Appendix II

Revised Traffic Impact Assessment

Planning Application for Redevelopment of Lai Sun Yuen Long Centre, 21 -35 Wang Yip Street East, Yuen Long

Traffic Impact Assessment Report (Rev.B)

September 2026

CTA Consultants Limited
志達顧問有限公司

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1. INTRODUCTION

1.1 Background

1.1.1 The site location is shown in **Figure 1.1**.

1.1.2 On 12 January, 2024, the Town Planning Board (TPB) approved the section 16 application (Application No. A/YL/304) for a minor relaxation of building height and plot ratio restrictions for construction of a residential development at the subject site with 1,019 flats, 1,600m^2 retail shops and 422.1m^2 welfare facilities.

1.1.3 In connection to the above, the Applicant would like to submit a new section 16 planning application for above-ground carpark proposal. The overall GFA is unchanged (same as previously approved S16 planning application) but only update podium design and max. height on main roof.

1.1.4 We, CTA Consultants Limited (CTA), are therefore commissioned as the traffic consultant to prepare the Traffic Impact Assessment (TIA) and provide technical justifications in supporting the application from the traffic engineering point of view.

1.2 Study Objectives

1.2.1 Main objectives of this study are listed below:

- To assess the existing and proposed traffic arrangement & provision of internal transport facilities at the subject site;
- To assess the existing traffic condition in the vicinity of the proposed development;
- To estimate the traffic trips related to the proposed development;
- To carry out the forecasts about the traffic demand of the adjacent road network in the design year 2033;
- To appraise any possible traffic impact induced by the proposed development on the adjacent road network;
- To recommend traffic improvement measures to alleviate any foreseeable traffic problem to the surrounding road network, if any.

2. THE PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The proposed development is located at Wang Yip Street East, the Keung Yip Street Rest Garden in the north, Po Yip Street in the east and the On Lok Road Substation to the South.

2.2 Proposed Development

2.2.1 Parameters of the proposed development are listed in **Table 2.1**.

Table 2.1 Parameters of the Proposed Development

<table>
<tr><th>Site Location</th><td>Wang Yip Street East</td></tr>
<tr><th>Proposed Use</th><td>Residential Development</td></tr>
<tr><th>Site Area (m²)</th><td>7,271</td></tr>
<tr><th>Nos. of Flat</th><td>1,068 nos., including
<table>
<tr><th>Flat size</th><th>Size of Flat (GFA)</th><th>No. of Flat</th></tr>
<tr><td rowspan="3">Flat Size ≤ 40m²</td><td>32</td><td>266</td></tr>
<tr><td>37.6</td><td>185</td></tr>
<tr><td>39.9</td><td>294</td></tr>
<tr><td rowspan="4">40m² < Flat Size ≤ 70m²</td><td>45.4</td><td>216</td></tr>
<tr><td>48.1</td><td>54</td></tr>
<tr><td>60.1</td><td>26</td></tr>
<tr><td>68.8</td><td>27</td></tr>
</table></td></tr>
<tr><th>Retail Shops</th><td>1,600m²</td></tr>
<tr><th>GFA for Welfare Facilities</th><td>Around 422m², including:
- A main base of Short-term Food Assistance Service Team (STFAST)
- Home Care Services (HCS) for Frail Elderly Persons</td></tr>
<tr><th>Domestic Plot Ratio</th><td>6.0</td></tr>
<tr><th>Nos. of Block</th><td>2</td></tr>
</table>

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

2.3 Proposed Vehicular Access

2.3.1 The proposed vehicular access is located at Wang Yip Street East and the location of the proposed vehicular access as shown diagrammatically in **Figure 2.1 (Rev.B)**. The proposed vehicular access would be able to facilitate the turning of 12m long vehicle from Wang Yip Street East / to site entrance.

2.4 Provision of Internal Transport Facilities

2.4.1 The required internal transport facilities provision for the proposed development for individual lots are summarized in **Table 2.2** and **2.3** below.

Table 2.2 Internal Transport Provision under the HKPSG Requirements

Proposed Development		**HKPSG Requirement**							
		Private Car Parking Space						**Motorcycle Parking**	**Loading / Unloading Bay**
Residential (1,068 flats)									
Flat size	No. of Flats	GPS	R1	R2	R3	GPS x R1 x R2 x R3	5 visitor spaces per block	1 motorcycle parking per 100 – 150 flats	1 bay for each housing block
Flat Size ≤ 40m^2	745	4-7	0.50	0.75	0.90	36 – 63	10 (2 Blocks)	-	2
40m^2 < Flat Size ≤ 70m^2	323	4-7	1.20	0.75	0.90	38 - 66			
Total Required		**74 - 129**					**10**	**-**	**2**
Required Provision[A]		**84 - 139**						**8 - 11**	**2**
Retail (1,600 m^2)									
		1 car space per 150 – 300 m^2 GFA						5 – 10% of the total provision for private cars	1 per 800 – 1200 m^2 GFA
Required Provision [B]		**6 - 11**						**1 - 2**	**2**
Total Required Provision [A+B]		***90 - 150***						***9 - 13***	***4***
Proposed Provision		***150 nos. (Included 2 nos. of accessible parking)***						***13 nos.***	***4 nos. (Included 3 nos. of HGV and 1 no. of LGV)***

Note: (1) The above parking requirements under the latest HKPSG is the same as that adopted in the Approved TIA under approved Planning Application (Application No. A/YL/304).

Table 2.3 Transport Facilities Provision for Welfare Facilities and Bicycle Parking Space for Residential

Requirement	Proposed Provision
Welfare Facilities (Based on Technical Schedule for the Government Accommodation)	
1 space (11m (L) x 3.5m (W)) for shared use for loading / unloading of goods vehicles and picking-up / setting-down of passengers	1 no. (11m (L) x 3.5m (W))
1 space (8m (L) x 3m (W)) for parking of private light bus	1 no. (8m (L) x 3m (W))
Bicycle Parking Space for Residential (Based on Approved Planning Application (No. A/YL/304))	
1 bicycle parking space for every 7.5 flats with flat size smaller than $70m^2$	143 nos.

2.4.2 The carpark layout plans for loading/unloading and parking spaces at ground floor and first floor are shown in **Figure 2.1 (Rev.B)** to **Figure 2.2 (Rev.B)** and the EVA connects from first floor to second floor as shown in **Figure 2.3 (Rev.B)**.

3. THE EXISTING TRAFFIC CONDITION

3.1 Existing Road Network

3.1.1 Po Yip Street is a dual-carriageway which connects Long Yip Street to the southern side and Keung Yip Street at the middle of section.

3.1.2 Long Yip Street is an eastbound road which connecting Castle Peak Road – Yuen Long at its eastern end and to Wang Tat Road at its western end.

3.2 Critical Junctions

3.2.1 Nine junctions are identified to be critical for the Traffic Impact Assessment due to the proposed development. Relevant details are listed in **Table 3.1** and shown in **Figure 3.1 (Rev.A)**. Existing junction layouts are tabulated in **Figures 3.2** to **3.10** respectively.

Table 3.1 Identified Critical Junctions

Ref.	Junction	Type	Figure No.
A	Yuen Long On Lok Road/ Long Yip Street/ Po Yip Street / Yuen Long Tung Tai Street	Signalized	3.2
B	Po Yip Street / Keung Yip Street	Priority	3.3
C	Wang Yip Street East/ Keung Yip Street	Priority	3.4
D	Wang Yip Street East/ Hi Yip Street	Priority	3.5
E	Yuen Long On Lok Road/ Long Yip Street /Wang Lok Street/ Wang Tat Road/ Ma Wang Road	Signalized	3.6
F	Fo Yip Street / Wang Yip Street West / Hi Yip Street	Priority	3.7
G	Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road	Signalized	3.8
H	Castle Peak Road - Yuen Long / Long Yat Road	Signalized	3.9
I	Pok Oi Interchange	Signalized	3.10

3.2.2 In order to study the existing traffic condition of the above critical junctions, traffic survey in the form of manual-classified count was conducted for the nine junctions

during the peak periods on a typical weekday in 16 March 2026 from 07:30 to 09:30 and from 17:00 to 19:00 respectively. The survey provides most up-to-date details of the traffic condition within the study area under normal operation. Based on the observed traffic flows, it reveals that morning and evening peak hours occurred from 07:45 to 08:45 and from 17:15 to 18:15 respectively.

3.2.3 The 2026 existing peak traffic flows are presented in **Figure 3.11 (Rev.A)**. The operational performances of the critical junctions are listed in **Table 3.2** below.

Table 3.2 Operational Performances of Critical Junctions in 2026

Ref.	Junction	Method of Control	Year 2026 RC/DFC (1)	
			AM Peak	PM Peak
A	Yuen Long On Lok Road/ Long Yip Street/ Po Yip Street / Yuen Long Tung Tai Street	Signalized	58%	88%
B	Po Yip Street / Keung Yip Street	Priority	0.31	0.34
C	Wang Yip Street East/ Keung Yip Street	Priority	0.24	0.25
D	Wang Yip Street East/ Hi Yip Street	Priority	0.20	0.15
E	Yuen Long On Lok Road/ Long Yip Street /Wang Lok Street/ Wang Tat Road/ Ma Wang Road	Signalized	72%	88%
F	Fo Yip Street / Wang Yip Street West / Hi Yip Street	Priority	0.43	0.34
G	Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road	Signalized	38%	50%
H	Castle Peak Road - Yuen Long / Long Yat Road	Signalized	43%	56%
I-1	Pok Oi Interchange (Yuen Long Highway Slip Road Northbound)	Signalized	28%	25%
I-2	Pok Oi Interchange (Yuen Long Highway Slip Road Southbound)	Signalized	36%	35%

Note: (1) RC = Reserve Capacity for Signal Junction;
DFC = Design Ratio of Flow to Capacity for Priority Junction/Roundabout

3.2.4 The assessment results in **Table 3.2** indicate that all critical junctions are at present operating with ample capacities during the peak hours.

3.2.5 The existing link capacity for adjacent road network is assessed and the results are shown in **Table 3.3.**

Table 3.3 Existing Link Capacity Assessment

Road Section	Direction	Capacity (veh/hr)	Traffic Flows (veh/hr)		V/C Ratio	
			AM	PM	AM	PM
Wang Yip Street East	Two-way	744(1)	265	280	0.36	0.38
Keung Yip Street	Two-way	744(1)	240	265	0.32	0.36
Po Yip Street	Northbound	1,300(3)	365	315	0.28	0.24
	Southbound	2,340(2)	590	490	0.25	0.21
Long Yip Street	Eastbound	2,418(1)	1,425	1,120	0.59	0.46
Yuen Long On Lok Road	Westbound	4,200	1,365	1,455	0.33	0.35
Kwong Yip Street	Northbound	744(1)	150	115	0.20	0.15
Wang Yip Street South	Two-way	720(2)	120	135	0.17	0.19

Notes:
(1) With reduction factor of 7% for HV percentage between 15-20%
(2) With reduction factor of 10% for HV percentage between 20-25%
(3) Consideration is given to illegal parking along the nearside traffic lane

3.2.6 **Table 3.3** shows that all critical road links operate with capacities during the AM and PM peak hours.

3.3 Public Transport Services in the Vicinity

3.3.1 Numerous road-based public transport services, for instance, franchised bus and GMB are also provided in vicinity of the proposed development. Details of the current services of franchised bus and GMB routes are listed in **Table 3.4** and are illustrated diagrammatically in **Figure 3.12**.

Table 3.4 Public Transport Services in the Vicinity of the Proposed Development

Service	Route	Origin / Destination	Frequency (mins)
KMB	53	Yoho Mall (Yuen Long) - Tsuen Wan (Nina Tower)	25-35
	54	Yuen Long (West) - Sheung Tsuen (Circular)	30
	69	Tin Shui Wai Town Centre - Yuen Long (Tak Yip Street)	20-30
	64K	Yuen Long (West) - Tai Po Market Station	7-20
	64X	Hung Shui Kiu (Hung Yuen Road) - Hong Kong Science Park	AM Peak
	68M	Tsuen Wan Station - Yuen Long (West) B/T	7-20
	68X	Hung Shui Kiu (Hung Fuk Estate) - Mong Kok (Park Avenue)	9-25
	77K	Sheung Shui - Yuen Long (Fung Cheung Road)	12-30
	76K	Sheung Shui (Ching Ho) - Long Ping Estate	20-30
	251C	Kong Ha Wai - Yuen Long (Hong Lok Road)	30
	264R	Tai Po Market Station - Tin Yiu	30
	265S	Tai Po Industrial Estate - Tin Shui Wai Town Centre	AM
	268A	Long Ping Estate - Kwun Tong Ferry	AM and PM Peak
	268B	Long Ping Station - Hung Hom (Hung Luen Road)	20-30
	268C	Long Ping Station - Kwun Tong Ferry	5-30
	268P	Ma Wang Road (San Shui House) - Kwun Tong Ferry	AM and PM Peak
	268X	Hung Shui Kiu (Hung Fuk Estate) - Jordan (West Kowloon Station)	6-35
	269D	Tin Fu - Lek Yuen	7-25
	276	Tin Tsz - Sheung Shui	15-30
	276C	Tin Shui Wai Station - Fanling (Cheung Wah)	AM and PM Peak
	276P	Tin Shui Wai Station - Sheung Shui	7-30
	968	Yuen Long (West) - Causeway Bay (Tin Hau)	6-20
	968A	Yuen Long (West) - Causeway Bay (Tin Hau)	AM Peak
	968X	Yuen Long (Tak Yip Street) - Quarry Bay (King's Road)	AM and PM Peak
	P968	Yuen Long (West) - Causeway Bay (Tin Hau)	AM and PM Peak
	B1	Tin Tsz - Lok Ma Chau Station (Futian)	8-30
	N269	Tin Tsz - Mei Foo	Overnight
	N368	Yuen Long (West) - Central (Macao Ferry)	Overnight
LWB	A36	Kam Sheung Road Station - Airport (Ground Transportation Centre)	15-60
	A37	Long Ping Station - Airport (Ground Transportation Centre)	20-30
	E36	Pat Heung Road - Airport (Ground Transportation Centre)	15-30
	E36C	Yuen Long (Tak Yip Street) - Aircraft Maintenance Area	AM Peak and PM Peak
	E36S	Yuen Long (Ma Wang Road) - Airport (Ground Transportation Centre)	15-25
	NA36	Kam Sheung Road Station - Cathay Pacific City	Overnight
	N30	Yuen Long Station - Airport (Cheong Tat Road)	Overnight
MTR	K68	Yuen Long Industrial Estate - Tai Kiu Tsuen	10-20
	K73	Yuen Long West - Tin Heng	4-10
	K74	Tin Shui Wai Town Centre - Au Tau (Circular)	20-60
	K66	Long Ping - Tai Tong Wong Nai Tun Tsuen	4-15
	K65	Yuen Long Station - Lau Fau Shan	9-16
NLB	B2	Yuen Long Mtr Station - Shenzhen Bay Port	20

GMB	32	Yuen Long Station (North) Public Transport Interchange - Tan Kwai Tsuen	10-15
	33	Yuen Long (Tai Fung Street) - Ha Pak Nai	20-30
	35	Yuen Long (Tai Fung Street) - Sha Kiu (Tsim Bei Tsui)	18-23
	36	Yuen Long (Fook Hong Street) - Tai Shang Wai Rural Office	10-15
	36A	Yuen Long (Fook Hong Street) - Yau Pok Road Light Public Housing	20
	37	Yuen Long (Fook Hong Street) - Yau Tam Mei Village Office	12-15
	38	Yuen Long (Fook Hong Street) - Ha Chuk Yuen (Near Ho Sang Farm)	10-15
	71	Shek Wu Tong (Ho Pui) - Yuen Long (Yuen Long Tai Hang Street)	15
	72	Yuen Long (Yuen Long Tai Hang Street) - Lui Kung Tin	10
	73	Yuen Long (Fook Hong Street) Public Light Bus Terminus - Sung Shan San Tsuen	10-20
	74	Yuen Long (Fook Hong Street) - Shing Uk Tsuen	8-15
	74A	Yuen Long (Fook Hong Street) - Tung Tau Wai	15
	75	Yuen Long (Fook Hong Street) - Ha Wan Tsuen	15-20
	76	Yuen Long (Fook Hong Street) - Siu Hum Tsuen	15-20
	79S	Tin Shui Wai (Grandeur Terrace) - Lok Ma Chau Control Point	30-60
	601	Yuen Long (Fung Cheung Road) - Pak Wai Tsuen	10-20
	601C	Yuen Long (Fung Cheung Road) - Kam Sheung Road Station (Circular)	20
	602	Yuen Long (Fung Cheung Road) - Tai Kong Po	15-20
	603	Yuen Long (Fung Cheung Road) - Fung Kat Heung	20-25
	604	Yuen Long (Fung Cheung Road) - Shan Ha Tsuen	10-20
	608	Wang Toi Shan (Pat Heung) > Yuen Long (Fung Cheung Road) (Circular Route)	10-13
	609	Yuen Long Stadium - Pok Oi Hospital (Circular Route)	6-15
	609B	Long Shin Estate - Yuen Long Station (Circular)	6
	609S	Long Shin Estate - Yuen Long Station (North) Public Transport Interchange	10
	611	Shan Pui Road - Fau Tsoi Street (Circular)	8-15
	611A	Yuen Long Station - Shan Pui Road (Circular)	5
	611B	Kwan Lok Lane - Yuen Long Station (Circular)	15
	611P	Shan Pui Road - On Shun Street (Circular)	20-30
	611S	United Court (Shan Pui Road) - Yuen Long Station (Circular)	15

Note:
KMB – Kowloon Motor Bus
LWB – Long Win Bus
MTR – MTR Bus
NLB – New Lantao Bus

4. FUTURE TRAFFIC CONDITION & TRAFFIC IMPACT ASSESSMENT

4.1 Design Year

4.1.1 It is anticipated that the proposed development would be completed in 2030 tentatively with full intended operation. 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 completion) has been adopted as the design year for this study.

4.2 Traffic Forecast

4.2.1 To estimate the reference traffic flow in year 2033 (without the proposed development) in the local road network, an appropriate growth factor has to be identified for the area in the first instance. The following approaches have been adopted to derive the growth factor for the Area of Influence.

Historical Trend

4.2.2 Numerous traffic-count stations are located in the vicinity of the proposed development. The traffic counts reported in the Annual Traffic Census (ATC), which is published by Transport Department, over a period of seven years, i.e. 2018 to 2024 are summarized in **Table 4.1**.

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

Stn No.	Road Name	AADT							Annual Growth Rate
		2018	2019	2020	2021	2022	2023	2024	2018-2024
5011	Wang Chau Rd (From Yuen Long On Ning Rd to Yuen Long On Lok Rd)	5,970	5,880	5,300	5,210	5,080	4,990	5,140	-2.46%
5837	Yuen Long On Ning Rd (From Tai Kiu Rd to Wang Chau Rd)	10,140	10,070	9,650	9,860	9,290	9,510	9,053	-1.87%
5812	Long Yip St & Yuen Long On Lok Rd (From Tai Kiu Rd to Wang Chau Rd)	23,790	24,730	23,540	25,330	25,340	26,920	27,080	2.18%
6032	Yuen Long On Ning Rd (From Wang Chau Rd to Tai)	16,080	15,960	15,300	15,920	13,430	13,640	13,680	-2.66%
6008	Long Yip St & Yuen Long On Lok Rd (From Wang Chau Rd to Tai Cheung St)	32,160	33,440	31,830	33,380	32,480	32,660	32,840	0.35%

5836	Tai Kiu Rd (From Yuen Long On Ning Rd to Yuen Long On Lok Rd)	6,480	6,430	6,170	6,590	7,180	7,350	7,370	2.17%
6059	Long Yip St FO <192>	25,480	26,500	25,230	26,460	24,450	23,240	23,370	-1.43%
5440	Castle Peak Rd - Yeun Long	45,510	45,570	45,860	47,700	46,240	47,330	45,680	0.06%
5208	Long Yip St & Yuen Long On Lok Rd	37,360	37,050	35,270	36,990	35,350	37,320	39,600	0.98%
6019	Long Yip St & Yuen Long On Lok Rd	22,050	22,920	21,820	22,890	24,180	26,130	26,280	2.97%
5611	Wang Tat Rd, Ma Wang Rd, Long Yip Rd & Yuen Long On Lok Rd	16,620	17,280	19,150	20,760	19,840	21,080	21,200	4.14%
6628	Wang Lok St	15,220	16,720	15,430	16,410	16,460	16,680	17,490	2.34%
Total AADT of Vicinity		**256,860**	**262,550**	**254,550**	**267,500**	**259,320**	**266,850**	**268,783**	**+0.76%**

Planning Data

4.2.3 Reference has also been made to the latest 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. The average annual growth rates in terms of population and employment from 2026 to 2031 are tabulated in **Table 4.2**.

Table 4.2 2021-Based Planning Data from 2021 to 2031

Yuen Long District				
Data	**Year**			**Average Annual Growth Rate (2026-2031)**
	2021	**2026**	**2031**	
Population	668,100	685,000	760,600	2.12%
Employment	152,850	238,500	258,200	1.60%
Total	820,950	923,500	1018,800	**+1.99%**

4.2.4 From Hong Kong Population Projections 2022-2046 obtained from the Census and Statistics Department, average annual growth rates in terms of population from 2031 to 2046 is +0.31%, details are summarised in **Table 4.3**.

Table 4.3 Hong Kong Population Projections 2031-2046

Year	2031	2046	Average Growth Rate
Population	7,820,200	8,190,400	**+0.31%**

Adopted Growth Rate

4.2.5 A.A.D.T. of ATC indicates that the traffic flow of the local road network has an average annual growth rate of +0.76% from year 2018 to year 2024.

4.2.6 Whilst, the planning data indicates that the population and employment of the study area are expected to grow with an average annual growth rate of +1.99% from 2026 to 2031 and the population with an average growth rate of +0.31% from 2031 to 2046.

4.2.7 As a conservative approach, an annual growth rate of **+1.99% p.a.** is adopted for assessment year 2026-2031 and an annual growth rate of **+0.31% p.a**. is adopted from assessment year 2031-2033. It is deemed sufficient to allow for any unexpected future growth as a result of some changes in land use or development in the study area.

Adjacent New Developments

4.2.8 Additional traffic generation and attraction of major committed/planned developments in the vicinity have been estimated and superimposed onto the road network to derive the year 2033 reference traffic flow. The estimated trip generation and attractions of the planned developments are summarized and illustrated in **Table 4.3**.

Table 4.3 Major Planned/ Committed Development in the Vicinity

Planning Application No.	Development Site	Uses	Development Parameters (Approx.)	Trip (pcu/hr)			
				AM Peak		PM Peak	
				GEN	ATT	GEN	ATT
/	Wang Chau Phase I (1)	Domestic	4,400 flats	217	156	121	167
A/YL/312	Multi-storey Building in YLIE (2)	Non-domestic	161,500 m^2	195	311	222	202
/	Public Housing Development at Tin Tsz Road (3)	Domestic	8,400 flats	493	407	319	348
LSPS/005	Land Sharing Pilot Scheme at Wing Ning Tsuen (4)	Domestic	5,613 flats	460	324	246	290
/	Wang Chau Remaining Phase (5)	Domestic	13,000 flats	922	732	505	597
/	Proposed Extension of YLIE (6)	Non-domestic	2,915,000 m^2	81	87	91	47
Y/YL/21	Proposed RCHE, residential and retail uses development of Yuen Long Theatre Lot 3678 in DD120 (7)	Domestic	74 flats	16	17	23	21
		RCHE	220 beds				
		Non-domestic	1,546 m^2				
LSPS/002	Proposed Land Sharing Pilot Scheme for a Site at Various Lots in D.D. 115, Yuen Long, the New Territories (8)	Domestic	3,316 flats	272	196	114	147
		Non-domestic	25,770 m^2				
/	Proposed Comprehensive Development with Wetland Enhancement (CDWE) at Nam Sang Wai and Lut Chau (9)	Domestic	2,512 Flats	662	494	485	501

Notes:
1. Data retrieved from 'Wang Chau Phase 1 Planning Brief', published by Hong Kong Housing Authority https://www.pland.gov.hk/file/resources/approved_pb/hd_pb/pdf/Wang_Chau_Phase_1_Yuen_Long.pdf
2. Reference from Town Planning Board: https://www.tpb.gov.hk/en/plan_application/A_YL_312.html
3. Data retrieved from 'Sites for Public Housing Development Estimated to be Completed from 2029-30 to 2033-34 (Position as at September 2023)', published by Development Bureau https://www.devb.gov.hk/filemanager/en/content_1322/2nd%20five-year%20project%20list_EN.pdf
4. Reference from: https://www.devb.gov.hk/filemanager/en/content_1154/LSPS_005_Gist.pdf
5. Reference from: https://www.cedd.gov.hk/eng/media-corner/project-reports/index-id-18.html
6. Reference from: https://hos.housingauthority.gov.hk/pdf/wangchau_report/TIA_Main_text.pdf
7. Reference from: https://www.tpb.gov.hk/en/plan_application/A_YL_319/FI_20240805/Traffic_Impact_Assessment_1.pdf
8. Reference from its TIA
9. Reference from: https://www.epd.gov.hk/eia/files/applications/en/pp_234/eia_5872/progress/action_172864/HTML/EIA%20Report%20PDF/Executive%20Summary/%E8%A1%8C%E6%94%BF%E6%91%98%E8%A6%81.pdf

4.2.9 The distribution of the traffic by the concerned committed/planned developments to the road network is illustrated in **Figure 4.1** to **Figure 4.9**.

4.3 Reference Traffic Flow in Year 2033

4.3.1 The year 2033 reference traffic flow is estimated by applying the adopted growth rate to the year 2026 adopted traffic flow.

4.3.2 The 2033 reference peak traffic flows are presented in **Figure 4.10**. The derivation for traffic flow of adjacent development has been made reference from the other TIA's report.

2033 Reference Traffic Flows (without proposed development)	=	**2026 Adopted Traffic Flows**	x	**Adopted Growth Factor i.e. +1.99% p.a. for 5 years and +0.31% p.a. for 2 years**	+	**Adjacent Developments**

4.4 Traffic Trips of the Proposed Development

4.4.1 Trip generation and attraction rates of private housing and retail as stipulated in T.P.D.M have been adopted for estimating the trip generations and attractions of the proposed development and summarized in the **Table 4.4**.

Table 4.4 Adopted Trip Rates for the Proposed Private Housing and Retail

Use	Category	Unit	Trip Generation Rates			
			AM Peak		PM Peak	
			Gen	Att	Gen	Att
Residential	R(A) - FS <= 60 - Mean	pcu/hour/flat	0.0718	0.0425	0.0286	0.0370
	R(A) - FS <= 70 - Mean	pcu/hour/flat	0.0888	0.0515	0.0356	0.0480
Retail	Retail/ Shopping Complex (Office + Retail)	pcu/hour/100m^2	0.2296	0.2434	0.3100	0.3563

4.4.2 As the use of government, institution and community (GIC) is not specified in the latest Transport Planning & Design Manual (TPDM), the estimation of the traffic trips related to GIC made reference to A/FSS/299, Instruction No. A20 – Proposed Public Housing Development at Po Shek Wu Road Traffic Review. Detail is summarized in the **Table 4.5**.

Table 4.5 Adopted Trip Rates for Proposed GIC

Use	Units	Trip Generation (pcu/hr) (1)			
		AM Peak		PM Peak	
		Gen	Att	Gen	Att
Government, Institution and Community (GIC) (2): - A main base of Short-term Food Assistance Service Team (STFAST) - Home Care Services (HCS) for Frail Elderly Persons	pcu/hr/ 100m^2 GFA	0.2230	0.2230	0.2230	0.2230

Notes:

(1) The adopted trip rates for the proposed development were referenced from *A/FSS/299, Instruction No. A20 – Proposed Public Housing Development at Po Shek Wu Road, Traffic Review* approved on 10 January 2025, which could be retrieved from pages 121-180 of https://www.tpb.gov.hk/uploads/page/meetings/RNTPC/A_FSS_299_A/A_FSS_299_A_Appendix.pdf.
The GFA of its approved welfare facilities is 4,484 m^2, with corresponding trips of 10 pcu/hr for both AM and PM trip generation and attraction, as shown at p.124 of the pdf.
The trip rate estimation method applied to the proposed GIC is calculated as 10 pcu/hr ÷ 4,484 m^2× 100 m^2 = 0.2230 pcu/hr/100m^2 GFA.

(2) Refer to p.187 on the pdf of *A/FSS/299, Instruction No. A20 – Proposed Public Housing Development at Po Shek Wu Road, Traffic Review* for type of GIC

4.4.3 Based on the adopted trip rate listed in **Table 4.4** and **Table 4.5** as well as the development parameters in **Table 2.1**, the total of the trip generation and attraction of the proposed development are estimated and summarized in the **Table 4.6**.

Table 4.6 Traffic Generations and Attractions of Proposed Development

Use	Development Parameter	Trip Generation (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Private Housing: High-Density (Average Flat Size: 60 m^2)	1,015 flats	73	44	30	38
Private Housing: High-Density (Average Flat Size: 70 m^2)	53 flats	5	3	2	3
Retail	1,600 m^2	4	4	5	6
Government, Institution and Communities (GIC)	422 m^2	1	1	1	1
Total (pcu/hr)		**83**	**52**	**38**	**48**

4.4.4 For reference, the net change in traffic generation between the Proposed Development and the approved scheme, the traffic trips will slightly decrease in AM peak but slightly increase in PM peak to the surrounding road network, as shown in **Table 4.7**.

Table 4.7 Net Difference of Traffic Trip between current and the approved proposals

Item	Trip Generation (pcu/hour)			
	AM Peak		PM Peak	
	Gen	Att	Gen	Att
Current Scheme (1)	83	52	38	48
Approved Scheme (2)	83	53	38	47
Difference	**0**	**-1**	**0**	**+1**

Notes:
(1) Refer to Table 4.6
(2) Reference from previously approved Traffic Impact Assessment report Table 4.4.

4.5 Traffic Forecast for Design Year 2033

4.5.1 The traffic trips of the proposed development as shown in **Figure 4.11**, which is superimposed onto the year 2033 reference traffic flow (without the proposed development) as shown in **Figure 4.10** to derive the year 2033 design traffic flow (with the proposed development).

Year 2033 Design Traffic Flow (with the Proposed Development)	=	**Year 2033 Reference Traffic Flow (without the Proposed Development)**	+	**Traffic Trips of the Proposed Development**

4.5.2 The traffic flow during peaks derived from AM and PM peak periods in the design year 2033 (with the proposed development) as shown in **Figure 4.12**.

4.6 Operational Assessment

4.6.1 To assess traffic impacts due to the proposed development, operational assessment of the critical junctions identified in **Chapter 3** are carried out for both reference (without the proposed development) and design (with the proposed development) scenarios in year 2033. The results are summarized in **Table 4.8**.

Table 4.8 Operational Performance of Critical Junctions in Year 2033

Ref.	Junction	Method of Control	Year 2033 RC/DFC (1)			
			Reference Scenario (Without the Proposed Development)		Design Scenario (With the Proposed Development)	
			AM Peak	PM Peak	AM Peak	PM Peak
A	Yuen Long On Lok Road/ Long Yip Street/ Po Yip Street / Yuen Long Tung Tai Street	Signalized	25%	48%	21%	45%
B	Po Yip Street / Keung Yip Street	Priority	0.35	0.39	0.53	0.46
C	Wang Yip Street East/ Keung Yip Street	Priority	0.27	0.28	0.34	0.34
D	Wang Yip Street East/ Hi Yip Street	Priority	0.22	0.17	0.24	0.18
E	Yuen Long On Lok Road/ Long Yip Street /Wang Lok Street/ Wang Tat Road/ Ma Wang Road	Signalized	21%	37%	21%	36%
F	Fo Yip Street / Wang Yip Street West / Hi Yip Street	Priority	0.48	0.39	0.49	0.41

G	Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road	Signalized	24%	35%	24%	35%
H	Castle Peak Road - Yuen Long / Long Yat Road	Signalized	18%	32%	16%	31%
I-1	Pok Oi Interchange (Yuen Long Highway Slip Road Northbound)	Signalized	**8%**	**5%**	**7%**	**4%**
I-2	Pok Oi Interchange (Yuen Long Highway Slip Road Southbound)	Signalized	**9%**	**6%**	**8%**	**6%**

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

4.6.2 The assessment result in **Table 4.8** reveals that all junctions operate with ample capacities in both reference and design scenarios in year 2033 except junction I-1 and I-2 (Pok Oi Interchange).

4.6.3 However, it is considered that the proposed development only generated insignificant traffic impact to Pok Oi Interchange with maximum -1% for the junction performance.

4.6.4 The traffic generated by the proposed development would induce insignificant impact on the surrounding road network. Therefore, the application is supported from the traffic points of view.

4.6.5 The 2033 link capacity for adjacent road network is also assessed and the results are shown in **Table 4.9** and **Table 10**.

Table 4.9 2033 Link Capacity Assessment (Without Proposed Development)

Road Section	Direction	Capacity (veh/hr)	Traffic Flows (veh/hr)		V/C Ratio	
			AM	PM	AM	PM
Wang Yip Street East	Two-way	744	300	315	0.40	0.42
Keung Yip Street	Two-way	744	265	295	0.36	0.40
Po Yip Street	Northbound	1,300	435	385	0.33	0.30
	Southbound	2,340	685	565	0.29	0.24
Long Yip Street	Eastbound	2,418	1895	1440	0.78	0.60
Yuen Long On Lok Road	Westbound	4,200	1815	1915	0.43	0.46
Kwong Yip Street	Northbound	744	165	135	0.22	0.18
Wang Yip Street South	Two-way	720	135	150	0.19	0.21

Table 4.10 2033 Link Capacity Assessment (With Proposed Development)

Road Section	Direction	Capacity (veh/hr)	Traffic Flows (veh/hr)		V/C Ratio	
			AM	PM	AM	PM
Wang Yip Street East	Two-way	744	400	375	0.54	0.50
Keung Yip Street	Two-way	744	365	355	0.49	0.48
Po Yip Street	Northbound	1,300	470	420	0.36	0.32
	Southbound	2,340	750	590	0.32	0.25
Long Yip Street	Eastbound	2,418	1940	1460	0.80	0.60
Yuen Long On Lok Road	Westbound	4,200	1840	1940	0.44	0.46
Kwong Yip Street	Northbound	744	170	135	0.23	0.18
Wang Yip Street South	Two-way	720	135	150	0.19	0.21

4.6.6 **Tables 4.9** and **4.10** shows that all critical road links operate with capacities during the AM and PM peak hours in both reference and design scenarios in year 2033.

5. PEDESTRIAN IMPACT ASSESSMENT

5.1 Survey on Pedestrian Flows in the Vicinity

5.1.1 In order to acquire the existing pedestrian condition around the proposed development, a pedestrian headcount survey was conducted at concerned footpath sections on a normal weekday on 16 March 2026 from 07:30 to 09:30 and from 17:00 to 19:00 respectively. The assessment sections are shown in **Figure 5.1 (Rev.B)**.

5.1.2 To concept of Minimum Width of Footways and Level-of-service (LOS) in accordance with **T.P.D.M. Volume 2 Chapter 3.4.11** and **Volume 6 Chapter 10** have been applied for assessing the concerned walkways. The Minimum Width of Footways refers to the desirable minimum effective widths of footways according to pedestrian volume and type of land use. LOS directly relates to the pedestrian comfort and ease with which pedestrians queued and proceed at the walkway.

5.1.3 The related assessment of pedestrian is based on Level-of-Service (LOS) approach, which is stipulated in T.P.D.M. (**Volume 6, Chapter 10, Section 10.4.2**), defines the service level of walkway in terms of several parameters such as pedestrian flow rate, pedestrian space, walking speed, etc. The standard with relevant descriptions is summarized in **Table 6.1**.

Table 6.1 Descriptions of Level-of-Service (LOS)

LOS	Flow Rate (ped/min/meter)	Description
A	≤ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 - 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exists, minor conflicts will occur, and speed and volume will be somewhat lower.

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

5.1.4 The level-of-service (LOS) for baseline operational performances of the identified critical sections are listed in **Table 6.2** and presented in **Figure 5.1 (Rev.B)**.

Table 6.2 Performance of Critical Footpath in Year 2026

2026 Observed Scenario								
			AM Peak			PM Peak		
Critical Sections	Actual Width (m)	Effective Width (m) (1)	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (2)	LOS (3)	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (2)	LOS (3)
A	3.5	2.5	217	1.45	A	285	1.90	A
B	3.2	2.2	166	1.26	A	188	1.42	A
C	3.3	2.3	562	4.07	A	687	4.98	A
D	3.5	2.5	1,219	8.13	A	1,363	9.09	A
E	2.7	1.7	50	0.49	A	93	0.91	A
F	4.7	3.7	56	0.25	A	66	0.30	A
G	4.7	3.7	20	0.09	A	17	0.08	A

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

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

5.2 Future Pedestrian Conditions

5.2.1 Based on the observed pedestrian flows and the adopted growth rate of **+1.99%** from 2026 to 2031 and growth rate of **+0.31%** from 2031 to 2033 as in **Section 4.3.2**, future pedestrian reference flows at the critical sections (without proposed development) in Year 2033 are estimated and summarized in **Table 6.3** and presented in **Figure 5.2 (Rev.B)**.

Table 6.3 Performance of Critical Footpath in Reference Scenario Year 2033

2033 Reference Scenario								
Critical Sections	Actual Width (m)	Effective Width (m) (1)	AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m)(2)	LOS (3)	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (2)	LOS (3)
A	3.5	2.5	240	1.60	A	315	2.10	A
B	3.2	2.2	185	1.40	A	210	1.59	A
C	3.3	2.3	625	4.53	A	765	5.54	A
D	3.5	2.5	1,355	9.03	A	1,515	10.10	A
E	2.7	1.7	55	0.54	A	105	1.03	A
F	4.7	3.7	60	0.27	A	75	0.34	A
G	4.7	3.7	20	0.09	A	20	0.09	A

5.3 Pedestrian Traffic Forecast

5.3.1 To estimate the pedestrian trips related to the proposed developments, same pedestrian trip rates are adopted from the approved TIA report as shown in the **Table 6.4**.

Table 6.4 Pedestrian Generation Rates

Use	Units	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Private Housing	ped/15-min/flat	0.075	0.0487	0.0443	0.0443
Retail	ped/15-min/100m^2	0.4900	0.2170	1.0670	1.0670
Welfare Facilities	ped/15-min/100m^2	0.0482	0.2651	0.2892	0.2048

5.3.2 The pedestrian generated by the proposed development are summarized in **Table 6.5**.

Table 6.5 Proposed Development Pedestrian Generation

Use	Units	AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Residential	1,068 flats	81	53	48	48
Retail	1,600 m^2	8	4	18	18
Welfare Facility	422m^2	1	2	2	1
Total (15-min)		90	59	68	67
Total (Hourly)		**360**	**236**	**272**	**268**

5.3.3 Based on the pedestrian generation as shown in **Table 6.5**. The expected pedestrian trips at AM and PM peak hour due to the proposed development is assigned to the reference pedestrian flow and the LOS assessment is shown in **Table 6.6** and presented in **Figure 5.3 (Rev.B)**.

Table 6.6 Performance of Critical Footpath in Design Scenario Year 2033

2033 Design Scenario								
Critical Sections	Actual Width (m)	Effective Width (m) (1)	AM Peak			PM Peak		
			Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (2)	LOS (3)	Two-way Pedestrian Flow (ped/hr)	Two-way Pedestrian Flow Rate (ped/min/m) (2)	LOS (3)
A	3.5	2.5	810	5.40	A	780	5.20	A
B	3.2	2.2	780	5.91	A	750	5.68	A
C	3.3	2.3	1,220	8.84	A	1,305	9.46	A
D	3.5	2.5	1,950	13.00	A	2,055	13.70	A
E	2.7	1.7	85	0.83	A	180	1.76	A
F	4.7	3.7	90	0.41	A	150	0.68	A
G	4.7	3.7	590	2.66	A	485	2.18	A

5.3.4 The assessment results in **Table 6.6** show that the concerned sections of footpath and will all operate with ample reserved capacity (LOS A) during AM and PM peak hours in design year 2033.

5.4 Pedestrian Crossing Assessment

5.4.1 The cautionary crossing at Kwong Yip Street is also assessed. The assessment section is shown in **Figure 5.1 (Rev.B)**. Based on the observed and pedestrian forecast in Sections 5.1 to 5.3, the operational performance of the cautionary crossing is summarized in **Table 6.7**.

Table 6.7 Operational Performance of Cautionary Crossing at Kwong Yip Street

Index	Input Parameters		Year 2026 Observed Scenario		Year 2033 Reference Scenario		Year 2033 Design Scenario	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
H	S_p	= average pedestrian walking speed (m/s)	1.2	1.2	1.2	1.2	1.2	1.2
	t_s	= pedestrian start-up time and end clearance time (s)	3	3	3	3	3	3
	L	= crosswalk length (m)	8	8	8	8	8	8
	v_p	= pedestrian flow rate (p/h)	135	365	150	405	745	945
		= pedestrian flow rate (p/s)	*0.04*	*0.1*	*0.04*	*0.11*	*0.21*	*0.26*
	v	= vehicular flow rate (veh/h)	30	25	35	30	35	30
		= vehicular flow rate (veh/s)	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
	W_E	= effective crosswalk (m)	1.5	1.5	1.5	1.5	1.5	1.5
Step								
1	t_c	= single pedestrian critical gap	10	10	10	10	10	10
2	N_c	= total number of pedestrian in the crossing platoon (p)	1	1	1	1	1.1	1.1
3	N_p	= spatial distribution of pedestrian (p)	1	1	1	1	1	1
4	t_G	= group critical gap (s)	10	10	10	10	10	10
5	d_p	= average pedestrian delay (s)	0.5	0.5	0.5	0.5	0.5	0.5
6	LOS	= Level of Services	**A**	**A**	**A**	**A**	**A**	**A**

Note: Methodology from HCM Chapter 18

5.4.2 The assessment results in **Table 6.7** show that the concerned crossing will operate with ample reserved capacity (LOS A) during AM and PM peak hours in 2026 observed, 2033 reference and 2033 design scenarios.

6. SUMMARY AND CONCLUSION

6.1 Summary

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

6.1.2 To appraise the existing traffic condition, a traffic survey in the form of manual-classified count was conducted at the surrounding road network of the proposed development. Current operational performance of the critical junctions and road links have been assessed with the observed traffic flow. The results reveal that all critical junctions and road links are at present operating within its capacities.

6.1.3 Assessment of operational performance of the critical junctions revealed that all critical junctions would still operate within their capacities in both reference scenario (without proposed development) and design scenario (with proposed development) in 2033 during the peak hours except Pok Oi Interchange. However, the proposed development only generated insignificant traffic impact to Pok Oi Interchange with maximum -1% for the junction performance.

6.1.4 The LOS assessment results indicated that the critical section of footpath and crossing near the proposed site will operate with adequate capacities to accommodate the estimated pedestrian flows in 2033 design year.

6.1.5 Based on the above assessment, the development is supported from the traffic points of view.

6.2 Conclusion

6.2.1 In conclusion, this Traffic Impact Assessment (TIA) study demonstrated that the related traffic trips related to the proposed development can be absorbed by the nearby road network and no significant traffic impact will be induced.

6.2.2 Therefore, the Site is considered feasible for the proposed development from traffic engineering point of view.

Appendix 1

Junction Calculation Sheets

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Po Yip Street / Yuen Long Tung Tai Street (Jn A)**

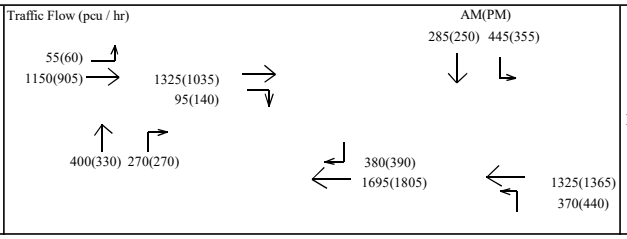
Description: **2026 Observed Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Po Yip Street	S		A	1	3.5	35	0	1	100%	100%	1965	6175	1885	1885	6020	6025	229	0.121	0.121	189	0.100	
	S		A	1	3.5	35	0	0	88%	81%	2105	0	2030	2035	0	0	246	0.121		204	0.100	
	S		A	1	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	255	0.121		211	0.100	
Po Yip Street	S		E	1	3.5	0	15	0	100%	100%	2105	4210	1915	1915	3830	3830	190	0.099		195	0.102	0.102
	S		E	1	3.5	0	15	0	100%	100%	2105	0	1915	1915	0	0	190	0.099		195	0.102	
Long Yip Street	E		B	2	3.3	40	0	0	14%	19%	2085	6255	2075	2070	6245	6240	400	0.193	0.193	320	0.155	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	402	0.193		322	0.155	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	402	0.193		322	0.155	
Long Yip Street	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	663	0.318		518	0.248	
	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	663	0.318		518	0.248	
	E		D	2,3,4	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	95	0.050		140	0.074	
Po Yip Street	N		C	3,4	5.5	0	0	1	0%	0%	2165	4470	2165	2165	4295	4280	338	0.156	0.156	304	0.140	
	N		C	3,4	5.5	0	15	0	81%	91%	2305	0	2130	2115	0	0	332	0.156		296	0.140	
Yuen Long On Lok Road	W		F	2,3,4	3.5	0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	539	0.274		574	0.292	0.292
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	578	0.274		615	0.292	
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	578	0.274		615	0.292	
Yuen Long On Lok Road	W		G	2,3	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	442	0.210		455	0.216	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	442	0.210		455	0.216	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	442	0.210		455	0.216	
Yuen Long Tung Tai Street	N		H	1,4	3.5	15	0	0	100%	100%	2105	4210	1915	1915	3830	3830	185	0.097		220	0.115	
	N		H	1,4	3.5	15	0	0	100%	100%	2105	0	1915	1915	0	0	185	0.097		220	0.115	

Pedestrian Crossing			
	Ip	2,3,4	Min. Crossing Time = 9Gm + 10FGm =19s
	Jp	1	Min. Crossing Time = 8Gm + 9Gm =17s
	Kp	2,3,4	Min. Crossing Time = 10Gm + 12FGm =22s
	Lp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Mp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Np	2,3	Min. Crossing Time = 10Gm + 12FGm =22s

Notes:

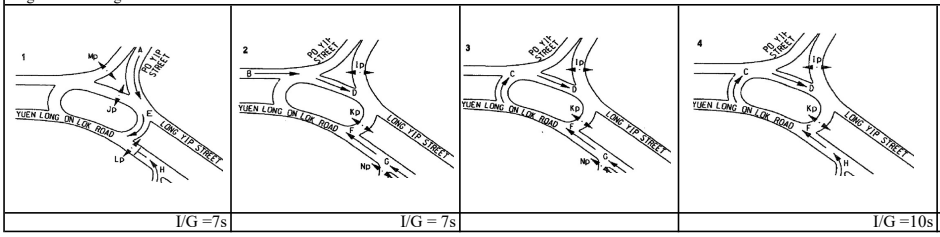
Traffic Flow (pcu / hr)



A.M. Check Phase	
εy	0.470
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	58%

P.M. Check Phase	
εy	0.394
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	88%

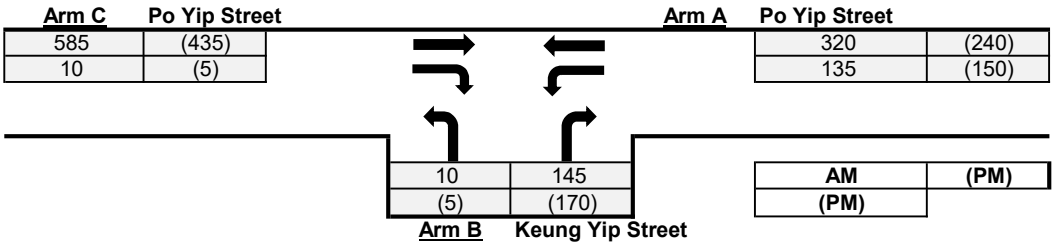
Stage / Phase Diagrams



I/G =7s | I/G = 7s | I/G =10s

Priority Junction Calculation

Junction :	Po Yip Street / Keung Yip Street (Jn B)	Job No.:	26016HK
Scenario :	2026 Observed Traffic Flows		



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	17	V-rBA	80	w-BA	3.5	D	0.921
W-CR	1.5	V-IBA	98	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	85	w-CB	4	F	1.154
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.414

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	585	435	Q-BA	492	516	
q-CB	10	5	Q-BC	658	668	
q-AB	135	150	Q-CB	781	792	
q-AC	320	240	Q-CA	N/A	N/A	(If C-B blocked C-A)
q-BA	145	170	Q-BAC	500	520	(If Minor Road Share LT&RT)
q-BC	10	5				
f	0.065	0.029				

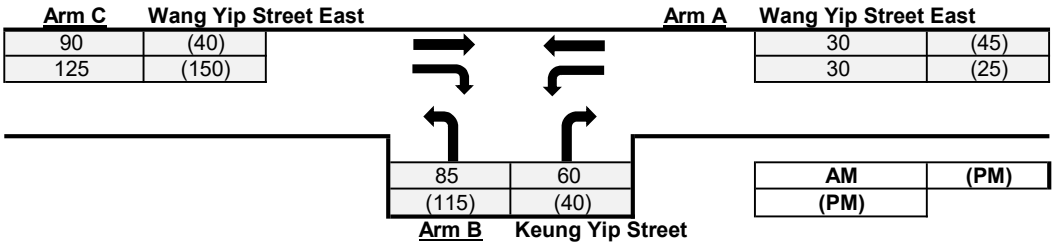
Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.01	0.01
C-A	N/A	N/A
B-AC	0.31	0.34
Critical DFC	**0.31**	**0.34**

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Wang Yip Street East/ Keung Yip Street (Jn C)	Job No.:	26016HK
Scenario :	2026 Observed Traffic Flows		



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	10	V-rBA	80	w-BA	3.5	D	0.891
W-CR	0	V-IBA	45	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	85	w-CB	5	F	1.259
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	90	40	Q-BA	500	496	
q-CB	125	150	Q-BC	702	699	
q-AB	30	25	Q-CB	920	917	
q-AC	30	45	Q-CA	1555	1505	(If C-B blocked C-A)
q-BA	60	40	Q-BAC	601	632	(If Minor Road Share LT&RT)
q-BC	85	115				
f	0.586	0.742				

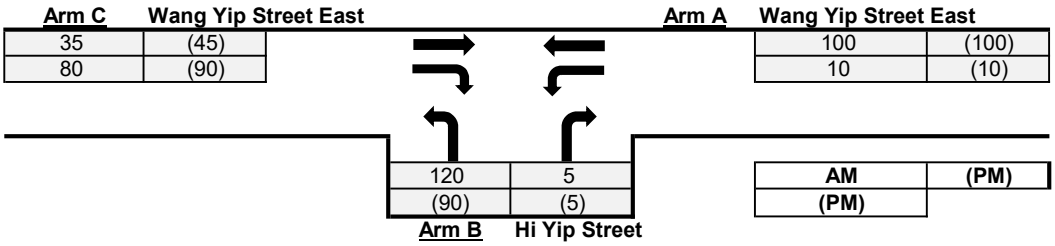
Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.14	0.16
C-A	0.06	0.03
B-AC	0.24	0.25
Critical DFC	**0.24**	**0.25**

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Wang Yip Street East/ Hi Yip Street (Jn D)	Job No.:	26016HK
Scenario :	2026 Observed Traffic Flows		



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	10	V-rBA	37	w-BA	3.3	D	0.838
W-CR	0	V-IBA	45	w-BC	3.3	E	0.900
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	43	w-CB	5	F	1.121
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	114			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	35	45	Q-BA	478	474	
q-CB	80	90	Q-BC	648	648	
q-AB	10	10	Q-CB	806	806	
q-AC	100	100	Q-CA	1621	1599	(If C-B blocked C-A)
q-BA	5	5	Q-BAC	639	636	(If Minor Road Share LT&RT)
q-BC	120	90				
f	0.960	0.947				

Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.10	0.11
C-A	0.02	0.03
B-AC	0.20	0.15
Critical DFC	**0.20**	**0.15**

CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Ma Wang Road / Wang Tat Road / Wang Lok Street (Jn E)**

Description: **2026 Observed Traffic Flows**

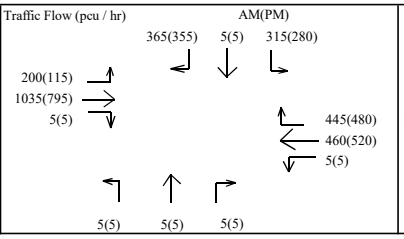
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Long Yip Street	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	223	0.114	0.114	240	0.123	
	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	223	0.114		240	0.123	
	W		A	1	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	230	0.112		260	0.127	0.127
	W		A	1	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	230	0.112		260	0.127	
	W		A	1	3.0	10	0	1	100%	100%	1915	1915	1665	1665	1665	1665	5	0.003		5	0.003	
Wang Lok Street	N		D	2	3.0	0	25	0	100%	100%	2055	2055	1940	1940	1940	1940	5	0.003		5	0.003	
	N		D	2	3.0	20	0	1	50%	50%	1915	1915	1845	1845	1845	1845	10	0.005		10	0.005	
Wang Tat Road	E		C	3	3.5	16	0	1	100%	100%	1965	8280	1795	1795	8105	8105	200	0.111		115	0.064	
	E		C	3	3.5	18	0	0	0%	0%	2105	0	2105	2105	0	0	347	0.165	0.165	267	0.127	0.127
	E		C	3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	347	0.165		267	0.127	
	E		C	3	3.5	0	15	0	1%	2%	2105	0	2100	2100	0	0	346	0.165		266	0.127	
Wang Lok Street	S		B	4	3.5	25	0	1	100%	100%	1965	6175	1855	1855	5855	5855	217	0.117	0.117	203	0.109	0.109
	S		B	4	3.5	25	27	0	2% / 56	5% / 62	2105	0	1995	1995	0	0	233	0.117		218	0.109	
	S		B	4	3.5	0	30	0	100%	100%	2105	0	2005	2005	0	0	235	0.117		219	0.109	

Pedestrian Crossing

Ep	3	Min. Crossing Time = 6Gm + 12FGm =18s
Fp	1,2,4	Min. Crossing Time = 10Gm + 15FGm =25s
Gp	4	Min. Crossing Time = 7Gm + 11FGm =18s
Hp	1,2,3	Min. Crossing Time = 8Gm + 10FGm =18s
Ip	2	Min. Crossing Time = 7Gm + 7FGm =14s
Jp	1,3,4	Min. Crossing Time = 5Gm + 6FGm =11s

Notes:

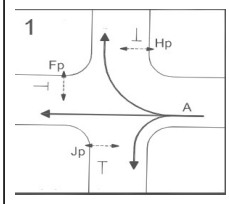
Traffic Flow (pcu / hr) AM(PM)



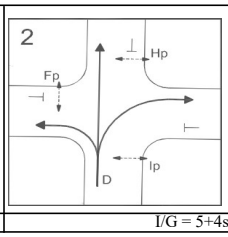
A.M. Check Phase	
εy	0.396
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	72%

P.M. Check Phase	
εy	0.363
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	88%

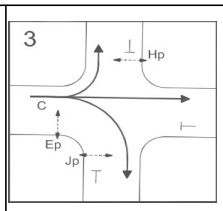
Stage / Phase Diagrams



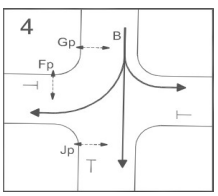
I/G =7s



I/G = 5+4s

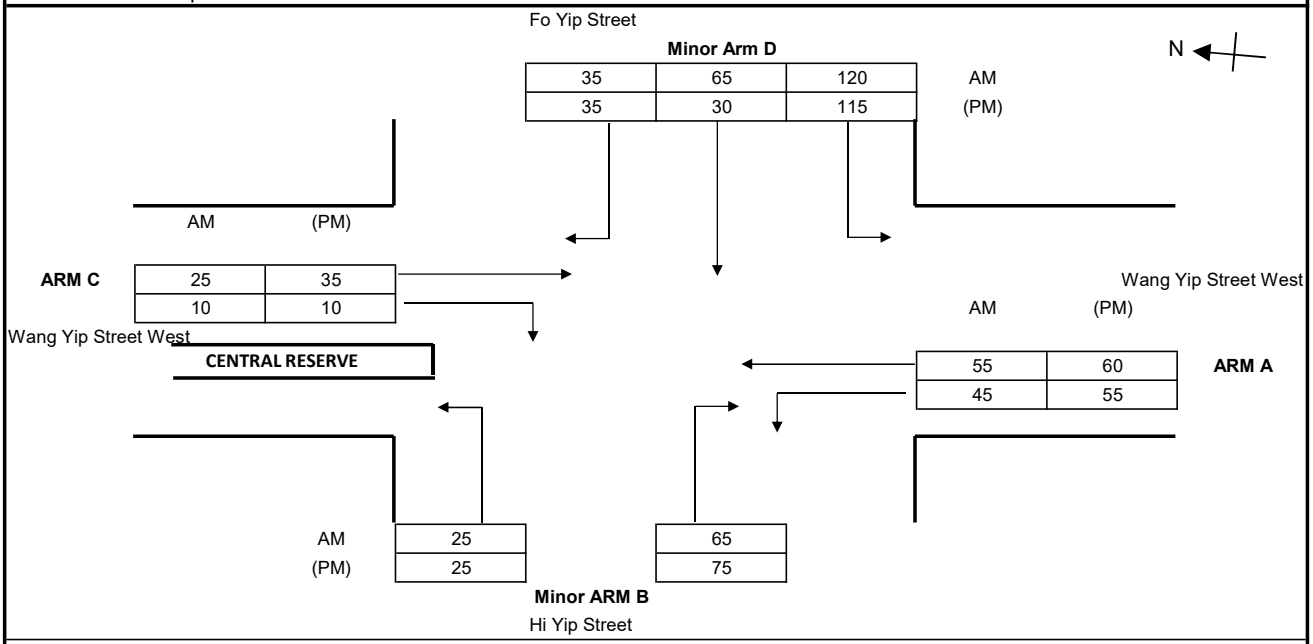


I/G = 8s



I/G =9s

Job Title:			
Junction:	Fo Yip Street / Wang Yip Street West / Hi Yip Street (Jn F)		
Scheme:			Ref. No.:
Year:	2026 Observed Traffic Flows	Job No.: 26016HK	Rev.: -
ARM A:	Wang Yip Street West		
ARM B:	Hi Yip Street		
ARM C:	Wang Yip Street West		
ARM D:	Fo Yip Street		



GEOMETRY					ARM B		ARM D
Major road width	W	10.00	Lane widths		w(b-a)	2.60	w(d-c) 2.20
Central Reserve width	Wcr	0.00			w(b-c)	2.60	w(d-a) 2.20
					w(c-b)	2.05	w(a-d) 2.05
Visibilities	Vr(b-a)	40	Vr(d-c)	55	D	0.78	D 0.75
	Vl(b-a)	40	Vl(d-c)	30	E	0.84	E 0.81
	Vr(b-c)	45	Vr(d-a)	55	F	0.95	F 0.87
	Vr(c-b)	250	Vr(a-d)	150	Y	0.66	Y 0.66

	Arm B			Arm D		
ANALYSIS		AM PEAK	(PM) PEAK		AM PEAK	(PM) PEAK
TRAFFIC FLOWS	q(c-a)	145	150	q(a-c)	80	85
	q(c-b)	10	10	q(a-d)	0	0
	q(a-b)	45	55	q(c-d)	0	0
	q(a-c)	90	95	q(c-a)	90	110
	q(b-a)	65	75	q(d-c)	100	65
	q(b-c)	25	25	q(d-a)	120	115
	f	0.28	0.25	f	0.55	0.64
CAPACITIES	Q(b-a)	450	448	Q(d-c)	448	444
	Q(b-c)	605	603	Q(d-a)	588	584
	Q(c-b)	676	673	Q(a-d)	631	627
	Q(b-ac)	484	479	Q(d-ca)	515	524
	Q(c-a)	1773	1773	Q(a-c)	1800	1800
RFC's	b-a	0.144	0.167	d-c	0.223	0.146
	b-c	0.041	0.041	d-a	0.204	0.197
	c-b	0.015	0.015	a-d	0.000	0.000
	b-ac	0.186	0.209	d-ca	0.427	0.343
	c-a	0.082	0.085	a-c	0.044	0.047

	AM	(PM)
Worst RFC	**0.427**	**0.343**

Where Vl and Vr are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams
- in accordance with TPDM V2.4

T.P.D.M.V.2.4
Appendix 1

Calculated by:	Date: Jul-26	Checked by:

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road (Jn G)**

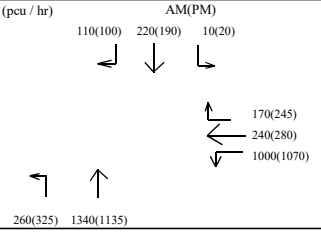
Description: **2026 Observed Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	N		B	1	4.0	25	0	1	100%	100%	2015	2015	1900	1900	1900	1900	260	0.137		325	0.171	
	N		B	1	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	670	0.321		568	0.272	
	N		B	1	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	670	0.321	0.321	568	0.272	0.272
Castle Peak Road - Yuen Long	N		C	1,3	3.6	0	0	1	0%	0%	1975	4090	1975	1975	4090	4090	647	0.328		548	0.278	
	N		C	1,3	3.6	0	0	0	0%	0%	2115	0	2115	2115	0	0	693	0.328		587	0.278	
Long Yat Road	S		D1	2,3	3.0	25	0	1	100%	100%	1915	1915	1805	1805	1805	1805	10	0.006		20	0.011	
	S		D2	2	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	165	0.080		145	0.071	
	S		D2	2	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	165	0.080		145	0.071	
Long Yat Road	S		E	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3940	3935	165	0.084		145	0.074	
	S		E	2	3.5	0	15	0	67%	69%	2105	0	1975	1970	0	0	165	0.084	0.084	145	0.074	0.074
Castle Peak Road - Yuen Long	W		G	3	3.0	0	15	0	100%	100%	2055	2055	1870	1870	1870	1870	170	0.091	0.115	245	0.131	0.134
	W		G	3	3.3	0	0	0	0%	0%	2085	2085	2085	2085	2085	2085	240	0.115		280	0.134	
	W		M	1,3	3.2	20	0	1	100%	100%	1935	4010	1800	1800	3760	3760	479	0.266		512	0.285	
	W		M	1,3	3.2	25	0	0	100%	100%	2075	0	1960	1960	0	0	521	0.266		558	0.285	

Pedestrian Crossing			
	Hp	2,3	Min. Crossing Time = 10Gm + 8FGm =18s
	Ip	1,3	Min. Crossing Time = 5Gm + 6FGm =11s
	Jp	2	Min. Crossing Time = 5Gm + 6FGm =11s
	Lp	1,2	Min. Crossing Time = 5Gm + 5FGm =10s
	Np	2	Min. Crossing Time = 5Gm + 7FGm =12s
	Op	1	Min. Crossing Time = 5Gm + 6FGm =11s
	Pp	1	Min. Crossing Time = 5Gm + 5FGm =10s

Notes:

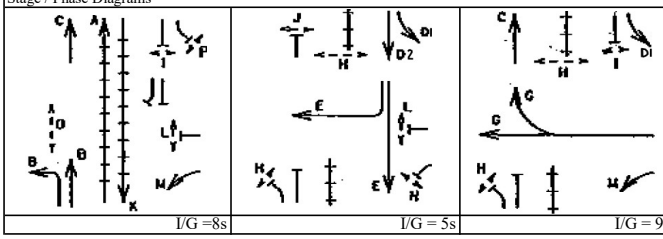
Traffic Flow (pcu / hr) AM(PM)



A.M. Check Phase	
εy	0.520
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	46%

P.M. Check Phase	
εy	0.480
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	58%

Stage / Phase Diagrams



I/G =8s | I/G = 5s | I/G = 9s

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Long Yat Road (Jn H)**

Description: **2026 Observed Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	E	↰	B	1	3.5	20	0	1	100%	100%	1965	1965	1830	1830	1830	1830	25	0.014		25	0.014	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	477	0.226		387	0.184	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	477	0.226		387	0.184	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	477	0.226	0.226	387	0.184	0.184
Castle Peak Road - Yuen Long	W	↱	D	3	3.7	0	30	0	100%	100%	2120	2120	2020	2020	2020	2020	295	0.146		275	0.136	
Long Yat Road	S	↳	E	3,4	3.7	25	0	1	100%	100%	2145	4265	2025	2025	4045	4045	731	0.361	0.361	696	0.344	0.344
	S	↳	E	3,4	3.7	30	0	0	100%	100%	2120	0	2020	2020	0	0	729	0.361		694	0.344	
	S	↲	C	1,4	3.7	0	25	0	100%	100%	2120	2120	2000	2000	2000	2000	250	0.125		225	0.113	

Pedestrian Crossing			
	Fp	1,4	Min. Crossing Time = 5Gm + 10FGm =15s
	Gp	1,2	Min. Crossing Time = 5Gm + 17FGm =22s

Notes:

Traffic Flow (pcu / hr) AM(PM)

250(225)

1460(1390)

25(25)

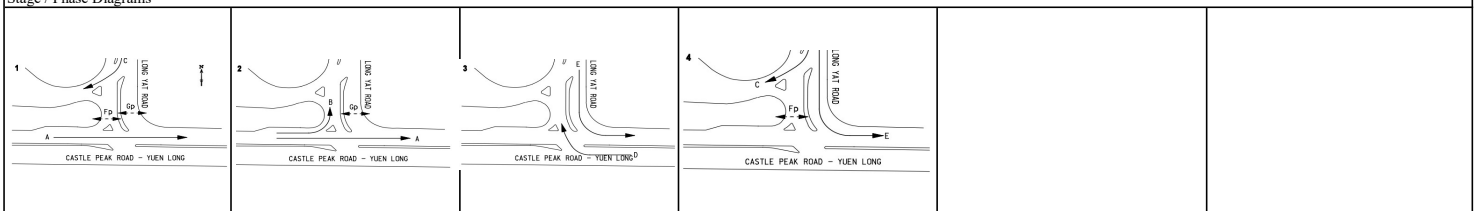
1430(1160)

295(275)

A.M. Check Phase	
εy	0.587
L (sec)	8
C (sec)	120
y pract.	0.840
R.C. (%)	43%

P.M. Check Phase	
εy	0.527
L (sec)	8
C (sec)	120
y pract.	0.840
R.C. (%)	59%

Stage / Phase Diagrams



TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Northbound) (Jn I)**
Description: **2026 Observed Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Yuen Long Highway	N		D	2	5.00	25	0	1	47%	61%	2060	2040	558	0.271	0.271	482	0.236	0.236
Slip Road	N		D	2	5.00	0	0	0	0%	0%	2255	2255	612	0.271		533	0.236	
Pok Oi Interchange	W	←	C	1	5.00	0	0	1	0%	0%	2115	2115	753	0.356	0.356	854	0.404	0.404
	W	←	C	1	5.00	0	0	0	0%	0%	2255	2255	802	0.356		911	0.404	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

← 1555(1765)

↰ 260(295) ↑ 910(720)

Check Phase		Check Phase	
εy	0.627	εy	0.640
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	28%	R.C. (%)	25%

Stage / Phase Diagrams

1	2			
C ←	D ↖ ↑ ⊢			
I/G = 7	I/G = 7			

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Southbound) (Jn I)**
Description: **2026 Observed Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Pok Oi Interchange	E	→	B	2	5.00	0	0	1	0%	0%	2115	2115	762	0.360	0.360	649	0.307	0.307
	E	→	B	2	5.00	0	0	0	0%	0%	2255	2255	813	0.360		691	0.307	
Yuen Long Highway Slip Road	S	↳	A	1	5.00	50	0	1	0%	0%	2115	2115	486	0.230	0.230	612	0.289	0.289
	S	↓	A	1	5.00	0	0	0	0%	0%	2255	2255	519	0.230		653	0.289	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

1005(1265) ↓ 0(0) ↳

1575(1340) →

Check Phase		Check Phase	
εy	0.590	εy	0.596
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	36%	R.C. (%)	35%

Stage / Phase Diagrams

1	2			
A	B			
I/G = 7	I/G = 7			

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Po Yip Street / Yuen Long Tung Tai Street (Jn A)**

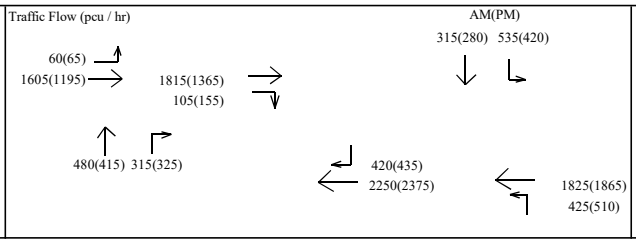
Description: **2033 Reference Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Po Yip Street	S		A	1	3.5	35	0	1	100%	100%	1965	6175	1885	1885	6015	6020	266	0.141	0.141	219	0.116	0.116
	S		A	1	3.5	35	0	0	94%	85%	2105	0	2025	2030	0	0	286	0.141		236	0.116	
	S		A	1	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	298	0.141		245	0.116	
Po Yip Street	S		E	1	3.5	0	15	0	100%	100%	2105	4210	1915	1915	3830	3830	210	0.110		218	0.114	
	S		E	1	3.5	0	15	0	100%	100%	2105	0	1915	1915	0	0	210	0.110		218	0.114	
Long Yip Street	E		B	2	3.3	40	0	0	11%	16%	2085	6255	2075	2075	6245	6245	554	0.267	0.267	418	0.202	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	556	0.267		421	0.202	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	556	0.267		421	0.202	
Long Yip Street	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	908	0.435		683	0.327	
	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	908	0.435		683	0.327	
	E		D	2,3,4	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	105	0.055		155	0.082	
Po Yip Street	N		C	3,4	5.5	0	0	1	0%	0%	2165	4470	2165	2165	4300	4280	400	0.185	0.185	374	0.173	
	N		C	3,4	5.5	0	15	0	80%	89%	2305	0	2135	2115	0	0	395	0.185		366	0.173	
Yuen Long On Lok Road	W		F	2,3,4	3.5	0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	716	0.364		756	0.385	0.385
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	767	0.364		810	0.385	
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	767	0.364		810	0.385	
Yuen Long On Lok Road	W		G	2,3	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	608	0.289		622	0.295	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	608	0.289		622	0.295	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	608	0.289		622	0.295	
Yuen Long Tung Tai Street	N		H	1,4	3.5	15	0	0	100%	100%	2105	4210	1915	1915	3830	3830	213	0.111		255	0.133	
	N		H	1,4	3.5	15	0	0	100%	100%	2105	0	1915	1915	0	0	213	0.111		255	0.133	

Pedestrian Crossing			
	Ip	2,3,4	Min. Crossing Time = 9Gm + 10FGm =19s
	Jp	1	Min. Crossing Time = 8Gm + 9Gm =17s
	Kp	2,3,4	Min. Crossing Time = 10Gm + 12FGm =22s
	Lp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Mp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Np	2,3	Min. Crossing Time = 10Gm + 12FGm =22s

Notes:

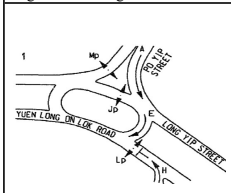
Traffic Flow (pcu / hr)



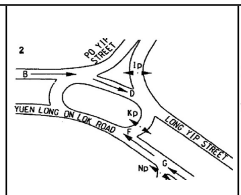
A.M. Check Phase	
εy	0.593
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	25%

P.M. Check Phase	
εy	0.501
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	48%

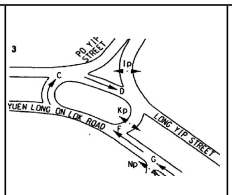
Stage / Phase Diagrams

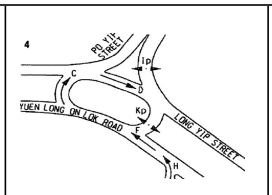


I/G =7s



I/G = 7s

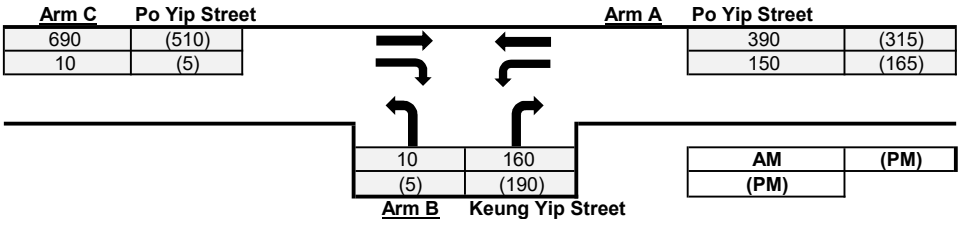




I/G =10s

Priority Junction Calculation

Junction :	Po Yip Street / Keung Yip Street (Jn B)	Job No.:	26016HK
Scenario :	2033 Reference Traffic Flows		



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	17	V-rBA	80	w-BA	3.5	D	0.921
W-CR	1.5	V-IBA	98	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	85	w-CB	4	F	1.154
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.414

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	690	510	Q-BA	472	498	
q-CB	10	5	Q-BC	647	657	
q-AB	150	165	Q-CB	766	776	
q-AC	390	315	Q-CA	N/A	N/A	(If C-B blocked C-A)
q-BA	160	190	Q-BAC	480	502	(If Minor Road Share LT&RT)
q-BC	10	5				
f	0.059	0.026				

Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.01	0.01
C-A	N/A	N/A
B-AC	0.35	0.39
Critical DFC	**0.35**	**0.39**

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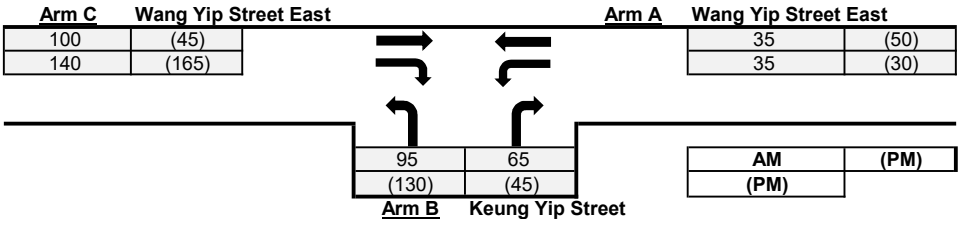
Priority Junction Calculation

Junction :	Wang Yip Street East/ Keung Yip Street (Jn C)	Job No.:	26016HK
Scenario :	2033 Reference Traffic Flows		



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	10	V-rBA	80	w-BA	3.5	D	0.891
W-CR	0	V-IBA	45	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	85	w-CB	5	F	1.259
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	100	45	Q-BA	492	489	
q-CB	140	165	Q-BC	700	697	
q-AB	35	30	Q-CB	917	914	
q-AC	35	50	Q-CA	1525	1475	(If C-B blocked C-A)
q-BA	65	45	Q-BAC	598	629	(If Minor Road Share LT&RT)
q-BC	95	130				
f	0.594	0.743				

Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.15	0.18
C-A	0.07	0.03
B-AC	0.27	0.28
Critical DFC	**0.27**	**0.28**

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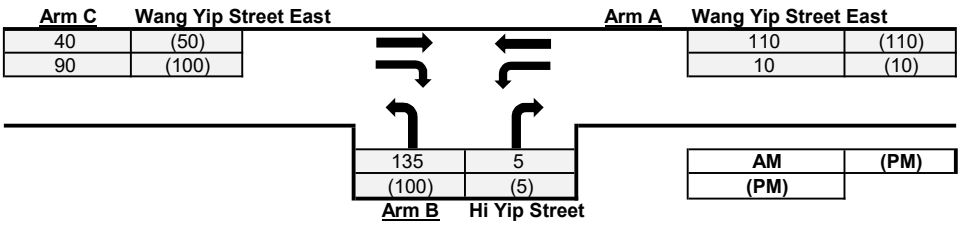
Priority Junction Calculation

Junction :	Wang Yip Street East/ Hi Yip Street (Jn D)	Job No.:	26016HK
Scenario :	2033 Reference Traffic Flows		



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

Geometry :

Input						Calculated	
W	10	V-rBA	37	w-BA	3.3	D	0.838
W-CR	0	V-lBA	45	w-BC	3.3	E	0.900
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	43	w-CB	5	F	1.121
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	114			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	40	50	Q-BA	472	468	
q-CB	90	100	Q-BC	646	646	
q-AB	10	10	Q-CB	803	803	
q-AC	110	110	Q-CA	1598	1576	(If C-B blocked C-A)
q-BA	5	5	Q-BAC	638	635	(If Minor Road Share LT&RT)
q-BC	135	100				
f	0.964	0.952				

Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.11	0.12
C-A	0.03	0.03
B-AC	0.22	0.17
Critical DFC	**0.22**	**0.17**

CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Ma Wang Road / Wang Tat Road / Wang Lok Street (Jn E)**

Description: **2033 Reference Traffic Flows**

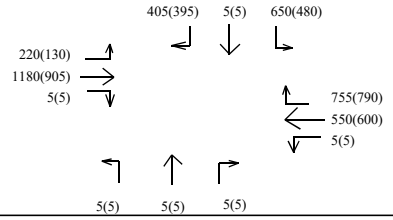
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Long Yip Street	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	378	0.194	0.194	395	0.203	0.203
	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	378	0.194		395	0.203	
	W		A	1	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	275	0.134		300	0.146	
	W		A	1	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	275	0.134		300	0.146	
	W		A	1	3.0	10	0	1	100%	100%	1915	1915	1665	1665	1665	1665	5	0.003		5	0.003	
Wang Lok Street	N		D	2	3.0	0	25	0	100%	100%	2055	2055	1940	1940	1940	1940	5	0.003		5	0.003	
	N		D	2	3.0	20	0	1	50%	50%	1915	1915	1845	1845	1845	1845	10	0.005		10	0.005	
Wang Tat Road	E		C	3	3.5	16	0	1	100%	100%	1965	8280	1795	1795	8105	8105	220	0.123		130	0.072	
	E		C	3	3.5	18	0	0	0%	0%	2105	0	2105	2105	0	0	395	0.188	0.188	304	0.144	0.144
	E		C	3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	395	0.188		304	0.144	
	E		C	3	3.5	0	15	0	1%	2%	2105	0	2100	2100	0	0	395	0.188		303	0.144	
Wang Lok Street	S		B	4	3.5	25	0	1	100%	100%	1965	6175	1855	1855	5850	5850	336	0.181	0.181	279	0.150	0.150
	S		B	4	3.5	25	27	0	7% / 12	7% / 31	2105	0	1990	1990	0	0	360	0.181		299	0.150	
	S		B	4	3.5	0	30	0	100%	100%	2105	0	2005	2005	0	0	363	0.181		302	0.150	

Pedestrian Crossing

Ep	3	Min. Crossing Time = 6Gm + 12FGm =18s
Fp	1,2,4	Min. Crossing Time = 10Gm + 15FGm =25s
Gp	4	Min. Crossing Time = 7Gm + 11FGm =18s
Hp	1,2,3	Min. Crossing Time = 8Gm + 10FGm =18s
Ip	2	Min. Crossing Time = 7Gm + 7FGm =14s
Jp	1,3,4	Min. Crossing Time = 5Gm + 6FGm =11s

Notes:

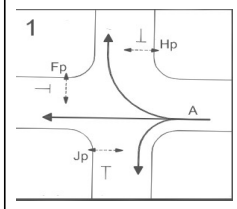
Traffic Flow (pcu / hr) AM(PM)



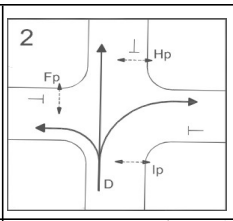
A.M. Check Phase	
εy	0.563
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	21%

P.M. Check Phase	
εy	0.498
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	37%

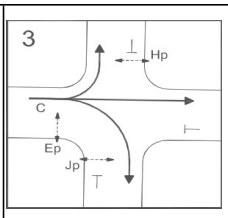
Stage / Phase Diagrams



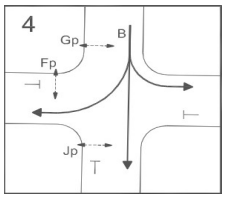
I/G =7s



I/G = 5+4s

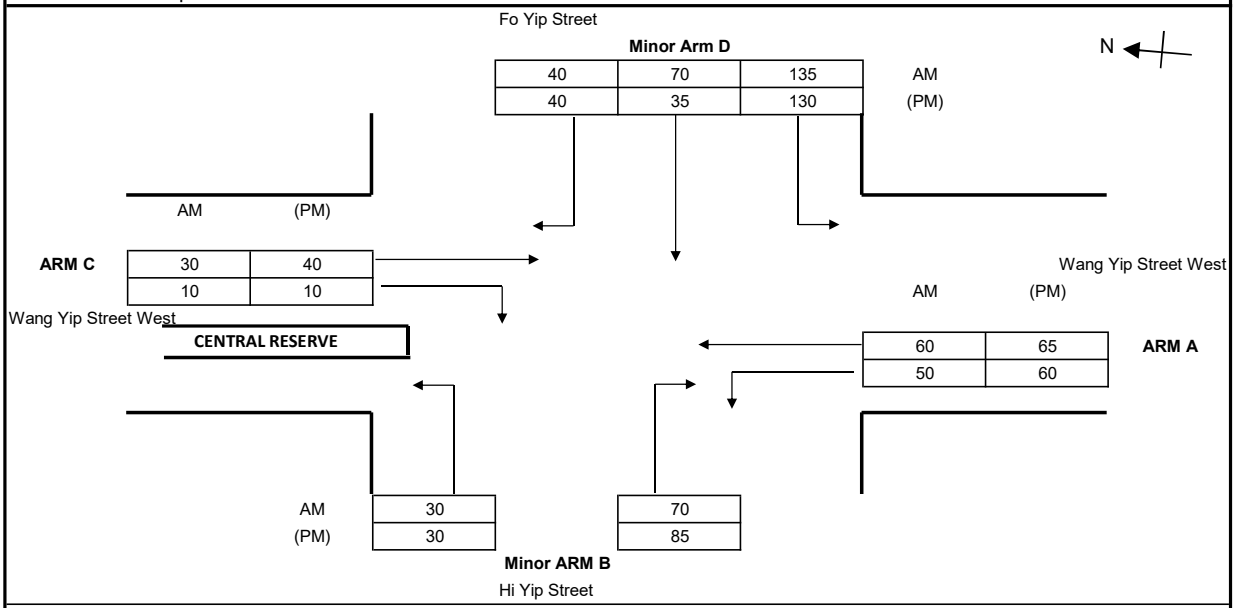


I/G = 8s



I/G =9s

Job Title:			
Junction:	Fo Yip Street / Wang Yip Street West / Hi Yip Street (Jn F)		
Scheme:			Ref. No.:
Year:	2033 Reference Traffic Flows	Job No.: 26016HK	Rev.: -
ARM A:	Wang Yip Street West		
ARM B:	Hi Yip Street		
ARM C:	Wang Yip Street West		
ARM D:	Fo Yip Street		



GEOMETRY					ARM B		ARM D
Major road width	W	10.00	Lane widths		w(b-a)	2.60	w(d-c) 2.20
Central Reserve width	Wcr	0.00			w(b-c)	2.60	w(d-a) 2.20
					w(c-b)	2.05	w(a-d) 2.05
Visibilities	Vr(b-a)	40	Vr(d-c)	55	D	0.78	D 0.75
	Vl(b-a)	40	Vl(d-c)	30	E	0.84	E 0.81
	Vr(b-c)	45	Vr(d-a)	55	F	0.95	F 0.87
	Vr(c-b)	250	Vr(a-d)	150	Y	0.66	Y 0.66

ANALYSIS		Arm B AM PEAK	Arm B (PM) PEAK		Arm D AM PEAK	Arm D (PM) PEAK
TRAFFIC FLOWS	q(c-a)	165	170	q(a-c)	90	95
	q(c-b)	10	10	q(a-d)	0	0
	q(a-b)	50	60	q(c-d)	0	0
	q(a-c)	100	105	q(c-a)	100	125
	q(b-a)	70	85	q(d-c)	110	75
	q(b-c)	30	30	q(d-a)	135	130
	f	0.30	0.26	f	0.55	0.63
CAPACITIES	Q(b-a)	446	443	Q(d-c)	445	440
	Q(b-c)	602	600	Q(d-a)	586	582
	Q(c-b)	673	670	Q(a-d)	629	624
	Q(b-ac)	484	475	Q(d-ca)	513	520
	Q(c-a)	1773	1773	Q(a-c)	1800	1800
RFC's	b-a	0.157	0.192	d-c	0.247	0.170
	b-c	0.050	0.050	d-a	0.230	0.224
	c-b	0.015	0.015	a-d	0.000	0.000
	b-ac	0.207	0.242	d-ca	0.477	0.394
	c-a	0.093	0.096	a-c	0.050	0.053

	AM	(PM)
Worst RFC	**0.477**	**0.394**

Where Vl and Vr are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams
- in accordance with TPDM V2.4

T.P.D.M.V.2.4
Appendix 1

Calculated by:	Date: Aug-26	Checked by:

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road (Jn G)**

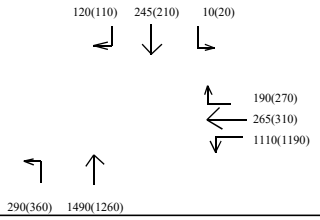
Description: **2033 Reference Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	N	↰	B	1	4.0	25	0	1	100%	100%	2015	2015	1900	1900	1900	1900	290	0.153		360	0.189	
	N	↑	B	1	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	745	0.357		630	0.302	
	N	↑	B	1	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	745	0.357	0.357	630	0.302	0.302
Castle Peak Road - Yuen Long	N	↑	C	1,3	3.6	0	0	1	0%	0%	1975	4090	1975	1975	4090	4090	719	0.364		608	0.308	
	N	↑	C	1,3	3.6	0	0	0	0%	0%	2115	0	2115	2115	0	0	771	0.364		652	0.308	
Long Yat Road	S	↳	D1	2,3	3.0	25	0	1	100%	100%	1915	1915	1805	1805	1805	1805	10	0.006		20	0.011	
	S	↓	D2	2	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	183	0.089		160	0.078	
	S	↓	D2	2	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	183	0.089		160	0.078	
Long Yat Road	S	↓	E	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3940	3935	182	0.093		160	0.081	
	S	↰↓	E	2	3.5	0	15	0	66%	69%	2105	0	1975	1970	0	0	183	0.093	0.093	160	0.081	0.081
Castle Peak Road - Yuen Long	W	↱	G	3	3.0	0	15	0	100%	100%	2055	2055	1870	1870	1870	1870	190	0.102	0.127	270	0.144	0.149
	W	←	G	3	3.3	0	0	0	0%	0%	2085	2085	2085	2085	2085	2085	265	0.127		310	0.149	
	W	↰	M	1,3	3.2	20	0	1	100%	100%	1935	4010	1800	1800	3760	3760	531	0.295		570	0.316	
	W	↰	M	1,3	3.2	25	0	0	100%	100%	2075	0	1960	1960	0	0	579	0.295		620	0.316	

Pedestrian Crossing			
	Hp	2,3	Min. Crossing Time = 10Gm + 8FGm =18s
	Ip	1,3	Min. Crossing Time = 5Gm + 6FGm =11s
	Jp	2	Min. Crossing Time = 5Gm + 6FGm =11s
	Lp	1,2	Min. Crossing Time = 5Gm + 5FGm =10s
	Np	2	Min. Crossing Time = 5Gm + 7FGm =12s
	Op	1	Min. Crossing Time = 5Gm + 6FGm =11s
	Pp	1	Min. Crossing Time = 5Gm + 5FGm =10s

Notes:

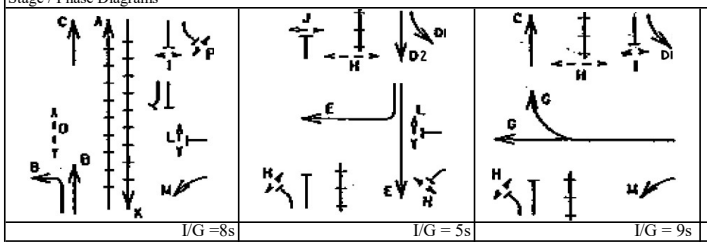
Traffic Flow (pcu / hr) AM(PM)



A.M. Check Phase	
εy	0.577
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	31%

P.M. Check Phase	
εy	0.532
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	42%

Stage / Phase Diagrams



I/G =8s I/G = 5s I/G = 9s

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Long Yat Road (Jn H)**

Description: **2033 Reference Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	E	↱	B	1	3.5	20	0	1	100%	100%	1965	1965	1830	1830	1830	1830	30	0.016		30	0.016	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	658	0.313		510	0.242	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	658	0.313		510	0.242	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	658	0.313	0.313	510	0.242	0.242
Castle Peak Road - Yuen Long	W	↰	D	3	3.7	0	30	0	100%	100%	2120	2120	2020	2020	2020	2020	330	0.163		305	0.151	
Long Yat Road	S	↳	E	3,4	3.7	25	0	1	100%	100%	2145	4265	2025	2025	4045	4045	811	0.400	0.400	773	0.382	0.382
	S	↳	E	3,4	3.7	30	0	0	100%	100%	2120	0	2020	2020	0	0	809	0.400		772	0.382	
	S	↲	C	1,4	3.7	0	25	0	100%	100%	2120	2120	2000	2000	2000	2000	280	0.140		250	0.125	

Pedestrian Crossing

Fp	1,4	Min. Crossing Time = 5Gm + 10FGm =15s
Gp	1,2	Min. Crossing Time = 5Gm + 17FGm =22s

Notes:

Traffic Flow (pcu / hr) AM(PM)

280(250)

1620(1545)

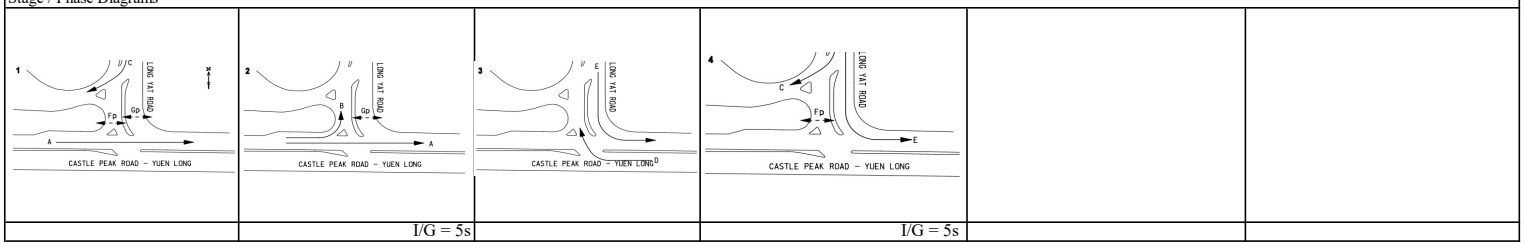
30(30)

1975(1530)

330(305)

A.M. Check Phase		P.M. Check Phase	
εy	0.713	εy	0.624
L (sec)	8	L (sec)	8
C (sec)	120	C (sec)	120
y pract.	0.840	y pract.	0.840
R.C. (%)	18%	R.C. (%)	35%

Stage / Phase Diagrams



I/G = 5s

I/G = 5s

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Northbound) (Jn I)**
Description: **2033 Reference Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Yuen Long Highway	N		D	2	5.00	25	0	1	45%	59%	2060	2045	649	0.315	0.315	561	0.274	0.275
Slip Road	N		D	2	5.00	0	0	0	0%	0%	2255	2255	711	0.315		619	0.275	
Pok Oi Interchange	W	←	C	1	5.00	0	0	1	0%	0%	2115	2115	907	0.429	0.429	1036	0.490	0.490
	W	←	C	1	5.00	0	0	0	0%	0%	2255	2255	968	0.429		1104	0.490	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

← 1875(2140)

↰ 290(330) ↑ 1070(850)

Check Phase		Check Phase	
εy	0.744	εy	0.764
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	8%	R.C. (%)	5%

Stage / Phase Diagrams

1	2			
C ← ⊤	D ↖ ⊢			
I/G = 7	I/G = 7			

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Southbound) (Jn I)**
Description: **2033 Reference Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Pok Oi Interchange	E	→	B	2	5.00	0	0	1	0%	0%	2115	2115	876	0.414	0.414	745	0.352	0.352
	E	→	B	2	5.00	0	0	0	0%	0%	2255	2255	934	0.414		795	0.352	
Yuen Long Highway Slip Road	S	↳	A	1	5.00	50	0	1	0%	0%	2115	2115	682	0.323	0.323	854	0.404	0.404
	S	↓	A	1	5.00	0	0	0	0%	0%	2255	2255	728	0.323		911	0.404	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

1410(1765) 0(0)

1810(1540) →

Check Phase		Check Phase	
εy	0.737	εy	0.756
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	9%	R.C. (%)	6%

Stage / Phase Diagrams

1	2			
A	B			
I/G = 7	I/G = 7			

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Po Yip Street / Yuen Long Tung Tai Street (Jn A)**

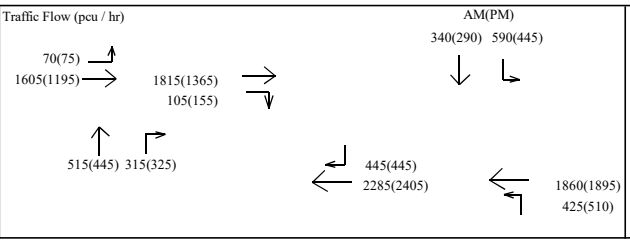
Description: **2033 Design Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Po Yip Street	S		A	1	3.5	35	0	1	100%	100%	1965	6175	1885	1885	6010	6020	292	0.155	0.155	230	0.122	0.122
	S		A	1	3.5	35	0	0	95%	87%	2105	0	2020	2030	0	0	313	0.155		248	0.122	
	S		A	1	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	326	0.155		257	0.122	
Po Yip Street	S		E	1	3.5	0	15	0	100%	100%	2105	4210	1915	1915	3830	3830	223	0.116		223	0.116	
	S		E	1	3.5	0	15	0	100%	100%	2105	0	1915	1915	0	0	223	0.116		223	0.116	
Long Yip Street	E		B	2	3.3	40	0	0	13%	18%	2085	6255	2075	2070	6245	6240	557	0.268	0.268	421	0.204	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	559	0.268		424	0.203	
	E		B	2	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	559	0.268		424	0.203	
Long Yip Street	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	908	0.435		683	0.327	
	E		D	2,3,4	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	908	0.435		683	0.327	
	E		D	2,3,4	3.3	0	15	0	100%	100%	2085	2085	1895	1895	1895	1895	105	0.055		155	0.082	
Po Yip Street	N		C	3,4	5.5	0	0	1	0%	0%	2165	4470	2165	2165	4305	4290	417	0.193	0.193	389	0.180	
	N		C	3,4	5.5	0	15	0	76%	85%	2305	0	2140	2125	0	0	413	0.193		381	0.179	
Yuen Long On Lok Road	W		F	2,3,4	3.5	0	0	1	0%	0%	1965	6175	1965	1965	6175	6175	727	0.370		765	0.389	0.389
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	779	0.370		820	0.389	
	W		F	2,3,4	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	779	0.370		820	0.389	
Yuen Long On Lok Road	W		G	2,3	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	620	0.295		632	0.300	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	620	0.295		632	0.300	
	W		G	2,3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	620	0.295		632	0.300	
Yuen Long Tung Tai Street	N		H	1,4	3.5	15	0	0	100%	100%	2105	4210	1915	1915	3830	3830	213	0.111		255	0.133	
	N		H	1,4	3.5	15	0	0	100%	100%	2105	0	1915	1915	0	0	213	0.111		255	0.133	

Pedestrian Crossing			
	Ip	2,3,4	Min. Crossing Time = 9Gm + 10FGm =19s
	Jp	1	Min. Crossing Time = 8Gm + 9Gm =17s
	Kp	2,3,4	Min. Crossing Time = 10Gm + 12FGm =22s
	Lp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Mp	1	Min. Crossing Time = 8Gm + 9FGm =17s
	Np	2,3	Min. Crossing Time = 10Gm + 12FGm =22s

Notes:

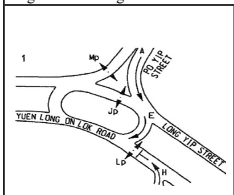
Traffic Flow (pcu / hr)



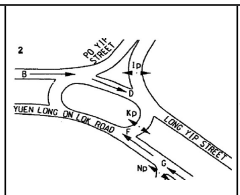
A.M. Check Phase	
εy	0.616
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	21%

P.M. Check Phase	
εy	0.512
L (sec)	21
C (sec)	120
y pract.	0.743
R.C. (%)	45%

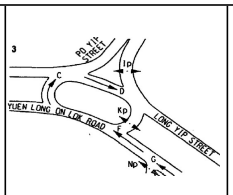
Stage / Phase Diagrams

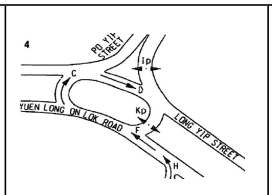


I/G =7s



I/G = 7s

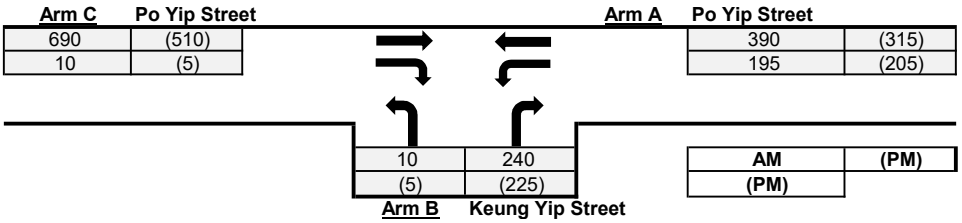




I/G =10s

Priority Junction Calculation

Junction :	Po Yip Street / Keung Yip Street (Jn B)	Job No.:	26016HK
Scenario :	2033 Design Traffic Flows		



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	17	V-rBA	80	w-BA	3.5	D	0.921
W-CR	1.5	V-IBA	98	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	0	V-rBC	85	w-CB	4	F	1.154
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.414

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	690	510	Q-BA	470	496	
q-CB	10	5	Q-BC	644	654	
q-AB	195	205	Q-CB	758	769	
q-AC	390	315	Q-CA	N/A	N/A	(If C-B blocked C-A)
q-BA	240	225	Q-BAC	475	499	(If Minor Road Share LT&RT)
q-BC	10	5				
f	0.040	0.022				

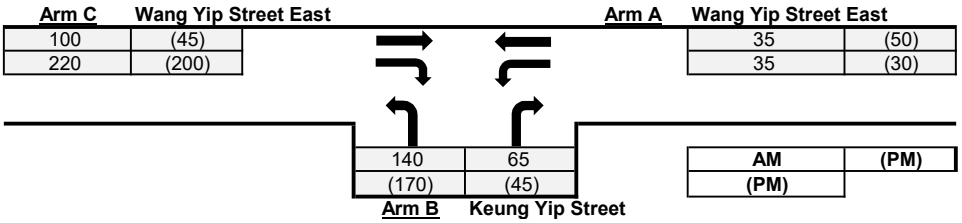
Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.01	0.01
C-A	N/A	N/A
B-AC	0.53	0.46
Critical DFC	**0.53**	**0.46**

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Wang Yip Street East/ Keung Yip Street (Jn C)	Job No.:	26016HK
Scenario :	2033 Design Traffic Flows		



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	10	V-rBA	80	w-BA	3.5	D	0.891
W-CR	0	V-IBA	45	w-BC	3.5	E	0.955
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	85	w-CB	5	F	1.259
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	250			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	100	45	Q-BA	468	479	
q-CB	220	200	Q-BC	700	697	
q-AB	35	30	Q-CB	917	914	
q-AC	35	50	Q-CA	1368	1406	(If C-B blocked C-A)
q-BA	65	45	Q-BAC	605	636	(If Minor Road Share LT&RT)
q-BC	140	170				
f	0.683	0.791				

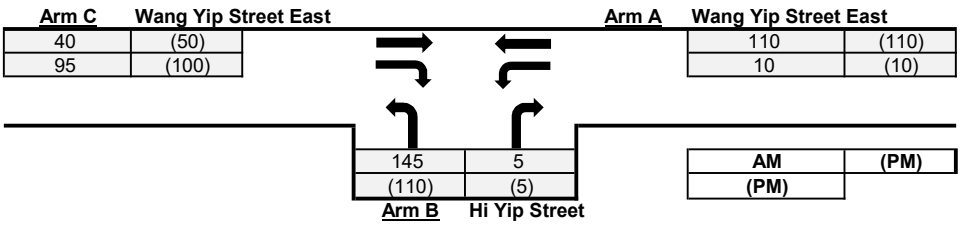
Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.24	0.22
C-A	0.07	0.03
B-AC	0.34	0.34
Critical DFC	**0.34**	**0.34**

CTA Consultants Ltd.

Priority Junction Calculation

Junction :	Wang Yip Street East/ Hi Yip Street (Jn D)	Job No.:	26016HK
Scenario :	2033 Design Traffic Flows		



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

Geometry :

Input						Calculated	
W	10	V-rBA	37	w-BA	3.3	D	0.838
W-CR	0	V-lBA	45	w-BC	3.3	E	0.900
C-B blocked C-A, residual width <2.5m? (Yes: 1, No: 0)	1	V-rBC	43	w-CB	5	F	1.121
Minor Road Share LT&RT? (Yes: 1, No: 0)	1	V-rCB	114			Y	0.655

Analysis :

Traffic Flow pcu/hr	AM	PM	Capacity pcu/hr	AM	PM	
q-CA	40	50	Q-BA	471	468	
q-CB	95	100	Q-BC	646	646	
q-AB	10	10	Q-CB	803	803	
q-AC	110	110	Q-CA	1587	1576	(If C-B blocked C-A)
q-BA	5	5	Q-BAC	638	636	(If Minor Road Share LT&RT)
q-BC	145	110				
f	0.967	0.957				

Results :

Ratio of Flow-to-Capacity	AM	PM
B-A	N/A	N/A
B-C	N/A	N/A
C-B	0.12	0.12
C-A	0.03	0.03
B-AC	0.24	0.18
Critical DFC	**0.24**	**0.18**

CTA Consultants Ltd.

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Yuen Long On Lok Road / Long Yip Street / Ma Wang Road / Wang Tat Road / Wang Lok Street (Jn E)**

Description: **2033 Design Traffic Flows**

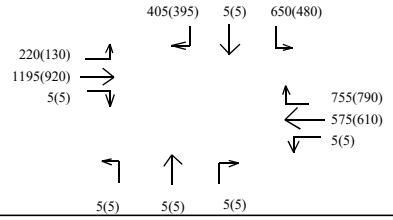
Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Long Yip Street	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	378	0.194	0.194	395	0.203	0.203
	W		A	1	3.0	0	27	0	100%	100%	2055	4110	1945	1945	3890	3890	378	0.194		395	0.203	
	W		A	1	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	288	0.140		305	0.148	
	W		A	1	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	288	0.140		305	0.148	
	W		A	1	3.0	10	0	1	100%	100%	1915	1915	1665	1665	1665	1665	5	0.003		5	0.003	
Wang Lok Street	N		D	2	3.0	0	25	0	100%	100%	2055	2055	1940	1940	1940	1940	5	0.003		5	0.003	
	N		D	2	3.0	20	0	1	50%	50%	1915	1915	1845	1845	1845	1845	10	0.005		10	0.005	
Wang Tat Road	E		C	3	3.5	16	0	1	100%	100%	1965	8280	1795	1795	8105	8105	220	0.123		130	0.072	
	E		C	3	3.5	18	0	0	0%	0%	2105	0	2105	2105	0	0	400	0.190	0.190	309	0.147	0.147
	E		C	3	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	400	0.190		309	0.147	
	E		C	3	3.5	0	15	0	1%	2%	2105	0	2100	2100	0	0	400	0.190		308	0.147	
Wang Lok Street	S		B	4	3.5	25	0	1	100%	100%	1965	6175	1855	1855	5850	5850	336	0.181	0.181	279	0.150	0.150
	S		B	4	3.5	25	27	0	7% / 12	7% / 31	2105	0	1990	1990	0	0	360	0.181		299	0.150	
	S		B	4	3.5	0	30	0	100%	100%	2105	0	2005	2005	0	0	363	0.181		302	0.150	

Pedestrian Crossing

Ep	3	Min. Crossing Time = 6Gm + 12FGm =18s
Fp	1,2,4	Min. Crossing Time = 10Gm + 15FGm =25s
Gp	4	Min. Crossing Time = 7Gm + 11FGm =18s
Hp	1,2,3	Min. Crossing Time = 8Gm + 10FGm =18s
Ip	2	Min. Crossing Time = 7Gm + 7FGm =14s
Jp	1,3,4	Min. Crossing Time = 5Gm + 6FGm =11s

Notes:

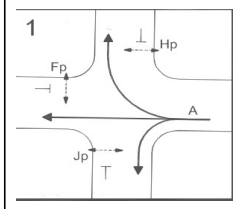
Traffic Flow (pcu / hr) AM(PM)



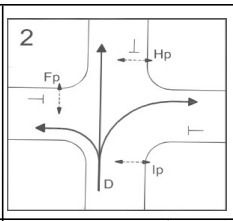
A.M. Check Phase	
εy	0.565
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	21%

P.M. Check Phase	
εy	0.500
L (sec)	29
C (sec)	120
y pract.	0.683
R.C. (%)	36%

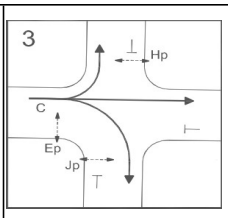
Stage / Phase Diagrams



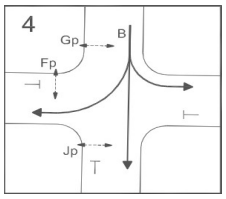
I/G =7s



I/G = 5+4s

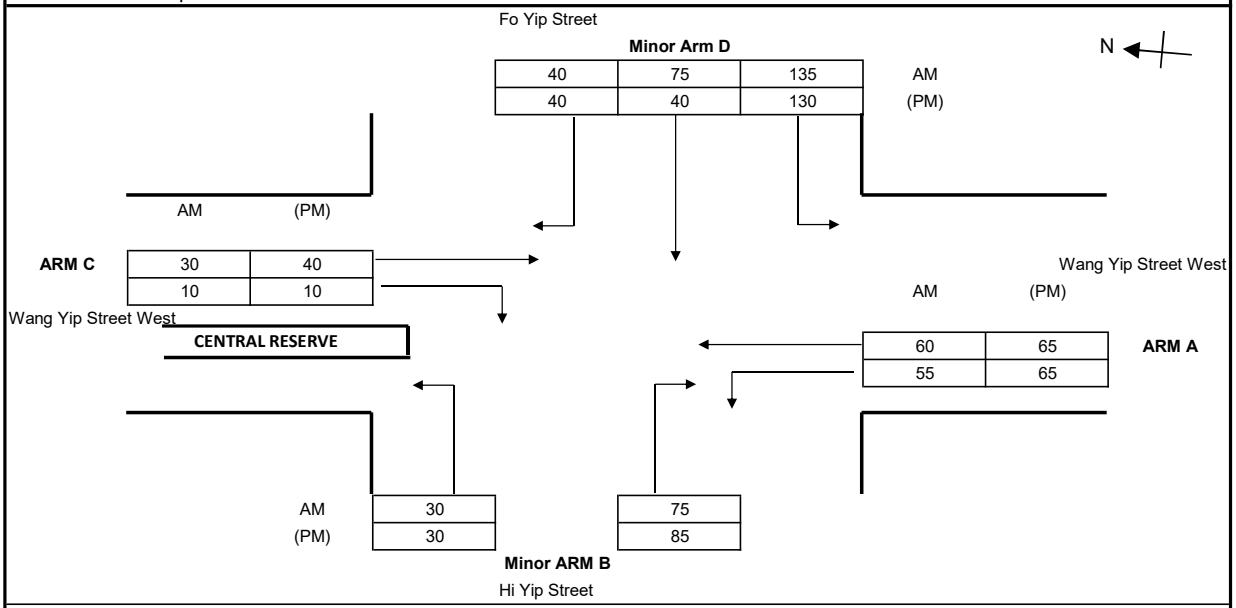


I/G = 8s



I/G =9s

Job Title:			
Junction:	Fo Yip Street / Wang Yip Street West / Hi Yip Street (Jn F)		
Scheme:			Ref. No.:
Year:	2033 Design Traffic Flows	Job No.: 26016HK	Rev.: -
ARM A:	Wang Yip Street West		
ARM B:	Hi Yip Street		
ARM C:	Wang Yip Street West		
ARM D:	Fo Yip Street		



GEOMETRY					ARM B		ARM D
Major road width	W	10.00	Lane widths		w(b-a)	2.60	w(d-c) 2.20
Central Reserve width	Wcr	0.00			w(b-c)	2.60	w(d-a) 2.20
					w(c-b)	2.05	w(a-d) 2.05
Visibilities	Vr(b-a)	40	Vr(d-c)	55	D	0.78	D 0.75
	Vl(b-a)	40	Vl(d-c)	30	E	0.84	E 0.81
	Vr(b-c)	45	Vr(d-a)	55	F	0.95	F 0.87
	Vr(c-b)	250	Vr(a-d)	150	Y	0.66	Y 0.66

ANALYSIS		Arm B AM PEAK	Arm B (PM) PEAK		Arm D AM PEAK	Arm D (PM) PEAK
TRAFFIC FLOWS	q(c-a)	165	170	q(a-c)	90	95
	q(c-b)	10	10	q(a-d)	0	0
	q(a-b)	55	65	q(c-d)	0	0
	q(a-c)	100	105	q(c-a)	105	125
	q(b-a)	75	85	q(d-c)	115	80
	q(b-c)	30	30	q(d-a)	135	130
	f	0.29	0.26	f	0.54	0.62
CAPACITIES	Q(b-a)	445	443	Q(d-c)	444	440
	Q(b-c)	602	600	Q(d-a)	585	582
	Q(c-b)	672	669	Q(a-d)	628	624
	Q(b-ac)	481	475	Q(d-ca)	511	518
	Q(c-a)	1773	1773	Q(a-c)	1800	1800
RFC's	b-a	0.169	0.192	d-c	0.259	0.182
	b-c	0.050	0.050	d-a	0.231	0.224
	c-b	0.015	0.015	a-d	0.000	0.000
	b-ac	0.218	0.242	d-ca	0.490	0.405
	c-a	0.093	0.096	a-c	0.050	0.053

	AM	(PM)
Worst RFC	**0.490**	**0.405**

Where Vl and Vr are visibility distances to the left or right of the respective streams

D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))

E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))

F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))

Y = 1-0.0345W

f = proportion of minor traffic turning left

Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)

Capacity of combined streams
- in accordance with TPDM V2.4

T.P.D.M.V.2.4
Appendix 1

Calculated by:	Date: Aug-26	Checked by:

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Yuen Long On Lok Road / Long Yat Road (Jn G)**

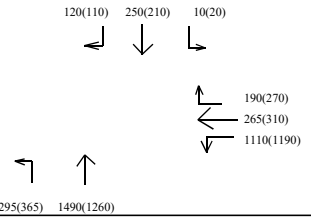
Description: **2033 Design Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	N	↰	B	1	4.0	25	0	1	100%	100%	2015	2015	1900	1900	1900	1900	295	0.155		365	0.192	
	N	↑	B	1	3.3	0	0	0	0%	0%	2085	4170	2085	2085	4170	4170	745	0.357		630	0.302	
	N	↑	B	1	3.3	0	0	0	0%	0%	2085	0	2085	2085	0	0	745	0.357	0.357	630	0.302	0.302
Castle Peak Road - Yuen Long	N	↑	C	1,3	3.6	0	0	1	0%	0%	1975	4090	1975	1975	4090	4090	719	0.364		608	0.308	
	N	↑	C	1,3	3.6	0	0	0	0%	0%	2115	0	2115	2115	0	0	771	0.364		652	0.308	
Long Yat Road	S	↳	D1	2,3	3.0	25	0	1	100%	100%	1915	1915	1805	1805	1805	1805	10	0.006		20	0.011	
	S	↓	D2	2	3.0	0	0	0	0%	0%	2055	4110	2055	2055	4110	4110	185	0.090		160	0.078	
	S	↓	D2	2	3.0	0	0	0	0%	0%	2055	0	2055	2055	0	0	185	0.090		160	0.078	
Long Yat Road	S	↓	E	2	3.5	0	0	1	0%	0%	1965	4070	1965	1965	3940	3935	184	0.094		160	0.081	
	S	↰↓	E	2	3.5	0	15	0	65%	69%	2105	0	1975	1970	0	0	186	0.094	0.094	160	0.081	0.081
Castle Peak Road - Yuen Long	W	↱	G	3	3.0	0	15	0	100%	100%	2055	2055	1870	1870	1870	1870	190	0.102	0.127	270	0.144	0.149
	W	←	G	3	3.3	0	0	0	0%	0%	2085	2085	2085	2085	2085	2085	265	0.127		310	0.149	
	W	↰	M	1,3	3.2	20	0	1	100%	100%	1935	4010	1800	1800	3760	3760	531	0.295		570	0.316	
	W	↰	M	1,3	3.2	25	0	0	100%	100%	2075	0	1960	1960	0	0	579	0.295		620	0.316	

Pedestrian Crossing			
	Hp	2,3	Min. Crossing Time = 10Gm + 8FGm =18s
	Ip	1,3	Min. Crossing Time = 5Gm + 6FGm =11s
	Jp	2	Min. Crossing Time = 5Gm + 6FGm =11s
	Lp	1,2	Min. Crossing Time = 5Gm + 5FGm =10s
	Np	2	Min. Crossing Time = 5Gm + 7FGm =12s
	Op	1	Min. Crossing Time = 5Gm + 6FGm =11s
	Pp	1	Min. Crossing Time = 5Gm + 5FGm =10s

Notes:

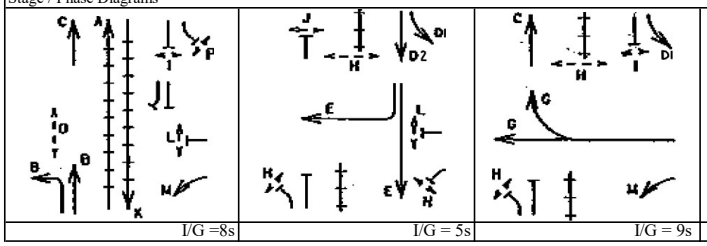
Traffic Flow (pcu / hr) AM(PM)



A.M. Check Phase	
εy	0.578
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	31%

P.M. Check Phase	
εy	0.532
L (sec)	19
C (sec)	120
y pract.	0.758
R.C. (%)	42%

Stage / Phase Diagrams



I/G =8s I/G = 5s I/G = 9s

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Castle Peak Road - Yuen Long / Long Yat Road (Jn H)**

Description: **2033 Design Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Saturation Flow (pcu/hr)	Total Saturation Flow (pcu/hr)	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	Total Revised Saturation Flow (pcu/hr) A.M.	Total Revised Saturation Flow (pcu/hr) P.M.	A.M. Flow (pcu/hr)	A.M. y Value	A.M. Critical y	P.M. Flow (pcu/hr)	P.M. y Value	P.M. Critical y
Castle Peak Road - Yuen Long	E	↱	B	1	3.5	20	0	1	100%	100%	1965	1965	1830	1830	1830	1830	30	0.016		30	0.016	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	6315	2105	2105	6315	6315	677	0.321		518	0.246	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	677	0.321		518	0.246	
	E	→	A	1,2	3.5	0	0	0	0%	0%	2105	0	2105	2105	0	0	677	0.321	0.321	518	0.246	0.246
Castle Peak Road - Yuen Long	W	↰	D	3	3.7	0	30	0	100%	100%	2120	2120	2020	2020	2020	2020	330	0.163		305	0.151	
Long Yat Road	S	↳	E	3,4	3.7	25	0	1	100%	100%	2145	4265	2025	2025	4045	4045	811	0.400	0.400	773	0.382	0.382
	S	↳	E	3,4	3.7	30	0	0	100%	100%	2120	0	2020	2020	0	0	809	0.400		772	0.382	
	S	↲	C	1,4	3.7	0	25	0	100%	100%	2120	2120	2000	2000	2000	2000	285	0.143		250	0.125	

Pedestrian Crossing

Fp	1,4	Min. Crossing Time = 5Gm + 10FGm =15s
Gp	1,2	Min. Crossing Time = 5Gm + 17FGm =22s

Notes:

Traffic Flow (pcu / hr) AM(PM)

285(250)

1620(1545)

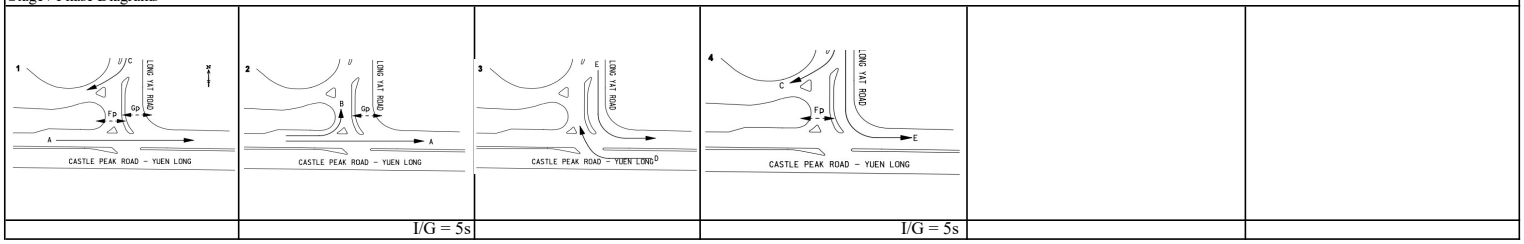
30(30)

2030(1555)

330(305)

A.M. Check Phase		P.M. Check Phase	
εy	0.722	εy	0.628
L (sec)	8	L (sec)	8
C (sec)	120	C (sec)	120
y pract.	0.840	y pract.	0.840
R.C. (%)	16%	R.C. (%)	34%

Stage / Phase Diagrams



I/G = 5s

I/G = 5s

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Northbound) (Jn I)**
Description: **2033 Design Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Yuen Long Highway	N		D	2	5.00	25	0	1	45%	59%	2060	2045	649	0.315	0.315	561	0.274	0.275
Slip Road	N		D	2	5.00	0	0	0	0%	0%	2255	2255	711	0.315		619	0.275	
Pok Oi Interchange	W	←	C	1	5.00	0	0	1	0%	0%	2115	2115	915	0.432	0.432	1043	0.493	0.493
	W	←	C	1	5.00	0	0	0	0%	0%	2255	2255	975	0.432		1112	0.493	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

← 1890(2155)

↰ 290(330) ↑ 1070(850)

Check Phase		Check Phase	
εy	0.748	εy	0.768
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	7%	R.C. (%)	4%

Stage / Phase Diagrams

1	2			
C ← ⊤	D ↖ ⊢			
I/G = 7	I/G = 7			

TRAFFIC SIGNALS CALCULATION Job No: 26016HK **CTA Consultants Ltd.**

Junction: **Pok Oi Interchange (Yuen Long Highway Slip Road Southbound) (Jn I)**
Description: **2033 Design Traffic Flows**

Approach	Direction	Movement notation	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Nearside 0/1	Pro. Turning (%) A.M.	Pro. Turning (%) P.M.	Revised Saturation Flow (pcu/hr) A.M.	Revised Saturation Flow (pcu/hr) P.M.	A.M. Peak Flow (pcu/hr)	A.M. Peak y Value	A.M. Peak Critical y	P.M. Peak Flow (pcu/hr)	P.M. Peak y Value	P.M. Peak Critical y
Pok Oi Interchange	E	→	B	2	5.00	0	0	1	0%	0%	2115	2115	876	0.414	0.414	745	0.352	0.352
	E	→	B	2	5.00	0	0	0	0%	0%	2255	2255	934	0.414		795	0.352	
Yuen Long Highway Slip Road	S	↓↳	A	1	5.00	50	0	1	0%	0%	2115	2115	690	0.326	0.326	861	0.407	0.407
	S	↓	A	1	5.00	0	0	0	0%	0%	2255	2255	735	0.326		919	0.407	

Notes:

Traffic Flow (pcu / hr) [AM (PM)]

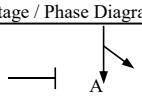
1425(1780) ↓ 0(0) ↳

1810(1540) →

Check Phase		Check Phase	
εy	0.740	εy	0.760
L (sec)	12	L (sec)	12
C (sec)	110	C (sec)	110
y pract.	0.802	y pract.	0.802
R.C. (%)	8%	R.C. (%)	6%

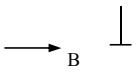
Stage / Phase Diagrams

1

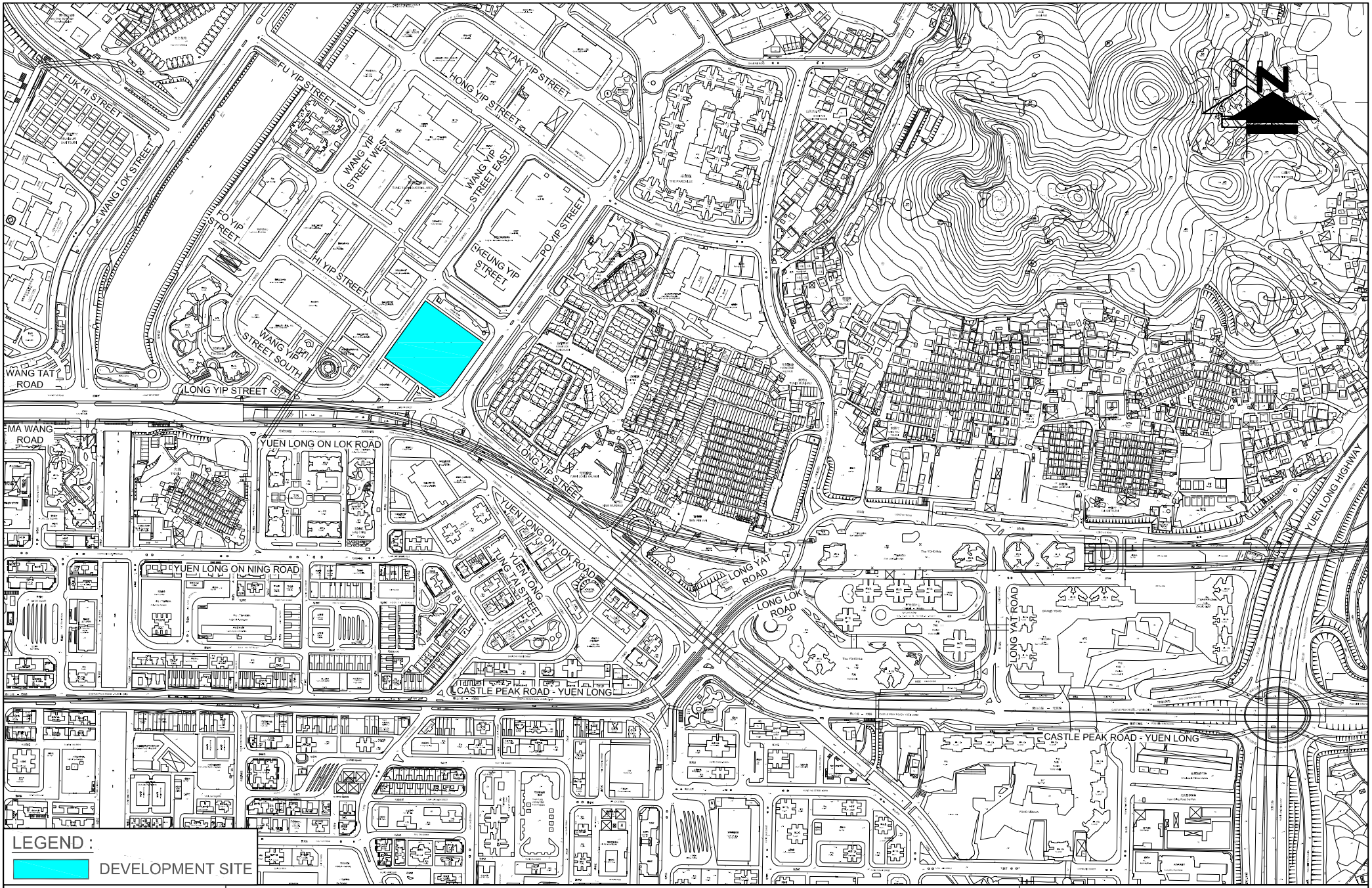


I/G = 7

2



I/G = 7



LEGEND :

DEVELOPMENT SITE

FIGURE NO.: 1.1	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: SITE LOCATION PLAN	
SCALE: 1 : 6000 @A4 / DATE: 06 JUL 2026		

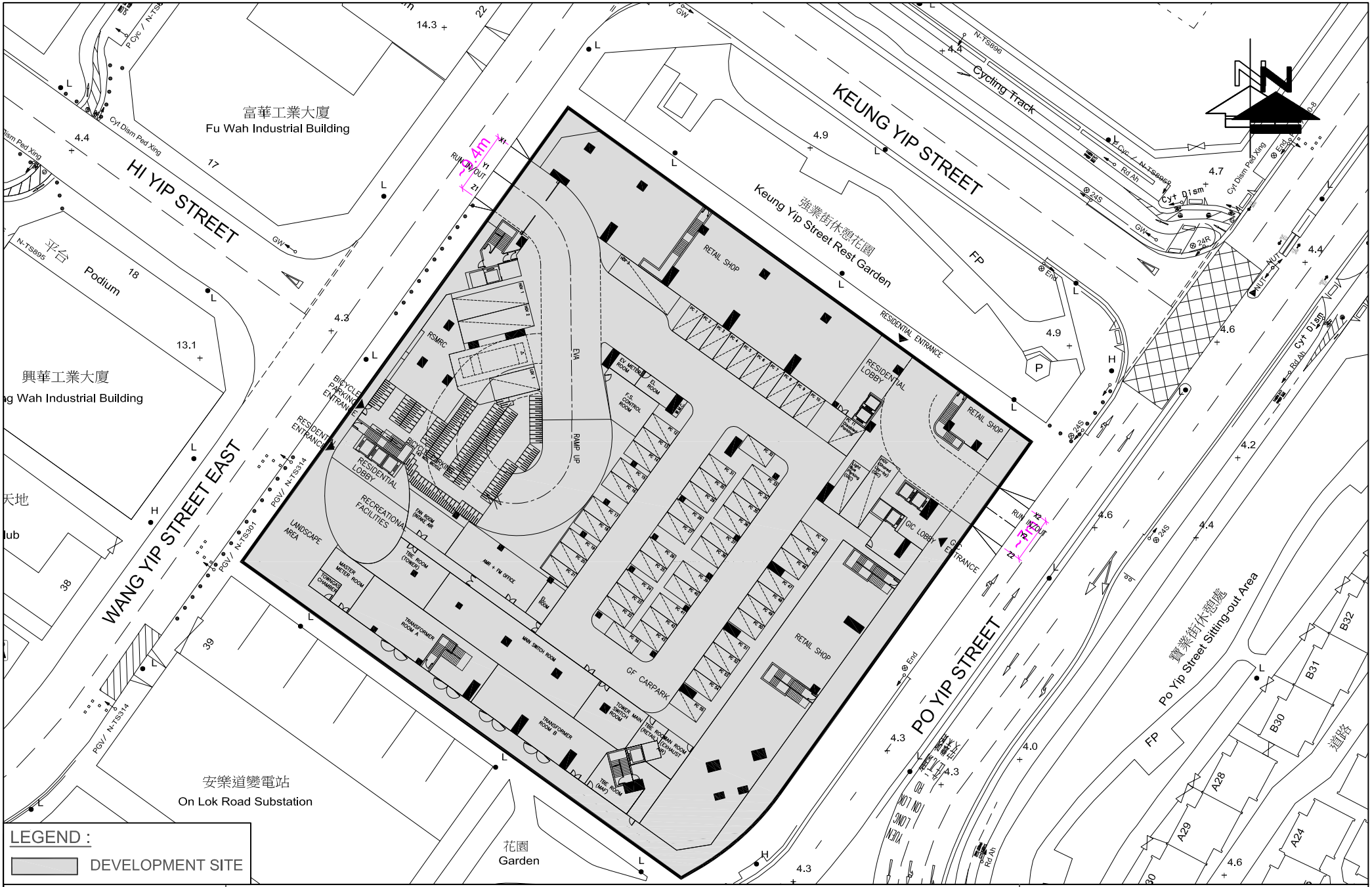


FIGURE NO.: 2.1(REV.B)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: G/F LAYOUT PLAN		
SCALE: 1 : 750 @A4	DATE: 01 SEP 2026		

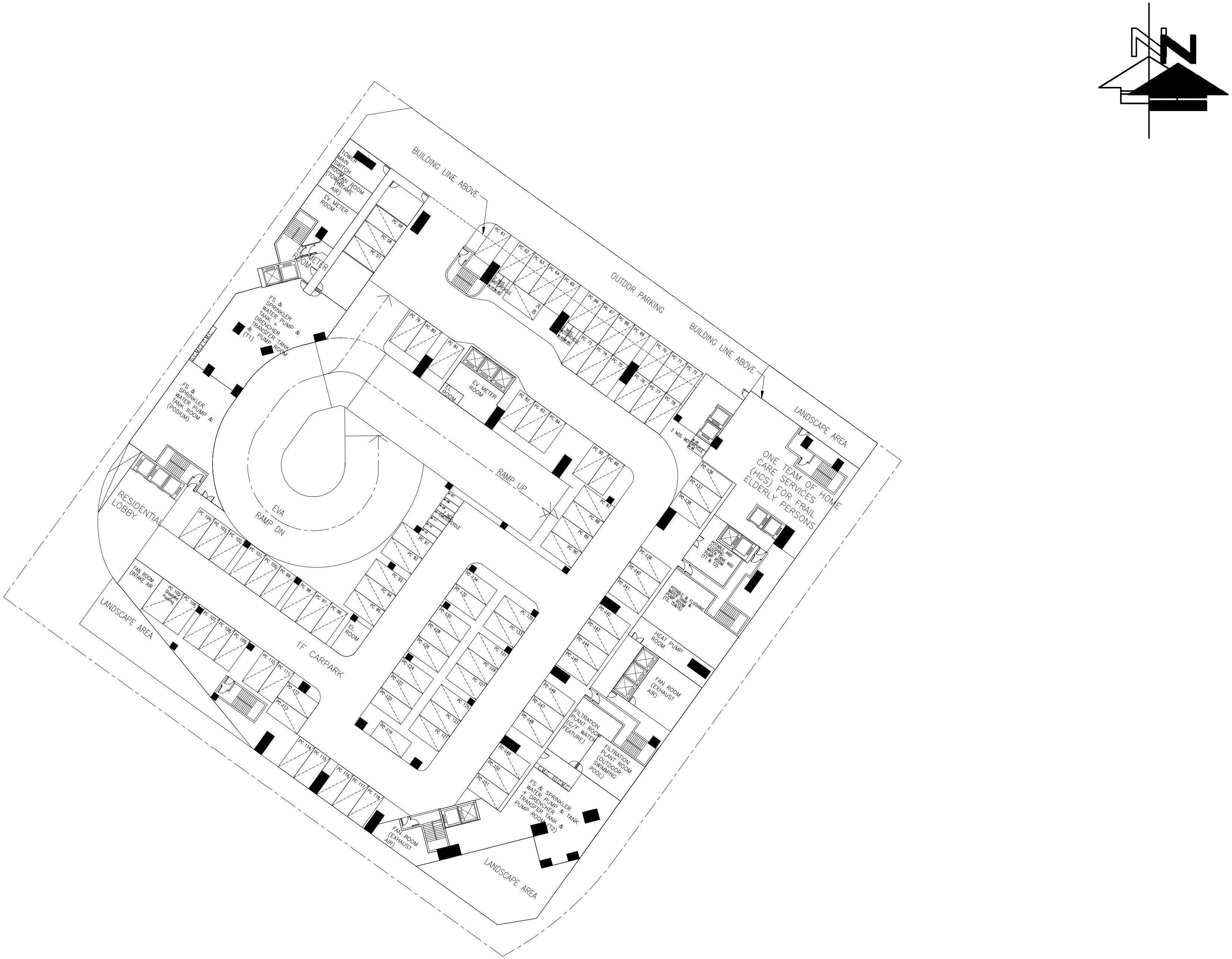


FIGURE NO.: 2.2 (REV.B)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: 1/F LAYOUT PLAN
SCALE: 1 : 750 @A4 / DATE: 01 SEP 2026	

CTA Consultants Limited
志達顧問有限公司

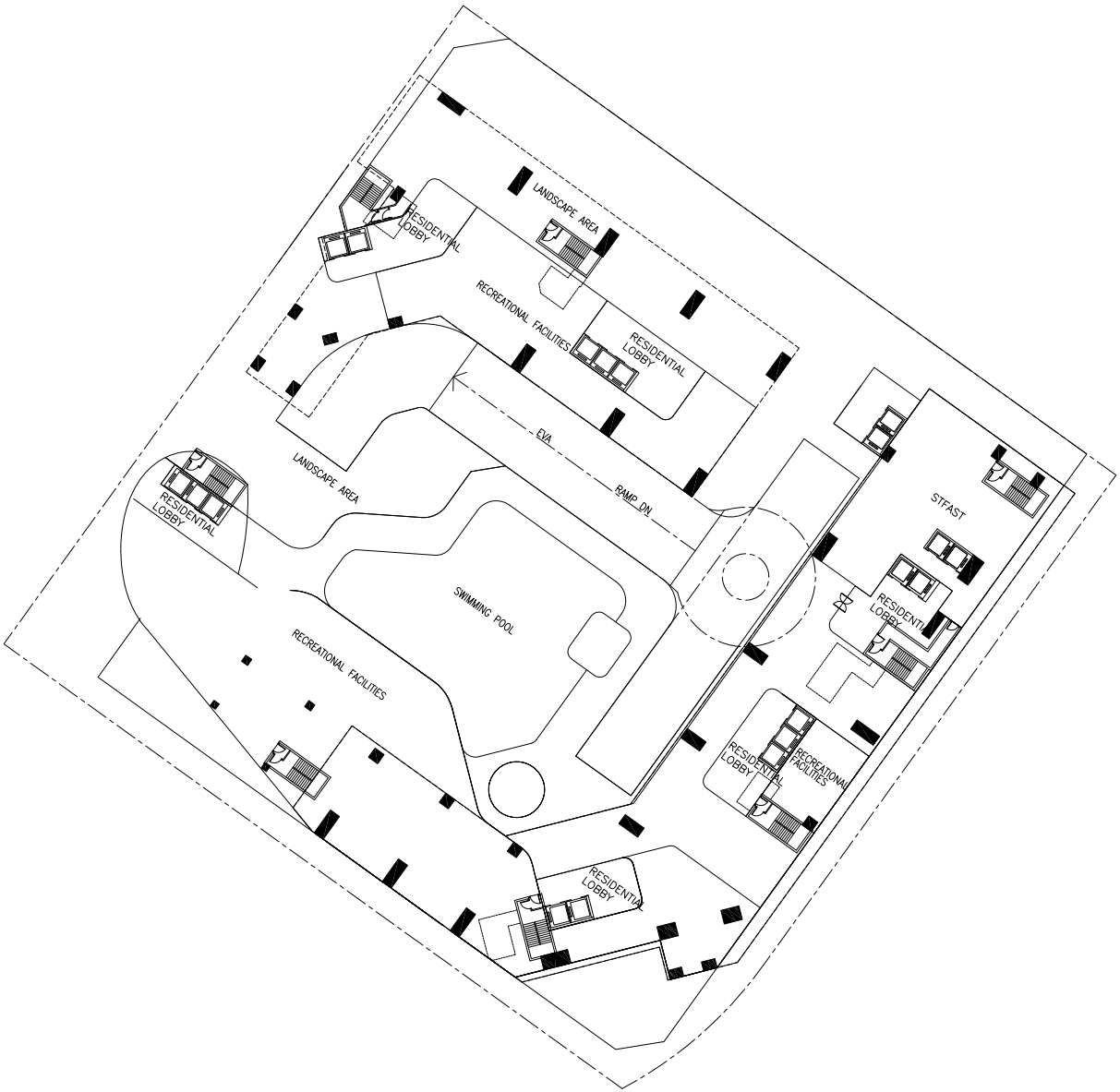
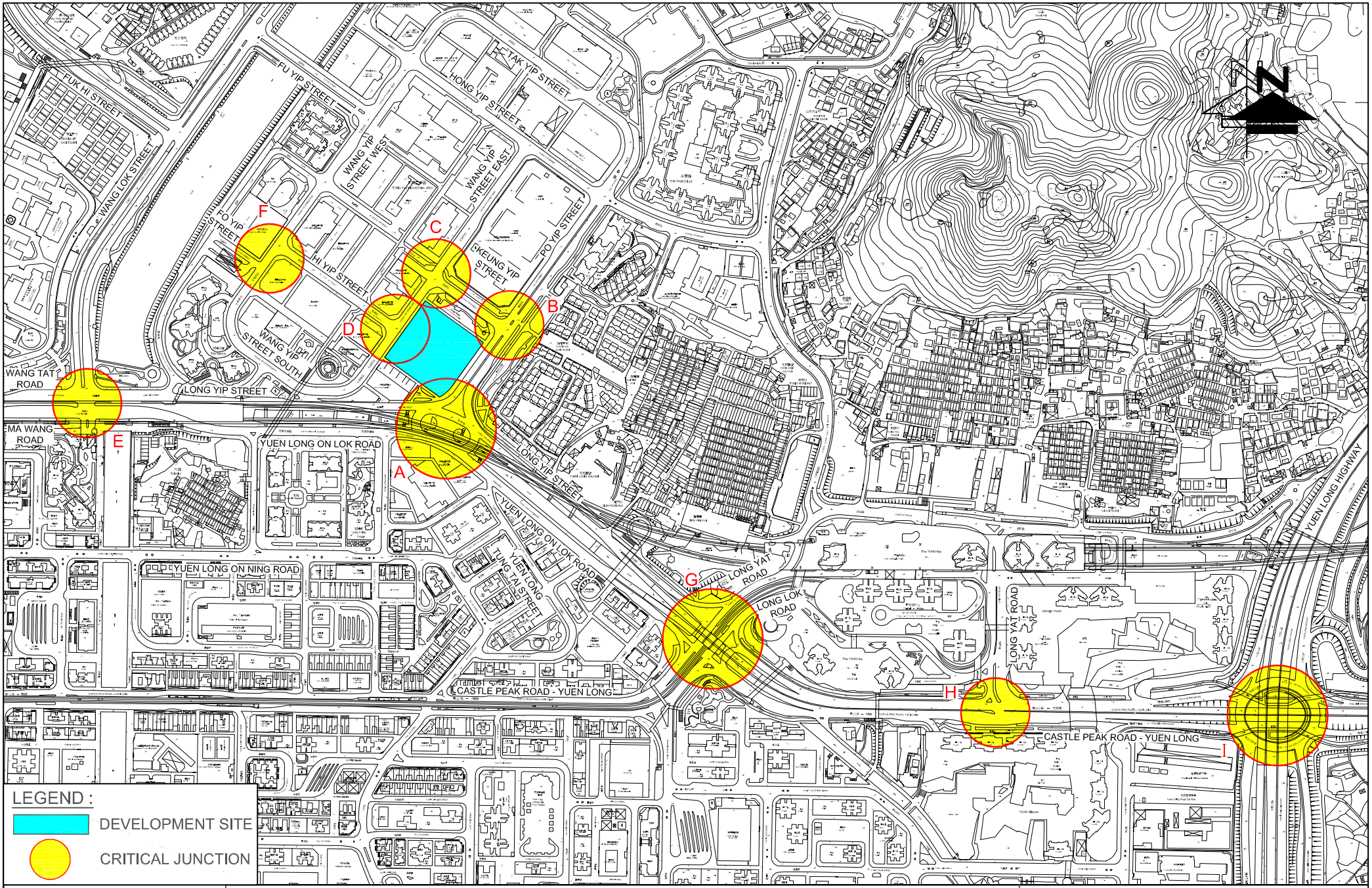


FIGURE NO.: 2.3 (REV.B)		PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK		DRAWING TITLE: 2/F LAYOUT PLAN	
SCALE: 1 : 750 @A4	DATE: 01 SEP 2026		



LEGEND :

DEVELOPMENT SITE

CRITICAL JUNCTION

FIGURE NO.: 3.1(REV A)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: IDENTIFIED CRITICAL JUNCTIONS	
SCALE: 1 : 6000 @A4 / DATE: 06 JUL 2026		

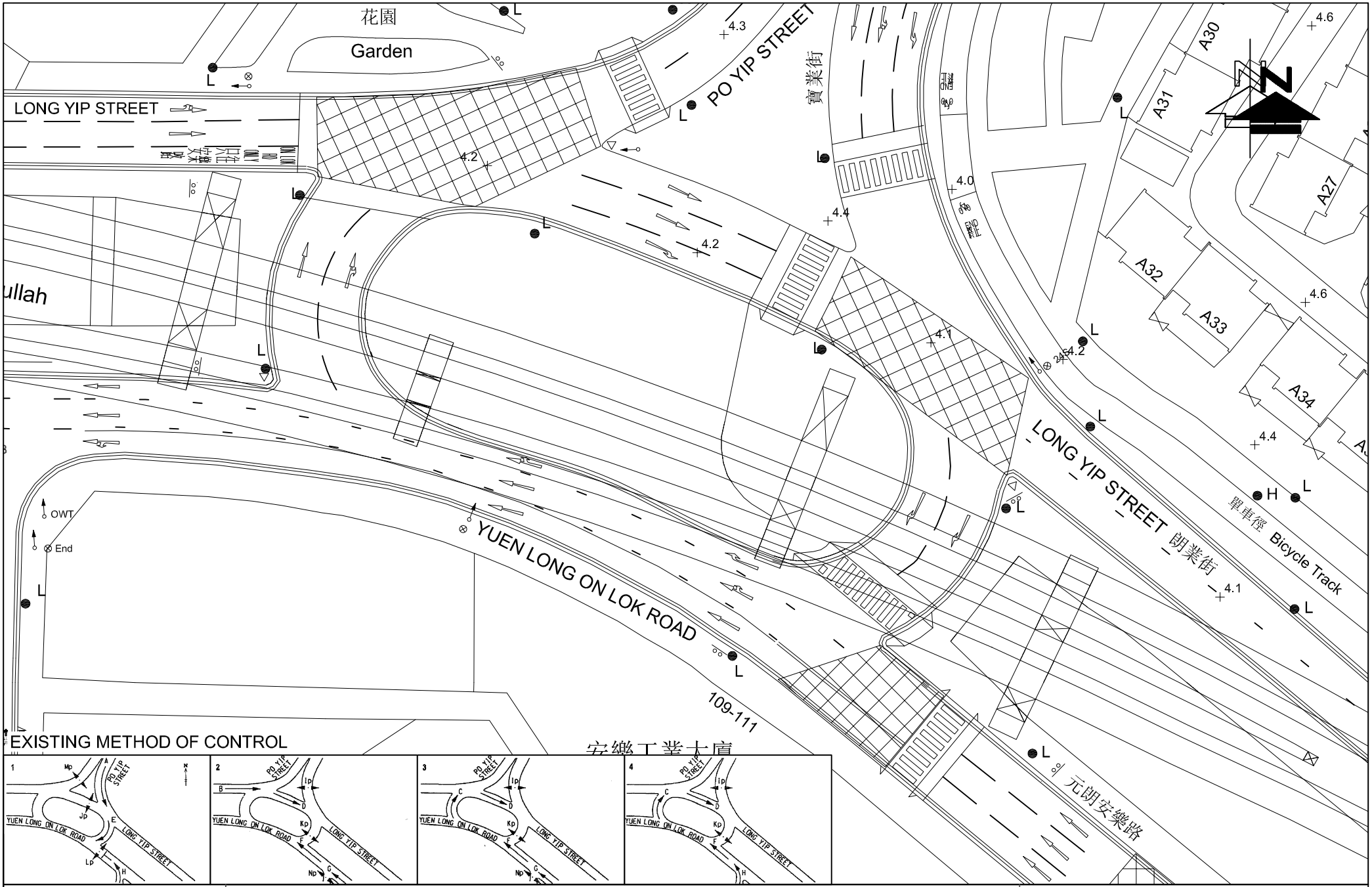


FIGURE NO.: 3.2	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YUEN LONG ON LOK ROAD / LONG YIP STREET / PO YIP STREET / YUEN LONG TUNG TAI STREET (A)	
SCALE: 1 : 550 @A4 / DATE: 22 APR 2026		

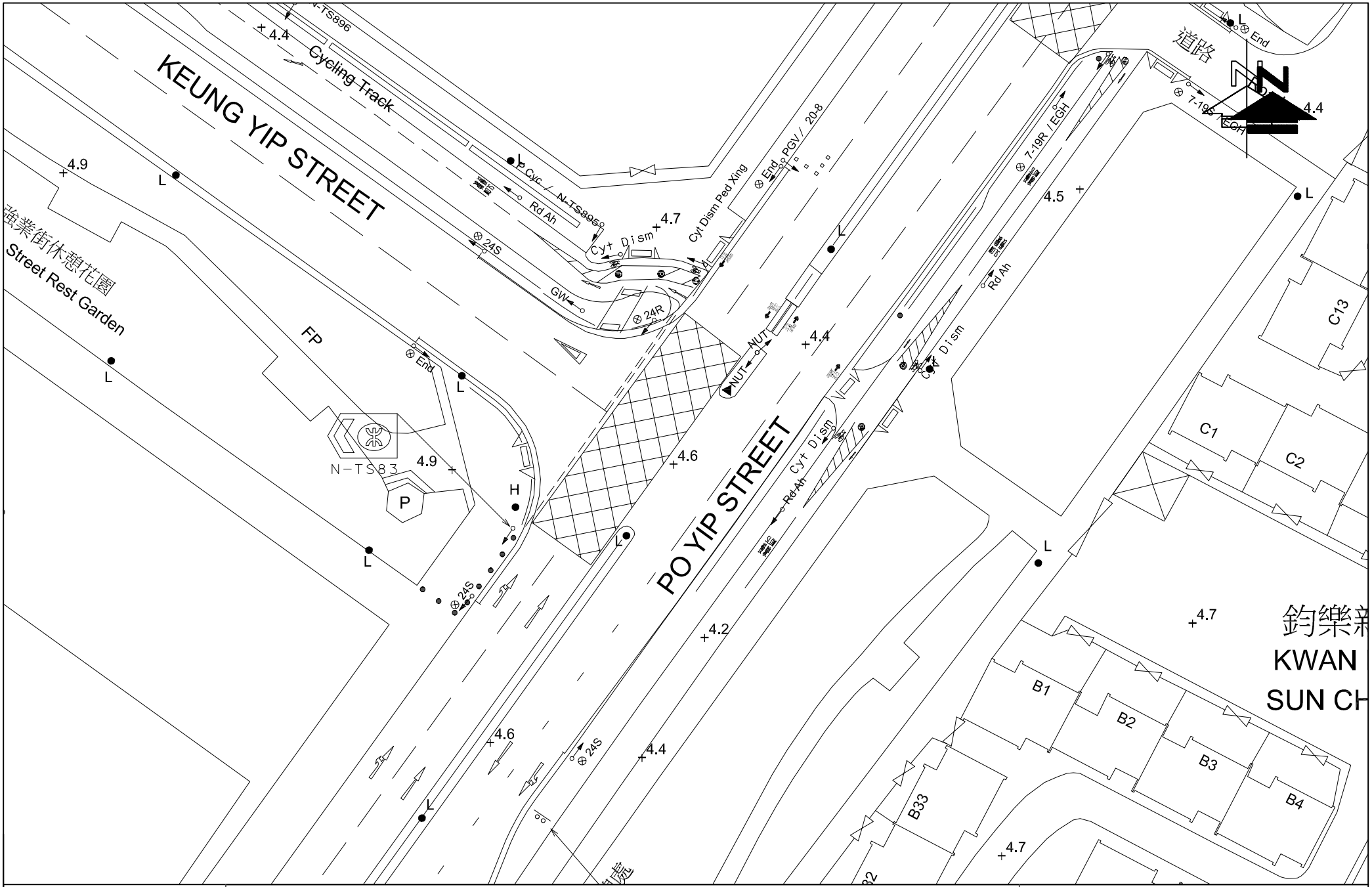


FIGURE NO.: 3.3	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF PO YIP STREET / KEUNG YIP STREET (B)		
SCALE: 1 : 500 @A4	DATE: 27 MAR 2026		

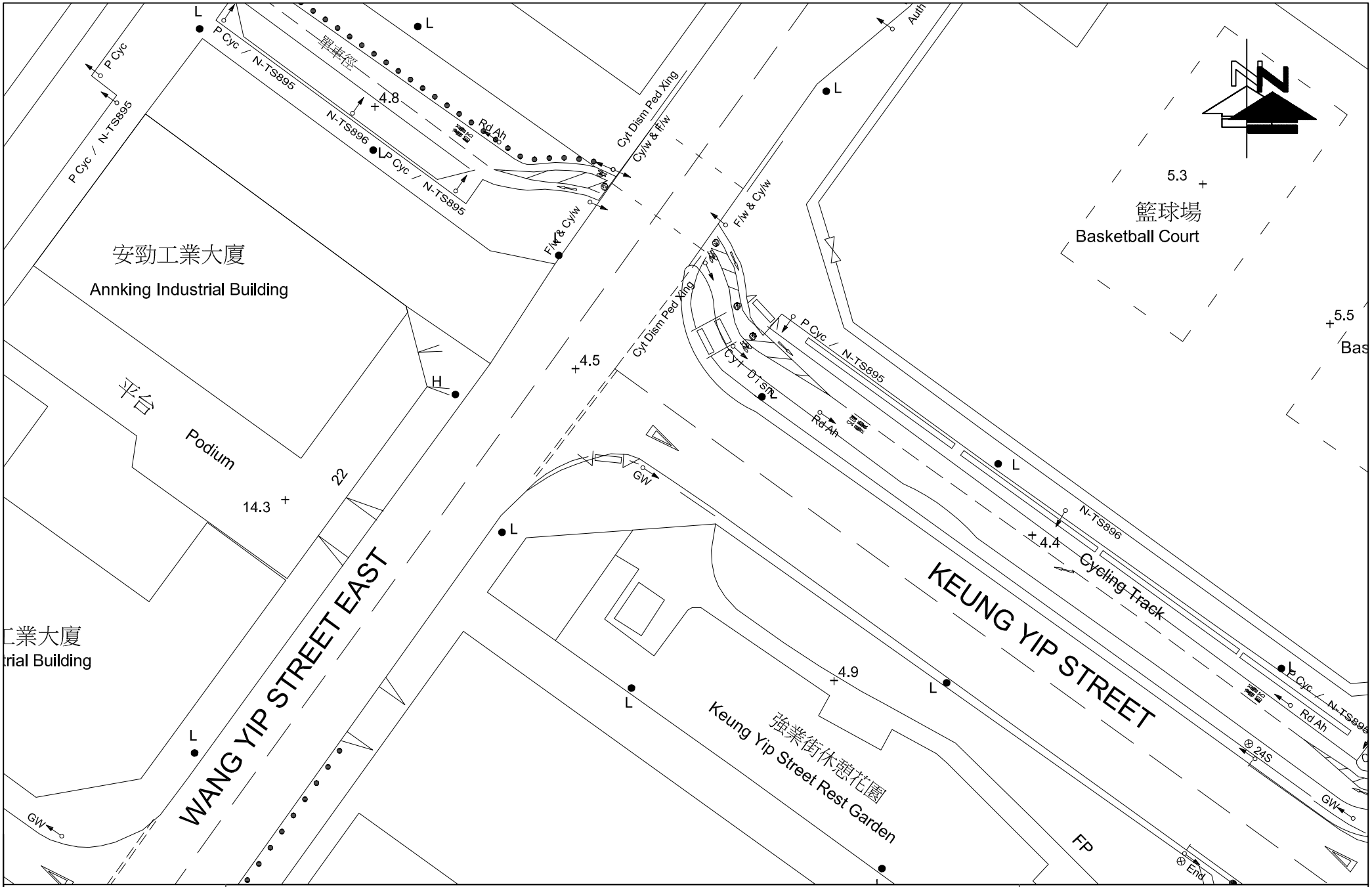


FIGURE NO.: 3.4	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF WANG YIP STREET EAST / KEUNG YIP STREET (C)		
SCALE: 1 : 500 @A4	DATE: 27 MAR 2026		

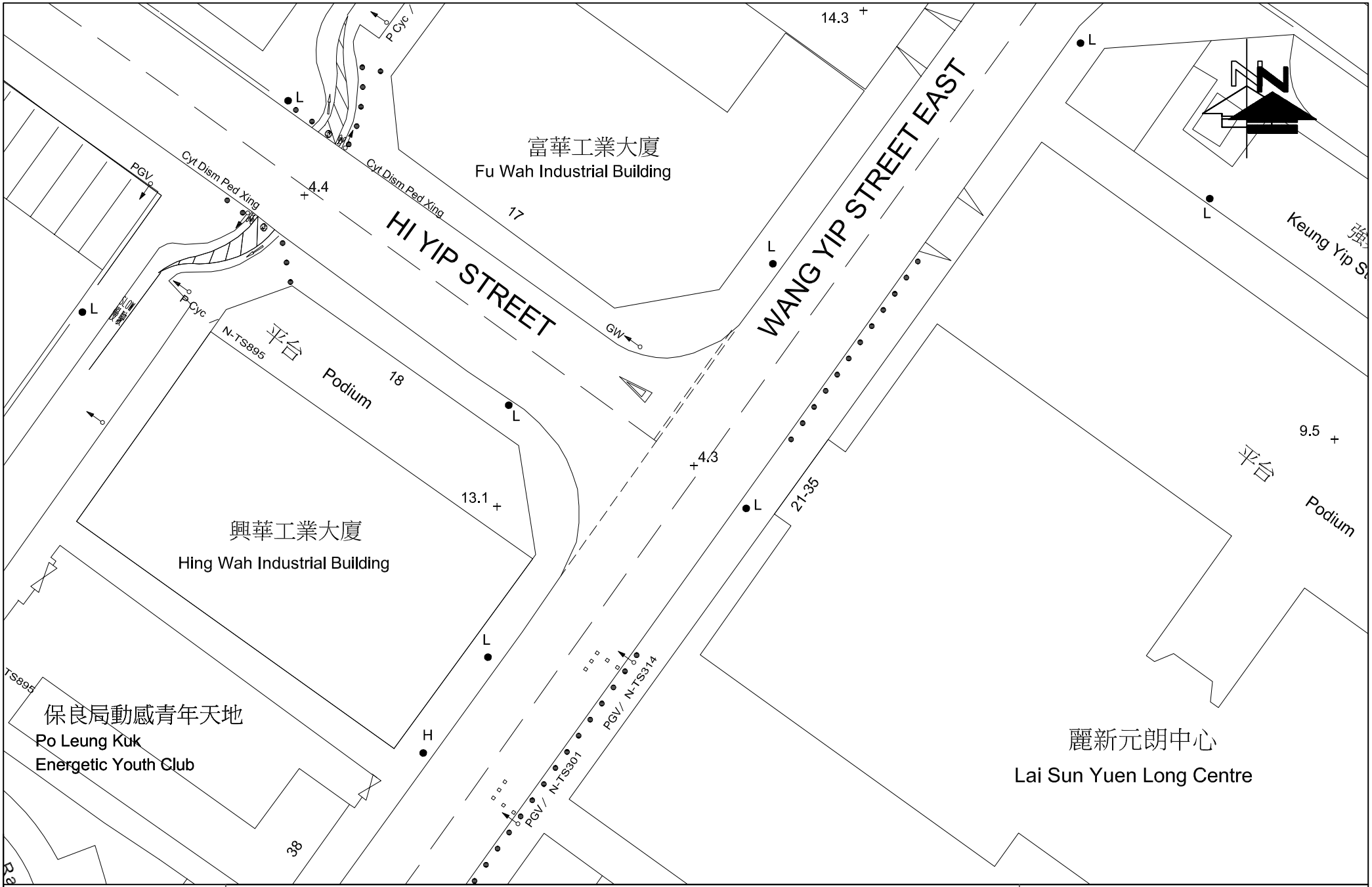


FIGURE NO.: 3.5	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF WANG YIP STREET EAST / HI YIP STREET (D)		
SCALE: 1 : 500 @A4	DATE: 27 MAR 2026		

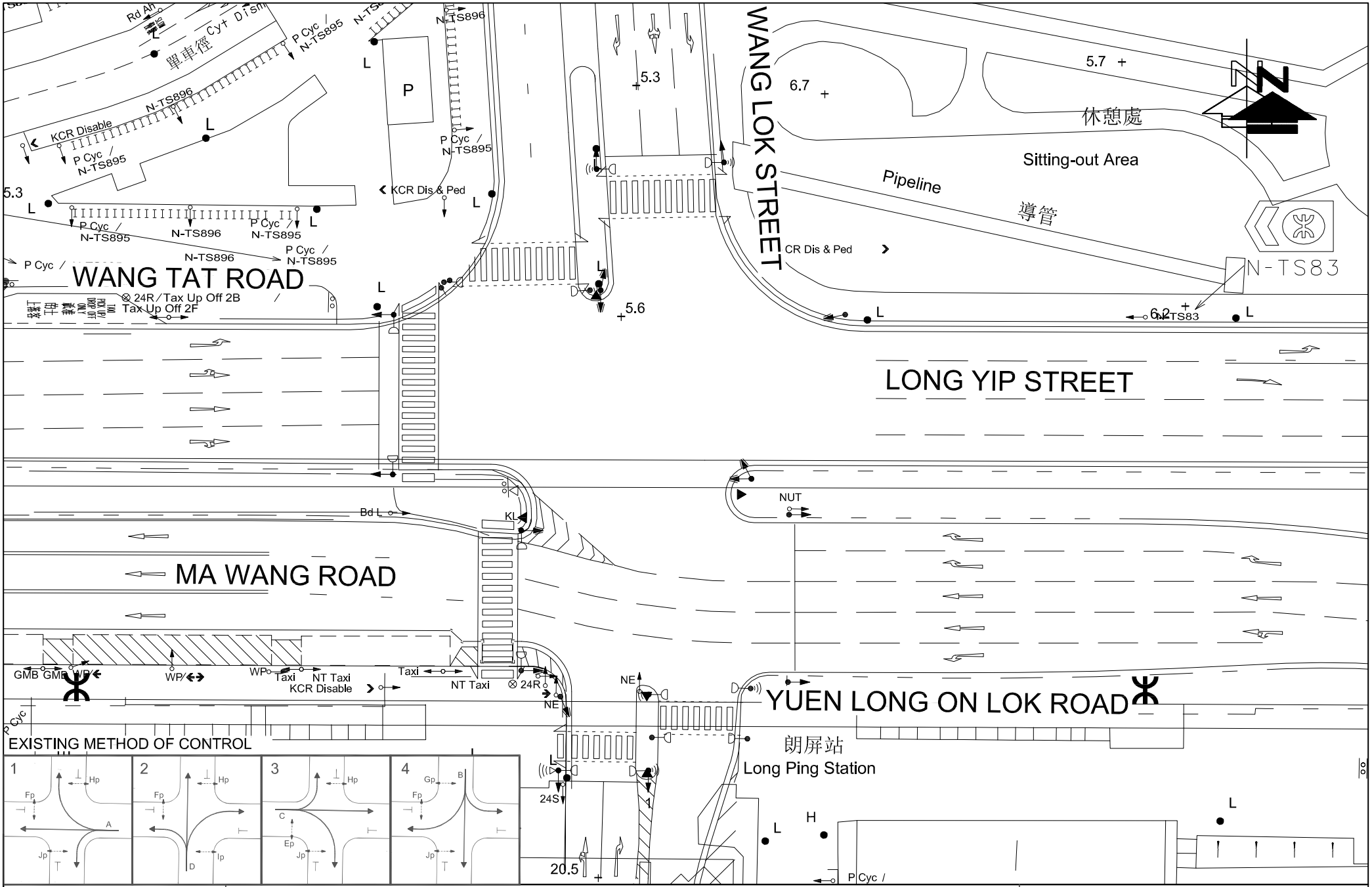


FIGURE NO.: 3.6	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF YUEN LONG ON LOK ROAD / LONG YIP STREET / WANG LOK STREET / WANG TAT ROAD / MA WANG ROAD (E)	
SCALE: 1 : 500 @A4 / DATE: 22 APR 2026		

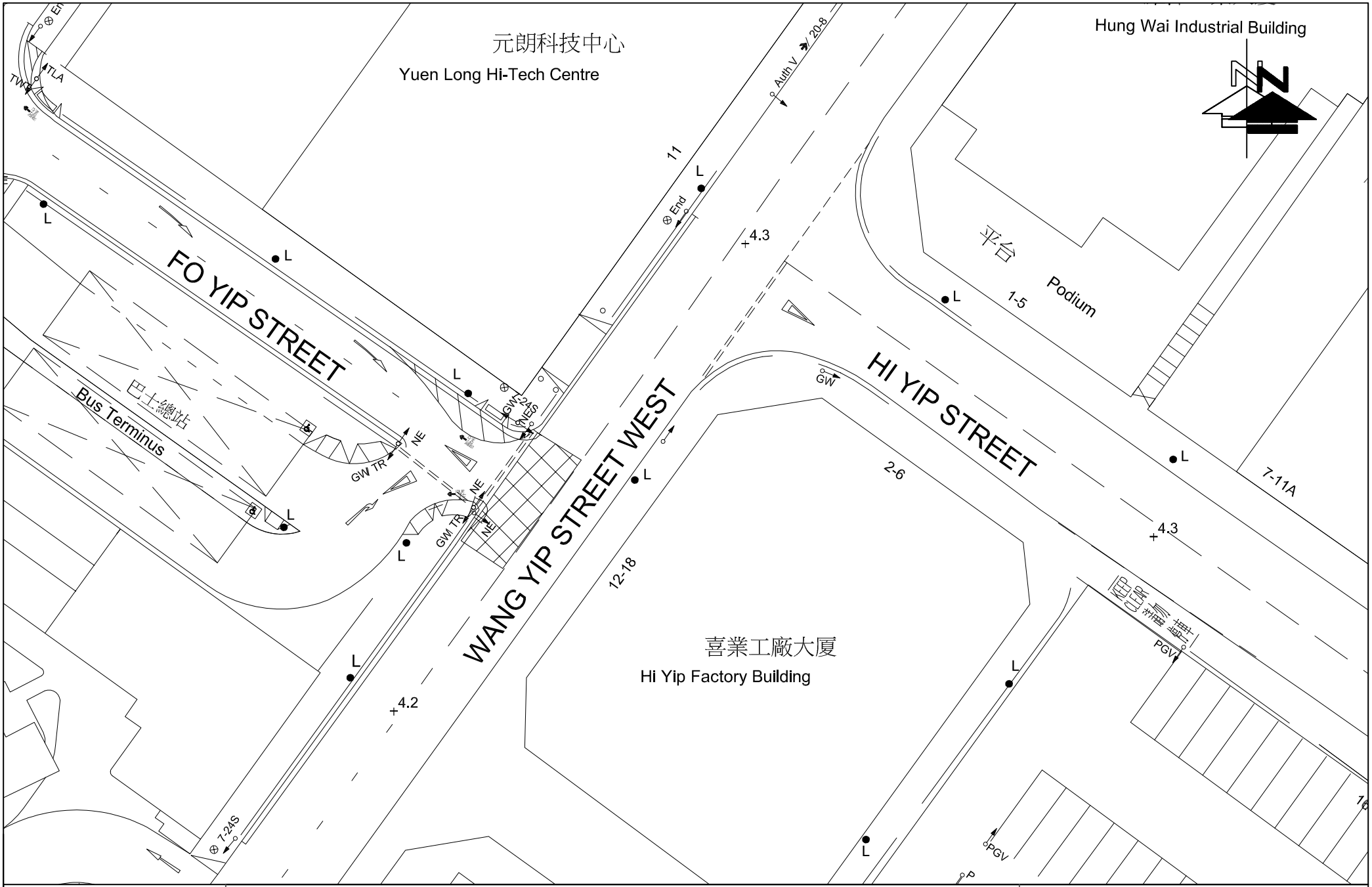


FIGURE NO.: 3.7	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long		CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF WANG YIP STREET WEST / HI YIP STREET / FO YIP STREET (F)		
SCALE: 1 : 500 @A4	DATE: 06 JUL 2026		

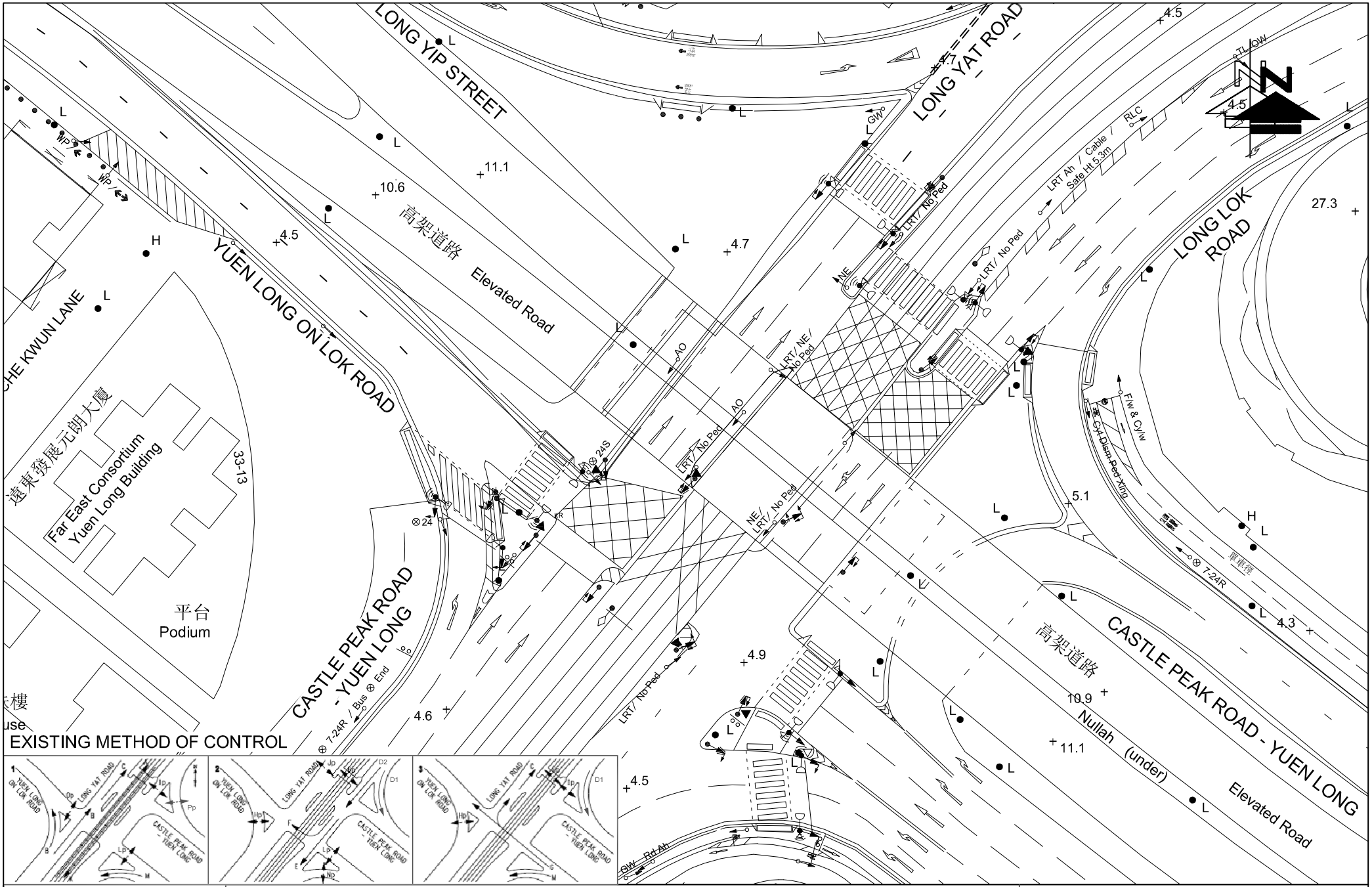


FIGURE NO.: 3.8	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / YUEN LONG ON LOK ROAD / LONG YIP STREET / LONG YAT ROAD / LONG LOK ROAD (G)	
SCALE: 1 : 550 @A4 / DATE: 06 JUL 2026		

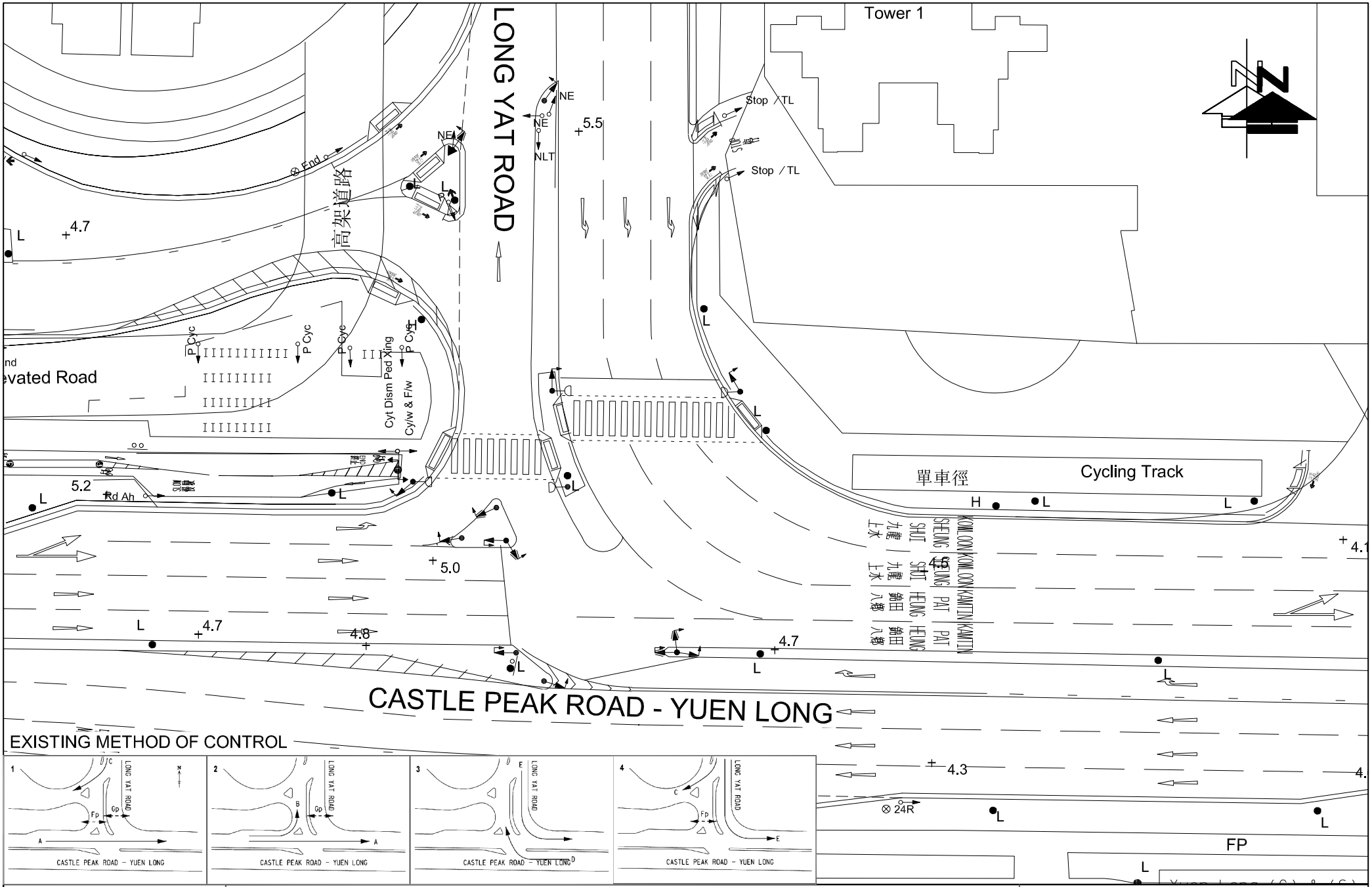


FIGURE NO.: 3.9	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / LONG YAT ROAD (H)	
SCALE: 1 : 500 @A4 / DATE: 06 JUL 2026		

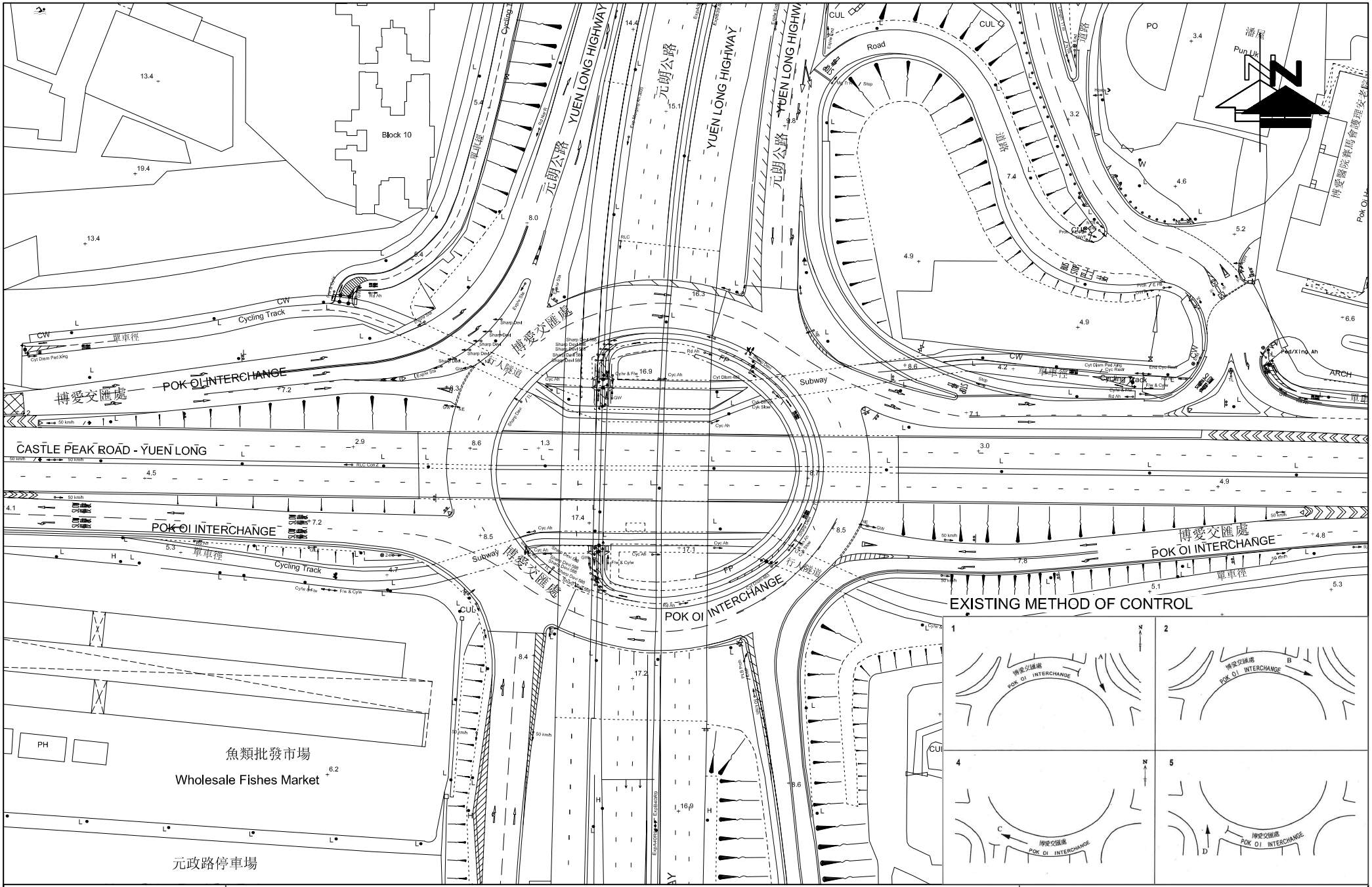
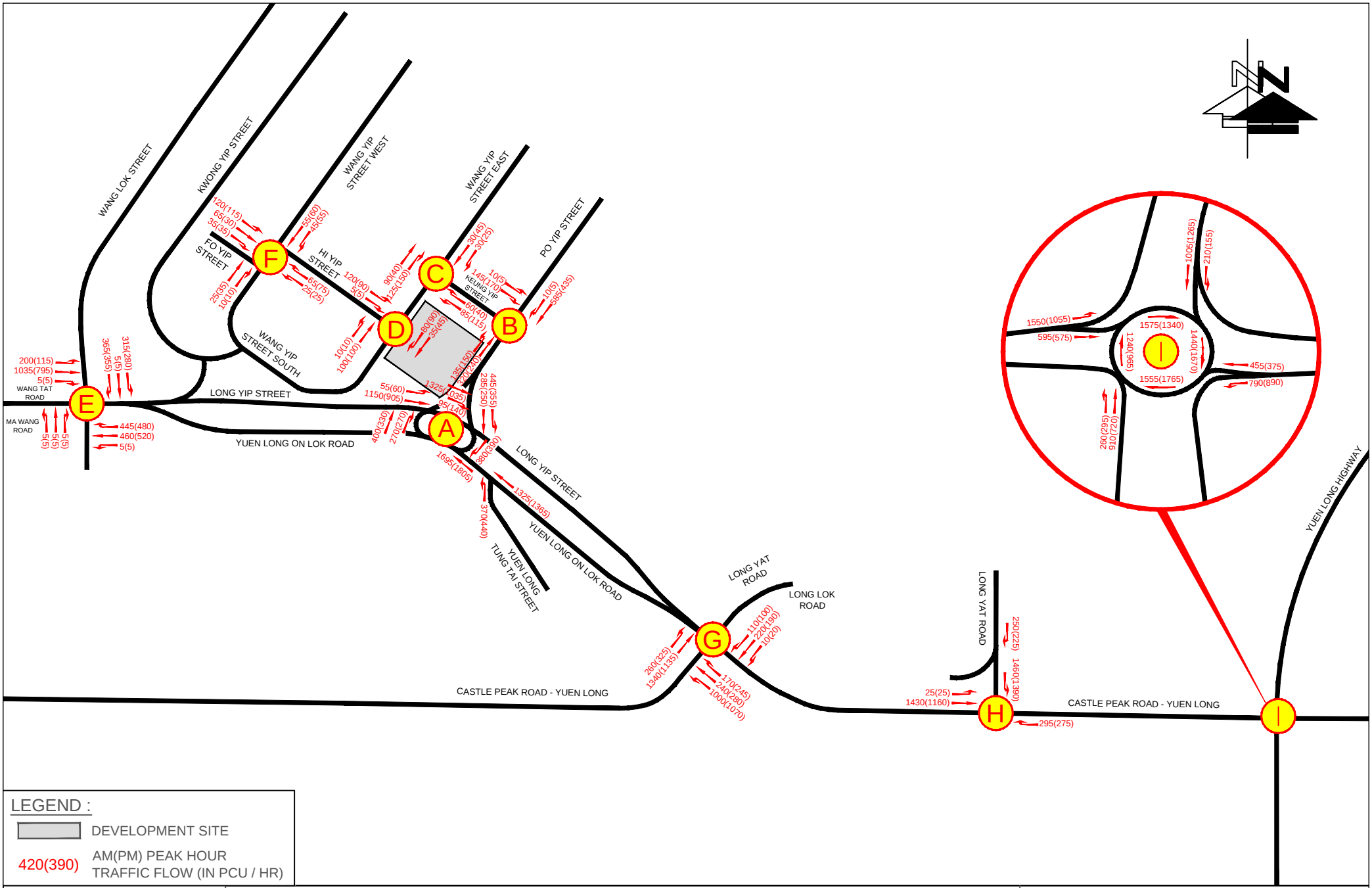


FIGURE NO.: 3.10	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: EXISTING JUNCTION LAYOUT OF POK OI INTERCHAHGE (I)	
SCALE: 1 : 1200 @A4 / DATE: 06 JUL 2026		



LEGEND :

DEVELOPMENT SITE

420(390) AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

FIGURE NO.: 3.11 (REV. A)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: 2026 OBSERVED TRAFFIC FLOW	
SCALE: N.T.S. @A4 / DATE: 06 JUL 2026		

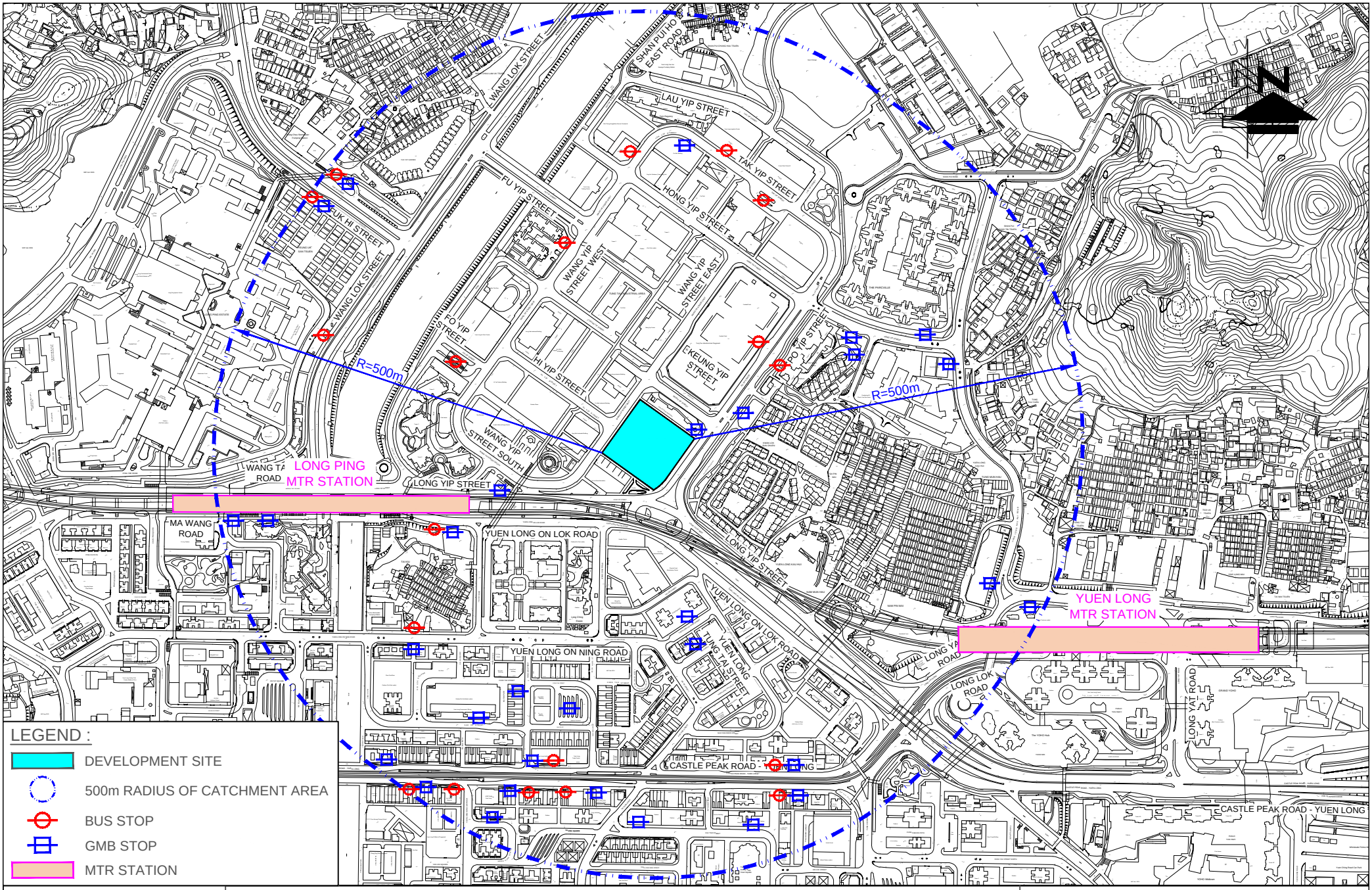


FIGURE NO.: 3.12	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: PUBLIC TRANSPORT SERVICES IN THE VICINITY	
SCALE: 1 : 6400 @A4 / DATE: 6 JUL 2026		

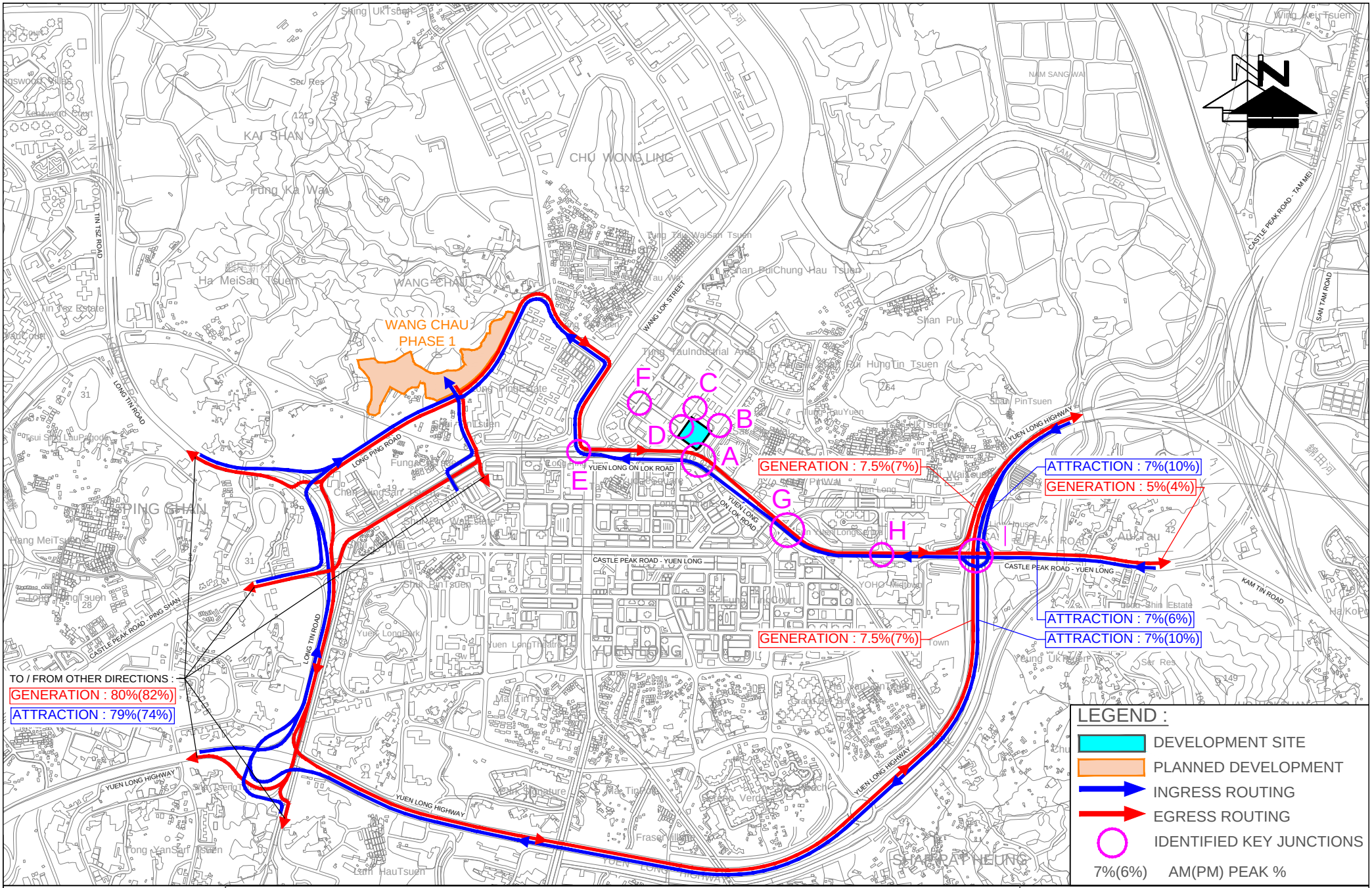


FIGURE NO.: 4.1	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - WANG CHAU PHASE 1
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

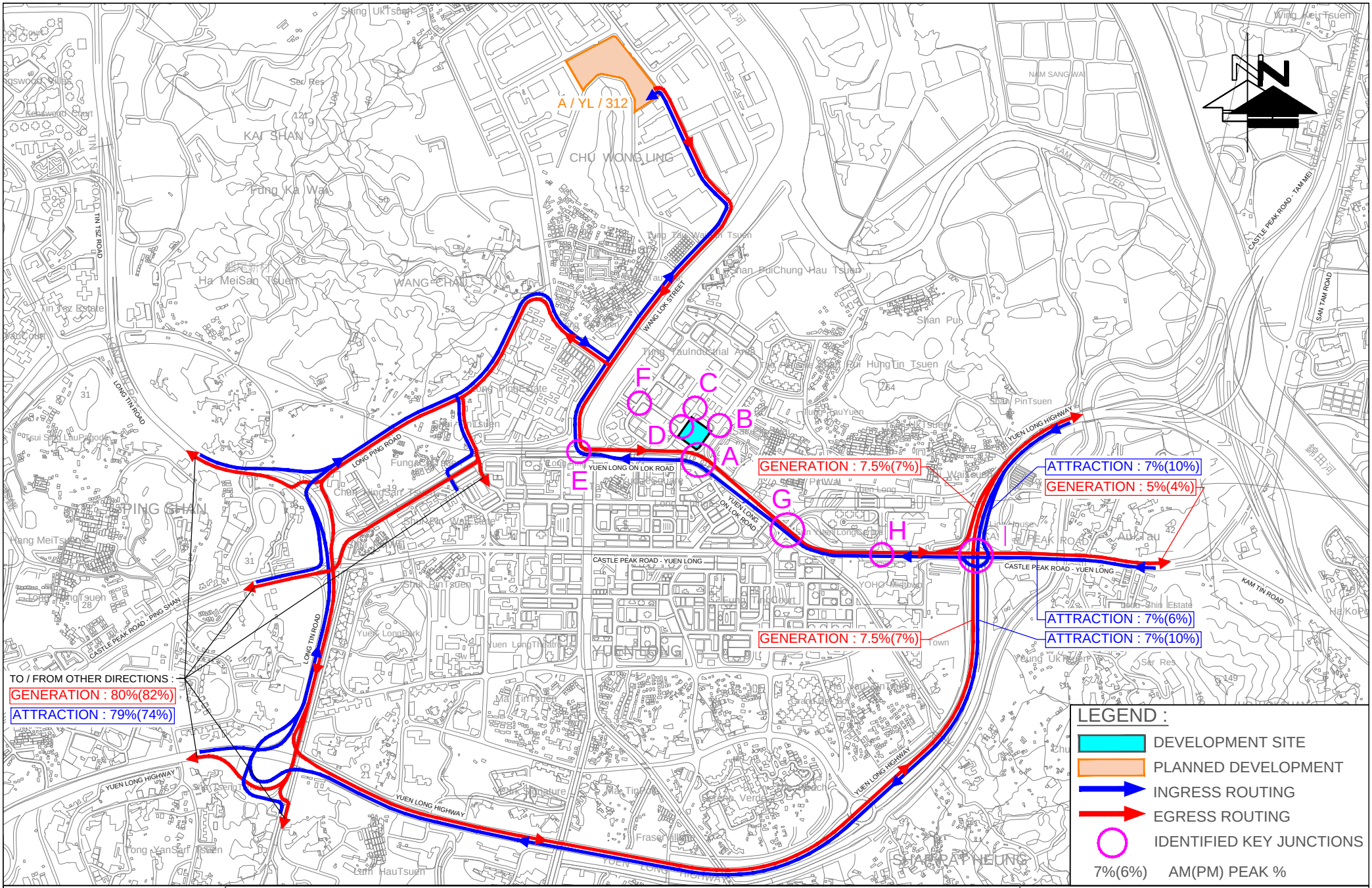


FIGURE NO.: 4.2	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - A / YL / 312
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

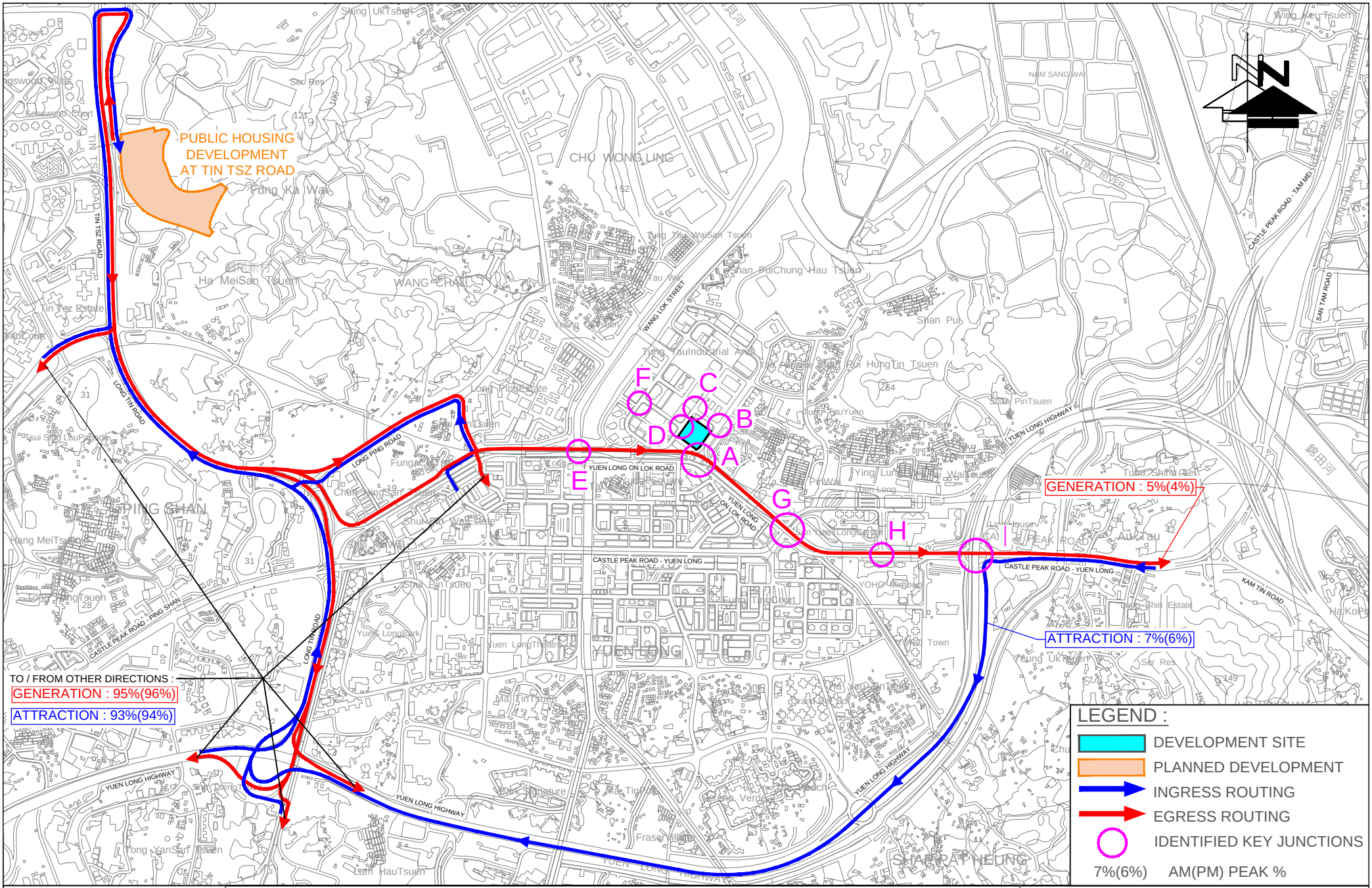


FIGURE NO.: 4.3	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - PUBLIC HOUSING DEVELOPMENT AT TIN TSZ ROAD
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

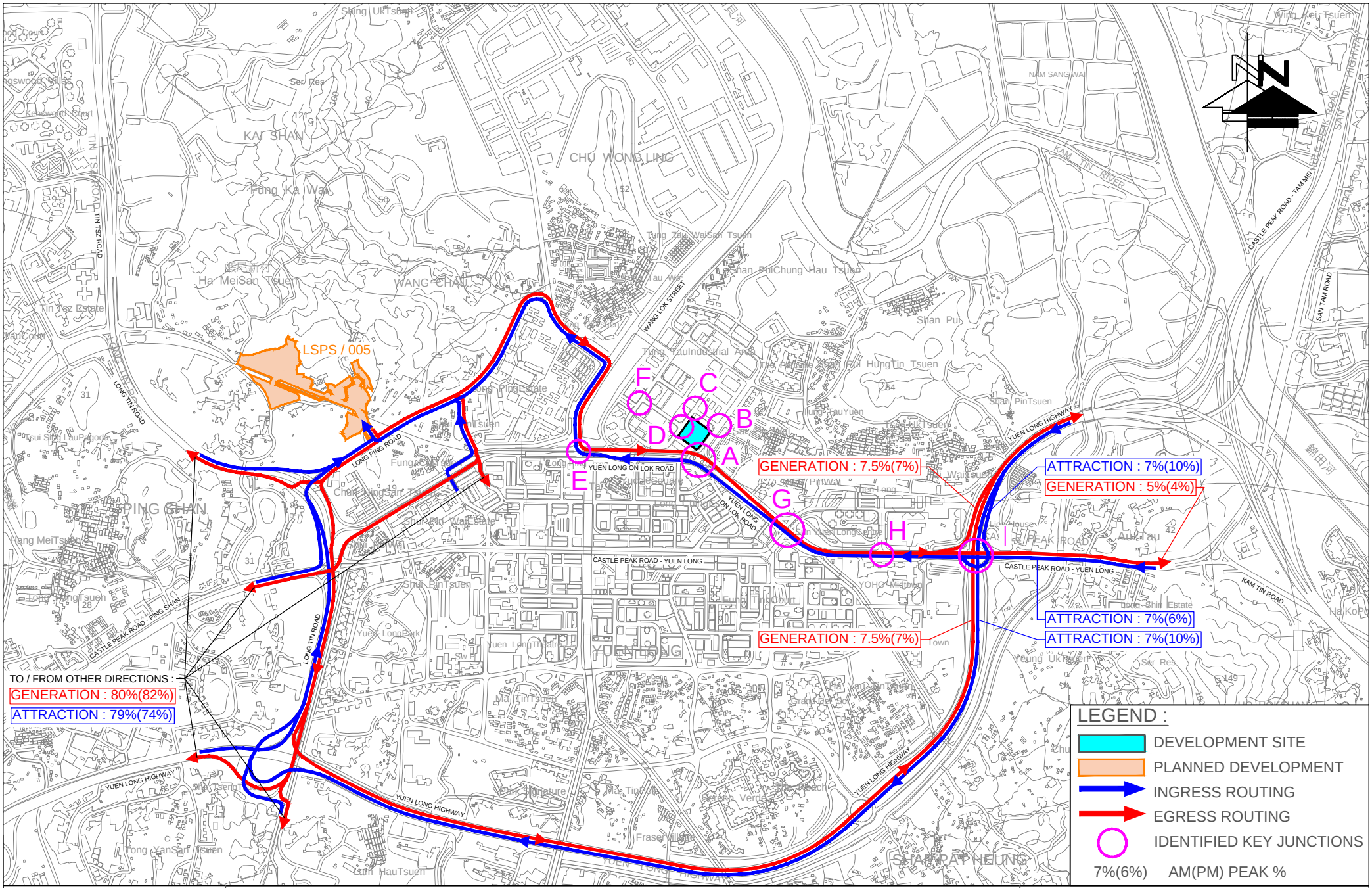


FIGURE NO.: 4.4	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - LSPS / 005
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

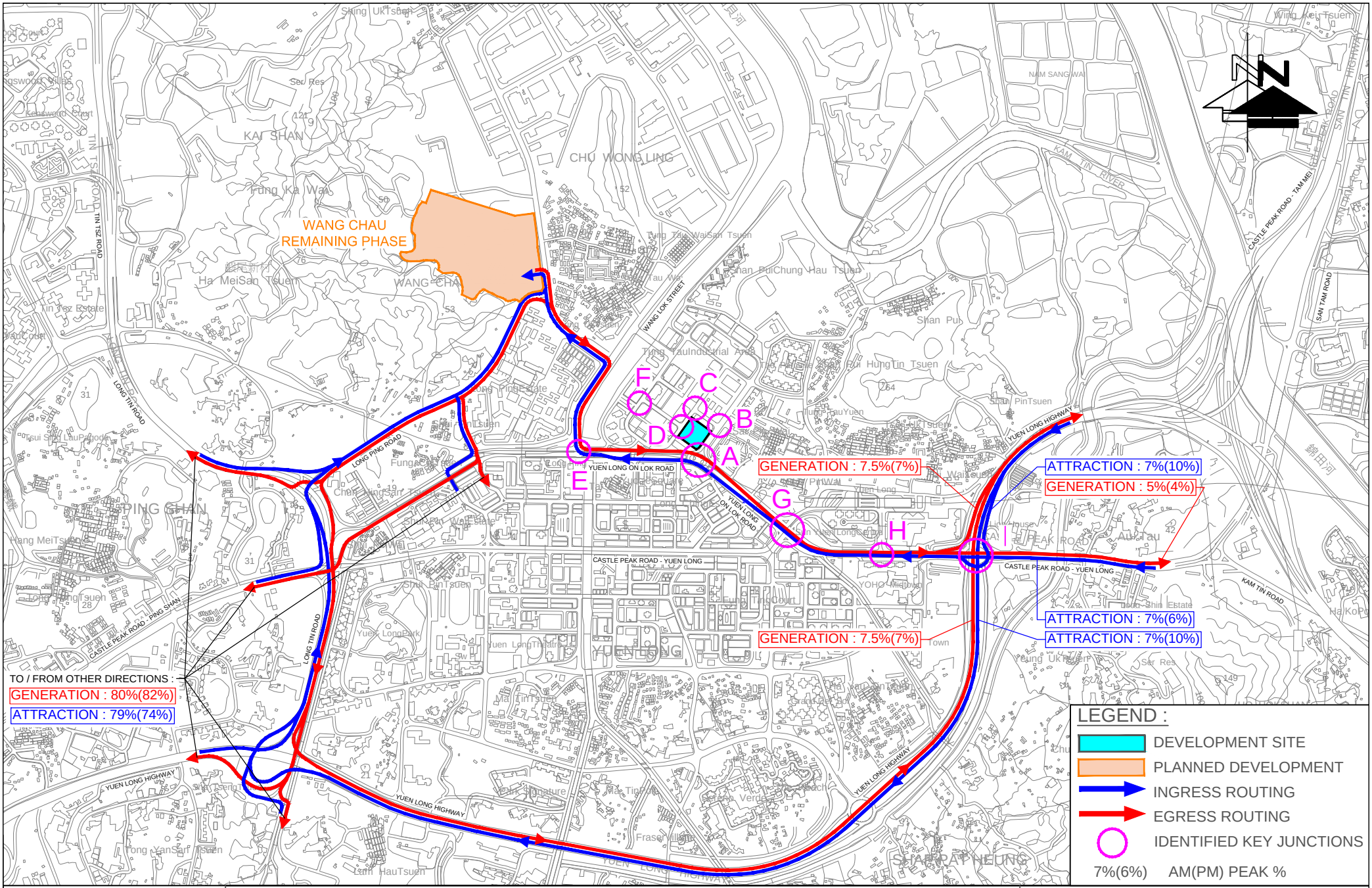


FIGURE NO.: 4.5	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - WANG CHAU REMAINING PHASE
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

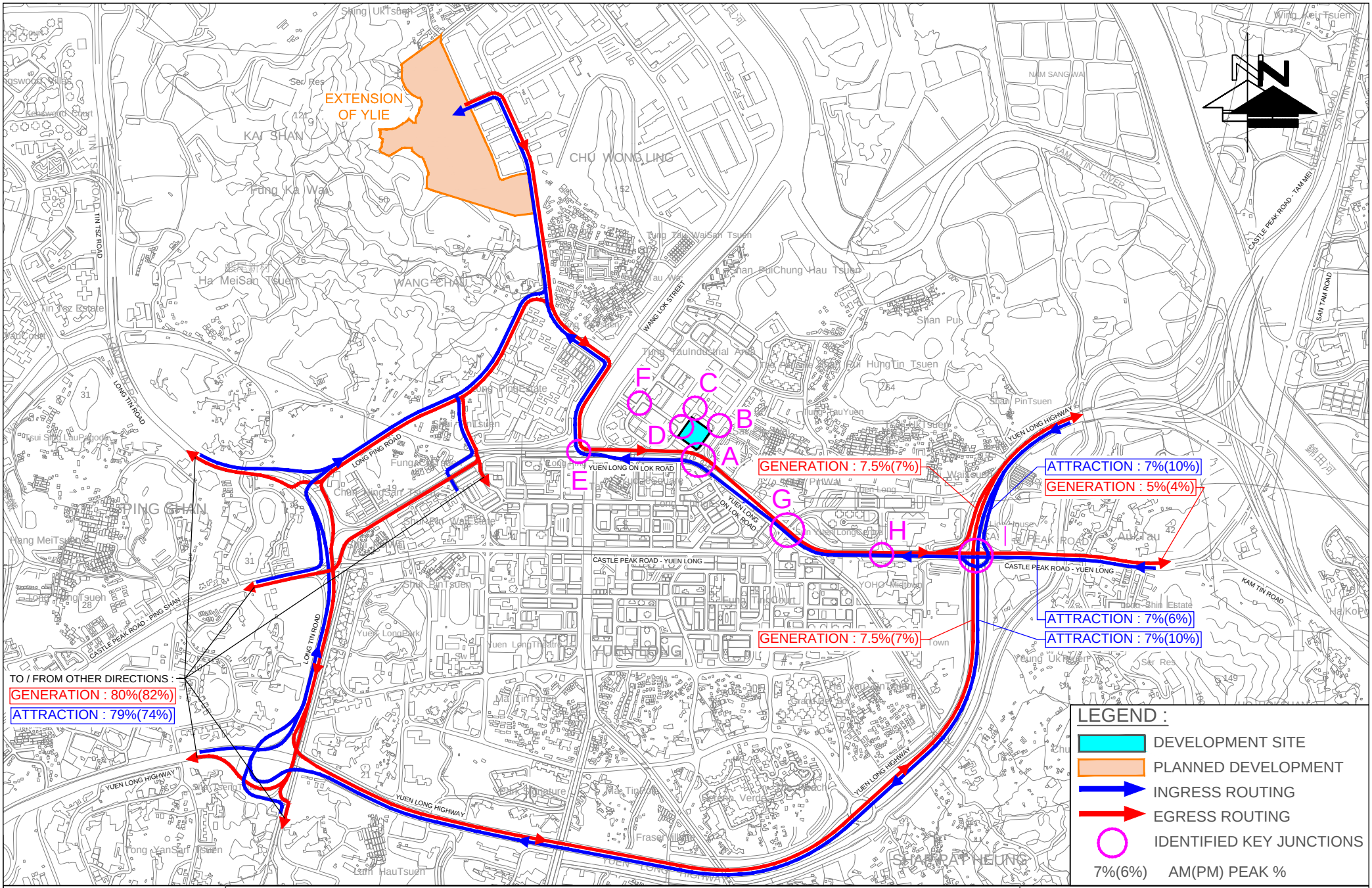


FIGURE NO.: 4.6	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - EXTENSION OF YLIE
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

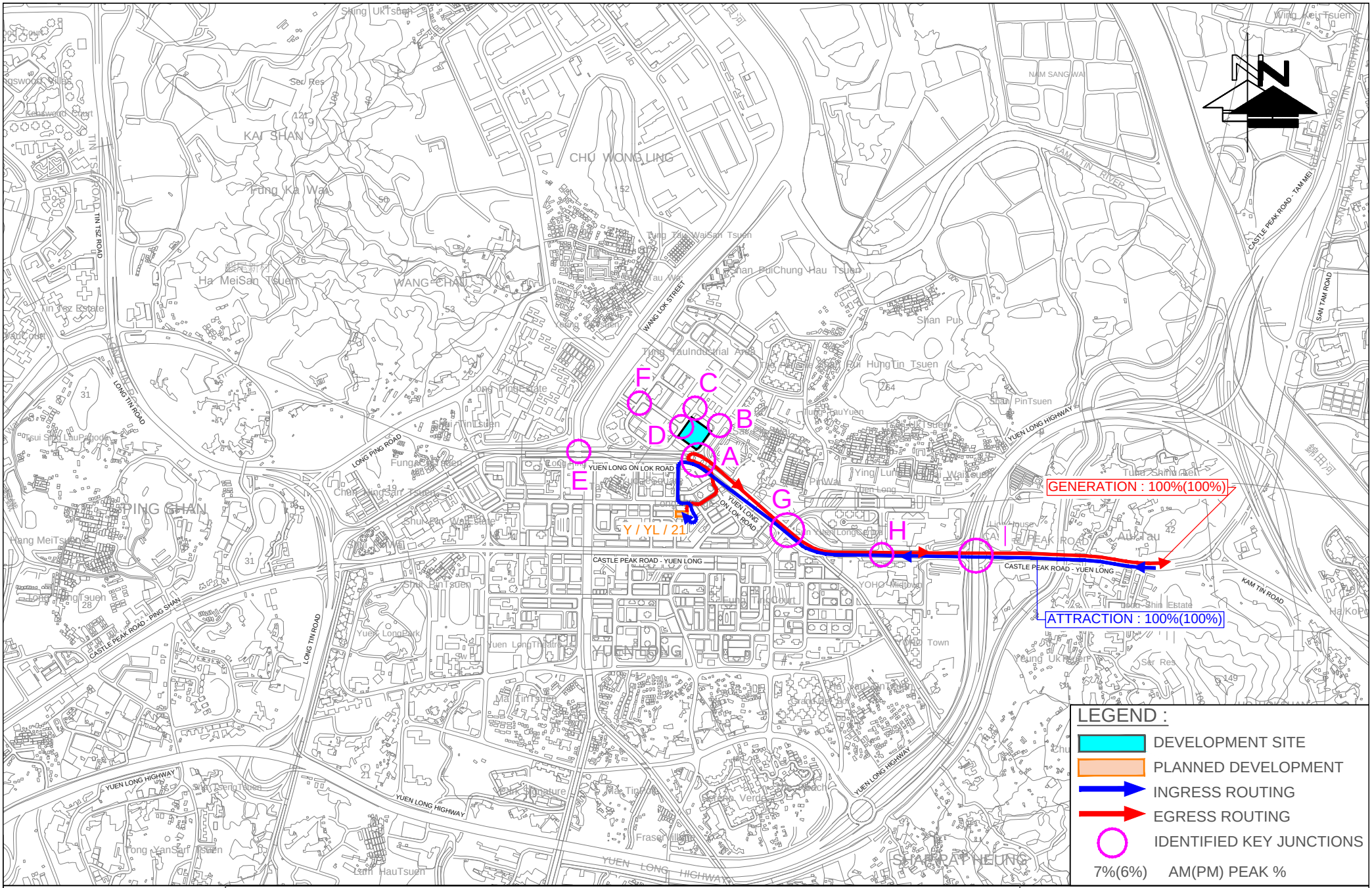


FIGURE NO.: 4.7	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - Y / YL / 21
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026	CTA Consultants Limited 志達顧問有限公司

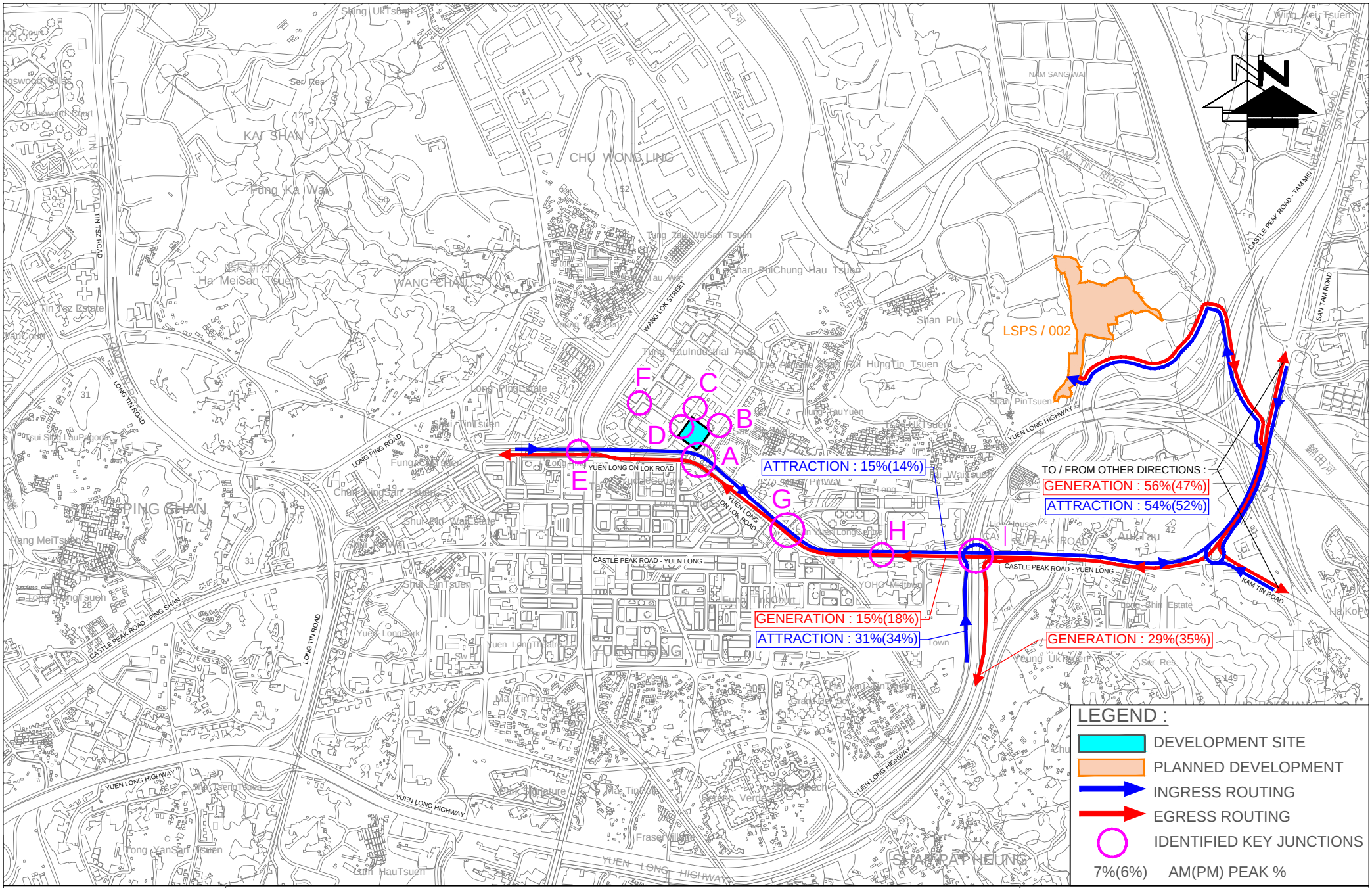


FIGURE NO.: 4.8	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - LSPS / 002	
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026		

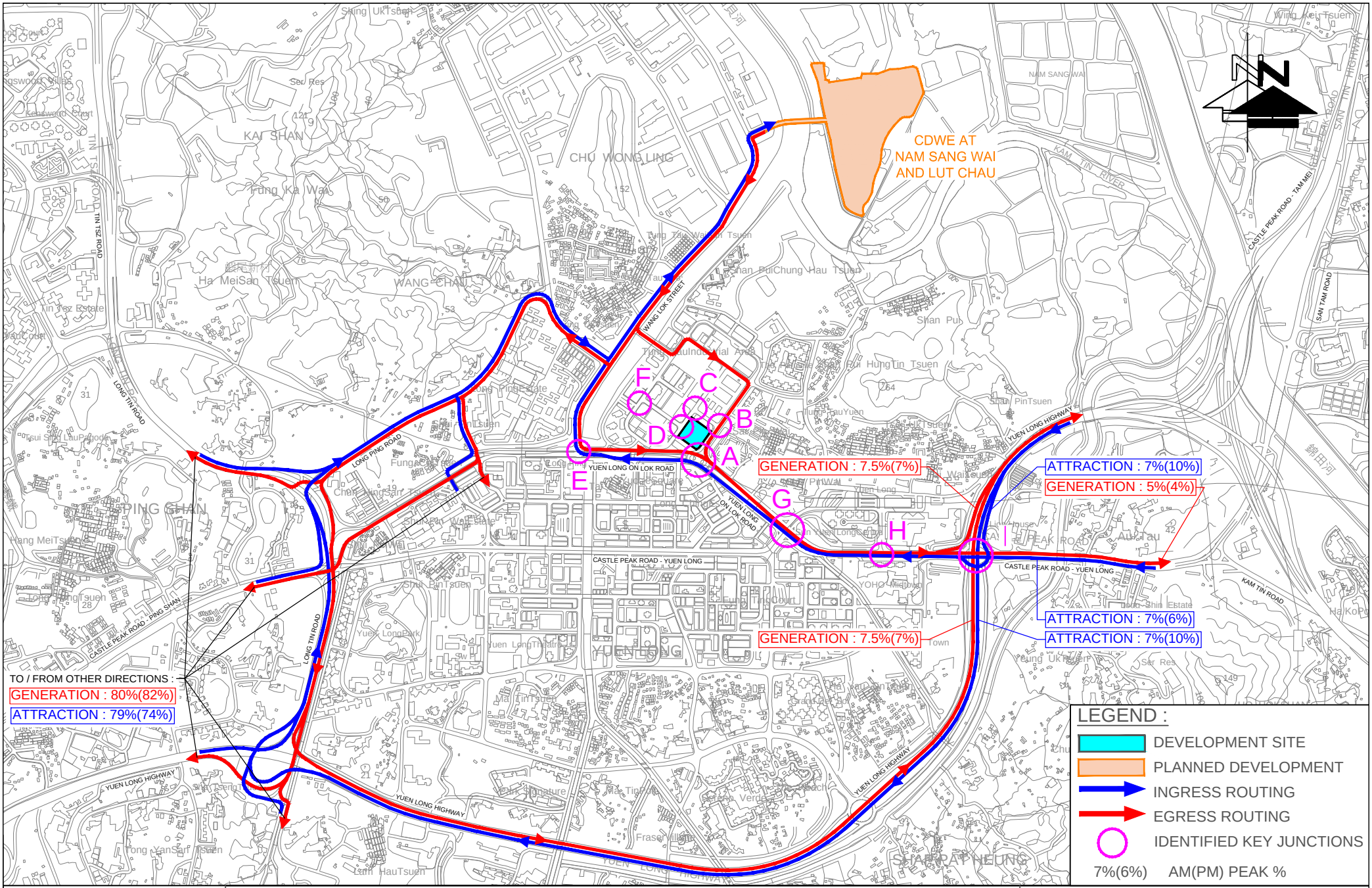
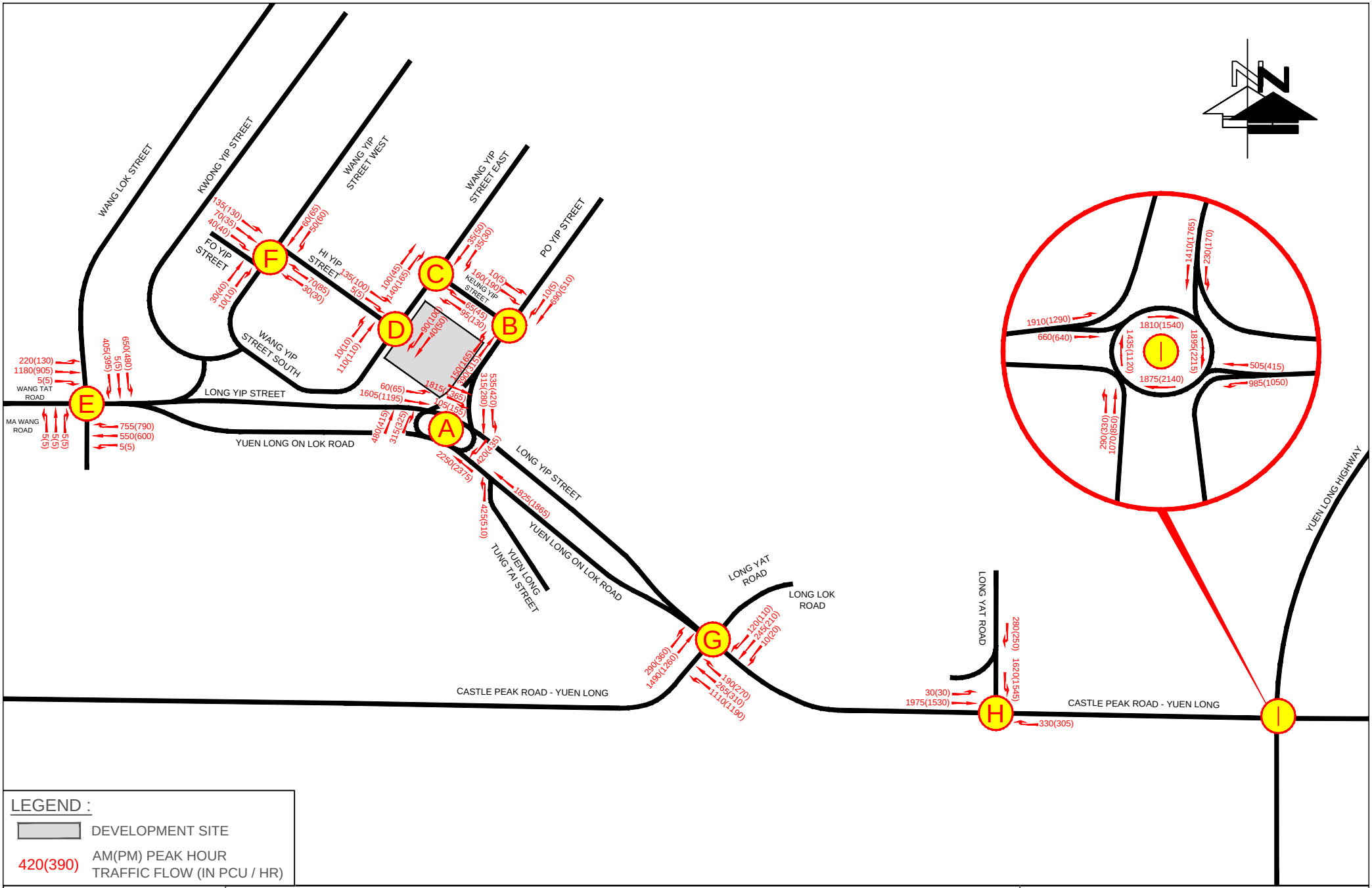


FIGURE NO.: 4.9	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: PROPORTION OF TRIP GENERATION FROM PLANNED DEVELOPMENT - CDWE AT NAM SANG WAI AND LUT CHAU	
SCALE: 1 : 18000 @A4 / DATE: 31 AUG 2026		

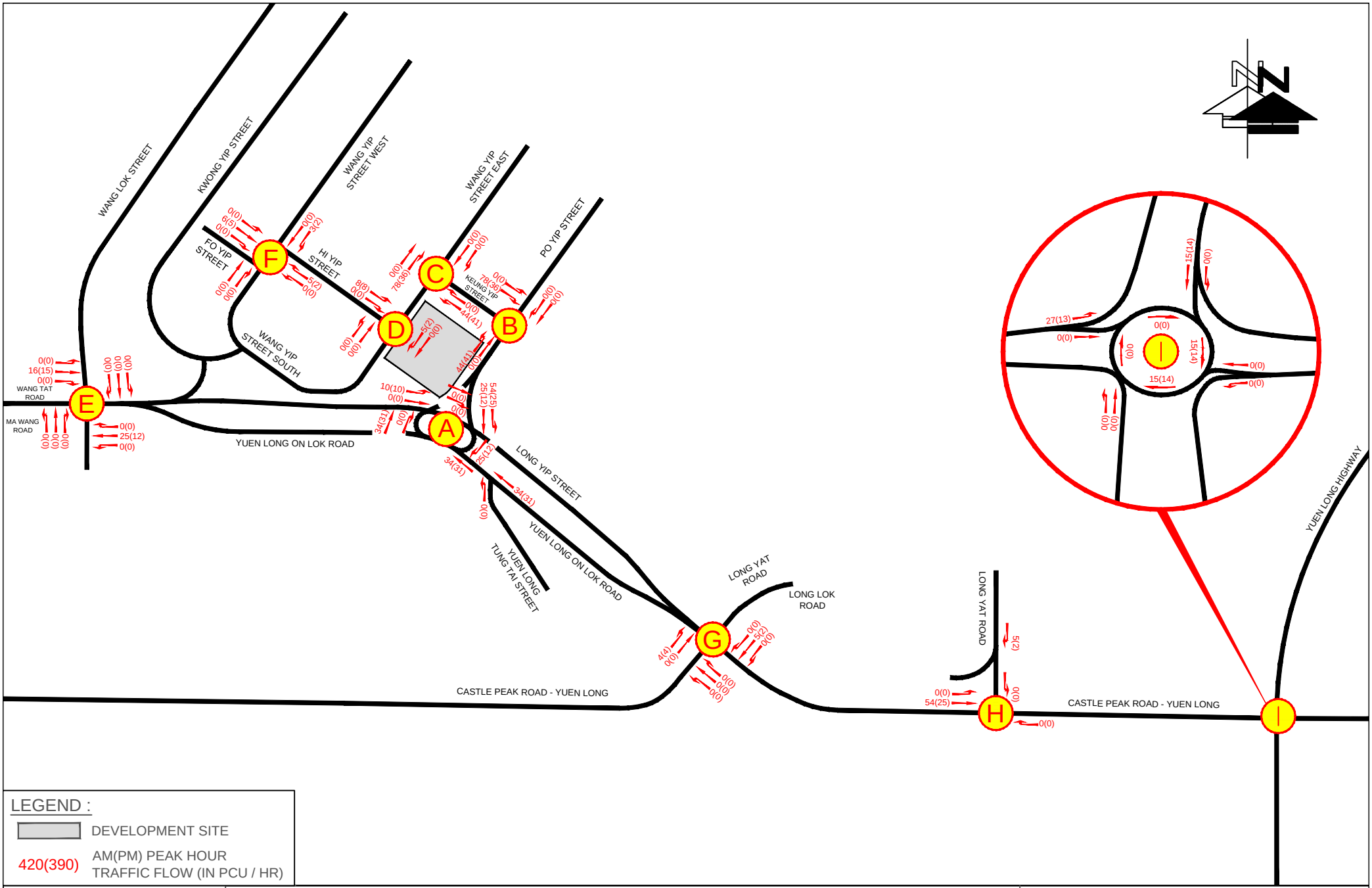


LEGEND :

DEVELOPMENT SITE

420(390) AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

FIGURE NO.: 4.10		PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK		DRAWING TITLE: 2033 REFERENCE TRAFFIC FLOW (WITHOUT PROPOSED DEVELOPMENT)	
SCALE: N.T.S. @A4	DATE: 28 AUG 2026		

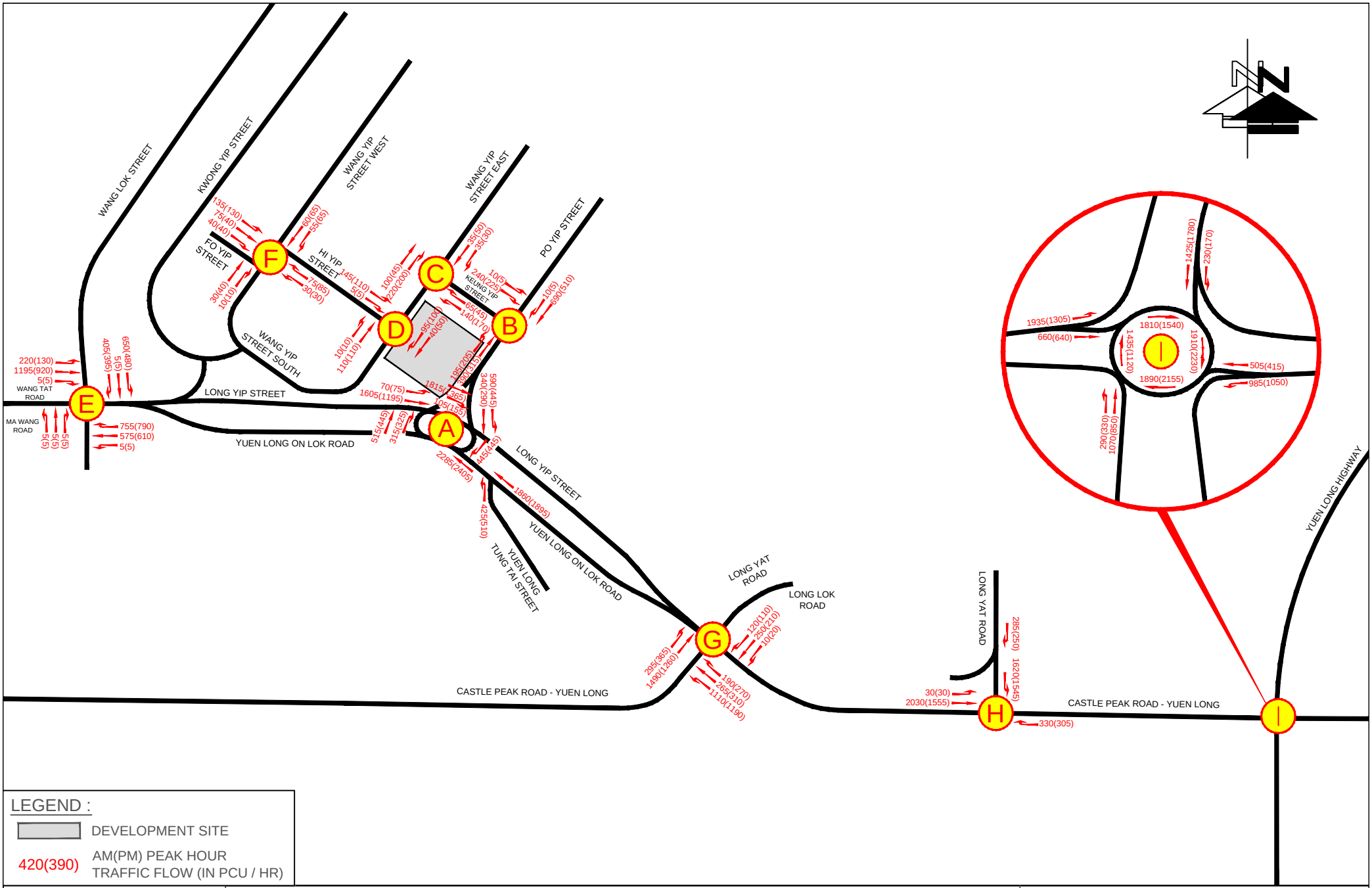


LEGEND :

DEVELOPMENT SITE

420(390) AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

FIGURE NO.: 4.11	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: 2033 DEVELOPMENT TRAFFIC FLOW	
SCALE: N.T.S. @A4 / DATE: 28 AUG 2026		

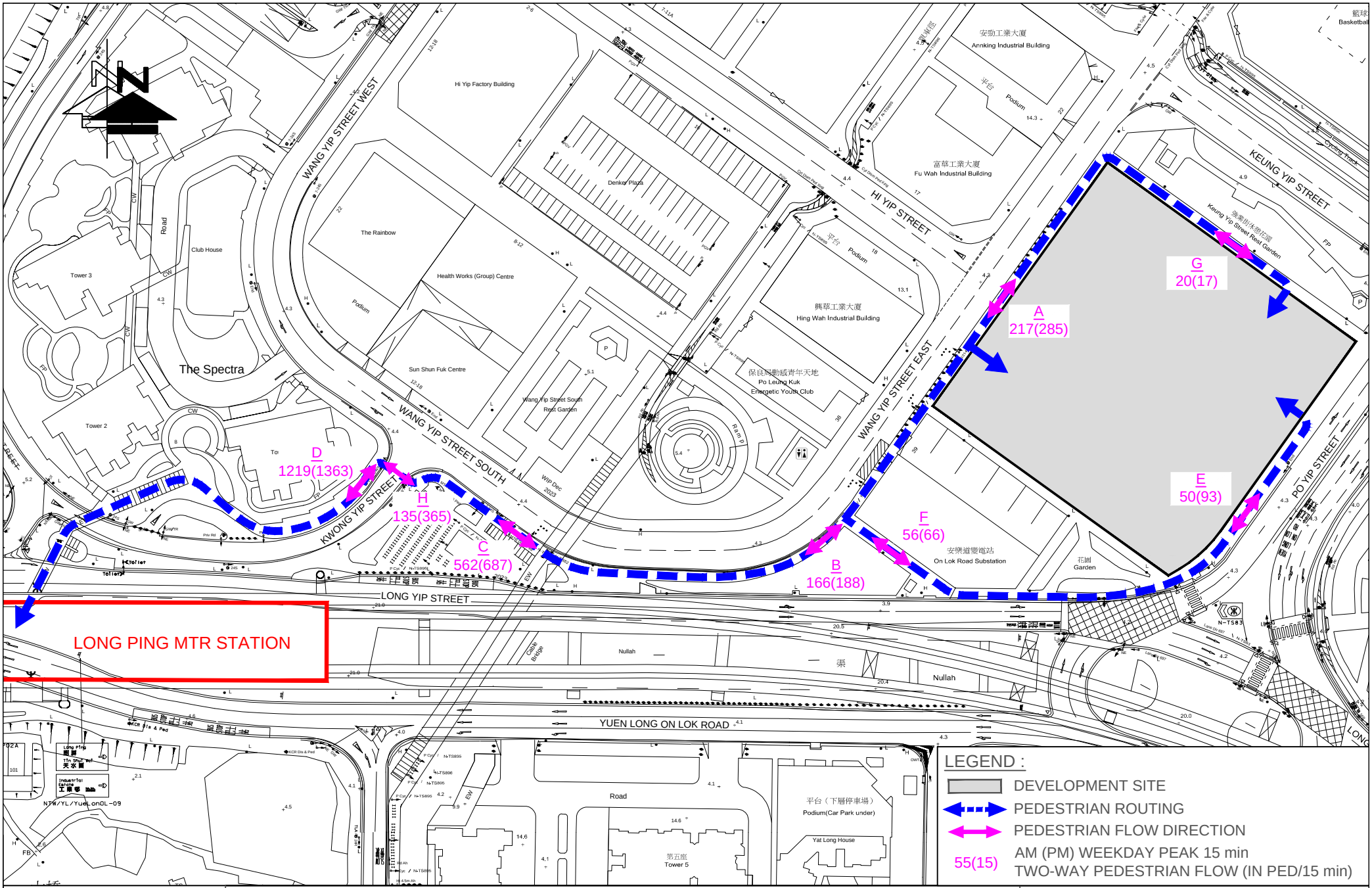


LEGEND :

DEVELOPMENT SITE

420(390) AM(PM) PEAK HOUR TRAFFIC FLOW (IN PCU / HR)

FIGURE NO.: 4.12		PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK		DRAWING TITLE: 2033 DESIGN TRAFFIC FLOW (WITH PROPOSED DEVELOPMENT)	
SCALE: N.T.S. @A4	DATE: 28 AUG 2026		



LEGEND :

- DEVELOPMENT SITE
- PEDESTRIAN ROUTING
- PEDESTRIAN FLOW DIRECTION
- 55(15) AM (PM) WEEKDAY PEAK 15 min TWO-WAY PEDESTRIAN FLOW (IN PED/15 min)

FIGURE NO.: 5.1(REV B)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: 2026 OBSERVED PEDESTRIAN FLOWS	
SCALE: 1 : 1400 @A4 / DATE: 28 AUG 2026		

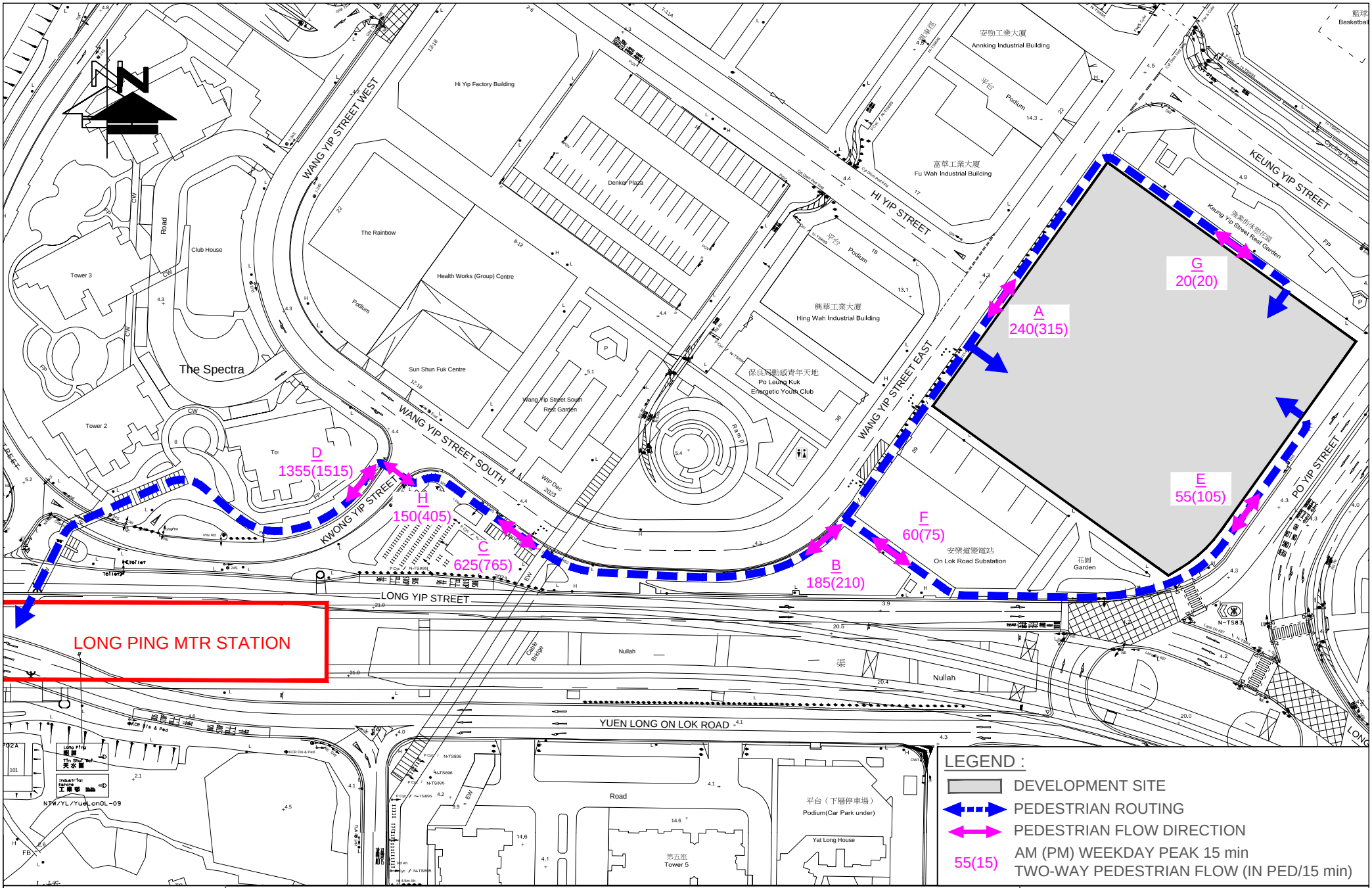


FIGURE NO.: 5.2(REV B)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: 2033 REFERENCE PEDESTRIAN FLOWS	
SCALE: 1 : 1400 @A4 / DATE: 28 AUG 2026		

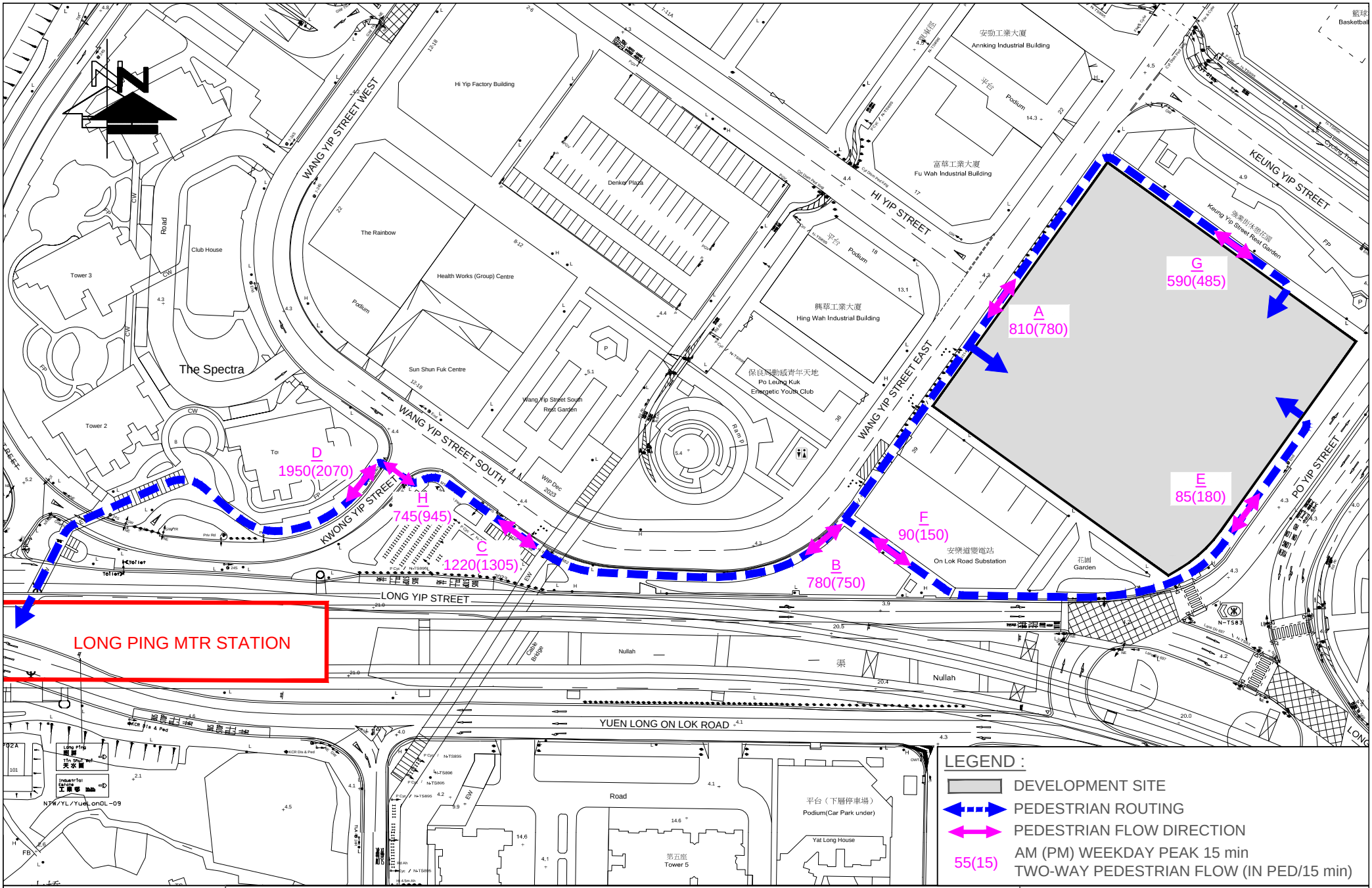


FIGURE NO.: 5.3(REV B)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: 2033 DESIGN PEDESTRIAN FLOWS	
SCALE: 1 : 1400 @A4 / DATE: 28 AUG 2026		

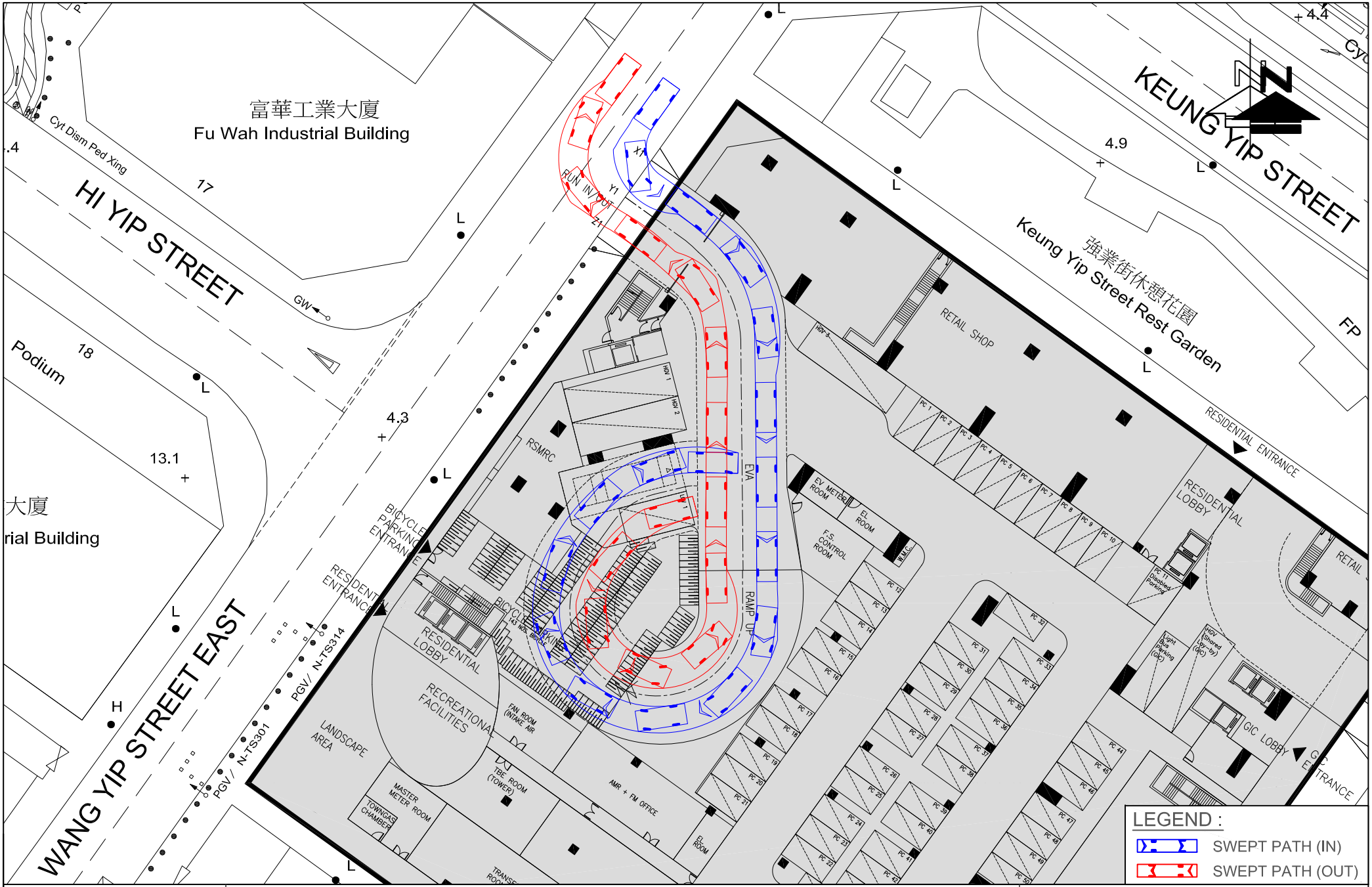


FIGURE NO.: SP-01(REV.A)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF PRIVATE VEHICLE AT G/F	
SCALE: 1 : 500 @A4 / DATE: 01 SEP 2026		

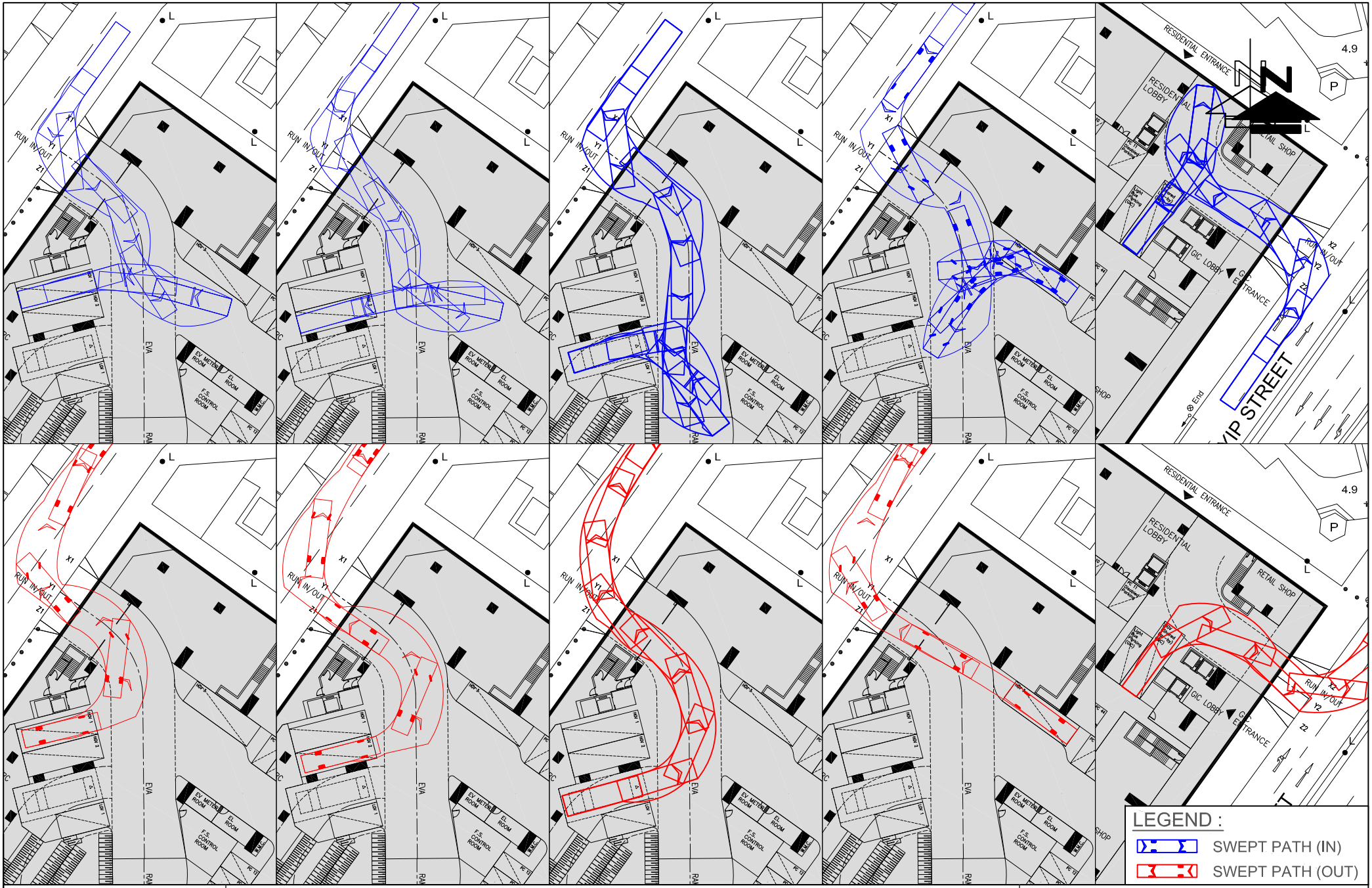


FIGURE NO.: SP-02 (REV.A)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF 11m VEHICLE AT G/F	
SCALE: 1 : 700 @A4 / DATE: 01 SEP 2026		

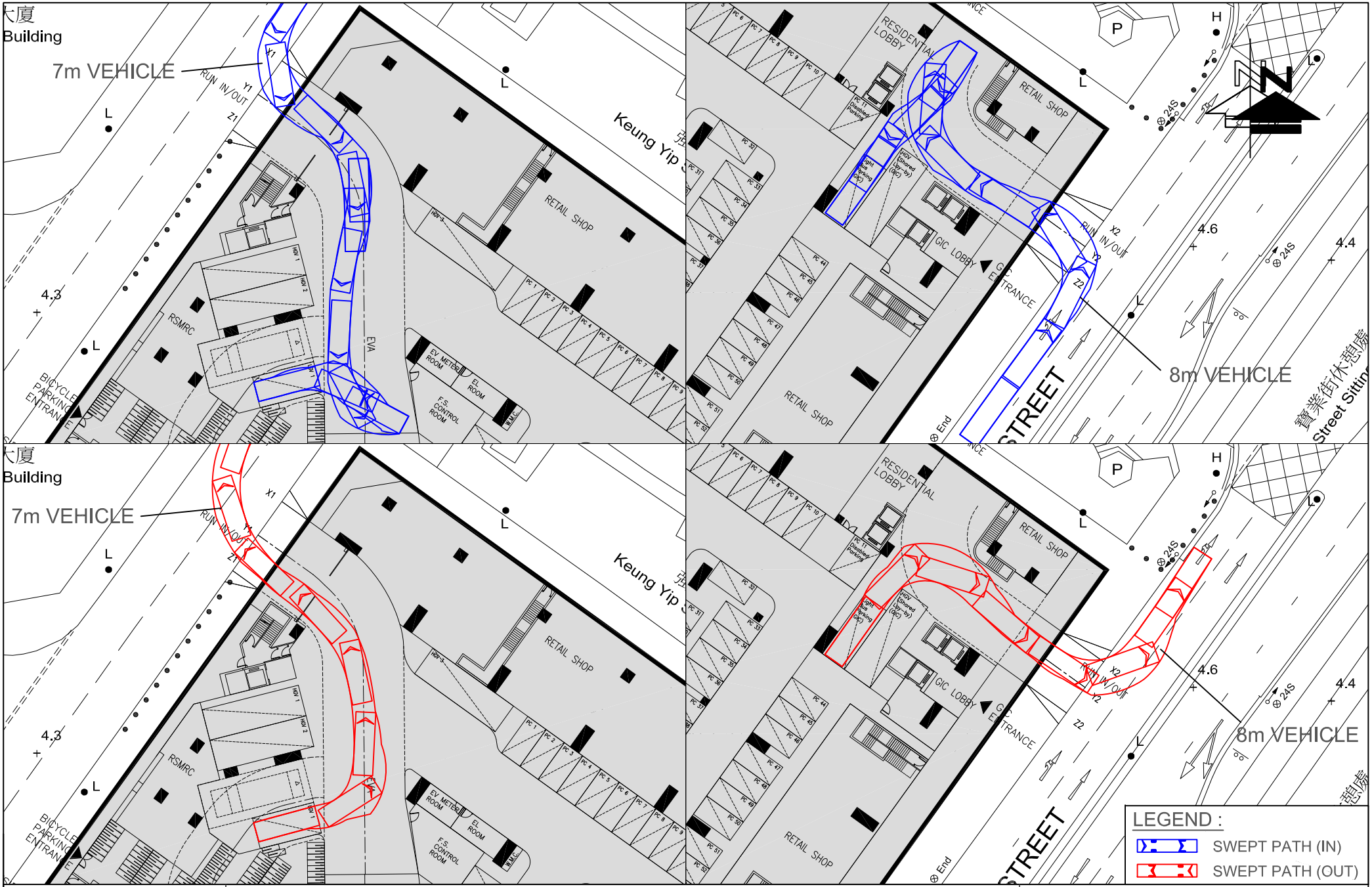


FIGURE NO.: SP-03 (REV.A)	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF 7m AND 8m VEHICLE AT G/F	
SCALE: 1 : 650 @A4 / DATE: 01 SEP 2026		

FIGURE NO.: SP-04	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: SWEPT PATH ANALYSIS OF 12m FIRE ENGINE AT 2/F	
SCALE: 1 : 350 @A4 / DATE: 01 SEP 2026		