unloading Requirement
			Private Car Parking Space					Motorcycle Parking Space	Bicycle Parking	Loading / Unloading Bay for Goods Vehicles
Residential										
No. of Blocks	*Flat Size (GFA) (m^2)*	*No. of Flat*	**Resident**				**Visitor**	1 space per 100-150 flats	Outside a 2km radius of a rail station, 1 space for 30 flats with flat size ≤ 70m^2	Provision of minimum 1 L/UL bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority
			GPS: 1 space per 4-7 flats			GPS x R1 X R2 X R3	> 75 units per block: 5 visitor spaces per block, ≤ 75 units per block: Determined by TD			
			R1	R2	R3					
6	40<FS≤70	1,718	1.2	1	1	295 to 516				
Subtotal			*295 to 516*				30			
Phase 1 Total (Required)			**325[3] to 546[4]**					**12 to 18**	**58**	**6**
No. of Blocks	*Flat Size (GFA) (m^2)*	*No. of Flat*	**Resident**				**Visitor**	1 space per 100-150 flats	Outside a 2km radius of a rail station, 1 space for 30 flats with flat size ≤ 70m^2	Provision of minimum 1 L/UL bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority
			GPS: 1 space per 4-7 flats			GPS x R1 X R2 X R3	> 75 units per block: 5 visitor spaces per block, ≤ 75 units per block: Determined by TD			
			R1	R2	R3					
1	40<FS≤70	270	1.2	1	1	47 to 81				
Subtotal			*47 to 81*				5			
Phase 2 Total (Required)			**52[2] to 86[2]**					**2 to 3**	**9**	**1**
Total (Proposed)			**Phase 1: 406 Phase 2: 64**				**Phase 1: 30 Phase 2: 5**	**20**	**67**	**7**
			505[4]							
Commercial										
GFA Not more than 800 m^2			1 car space per 150-300 m^2					5% to 10% of the total provision for private cars	**N/A**	1 loading/ unloading bay for good vehicles for every 800-1200m^2 or part thereof GFA
Total (Required)			**3-6**					**1**	**N/A**	**1**
Total (Proposed)			**6[1]**					**1**	**N/A**	**1 LGV (Within Commercial Building) 1 HGV (Near Tower T5)**
Public Vehicle Park										
Total (Proposed)			**30[1]**					**N/A**	**N/A**	**N/A**

Notes: (1) Including 1 accessible car parking spaces for 1-50 car parking spaces;
(2) Including 2 accessible car parking spaces for 51-150 car parking spaces;
(3) Including 4 accessible car parking spaces for 251-350 numbers of parking spaces;
(4) Including 6 accessible car parking spaces for total above 450 numbers of parking spaces.

2.3.2 It is noted that the requirement of provision of internal transport facilities for "Residential Home for Elderly" and "Day Car Unit" 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 2.3**.

Table 2.3 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	14 car parking spaces	0.022
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.

2.3.3 With reference to **Table 2.3**, 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 0.022. Based on the maximum parking rate number for private car per bed, taking into consideration that a total of 180 nos. of beds will be provided, the private car parking provision of the proposed development would be 4 nos. (i.e. 0.022 x 180). For conservative, 6 nos. of private car parking spaces is proposed. The overall parking provision is summarized in **Table 2.4**, which should be sufficient for the daily operation needs of the proposed development.

2.3.4 All staff will use public transport to travel to the RCHE. All the private car parking spaces will be reserved for the visitors.

Table 2.4 Internal Transport Facilities Provision required under the HKPSG (Area (B))

Social Welfare	
Type	**Proposed Number of spaces**
Private cars	6(1)
Motorcycles	1
L/UL for light bus	1
L/UL for Ambulance	1
L/ UL for LGV	1

Notes: (1) Including 1 accessible car parking spaces for 1-50 car parking spaces

2.4 Vehicular Access

2.4.1 The vehicular accesses are shown in **Figures 2.2 to 2.5**. Since the proposed accesses of the commercial and public vehicle park are near the priority junction at Fung Yuen Road. To minimize the traffic impact, two accesses are proposed to separate the ingress and egress movement. Vehicles will ingress from Fung Yuen Road and egress at the minor road. As the access at Fung Yuen Road is for ingress only, it will not conflict with the future bus turning facilities proposed in **Chapter 5** below.

2.5 Public Transport Services in the Vicinity of the Proposed Development

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 within 500 meters catchment area are listed in **Table 2.4**, and the location of the nearby public transport stops are shown in **Figure 2.6**.

2.5.2 The proposed development despite being close to various transport stops, for the convenience of future residents, we proposed a bus stop at Fung Yuen Road. The proposed bus stop will be further discussed in the later section of this report.

Table 2.5 Public Transport Services in the Vicinity of the Proposed Development

Service	Route	Origin - Destination	Frequency (min)
Franchised Buses	72A	Tai Po Industrial Estate – Tai Wai Station	30-35[(2)(3)(4)]
	72C	Tai Mei Tuk B/T – Tai Po Market Station	07:00[(1)(2)]
	73	Fanling (Wah Ming) - Tai Po Industrial Estate	20-30[(2),] 30[(3)]
		Tai Po Industrial Estate – Fanling (Wah Ming)	30[(2)]
	73P	Tai Mei Tuk - Tsuen Wan (Nina Tower)	06:55, 07:05[(1)(2)]
		Tsuen Wan (Nina Tower) – Tai Mei Tuk	17:50, 18:10[(1)(2)]
	74E	Tai Mei Tuk - Kwun Tong Ferry Pier	07:00, 07:15, 07:30[(2)]
		Kwun Tong Ferry – Tai Mei Tuk	17:50, 18:10[(1)(2)]
	74K	Tai Po Market Station - Sam Mun Tsai (Circular) (via Sam Mun Tsai first)	14-30[(2)], 20-30[(3)(4)]
	75K	Tai Mei Tuk - Tai Po Market Station	10-25[(2),] 15-25[(3)(4)]
	73F	Education University of Hong Kong – Tsuen Wan (Nina Tower)	17:40[(1)(2)]
	74F	Education University of Hong Kong – Kwun Tong Ferry	17:40, 18:00[(1)(2)]
	96	Hong Sing Garden – Tai Po Industrial Estate	20-30[(1)(2)], 45[(3)(4)], 17:40[3)(4)], 18:30[3)(4)]
		Park Central – Tai Po Industrial Estate	17:45[(1)(2)]
		Tai Po Industrial Estate – Hong Sing Garden	15-30[(1)(2)], 40-45[(3)(4)]
	263C	Education University of Hong Kong – Tuen Mun Station	06:35, 17:50[(1)(2)]
	274P	Tai Po Industrial Estate – Wu Kai Sha Station	06:30, 07:20; 17:35, 17:50, 18:05; 18:20; 18:40, 19:00
GMB	20M	Fung Yun Road – Tai Po Central (Circular)	8-20[(2)], 10-20[(3)(4)]
	20B	Tai Po Market Station - Tung Tsz	10-20[(2)(3)], 12-20[(4)]
		Tung Tsz – Tai Po Market	
	20C	Tai Po Market Station - Tai Mei Tuk	4-10, 12-15[(1)(5)]
		Tai Mei Tuk – Tai Po Market Station	
	20K	Tai Po Market Station - Sam Mun Tsai	6-20[(2)(3)], 10-20[(4)]
		Sam Mun Tsai – Tai Po Market Station	
	20E	Tai Po Market Station – Shan Liu (Circular)	30[(2)(3)]
	20P	Fung Yuen - Tai Po Market Station (Circular)	5-15[(2)(3)], 6-15[(4)]
	20R	Tai Po Market Station – Wu Kau Tang	60
		Wu Kau Tang - Tai Po Market Station	
	20T	Tai Po Market Station – Tsz Shan Monastery	30[(2)]
		Tsz Shan Monastery – Tai Po Market Station	
	20G	Wong Yue Tan (Lok Sin Village) – Tai Po Market Station	12-15[(2)], 20-30[(3)]
	26	The Education University of Hong Kong – Bayshore Towers, Ma On Shan	6-9
Residents' Service	NR533	Mont Vert - Tai Wo Station (Circular)	10-30[(1)(2)], 30[(3)(4)]

Notes:
(1) Peak hour service only
(2) Weekday service
(3) Saturday service
(4) Sunday and Public holiday service
(5) Express Service

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

3.1.1 The proposed development is located in Fung Yuen, Tai Po as shown in **Figure 2.1**. It is accessed via Fung Yuen Road.

3.1.2 Fung Yuen Road is a single two-way carriageway connecting to Ting Kok Road to the south.

3.1.3 Ting Kok Road is a dual carriageway with two lanes in each direction connecting Bride's Pool to the east and Ting Tai Road to the west.

3.2 Critical Junctions in Surrounding Area

3.2.1 As shown in **Figure 3.1**, 7 junctions were identified to be critical for assessment of traffic impact due to the proposed development. They are listed in below **Table 3.1** and their existing junction layout arrangements are shown in **Figures 3.2** to **3.7** respectively.

Table 3.1 Identified Critical Junctions

Ref.	Junction	Type	Figure No.
A	Ting Kok Road / Dai Fat Street	Signal	3.2
B	Ting Kok Road / Fung Yuen Road	Signal	3.3
C	Ting Kok Road / Dai Fuk Road / Yuen Shin Road	Signal	3.4
D	Yuen Shin Road / Dai Fat Street	Signal	3.5
E	Tai Po Tai Wo Road / Yuen Shin Road	Signal	3.6
F	Fung Yuen Road / Access Road to Mont Vert	Priority	3.7
G	Future Junction at Fung Yuen Road / Bus Layby	Priority	5.2

3.2.2 In order to appraise the existing traffic condition in the above-mentioned critical junctions, traffic survey in the form of manual classified count was conducted on a typical weekday during AM and PM peak periods from 07:30 to 09:30 and from 17:00 to 19:00 on 14 Apr 2025.

3.2.3 Analysis of the observed traffic data indicates that the AM and PM peak hour flows occurred from 08:30 to 09:30 and from 17:30 to 18:30 respectively.

3.2.4 The observed traffic flows are presented in **Figure 3.8**.

3.2.5 The existing performance based on the observed traffic flows of the identified critical junctions was assessed. The results are summarized in **Table 3.3** and the junction calculation sheets are attached in **Appendix II**.

3.2.6 The assessment results in **Table 3.3** indicate that all junctions at present are operating with ample capacities for the observed traffic flows.

Table 3.2 Operational Performance of Critical Junctions for Observed Traffic Flows in 2025

Ref.	Junction	Method of Control	Year 2025 DFC[(1)] / RC[(2)] (%)	
			AM Peak	PM Peak
A	Ting Kok Road / Dai Fat Street	Signal	31%	51%
B	Ting Kok Road / Fung Yuen Road	Signal	21%	18%
C	Ting Kok Road / Dai Fuk Road / Yuen Shin Road	Signal	41%	44%
D	Yuen Shin Road / Dai Fat Street	Signal	19%	52%
E	Tai Po Tai Wo Road / Yuen Shin Road	Signal	29%	54%
F	Fung Yuen Road / Access Road to Mont Vert	Priority	0.17	0.13

Notes: (1) DFC = Design Ratio of Flow to Capacity for Priority Junction/ Roundabout
(2) RC = Reserve Capacity for Signalized Junction

3.3 Critical Road Links in Surrounding Area

3.3.1 The critical road links were identified and listed below in **Table 3.4**.

Table 3.3 Identified Critical Road Links

Ref.	Road Links
L1	Fung Yuen Road
L2	Ting Kok Road (between Dai Fat Street and Fung Yuen Road)
L3	Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)
L4	Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)
L5	Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)

3.3.2 The assessment of the critical road links for the observed flows in 2025 is shown in **Table 3.5**

Table 3.4 Assessment of Critical Road Links for Observed Flows in 2025

Ref.	Road Links	Direction	Capacity (pcu/hr)	Flow (pcu/hr)		V/C	
				AM Peak	PM Peak	AM Peak	PM Peak
L1	Fung Yuen Road	N/B	890	145	190	0.16	0.21
		S/B	890	205	155	0.23	0.17
L2	Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	W/B	2940	1360	1045	0.46	0.36
		E/B	2940	1270	1250	0.43	0.43
L3	Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	N/B	2940	1365	1400	0.46	0.48
		S/B	2940	1515	1160	0.52	0.39
L4	Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	N/B	2940	745	840	0.25	0.29
		S/B	2940	1100	835	0.37	0.28
L5	Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	N/B	2940	1615	1155	0.55	0.39
		S/B	2940	1660	1415	0.56	0.48

Note: (1) Pcu factor 1.226 adopted
(2) Capacity Reduction Factor of 0.9 applied due to high Heavy Vehicle percentage

3.3.3 The assessment results in **Table 3.5** indicate that all road links at present are operating with ample capacities for the observed flows in 2025.

4. FUTURE TRAFFIC CONDITION & TRAFFIC IMPACT ASSESSMENT

4.1 Design Year

4.1.1 It is anticipated that the proposed development will be completed in 2030 tentatively. In order to assess the possible traffic impacts to the local road network due to the proposed development, year 2033 (i.e. 3 years after construction work completion) has been adopted as the design year for this TIA. An implementation programme is attached in **Appendix I** for reference.

4.2 Traffic Forecast

4.2.1 The traffic growth can be estimated by applying growth factor, based on the following information sources:

I. Historical Trend - Historical traffic growth in Annual Traffic Census (ATC) published by the Transport Department (TD).

II. Planning Data - Territorial planning assumptions prepared by the Planning Department.

Historical Trend

4.2.2 Transport Department has traffic count stations in the vicinity of the proposed development. The traffic counts reported in the Annual Traffic Census over a period of six years, i.e., 2018 to 2023 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
		2018	2019	2020	2021	2022	2023	
5006	Ting Kok Rd (From Nam Wan Rd to Dai Kwai St)	30,900	30,840	29,430	32,240	30,440	29,190	-1.13%
6057	Yuen Shin Rd (From Tolo Highway to Ting Kok Rd)	38,630	40,170*	38,240*	40,100*	44,820	41,790	1.58%
6211	Ting Kok Rd (From Dai Kwai St to Tai Mei Tuk)	29,580	28,620	28,530	30,220	28,760	28,620	-0.66%
Total		**99,110**	**99,630**	**96,200**	**102,560**	**104,020**	**99,600**	**0.10%**

Notes: *AADT estimated by Growth factor

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 2021-Based Planning Data from 2021 to 2031

Zone	Population			Employment		
	2021	2026	2031	2021	2026	2031
Tai Po	316,450	348,900	343,250	96,600	94,800	89,800
Weight Average Growth (from 2021 to 2031)				***+0.47%***		

Adopted Growth Rate

4.2.4 A.A.D.T. of ATC indicates that the traffic flow of the local road network has an average annual growth rate of **+0.10%** from year 2018 to year 2023.

4.2.5 Whilst, the planning data indicates that the population and employment data of the study area are expected to grow with a weighted average annual growth rate of **+0.47%** from 2021 to 2031.

4.2.6 As a conservative approach, annual weighted average growth rate **+1.00%** p.a. is adopted.

4.3 Traffic Generations of Planned Adjacent "Committed" Developments

4.3.1 To fully reflect the growth traffic, trip generation of the future "Committed" developments in the vicinity have been taken into consideration. The developments are detailed in **Table 4.3** and their locations are shown in **Figure 4.1.**

Table 4.3 Adjacent Developments in the Vicinity

Adjacent Committed Developments						
Application No.	**Development site**	**Applied use**	**Use**	**Site Area**	**Assumed GFA**	**Flat No.**
/	36 Lo Fai Road	Private housing	Domestic	~341,600 m^2	~46,200 m^2	262
LSPS/001	Lo Fai Road and Ting Kok Road, Tai Po, New Territories (The remaining portions of Unserved District at Wong Yue Tan Lot Nos.11 and 14 and adjoining Government land)	Private housing development and public housing development or starter homes portion	Domestic	~20,300 m^2 (Site A)	~64,522 m^2	1,290
			Non- domestic		~1,000 m^2	/
			Domestic	~5,700 m^2 (Site B)	~23,000 m^2	460
A/TP/700	Chung Nga Road West Public Housing Development	Public Housing, GIC and retails	Domestic	~9,900 m^2	~52,880 m^2	1,292
			Non-domestic		~5,625 m^2	/
			Primary School	One 24-classroom to be provided at the adjoining School Site (outside Application Site)		
/	Tai Po Town Lot 246	Golf Course Development	Non-domestic	~527,244 m^2	~15,000 m^2	/
/	On Pong Road	Community Health Centre	Non-domestic	~4,500m^2	~31,580m^2	/
/	Area 33	CIC Training Academy Tai Po Training Ground	Non-domestic	/	/	/
/	Area 33	Football-cum-Rugby Pitch, Underground PVP	Non-domestic	~2.7ha	/	400 car spaces
/	Tai Po Sewage Treatment Works	PWP No. 5191DR Upgrading of Tai Po Sewage Treatment Works and Organic Waste and Sewage Sludge Co-digestion Facilities	Non-domestic	/	/	/

Note:
(1) According to the TIA of the Bus Depot (A/TP/685), most of the buses will leave and return to the depot between 00:00 and 06:00, there will be limited no. of buses during daytime. Its effect on AM and PM peaks is insignificant and therefore the Bus Depot was omitted in this TIA

4.3.2 The adopted trip rates are referring to the Trip Rates Table given in TPDM Volume 1 Chapter 3 Annex C. The estimation on trip generations and attractions of the adjacent planned developments are shown in **Table 4.4.**

Table 4.4 Estimated Trip Rates and Trip Generations and Attractions of Planned Developments in the Vicinity

Application No.	Development site		Units	Trip Rates (pcu/hr)			
				AM Peak		PM Peak	
				Gen.	Att.	Gen.	Att.
/	36 Lo Fai Road		Pcu/hr/flat	0.3252	0.2609	0.2835	0.4074
LSPS/001	Lo Fai Road and Ting Kok Road, Tai Po, New Territories (The remaining portions of Unserved District at Wong Yue Tan Lot Nos.11 and 14 and adjoining Government land)	Public Housing	Pcu/hr/flat	0.0761(1)	0.0573(1)	0.0350(1)	0.0451(1)
		Retail	Pcu/hr/100 sqm GFA	0.3307(1)	0.3342(1)	0.3839(1)	0.4504
		GIC	/	/	/	/	/
		Private Housing	Pcu/hr/flat	0.1021(1)	0.0709(1)	0.0415(1)	0.0464(1)
A/TP/700	Chung Nga Road West Public Housing Development	Public Housing	Pcu/hr/flat	0.0432	0.0326	0.0237	0.0301
		Retail	Pcu/hr/100 sqm GFA	0.2296	0.2434	0.3100	0.3563
		Primary School	Pcu/hr/classroom	0.5670(2)	1.000(2)	0.333(2)	0.167(2)
/	Tai Po Town Lot 246	Golf Course	/	/	/	/	/
/	On Pong Road Community Health Centre		Pcu/hr/100 sqm GFA	0.2350(3)	0.2350(3)	0.2300(3)	0.1150(3)
/	Area 33 CIC Training Academy Tai Po Training Ground		/	/	/	/	/
/	Area 33 Football-cum-Rugby Pitch, Underground PVP		Pcu/hr/parking space	0.0771(4)	0.0907(4)	0.0493(4)	0.0811(4)
/	PWP No. 5191DR Upgrading of Tai Po Sewage Treatment Works and Organic Waste and Sewage Sludge Co-digestion Facilities		/	/	/	/	/

Application No.	Development site		Parameters	AM Peak		PM Peak	
				Gen.	Att.	Gen.	Att.
/	36 Lo Fai Road (Assume 40% Occupancy) (8)		262 flats	86 (52)	69 (41)	75 (45)	107 (64)
LSPS/001	Lo Fai Road and Ting Kok Road, Tai Po, New Territories (The remaining portions of Unserved District at Wong Yue Tan Lot Nos.11 and 14 and adjoining Government land)	Public Housing	1,290 flats	100(1)	75(1)	45(1)	60(1)
		Retail	~1,000m^2	5(1)	5(1)	5(1)	5(1)
		GIC	/	30(1)	30(1)	25(1)	30(1)
		Private Housing	460 flats	45(1)	35(1)	20(1)	20(1)
A/TP/700	Chung Nga Road West Public Housing Development	Public Housing	1,292 flats	56	43	31	39
		Retail	~800m^2	2	2	3	3
		Primary School	24 classrooms	14	24	8	5
/	Tai Po Town Lot 246	Golf Course	/	8(5)	32(5)	50(5)	26(5)
/	On Pong Road Community Health Centre		~31,580m^2	75	75	73	37
/	Area 33 CIC Training Academy Tai Po Training Ground		/	23(6)	23(6)	23(6)	23(6)
/	Area 33 Football-cum-Rugby Pitch, Underground PVP		400 parking spaces	31	37	20	33
/	PWP No. 5191DR Upgrading of Tai Po Sewage Treatment Works and Organic Waste and Sewage Sludge Co-digestion Facilities		/	10(7)	10(7)	10(7)	10(7)

Note
(1) According to its TIA
(2) Adopted trip rate of primary school in Queen's Hill
(3) Adopted trip rate of community health centre in the approved TIA report for Queen's Hill, Fanling
(4) Based on surveyed trip rate at Tai Po Tung Cheong Street Sports Cetnre Public Vehicle Park
(5) According to its TIA
(6) Based on previous study on Construction Industry Council Training Academy
(7) Information not disclosed to for private planning application use. Assumptions have been made
(8) 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 Reference Traffic Flow in Year 2033

4.4.1 The reference traffic flow is estimated by applying the adopted growth rate to the baseline traffic flow in the current year, and the 2033 reference traffic flows for critical junctions can be computed using the following calculation:

2033 Reference Traffic Flows (Without Proposed Development) = **2025 (Observed Traffic Flows** x **Adopted Growth Factor i.e., +1.00% p.a. for 8 years**) + **Traffic Flows of Planned Adjacent Committed Developments**

4.4.2 The 2033 Reference Traffic Flows at surrounding critical junctions are shown in **Figure 4.2**.

4.5 Traffic Generations of the Proposed Development

4.5.1 In order to estimate the traffic generation and attraction of the proposed development, traffic surveys were carried out for the existing Mont Vert at Fung Yuen Road. The surveyed results, as shown in **Table 4.5** were used in deriving the trip rates for the proposed development.

4.5.2 Reference has been made to the trip generation rates as stipulated in Volume 1 Chapter 3 Appendix C of the latest T.P.D.M published by Transport Department for the small commercial site. The adopted trips rates are summarised in the below **Table 4.6**.

4.5.3 Based on development parameters in **Table 2.1**, the trips generated and attracted by the proposed development are estimated and summarised in the **Table 4.6**.

Table 4.5 Adopted Trip Rates for the Proposed Development

		Surveyed Trips (pcu/hr)			
		AM		PM	
		Gen.	Att.	Gen.	Att.
Mont Vert	1350 flats	105	85	85	80
	Trip Rates (pcu/hr/flat)	0.0778	0.0630	0.0630	0.0593

Table 4.6 Trip for the Proposed Development

Residential Use										
Use	No. of Flats		Trips Rates (pcu/hr/flat)				Trips (pcu/hr)			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Gen.	Att.	Gen.	Att.	Gen.	Att.	Gen.	Att.
Private Housing	1,988		0.0778(1)	0.0630(1)	0.0630(1)	0.0593(1)	155	125	125	118
	Total	***1,988***	***Sub-Total***				***155***	***125***	***125***	***118***
Commercial Use										
Commercial	Not more than 800 m^2		pcu/100 m^2/hr				2	2	2	3
			0.2296	0.2434	0.3100	0.3563				
Sub-Total							***2***	***2***	***2***	***3***
Social Welfare Complex										
RCHE(1)	150 beds		0.0259	0.0345	0.0604	0.0475	4	5	9	7
Sub-Total							***4***	***5***	***9***	***7***
Total							**161**	**132**	**136**	**128**

Note: (1) Internal Trip Rates

4.6 Traffic Forecast for Design Year 2033

4.6.1 The net traffic trips of the proposed development are then superimposed onto the year 2033 Reference Traffic Flows (without the proposed development) as shown in **Figure 4.2** to derive the year 2033 Design Traffic Flows (with the proposed development).

2033 Design Traffic Flows (With Proposed Development) = **2033 Reference Traffic Flows (Without Proposed Development)** + **Proposed Development Traffic Flows**

4.6.2 The design traffic flows during AM and PM peak periods in year 2033 (with the proposed development) are shown in **Figure 4.3**.

4.7 Operational Assessment for Design Flows

Assessment of Critical Junctions

4.7.1 To assess traffic impacts due to the proposed development, operational assessment of the critical junctions in **Chapter 3** is carried out for both the reference (without the proposed development) and the design (with the proposed development) scenarios in year 2033. The results are summarized in **Table 4.7**

Table 4.7 Operational Performance of Critical Junctions in Year 2033

Ref.	Junction	Method of Control	Year 2033 DFC[(1)] / RC[(2)] (%)			
			Reference Scenario (Without the Proposed Development)		Design Scenario (With the Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
A	Ting Kok Road / Dai Fat Street	Signal	**3%**	19%	**3%**	18%
B	Ting Kok Road / Fung Yuen Road	Signal	**0%**	**-2%**	**-17%**	**-18%**
C	Ting Kok Road / Dai Fuk Road / Yuen Shin Road	Signal	**10%**	16%	**5%**	**9%**
D	Yuen Shin Road / Dai Fat Street	Signal	**-3%**	20%	**-6%**	**14%**
E	Tai Po Tai Wo Road / Yuen Shin Road	Signal	**11%**	31%	**10%**	30%
F	Fung Yuen Road / Access Road to Mont Vert	Priority	0.18	0.14	0.18	0.14
G	Future Junction at Fung Yuen Road / Bus Layby	Priority	-	-	0.03	0.03

Notes: (1) DFC = Design Ratio of Flow to Capacity for Priority Junction/Roundabout
(2) RC = Reserve Capacity for Signalized Junction

4.7.2 Based on the assessment results given in **Table 4.7**, most of the critical junctions will operate over capacities in both reference (without the proposed development) and design (with the proposed development) scenarios in year 2033, namely:

- **Junction A** - Ting Kok Road/ Dai Fai Street with RC <15% during AM peak hour without and with the proposed development;
- **Junction B** - Ting Kok Road / Fung Yuen Road with RC <15% during both AM and PM peak hours without and with the proposed development;
- **Junction C** - Ting Kok Road / Dai Fuk Road / Yuen Shin Road with RC <15% during AM peak hour without the proposed development, both AM and PM peak hours with the proposed development;

- **Junction D** - Yuen Shin Road / Dai Fat Street with RC <15% during AM peak hour without and with the proposed development;
- **Junction E** - Tai Po Tai Wo Road / Yuen Shin Road with RC <15% during AM peak hour without and with the proposed development.

4.7.3 Improvement schemes are proposed for Junction A, Junction B, Junction C, Junction D and Junction E will be discussed in **Section 4.8**.

4.8 Proposed Improvement Schemes of Critical Junctions

4.8.1 Improvement schemes are proposed at Junction A, Junction B, Junction C, Junction D and Junction E. The details of the improvement schemes are illustrated in **Figure 4.4 to Figure 4.8.** The operational performances are summarized in **Table 4.8**.

Table 4.8 Operational Performance in 2033 with Proposed Improvement

Ref.	Junction	Proposed Improvement Details	Method of Control	Year 2033 RC[(1)]			
				Design Scenario (Without Proposed Improvement)		Design Scenario (With Proposed Improvement)	
				AM Peak	PM Peak	AM Peak	PM Peak
A	Ting Kok Road/ Dai Fat Street	As shown in **Figure 4.4**: • Additional lane for right turn movement at Ting Kok Road (Eastbound); • Modifying the road marking. The existing shared use of straight and right turn movements will change to straight ahead movement; • Island and pedestrian crossing are slightly shifted to the southward at Dai Fat Street; • Relocate the bus stop at Ting Kok Road; • Cycle time is modified to 120s at peak hours.	Signal	**3%**	18%	48%	75%

Ref.	Junction	Proposed Improvement Details	Method of Control	Year 2033 RC[(1)]			
				Design Scenario (Without Proposed Improvement)		Design Scenario (With Proposed Improvement)	
				AM Peak	PM Peak	AM Peak	PM Peak
B	Ting Kok Road / Fung Yuen Road	As shown in **Figure 4.5:** • Changing direct crossing at Ting Kok Road to the opposite side; • Modifying Fung Yuen Road (Southbound) left and right turn movements to right turn movement only; • Adding channelizing island and additional lane for left turn movement; • Modifying the road marking from shared use of straight ahead and right turn to the straight ahead movement only at Ting Kok Road (Westbound); • Removal of the pocket at Ting Kok Road (Westbound); • Converting crossing at Fung Yuen Road to stagger crossing so that the inter-green time of this junction is substantially reduced; • Relocation of bus stop; • The unnamed road will allow for two-way traffic with traffic road markings on it; • Additional right turn movement will be provided in Ting Kok Road (Westbound); • Pedestrian crossing will be provided in the unnamed road; • Cycle time is modified to 120s at peak hours.	Signal	**-17%**	**-18%**	44%	42%
C	Ting Kok Road / Dai Fuk Road / Yuen Shin Road	As shown in **Figure 4.6:** • Additional lane of left turn from Ting Kok Road (E/B) to Ting Kok Road (N/B); • Modifying the cycling time to 120s for both AM and PM peak hours to reduce the overall lost time; • Modifying the right turn movement at Ting Kok Road (N/B) to shared use of straight ahead and right turn; • Modifying the left turn movement to straight ahead movement at Ting Kok Road (E/B); • Modifying the straight ahead	Signal	**5%**	**9%**	35%	43%

Ref.	Junction	Proposed Improvement Details	Method of Control	Year 2033 RC[(1)]			
				Design Scenario (Without Proposed Improvement)		Design Scenario (With Proposed Improvement)	
				AM Peak	PM Peak	AM Peak	PM Peak
		movement of Ting Kok Road (E/B) right turn to Yuen Shin Road.					
D	Yuen Shin Road / Dai Fat Street	As shown in **Figure 4.7:** • Modifying Yuen Shin Road (Southbound) to straight ahead and left turn movements to straight ahead movement only; • Additional lane on Yuen Shin Road (Southbound); • Modifying Yuen Shin Road (Northbound) shared straight ahead and right turn movements to turning right movement only; • Modifying Yuen Shin Road (Northbound) straight ahead movement only to straight ahead and right turn movements; • Additional straight ahead movement lane of Yuen Shin Road (Northbound); • Cycle time is modified to 120s at peak hours.	Signal	**-6%**	**14%**	32%	46%
E	Tai Po Tai Wo Road / Yuen Shin Road	As shown in **Figure 4.8:** • Additional right turn movement lane of Tai Po Tai Wo Road (Eastbound) by narrowing down the central divider; • Modifying the road markings on Yuen Shin Road (Southbound); • Narrowing and shortening the central divider at Tai Po Tai Wo Road; • Guided road markings are provided along Yuen Shin Road (Northbound); • Cycle time is modified to 120s at peak hours.	Signal	**10%**	30%	28%	52%

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

4.8.2 **Table 4.8** revealed that the critical junctions would operate with ample capacities in design year 2033 after modification.

4.8.3 The detailed arrangements, such as signal aspects, traffic controllers, vehicle detector loops, etc. will be provided in the junction improvement works. The detailed design will be refined in the later stage upon the approval of this planning application and verified during the land exchange application process.

Assessment of Critical Road Links

4.8.4 The assessment of the critical road links for the design flows in 2033 is shown in **Table 4.9.**

Table 4.9 Assessment of Critical Road Links for Design Flows in 2033

Ref.	Road Links	Direction	Capacity (pcu/hr)	Flow (pcu/hr)		V/C	
				AM Peak	PM Peak	AM Peak	PM Peak
L1	Fung Yuen Road	N/B	890	295	335	0.33	0.38
		S/B	890	380	300	0.43	0.34
L2	Ting Kok Road (between Dai Fat Street and Fung Yuen Road)	W/B	2940	1720	1325	0.59	0.45
		E/B	2940	1600	1570	0.54	0.53
L3	Ting Kok Road (between Fung Yuen Road and Dai Fuk Road)	N/B	2940	1825	1845	0.62	0.63
		S/B	2940	2035	1570	0.69	0.53
L4	Yuen Shin Road (between Dai Fuk Road and Dai Fat Street)	N/B	2940	1010	1095	0.34	0.37
		S/B	2940	1440	1130	0.49	0.38
L5	Yuen Shin Road (between Dai Fat Street and Tai Po Tai Wo Road)	N/B	2940	1965	1440	0.67	0.49
		S/B	2940	2080	1765	0.71	0.60

Note: (1) Pcu factor 1.226 adopted
(2) Capacity Reduction Factor of 0.9 applied due to high Heavy Vehicle percentage

4.8.5 The assessment results in **Table 4.9** indicate that all road links at present will be operating with ample capacities for the Design Flows in 2033.

4.8.6 The road improvement works listed in the **Table 4.8** will be responsible by the applicant on his own cost before population intake and Occupation Permit.

4.8.7 The OP year of the applicant's site will be 2030, which is 3 years earlier than the OP year of LSPS/0001, i.e. 2033. Throughout the calculation, the applicant has taken into account the LSPS/0001, and the operational performance with the proposed improvement works will operate with ample capacities. If there are any substantial changes, the applicant will update the traffic review report in the land exchange stage.

4.8.8 The applicant will also undertake all the coordination works and interface issues regarding the junction improvement works.

5. PUBLIC TRANSPORT DEMAND

5.1 Survey on Existing Public Transport Service at Fung Yuen Bus Terminus

5.1.1 The proposed development is a residential and social complex development. It is assumed that the outbound trips for work and school during weekday morning peak will be the most critical. This will be adopted for assessment purposes for this study.

5.1.2 A traffic survey on traffic pattern and localized public transport demand survey at bus/ GMB stops in the vicinity was carried out during the morning peak period, from 7:30am to 9:30am on a typical weekday in May 2025. It is note that no special events happened on the survey date. Analysis of the observed traffic data indicated that the peak hour flow in the AM peak occurred from 07:30 to 08:30.

5.1.3 The details of bus stop locations and findings are shown in **Figure 5.1** and **Table 5.1** respectively.

5.1.4 The same design year as vehicular traffic forecast for Year 2033 is adopted for the future public transport demand forecast.

5.1.5 Based on the observed flows and adopted the growth rate of **1.00%**, the pedestrian flow is then superimposed onto the design year 2033 with the assumption of the public transport demand. This derives the year 2033 reference scenario (without the proposed development). The details of the calculation of the reference case are shown in the **Table 5.2**.

5.1.6 The maximum occupancy rate of franchised bus services is 75%. The 75% rate will only be applied in the year 2033 calculation (for both reference and design cases).

Table 5.1 Observed Boarding/ Alighting of Public Transport in AM Peak Hour in 2025

	Bus /GMB Stop	Mode	Route No.	Observed Vehicular Trips [A]	Passenger Capacity (per hour) [B]	Year 2025 Existing Scenario (per hour)					
						Surveyed passengers on board arriving bus stop [C]	Total no. of Boarding passengers [D]	Total no. of Alighting passengers [E]	Surveyed passengers on board leaving bus stop [F]=[C]+[D]	Surplus Capacity (G)=(B)-(F)	Surplus Capacity %
AM Peak (0730-0830)	**Inbound**										
	A	Bus	74E	2	240	156	53	0	209	31	13%
		GMB	20M	6	114	10	94	10	94	20	18%
			20P	9	171	6	162	6	162	9	5%
	C	GMB	20M	5	95	77	2	0	79	16	17%
			20P	10	190	151	0	0	151	39	21%
	E	GMB	20M	5	95	81	0	0	81	14	15%
			20P	10	190	151	0	0	151	39	21%
	G	GMB	20M	5	95	81	1	0	82	13	14%
			20P	10	190	154	0	0	154	36	19%
	H	Bus	73	3	360	36	1	5	32	328	91%
			74K	7	840	432	11	4	439	401	48%
			96	2	240	24	0	0	24	216	90%
		GMB	20B	9	171	104	0	5	99	72	42%
			20C	17	323	176	1	9	168	155	48%
			20G	3	57	20	0	0	20	37	65%
			20K	11	209	168	1	16	153	56	27%
			20R	1	19	12	0	0	12	7	37%
			26	15	285	243	0	1	242	43	15%
	Outbound										
	A	Bus	74E	2	240	156	53	0	209	31	13%
		GMB	20M	6	114	10	94	10	94	20	18%
			20P	9	171	6	162	6	162	9	5%
	B	GMB	20M	6	114	39	0	16	23	91	80%
			20P	9	171	28	0	7	21	150	88%
	D	Bus	74E	2	240	156	0	0	156	84	35%
		GMB	20M	6	114	40	0	0	40	74	65%
			20P	10	190	31	0	0	31	159	84%
	F	Bus	74E	2	240	156	0	0	156	84	35%
		GMB	20M	6	114	40	0	0	40	74	65%
			20P	10	190	31	0	0	31	159	84%
	I	Bus	72A	2	240	24	0	0	24	216	90%
			73	2	240	24	0	0	24	216	90%
			74E	2	240	144	0	0	144	96	40%
			74K	4	480	216	2	3	215	265	55%
			75K	5	600	396	0	0	396	204	34%
			75P	1	120	84	0	0	84	36	30%
			96	1	120	12	1	0	13	107	89%
		GMB	20B	5	95	95	0	1	94	1	1%
			20C	12	228	225	0	2	223	5	2%
			20E	2	38	35	0	0	35	3	8%
			20G	2	38	36	0	0	36	2	5%
			20K	8	152	87	0	0	87	65	43%
			20R	1	19	18	0	0	18	1	5%
			26	13	247	80	4	0	84	163	66%

Note: Assumed capacity for bus: 120 seats; assumed capacity for GMB: 19 seats

Table 5.2 Boarding/ Alighting of Public Transport at Fung Yuen in AM Peak Hour in 2033 (without the Proposed Development)

	Bus /GMB Stop	Mode	Route No.	Observed Vehicular Trips [A]	Passenger Capacity (per hour) [H] (1)	Year 2033 Reference Scenario (per hour)						
						Surveyed passengers on board arriving bus stop [I]=[C]*{1+G.F%}^8	Total no. of Boarding passengers [J]=[D]*{1+G.F%}^8	Total no. of Alighting passengers [K][E]*{1+G.F%}^8	Surveyed passengers on board leaving bus stop [L]=[J]+[I]	Surplus Capacity (N)=(H)-(I)-(J)	Surplus Capacity %	Additional Frequency Required
AM Peak (0730-0830)	**Inbound**											
	A	Bus	74E	2	180	169	57	0	226	-46	-26%	1
		GMB	20M	6	114	11	102	11	102	12	11%	-
			20P	9	171	6	175	6	175	-4	-2%	1
	C	GMB	20M	5	95	83	2	0	85	10	11%	-
			20P	10	190	164	0	0	164	26	14%	-
	E	GMB	20M	5	95	88	0	0	88	7	7%	-
			20P	10	190	164	0	0	164	26	14%	-
	G	GMB	20M	5	95	88	1	0	89	6	6%	-
			20P	10	190	167	0	0	167	23	12%	-
	H	Bus	73	3	270	39	1	5	35	235	87%	-
			74K	7	630	468	12	4	476	154	24%	-
			96	2	180	26	0	0	26	154	86%	-
		GMB	20B	9	171	113	0	5	108	63	37%	-
			20C	17	323	191	1	10	182	141	44%	-
			20G	3	57	22	0	0	22	35	61%	-
			20K	11	209	182	1	17	166	43	21%	-
			20R	1	19	13	0	0	13	6	32%	-
			26	15	285	263	0	1	262	23	8%	-
	Outbound											
	A	Bus	74E	2	180	169	57	0	226	-46	-26%	1
		GMB	20M	6	114	11	102	11	102	12	11%	-
			20P	9	171	6	175	6	175	-4	-2%	1
	B	GMB	20M	6	114	42	0	17	25	89	78%	-
			20P	9	171	30	0	8	22	149	87%	-
	D	Bus	74E	2	180	169	0	0	169	11	6%	-
		GMB	20M	6	114	43	0	0	43	71	62%	-
			20P	10	190	34	0	0	34	156	82%	-
	F	Bus	74E	2	180	169	0	0	169	11	6%	-
		GMB	20M	6	114	43	0	0	43	71	62%	-
			20P	10	190	34	0	0	34	156	82%	-
	I	Bus	72A	2	180	26	0	0	26	154	86%	-
			73	2	180	26	0	0	26	154	86%	-
			74E	2	180	156	0	0	156	24	13%	-
			74K	4	360	234	2	3	233	127	35%	-
			75K	5	450	429	0	0	429	21	5%	-
			75P	1	90	91	0	0	91	-1	-1%	1
			96	1	90	13	1	0	14	76	84%	-
		GMB	20B	5	95	103	0	1	102	-7	-7%	1
			20C	12	228	244	0	2	242	-14	-6%	1
			20E	2	38	38	0	0	38	0	0%	-
			20G	2	38	39	0	0	39	-1	-3%	1
			20K	8	152	94	0	0	94	58	38%	-
			20R	1	19	19	0	0	19	0	0%	-
			26	13	247	87	4	0	91	156	63%	-

Note: (1) The maximum occupancy of franchised bus will be 75%
(2) Assumed capacity for bus: 120 seats; assumed capacity for GMB: 19 seats

5.1.7 **Table 5.2** indicates that there are shortages of GMB services 20B, 20C, 20G, 20P and bus services 74E, 75P in AM for the reference case in year 2033.

5.2 Assessment on Public Transport Demand in Year 2033 for Proposed Development

5.2.1 The assessment year of the proposed development will be year 2033.

5.2.2 The anticipated population size of the development is calculated based on the person per flat (PPOF) of 2.6. The results are shown in the **Table 5.3**.

Table 5.3 Size of Population of the Proposed Development

No. of Flats	Population (PPF = 2.6)	Anticipated Completion Year	Assessment Year
1988	5169	2030	2033
Total	**5169**	-	-

5.2.3 Reference has been made to the modal split in the 2021 Population Census for Tai Po District as shown in **Table 5.4**.

Table 5.4 Modal Split in 2021 Population Census Tai Po District

Mode			Percentage in 2021 Population Census Tai Po District
Franchised Bus			52%
PLB / GMB			13%
Others	MTR (Local Line)	-	35%
	On Foot	-	
	Private Car/Passenger Van	28%	
	Company bus / van	-	
	Light Rail (Light Rail)	-	
	Taxi	2%	
	Residential Coach	1%	
	Ferry / Vessel	-	
	Others	4%	
Total			**100%**

Table 5.5 Boarding Distribution Arising from Proposed Development by Transport Mode

Mode	Percentage in 2021 Population Census Tai Po District	Passenger Demand
		Proposed Development
Franchised Bus	52%(1)	590
GMB	13%(1)	147
Sub-total	***65%***	***737***
Others	35%(1)	398
Total	100%	= 1,988(2) x 2.6(2) x 1.83(3) x 12%(3) = 1,135 (2-ways)
Boarding Distribution		
AM Peak Inbound (15%)(4)	Bus	89
	GMB	22
AM Peak Outbound (85%)(4)	Bus	501
	GMB	125

Notes:
(1) Extracted from Table 5.4.
(2) Extracted from Table 5.3.
(3) Peak hour consists of 12% of daily trips according to E2.9 of TCS Report 2011.
(4) Distribution % is extracted from the table of 5.1

5.2.4 As discussed with relevant Government departments previously for enhancing the convenience of the proposed residential development, a bus layby is proposed. The proposed layby with bus turn-around facility is adjacent to the Tower 6. Further details are shown in **Figure 5.2**.

5.2.5 It is assumed that the proposed bus layby will have the same bus routes as Fung Yuen Bus Terminus. For GMB services, it is anticipated that the residents of the proposed development will use the nearest stop at Case Papillon and Tin Sam Tsuen for existing GMB services along Fung Yuen Road and the GMB stops at Ting Kok Road for existing GMB services along Ting Kok Road.

5.2.6 The future demand for public transport is derived from the equation below:

2033 Reference Passenger Flows (Without Proposed Development) = **2025 Passenger Flows** **x** **Adopted Growth Factor (i.e. +1.00% p.a. for 8 years)**

2033 Design Passenger Flows (With Proposed Development)	=	**2033 Reference Passenger Flows (Without Proposed Development)**	+	**Proposed Development Passenger Flows**

5.2.7 Based on **Table 5.1** and **Table 5.2**, the expected demand of public transport in Year 2033 with proposed development is shown in **Table 5.6**.

Table 5.6 Boarding Distribution Arising from Proposed Development by Transport Mode in the AM Peak Hour

	Bus /GMB Stop	Mode	Route No.	Year 2033 Reference Scenario (without proposed development)		Year 2033 Design Scenario (with proposed development)				
				Surplus Capacity (without the Proposed Development) [C]	Additional Frequency Required [B]	% of Distribution	No. of Passengers from Proposed Development [D]	Surplus Capacity (per hour) [E] = [C] - [D]	Surplus Capacity in %	Additional Frequency Required
AM Peak (0730-0830)	**Inbound**									
	A	Bus	74E	-46	1	-	0	-46	-26%	1
		GMB	20M	12	-	-	0	12	11%	-
			20P	-4	1	-	0	-4	-2%	1
	C	GMB	20M	10	-	-	0	10	11%	-
			20P	26	-	-	0	26	14%	-
	E	GMB	20M	7	-	9%	2	5	5%	-
			20P	26	-	9%	2	24	13%	-
	G	GMB	20M	6	-	9%	2	4	4%	-
			20P	23	-	9%	2	21	11%	-
	H	Bus	73	235	-	56%	49	186	69%	-
			74K	154	-	44%	40	114	18%	-
			96	154	-	0%	0	154	86%	-
		GMB	20B	63	-	10%	2	61	36%	-
			20C	141	-	20%	4	137	42%	-
			20G	35	-	0%	0	35	61%	-
			20K	43	-	34%	7	36	17%	-
			20R	6	-	0%	0	6	32%	-
			26	23	-	2%	0	23	8%	-
	Outbound									
	A	Bus	74E	-46	1	-	0	-46	-26%	1
		GMB	20M	12	-	-	0	12	11%	-
			20P	-4	1	-	0	-4	-2%	1
	B	GMB	20M	89	-	-	0	89	78%	-
			20P	149	-	-	0	149	87%	-
	D	Bus	74E	11	-	32%	159	-148	-82%	2
		GMB	20M	71	-	25%	31	40	35%	-
			20P	156	-	25%	31	125	66%	-
	F	Bus	74E	11	-	32%	159	-148	-82%	2
		GMB	20M	71	-	25%	31	40	35%	-
			20P	156	-	25%	31	125	66%	-
	I	Bus	72A	154	-	0%	0	154	86%	-
			73	154	-	0%	0	154	86%	-
			74E	24	-	0%	0	24	13%	-
			74K	127	-	5%	25	102	28%	-
			75K	21	-	0%	0	21	5%	-
			75P	-1	1	0%	0	-1	-1%	1
			96	76	-	0%	0	76	84%	-
		GMB	20B	-7	1	0%	1	-8	-8%	1
			20C	-14	1	1%	1	-15	-7%	1
			20E	0	-	0%	0	0	0%	-
			20G	-1	1	0%	0	-1	-3%	1
			20K	58	-	0%	0	58	38%	-
			20R	0	-	0%	0	0	0%	-
			26	156	-	0%	0	156	63%	-

5.2.8 Based on the assessment, it is foreseen that the spare capacity of some of the existing public transport services in morning peak hour will be insufficient to cater the future demand by Year 2033 induced by both with and without the proposed development.

Mitigation Measures

5.2.9 It is proposed to enhance the existing public transport services by introducing more additional trips to meet the shortage as given in **Table 5.6**.

5.3 Assessment Waiting Area of Bus/ GMB Stop

5.3.1 The existing bus/ GMB stops assessed in **Table 5.6** are expected to serve the residents of the proposed development.

5.3.2 Analysis on the estimated waiting passengers due to proposed development is required to assess whether the bus/GMB stops will have sufficient space for waiting passengers.

5.3.3 Based on the calculation of peak hour trips for franchised bus and minibus summarized in **Table 5.6** and the frequency of the public transport services recorded, the number of waiting passengers per vehicular trip can be estimated and resulted in **Table 5.7**.

Table 5.7 Inbound and Outbound Direction during the AM Peak in Year 2033

	Bus /GMB Stop	Mode	Route No.	Year 2033 Reference Scenario (without proposed development)		Year 2033 Design Scenario (with proposed development)				
				Total no. of Boarding Passengers [A]	Total no. of Alighting Passengers [B]	No. of Passengers from Proposed Development [C]	Total Boarding Passenger (per hour) [D] = [A] + [C]	No. of Bus/GMB in Peak Hour [E](2)	Average No. of Waiting Passenger in Bus/GMB Stop per vehicular trip [F] = [D]/[E]	Average No. of Waiting Passenger per vehicular trip [G]
AM Peak (0730-0830)	**Inbound**									
	G	GMB	20M	1	0	2	3	5	1	2
			20P	0	0	2	2	10	1	
	H	Bus	73	1	5	49	50	3	17	28
			74K	12	4	40	52	7	8	
			96	0	0	0	0	2	0	
		GMB	20B	0	5	2	2	9	1	
			20C	1	10	4	5	17	1	
			20G	0	0	0	0	3	0	
			20K	1	17	7	8	11	1	
			20R	0	0	0	0	1	0	
			26	0	1	0	0	15	0	
	Outbound									
	F	Bus	74E	0	0	159	159	4	40	50
		GMB	20M	0	0	31	31	6	6	
			20P	0	0	31	31	10	4	
	I	Bus	72A	0	0	0	0	2	0	11
			73	0	0	0	0	2	0	
			74E	0	0	0	0	2	0	
			74K	2	3	25	27	4	7	
			75K	0	0	0	0	5	0	
			75P	0	0	0	0	2	0	
			96	1	0	0	1	1	1	
		GMB	20B	0	1	1	1	6	1	
			20C	0	2	1	1	13	1	
			20E	0	0	0	0	2	0	
			20G	0	0	0	0	3	0	
			20K	0	0	0	0	8	0	
			20R	0	0	0	0	1	0	
			26	4	0	0	4	13	1	

Notes:
(1) The location of Bus/ GMB stops refer to **Figure 5.1**
(2) Item [E] refers to **Table 5.1**

5.3.4 In order to ensure a desirable walking environment along the layby, the concept of Level-of-Service (LOS) has been applied. LOS directly relates to the pedestrian comfort and ease with which pedestrians proceed along the walkway.

5.3.5 The Break Points of LOS levels are determined on the basis of flow rate, pedestrian spacing, and the probabilities of conflict at various concentrations. These standards with relevant descriptions are summarized in **Table 5.8**.

Table 5.8 LOS Standard Criteria for Queuing Area

LOS	Average Pedestrian Space (m^2/p)	Description
A	>1.2	Standing and free circulation through the queuing area is possible without disturbing others within the queue.
B	>0.9 – 1.2	Standing and partially restricted circulation to avoid disturbing others in the queue is possible.
C	>0.6 – 0.9	Standing and restricted circulation through the queue area by disturbing others in the queue is possible; this density is within the range of personal comfort.
D	>0.3 – 0.6	Standing without touching is possible; circulation is severely restricted within the queue and forward movement is only possible as a group; long-term waiting at this density is uncomfortable.
E	>0.2 – 0.3	Standing in physical contact with others is unavoidable; circulation in the queue is not possible; queuing can only be sustained for a short period without serious discomfort.
F	<0.2	Virtually all persons within the queue are standing in direct physical contact with others; this density is extremely uncomfortable; no movement is possible in the queue; there is potential for panic in large crowds at this density.

Source: Chapter 11 of Highways Capacity Manual 2000

5.3.6 The LOS is calculated and the results are given in **Table 5.9** below. In addition, the corresponding bus/ GMB stop locations and the area of the waiting space can be referred to **Figure 5.3.**

Table 5.9 LOS Assessment on Waiting Space at Bus Stops in AM Peak in 2033

	Bus/ GMB Stops	Approx. Length (m)	Approx. Width (m)	Approx. Waiting Space Area (m^2)	Waiting Space (m^2/p)	LOS	Remark
AM Peak	F	22	1.5	33	= 33 ÷ 50 = 0.66	C	Acceptable
	G	11	2.2	24.2	= 24.2 ÷ 2 = 12.1	A	Acceptable
	H	16	1.3	20.8	= 20.8 ÷ 28 = 0.74	C	Acceptable
	I	20	1.4	28	= 28 ÷ 11 = 2.55	A	Acceptable

5.3.7 Based on the above calculation and assessment, LOS A and C are achieved. They are considered acceptable in traffic engineering point of view.

6. PEDESTRIAN ASSESSMENT

6.1 Survey on Pedestrian Flows in the Vicinity

6.1.1 To investigate the serviceability of pedestrian pathways in the vicinity in design year 2033, a pedestrian assessment is conducted.

6.1.2 Pedestrian count surveys were carried out to obtain the existing pedestrian demand on the major pedestrian pathways in the vicinity of the proposed development site.

6.1.3 The survey was carried out on a normal weekday 13 May 2025, from 07:30 to 09:30 (AM Peak), from 17:00 to 19:00 (PM Peak), and there is no special event happened around.

6.1.4 The assessment sections are shown in the **Figure 6.1** and the observed pedestrian flow is shown in **Figure 6.2.**

6.1.5 The level-of-service (LOS) for baseline operational performances of the identified critical sections and pedestrian crossings are listed in **Table 6.1** and **Table 6.2**.

Table 6.1 Performance of Critical Footpath in Observed Scenario

Critical Sections	Total Footpath Width (m)[1]	Effective Width (m)[2]	Baseline Scenario (Year 2025)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) [3]	LOS	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) [3]	LOS
A	1.6	0.6	195	5.42	A	150	4.17	A
B	1.7	0.7	70	1.67	A	55	1.31	A
C	2	1	65	1.08	A	65	1.08	A
D	2	1	75	1.25	A	100	1.67	A
E	1	0.5	75	2.5	A	70	2.33	A
F	2	1	160	2.67	A	150	2.5	A
G	2	1	25	0.42	A	50	0.83	A
H	2.7	1.7	60	0.59	A	85	0.83	A
I	2	1	80	1.33	A	120	2	A
J	2.1	1.1	50	0.76	A	40	0.61	A
L	2	1	55	0.92	A	40	0.67	A
M	2	1	50	0.83	A	40	0.67	A

Notes:
(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls each for both sides).
(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 60 min / Effective Width.
(3) LOS details extracted from the HCM are tabulated in TPDM Volume 6 Chapter 10 Clause 10.4.2.3.

Table 6.2 Performance of Pedestrian Crossings in Observed Scenario

Crossing	Method of Control	Observed Scenario (Year 2025)					
		AM Peak			PM Peak		
		Crossing Demand (ped/hr)	Crossing Capacity [1] (ped/hr)	V/C	Crossing Demand (ped/hr)	Crossing Capacity [1] (ped/hr)	V/C
R	Signalized	55	1265	0.04	75	1265	0.06
S	Signalized	55	1075	0.05	35	1075	0.03

Notes:

(1) Crossing Capacity is calculated according to TPDM Volume 4, Section 3.2.5.6

PC = K x GTP x W

Crossing "R":	***Crossing "S"***:
K = 1900 / m / hr	*K = 1900 / m / hr*
GTP = 20/120 = 0.167	*GTP = 17/120 = 0.142*
W = 4 m	*W = 4 m*
PC = 1,265 ped/hr	***PC = 1,075 ped/hr***

6.1.6 The results of assessment shown in **Table 6.1** and **Table 6.2** indicate that all critical sections and pedestrian crossings are operating with ample reserved capacity during AM and PM peak hours.

6.2 Future Pedestrian Conditions

6.2.1 Based on the observed flows and the adopted growth rate of +1.00%, the future pedestrian reference flows at the critical sections (without proposed development) in Year 2033 are estimated and summarized in **Table 6.3**, **Table 6.4** and **Figure 6.4**.

Table 6.3 Performance of Critical Footpath in Reference Scenario

Critical Sections	Total Footpath Width (m)[1]	Effective Width (m)[2]	Reference Scenario (Year 2033)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS
A	1.6	0.6	210	5.83	A	160	4.44	A
B	1.7	0.7	75	1.79	A	60	1.43	A
C	2	1	70	1.17	A	70	1.17	A
D	2	1	80	1.33	A	110	1.83	A
E	1	0.5	80	2.67	A	75	2.5	A
F	2	1	175	2.92	A	160	2.67	A
G	2	1	25	0.42	A	55	0.92	A
H	2.7	1.7	65	0.64	A	90	0.88	A
I	2	1	85	1.42	A	130	2.17	A
J	2.1	1.1	55	0.83	A	45	0.68	A
L	2	1	60	1.00	A	45	0.75	A
M	2	1	55	0.92	A	45	0.75	A

Table 6.4 Performance of Critical Pedestrian Crossings in Reference Scenario

Crossing	Method of Control	Reference Scenario (Year 2033)					
		AM Peak			PM Peak		
		Crossing Demand (ped/hr)	Crossing Capacity [1] (ped/hr)	V/C	Crossing Demand (ped/hr)	Crossing Capacity [1] (ped/hr)	V/C
R	Signalized	60	1265	0.05	80	1265	0.06
S	Signalized	60	1075	0.06	40	1075	0.04

Note: (1) Crossing Capacity is calculated according to TPDM Volume 4, Section 3.2.5.6

PC = K x GTP x W

Crossing "R":	***Crossing "S"***:
K = 1900 / m / hr	*K = 1900 / m / hr*
GTP = 20/120 = 0.167	*GTP = 17/120 = 0.142*
W = 4 m	*W = 4 m*
PC = 1,265 ped/hr	***PC = 1,075 ped/hr***

6.2.2 To estimate the pedestrian generation and attraction of the proposed development, assumptions of public transport demand assessment as in **Section 5.2** are also applied to the pedestrian assessment.

6.2.3 Based on the calculation of peak hour trips for franchised bus and minibus summarized in Table 5.6, the pedestrian flows of the proposed development is then superimposed onto the year 2033 reference pedestrian flow (without the proposed development) as shown in Figure 6.5, to derive at the year 2033 design pedestrian traffic flow (with the proposed development).

6.2.4 The assessment of the design scenario is summarized in **Table 6.5** and **Table 6.6**

Table 6.5 Performance of Critical Footpath in Design Scenario

Critical Sections	Total Footpath Width (m)(1)	Effective Width (m)(2)	Design Scenario (Year 2033)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS
A	1.6	0.6	210	5.83	A	160	4.44	A
B	1.7	0.7	75	1.79	A	60	1.43	A
C	2	1	645	10.75	A	780	13	A
D	2	1	435	7.25	A	795	13.25	A
E	1	0.5	210	7.00	A	705	23.5	C
F	2	1	175	2.92	A	160	2.67	A
G	2	1	25	0.42	A	55	0.92	A
H	2.7	1.7	90	0.88	A	480	4.71	A
I	2	1	185	3.08	A	370	6.17	A
J	2.1	1.1	55	0.83	A	45	0.68	A
L	2	1	280	4.67	A	70	1.17	A
M	2	1	55	0.92	A	45	0.75	A

Notes:
(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls each for both sides).
(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 60 min / Effective Width.
(3) LOS details extracted from the HCM are tabulated in TPDM Volume 6 Chapter 10 Clause 10.4.2.3.

Table 6.6 Performance of Critical Pedestrian Crossings in Design Scenario

Crossing	Method of Control	Design Scenario (Year 2033)					
		AM Peak			PM Peak		
		Crossing Demand (ped/hr)	Crossing Capacity (1) (ped/hr)	V/C	Crossing Demand (ped/hr)	Crossing Capacity (1) (ped/hr)	V/C
R	Signalized	160	760	0.21	320	760	0.42
S	Signalized	85	950	0.09	430	950	0.45

Notes: (1) Crossing Capacity is calculated according to TPDM Volume 4, Section 3.2.5.6

PC = K x GTP x W

Crossing "R":	***Crossing "X"***:
K = 1900 / m / hr	*K = 1900 / m / hr*
GTP = 12/120 = 0.1	*GTP = 15/120 = 0.125*
W = 4 m	*W = 4 m*
PC = 760 ped/hr	***PC = 950 ped/hr***

6.2.5 It is revealed from the assessment results in **Table 6.5** and **Table 6.6** that the concerned sections of footpath and pedestrian crossings will all operate with ample reserved capacity (LOS C) during AM and PM peak hours in design year 2033.

6.2.6 Although the LOS C could be achieved for section E, it is noted that a small it is only about 1 m width. It is proposed widen this section minimum 2 m width to match with remaining part of section E. The layout is shown in **Figure 6.5**.

Table 6.7 Proposed Improvement of Critical Footpath in Design Scenario

Critical Sections	Total Footpath Width (m)[1]	Effective Width (m)[2]	Design Scenario (Year 2033)					
			AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (3)	LOS
E	2	1	210	3.5	A	705	11.75	A

Notes:
(1) Effective Width = Total Footpath Width – Death Width (0.5m from railings or walls each for both sides).
(2) Two-way Pedestrian Flow Rate (ped/min/m) = Peak Pedestrian Flow / 60 min / Effective Width.
(3) LOS details extracted from the HCM are tabulated in TPDM Volume 6 Chapter 10 Clause 10.4.2.3.

6.2.7 LOS A could be achieved for section E after widening to minimum 2 m width.

7. SUMMARY AND CONCLUSION

7.1 Summary

7.1.1 CTA Consultants Limited (CTA) is commissioned as the traffic consultant to prepare the Traffic Impact Assessment (TIA) and provide technical justifications in supporting the S12A Planning Application from traffic engineering point of view.

7.1.2 To appraise the existing traffic condition, manual-classified counting surveys were conducted at critical junctions in 2025 from 07:30 to 09:30 and from 17:00 to 19:00. Current operational performance of the critical junctions has been assessed with the baseline traffic flows.

Junction Assessment and Performance

7.1.3 Junction operational assessment has been carried out for the year 2033 in both the reference and design scenarios. Results indicate that all critical junctions will operate within their capacities in 2033 during peak hours except the following junctions:

- Junction A - Ting Kok Road/ Dai Fai Street with RC <15% during AM peak hour without and with the proposed development;
- Junction B - Ting Kok Road / Fung Yuen Road with RC <15% during both AM and PM peak hours without and with the proposed development;
- Junction C - Ting Kok Road / Dai Fuk Road / Yuen Shin Road with RC <15% during AM peak hour without the proposed development, both AM and PM peak hours with the proposed development;
- Junction D - Yuen Shin Road / Dai Fat Street with RC <15% during AM peak hour without and with the proposed development;
- Junction E - Tai Po Tai Wo Road / Yuen Shin Road with RC <15% during AM peak hour without and with the proposed development.

7.1.4 Improvement schemes are proposed at Junctions A, B, C, D, and E. They will operate with ample capacities in design year 2033 after improvements.

7.1.5 The road link assessment shows that all road links will operate with the ample capacities for the Design Flow in 2033.

Public Transport

7.1.6 Public transport demand has also been assessed. It is observed that the most popular mode of transport for the residents in the area will be going to Tai Po Central, Tai Po Market MTR station, Kwun Tong Ferry Pier and Tsuen Wan. Therefore, it is proposed to enhance the existing public transport services by increasing the frequency during the AM Peak period.

Pedestrian Assessment

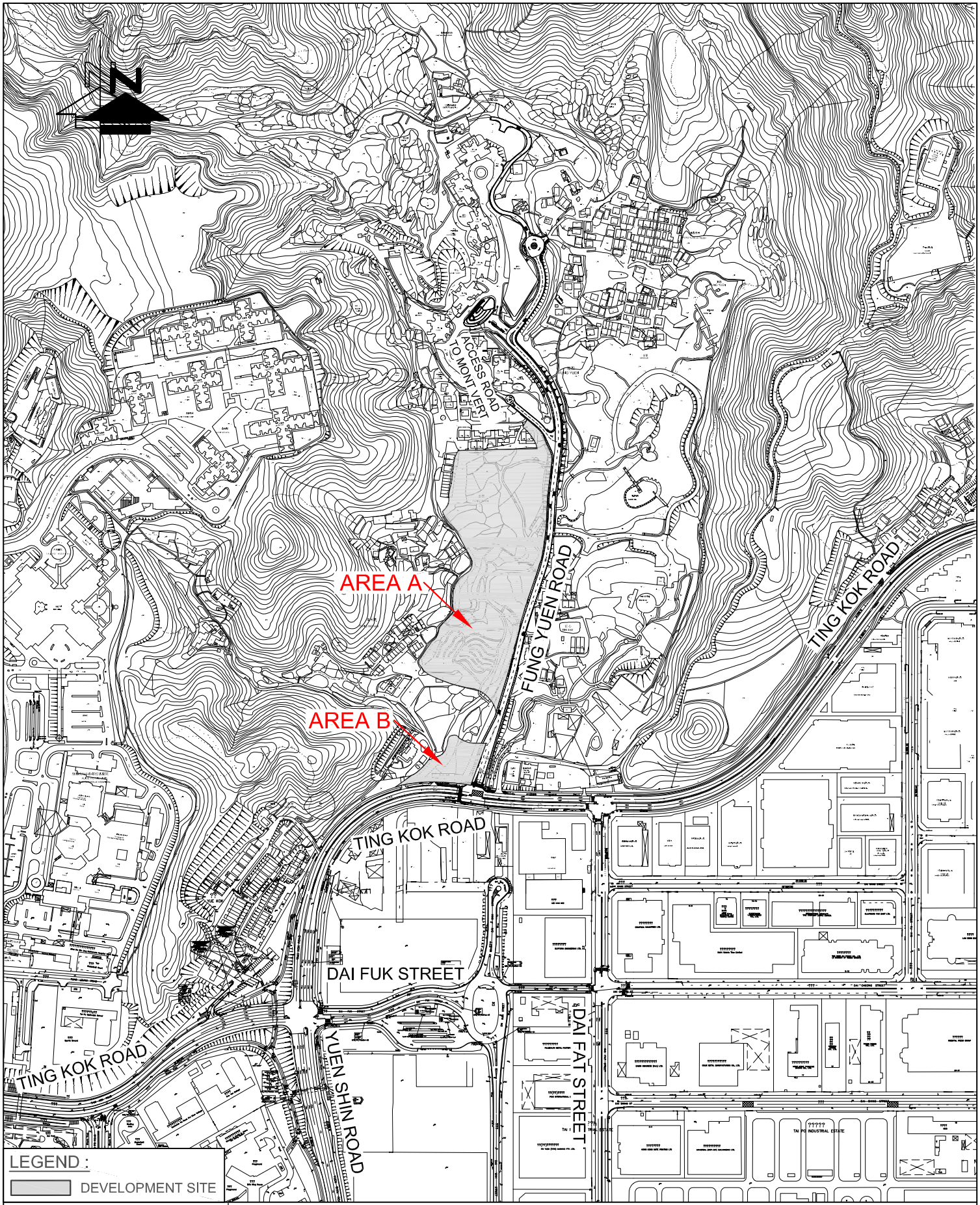
7.1.7 Pedestrian assessment also revealed that the concerned sections of footpath and pedestrian crossing will all operate with ample reserved capacity during AM and PM peak hours in design year 2033. Narrow part of Section E will be widened to min. 2m width.

7.2 Conclusion

7.2.1 In conclusion, this TIA has demonstrated that the related traffic trips related to the proposed development can be absorbed by the nearby road network with the proposed junction improvements and no significant traffic impact will be induced.

7.2.2 With slight enhancement to the Public Transport, there will be sufficient services to meet the increased demand due to the proposed development.

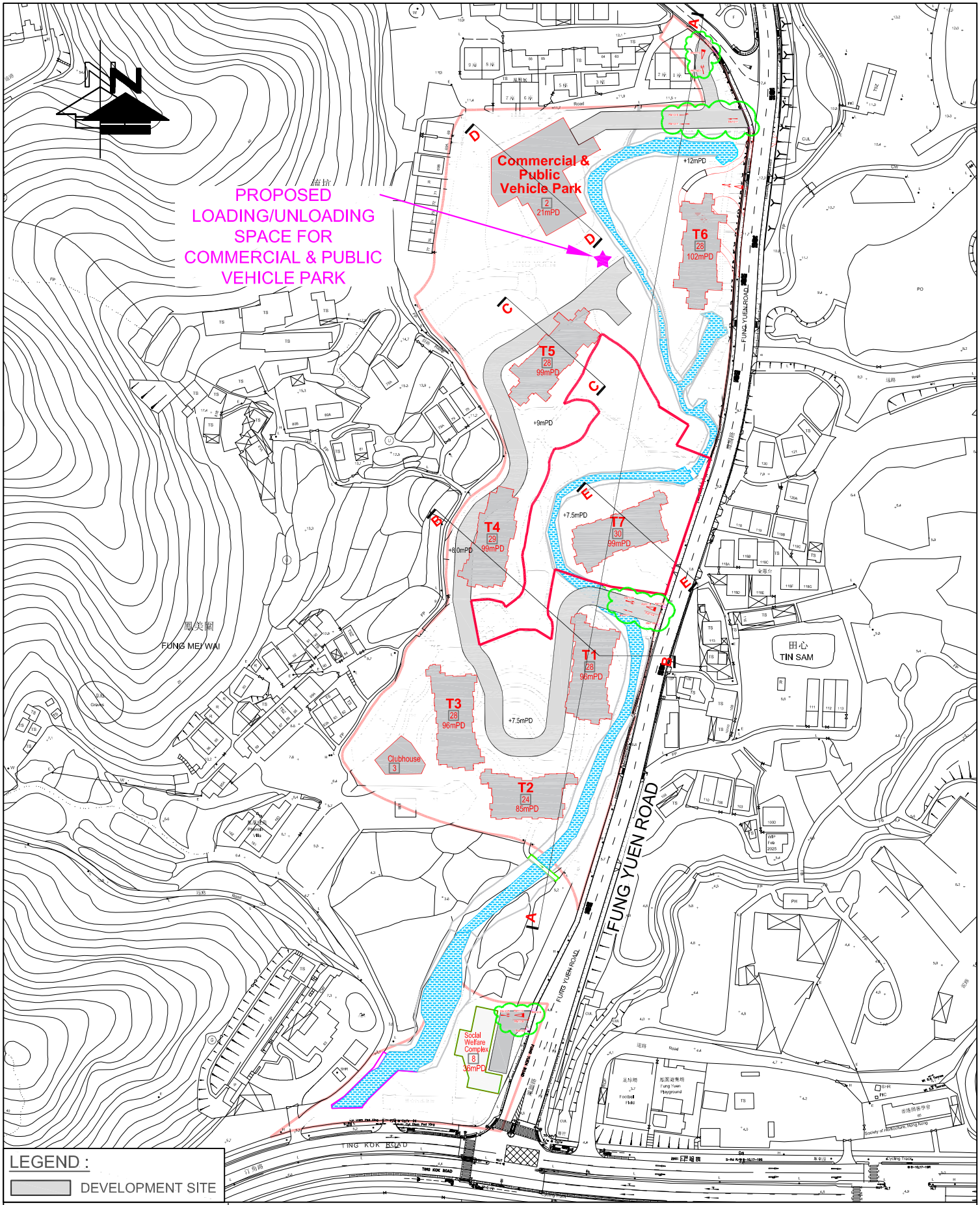
7.2.3 Therefore, the proposed development is considered feasible from traffic engineering point of view.



LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.1	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SITE LOCATION PLAN
SCALE: 1 : 6100 @A4 / DATE: 18 JUL 2025	CTA Consultants Limited 志達顧問有限公司

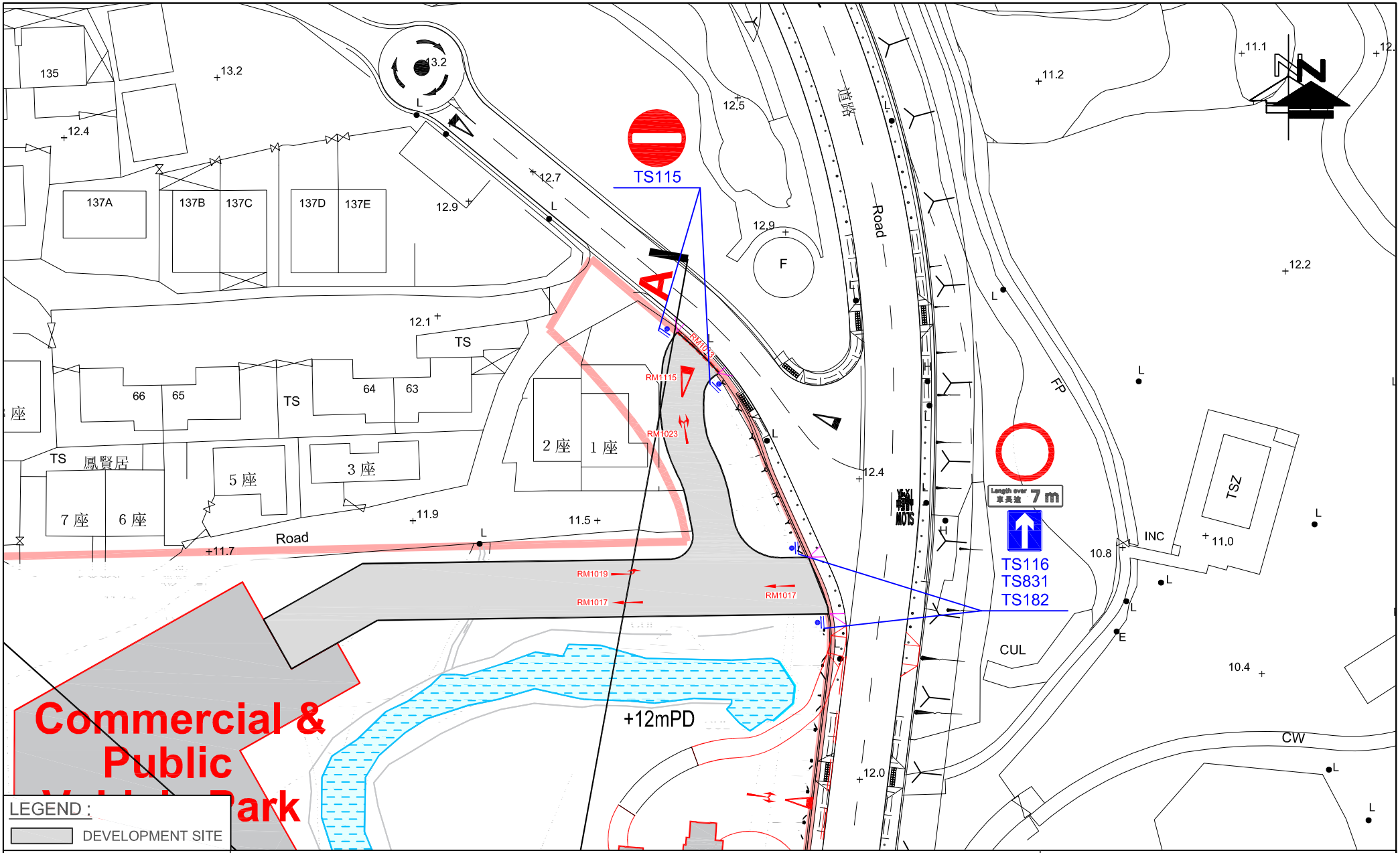


LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.2	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SITE LAYOUT PLAN
SCALE: 1 : 2000 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司



LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.3	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS FOR COMMERCIAL AND PUBLIC VEHICLE PARK
SCALE: 1 : 650 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

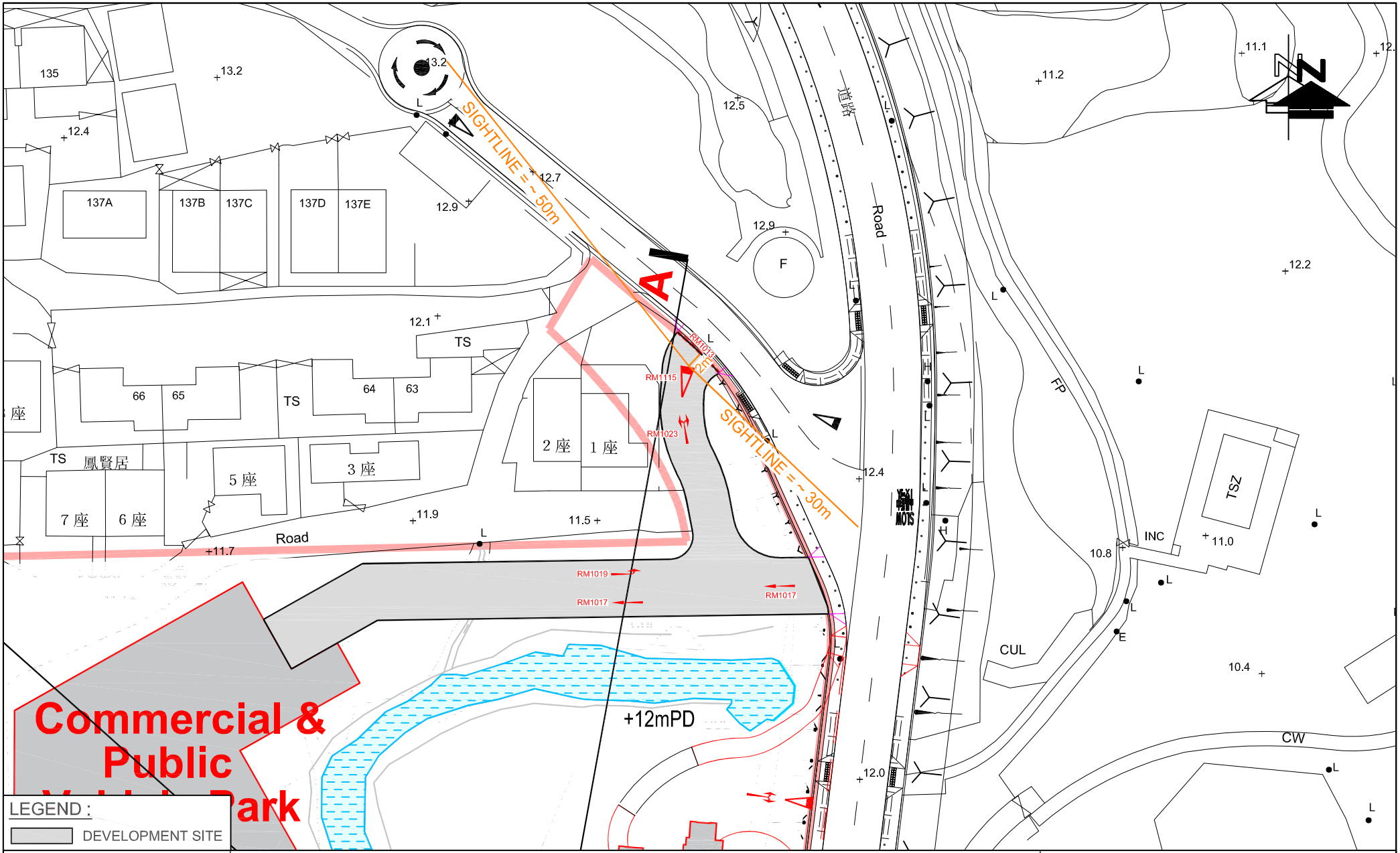


FIGURE NO.: 2.3(SL)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SIGHT LINE ANALYSIS OF PROPOSED ACCESS FOR COMMERCIAL AND PUBLIC VEHICLE PARK
SCALE: 1 : 650 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

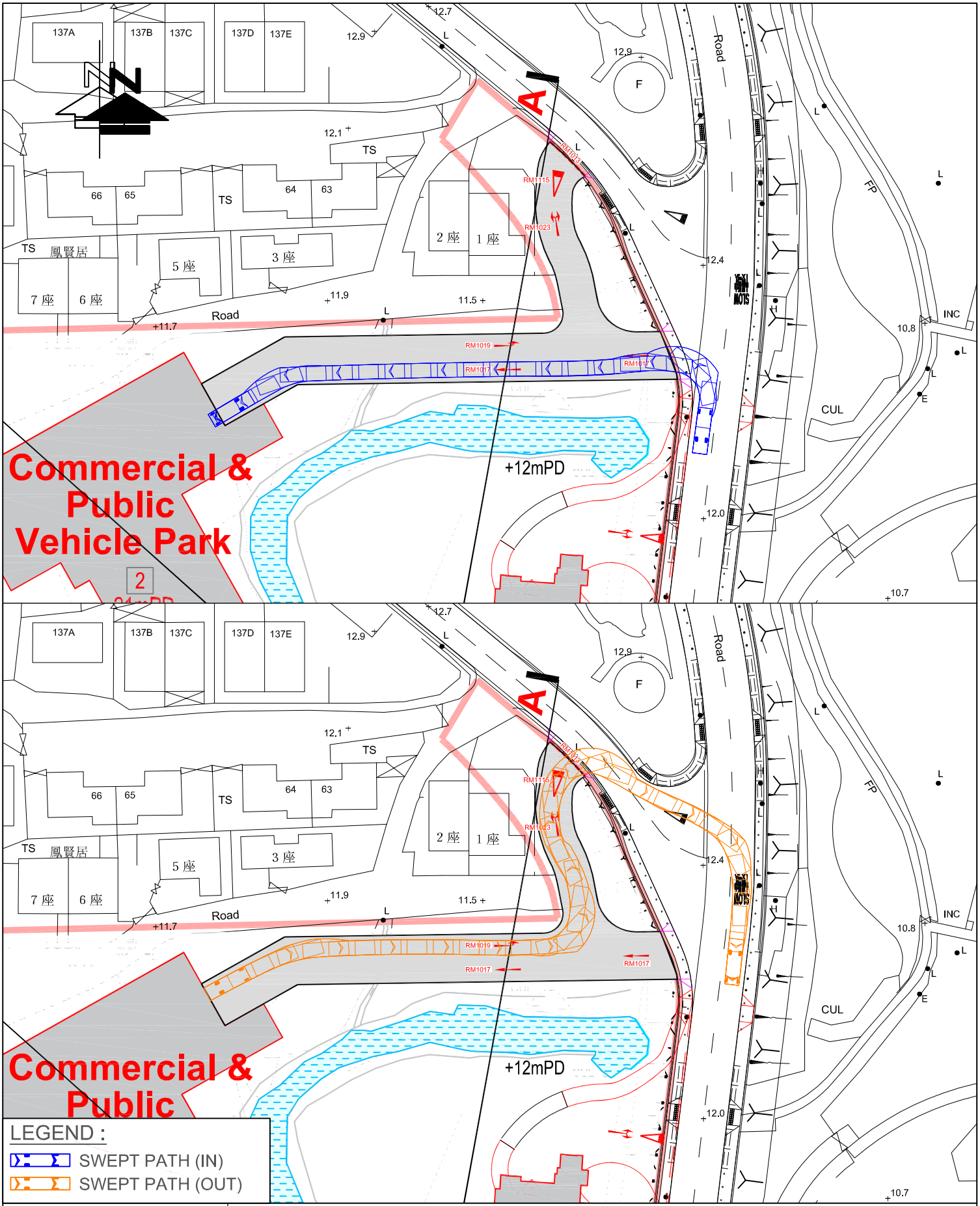
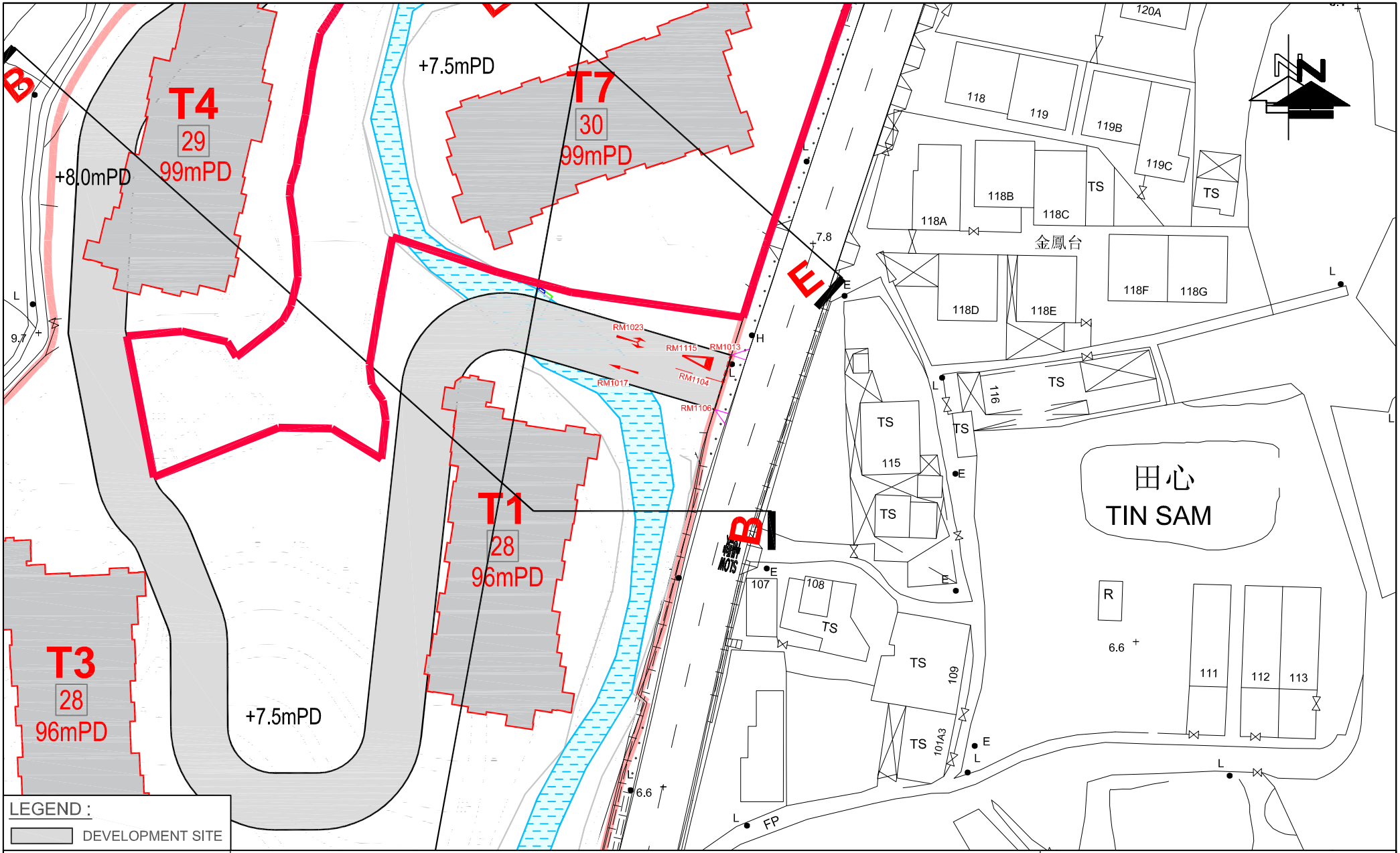


FIGURE NO.: 2.3 (SP)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS SWEPT PATH ANALYSIS OF 7M VEHICLES
SCALE: 1 : 750 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司



LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.4	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS FOR RESIDENTIAL DEVELOPMENT
SCALE: 1 : 650 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

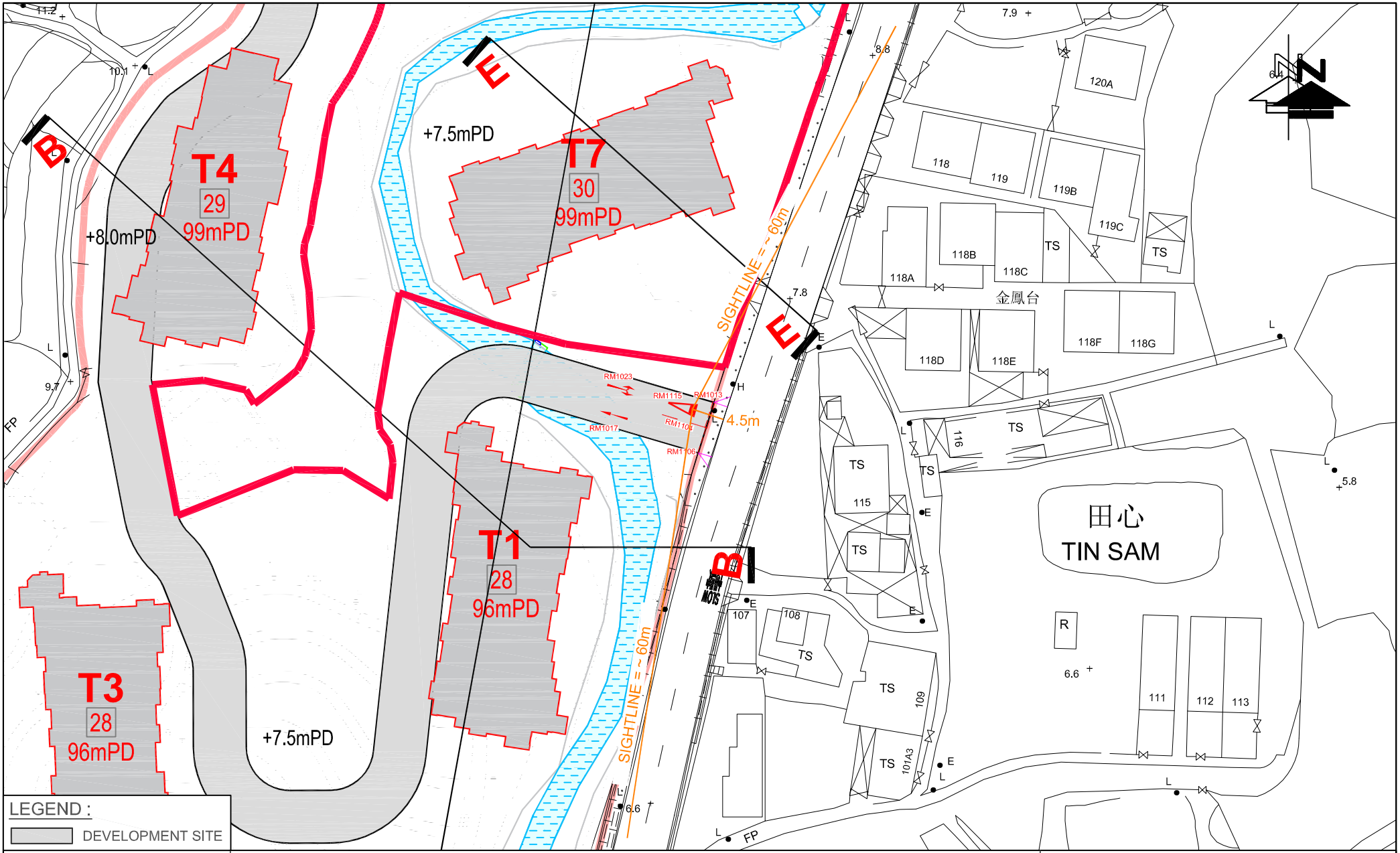
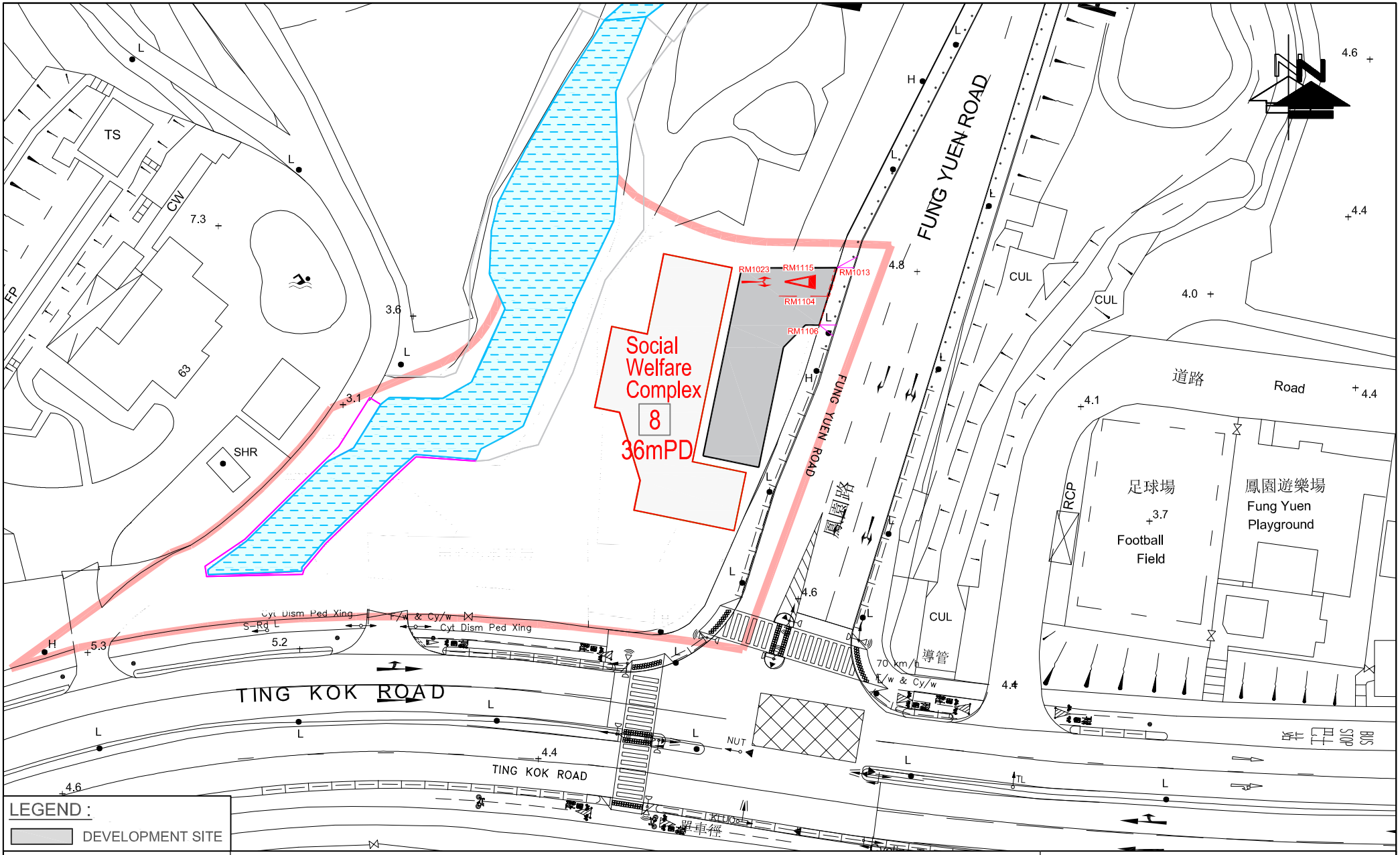


FIGURE NO.: 2.4(SL)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SIGHT LINE ANALYSIS OF PROPOSED ACCESS FOR RESIDENTIAL DEVELOPMENT
SCALE: 1 : 700 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

FIGURE NO.: 2.4(SP)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS SWEPT PATH ANALYSIS OF 11M VEHICLES
SCALE: 1 : 650 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

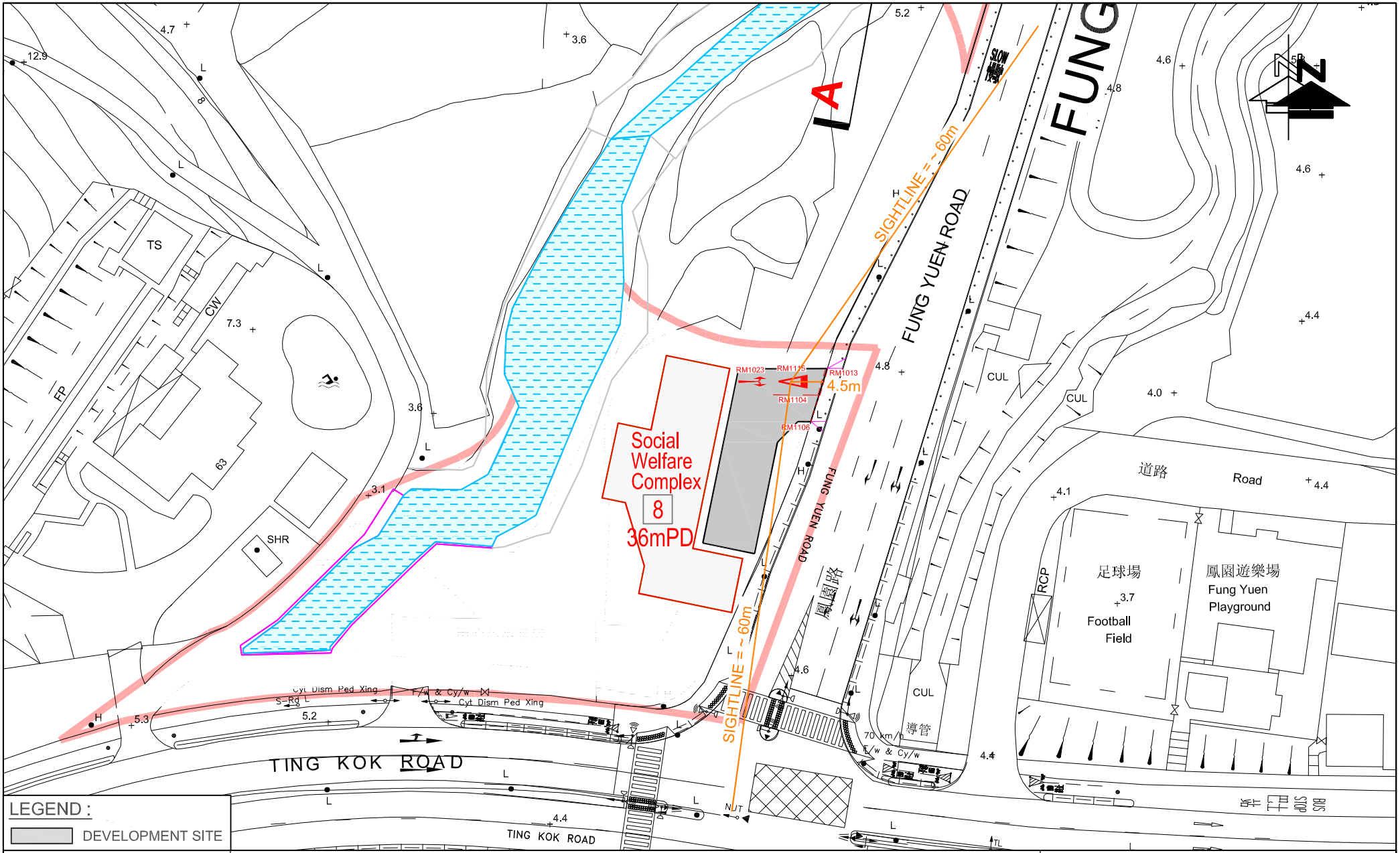


LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.5	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS FOR SOCIAL WELFARE COMPLEX
SCALE: 1 : 650 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司



LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 2.5(SL)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SIGHT LINE ANALYSIS OF PROPOSED ACCESS FOR SOCIAL WELFARE COMPLEX
SCALE: 1 : 700 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

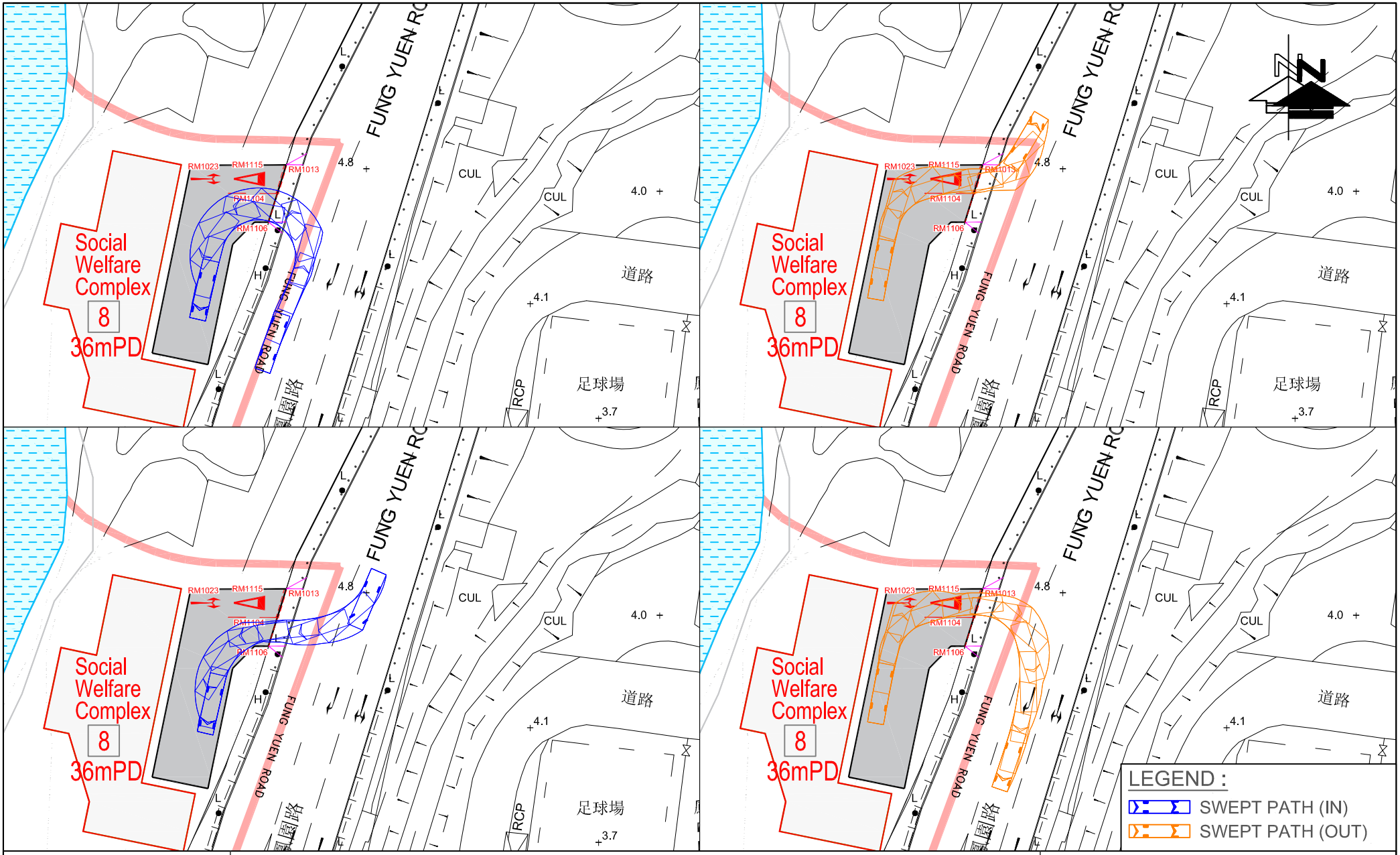


FIGURE NO.: 2.5(SP)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED ACCESS SWEPT PATH ANALYSIS OF 8M VEHICLES
SCALE: 1 : 650 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

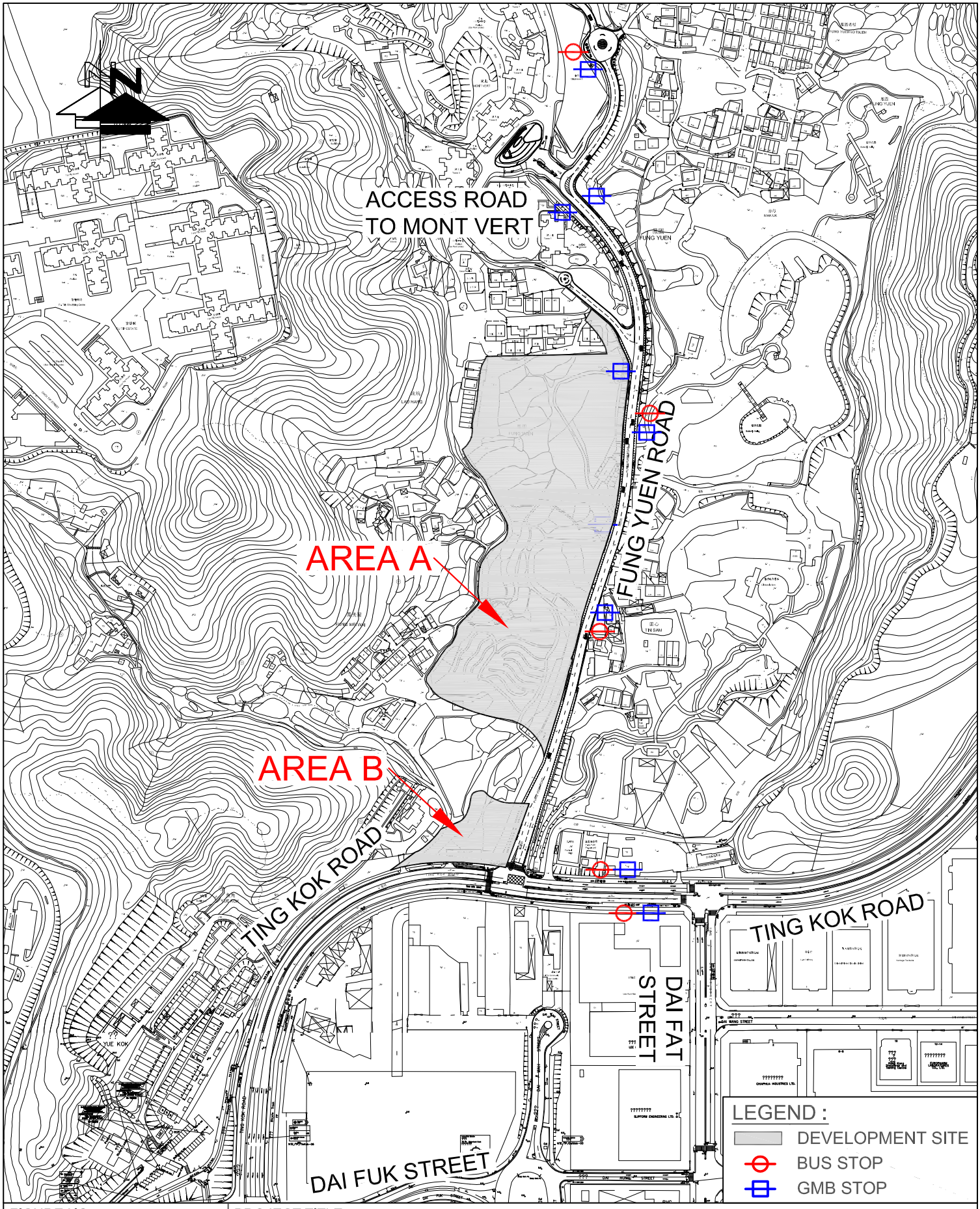


FIGURE NO.: 2.6	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: LOCATION OF THE NEARBY BUS STOP & GMB STOP
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

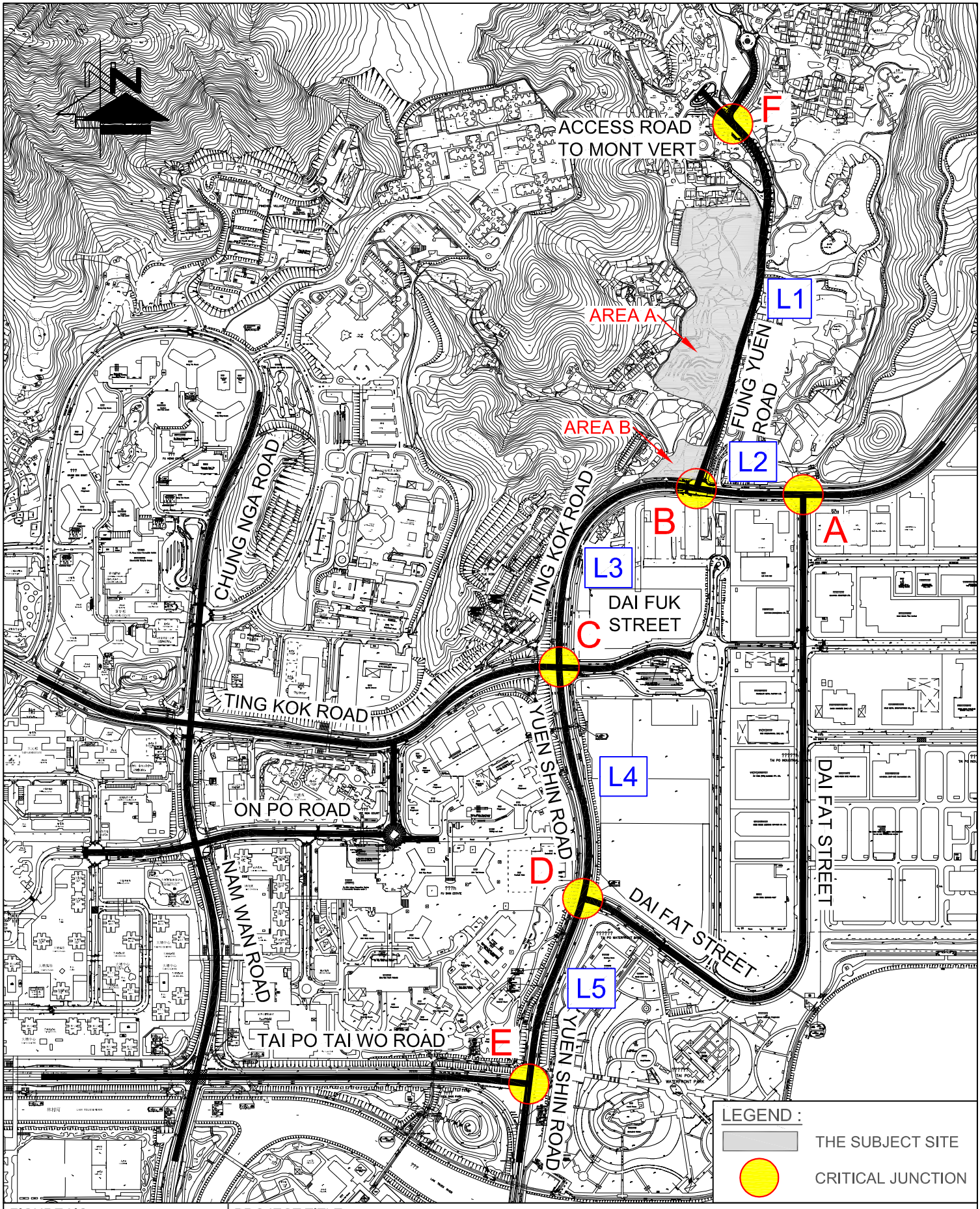


FIGURE NO.: 3.1	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: KEY JUNCTIONS AND CRITICAL ROAD LINK OF EXISTING ROAD NETWORK
SCALE: 1 : 7500 @A4	DATE: 18 JUL 2025
	CTA Consultants Limited 志達顧問有限公司

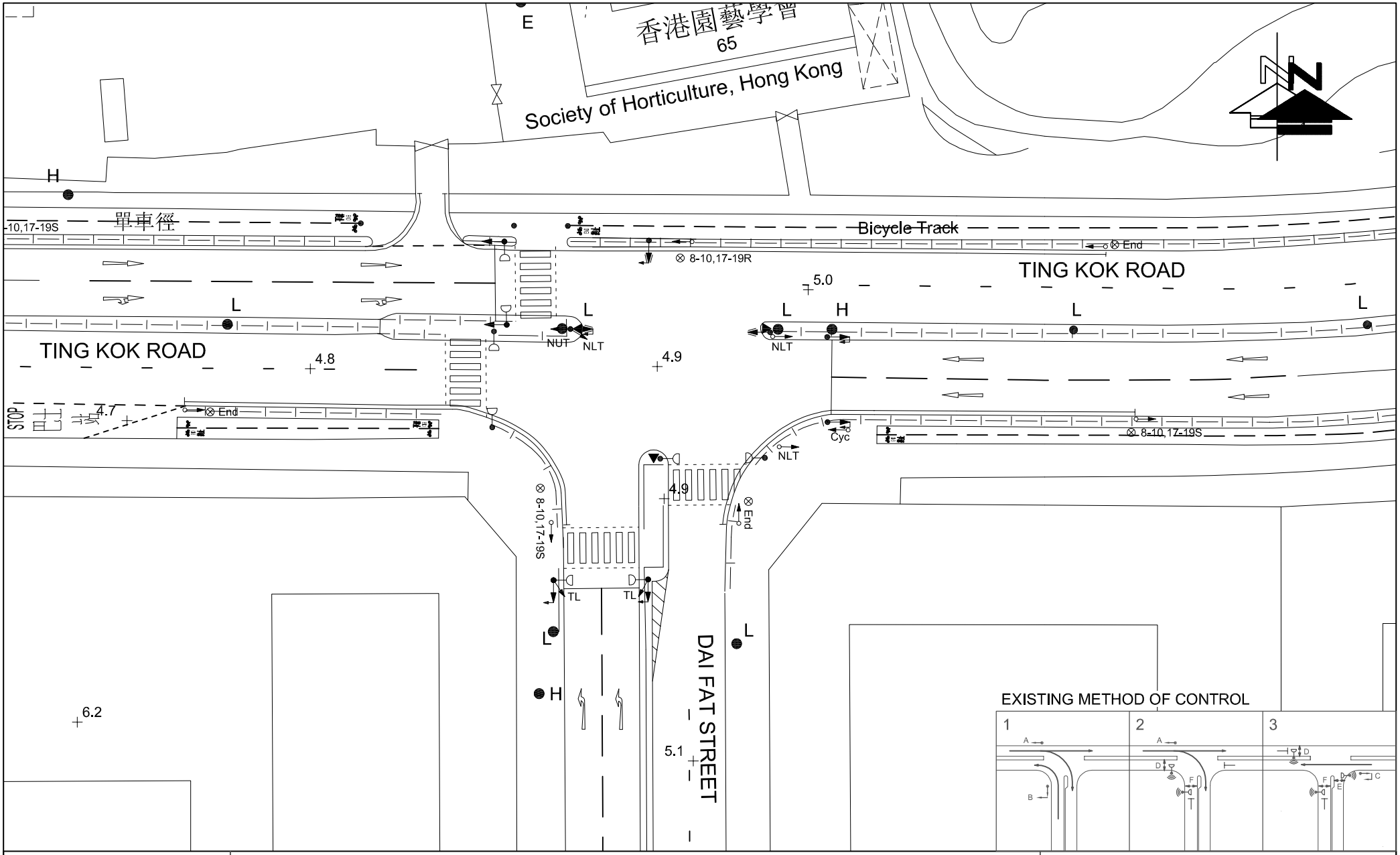


FIGURE NO.: 3.2	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (A)
SCALE: 1 : 500 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

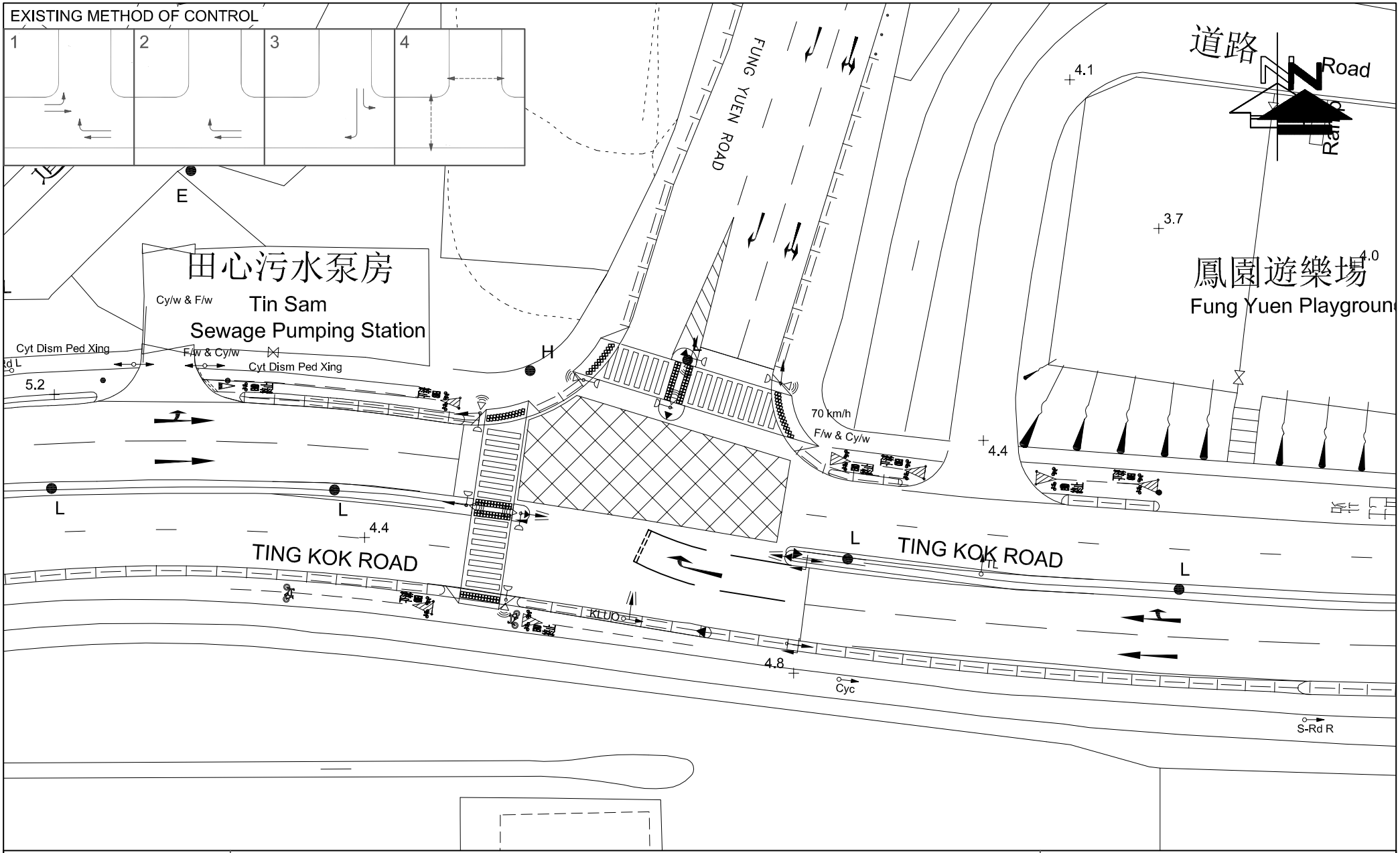


FIGURE NO.: 3.3	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / FUNG YUEN ROAD (B)	
SCALE: 1 : 500 @A4 / DATE: 18 JUL 2025		

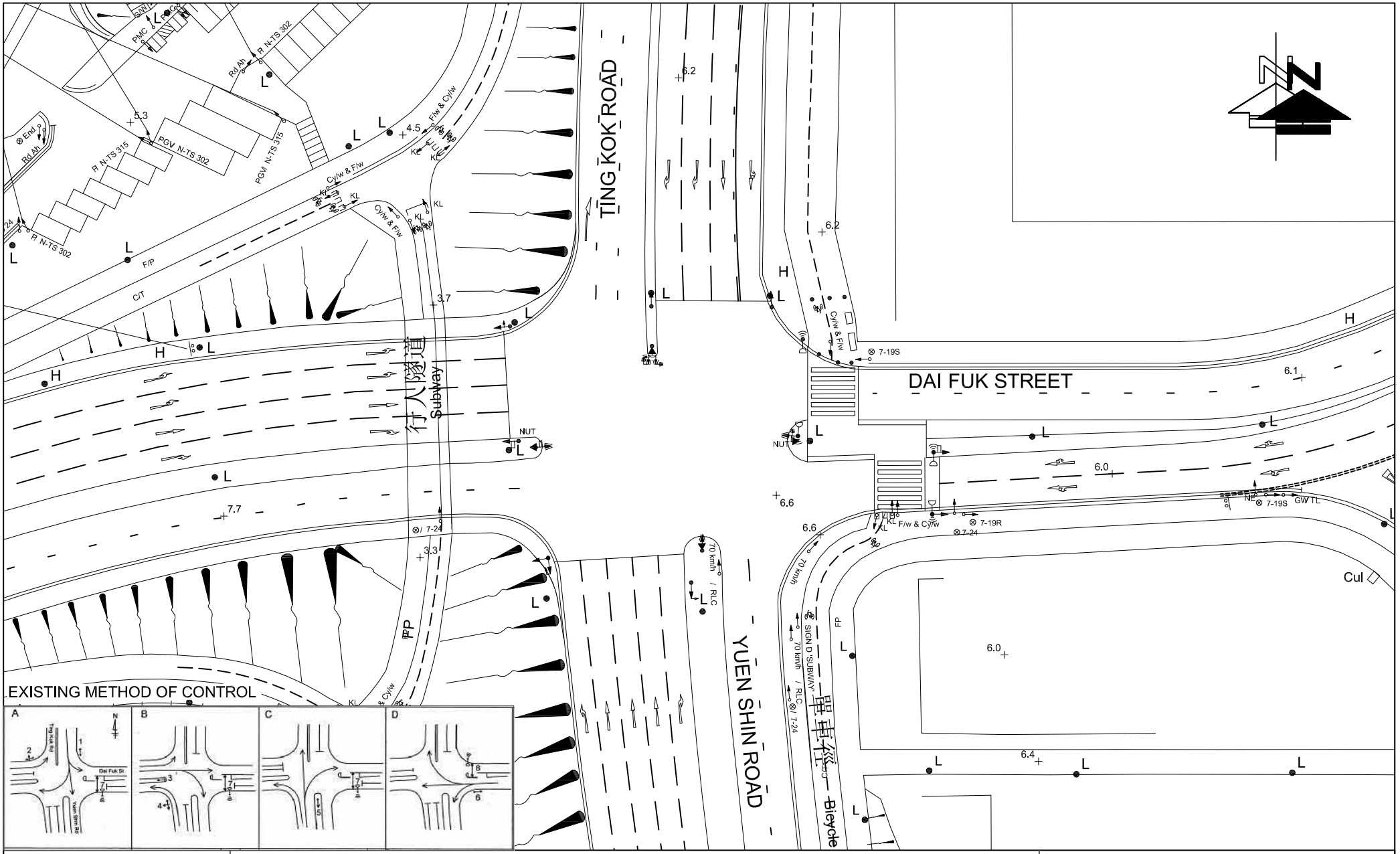


FIGURE NO.: 3.4	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TING KOK ROAD / DAI FUK ROAD / YUEN SHIN ROAD (C)
SCALE: 1 : 700 @ A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

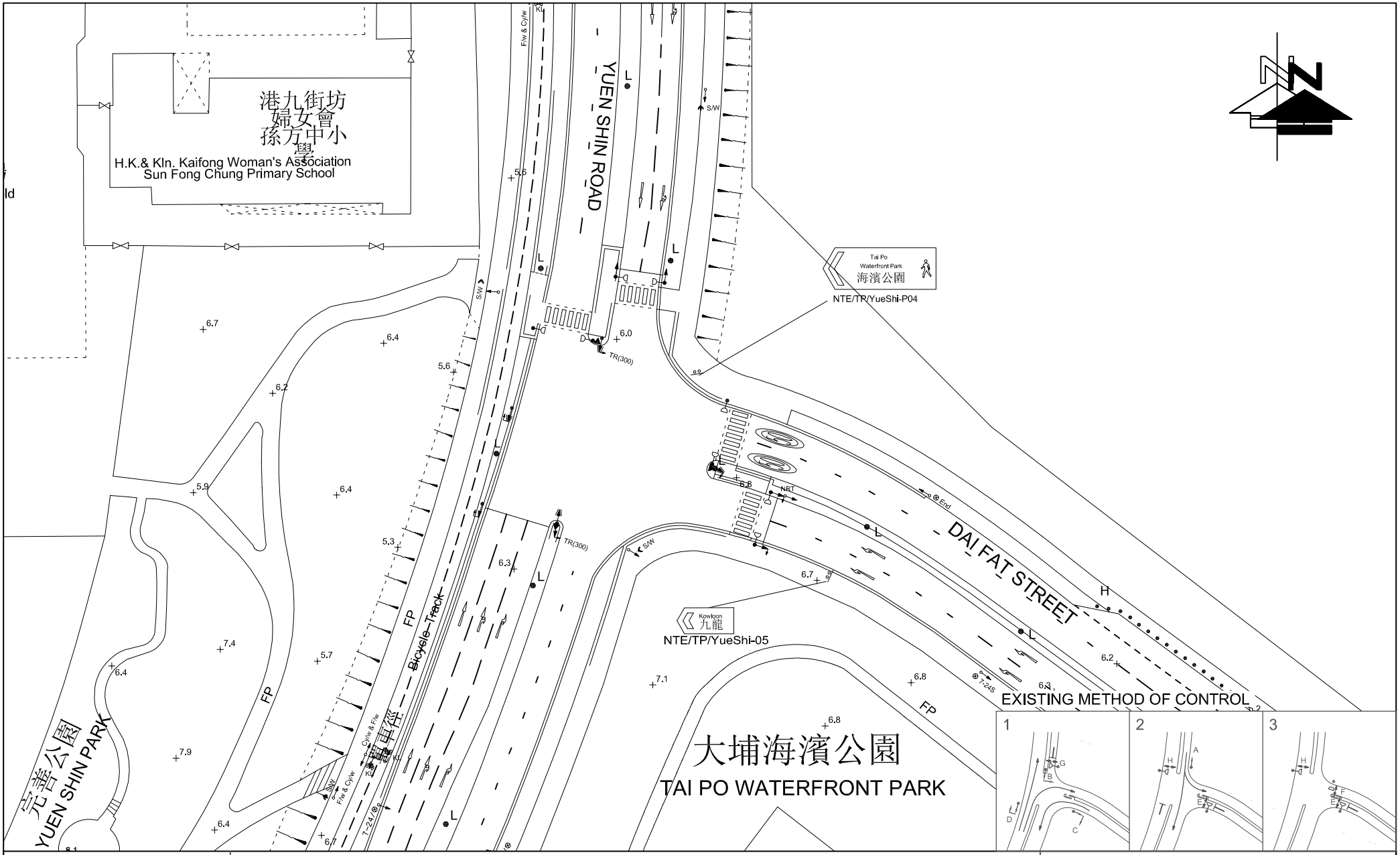


FIGURE NO.: 3.5	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (D)
SCALE: 1 : 800 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

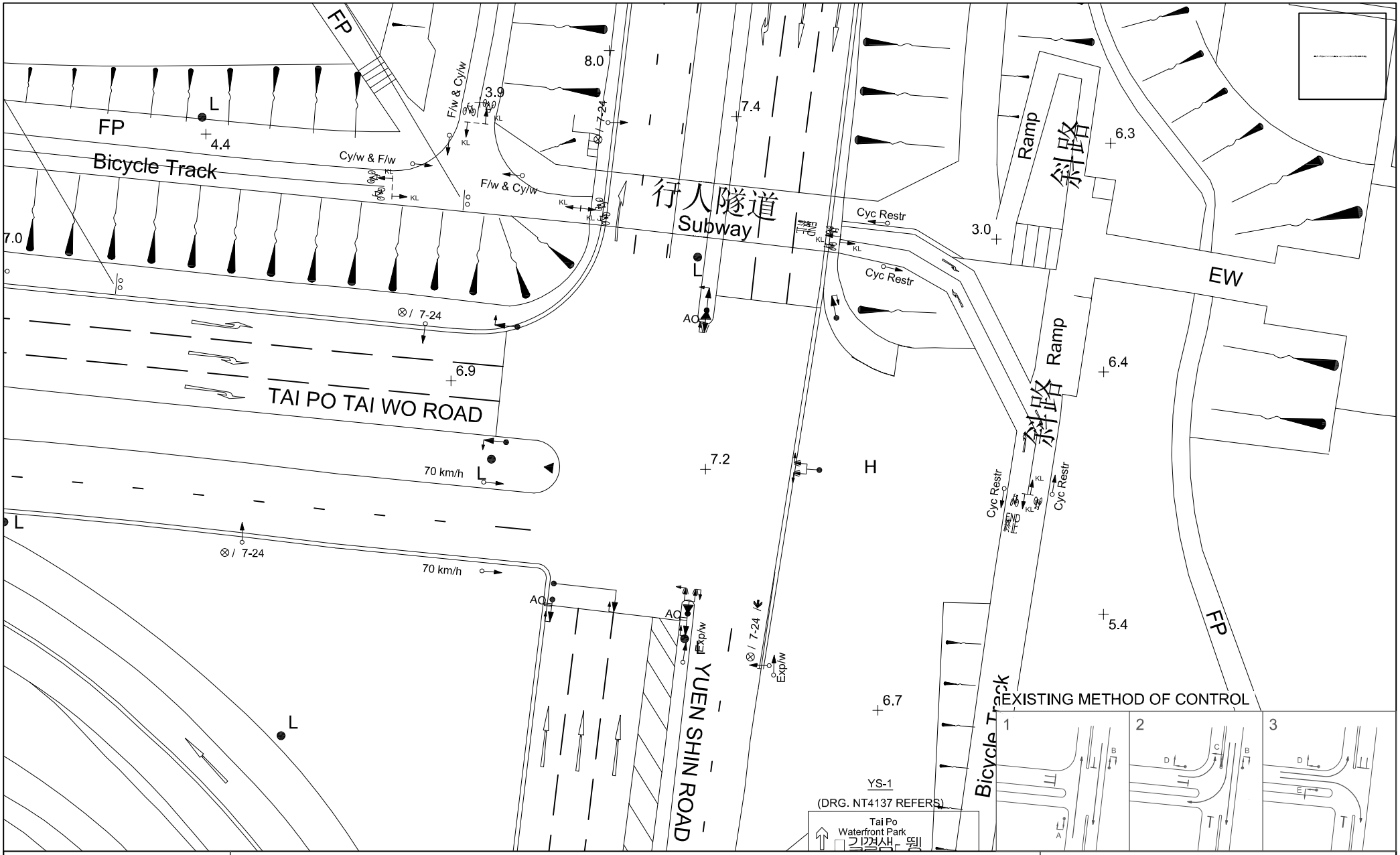


FIGURE NO.: 3.6	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF TAI PO TAI WO ROAD / YUEN SHIN ROAD (E)	CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 500 @ A4	DATE: 18 JUL 2025	

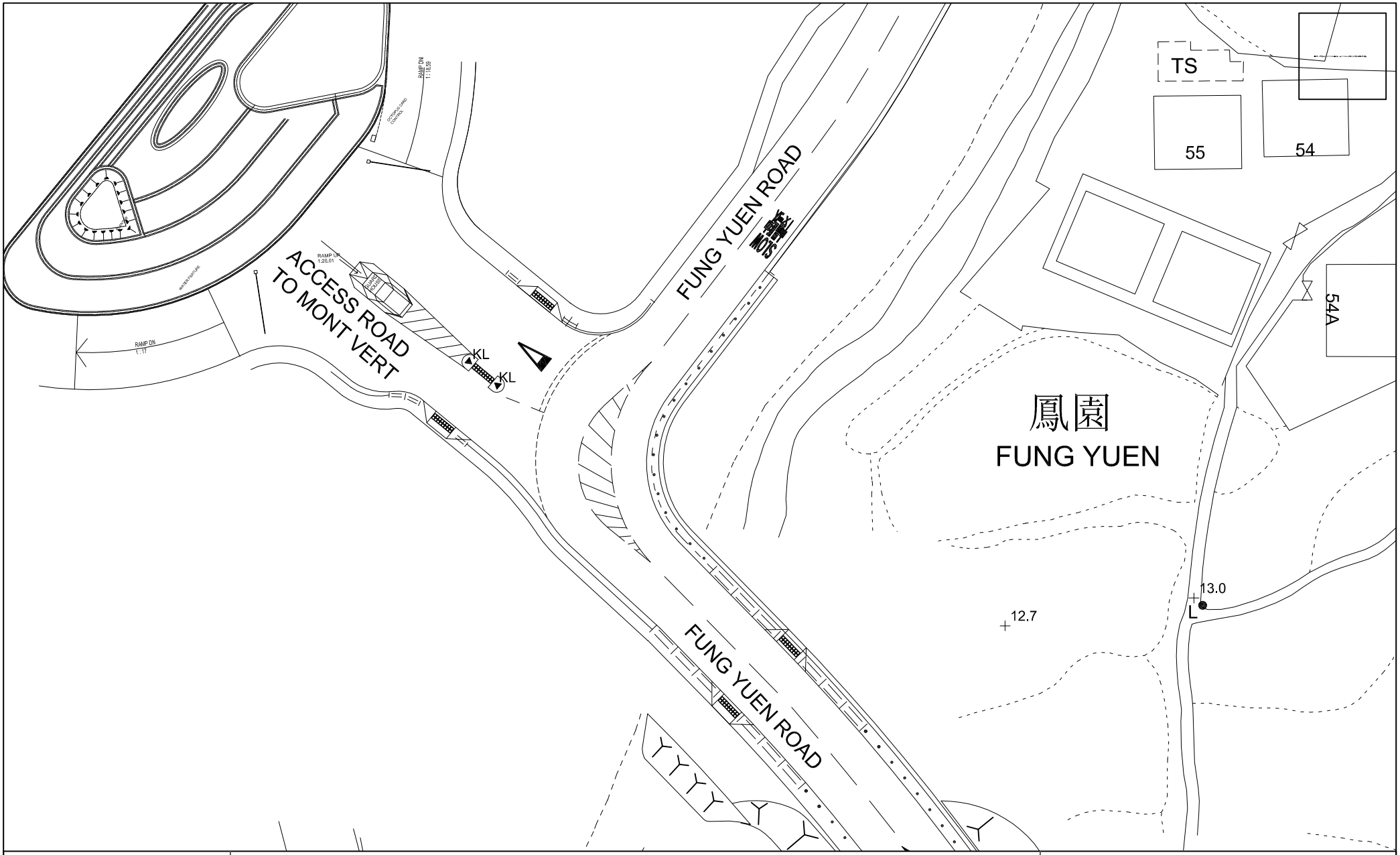


FIGURE NO.: 3.7	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	
PROJECT NO.: 25022HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF FUNG YUEN ROAD / ACCESS ROAD TO MONT VERT (F)	CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 500 @ A4 / DATE: 18 JUL 2025		

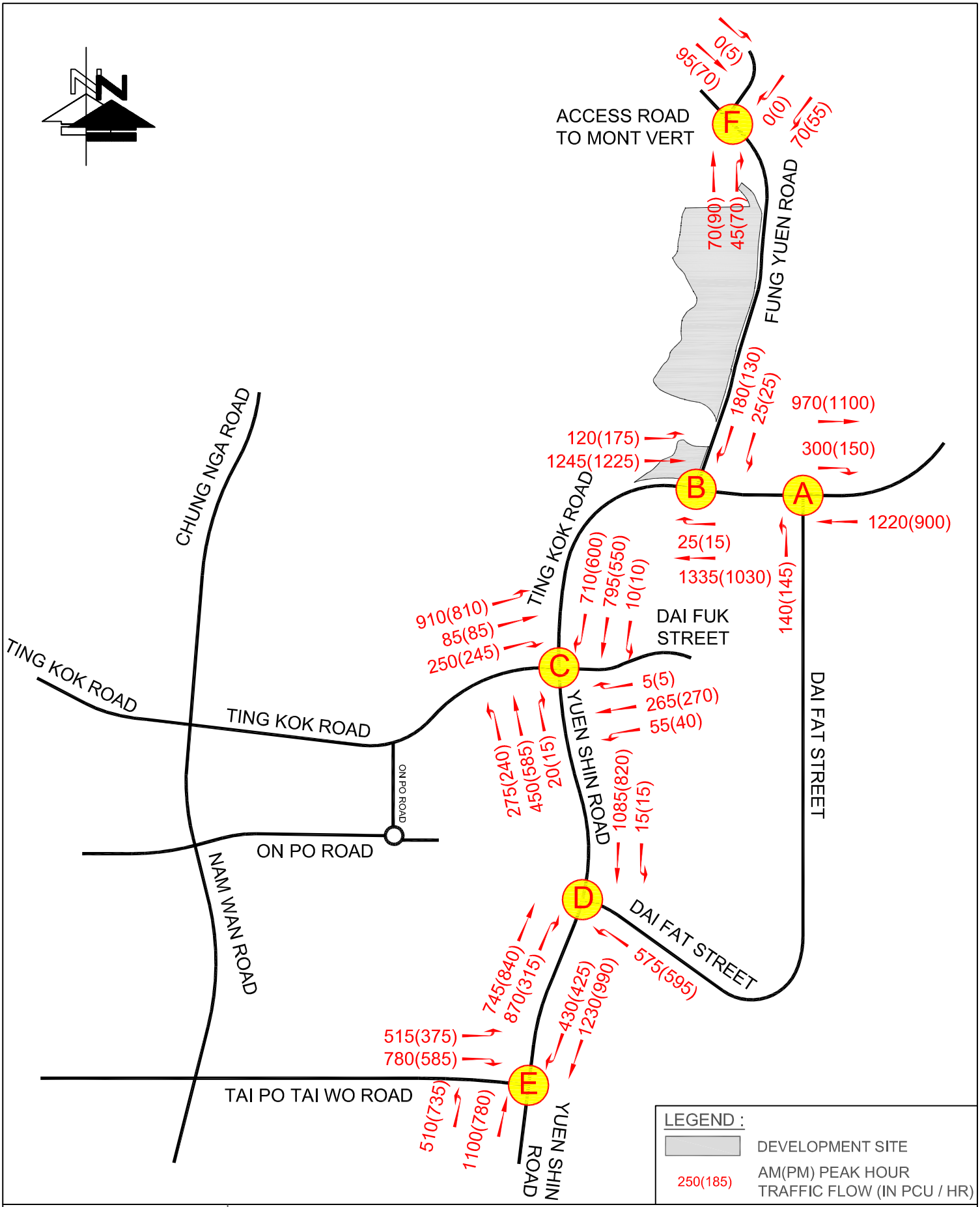


FIGURE NO.: 3.8	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: 2025 OBSERVED TRAFFIC FLOWS
SCALE: 1 : 7500 @A4 / DATE: 18 JUL 2025	CTA Consultants Limited 志達顧問有限公司

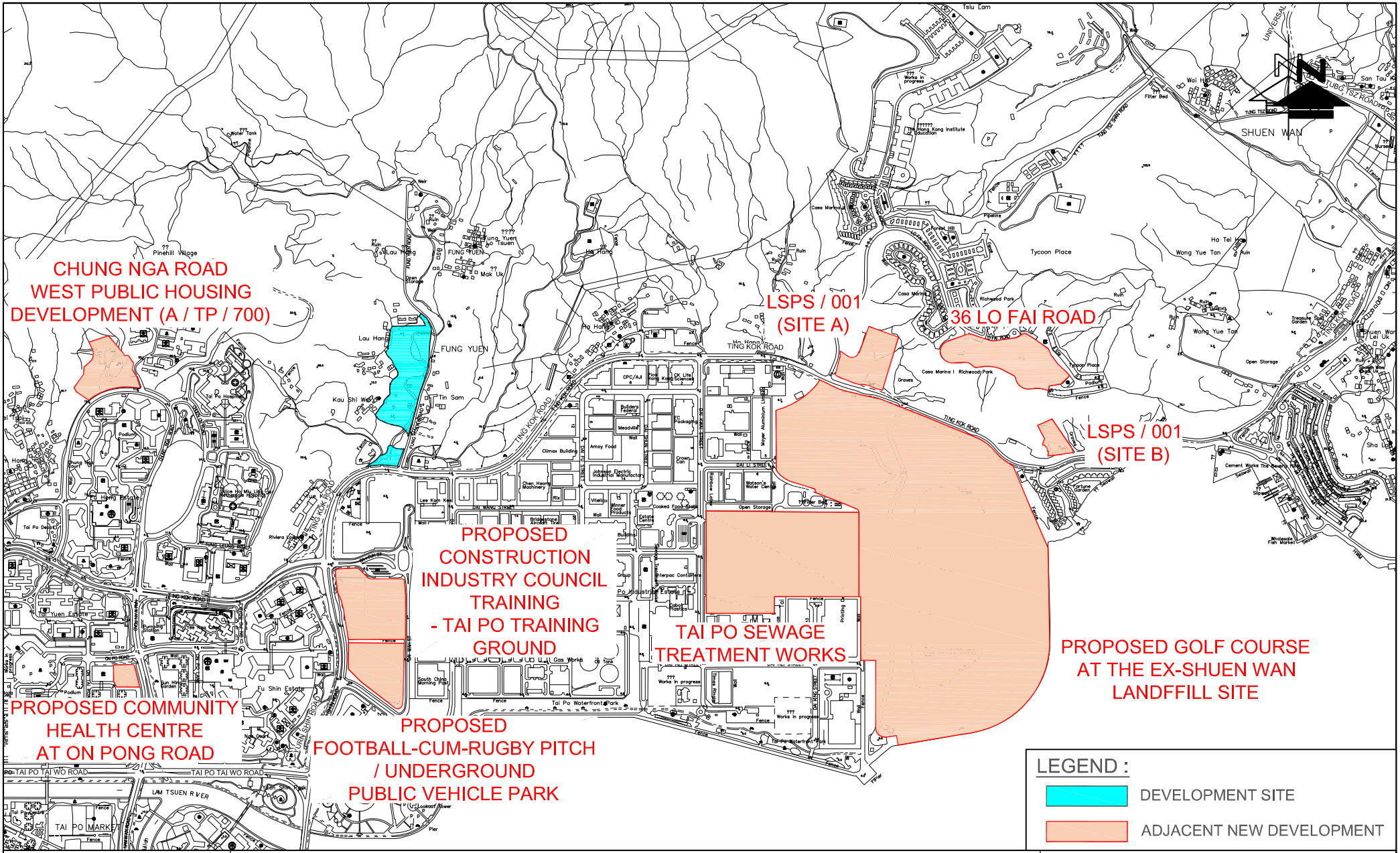


FIGURE NO.: 4.1	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PLANNED MAJOR DEVELOPMENTS IN THE VICINITY
SCALE: 1 : 15000 @A4	DATE: 26 NOV 2025

CTA Consultants Limited
志達顧問有限公司

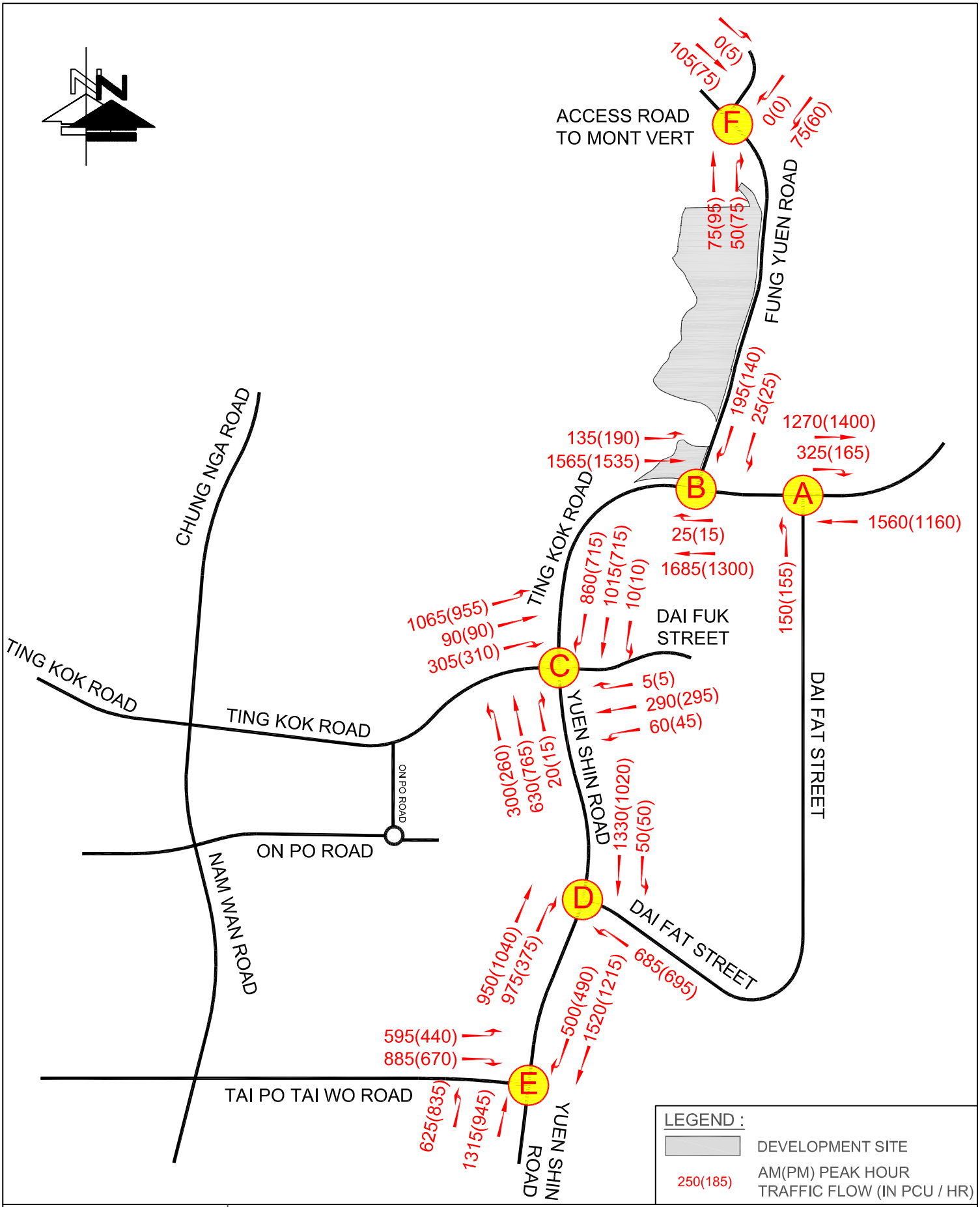


FIGURE NO.: 4.2	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: 2033 REFERENCE TRAFFIC FLOWS
SCALE: 1 : 7500 @A4 / DATE: 28 NOV 2025	CTA Consultants Limited 志達顧問有限公司

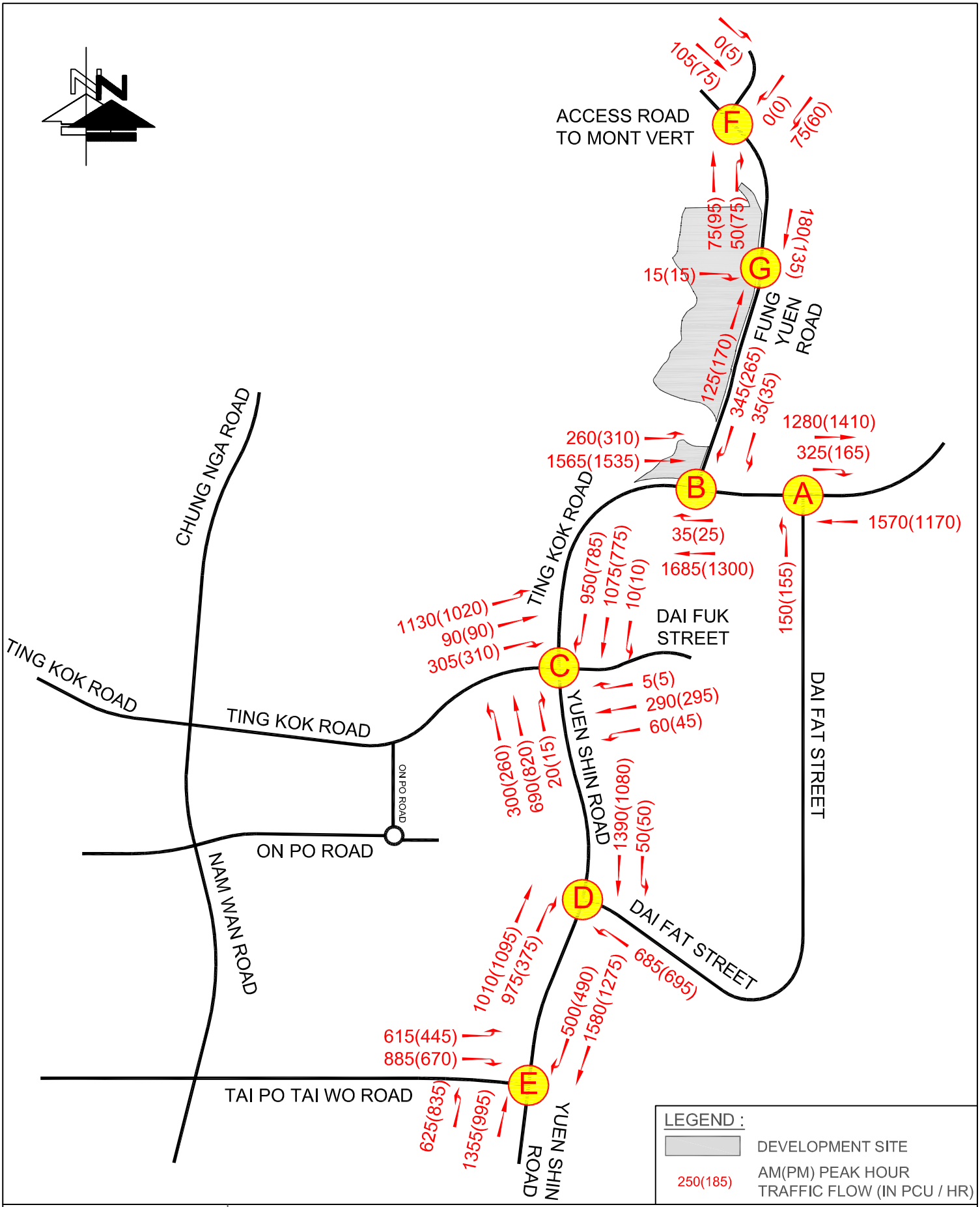
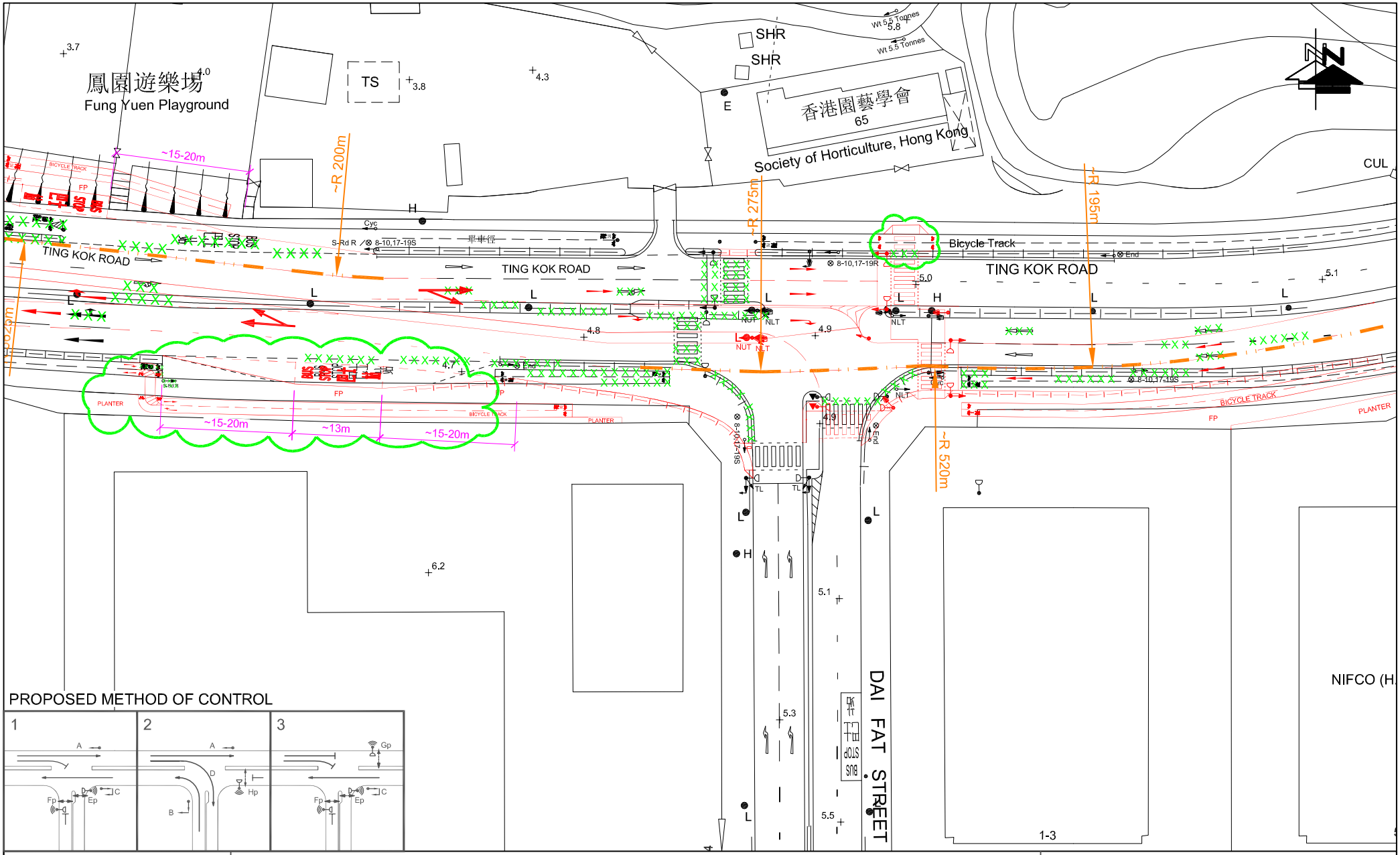


FIGURE NO.: 4.3	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	
PROJECT NO.: 25022HK	DRAWING TITLE: 2033 DESIGN TRAFFIC FLOWS	CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 7500 @A4 / DATE: 28 NOV 2025		



PROPOSED METHOD OF CONTROL

FIGURE NO.: 4.4	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (A)
SCALE: 1 : 750 @A4 / DATE: 27 NOV 2025	

CTA Consultants Limited
志達顧問有限公司

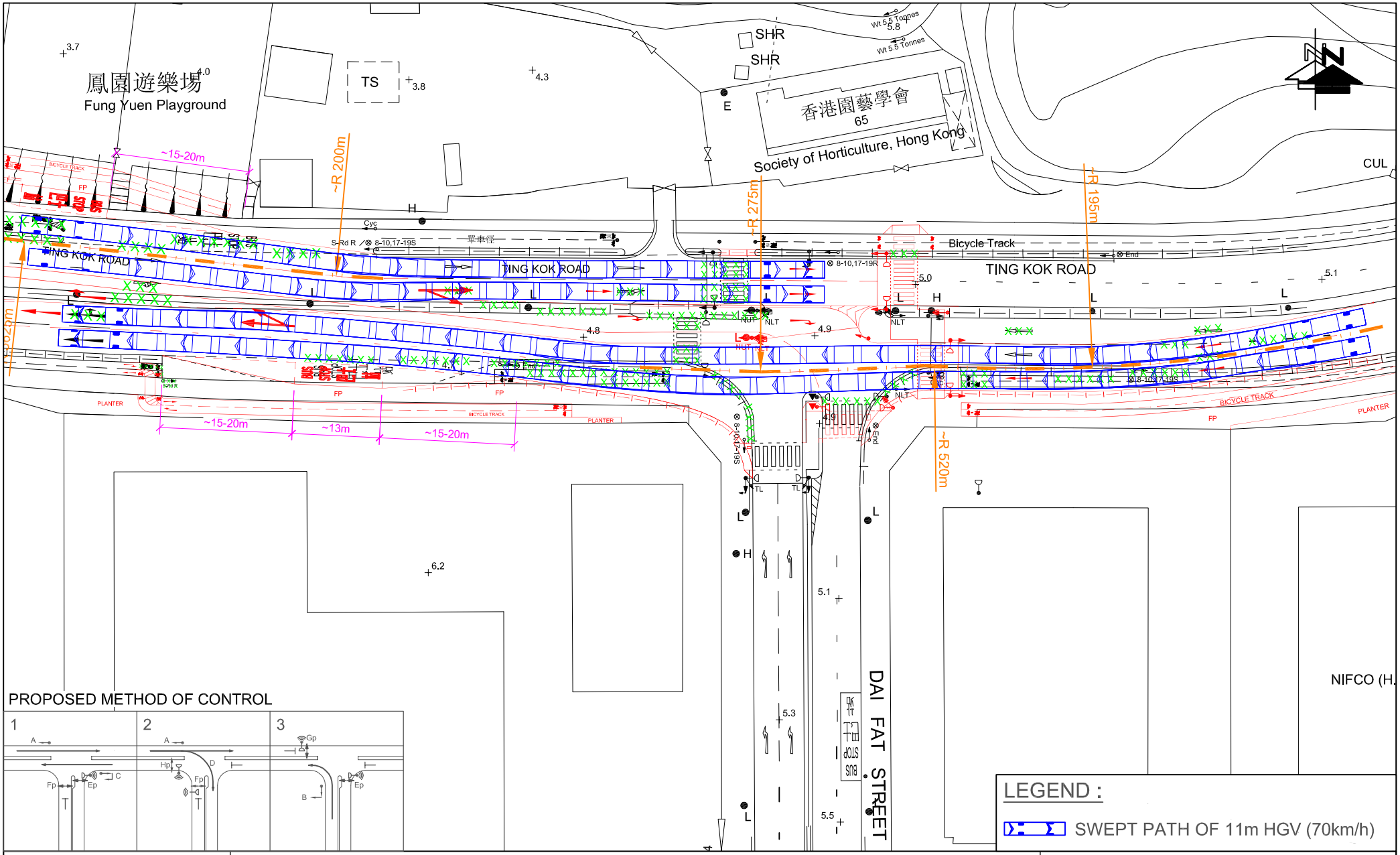


FIGURE NO.: 4.4(SP1)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (A) (SWEPT PATH ANALYSIS OF 11m HGV [70km/h])
SCALE: 1 : 750 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

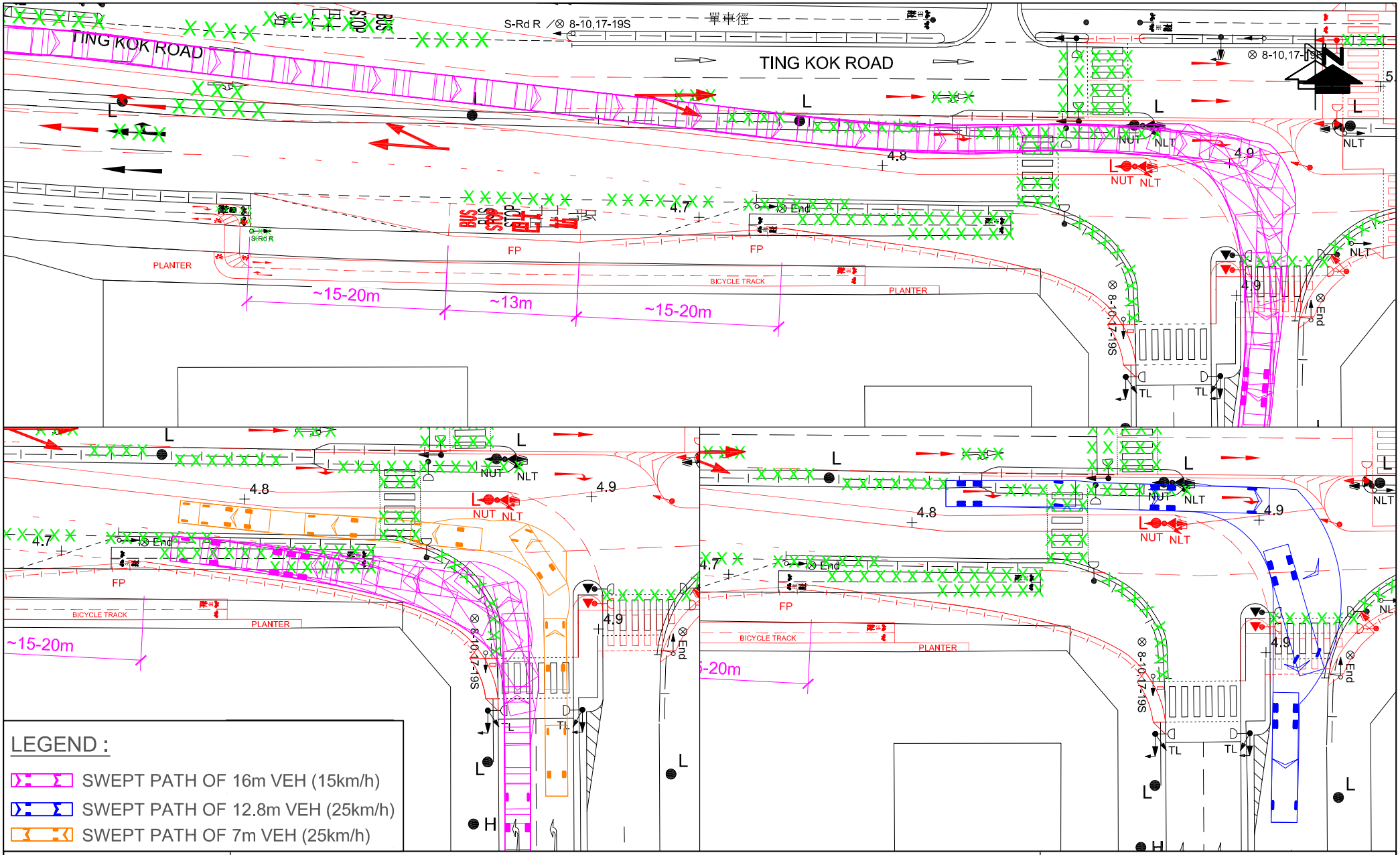


FIGURE NO.: 4.4(SP2)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FAT STREET (A) WITH SWEPT PATH ANALYSIS OF 16m VEHICLE, 12.8m VEHICLE & 7m VEHICLE
SCALE: 1 : 500 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

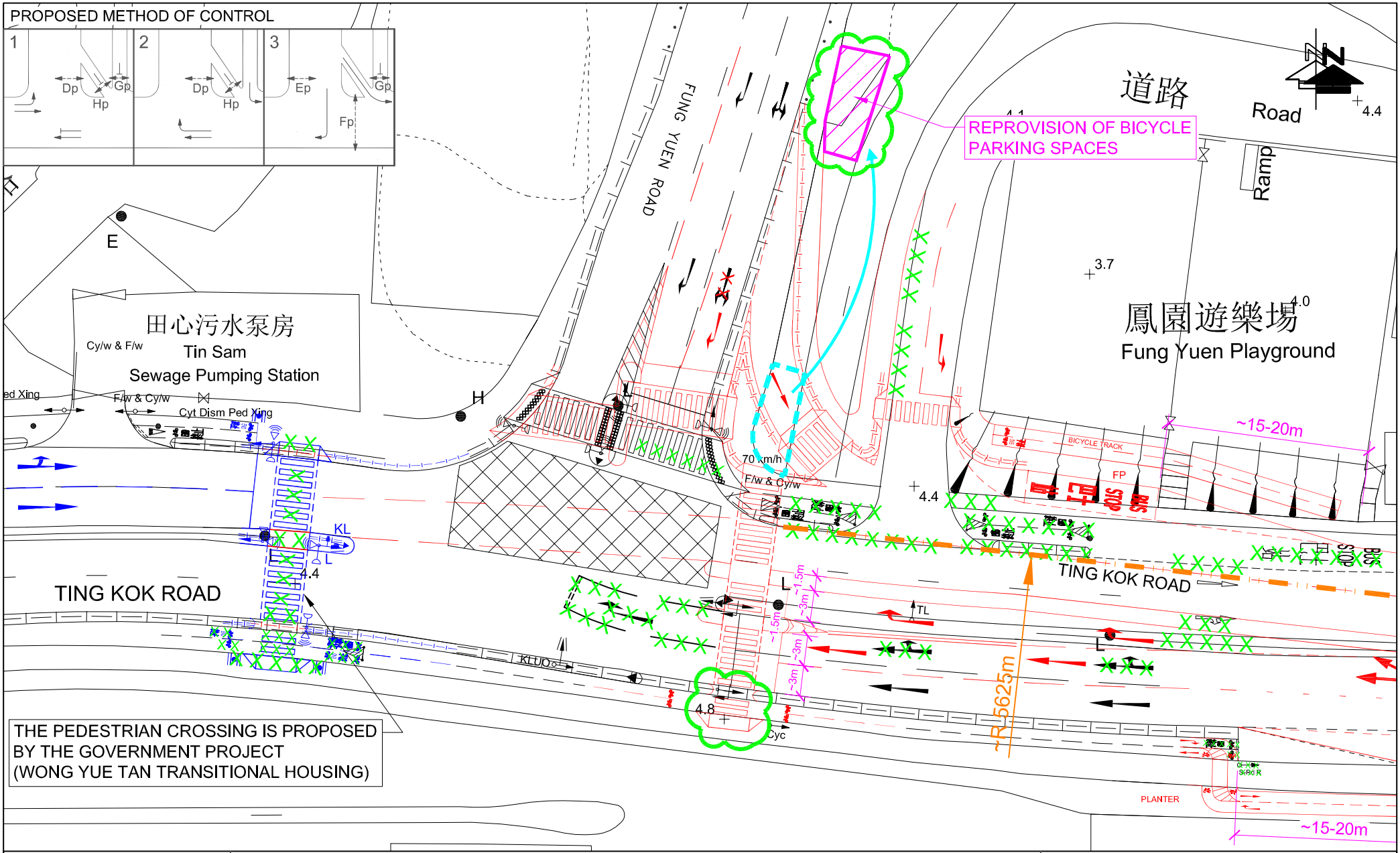


FIGURE NO.: 4.5	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / FUNG YUEN ROAD (B)
SCALE: 1 : 500 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

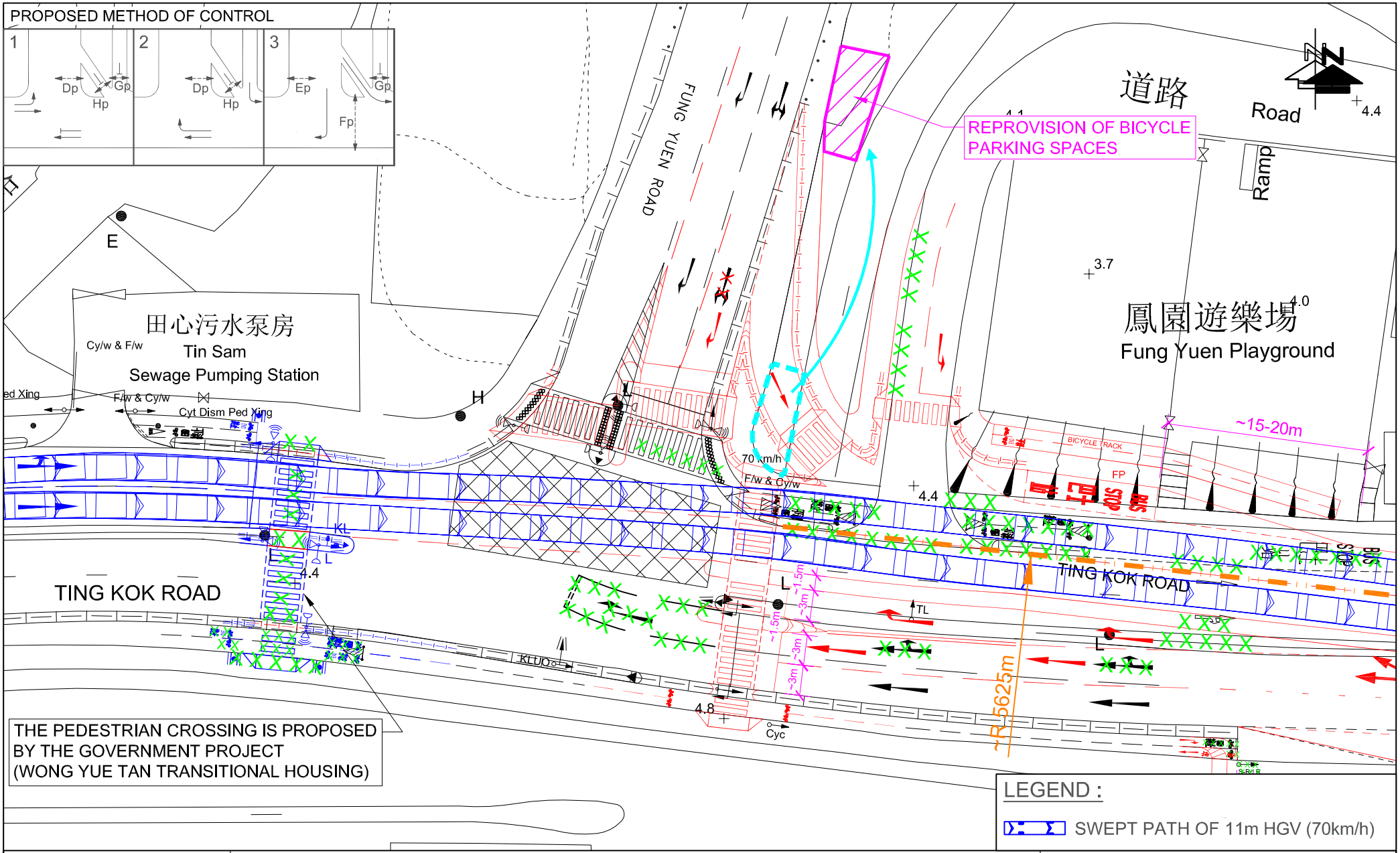


FIGURE NO.: 4.5(SP1)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / FUNG YUEN ROAD (B) (SWEPT PATH ANALYSIS OF 11m HGV [70km/h])
SCALE: 1 : 500 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

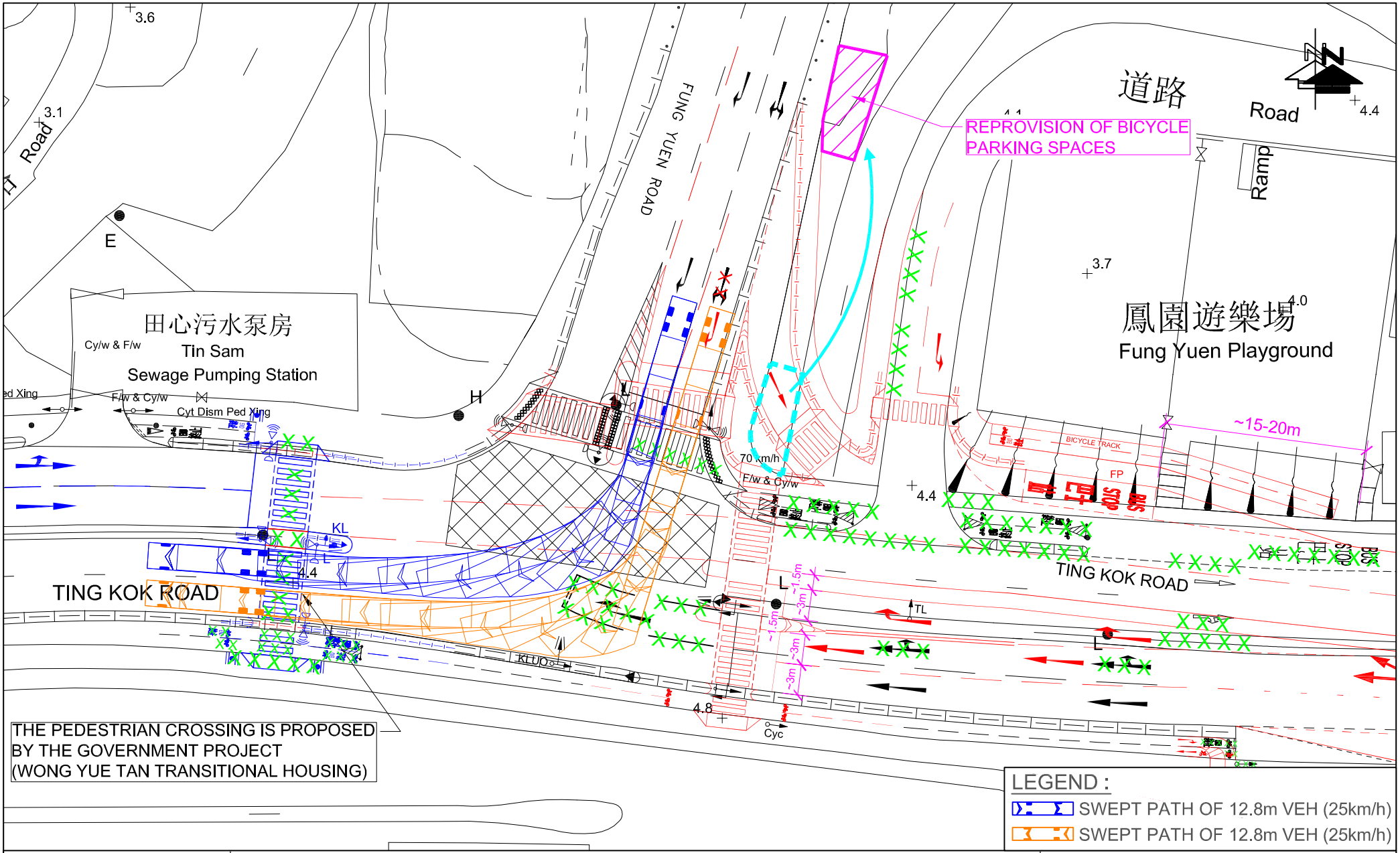


FIGURE NO.: 4.5(SP2)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / FUNG YUEN ROAD (B) WITH SWEPT PATH ANALYSIS OF 12.8m VEHICLES
SCALE: 1 : 500 @A4	DATE: 27 NOV 2025

CTA Consultants Limited
志達顧問有限公司

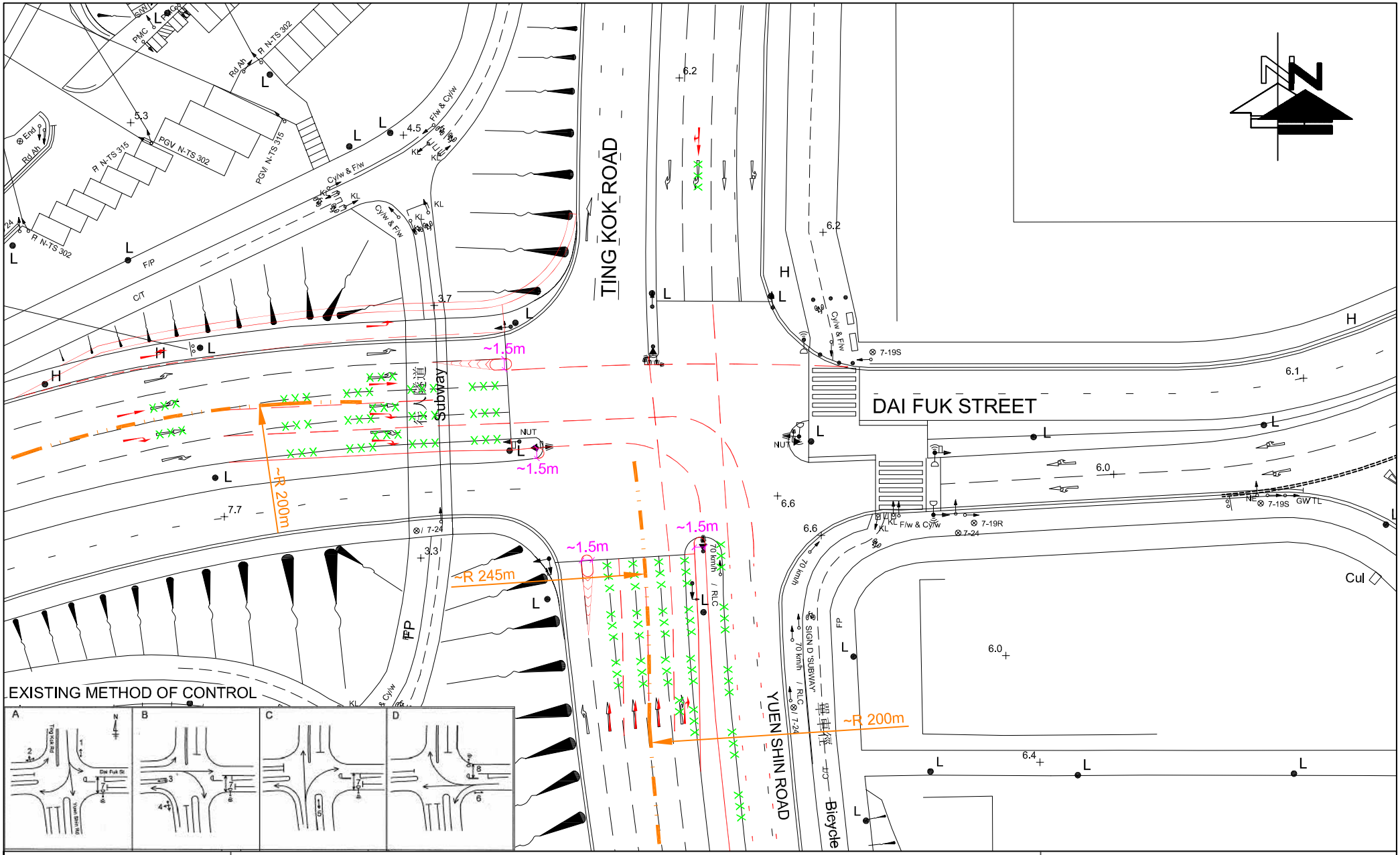
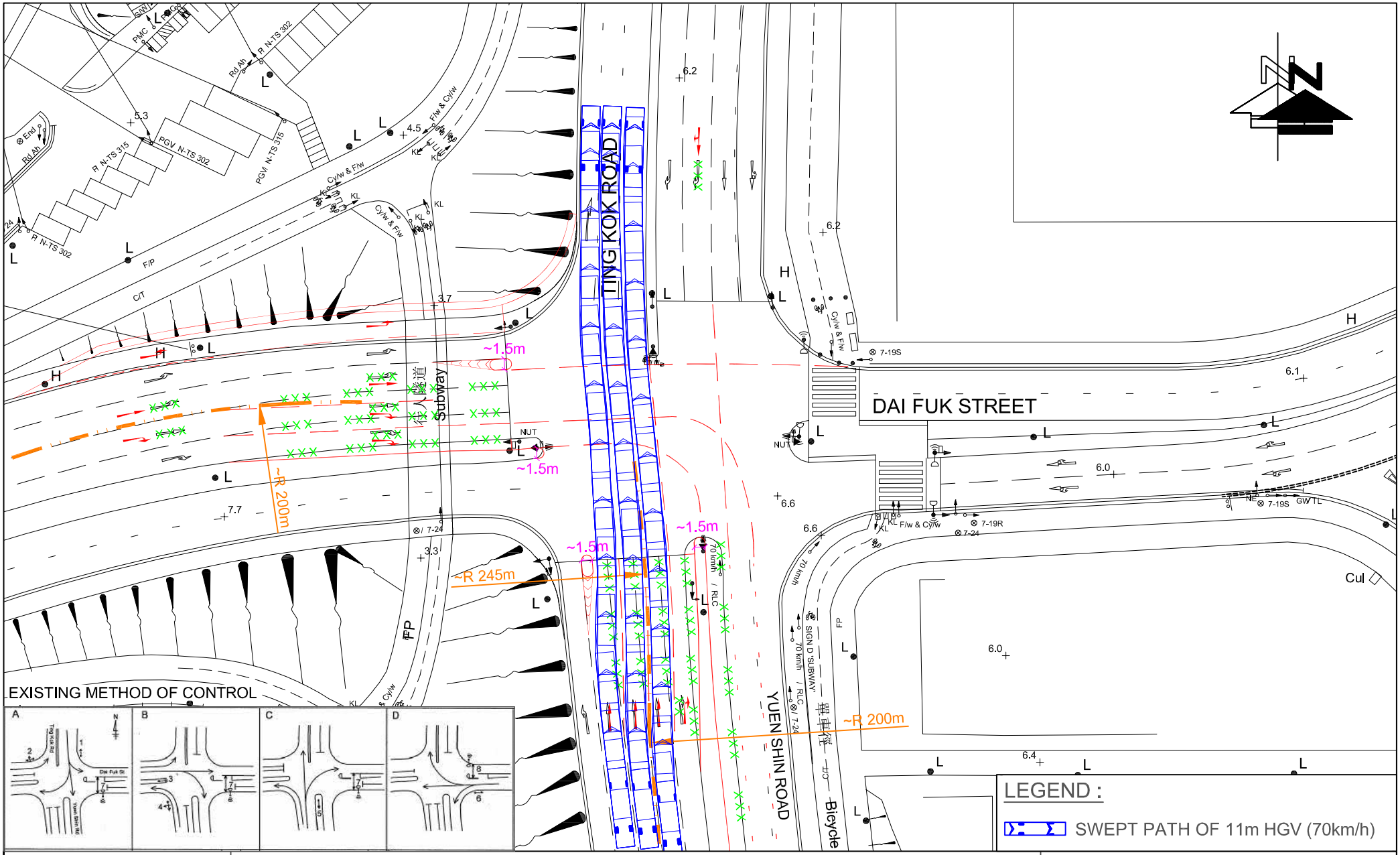


FIGURE NO.: 4.6	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FUK ROAD / YUEN SHIN ROAD (C)	CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 700 @A4 / DATE: 18 JUL 2025		

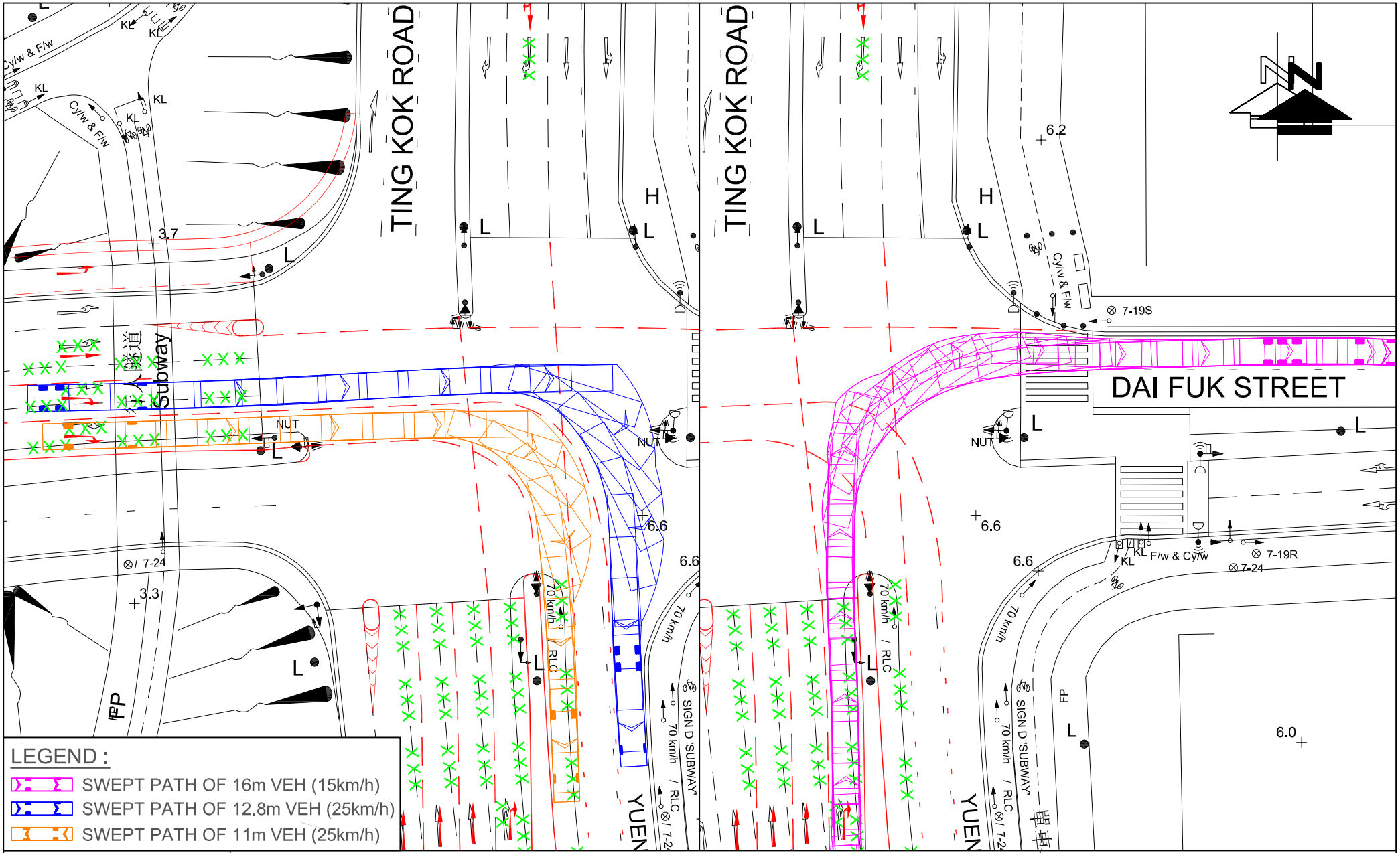


LEGEND :

SWEPT PATH OF 11m HGV (70km/h)

FIGURE NO.: 4.6(SP1)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FUK ROAD / YUEN SHIN ROAD (C) (SWEPT PATH ANALYSIS OF 11m HGV [70km/h])
SCALE: 1 : 700 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司



LEGEND :

- SWEPT PATH OF 16m VEH (15km/h)
- SWEPT PATH OF 12.8m VEH (25km/h)
- SWEPT PATH OF 11m VEH (25km/h)

FIGURE NO.: 4.6(SP2)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TING KOK ROAD / DAI FUK ROAD / YUEN SHIN ROAD (C) WITH SWEPT PATH ANALYSIS OF 16m VEHICLE, 12.8m VEHICLE & 11m VEHICLE
SCALE: 1 : 500 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

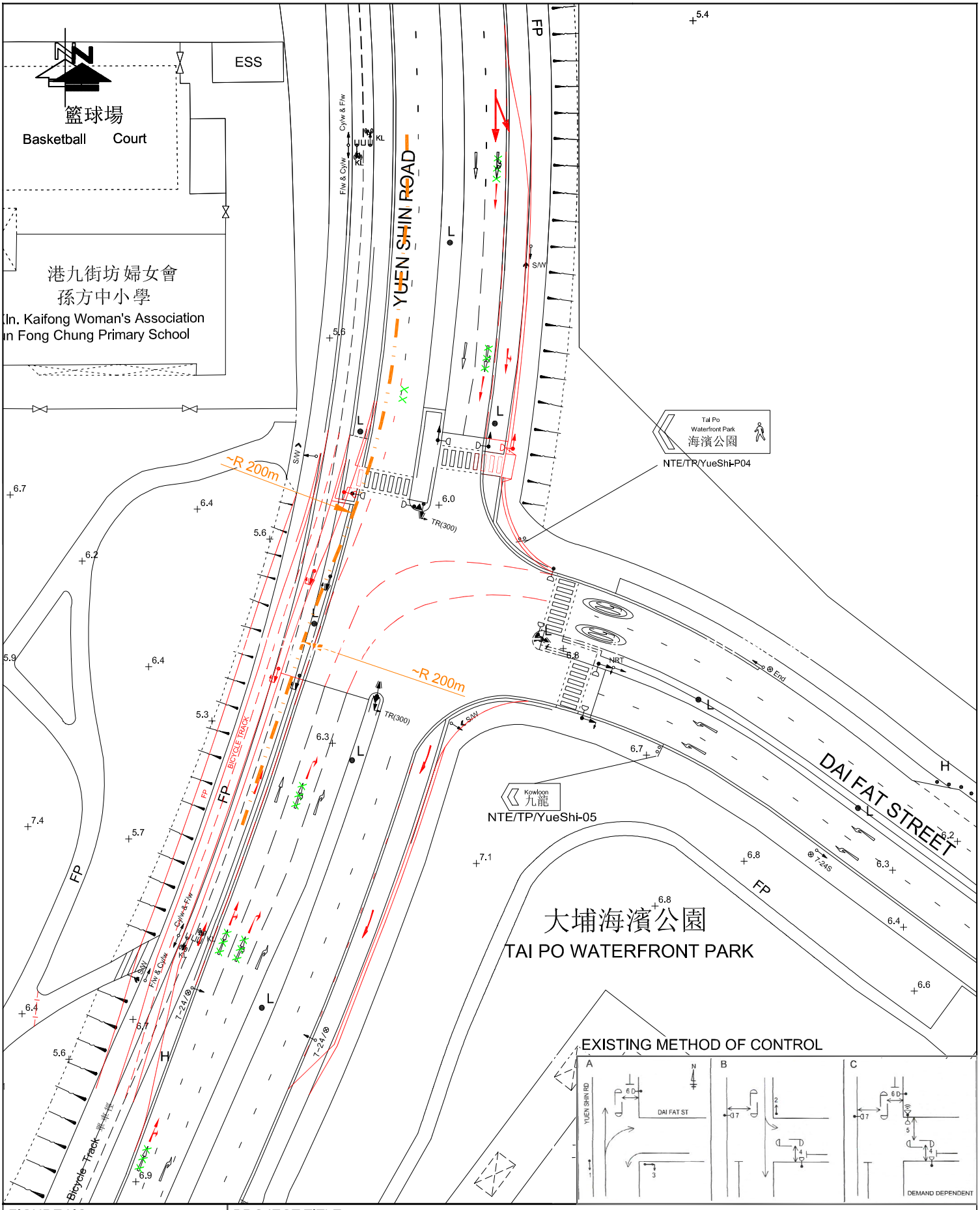
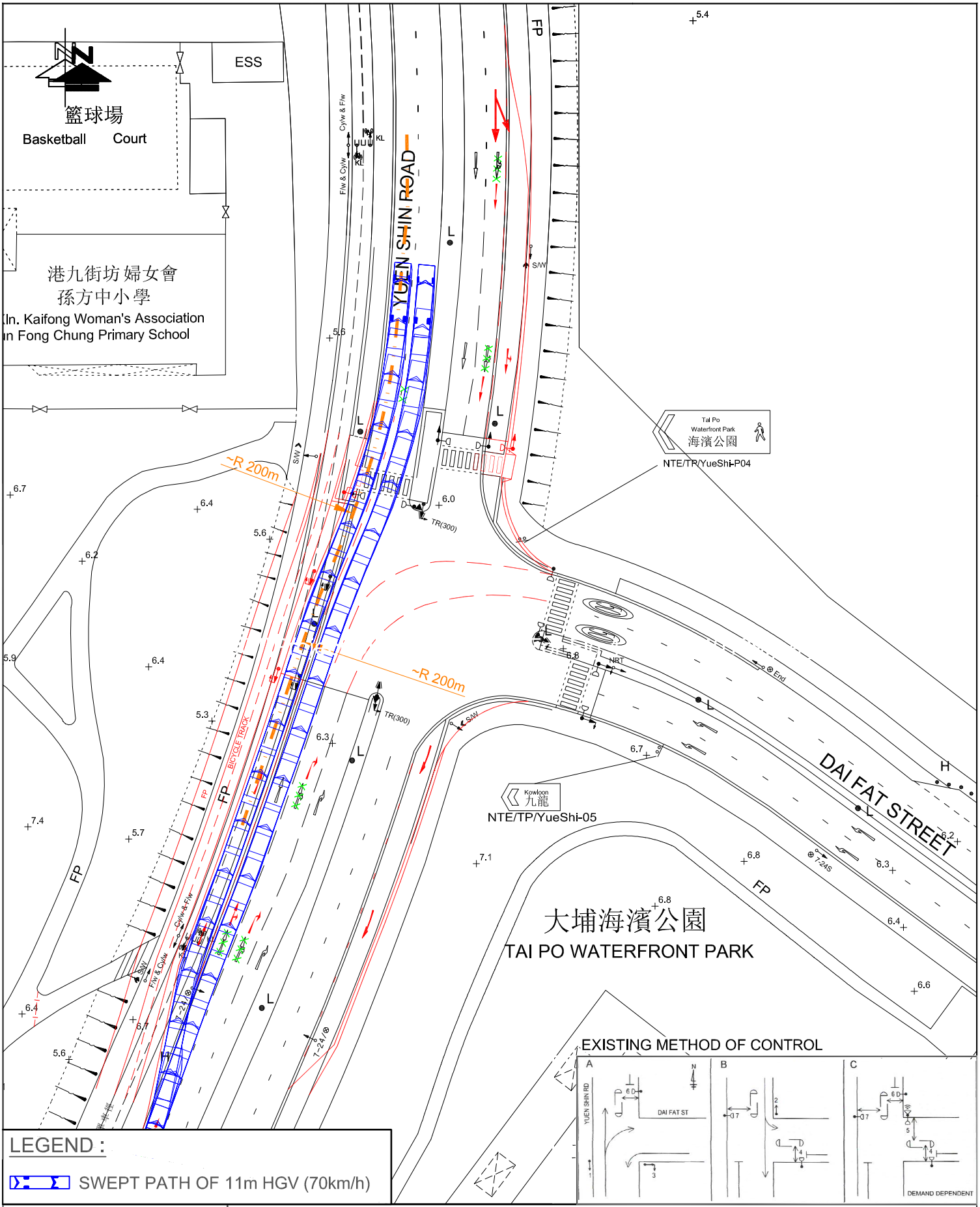


FIGURE NO.: 4.7	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (D)
SCALE: 1 : 750 @A4	DATE: 08 DEC 2025

CTA Consultants Limited
志達顧問有限公司



EXISTING METHOD OF CONTROL

LEGEND :

SWEPT PATH OF 11m HGV (70km/h)

FIGURE NO.: 4.7(SP1)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (D) (SWEPT PATH ANALYSIS OF 11m HGV [70km/h])	CTA Consultants Limited 志達顧問有限公司
SCALE: 1 : 750 @A4	DATE: 08 DEC 2025	

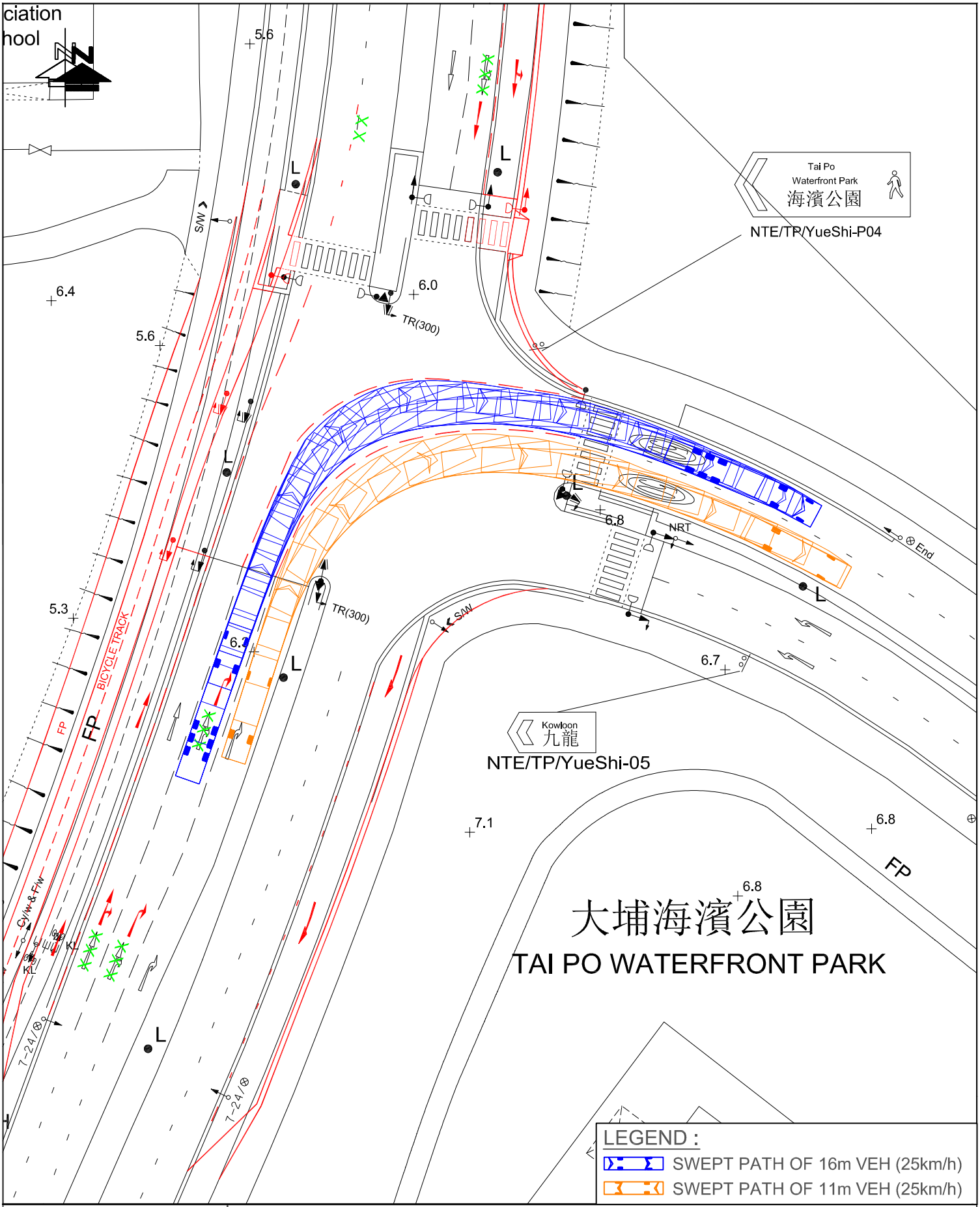


FIGURE NO.: 4.7(SP2)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF YUEN SHIN ROAD / DAI FAT STREET (D) WITH SWEPT PATH ANALYSIS OF 16m VEHICLE & 11m VEHICLE
SCALE: 1 : 500 @A4 / DATE: 08 DEC 2025	CTA Consultants Limited 志達顧問有限公司

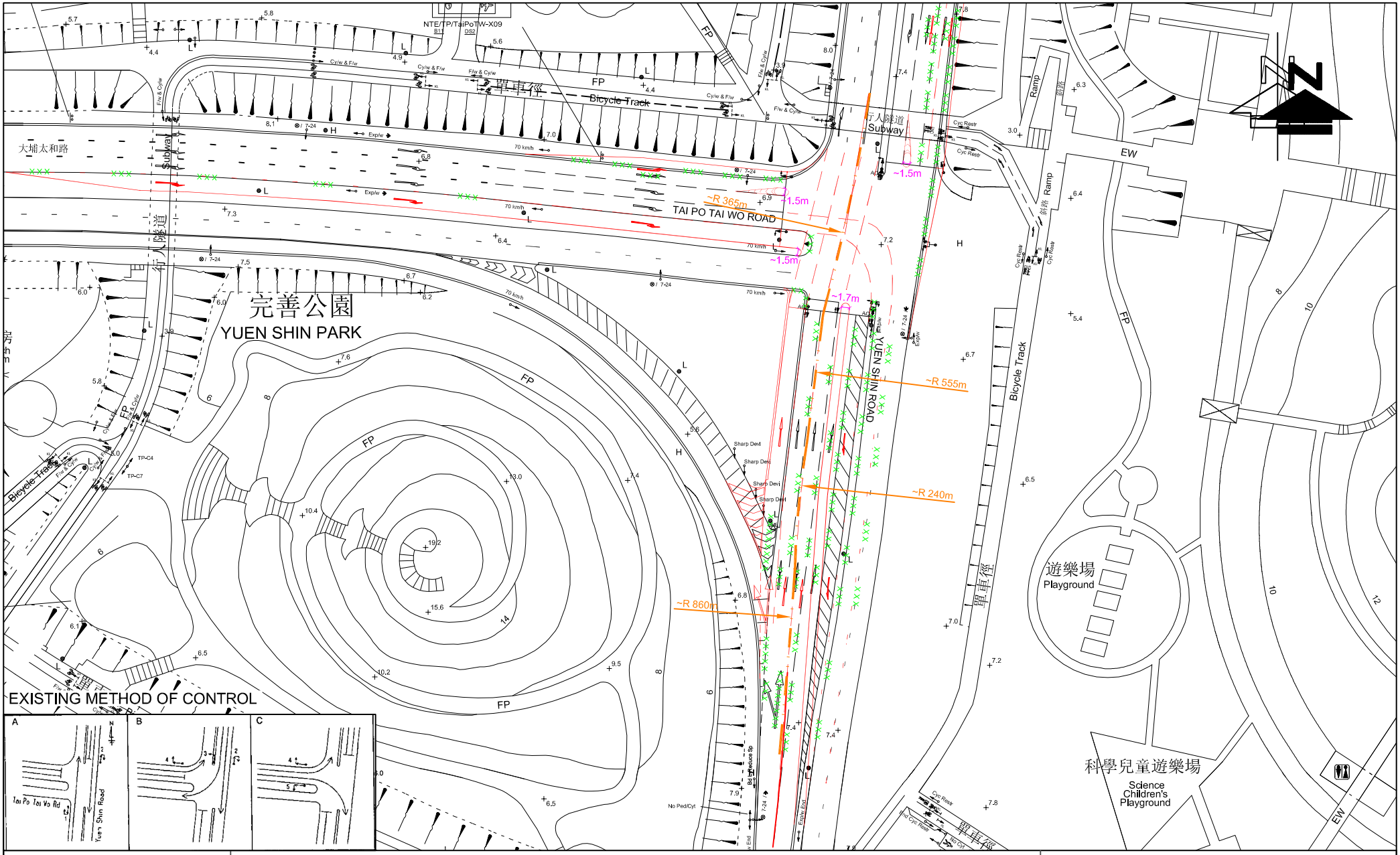


FIGURE NO.: 4.8	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TAI PO TAI WO ROAD / YUEN SHIN ROAD (E)	
SCALE: 1 : 1050 @A4	DATE: 18 JUL 2025	

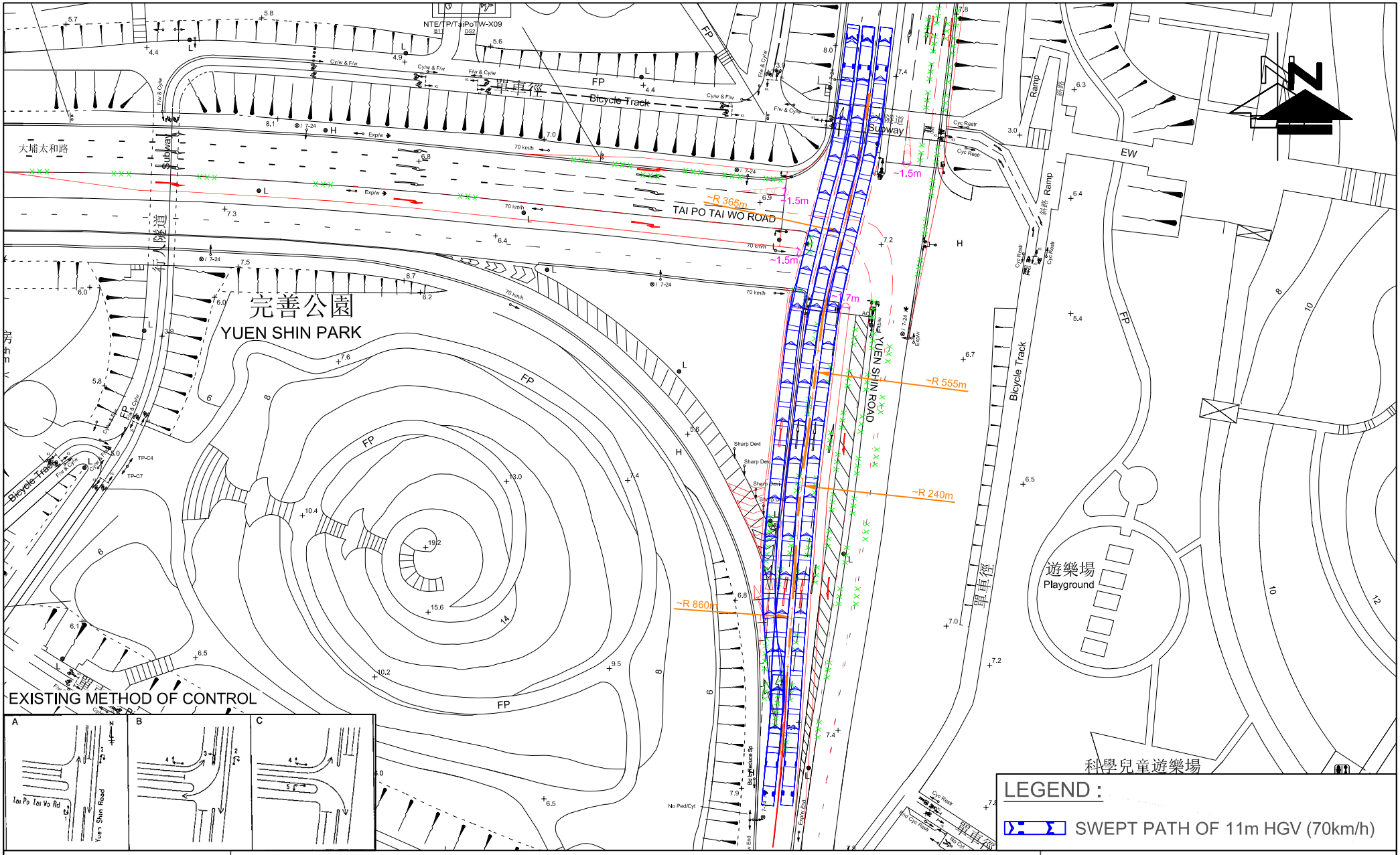


FIGURE NO.: 4.8(SP1)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TAI PO TAI WO ROAD / YUEN SHIN ROAD (E) (SWEPT PATH ANALYSIS OF 11m HGV [70km/h])
SCALE: 1 : 1050 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

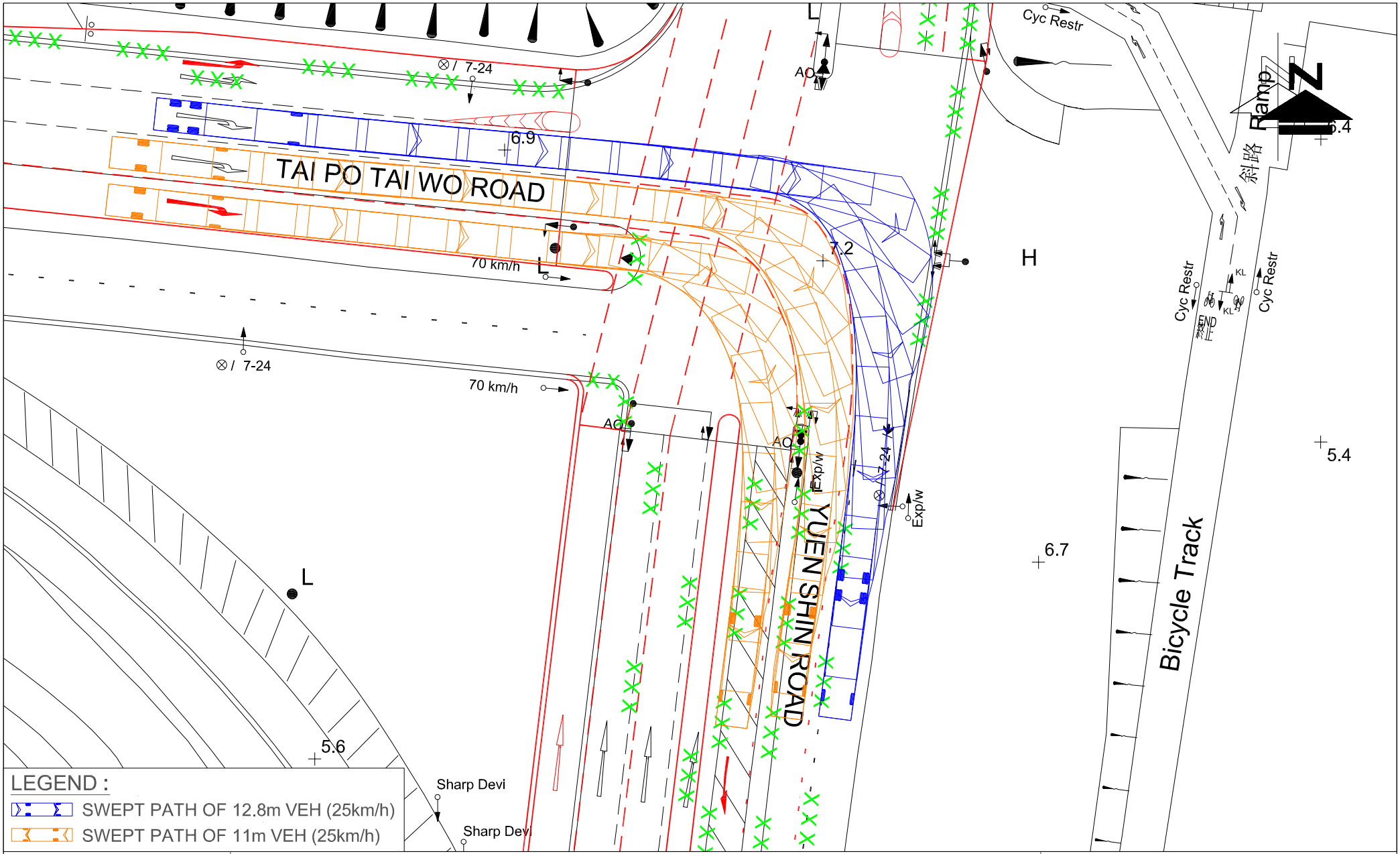


FIGURE NO.: 4.8(SP2)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TAI PO TAI WO ROAD / YUEN SHIN ROAD (E) WITH SWEPT PATH ANALYSIS OF 12.8m VEHICLE & 11m VEHICLES
SCALE: 1 : 400 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

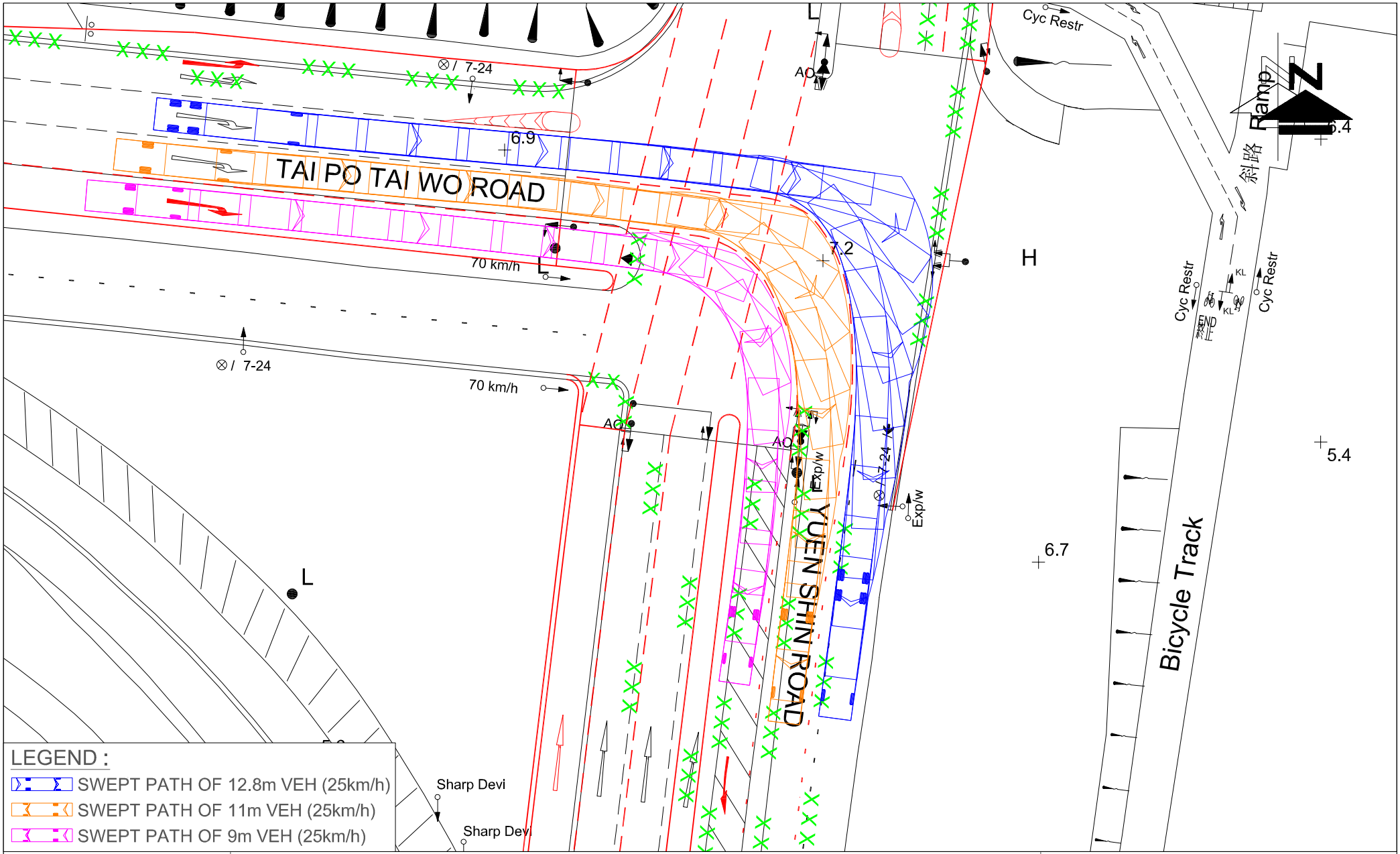


FIGURE NO.: 4.8(SP3)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED IMPROVEMENT JUNCTION LAYOUT OF TAI PO TAI WO ROAD / YUEN SHIN ROAD (E) WITH SWEPT PATH ANALYSIS OF 12.8m VEHICLE, 11m VEHICLE & 9m VEHICLE
SCALE: 1 : 400 @A4	DATE: 18 JUL 2025

CTA Consultants Limited
志達顧問有限公司

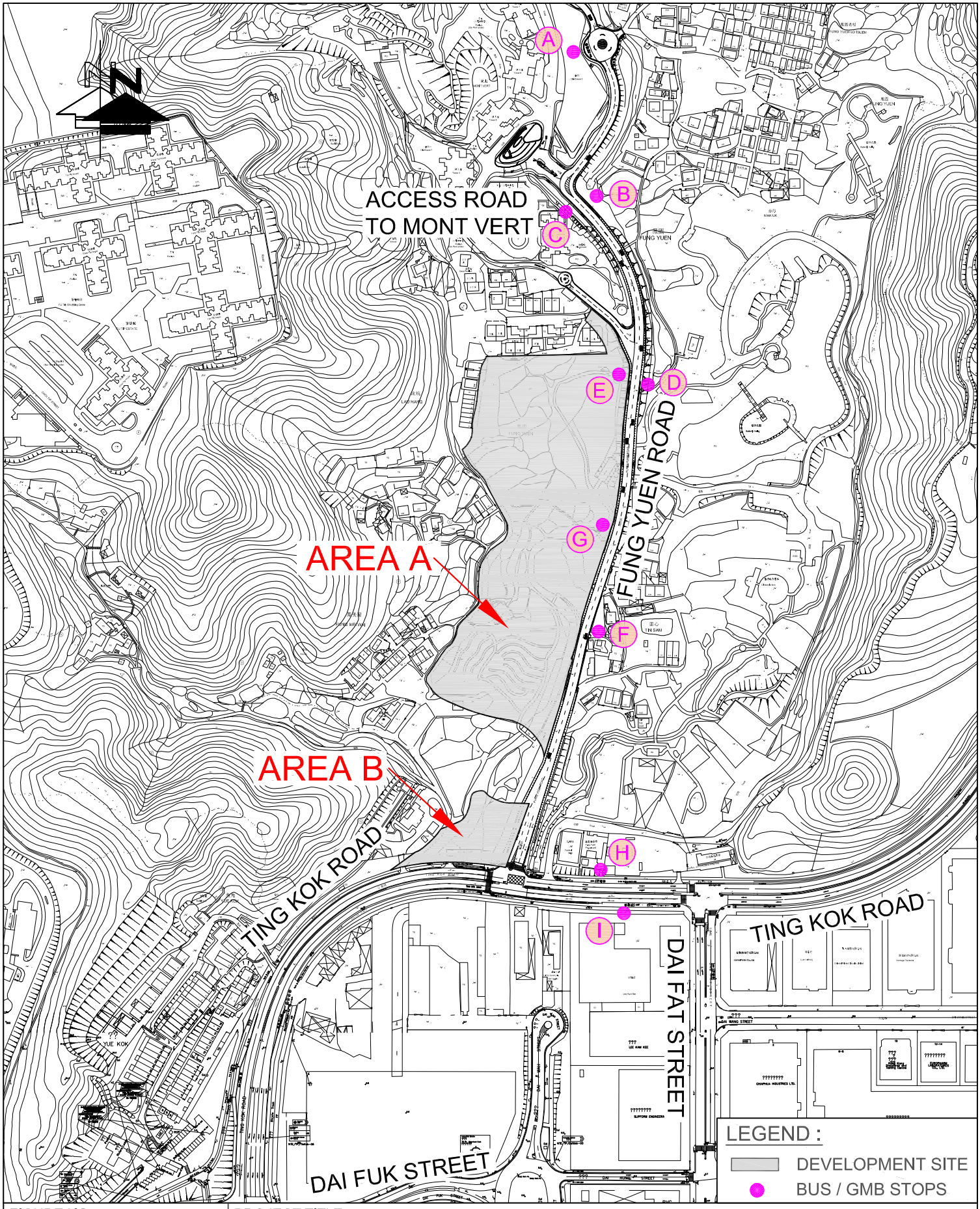


FIGURE NO.: 5.1	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: THE LOCATION OF BUS STOP & GMB STOP
SCALE: 1 : 4000 @A4 / DATE: 18 JUL 2025	CTA Consultants Limited 志達顧問有限公司

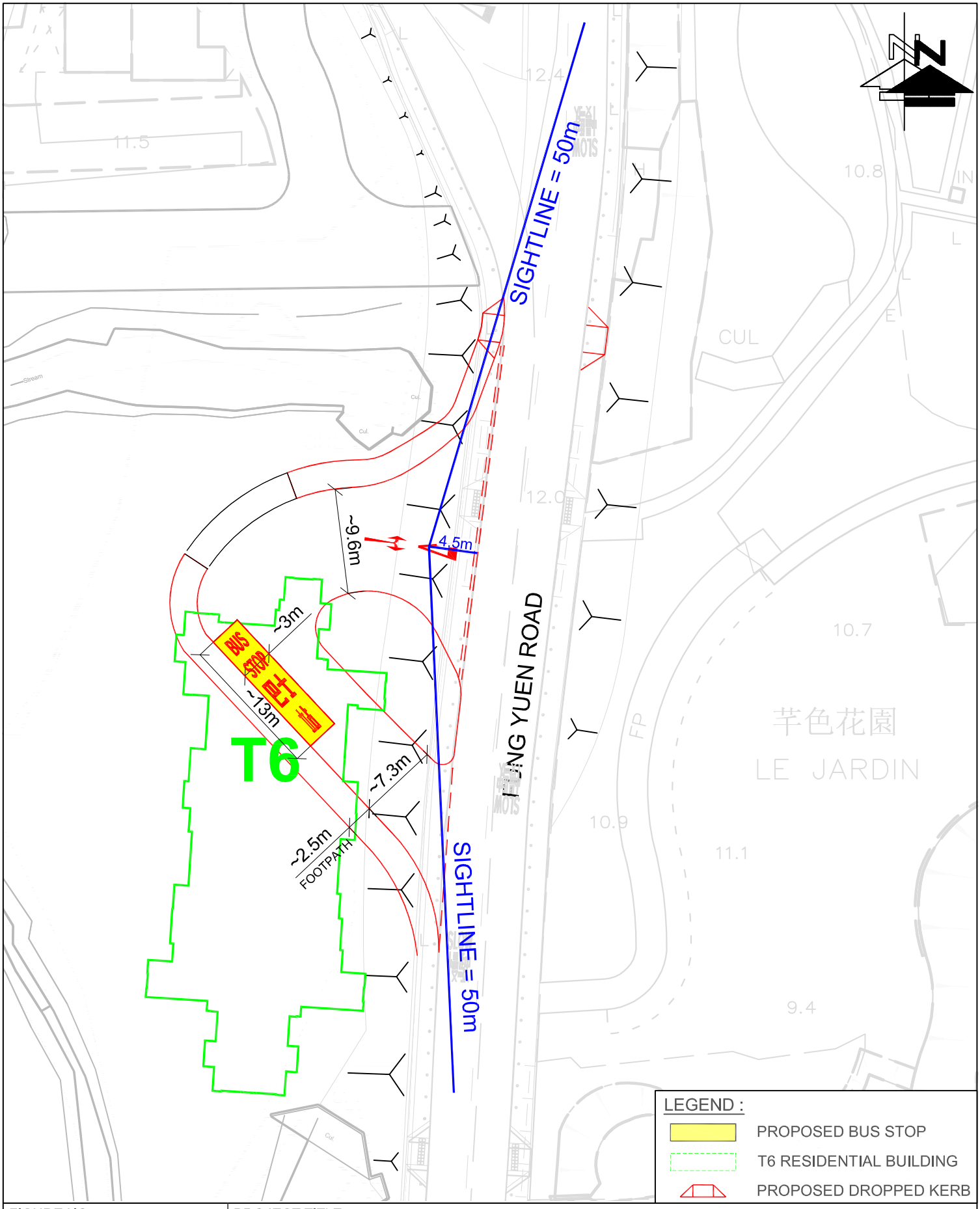
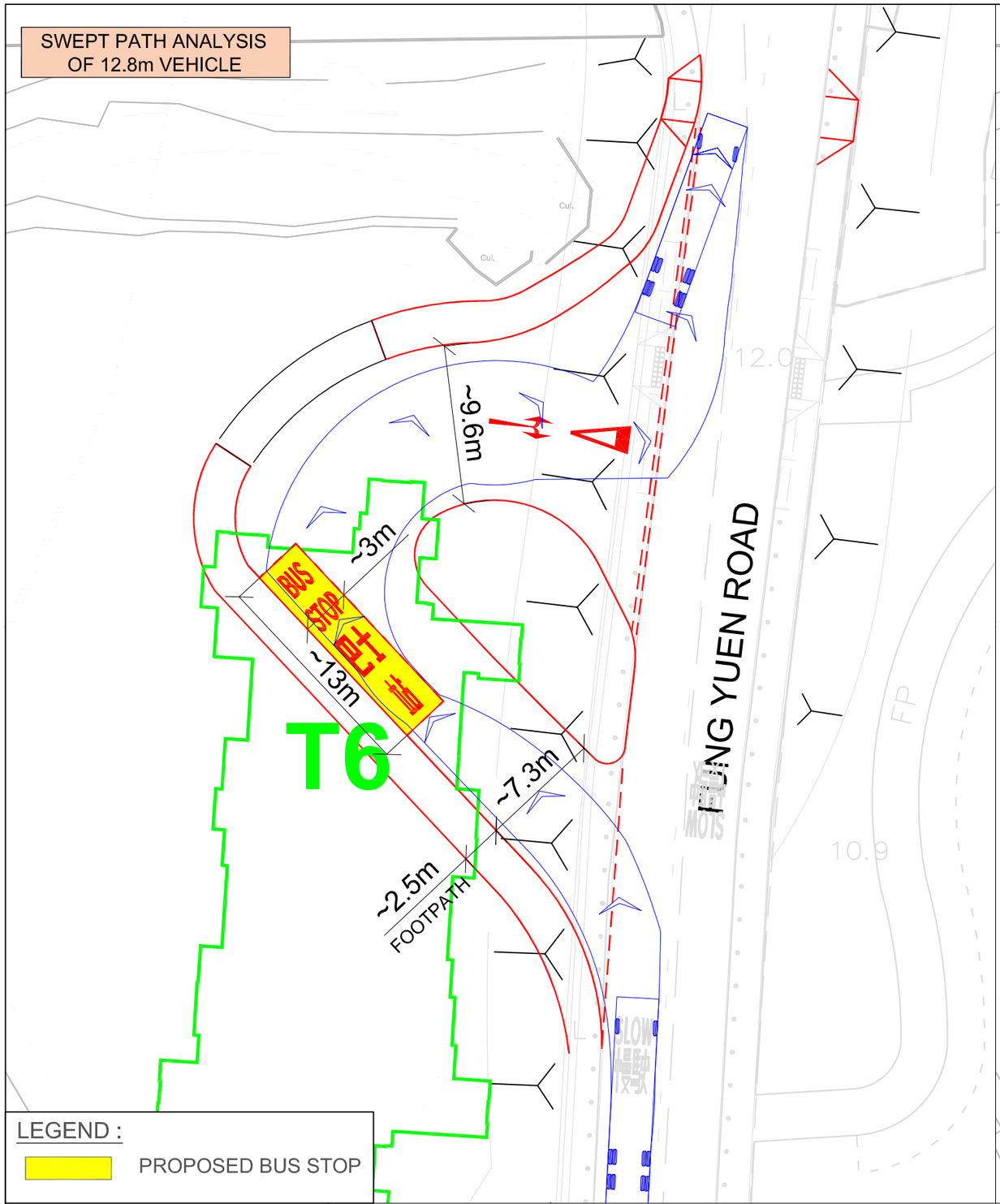
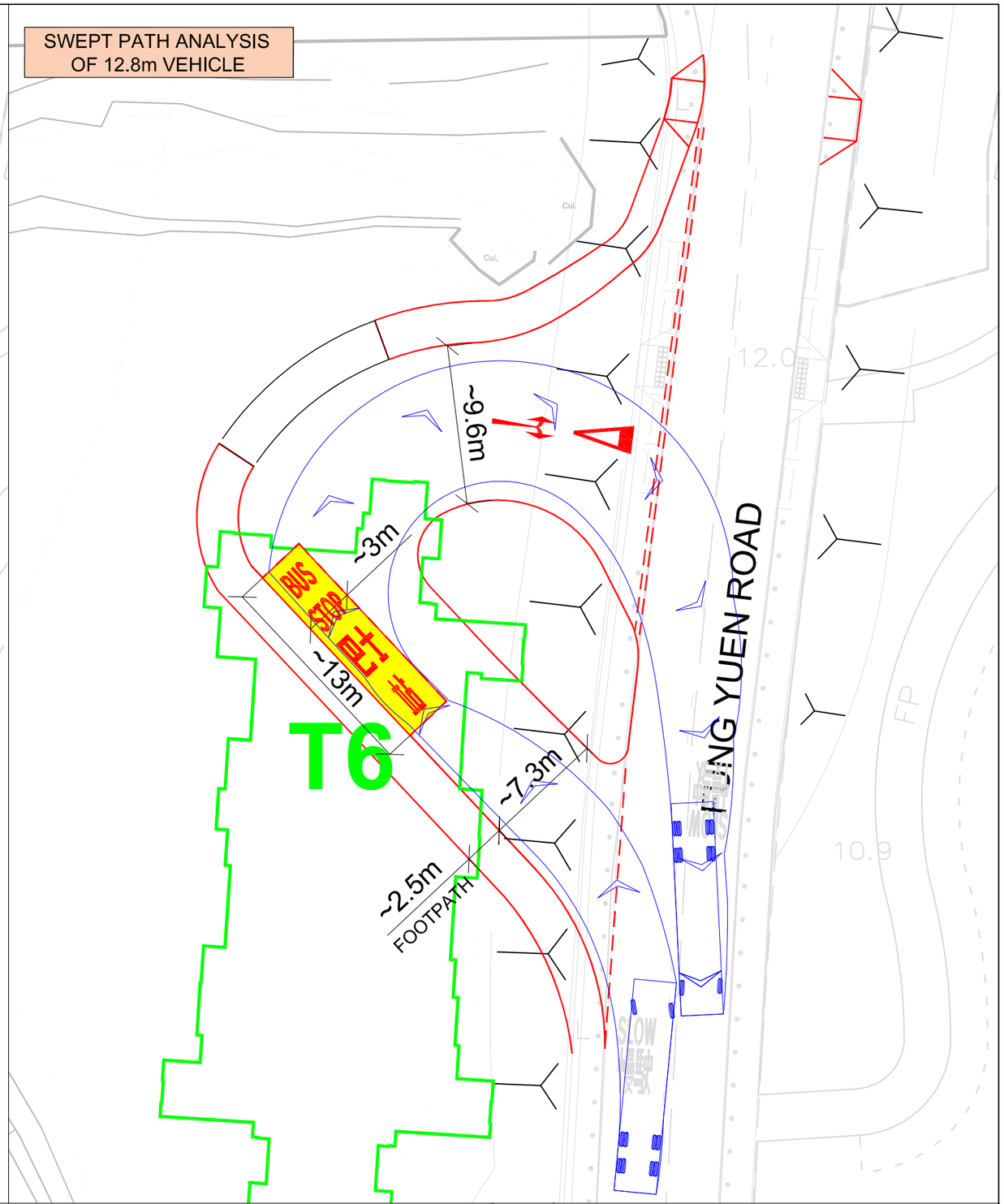


FIGURE NO.: 5.2	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED BUS STOP
SCALE: 1 : 450 @A4 / DATE: 09 SEP 2025	CTA Consultants Limited 志達顧問有限公司

SWEPT PATH ANALYSIS
OF 12.8m VEHICLE



SWEPT PATH ANALYSIS
OF 12.8m VEHICLE



LEGEND :

PROPOSED BUS STOP

FIGURE NO.: 5.2(SP)	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF 12.8m VEHICLE
SCALE: 1 : 300 @A3 / DATE: 09 SEP 2025	CTA Consultants Limited 志達顧問有限公司

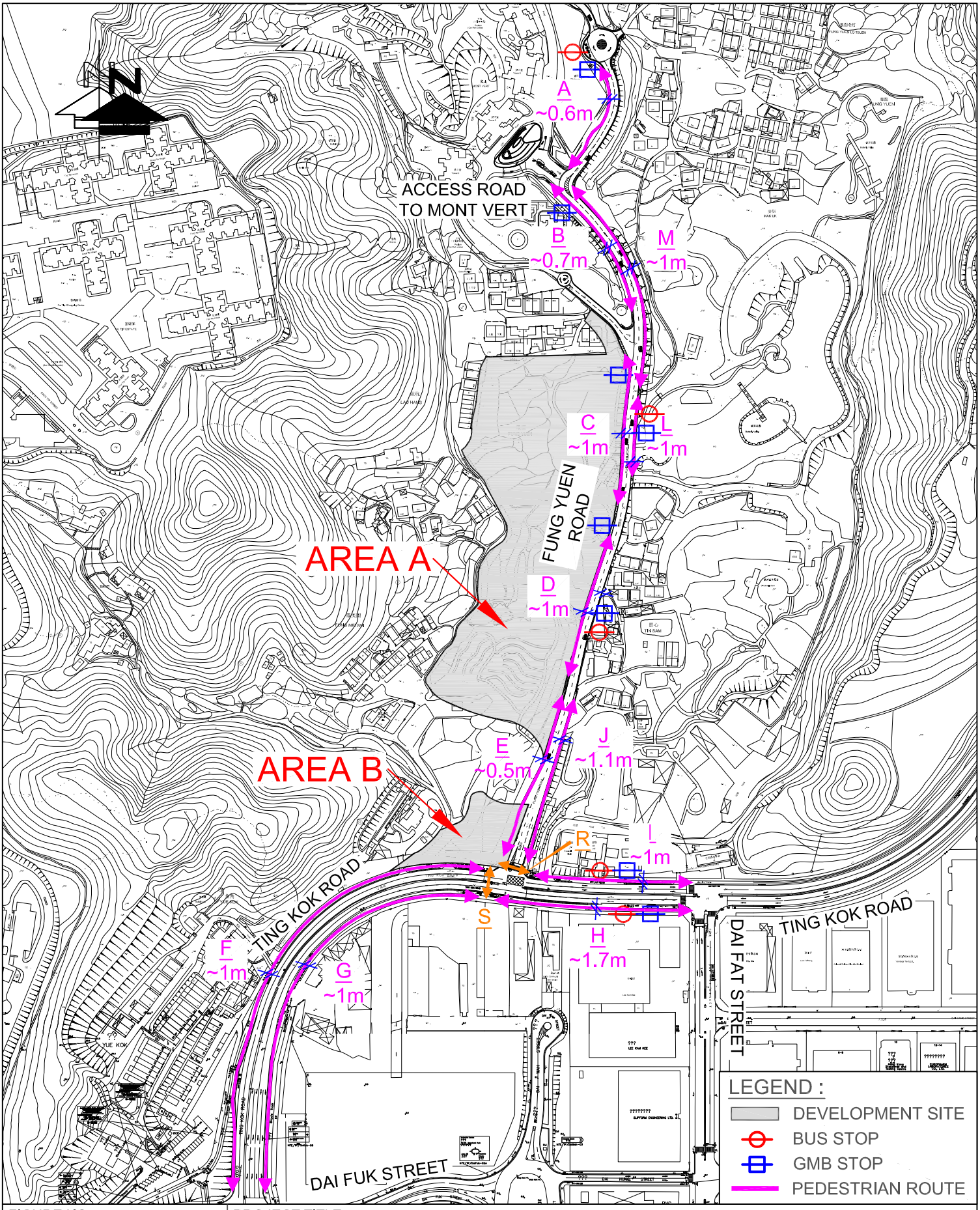


FIGURE NO.: 6.1	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: INDEX PLAN OF CRITICAL FOOTPATH SECTIONS
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

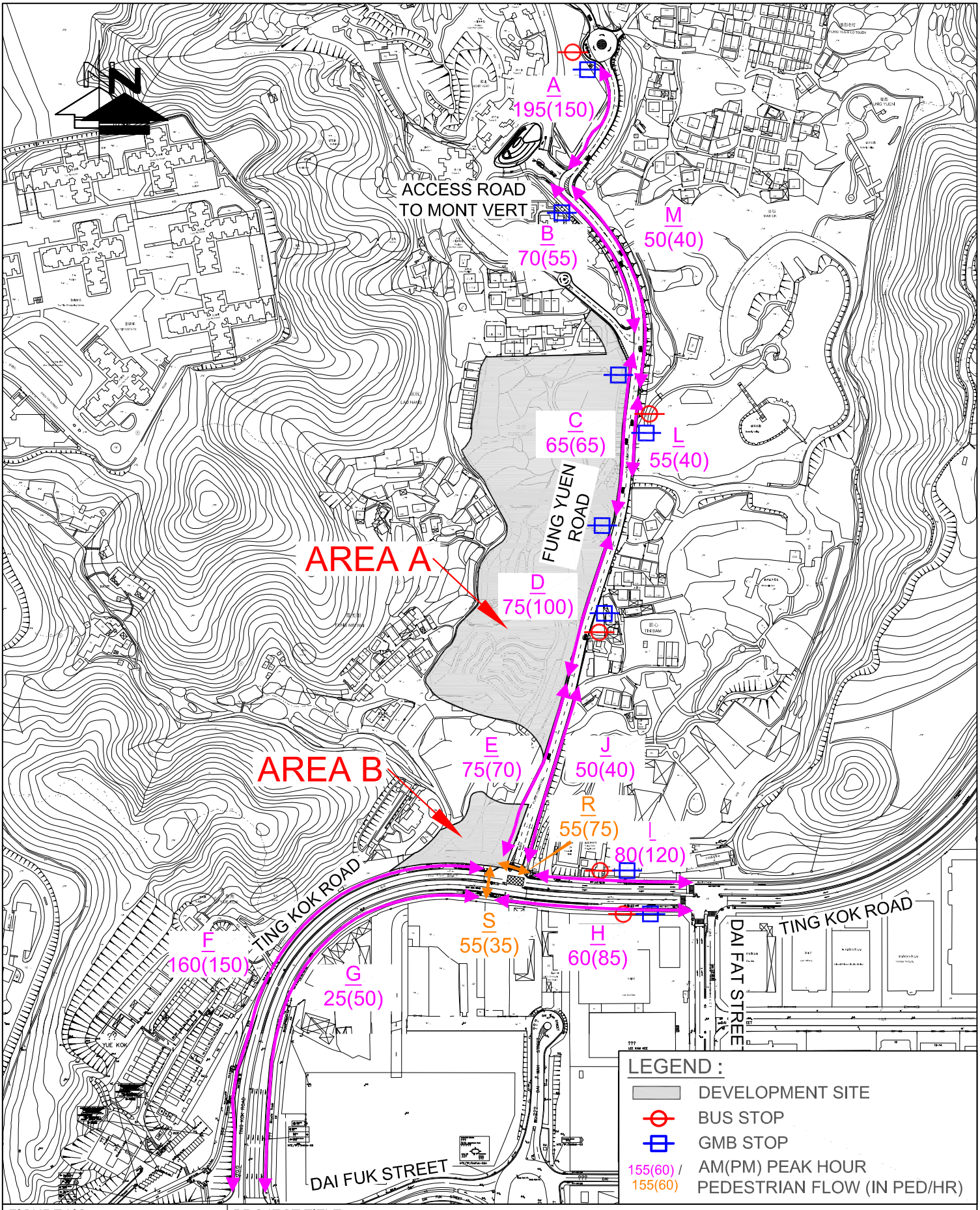


FIGURE NO.: 6.2	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: 2025 OBSERVED PEDESTRIAN FLOW
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

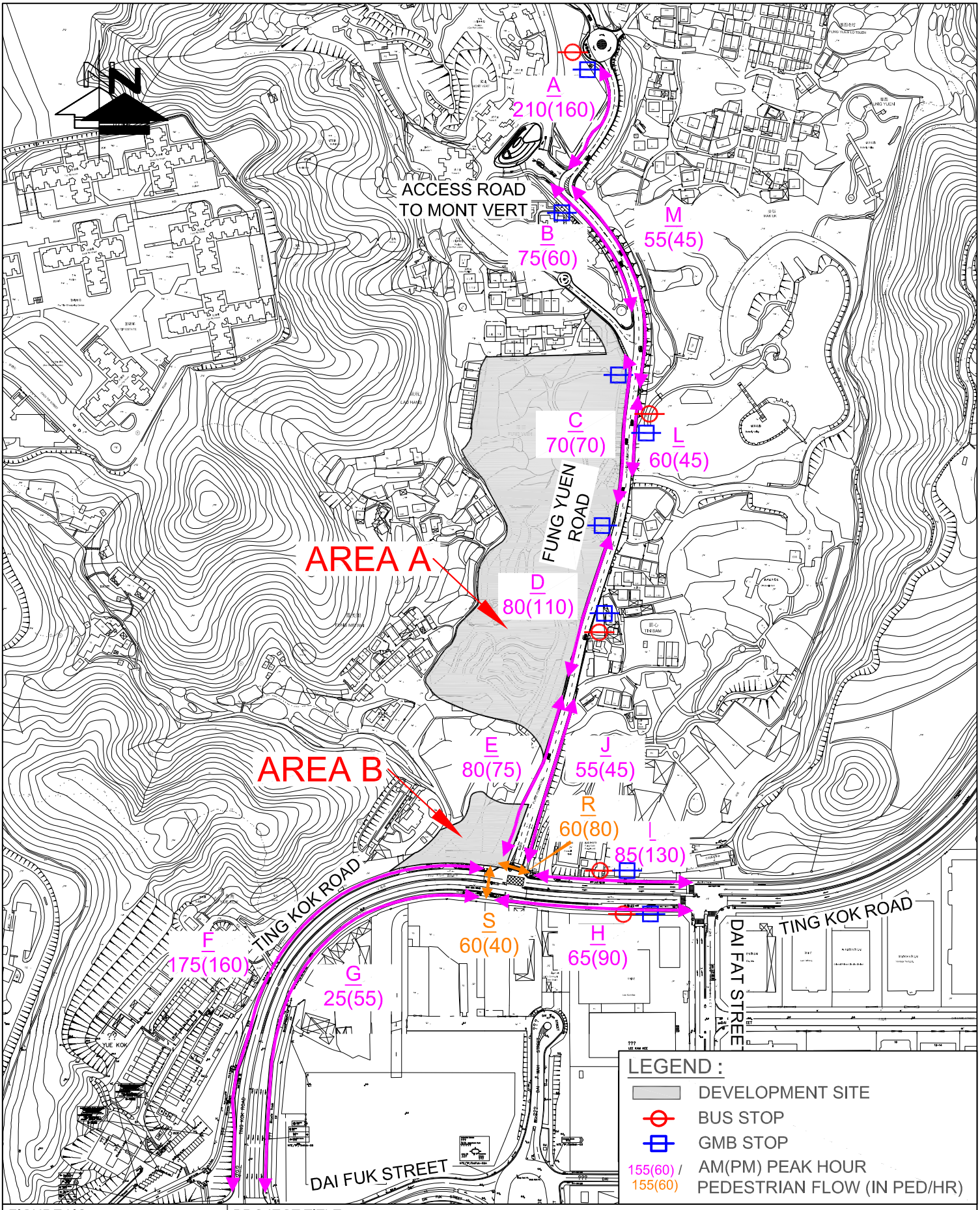


FIGURE NO.: 6.3	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: 2033 REFERENCE PEDESTRIAN FLOW
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

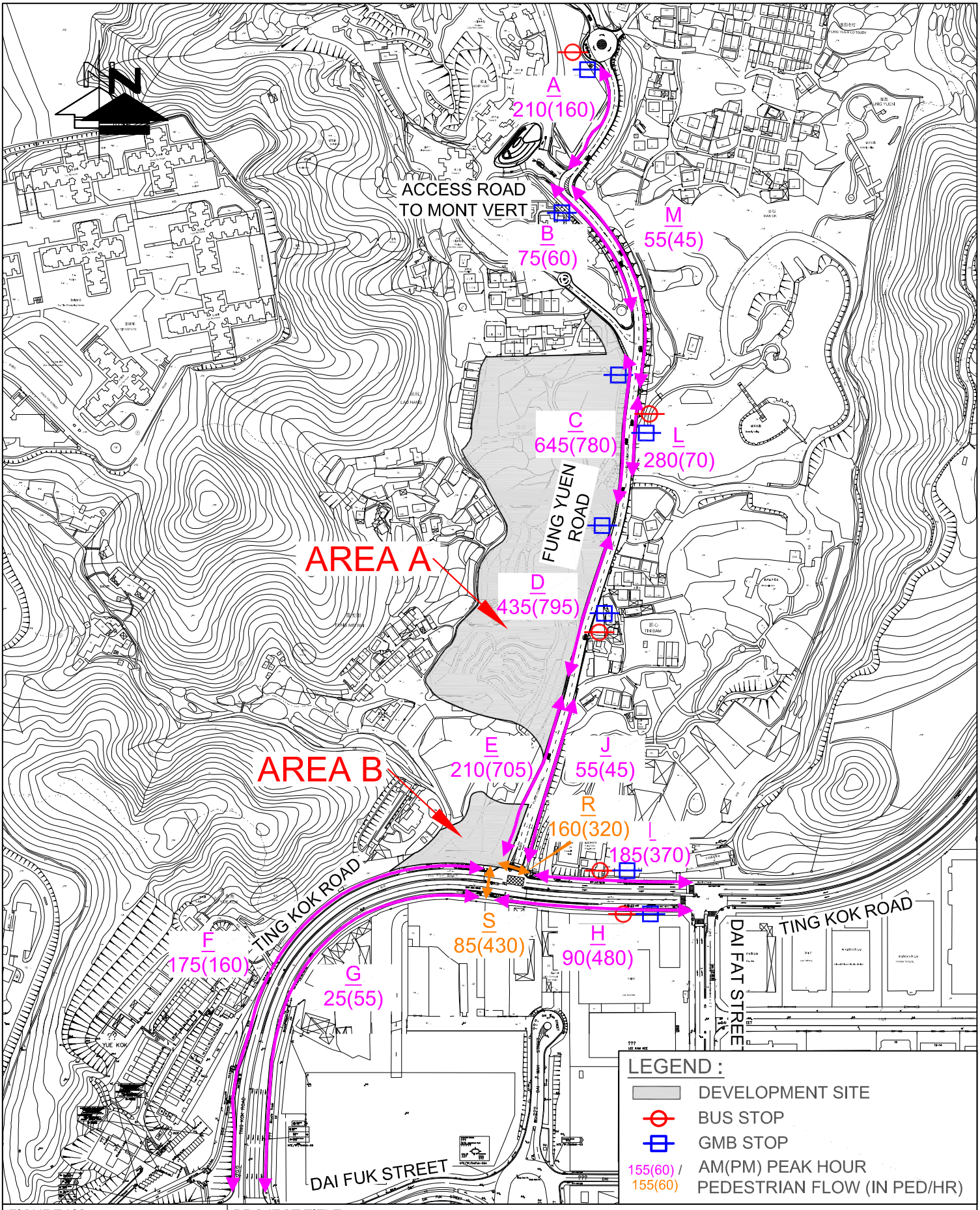


FIGURE NO.: 6.4	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: 2033 DESIGN PEDESTRIAN FLOW
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

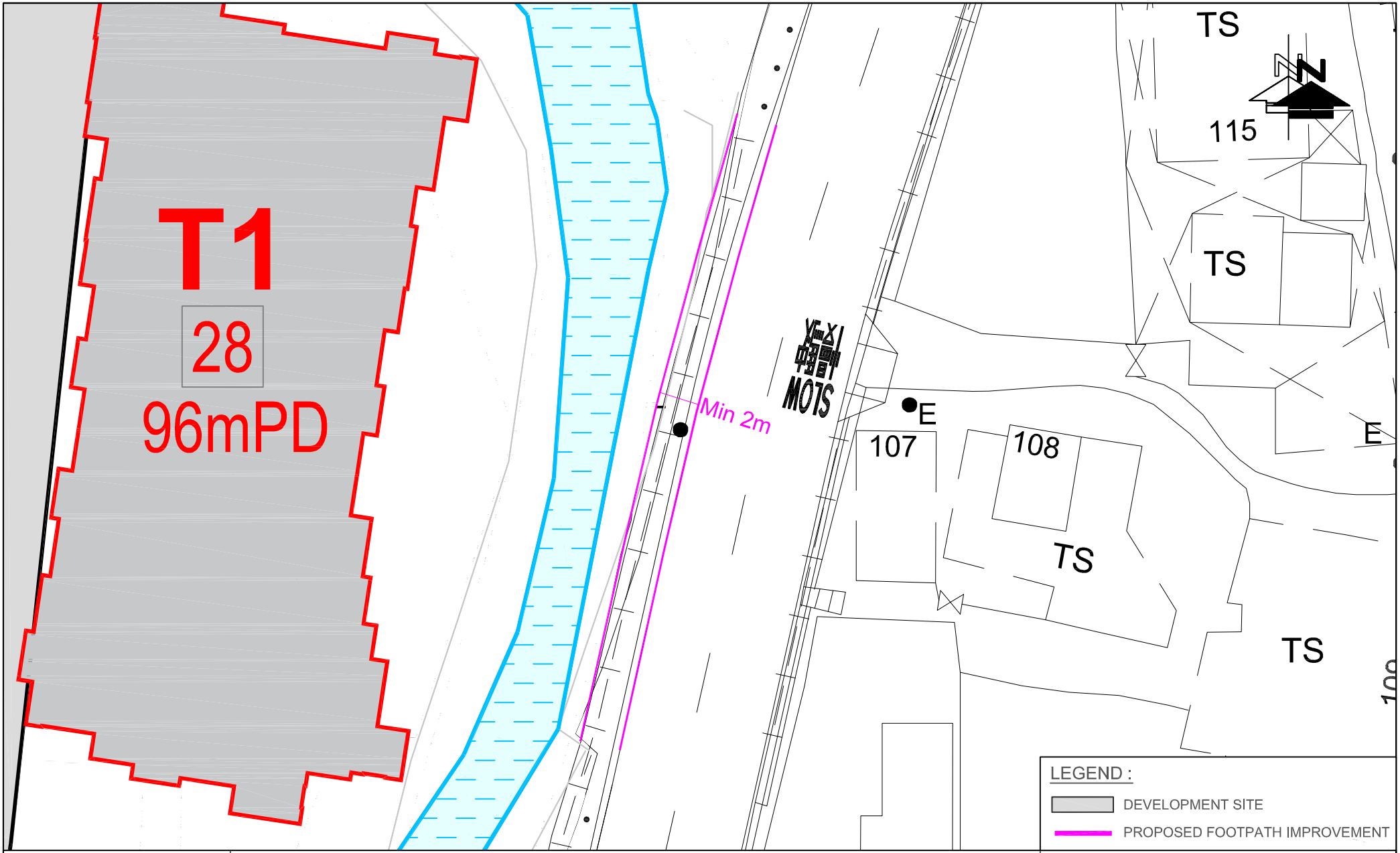


FIGURE NO.: 6.5	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PROPOSED FOOTPATH IMPROVEMENT
SCALE: 1 : 250 @A4 / DATE: 26 NOV 2025	CTA Consultants Limited 志達顧問有限公司

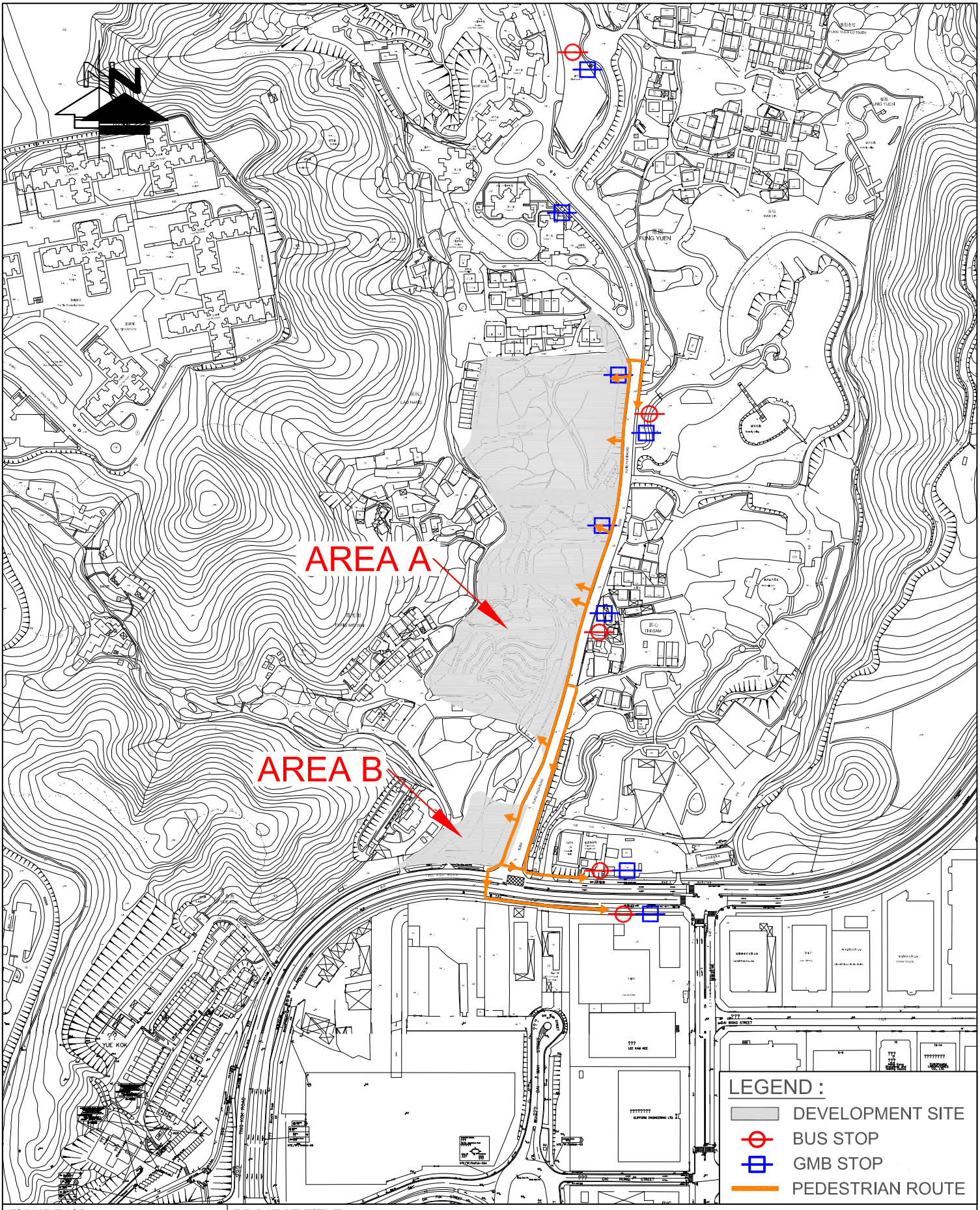
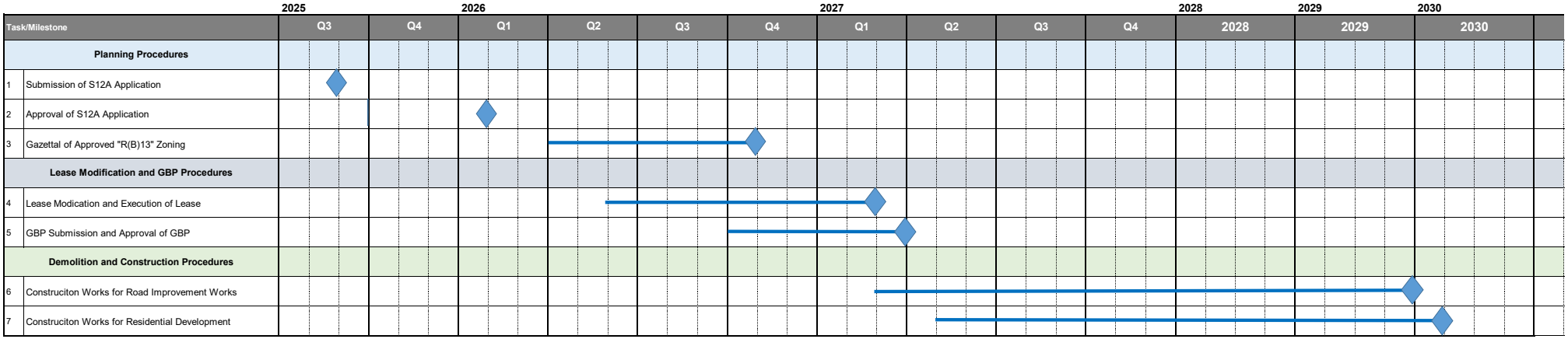


FIGURE NO.: 6.6	PROJECT TITLE: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots and Adjoining Government Land at Fung Yuen, Tai Po, New Territories
PROJECT NO.: 25022HK	DRAWING TITLE: PEDESTRIAN ROUTINGS
SCALE: 1 : 4000 @A4 / DATE: 27 NOV 2025	CTA Consultants Limited 志達顧問有限公司

APPENDIX I

Indicative Implementation Programme

Indicative Programme of Residential Development in Fung Yuen



APPENDIX II

Junction Calculation Sheets

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction A - Ting Kok Road / Dai Fat Street**

Description: **2025 OBSERVED TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	0%	1955	4050	1603	3321	1603	3321	635	0.325	0.325	614	0.314	0.314
	E	⇉	1	A,B	3.4	0.0	10	0	47%	24%	2095	0	1718	0	1718		635	0.325		636	0.314	
Dai Fat Street	N	↰	2	A	3.7	10.0	0	1	100%	100%	1980	4100	1624	3362	1624	3362	67	0.039		69	0.040	
	N	↰	2	A	3.7	12.5	0	0	100%	100%	2120	0	1738	0	1738	0	73	0.039		76	0.040	
Ting Kok Road	W	←	3	C	3.7	0.0	0	1	0%	0%	1980	4100	1624	3362	1624	3362	589	0.298	0.298	435	0.220	0.220
	W	←	3	C	3.7	0.0	0	0	0%	0%	2120	0	1738	0	1738	0	631	0.298		465	0.220	
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																

1,5 1,3 1,5 1,3

Notes:

(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

970(1100) →

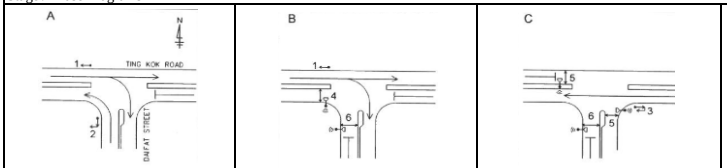
300(150) ↘

1220(900) ←

140(145) ↰

AM Peak Check Phase			PM Peak Check Phase		
εy	0.325	0.622	εy	0.314	0.534
L (sec)	25	10	L (sec)	25	10
C (sec)	104	104	C (sec)	96	96
y pract.	0.684	0.813	y pract.	0.666	0.806
R.C. (%)	110%	31%	R.C. (%)	112%	51%

Stage / Phase Diagrams



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

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction B - Ting Kok Road / Fung Yuen Road**

Description: **2025 OBSERVED TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	18%	26%	1965	4070	1930	1915	4035	4020	653	0.338	0.338	667	0.348	0.348
	E		1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	712	0.338		733	0.348	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	0%	1965	3840	1965	1965	3835	3835	697	0.355		536	0.273	
	W		2	A,B	3.5	0.0	15	0	4%	3%	1875	0	1870	1870	0	0	663	0.354		509	0.272	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s																	
Fung Yuen Road	S		4	C	3.8	10.0	0	1	100%	100%	1990	1990	1730	1730	1730	1730	25	0.014		25	0.014	
	S		4	C	3.8	0.0	20	0	100%	100%	2130	2130	1980	1980	1980	1980	180	0.091	0.091	130	0.066	0.066

Pedestrian crossing

5 D Min. Crossing Time = 8Gm + 8FGm = 16s

6 D Min. Crossing Time = 11Gm + 10FGm = 21s

																		1,3,4,6	1,3,4,5		1,3,4,6	1,3,4,5

Notes:

Traffic Flow (pcu / hr) AM(PM) Peak

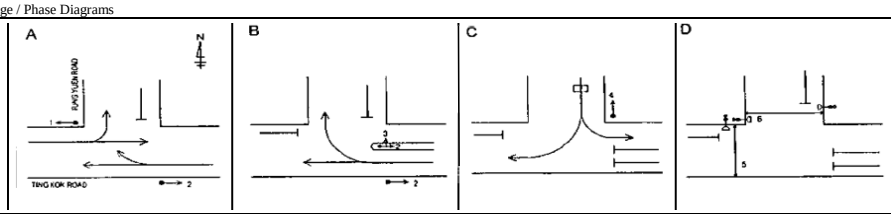
180(130) 25(25)

120(175) 25(15)

1245(1225) 1335(1030)

AM Peak Check Phase			PM Peak Check Phase		
εy	0.429	0.429	εy	0.414	0.414
L (sec)	42	44	L (sec)	42	44
C (sec)	104	104	C (sec)	96	96
y pract.	0.537	0.519	y pract.	0.506	0.488
R.C. (%)	25%	21%	R.C. (%)	22%	18%

Stage / Phase Diagrams



I/G = 4s I/G = 6s+5s I/G = 6s I/G = 11s+16s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction C - Ting Kok Road / Yuen Shin Road / Dai Fuk Road**

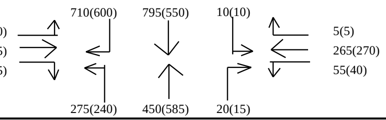
Description: **2025 OBSERVED TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	S		1	A	3.6	12.5	0	1	3%	4%	1975	4090	1970	1965	4085	4080	388	0.197		270	0.137	
	S		1	A	3.6	0.0	0	0	0%	0%	2115	0	2115	2115	0	0	417	0.197		290	0.137	
	S		1	A	3.6	0.0	25	0	100%	100%	2115	4230	1995	1995	4000	4000	354	0.178	0.197	299	0.150	0.150
	S		1	A	3.6	0.0	27.5	0	100%	100%	2115	0	2005	2005	0	0	356	0.178		301	0.150	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	100%	1965	4070	1785	1785	3725	3725	436	0.244		388	0.217	
	E		2	A,B	3.5	17.5	0	0	100%	100%	2105	0	1940	1940	0	0	474	0.244		422	0.217	
	E		3	B	3.5	0.0	0	0	0%	0%	2105	2105	2105	2105	2105	2105	85	0.040		85	0.040	
	E		3	B	3.5	0.0	32.5	0	100%	100%	2105	2105	2010	2010	2010	2010	250	0.124	0.124	245	0.122	0.122
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	100%	1965	1965	1785	1785	1785	1785	275	0.154		240	0.134	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	150	0.071	0.071	195	0.093	0.093
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	150	0.071		195	0.093	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	150	0.071		195	0.093	
	N		5	C	3.5	0.0	25	0	100%	100%	2105	2105	1985	1985	1985	1985	20	0.010		15	0.008	
Dai Fuk Road	W		6	D	3.7	0.0	22.5	0	3%	3%	2120	0	2115	2115	0	0	171	0.081		165	0.078	
	W		6	D	3.7	15.0	0	1	36%	27%	1980	4100	1910	1930	4025	4045	154	0.081		150	0.078	
Pedestrian crossing			7	A,B,C	Min. Crossing Time = 9Gm + 7FGm =16s																	
			8	D	Min. Crossing Time = 5Gm + 10FGm =15s																	

Notes:

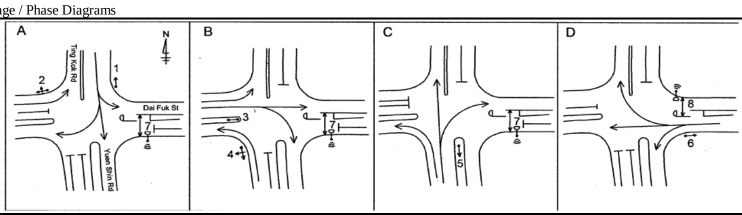
(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak



	AM Peak Check Phase		PM Peak Check Phase	
Stage	1,3,5,6	1,3,5,8	1,3,5,6	1,3,5,8
εy	0.474	0.393	0.442	0.365
L (sec)	25	40	25	40
C (sec)	104	104	96	96
y pract.	0.684	0.554	0.666	0.525
R.C. (%)	44%	41%	50%	44%

Stage / Phase Diagrams



I/G = 2s I/G = 7s I/G = 8s I/G = 11s + 15s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction D - Yuen Shin Road / Dai Fat Street**

Description: **2025 OBSERVED TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yuen Shin Road	S		2	B	3.3	15.0	0	1	3%	4%	1945	4030	1940	1940	4025	4025	530	0.273	0.273	402	0.207	0.208
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	570	0.273		433	0.208	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	5945	6030	534	0.272	0.272	406	0.206	0.206
	N		1	A	3.5	0.0	22.5	0	62%	0%	2105	0	2020	2105	0	0	549	0.272		434	0.206	
	N		1	A	3.5	0.0	20	0	100%	100%	2105	0	1960	1960	0	0	532	0.272		315	0.161	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	100%	1990	4120	1850	1850	3845	3845	277	0.150		286	0.155	
	W		3	A	3.8	22.5	0	0	100%	100%	2130	0	1995	1995	0	0	298	0.150		309	0.155	

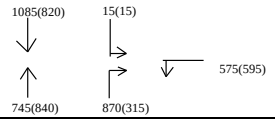
Pedestrian crossing

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:

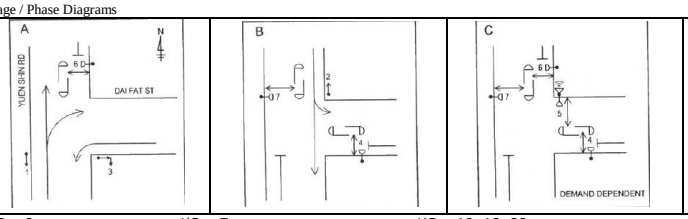
(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak



	AM Peak Check Phase			PM Peak Check Phase		
	3,2,5	1,2,5		3,2,5	1,2,5
εy	0.423	0.545	εy	0.362	0.414
L (sec)	31	29	L (sec)	31	29
C (sec)	104	104	C (sec)	96	96
y pract.	0.632	0.649	y pract.	0.609	0.628
R.C. (%)	49%	19%	R.C. (%)	68%	52%

Stage / Phase Diagrams



I/G = 2 I/G = 7 I/G = 10+13=23

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction E - Tai Po Tai Wo Road / Yuen Shin Road**

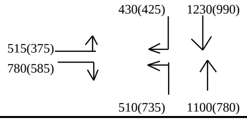
Description: **2025 OBSERVED TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak 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	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	430	0.227	0.227	425	0.224	0.224
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	20	0	100%	100%	2085	4170	1940	1940	3835	3835	395	0.203	0.203	296	0.153	0.153
	E	↴	5	C	3.3	0	15	0	100%	100%	2085	0	1895	1895	0	0	385	0.203		289	0.153	
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)

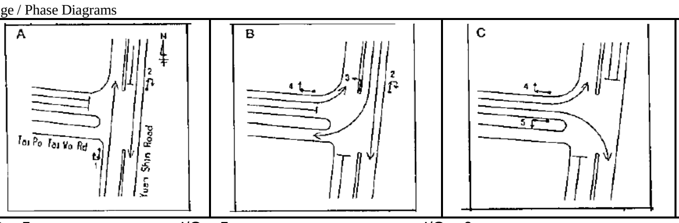
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase		
Stage	2,5	1,3,5
ey	0.509	0.610
L (sec)	10	13
C (sec)	104	104
y pract.	0.813	0.788
R.C. (%)	60%	29%

PM Peak Check Phase		
Stage	2,5	1,3,5
ey	0.398	0.504
L (sec)	10	13
C (sec)	96	96
y pract.	0.806	0.778
R.C. (%)	102%	54%

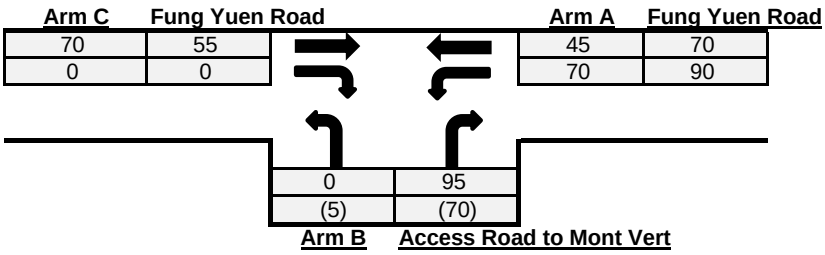
Stage / Phase Diagrams



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

Priority Junction Calculation

Junction :	Fung Yuen Road / Access Road to Mont Vert (F)	Job No.:	25022HK
Scenario :	2025 OBSERVED TRAFFIC FLOWS		



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	7	V-rBA	50	w-BA	4.7	D	0.968
W-CR	0	V-IBA	50	w-BC	4.7	E	1.029
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	50	w-CB	3.4	F	0.915
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.759

Analysis :	**Traffic Flow pcu/hr**	**AM**	**PM**	**Capacity pcu/hr**	**AM**	**PM**	
	q-CA	70	55	Q-BA	576	569	
	q-CB	0	0	Q-BC	746	737	
	q-AB	70	90	Q-CB	653	641	
	q-AC	45	70	Q-CA	N/A	N/A	(If C-B blocked C-A)
	q-BA	95	70	Q-BAC	576	578	(If Minor Road Share LT&RT)
	q-BC	0	5				
	f	0.000	0.067				

Results :	**Ratio of Flow-to-Capacity**	**AM**	**PM**
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.00	0.00
	C-A	N/A	N/A
	B-AC	0.17	0.13
	Critical DFC	**0.17**	**0.13**

CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction A - Ting Kok Road / Dai Fat Street**

Description: **2033 REFERENCE TRAFFIC FLOWS**

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,B	3.4	0.0	0	1	0%	0%	1955	4050	1603	3321	1603	3321	793	0.406	0.406	767	0.393	0.393
	E	⇉	1	A,B	3.4	0.0	10	0	41%	21%	2095	0	1718	0	1718		802	0.406		798	0.393	
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	753	0.380	0.380	560	0.283	0.283
	W	←	3	C	3.7	0.0	0	0	0%	0%	2120	0	1738	0	1738	0	807	0.380		600	0.283	
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																

1,5 1,3 1,5 1,3

Notes:

(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

1270(1400) →

325(165) ↘

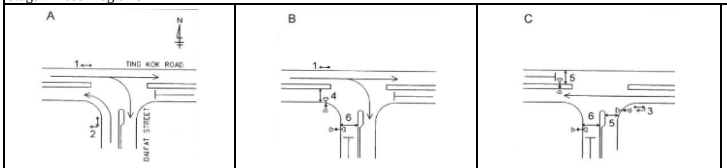
← 1560(1160)

↰ 150(155)

AM Peak Check Phase		
εy	0.406	0.786
L (sec)	25	10
C (sec)	104	104
y pract.	0.684	0.813
R.C. (%)	68%	3%

PM Peak Check Phase		
εy	0.393	0.676
L (sec)	25	10
C (sec)	96	96
y pract.	0.666	0.806
R.C. (%)	69%	19%

Stage / Phase Diagrams



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

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction B - Ting Kok Road / Fung Yuen Road**

Description: **2033 REFERENCE TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	17%	23%	1965	4070	1935	1920	4040	4025	814	0.421	0.421	823	0.429	0.429
	E		1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	886	0.421		902	0.429	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	0%	1965	3840	1965	1965	3835	3835	876	0.446		674	0.343	
	W		2	A,B	3.5	0.0	15	0	3%	2%	1875	0	1870	1870	0	0	834	0.446		641	0.343	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s																	
Fung Yuen Road	S		4	C	3.8	10.0	0	1	100%	100%	1990	1990	1730	1730	1730	1730	25	0.014		25	0.014	
	S		4	C	3.8	0.0	20	0	100%	100%	2130	2130	1980	1980	1980	1980	195	0.098	0.098	140	0.071	0.071

Pedestrian crossing

5 D Min. Crossing Time = 8Gm + 8FGm = 16s

6 D Min. Crossing Time = 11Gm + 10FGm = 21s

																	1,3,4,6	1,3,4,5			1,3,4,6	1,3,4,5

Notes:

Traffic Flow (pcu / hr) AM(PM) Peak

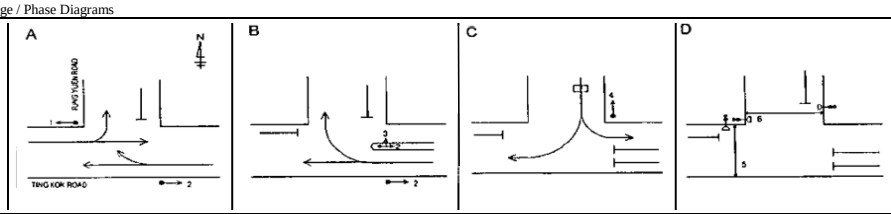
195(140) 25(25)

135(190) 25(15)

1565(1535) 1685(1300)

AM Peak Check Phase			PM Peak Check Phase		
εy	0.519	0.519	εy	0.499	0.499
L (sec)	42	44	L (sec)	42	44
C (sec)	104	104	C (sec)	96	96
y pract.	0.537	0.519	y pract.	0.506	0.488
R.C. (%)	3%	0%	R.C. (%)	1%	-2%

Stage / Phase Diagrams



I/G = 4s I/G = 6s+5s I/G = 6s I/G = 11s+16s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction C - Ting Kok Road / Yuen Shin Road / Dai Fuk Road**

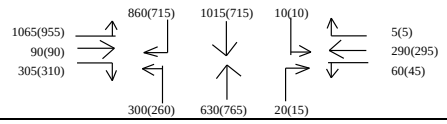
Description: **2033 REFERENCE TRAFFIC FLOWS**

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	3.6	12.5	0	1	2%	3%	1975	4090	1970	1970	4085	4085	494	0.251		349	0.177	
	S		1	A	3.6	0.0	0	0	0%	0%	2115	0	2115	2115	0	0	531	0.251		376	0.178	
	S		1	A	3.6	0.0	25	0	100%	100%	2115	4230	1995	1995	4000	4000	429	0.215	0.251	357	0.179	0.179
	S		1	A	3.6	0.0	27.5	0	100%	100%	2115	0	2005	2005	0	0	431	0.215		358	0.179	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	100%	1965	4070	1785	1785	3725	3725	510	0.286		458	0.256	
	E		2	A,B	3.5	17.5	0	0	100%	100%	2105	0	1940	1940	0	0	555	0.286		497	0.256	
	E		3	B	3.5	0.0	0	0	0%	0%	2105	2105	2105	2105	2105	2105	90	0.043		90	0.043	
	E		3	B	3.5	0.0	32.5	0	100%	100%	2105	2105	2010	2010	2010	2010	305	0.152	0.152	310	0.154	0.154
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	100%	1965	1965	1785	1785	1785	1785	300	0.168		260	0.146	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	210	0.100	0.100	255	0.121	0.121
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	210	0.100		255	0.121	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	210	0.100		255	0.121	
	N		5	C	3.5	0.0	25	0	100%	100%	2105	2105	1985	1985	1985	1985	20	0.010		15	0.008	
Dai Fuk Road	W		6	D	3.7	0.0	22.5	0	3%	3%	2120	0	2115	2115	0	0	187	0.088		181	0.085	
	W		6	D	3.7	15.0	0	1	36%	27%	1980	4100	1910	1925	4025	4040	168	0.088		164	0.085	
Pedestrian crossing			7	A,B,C		Min. Crossing Time = 9Gm + 7FGm =16s																
			8	D		Min. Crossing Time = 5Gm + 10FGm =15s																
																	Stage	1,3,5,6	1,3,5,8		1,3,5,6	1,3,5,8

Notes:

(Nil)

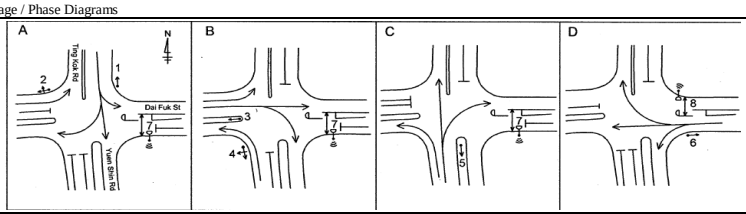
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase		
εy	0.591	0.502
L (sec)	25	40
C (sec)	104	104
y pract.	0.684	0.554
R.C. (%)	16%	10%

PM Peak Check Phase		
εv	0.540	0.454
L (sec)	25	40
C (sec)	96	96
y pract.	0.666	0.525
R.C. (%)	23%	16%

Stage / Phase Diagrams



I/G = 2s I/G = 7s I/G = 8s I/G = 11s + 15s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction D - Yuen Shin Road / Dai Fat Street**

Description: **2033 REFERENCE TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yuen Shin Road	S		2	B	3.3	15.0	0	1	8%	10%	1945	4030	1930	1925	4015	4010	663	0.344	0.344	514	0.267	0.267
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	717	0.344		556	0.267	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	5960	6030	635	0.323	0.323	502	0.256	0.256
	N		1	A	3.5	0.0	22.5	0	52%	0%	2105	0	2035	2105	0	0	657	0.323		538	0.256	
	N		1	A	3.5	0.0	20	0	100%	100%	2105	0	1960	1960	0	0	633	0.323		375	0.191	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	100%	1990	4120	1850	1850	3845	3845	330	0.178		334	0.181	
	W		3	A	3.8	22.5	0	0	100%	100%	2130	0	1995	1995	0	0	355	0.178		361	0.181	

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	

3,2,5 1,2,5 3,2,5 1,2,5

Notes:

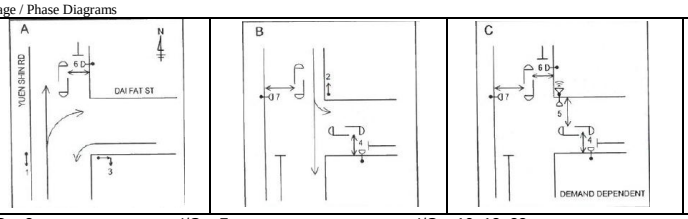
(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

1330(1020) 50(50) 685(695) 950(1040) 975(375)

AM Peak Check Phase			PM Peak Check Phase		
εy	0.522	0.667	εy	0.448	0.522
L (sec)	31	29	L (sec)	31	29
C (sec)	104	104	C (sec)	96	96
y pract.	0.632	0.649	y pract.	0.609	0.628
R.C. (%)	21%	-3%	R.C. (%)	36%	20%

Stage / Phase Diagrams



I/G = 2 I/G = 7 I/G = 10+13=23

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction E - Tai Po Tai Wo Road / Yuen Shin Road**

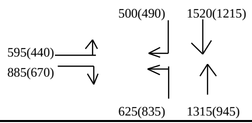
Description: **2033 REFERENCE TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	0%	1945	4030	1945	1945	4030	4030	734	0.377		586	0.301	
	S	↓	2	A,B	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	786	0.377		629	0.301	
	S	↲	3	B	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	500	0.264	0.264	490	0.259	0.259
Tai Po Tai Wo Road	E	↑	4	B,C	3.3	15	0	1	100%	100%	1945	1945	1770	1770	1770	1770	595	0.336		440	0.249	
	E	↓	5	C	3.3	0	20	0	100%	100%	2085	4170	1940	1940	3835	3835	448	0.231	0.231	339	0.175	0.175
	E	↓	5	C	3.3	0	15	0	100%	100%	2085	0	1895	1895	0	0	437	0.231		331	0.175	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	0%	1945	6115	1945	1945	6115	6115	418	0.215	0.215	301	0.155	0.155
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	448	0.215		322	0.155	
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	448	0.215		322	0.155	

Notes:

(Nil)

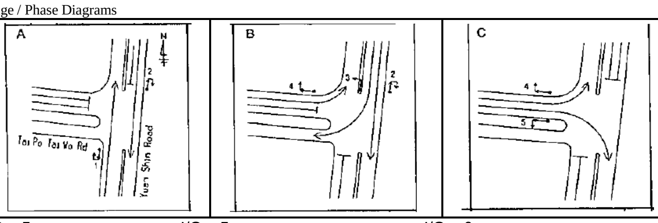
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase		
Stage	2,5	1,3,5
ey	0.608	0.710
L (sec)	10	13
C (sec)	104	104
y pract.	0.813	0.788
R.C. (%)	34%	11%

PM Peak Check Phase		
Stage	2,5	1,3,5
ey	0.476	0.588
L (sec)	10	13
C (sec)	96	96
y pract.	0.806	0.778
R.C. (%)	69%	32%

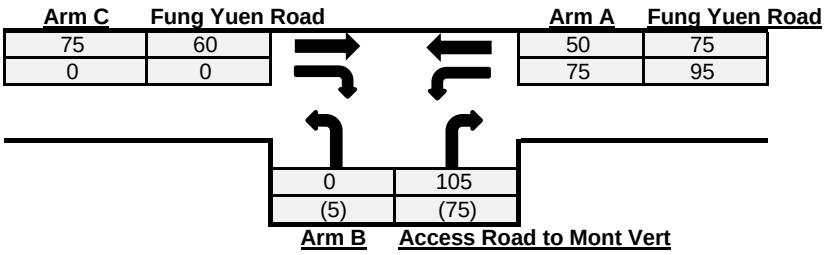
Stage / Phase Diagrams



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

Priority Junction Calculation

Junction :	Fung Yuen Road / Access Road to Mont Vert (F)	Job No.:	25022HK
Scenario :	2033 REFERENCE TRAFFIC FLOWS		



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	7	V-rBA	50	w-BA	4.7	D	0.968
W-CR	0	V-IBA	50	w-BC	4.7	E	1.029
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	50	w-CB	3.4	F	0.915
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.759

Analysis :	**Traffic Flow pcu/hr**	**AM**	**PM**	**Capacity pcu/hr**	**AM**	**PM**	
	q-CA	75	60	Q-BA	573	567	
	q-CB	0	0	Q-BC	744	735	
	q-AB	75	95	Q-CB	650	639	
	q-AC	50	75	Q-CA	N/A	N/A	(If C-B blocked C-A)
	q-BA	105	75	Q-BAC	573	575	(If Minor Road Share LT&RT)
	q-BC	0	5				
	f	0.000	0.063				

Results :	**Ratio of Flow-to-Capacity**	**AM**	**PM**
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.00	0.00
	C-A	N/A	N/A
	B-AC	0.18	0.14
	Critical DFC	**0.18**	**0.14**

CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction A - Ting Kok Road / Dai Fat Street**

Description: **2033 DESIGN TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E	→	1	A,B	3.4	0.0	0	1	0%	0%	1955	4050	1603	3321	1603	3321	798	0.408	0.408	772	0.395	0.395
	E	⇉	1	A,B	3.4	0.0	10	0	40%	21%	2095	0	1718	0	1718		807	0.408		803	0.395	
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	758	0.383	0.383	565	0.285	0.285
	W	←	3	C	3.7	0.0	0	0	0%	0%	2120	0	1738	0	1738	0	812	0.383		605	0.285	
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																

1,5 1,3 1,5 1,3

Notes:

(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

1280(1410) →

325(165) ↘

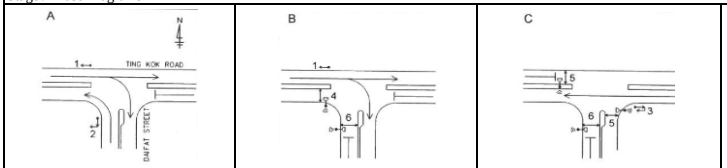
← 1570(1170)

↰ 150(155)

AM Peak Check Phase		
εy	0.408	0.791
L (sec)	25	10
C (sec)	104	104
y pract.	0.684	0.813
R.C. (%)	67%	3%

PM Peak Check Phase		
εy	0.395	0.681
L (sec)	25	10
C (sec)	96	96
y pract.	0.666	0.806
R.C. (%)	68%	18%

Stage / Phase Diagrams



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

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction A - Ting Kok Road / Dai Fat Street**

Description: **2033 DESIGN TRAFFIC FLOWS (Improvement)**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Site Factor	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E	→	A	1,2	3.3	0.0	0		1	0%	0%	1945	3196	1595	2621	3196	3196	779	0.401		858	0.441	0.441
	E	→	A	1,2	3.3	0.0	0	0.6	0	0%	0%	1251	0	1251	1251	0	0	501	0.401		552	0.441	
	E	↴	D	2	3.3	0.0	24		0	100%	100%	2085	2085	1960	1960	1960	1960	325	0.166	0.166	165	0.084	
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	758	0.386	0.386	565	0.287	
	W	←	C	1,3	3.5	0.0	0		0	0%	0%	2105	0	2105	2105	0	0	812	0.386		605	0.287	

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:

(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

1280(1410) →

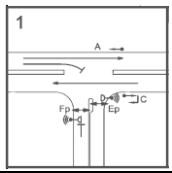
325(165) ↘

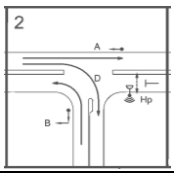
← 1570(1170)

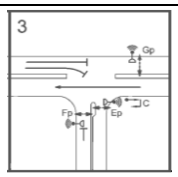
↰ 150(155)

Stage	12,3	13,2	Stage	12,3	13,2
AM Peak Check Phase			PM Peak Check Phase		
εy	0.401	0.552	εy	0.441	0.372
L (sec)	17	11	L (sec)	17	11
C (sec)	120	120	C (sec)	120	120
y pract.	0.773	0.818	y pract.	0.773	0.818
R.C. (%)	93%	48%	R.C. (%)	75%	120%

Stage / Phase Diagrams







AM:	I/G = 8s	I/G = 5s
PM: I/G = 3s		I/G = 3s + 12s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction B - Ting Kok Road / Fung Yuen Road**

Description: **2033 DESIGN TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Ting Kok Road	E		1	A	3.5	15.0	0	1	30%	35%	1965	4070	1910	1900	4015	4005	868	0.454	0.455	875	0.460	0.461
	E		1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	957	0.455		970	0.461	
Ting Kok Road	W		2	A,B	3.5	0.0	0	1	0%	0%	1965	3840	1965	1965	3830	3835	882	0.449		679	0.346	
	W		2	A,B	3.5	0.0	15	0	4%	4%	1875	0	1865	1870	0	0	838	0.449		646	0.345	
	W		3	B	GREEN TIME (Lost time for Stage 2 right turn) = 5s																	
Fung Yuen Road	S		4	C	3.8	10.0	0	1	100%	100%	1990	1990	1730	1730	1730	1730	35	0.020		35	0.020	
	S		4	C	3.8	0.0	20	0	100%	100%	2130	2130	1980	1980	1980	1980	345	0.174	0.174	265	0.134	0.134

Pedestrian crossing

5 D Min. Crossing Time = 8Gm + 8FGm = 16s

6 D Min. Crossing Time = 11Gm + 10FGm = 21s

																		1,3,4,6	1,3,4,5		1,3,4,6	1,3,4,5

Notes:

Traffic Flow (pcu / hr) AM(PM) Peak

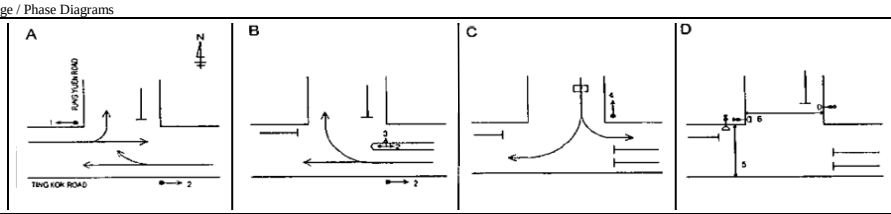
345(265) 35(35)

260(310) 35(25)

1565(1535) 1685(1300)

AM Peak Check Phase			PM Peak Check Phase		
εy	0.629	0.629	εy	0.595	0.595
L (sec)	42	44	L (sec)	42	44
C (sec)	104	104	C (sec)	96	96
y pract.	0.537	0.519	y pract.	0.506	0.488
R.C. (%)	-15%	-17%	R.C. (%)	-15%	-18%

Stage / Phase Diagrams



I/G = 4s I/G = 6s+5s I/G = 6s I/G = 11s+16s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction B - Ting Kok Road / Fung Yuen Road**

Description: **2033 DESIGN TRAFFIC FLOWS (Improvement)**

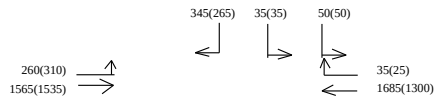
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Ting Kok Road	E		A	1	3.5	17.0	0	1	30%	35%	1965	4080	1915	1905	4030	4020	867	0.453	0.453	874	0.459	0.459
	E		A	1	3.6	0.0	0	0	0%	0%	2115	0	2115	2115	0	0	958	0.453		971	0.459	
Unnammed Access Road	E		C	2	3.3	15.0	0	1	100%	100%	1945	1945	1770	1770	1770	1770	35	0.020		35	0.020	
Exclusive Road	E		B	3	3.3	12.5	0	1	100%	100%	1945	1945	1735	1735	1735	1735	50	0.029		50	0.029	
Ting Kok Road	W		B	1,2	3.0	0.0	0	1	0%	0%	1915	3970	1915	1915	3970	3970	813	0.424		627	0.327	
	W		B	1,2	3.0	0.0	0	0	0%	0%	2055	0	2055	2055	0	0	872	0.424		673	0.327	
	W		B	2	3.0	0.0	19	0	100%	100%	2055	2055	1905	1905	1905	1905	35	0.018		25	0.013	
Fung Yuen Road	S		C	3	3.0	20.0	0	0	100%	100%	2055	4110	1910	1910	3820	3820	173	0.090		133	0.069	
	S		C	3	3.0	20.0	0	0	100%	100%	2055	0	1910	1910	0	0	173	0.090		133	0.069	

Pedestrian crossing

Dp Min. Crossing Time = 5Gm + 8FGm = 13s
Ep Min. Crossing Time = 5Gm + 9FGm = 14s
Fp Min. Crossing Time = 9 Gm + 8FGm = 17s
Gp Min. Crossing Time = 5Gm + 6FGM = 11s
Hp Min. Crossing Time = 5Gm + 5FGM = 10s

Notes:

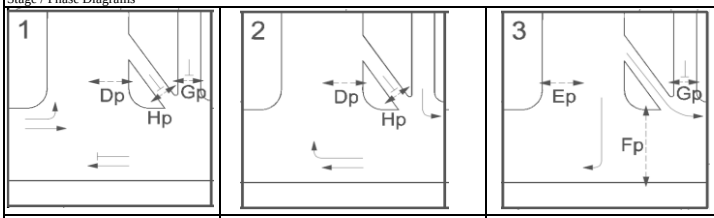
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase	
εy	0.453
L (sec)	33
C (sec)	120
y pract.	0.653
R.C. (%)	44%

PM Peak Check Phase	
εy	0.459
L (sec)	33
C (sec)	120
y pract.	0.653
R.C. (%)	42%

Stage / Phase Diagrams



AM: I/G = 3s	AM: I/G = 5s+Min G 5s=10s	AM: I/G =3s+19s=22s
PM: I/G = 3s	PM: I/G = 5s+Min G 5s=10s	PM: I/G =3s+19s=22s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction C - Ting Kok Road / Yuen Shin Road / Dai Fuk Road**

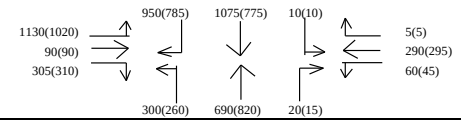
Description: **2033 DESIGN TRAFFIC FLOWS**

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	3.6	12.5	0	1	2%	3%	1975	4090	1970	1970	4085	4085	523	0.266		378	0.192	
	S		1	A	3.6	0.0	0	0	0%	0%	2115	0	2115	2115	0	0	562	0.266		407	0.192	
	S		1	A	3.6	0.0	25	0	100%	100%	2115	4230	1995	1995	4000	4000	474	0.238	0.266	392	0.196	0.196
	S		1	A	3.6	0.0	27.5	0	100%	100%	2115	0	2005	2005	0	0	476	0.238		393	0.196	
Ting Kok Road	E		2	A,B	3.5	15.0	0	1	100%	100%	1965	4070	1785	1785	3725	3725	541	0.303		489	0.274	
	E		2	A,B	3.5	17.5	0	0	100%	100%	2105	0	1940	1940	0	0	589	0.303		531	0.274	
	E		3	B	3.5	0.0	0	0	0%	0%	2105	2105	2105	2105	2105	2105	90	0.043		90	0.043	
	E		3	B	3.5	0.0	32.5	0	100%	100%	2105	2105	2010	2010	2010	2010	305	0.152	0.152	310	0.154	0.154
Yuen Shin Road	N		4	B,C	3.5	15.0	0	1	100%	100%	1965	1965	1785	1785	1785	1785	300	0.168		260	0.146	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	230	0.109	0.109	273	0.130	0.130
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	230	0.109		273	0.130	
	N		5	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	230	0.109		273	0.130	
	N		5	C	3.5	0.0	25	0	100%	100%	2105	2105	1985	1985	1985	1985	20	0.010		15	0.008	
Dai Fuk Road	W		6	D	3.7	0.0	22.5	0	3%	3%	2120	0	2115	2115	0	0	187	0.088		181	0.085	
	W		6	D	3.7	15.0	0	1	36%	27%	1980	4100	1910	1925	4025	4040	168	0.088		164	0.085	
Pedestrian crossing			7	A,B,C		Min. Crossing Time = 9Gm + 7FGm =16s																
			8	D		Min. Crossing Time = 5Gm + 10FGm =15s																
																	Stage	1,3,5,6	1,3,5,8		1,3,5,6	1,3,5,8

Notes:

(Nil)

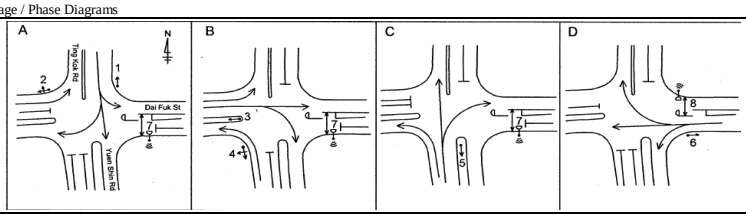
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase		
εy	0.615	0.527
L (sec)	25	40
C (sec)	104	104
y pract.	0.684	0.554
R.C. (%)	11%	5%

PM Peak Check Phase		
εy	0.566	0.480
L (sec)	25	40
C (sec)	96	96
y pract.	0.666	0.525
R.C. (%)	18%	9%

Stage / Phase Diagrams



I/G = 2s I/G = 7s I/G = 8s I/G = 11s + 15s

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction C - Ting Kok Road / Yuen Shin Road / Dai Fuk Road**

Description: **2033 DESIGN TRAFFIC FLOWS (Improvement)**

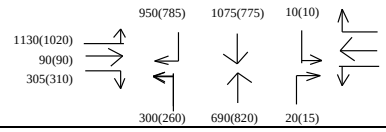
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m)		Nearside 0/1	Pro. Turning (%)		Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr)		Total Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
						Left	Right		AM	PM			AM	PM	AM	PM	Flow (pcu/hr)	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	7960	7945	509	0.256		379	0.190	
	S		1	A	3.8	0.0	0	0	0%	0%	2135	0	2135	2135	0	0	546	0.256		406	0.190	
	S		1	A	3.8	0.0	13.5	0	94%	100%	2135	0	1935	1920	0	0	494	0.255		395	0.206	
	S		1	A	3.8	0.0	12	0	100%	100%	2135	0	1900	1900	0	0	486	0.256	0.256	390	0.205	0.206
Ting Kok Road	E		1,2	A,B	3.5	20.0	0	1	100%	100%	1965	4070	1830	1830	3815	3815	542	0.296		489	0.267	
	E		1,2	A,B	3.5	25.0	0	0	100%	100%	2105	0	1985	1985	0	0	588	0.296		531	0.267	
	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	300	0.162		260	0.141	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	230	0.109	0.109	273	0.130	0.130
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	230	0.109		273	0.130	
	N		3	C	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	230	0.109		273	0.130	
	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%	27%	1965	4070	1895	1915	3995	4015	169	0.089	0.089	164	0.086	0.086
	W		4	D	3.5	0.0	15	0	3%	3%	2105	0	2100	2100	0	0	186	0.089		181	0.086	
Pedestrian crossing			7	A,B,C		Min. Crossing Time = 5Gm + 6FGm =11s																
			8	D		Min. Crossing Time = 5Gm + 8FGm =13s																

Stage A,B,C,D A,B,C,Dp A,B,C,D A,B,C,Dp

Notes:

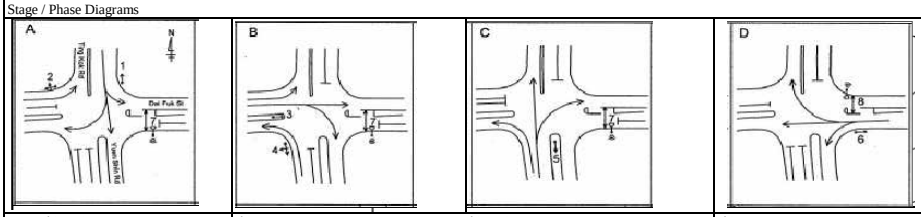
(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase			PM Peak Check Phase		
εy	0.529	0.440	εy	0.498	0.412
L (sec)	25	38	L (sec)	25	38
C (sec)	120	120	C (sec)	120	120
y pract.	0.713	0.615	y pract.	0.713	0.615
R.C. (%)	35%	40%	R.C. (%)	43%	49%

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

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction D - Yuen Shin Road / Dai Fat Street**

Description: **2033 DESIGN TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yuen Shin Road	S		2	B	3.3	15.0	0	1	7%	9%	1945	4030	1930	1925	4015	4010	692	0.359	0.359	543	0.282	0.282
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	748	0.359		587	0.282	
Yuen Shin Road	N		1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	5965	6030	654	0.333	0.333	529	0.269	0.269
	N		1	A	3.5	0.0	22.5	0	48%	0%	2105	0	2040	2105	0	0	679	0.333		566	0.269	
	N		1	A	3.5	0.0	20	0	100%	100%	2105	0	1960	1960	0	0	652	0.333		375	0.191	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	100%	1990	4120	1850	1850	3845	3845	330	0.178		334	0.181	
	W		3	A	3.8	22.5	0	0	100%	100%	2130	0	1995	1995	0	0	355	0.178		361	0.181	

Pedestrian crossing

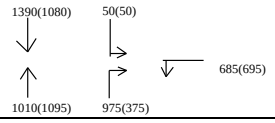
	4	B,C	Min. Crossing Time = 5Gm + 6FGm =11s
	5	C	Min. Crossing Time = 5Gm + 8FGm =13s
	6	A,C	Min. Crossing Time = 5Gm + 6FGm =11s
	7	B,C	Min. Crossing Time = 5Gm + 7FGm =12s

3,2,5 1,2,5 3,2,5 1,2,5

Notes:

(Nil)

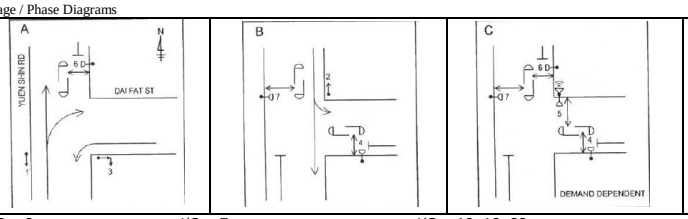
Traffic Flow (pcu / hr) AM(PM) Peak



AM Peak Check Phase		
εy	0.537	0.692
L (sec)	31	29
C (sec)	104	104
y pract.	0.632	0.649
R.C. (%)	18%	-6%

PM Peak Check Phase		
εy	0.463	0.551
L (sec)	31	29
C (sec)	96	96
y pract.	0.609	0.628
R.C. (%)	32%	14%

Stage / Phase Diagrams



I/G = 2 I/G = 7 I/G = 10+13=23

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction D - Yuen Shin Road / Dai Fat Street**

Description: **2033 DESIGN TRAFFIC FLOWS (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
Yuen Shin Road	S		2	B	3.3	10.0	0	1	11%	14%	1945	6115	1915	1905	6085	6075	453	0.237	0.237	354	0.186	0.186
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	494	0.237		388	0.186	
	S		2	B	3.3	0.0	0	0	0%	0%	2085	0	2085	2085	0	0	494	0.237		388	0.186	
Yuen Shin Road	N		1	A	3.3	0.0	0	1	100%	100%	1945	4030	1945	1945	4030	4030	487	0.251	0.269	528	0.272	0.272
	N		1	A	3.3	0.0	0	0	100%	100%	2085	0	2085	2085	0	0	523	0.251		567	0.272	
	N		1	A	3.3	0.0	10	0	100%	100%	2085	4170	1815	1815	3630	3630	488	0.269		188	0.103	
	N		1	A	3.3	0.0	10	0	100%	100%	2085	0	1815	1815	0	0	488	0.269		188	0.103	
Dai Fat Street	W		3	A	3.8	20.0	0	1	100%	100%	1990	4120	1850	1850	3845	3845	330	0.178		334	0.181	
	W		3	A	3.8	22.5	0	0	100%	100%	2130	0	1995	1995	0	0	355	0.178		361	0.181	

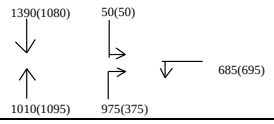
Pedestrian crossing

	4	B,C	Min. Crossing Time = 5Gm + 9FGm = 14s
	5	C	Min. Crossing Time = 5Gm + 9FGm = 14s
	6	A,C	Min. Crossing Time = 5Gm + 9FGm = 14s
	7	B,C	Min. Crossing Time = 5Gm + 8FGm =13s

Notes:

(Nil)

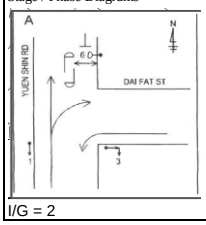
Traffic Flow (pcu / hr) AM(PM) Peak



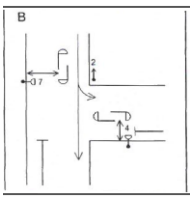
AM Peak Check Phase	
εy	0.505
L (sec)	31
C (sec)	120
y pract.	0.668
R.C. (%)	32%

PM Peak Check Phase	
εy	0.458
L (sec)	31
C (sec)	120
y pract.	0.668
R.C. (%)	46%

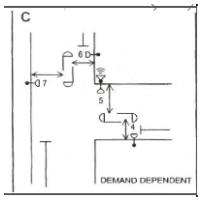
Stage / Phase Diagrams



I/G = 2



I/G = 7



I/G =10+14=24

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction E - Tai Po Tai Wo Road / Yuen Shin Road**

Description: **2033 DESIGN TRAFFIC FLOWS**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) AM	Pro. Turning (%) PM	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) AM	Revised Saturation Flow (pcu/hr) PM	Total Revised Saturation Flow (pcu/hr) AM	Total Revised Saturation Flow (pcu/hr) PM	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yuen Shin Road	S	↓	2	A,B	3.3	0	0	1	0%	0%	1945	4030	1945	1945	4030	4030	763	0.392		615	0.316	
	S	↓	2	A,B	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	817	0.392		660	0.316	
	S	↙	3	B	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	500	0.264	0.264	490	0.259	0.259
Tai Po Tai Wo Road	E	→	4	B,C	3.3	15	0	1	100%	100%	1945	1945	1770	1770	1770	1770	615	0.347		445	0.251	
	E	↘	5	C	3.3	0	20	0	100%	100%	2085	4170	1940	1940	3835	3835	448	0.231	0.231	339	0.175	0.175
	E	↘	5	C	3.3	0	15	0	100%	100%	2085	0	1895	1895	0	0	437	0.231		331	0.175	
Yuen Shin Road	N	↑	1	A	3.3	0	0	1	0%	0%	1945	6115	1945	1945	6115	6115	431	0.222	0.222	316	0.163	0.163
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	462	0.222		339	0.163	
	N	↑	1	A	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	462	0.222		339	0.163	

	AM Peak			PM Peak		
Stage	2,5	1,3,5		2,5	1,3,5	
ey	0.623	0.716		0.491	0.596	
L (sec)	10	13		10	13	
C (sec)	104	104		96	96	
y pract.	0.813	0.788		0.806	0.778	
R.C. (%)	31%	10%		64%	31%	

Notes:

(Nil)

Traffic Flow (pcu / hr) AM(PM) Peak

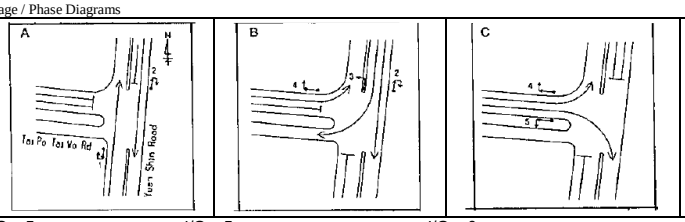
500(490) 1580(1275)

615(445) →

885(670) ↘

625(835) 1355(995)

Stage / Phase Diagrams



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

TRAFFIC SIGNALS CALCULATION Job No: 25022HK **CTA Consultants Ltd.**

Junction: **Junction E - Tai Po Tai Wo Road / Yuen Shin Road**

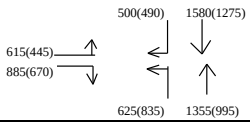
Description: **2033 DESIGN TRAFFIC FLOWS (Improvement)**

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
Yuen Shin Road	S	↓	2	A,B	3.5	0.0	0	1	0%	0%	1965	4070	1965	1965	4070	4070	763	0.388		616	0.313	
	S	↓	2	A,B	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	817	0.388		659	0.313	
	S	↲	3	B	3.5	0.0	32	0	100%	100%	2105	2105	2010	2010	2010	2010	500	0.249	0.249	490	0.244	0.244
Tai Po Tai Wo Road	E	↗	4	B,C	3.5	24.0	0	1	100%	100%	1965	1965	1850	1850	1850	1850	615	0.332		445	0.241	
	E	↘	5	C	3.5	0.0	16	0	100%	100%	2105	6315	1925	1925	5695	5695	299	0.155	0.155	226	0.118	0.118
	E	↘	5	C	3.5	0.0	14	0	100%	100%	2105	0	1900	1900	0	0	295	0.155		224	0.118	
	E	↘	5	C	3.5	0.0	12	0	100%	100%	2105	0	1870	1870	0	0	291	0.155		220	0.118	
Yuen Shin Road	N	↑	1	A	3.5	0.0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	431	0.219	0.219	317	0.161	0.161
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	462	0.219		339	0.161	
	N	↑	1	A	3.5	0.0	0	0	0%	0%	2105	0	2105	2105	0	0	462	0.219		339	0.161	

Notes:

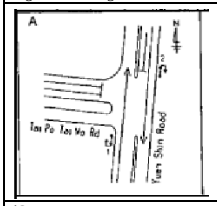
(Nil)

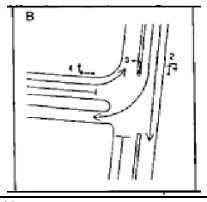
Traffic Flow (pcu / hr) AM(PM) Peak

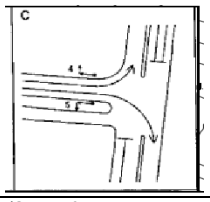


Stage	A,B,C	A,BC	Stage	A,B,C	A,BC
AM Peak Check Phase			PM Peak Check Phase		
εy	0.624	0.552	εy	0.523	0.402
L (sec)	13	10	L (sec)	13	10
C (sec)	120	120	C (sec)	120	120
y pract.	0.803	0.825	y pract.	0.803	0.825
R.C. (%)	29%	49%	R.C. (%)	54%	105%

Stage / Phase Diagrams



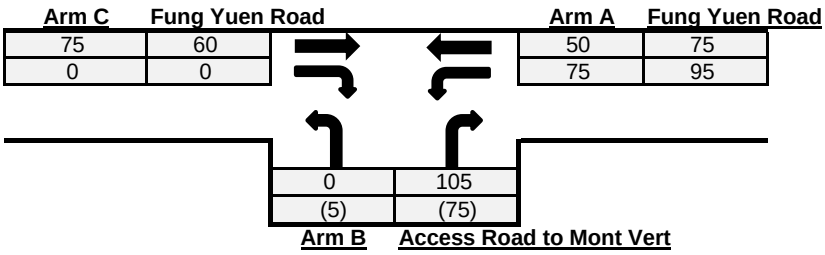




I/G = 5	I/G = 5	I/G = 6			

Priority Junction Calculation

Junction :	Fung Yuen Road / Access Road to Mont Vert (F)	Job No.:	25022HK
Scenario :	2033 DESIGN TRAFFIC FLOWS		



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	7	V-rBA	50	w-BA	4.7	D	0.968
W-CR	0	V-IBA	50	w-BC	4.7	E	1.029
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	50	w-CB	3.4	F	0.915
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.759

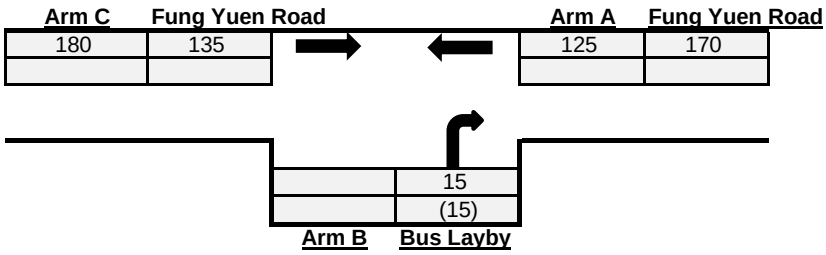
Analysis :	**Traffic Flow pcu/hr**	**AM**	**PM**	**Capacity pcu/hr**	**AM**	**PM**	
	q-CA	75	60	Q-BA	573	567	
	q-CB	0	0	Q-BC	744	735	
	q-AB	75	95	Q-CB	650	639	
	q-AC	50	75	Q-CA	N/A	N/A	(If C-B blocked C-A)
	q-BA	105	75	Q-BAC	573	575	(If Minor Road Share LT&RT)
	q-BC	0	5				
	f	0.000	0.063				

Results :	**Ratio of Flow-to-Capacity**	**AM**	**PM**
	B-A	N/A	N/A
	B-C	N/A	N/A
	C-B	0.00	0.00
	C-A	N/A	N/A
	B-AC	0.18	0.14
	Critical DFC	**0.18**	**0.14**

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Future Junction at Fung Yuen Road / Bus Layby (G)	Job No.:	25022HK
Scenario :	2033 DESIGN TRAFFIC FLOWS		



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	7.3	V-rBA	50	w-BA	4.7	D	0.968
W-CR	0	V-IBA	50	w-BC	4.7	E	1.029
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	50	w-CB	3.65	F	0.937
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	50			Y	0.748

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	180	135	Q-BA	544	540	
q-CB	0	0	Q-BC	732	719	
q-AB	0	0	Q-CB	666	655	
q-AC	125	170	Q-CA	N/A	N/A	(If C-B blocked C-A)
q-BA	15	15	Q-BAC	544	540	(If Minor Road Share LT&RT)
q-BC	0	0				
f	0.000	0.000				

Results :

Ratio of Flow-to-Capacity

	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.00	0.00
C-A	N/A	N/A
B-AC	0.03	0.03

Critical DFC	**0.03**	**0.03**

CTA Consultants Ltd.