

**Comprehensive
Architectural Consultancy
Services for Project KC-
015 at Kai Tak Road / Sa
Po Road, Kowloon City,
Kowloon for Urban
Renewal Authority**

**Traffic Impact
Assessment of Urban
Renewal Authority Kai
Tak Road / Sa Po Road
Development Scheme
(KC-015)**

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1 INTRODUCTION

1.1 Background

- 1.1.1 The Kai Tak Road / Sa Po Road Development Scheme (KC-015) (the Scheme), is located in Kowloon City and is bounded by Kai Tak Road, Prince Edward Road East, Sa Po Road, and Carpenter Road. The Development Scheme Plan was approved by Chief Executive in Council (CE in C) on 29 September 2020 (the Approved DSP).
- 1.1.2 With an aim to enhance development flexibility to meet market needs, adopt Modular Integrated Construction (MiC) method and aboveground carpark design in response to the recent Government initiatives, the URA intends to seek Town Planning Board (TPB)'s approval on **minor relaxation of domestic plot ratio (DPR) restriction from 7.5 to 8.0 and building height restrictions (BHR) from 120mPD to 140mPD for the Application Site** (i.e. the area zoned 'R(A)' of the Approved DSP) in accordance to Section 16 of the Town Planning Ordinance (S16 Planning Application).
- 1.1.3 This S16 Planning Application is a non-scheme-based submission. The notional design and indicative development parameters provided in the application are solely for illustration purpose and for conducting necessary technical assessments. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S16 Planning Application.
- 1.1.4 Aurecon Hong Kong Limited was commissioned as a sub-consultant to prepare the Traffic Impact Assessment (TIA) in support of the S16 Planning Application for the Project. The purpose of this TIA is to propose (i) the potential internal traffic arrangements for and (ii) to access the potential traffic impact arising from the S16 Planning Application.
- 1.1.5 This TIA report has taken into account the latest TIA reports for the Project dated February 2019 for the Approved DSP (TIA for the Approved DSP), which the Transport Department (TD) had no in-principle objection on the assessments and the proposals provided in these reports.

1.2 Structure of the Report

1.2.1 Following this introduction, the report is structured as below:

- Section 2 describes the indicative development proposal for the Project, including the access arrangements and internal transports provisions;
- Section 3 overviews the existing traffic context in the vicinity of the Project;
- Section 4 presents the traffic forecasting methodology and results;
- Section 5 assess the potential traffic and transport impacts arise from the Project and provides mitigation measures, if necessary; and
- Section 6 summarises the findings.

2 PROPOSED REDEVELOPMENT

2.1 Proposed Redevelopment

- 2.1.1 The Application Site, with an area of about 5,307 m², is broadly bounded by Carpenter Road to the north, Kai Tak Road to the west and Sa Po Road to the east. Please refer to **Figure 2.1** for the location of the Application Site.
- 2.1.2 The S16 Planning Application seeks TPB permission for (i) **minor relaxation of maximum permissible DPR from 7.5 to 8.0** and (ii) **minor relaxation of BHR from 120mPD to 140mPD** to enhance development flexibility to meet market needs and at the same time facilitate design flexibility for adopting MiC and aboveground carpark design to the Scheme in response to the recent Government initiatives.
- 2.1.3 A comparison between the Approved DSP and the S16 Planning Application is summarized below:
- **Reduced proposed residential towers** to 2.
 - **Increased proposed number of flat** by 54 nos.
- 2.1.4 A comparison table for the indicative parameters based on the notional design of the Approved DSP and the current S16 planning proposal is provided in **Table 2.1** below.

Table 2.1 Comparison of Development Parameters of the Approved DSP and the Current S16 Planning Proposal

Development / Facilities ⁽¹⁾	Approved DSP (a)	S16 Planning Application (b)	Difference (b) –(a)
Net Site Area (m ²)	About 5,352	About 5,307 ⁽¹⁾	-45
Total Plot Ratio (PR)	9.0	9.0	0
Domestic Plot Ratio (PR)	7.5	8.0 ⁽³⁾	+0.5
Non-Domestic Plot Ratio (PR)	1.5	1.0 ⁽³⁾	-0.5
Total GFA (m ²)	About 48,168	About 47,763 ⁽¹⁾⁽²⁾	-405
Domestic GFA (m ²)	About 40,140	About 42,456 ⁽¹⁾⁽³⁾	+2316
Non-Domestic GFA (m ²)	About 8,028	About 5,307 ⁽¹⁾⁽³⁾	-2721
GIC (m ²)	About 800	About 800 ⁽⁴⁾	0
Max. Building Height (mPD)	120	140	+20
No. of Residential Towers	3	2	-1
Average Flat Size (m ²) ⁽⁵⁾	About 42.8	About 42.8	0
No. of Flats	About 938	992	+54

Note:

- (1) As per the net site area under land grant resulting to corresponding adjustment in GFA.
- (2) Excluding 10% of MiC floor area which could be disregarded from calculation of GFA and plot ratio as per Joint Practice Note No. 8.
- (3) For illustrative purpose only, the Scheme is subject to maximum domestic PR and total PR, the actual domestic and non-domestic PRs and GFAs will be worked out at detailed design stage.
- (4) The actual GIC GFA is subject to further liaison and confirmation with relevant Government bureaux/ departments.
- (5) For a like-to-like analysis, an average flat size of about 42.8 sq.m. under the Current S16 Planning Proposal has been applied to both the approved DSP and current S16 scenarios in the comparison table to show the net increase in the number of flats and population.

2.1.5 While the subject S16 Planning Application is a **non-scheme-based submission**, this TIA is prepared based on the indicative development parameters for S16 Planning Application (i.e. Column (b)) in **Table 2.1** above and the notional design provided in **Appendix A**, for the purpose of conducting technical assessments. The tentative completion year for the Scheme will be 2030.

2.2 Vehicular Access

2.2.1 The Application Site is bounded by Carpenter Road, Kai Tak Road, and Sa Po Road. Under the Approved DSP, two vehicular accesses were proposed, i.e. one at Kai Tak Road and one at Sa Po Road. The vehicular access at Sa Po Road would allow ingress for the private car park only, while the access at Kai Tak Road would accommodate ingress for PVP and goods vehicles, as well as egress for all vehicles. The locations of the vehicular accesses are illustrated in **Figure 2.2**.

- 2.2.2 In the current design, the locations of the vehicular accesses remain the same as in the previous proposal, with access points provided at Sa Po Road and Kai Tak Road. Considering that the previous design involved multiple internal intersections which could affect the car park operation within the site, the vehicular accesses have been rearranged to provide one ingress at Sa Po Road and one egress at Kai Tak Road for all vehicles, thereby enhancing the overall efficiency and smooth operation of the car park. The locations of the vehicular accesses are illustrated in **Figure 2.3**.

2.3 Internal Transport Facilities

- 2.3.1 With reference to the lease of the subject lot and the TIA for the Approved DSP which TD had no in-principle objection on the assessments and proposals provided therein, the parking and internal transport provision for the Scheme under the subject S16 Planning Application are proposed in accordance with the requirements as stipulated in approved Land Grant and presented in **Table 2.2** below.

Table 2.2 Proposed Provision of Internal Transport Facilities

Facilities	Parking Space Dimension	Parking Ratio from Land Grant	Required Parking Provision	Proposed Parking Provision
Private Housing (with 992 flats) ⁽¹⁾				
Private Car Parking	5m(L) x 2.5m(W) x 2.4m(H)	1 space for every 22.2 residential units or part thereof for 310 units of flat size less than 40 m ²	14	14
		1 space for every 12.6 residential units or part thereof for 682 units of flat size not less than 40 m ² but less than 70 m ²	55	55
	Sub-total		69 (Include 2 Accessible Car Parking Space)	69 (Include 2 Accessible Car Parking Space)
Visitor Car Parking	5m(L) x 2.5m(W) x 2.4m(H)	5 spaces per block with more than 75 units	10	10
Motorcycle Parking	2.4m(L) x 1m(W) x 2.4m(H)	1 motorcycle parking space per 100 flats	10	10
Loading/unloading for Goods Vehicle	HGV 12m(L) x 3.5m(W) x 4.7m(H)	Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or subject to a minimum of 1 bay for each housing block	2	2
Retail (with 5,307m² GFA) ⁽¹⁾				
Private Car Parking	5m(L) x 2.5m(W) x 2.4m(H)	1 space per 200 m ² GFA	27 (Include 1 Accessible Car Parking Space)	27 (Include 1 Accessible Car Parking Space)
Loading/unloading for Goods Vehicle	HGV 12m(L) x 3.5m(W) x 4.7m(H)	1 space per 800 m ² GFA (35%)	2	2
	LGV 7m(L) x 3.5m(W) x 4.7m(H)	1 space per 800 m ² GFA (65%)	5	5 ⁽²⁾
Motorcycle Parking	2.4m(L) x 1m(W) x 2.4m(H)	10% of the total provision for private cars	3	3

Note:

(1) The parameters of the proposed development parameters are based on the indicative development parameters for the subject S16 Planning Application

(2) 1 no. of LGV L/UL space will be shared with the proposed GIC use.

2.3.2 As shown in **Table 2.2**, the parking provision aligns with the Land Grant requirements. Under the current design, the loading/unloading (L/UL) area is proposed on the G/F, while car parking spaces (including public and ancillary car parking spaces) will be provided in B1/F to B2/F of the basement levels and on 1/F to 4/F of the podium.

2.4 Public Vehicle Park

- 2.4.1 With reference to the previously approved TIA report in February 2019, 24 nos. of the metered car parking spaces at Sa Po Road and Kai Tak Road were proposed to be removed to accommodate the ingress or egress for the Application Site and enhance the pedestrian safety, it is illustrated in **Figure 2.4**. As a result, a total of 300 PVP parking spaces, including 83 surplus spaces, was proposed to be provided under the Approved DSP.
- 2.4.2 According to the parking demand and supply assessments submitted to TD on 11 April 2025 (which received no in-principle objection on 15 April 2025; refer to **Appendix B**), it was confirmed that only 195 car parking spaces would be required to cater for the future unmet demand. To adopt a conservative approach, a total of 217 parking spaces (including 22 surplus spaces) is proposed under the subject S16 Planning Application.

2.5 Previous Traffic Proposals

- 2.5.1 All traffic-related arrangements and mitigation measures previously proposed under the Approved DSP have been fully retained and incorporated into the current submission without modification. No new traffic proposals have been introduced under the subject S16 Planning Application.

Realignment of Sa Po Road

- 2.5.2 According to the previously approved TIA report from February 2019, it was proposed that Sa Po Road be realigned to form a perpendicular intersection with Kai Tak Road as illustrated in **Figure 2.5**. This realignment aims to improve pedestrian safety, enhance walkability and comfort, and promote smoother and safer traffic flow.
- 2.5.3 Sa Po Road will be reconfigured as a 24-hour, with both grade-separated link and at-grade accessible paths at the redeveloped KC-015 site, in line with Kowloon City District Council “Housing and Infrastructure Committee” Paper No. 20/18 submitted by CEDD (refer to the **Appendix C**) on the provision of USS entrance at Sa Po Road in future.

Enhanced Pedestrian Connectivity between Kowloon City and Kai Tak Development Area via the Sunken Plaza and USS

- 2.5.4 The realignment will improve connectivity between this part of Kowloon City area and Kai Tak Development Area (KTDA) via the proposed sunken plaza in the Project and the pedestrian tunnel by CEDD towards the future Underground Shopping Street (USS) at KTDA. It will also facilitate to create more at-grade space for walking and queue area along the Prince Edward Road East bus stops. Furthermore, the redesigned sidewalks will feature new paving, landscaping, and enhanced safety measures, such as traffic calming features and pedestrian crossings, to create a safer and more attractive environment for pedestrians.

3 EXISTING TRANSPORT CONTEXT

3.1 Adjacent Road Network

- 3.1.1 Sa Po Road is a north-south Local Distributor. The section between Kai Tak Road and Carpenter Road is a single carriageway of approx. 12 m in width, operating under one-way traffic flow. Metered parking spaces are provided along eastern sides of the road.
- 3.1.2 Kai Tak Road is a north-south Local Distributor. The section between Sa Po Road and Carpenter Road is a single carriageway of approx. 12 m in width, operating under one-way traffic flow. Metered parking spaces are provided along both sides of the road.
- 3.1.3 The section of Carpenter Road between Junction Road and Lok Sin Road is a single carriageway 2-lane 2-way road running in east-west direction. Public metered car parking spaces and motorcycle parking spaces are provided along the northern kerbside of Carpenter Road between Hau Wong Road and Lung Kong Road.

3.2 Traffic Surveys

- 3.2.1 Vehicular count surveys were conducted at the identified critical junctions in the immediate vicinity of the proposed redevelopment on Friday, 26 September 2025, and on Saturday, 27 September 2025, in order to capture the one-hour peak periods.
- 3.2.2 A comparison between the latest surveyed traffic data and the observed data from the previously approved TIA report shows that the latest surveyed traffic data is approximately 15% to 20% lower than the data from the previously approved TIA report. To ensure a conservative approach, the traffic data from the previously approved TIA report will be adopted for further analysis in this study.
- 3.2.3 Pedestrian count surveys were conducted at the identified critical footpath in the immediate vicinity of the proposed redevelopment on Wednesday, 12 November 2025, and on Saturday, 08 November 2025, in order to capture the one-hour peak periods.

3.3 Existing Traffic Conditions

Vehicular Traffic

- 3.3.1 A total of seventeen key local junctions within Kowloon City District have been identified for traffic survey and assessment in this TIA. These junctions are considered susceptible to potential traffic impacts arising from the Proposed Redevelopment. Their locations are illustrated in **Figure 3.1** and listed in **Table 3.1**.

Table 3.1 Identified Key Junctions

Ref	Junction	Type of Control
J01	Tung Tsing Road / Lok Sin Road / Sa Po Road	Signal controlled
J02	Carpenter Road / Tak Ku Ling Road	Signal controlled
J03	Carpenter Road / Lion Rock Road	Signal controlled
J04	Junction Road / Carpenter Road	Signal controlled
J05	Junction Road / Nga Tsin Wai Road	Signal controlled
J06	Nga Tsin Wai Road / Lion Rock Road	Signal controlled
J07	Nga Tsin Wai Road / Hau Wong Road	Signal controlled
J08	Nga Tsin Wai Road / Lung Kong Road	Signal controlled
J09	Prince Edward Road West / South Wall Road	Give-way controlled
J10	Prince Edward Road West / Lion Rock Road	Give-way controlled
J11	Prince Edward Road West / Fuk Lo Tsun Road	Give-way controlled
J12	Prince Edward Road West / Junction Road	Signal controlled
J13	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Signal controlled
J14	Junction Road / Tung Tau Tsuen Road	Signal controlled
J15	Junction Road / Inverness Road	Signal controlled
J16	Lung Kong Road / Carpenter Road	Give-way controlled
J17	Olympic Garden Roundabout	Roundabout

- 3.3.2 The observed vehicular traffic flows in weekday and weekend from the previously approved TIA report are presented in **Figure 3.2** and **3.3** respectively. A junction capacity assessment for the identified critical junctions was conducted based on the observed traffic flows. The results are summarised in **Table 3.2**. The junction calculation sheets are attached in **Appendix D**. **Table 3.2** demonstrated that all identified junctions are currently operating with ample capacity during both normal weekday and weekend morning and evening peak hours.

Table 3.2 Junction Operational Performance (Existing 2019)

Ref ⁽¹⁾	Junction	RC / DFC ⁽²⁾	
		AM Peak	PM Peak
	Weekday		
J01	Tung Tsing Road / Lok Sin Road / Sa Po Road	75%	>100%
J02	Carpenter Road / Tak Ku Ling Road	>100%	>100%
J03	Carpenter Road / Lion Rock Road	>100%	46%
J04	Junction Road / Carpenter Road	69%	49%
J05	Junction Road / Nga Tsin Wai Road	77%	63%
J06	Nga Tsin Wai Road / Lion Rock Road	>100%	>100%
J07	Nga Tsin Wai Road / Hau Wong Road	95%	84%
J08	Nga Tsin Wai Road / Lung Kong Road	>100%	>100%
J09	Prince Edward Road West / South Wall Road	0.73	0.60
J10	Prince Edward Road West / Lion Rock Road	0.40	0.45
J11	Prince Edward Road West / Fuk Lo Tsun Road	0.35	0.29
J12	Prince Edward Road West / Junction Road	47%	64%
J13	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	>100%	>100%
J14	Junction Road / Tung Tau Tsuen Road	>100%	67%
J15	Junction Road / Inverness Road	32%	52%
J16	Lung Kong Road / Carpenter Road	0.46	0.51
J17	Olympic Garden Roundabout	0.77	0.70
	Weekend		
J01	Tung Tsing Road / Lok Sin Road / Sa Po Road	73%	67%
J02	Carpenter Road / Tak Ku Ling Road	>100%	>100%
J03	Carpenter Road / Lion Rock Road	96%	37%
J04	Junction Road / Carpenter Road	76%	59%
J05	Junction Road / Nga Tsin Wai Road	70%	62%
J06	Nga Tsin Wai Road / Lion Rock Road	>100%	92%
J07	Nga Tsin Wai Road / Hau Wong Road	77%	71%
J08	Nga Tsin Wai Road / Lung Kong Road	>100%	88%
J09	Prince Edward Road West / South Wall Road	0.61	0.70
J10	Prince Edward Road West / Lion Rock Road	0.37	0.39
J11	Prince Edward Road West / Fuk Lo Tsun Road	0.33	0.30
J12	Prince Edward Road West / Junction Road	60%	52%
J13	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	>100%	99%
J14	Junction Road / Tung Tau Tsuen Road	>100%	72%
J15	Junction Road / Inverness Road	48%	44%
J16	Lung Kong Road / Carpenter Road	0.44	0.57
J17	Olympic Garden Roundabout	0.66	0.73

Note:

(1) Refer to **Figure 3.1** for junction reference

(2) RC = reserved capacity, DFC = design flow/capacity ratio

Pedestrian Traffic

3.3.3 The identified critical pedestrian walkways are illustrated in **Figure 3.4**, and the surveyed hourly pedestrian demand in weekday and weekend are illustrated in **Figure 3.5 and 3.6 respectively**.

3.3.4 The Level of Service (LOS) assessment for the key pedestrian walkways based on the most critical hourly flows in the year of 2025, is presented in **Table 3.3**.

Table 3.3 Pedestrian Walkways LOS (Existing 2025)

Walkway		Walkway Width (m)	Effective Width (m)	Pedestrian Flow (ped/hr)		LOS ⁽¹⁾	
				AM Peak	PM Peak	AM Peak	PM Peak
	Weekday						
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	115	365	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	840	1160	A	A
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	220	675	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	365	1120	A	A
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	365	1195	A	A
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	480	665	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	220	300	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	290	400	A	A
	Weekend						
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	115	370	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	850	1180	A	A
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	215	625	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	385	1135	A	A
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	405	1185	A	A
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	485	740	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	220	285	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	295	405	A	A

Note:

(1) Refer to **Appendix E** for interpretation of LOS

3.3.5 From **Table 3.3**, all the identified key pedestrian walkways would operate satisfactorily with LOS of A.

3.4 Existing Public Transport Services

3.4.1 The area surrounding the Proposed Redevelopment is well-served by public transport network and services comprising railway, franchised buses, green mini-buses and taxis. This multi-model connectivity facilitates seamless access to key destinations across the district and beyond.

3.4.2 Rail-based: The Proposed Redevelopment benefits from direct proximity to the Sung Wong Toi MTR Station of Tuen Ma Line, with two nearby exits - Exit B2 & B3 located on Nam Kok Road. These close accesses to rail infrastructure offer strong connectivity for both residents and visitors of the Proposed Redevelopment.

3.4.3 Road-based: Over 80 franchised bus routes and 14 minibus routes operating in close vicinity of the Proposed Redevelopment. These services provide extensive connectivity to other districts over the territory. The full list of available bus and minibus service routes is summarized in **Table 3.4**.

Table 3.4 Existing Road-based Public Transport Services

Route	Routing	Headway (mins)
GMB		
25A	Kowloon Tong Station - Tung Tau Estate (Tung Lung Road)	15 - 20
25B	Kowloon Tong Station - The Latitude	15 - 18
25M	Kowloon Tong Station - Tung Tau Estate (Tung Lung Road)	6 - 8
39M	Lok Fu Station - Tung Tau Estate (Circular)	6 - 8
46	Olympic Station - Richland Gardens	3 - 15
49	Shun Tin Estate - Kowloon City Ferry (Circular)	25
61	Siu Sai Wan (Island Resort) - Mong Kok (Fife Street)	Overnight
69	Kowloon City (Lion Rock Road) - Laguna City	20 - 30
69A	Laguna City - Prince Edward Station	15 - 20
70	Diamond Hill Station - Tai Kok Tsui (Island Harbourview)	4 - 15
70A	Diamond Hill Station - Olympic Station	30 - 60
88	Kai Ching Estate - Wong Tai Sin Station (Circular)	12 - 30
105	Hong Shing Garden - To Kwa Wan (Ko Shan Theatre)	5 - 20
805S	Ma On Shan (Kam Ying Court) - Monk Kong Station	Overnight

Route	Routing	Headway (mins)
Franchised Bus		
1	Star Ferry - Chuk Yuen Estate	8 - 25
1A	Star Ferry - Sau Mau Ping (Central)	7 - 20
2A	Mei Foo - Lok Wa	10 - 25
2D	Chak On Estate - Wong Tai Sin	20 - 30
3B	Hung Hom (Hung Luen Road) - Tsz Wan Shan (Central)	20 - 30
3X	China Ferry Terminal - Tsz Wan Shan (North)	AM Peak
5	Fu Shan Estate - Star Ferry	9 - 30
5C	Tsz Wan Shan (Central) - Star Ferry	8 - 20
5D	Telford Gardens - Hung Hom (Circular)	20 - 30
5P	Tsz Wan Shan (Central) - Star Ferry	AM Peak & PM Peak
6D	Ngau Tau Kok - Mei Foo	12 - 30
6P	Cheung Sha Wan (So Uk Estate) - Lei Yue Mun Estate	AM Peak & PM Peak
9	Choi Fook - Tsim Sha Tsui East (Mody Road)	15 - 30
10	Choi Wan - Tai Kok Tsui (Circular)	15 - 30
11	Diamond Hill Station - Kowloon Station	12 - 30
11B	Kwun Tong (Tsui Ping Road) - Kowloon City Ferry	10 - 30
11D	Lok Fu - Kwun Tong Ferry	15 - 30
11K	Chuk Yuen Estate - Hung Hom Station	20 - 35
11X	Hung Hom Station - On Tai (North)	15 - 25
12A	Whampoa Garden - Cheung Sha Wan (Hoi Tat Estate)	10 - 30
13	Sham Shui Po (Yen Chow Street) - Anderson	AM Peak & PM Peak
13D	Tai Kok Tsui (Island Harbourview) - Po Tat	15 - 30
14	Lei Yue Mun Estate - China Ferry Terminal	15 - 30
15	Ping Tin - Hung Hom (Hung Luen Road)	12 - 30
16	Mong Kok (Park Avenue) - Lam Tin (Kwong Tin Estate)	8 - 30
16P	Mong Kok (Park Avenue) - Kwun Tong Ferry	AM Peak & PM Peak
16X	Mong Kok (Park Avenue) - Lam Tin (Kwong Tin Estate)	20 - 60
17	Ho Man Tin (Oi Man Estate) - Kwun Tong (Yue Man Square)	5 - 25
20	Cheung Sha Wan (Hoi Tat) - Kai Tak (Muk On Street)	12 - 30
20A	HSR West Kowloon Station - Kai Tak Cruise Terminal	30
21	Choi Wan - Hung Hom Station	20 - 30
22	Kowloon Tong (Festival Walk) - Kai Tak Cruise Terminal	20 - 30
22M	To Kwa Wan - Kai Tak Cruise Terminal	20 - 30
24	Kai Yip - Mong Kok (Circular)	20 - 30
26	Shun Tin - Tsim Sha Tsui East	8 - 30
27	Shun Tin - Mong Kok (Circular)	6 - 20
27X	Shun Tin - Olympic Station	AM Peak & PM Peak
28	Lok Wah - Star Ferry	10 - 30
42	Tsing Yi (Cheung Hong Estate) - Shun Lee	15 - 25
61X	Tuen Mun Central - Kowloon City Ferry	10 - 30
75X	Tai Po (Fu Shin) - Kowloon City Ferry	10 - 25
85	Fo Tan Chun Yeung Estate - Kowloon City Ferry	20 - 30
85A	Kwong Yuen - Kowloon City Ferry	25 - 30
85B	Chun Shek - Kowloon City Ferry	AM Peak
85P	Hung Hom (Hung Luen Road) - Nai Chung	AM Peak & PM Peak
85X	Ma On Shan Town Centre - Hung Hom (Hung Luen Road)	9 - 30
92R	Sai Kung - Star Ferry	30
93K	Po Lam - Mong Kok East Station	17 - 30
95	Tsui Lam - Kowloon Station	12 - 30
98C	Hang Hau (North) (Tseung Kwan O Hospital) - Mei Foo	10 - 30

Route	Routing	Headway (mins)
98S	Hang Hau (North) (Tseung Kwan O Hospital) - Mei Foo	AM Peak & PM Peak
101	Kwun Tong (Yue Man Square) - Kennedy Town	4 - 27
106	Wong Tai Sin - Siu Sai Wan (Island Resort)	6 - 25
106A	Wong Tai Sin - Tai Koo (Kornhill Plaza)	AM Peak
106P	Wong Tai Sin - Siu Sai Wan (Island Resort)	AM Peak & PM Peak
107	Kowloon Bay - Wah Kwai	5 - 25
108	Kai Yip - Braemar Hill	15 - 30
111	Ping Shek / Choi Hung Station - Central (Macau Ferry)	6 - 30
111P	Choi Fook - Central (Macau Ferry)	AM Peak & PM Peak
113	Kennedy Town (Belcher Bay) - Choi Hung	15 - 30
116	Tsz Wan Shan (Central) - Quarry Bay (Yau Man Street)	4 - 20
203E	Choi Hung - Kowloon Station	15 - 30
213D	Sau Mau Ping (Central) - Mong Kok (Circular)	10 - 30
275X	Tai Po (Fu Shin) - Hung Hom (Hung Luen Road)	AM Peak & PM Peak
293S	Hang Hau (Ngan O Road) - Mei Foo	Overnight
296C	Sheung Tak - Cheung Sha Wan (Hoi Ying Estate)	15 - 30
296P	Sheung Tak - Lai Chi Kok Station	AM Peak & PM Peak
297	Po Lam - Hung Hom (Hung Luen Road)	15 - 30
298X	Hang Hau (North) (Tseung Kwan O Hospital) - Mei Foo	20 - 30
793	So Uk - Tseung Kwan O Industrial Estate	15 - 60
796X	Tsim Sha Tsui East - Tseung Kwan O Industrial Estate / Tseung Kwun O Station	12 - 30
A22	Lam Tin Station - Airport	15 - 60
E23	Tsz Wan Shan (South) - Airport (Ground Transportation Centre)	12 - 30
E23A	Tsz Wan Shan (South) - Airport (Ground Transportation Centre)	20 - 30
N20	Tai Kok Tsui (Island Harbourview) - Kai Tak (Muk On Street)	Overnight
N23	Tsz Wan Shan (north) - Tung Chung Station	Overnight
N121	Ngau Tau Kok - Central (Macau Ferry)	Overnight
N213	Tsim Sha Tsui East (Mody Road) - On Tai (West)	Overnight
N216	Yau Tong - Hung Hom Station	Overnight
N293	Sheung Tak - Mong Kok (Park Avenue)	Overnight
N796	Mong Kok - LOHAS Park	Overnight

3.5 Existing Pedestrian Facilities

3.5.1 The area surrounding KC-015 is well equipped with pedestrian facilities, including continuous footpaths and at-grade pedestrian crossings at major road junctions, providing convenient pedestrian circulation within the district.

3.5.2 In addition, several pedestrian subways are located in the vicinity of KC-015. These include:

- A pedestrian subway across Prince Edward Road West near Lion Rock Road, providing access to Boundary Street and St. Teresa's Hospital;
- A pedestrian subway across Prince Edward Road East near Tak Ku Ling Road, facilitating access to the future Kai Tak Development; and
- A subway system at Olympic Garden Roundabout, linking Prince Edward Road East, Prince Edward Road West, Argyle Street, and Ma Tau Chung Road, thereby enhancing pedestrian connectivity across major corridors.

4 TRAFFIC FORECAST

4.1 Design Year

- 4.1.1 The Proposed Redevelopment is scheduled for completion by 2030, with the design year set as 2033, three years following completion.

4.2 Traffic Forecasting Approach

Junction Capacity Assessment

- 4.2.1 As mentioned in **Section 3.2.2**, the surveyed traffic data is approx. 15% - 20% lower than that in the previously approved TIA report for both weekday and weekend conditions. In a conservative approach, the traffic data from the previously approved TIA report will be adopted in this study.

- 4.2.2 Based on the above, the year 2033 reference flow and year 2033 design flows are produced according to the following.

Year 2033 Reference Case = traffic data is extracted from Year 2033 Reference Scenario of the Previously approved TIA report + Development Traffic of Approved DSP

Year 2033 Design Case = 2033 Reference Case + Difference in Trip Generation due to Changing of Development Parameters

Pedestrian Walkway Assessment

- 4.2.3 Based on the above, the year 2033 reference and design pedestrian flows are produced according to the following.

Year 2033 Reference Case = Observed Pedestrian Flow x Adopted Growth Factor (i.e. 0.56%)
+ Approved DSP Pedestrian Trip Generation
+ Other Planned / Committed Development Pedestrian Trip Generation

Year 2033 Design Case = 2033 Reference Case + Difference in Pedestrian Trip Generation due to Changing of Development Parameters

4.3 Annual Growth Factor

- 4.3.1 To establish a suitable traffic growth factor for forecasting purposes, reference will be made to the Annual Average Daily Traffic as well as the HK Population Projections from publicised sources.

4.3.2 Annual Traffic Census (ATC): Based on the ATC, traffic count stations located in the vicinity of the Application Site have been reviewed. The Annual Average Daily Traffic (AADT) have been extracted and the corresponding annual percentage change between year 2019 and 2023 has been established to determine the historical traffic growth trend and the results are summarized in **Table 4.1**. The historical traffic growth reveals an increasing growth trend, with an average annual reduction of 0.27% in traffic volumes.

4.3.3 Hong Kong Population Projections: Population figures for the years 2025 and 2033 have been extracted from the Hong Kong Population Projections (2022-2046), published by Census and Statistics Department and are summarised in **Table 4.2**. Hong Kong's territorial population is projected to have a positive growth trend, with an average annual increase of approx. 0.56% between 2025 to 2033.

Table 4.1 AADT between 2019 and 2023 (from ATC)

Road	ATC Station No.	Annual Average Daily Traffic (AADT)					Average Annual Growth
		2019	2020	2021	2022	2023	
Junction Rd	3016	16,700	15,060	15,220	14,160	15,140	-2.42%
Nga Tsin Wai Road & Kai Tak Road	3284	8,420	7,880	8,220	7,830	6,610	-5.87%
Junction Road	3458	15,070	15,350	16,000	15,250	16,090	1.65%
Lok Sin Road	3489	8,860	7,840	8,180	7,790	8,220	-1.86%
Tak Ku Ling Road	3494	7,130	8,140	8,490	8,090	8,540	4.61%
Nga Tsin Wai Road	4076	11,420	10,690	11,140	11,290	13,730	4.71%
Total Average Annual Growth							0.27%

Table 4.2 Hong Kong Population Projections in 2025 and 2033

Year	Resident Population (thousands)	Annual Growth Rate (p.a.) Between 2025 & 2033
2025	7,559.8	+0.56%
2033	7903.6	

4.3.4 Annual Growth Factor: For a conservative assessment approach, a **+0.56%** annual growth rate has been adopted to generate background traffic flows. This rate has been applied to the observed pedestrian flow obtained from the 2025 pedestrian surveys.

4.4 Planned and Committed Developments

- 4.4.1 A number of planned/ committed developments located in proximity to the Application Site have been identified and reviewed as summarised in **Appendix F** and illustrated in **Figure 4.1**.
- 4.4.2 **Table 4.3** summarises the pedestrian traffic generation rates adopted for this TIA, which are sourced from the consultant's in-house database and supplemented by pedestrian traffic rate surveys conducted at comparable nearby developments. The resulting pedestrian traffic volumes generated by the adjacent planned/ committed developments are presented in **Table 4.4**.

Table 4.3 Pedestrian Traffic Generation Rates

Development Type	Unit	Pedestrian Traffic Generation Rates			
		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
Private Housing	ped/ hr/ flat	0.48	0.06	0.15	0.37
Retail	ped/ hr/ 100m ² GFA	0.4	0.5	5.5	6.6
GIC	Ped/hr/100m ² GFA	0.328	0.983	0.557	0.246

Table 4.4 Pedestrian Traffic Generations of Planned/ Committed Developments

Ref No.	Planned/ Committed Developments	Pedestrian Traffic Generations (ped/hr)			
		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
1	456-464 Prince Edward Road West	51	12	78	112
2	65-75 Lion Rock Road	75	12	58	98
3	New Kowloon Inland Lot No. 6590 (Part), Kowloon(A/K22/38)	471	87	484	758
4	URA Project at Nga Tsin Wai Road / Carpenter Road (KC-017)	2189	388	2044	3279
5	Kai Tak Development Site 2A3 Private Housing	72	9	22	55
6	Kai Tak Development Site 2A4 Private Housing	79	10	25	61
7	Kai Tak Development Site 2A5(B) Private Housing	40	5	13	31
8	Kai Tak Development Site 2A10 Private Housing	73	9	23	57
9	Kai Tak Development Site 2B1 Public Housing	864	108	270	666
10	Kai Tak Development Site 2B2 Public Housing	883	110	276	681
11	Kai Tak Development Site 2B3 Public Housing	614	77	192	474
12	Kai Tak Development Site 2B4 Public Housing	883	110	276	681
13	Kai Tak Development Site 2B5 Public Housing	835	104	261	644
14	Kai Tak Development Site 2B6 Public Housing	984	123	308	759
	Total:	8113	1164	4330	8356

4.5 Vehicular Traffic Generations

4.5.1 The vehicular traffic generation and attraction of the Proposed Redevelopment of Approved DSP and Current S16 Planning Proposal have been estimated based on the traffic rates in TPDM Volume 1 Chapter 3 Appendix, and the results are summarized in **Table 4.5** and **Table 4.6**.

Table 4.5 Vehicular Traffic Generations of the Proposed Redevelopment (Approved DSP)

Land Use	Vehicular Traffic Generation (pcu/hr) ⁽²⁾			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Domestic units (about 810 units) ⁽¹⁾	58	34	23	30
Retails (GFA approx. 8,028m ²) ⁽¹⁾	18	20	25	29
GIC (GFA approx. 800m ²) ⁽¹⁾	1	2	1	1
PVP (300 parking spaces) ⁽³⁾⁽⁴⁾	54	60	24	42
Total:	131	116	73	102

Note:

- (1) The development parameters would be referred to approved DSP
- (2) 5% increment would be adopted in the technical assessment for design flexibility allowance
- (3) Refer to **section 2.4.1**.
- (4) Trip Generation of PVP is based on the site observation of the Public Vehicle Parking at Tung Lei Road near Lee Kau Yan Memorial School

Table 4.6 Vehicular Traffic Generations of the Proposed Redevelopment (Current S16 Planning Proposal)

Land Use	Vehicular Traffic Generation (pcu/hr) ⁽²⁾⁽⁴⁾			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Domestic units (about 992 units) ⁽¹⁾	71	42	28	37
Retails (GFA approx. 5,307m ²) ⁽³⁾	12	13	16	19
GIC (GFA approx. 800m ²) ⁽¹⁾	1	2	1	1
PVP (217 parking spaces) ⁽⁵⁾⁽⁶⁾	39	43	17	30
Total:	123	100	62	87

Note:

- (1) The parameters of the proposed development are indicative only and subject to detailed design
- (2) 5% increment would be adopted in the technical assessment for design flexibility allowance
- (3) The actual GIC GFA is not yet confirmed and subject to liaison with relevant Government Bureaux/ Departments
- (4) Trip Generation is based on the TPDM Volume 1 Chapter 3 Appendix
- (5) Refer to **section 2.4.2**.
- (6) Trip Generation of PVP is based on the site observation of the Public Vehicle Parking at Tung Lei Road near Lee Kau Yan Memorial School

- 4.5.2 The net difference of the trip generation between the approved DSP and Current S16 Planning Proposal is summarised in **Table 4.7**. As shown in **Table 4.7**, the trip generation of the current proposed scheme would be larger in AM peak period and decrease in PM peak period, compared with the previous approved DSP.

Table 4.7 Net Difference of Trip Generations between Approved DSP and Current S16 Planning Proposal

Scheme	Vehicular Traffic Generation (pcu/hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Approved DSP	131	116	73	102
S16 Planning Application	123	100	62	87
Total:	-8	-16	-11	-15

4.6 Pedestrian Trip Generations

- 4.6.1 Pedestrian trips generated from the Approved DSP and the Current S16 Planning Proposal have been estimated with reference to the traffic rates outlined in **Table 4.3**. The resulting pedestrian traffic generations are summarised in **Table 4.8 and 4.9**.

Table 4.8 Pedestrian Traffic Generations of the Approved DSP

Land Use	Pedestrian Trip Generations (ped/hr) ⁽²⁾			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Domestic units (about 810 units) ⁽¹⁾	389	49	122	300
Retails (GFA approx. 8,028m ²) ⁽¹⁾	32	40	442	530
GIC (GFA approx. 800m ²) ⁽¹⁾	3	8	4	2
Total:	424	97	568	832

Note:

(1) The development parameters would be referred to approved DSP

(2) 5% increment would be adopted in the technical assessment for design flexibility allowance

Table 4.9 Pedestrian Traffic Generations of the Current S16 Planning Proposal

Land Use	Pedestrian Trip Generations (ped/hr) ⁽²⁾			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Domestic units (about 992 units) ⁽¹⁾	476	60	149	367
Retails (GFA approx. 5,307m ²) ⁽¹⁾	21	27	292	350
GIC (GFA approx. 800m ²) ⁽¹⁾⁽⁴⁾	3	8	4	2
Total:	500	95	445	719

Note:

- (1) The parameters of the proposed development are indicative only and subject to detailed design
- (2) 5% increment would be adopted in the technical assessment for design flexibility allowance
- (3) The actual GIC GFA is not yet confirmed and subject to liaison with relevant Government Bureaux/ Departments
- (4) Pedestrian Trip Generation is based on the in-house survey data

4.6.2 The net difference of the pedestrian trip generation between the Approved DSP and Current S16 Planning Proposal is summarised in **Table 4.10**. As shown in **Table 4.10**, the pedestrian trip generation of the Current S16 Planning Proposal would be larger in AM peak period and decrease in PM peak period, compared with the Approved DSP.

Table 4.10 Net Difference of Pedestrian Trip Generations between the Approved DSP and Current S16 Planning Proposal

Scheme	Pedestrian Traffic Generations (ped/hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Approved DSP	424	97	568	832
Current S16 Planning Proposal	500	95	445	719
Total:	+76	-2	-123	-113

4.6.3 The pedestrian trips estimated in **Table 4.8 – Table 4.10** have been manually assigned to the surrounding pedestrian network/ transport facilities based on modal split data. This assignment takes reference from the Kowloon City District modal split statistics obtained from the 2021 Population Census, as presented in **Table 4.11**.

Table 4.11 Pedestrian Trips by Transport Mode

Main Transport Mode	Modal Split ⁽¹⁾
Rail	41%
Bus/ Public Light Bus	32%
Walk	14%
Others ⁽²⁾	13%

Note:

- (1) Refer to 2021 Population Census Table C204 (Kowloon City District)
- (2) Others include private vehicle, taxi, etc.

5 TRAFFIC IMPACT ASSESSMENT

5.1 Junction Capacity Analysis

5.1.1 The results of the junction capacity analyses for the 2033 Reference and Design Forecasts under both weekday and weekend conditions for the Proposed Redevelopment are presented in **Figures 5.1 to 5.4** and summarised in **Tables 5.1 and 5.2**. The detailed junction calculation results are provided in **Appendix D**.

Table 5.1 Junction Operational Performance (Year 2033 Weekday)

Ref (1)	Junction	RC/DFC (2)			
		2033 Reference		2033 Design	
		AM Peak	PM Peak	AM Peak	PM Peak
J01	Tung Tsing Road / Lok Sin Road / Sa Po Road	36%	55%	38%	57%
J02	Carpenter Road / Tak Ku Ling Road	>100%	98%	>100%	>100%
J03	Carpenter Road / Lion Rock Road	90%	37%	90%	37%
J04	Junction Road / Carpenter Road	60%	40%	60%	41%
J05	Junction Road / Nga Tsin Wai Road	66%	67%	66%	68%
J06	Nga Tsin Wai Road / Lion Rock Road	>100%	95%	>100%	96%
J07	Nga Tsin Wai Road / Hau Wong Road	74%	64%	74%	65%
J08	Nga Tsin Wai Road / Lung Kong Road	74%	69%	76%	71%
J09	Prince Edward Road West / South Wall Road	0.91	0.69	0.90	0.69
J10	Prince Edward Road West / Lion Rock Road	0.46	0.49	0.46	0.49
J11	Prince Edward Road West / Fuk Lo Tsun Road	0.38	0.32	0.38	0.32
J12	Prince Edward Road West / Junction Road	37%	49%	37%	49%
J13	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	100%	>100%	>100%	>100%
J14	Junction Road / Tung Tau Tsuen Road	90%	54%	90%	54%
J15	Junction Road / Inverness Road	17%	35%	17%	35%
J16	Lung Kong Road / Carpenter Road	0.53	0.61	0.53	0.60
J17	Olympic Garden Roundabout	0.90	0.81	0.90	0.81

Note:

(1) Refer to Figure 3.1

(2) RC = reserved capacity, DFC = design flow/capacity ratio

Table 5.2 Junction Operational Performance (Year 2033 Weekend)

Ref (1)	Junction	RC/DFC (2)			
		2033 Reference		2033 Design	
		AM Peak	PM Peak	AM Peak	PM Peak
J01	Tung Tsing Road / Lok Sin Road / Sa Po Road	32%	30%	35%	32%
J02	Carpenter Road / Tak Ku Ling Road	89%	71%	90%	73%
J03	Carpenter Road / Lion Rock Road	78%	28%	78%	28%
J04	Junction Road / Carpenter Road	66%	48%	66%	48%
J05	Junction Road / Nga Tsin Wai Road	59%	48%	59%	49%
J06	Nga Tsin Wai Road / Lion Rock Road	>100%	75%	>100%	76%
J07	Nga Tsin Wai Road / Hau Wong Road	59%	52%	59%	53%
J08	Nga Tsin Wai Road / Lung Kong Road	68%	57%	69%	59%
J09	Prince Edward Road West / South Wall Road	0.77	0.80	0.77	0.80
J10	Prince Edward Road West / Lion Rock Road	0.42	0.45	0.42	0.44
J11	Prince Edward Road West / Fuk Lo Tsun Road	0.35	0.34	0.35	0.34
J12	Prince Edward Road West / Junction Road	46%	37%	47%	38%
J13	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	>100%	72%	>100%	73%
J14	Junction Road / Tung Tau Tsuen Road	86%	49%	86%	49%
J15	Junction Road / Inverness Road	29%	28%	29%	28%
J16	Lung Kong Road / Carpenter Road	0.51	0.68	0.50	0.67
J17	Olympic Garden Roundabout	0.84	0.86	0.84	0.86

Note:

(1) Refer to Figure 3.1

(2) RC = reserved capacity, DFC = design flow/capacity ratio

5.1.2 As shown in **Table 5.1** and **Table 5.2**, the identified critical junctions are projected to operate satisfactorily during peak hours in design year 2033. No adverse vehicular traffic impact from the Proposed Redevelopment is anticipated on the surrounding road network.

5.2 Pedestrian Walkway Assessment

5.2.1 The LOS assessment for the 2033 Reference and Design scenarios of weekday and weekend for the key pedestrian walkways is illustrated in **Figure 5.5 – 5.8** and summarised in **Table 5.3** and **5.4**.

Table 5.3 Pedestrian Walkways LOS (Year 2033 Weekday)

Walkway		Walkway Width (m)	Effective Width (m)	Pedestrian Flow (ped/hr)		LOS ⁽¹⁾	
				AM Peak	PM Peak	AM Peak	PM Peak
2033 Reference Scenario							
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	570	1600	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	1630	2990	A	B
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	525	1375	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	735	1940	A	B
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	675	1930	A	B
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	825	1450	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	540	1050	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	590	1055	A	A
2033 Design Scenario							
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	635	1395	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	1675	2835	A	B
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	540	1325	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	745	1910	A	B
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	690	1880	A	B
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	840	1405	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	555	1000	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	595	1025	A	A

Note:

(1) Refer to **Appendix E** for interpretation of LOS

Table 5.4 Pedestrian Walkways LOS (Year 2033 Weekend)

Walkway		Walkway Width (m)	Effective Width (m)	Pedestrian Flow (ped/hr)		LOS ⁽¹⁾	
				AM Peak	PM Peak	AM Peak	PM Peak
2033 Reference Scenario							
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	575	1605	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	1640	3005	A	B
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	515	1325	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	755	1955	A	B
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	720	1920	A	B
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	830	1530	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	545	1030	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	590	1060	A	A
2033 Design Scenario							
P1	Footpath at the eastern side of Kai Tak Road adjacent to Application Site	3	2	640	1400	A	A
P2	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	3.8	2.8	1690	2855	A	B
P3	Footpath at the southern side of Nga Tsin Wai Road adjacent to Yen Shing Building	2.6	1.6	530	1275	A	A
P4	Footpath at the northern side of Nga Tsin Wai Road adjacent to Hong Ning Building	2.5	1.5	765	1925	A	B
P5	Footpath at the southern side of Nga Tsin Wai Road adjacent to Fulcain House	2.5	1.5	735	1870	A	B
P6	Footpath at the northern side of Prince Edward Road West adjacent to Sung Woi Toi Station Exit B2	4.2	3.2	845	1480	A	A
P7	Footpath at the northern side of Prince Edward Road East adjacent to Tak Ku Ling Road Rest Garden	2.6	1.6	560	980	A	A
P8	Footpath at the southern side of Ma Tau Chung Road adjacent to Dakota Drive	2.5	1.5	600	1030	A	A

Note:

(1) Refer to **Appendix E** for interpretation of LOS

5.2.2 From **Table 5.3**, all the identified key pedestrian walkways would operate satisfactorily with LOS of B or above. No adverse pedestrian traffic impact from the current S16 Planning Proposal is anticipated on the surrounding network.

6 SUMMARY AND CONCLUSION

6.1 Summary

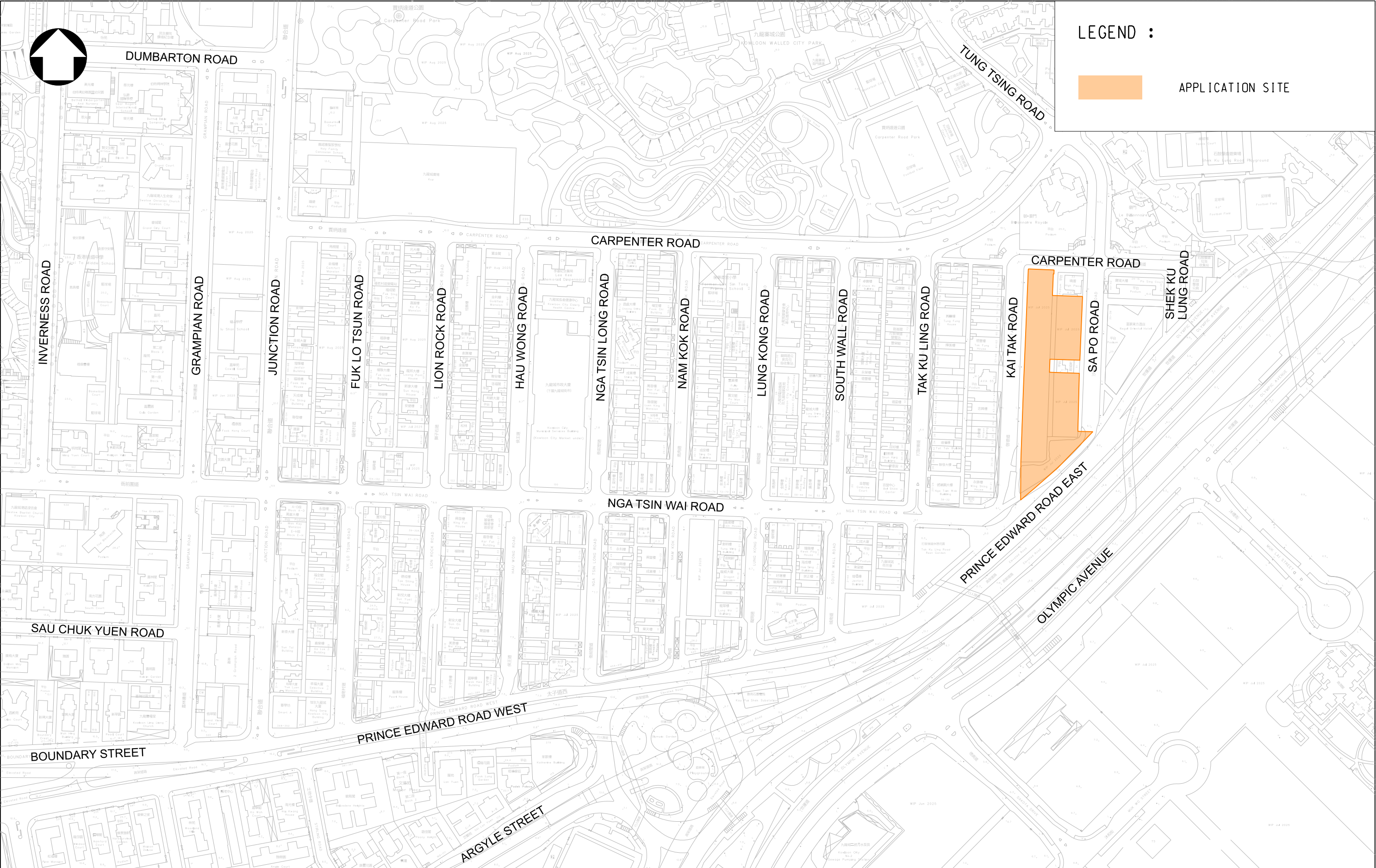
- 6.1.1 Aurecon Hong Kong Limited was commissioned as a sub-consultant to prepare the Traffic Impact Assessment (TIA) for the Section 16 submission for KC-015. This application will seek Town Planning Board (TPB) approval for a minor relaxation of the domestic plot ratio from 7.5 to 8.0 and the building height restriction from 120 mPD to 140 mPD for the Application Site (i.e. the area zoned “R(A)” on the Approved DSP).
- 6.1.2 This S16 Planning Application is a non-scheme-based submission. The notional design and indicative development parameters provided in the application are solely for illustration purpose and for conducting necessary technical assessments. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S16 Planning Application.
- 6.1.3 The Application Site is bounded by Carpenter Road, Kai Tak Road and Sa Po Road. The vehicular access was proposed at the same location with the previously approved TIA, one access is located at Sa Po Road, and one access is located at Kai Tak Road. To enhance the overall efficiency and smooth internal parking operation, the vehicular accesses have been rearranged to one ingress and one egress for all vehicles.
- 6.1.4 The parking provision aligns with the Land Grant requirements. Under the current design, the loading/unloading (L/UL) area is proposed on the G/F, while car parking spaces (including public and ancillary car parking spaces) will be provided in B1/F to B2/F of the basement levels and on 1/F to 4/F of the podium. The technical note regarding parking demand and supply assessment, submitted to the TD on 11 April 2025, indicated that 195 public vehicle parking spaces are sufficient to cater to future unmet demand. This note received no in-principle objection on 15 April 2025 (refer to Appendix B). In view of this, the provision of PVP spaces has been reduced from 300 to 217, which remains a conservative approach.
- 6.1.5 The previous traffic proposal (i.e. the Realignment of Sa Po Road and Enhanced Pedestrian Connectivity between Kowloon City and Kai Tak Development Area via the Sunken Plaza and USS) was approved in the previous TIA report to improve safety issues and enhance landscaping have been retained and incorporated in the current S16 Planning Proposal. No new traffic proposals have been introduced under the current S16 Planning Application.

- 6.1.6 Traffic surveys have been conducted to establish the current traffic conditions in the vicinity of the subject site. Despite the latest surveyed traffic data is approx. 15% - 20% lower than that in the previously approved TIA report, this TIA report has adopted the traffic data from the previously approved TIA report as a conservative approach. The junction capacity assessments revealed that all identified local junctions are currently operating with ample capacity.
- 6.1.7 The operational performance of the identified local junctions and footpath have been assessed based on the anticipated year 2033 traffic flows and the pedestrian flow. The anticipated trip generation of the currently proposed scheme (i.e., the current S16 Planning Application) is expected to be higher during the AM peak period and slightly lower during the PM peak period for better traffic and pedestrian flow, compared with the previously approved scheme (i.e., the Approved DSP). The impact of the development on traffic and pedestrian flow is expected to be insignificant, with no adverse effects anticipated.

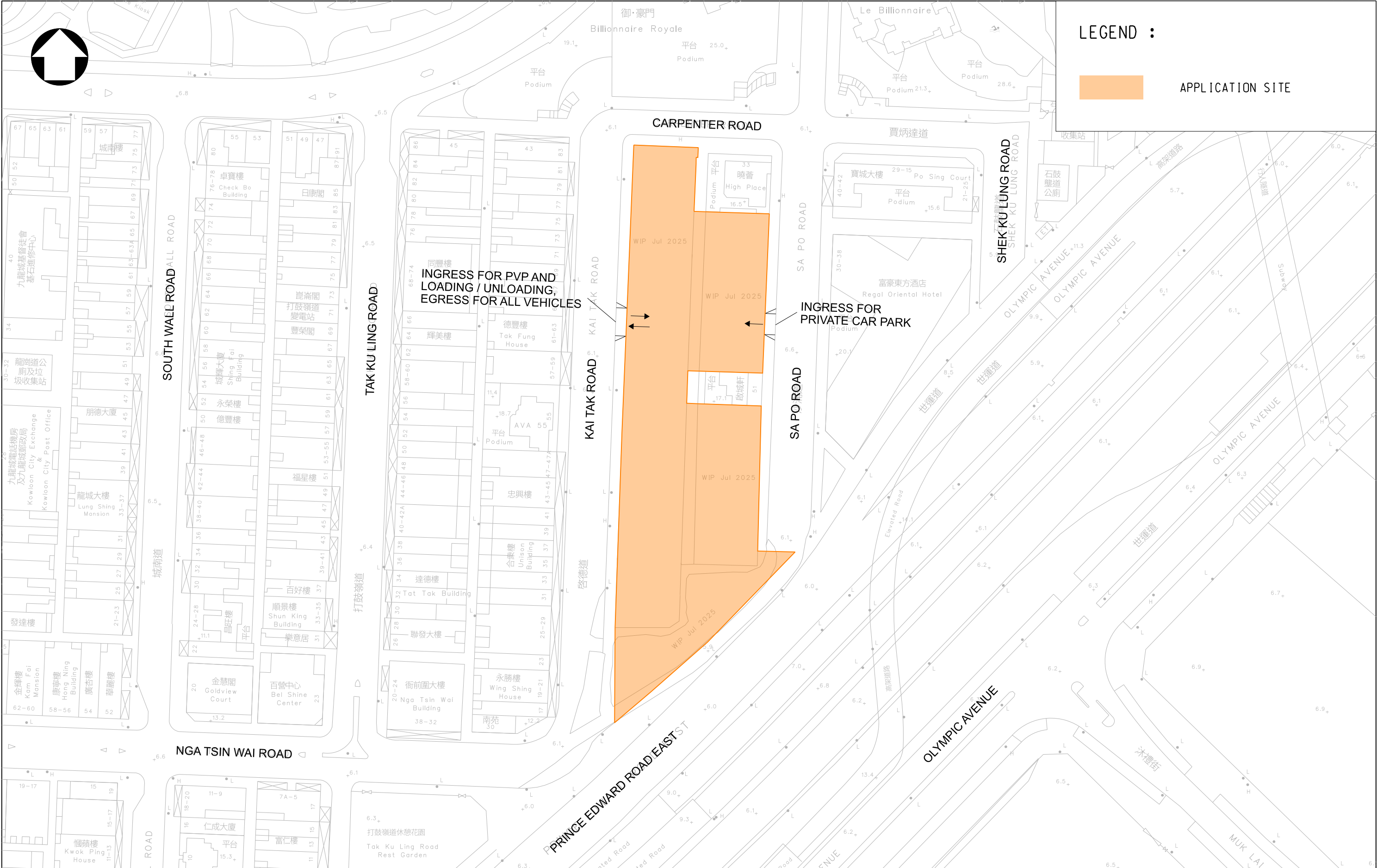
6.2 Conclusion

- 6.2.1 The traffic impact assessment results indicate that any additional traffic caused by the S16 Planning Application can be adequately absorbed by the existing surrounding road network without causing significant congestion or delay. Therefore, from a traffic engineering perspective, the proposed development is acceptable and will not generate significant negative traffic impacts in the vicinity.

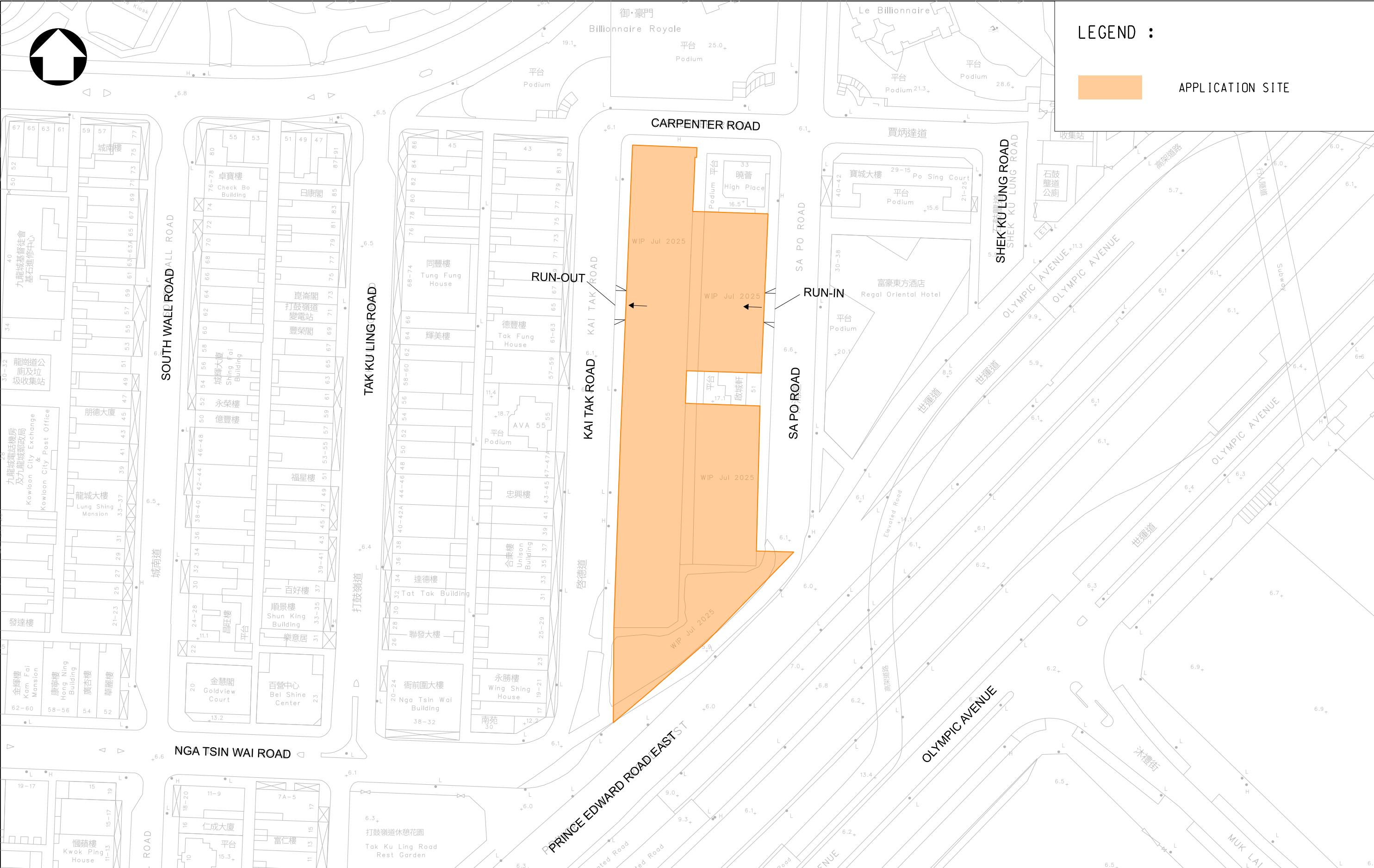
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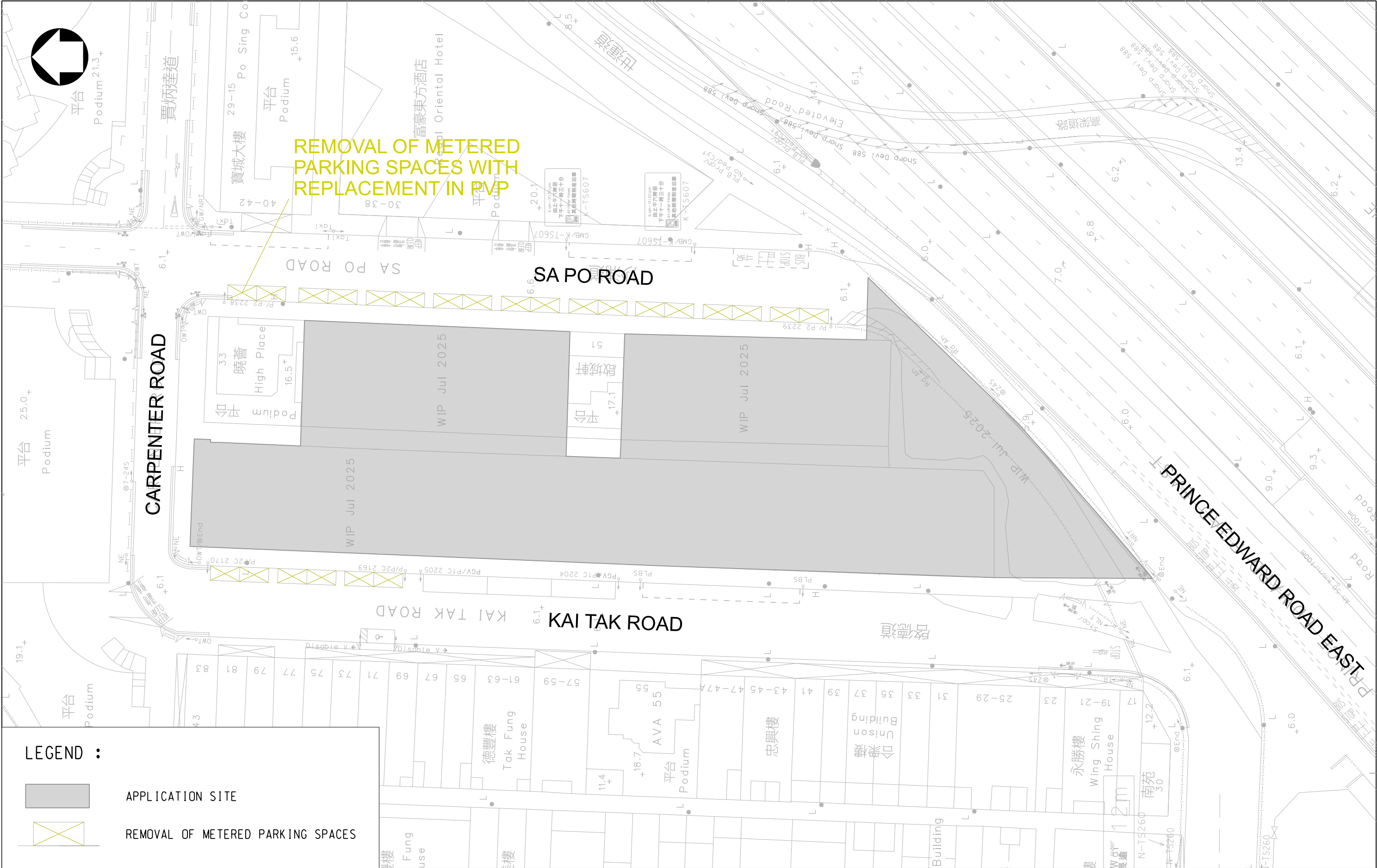
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 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				SITE LOCATION					
Designed	HL	Checked	RP	Scale	1:2500(A3)	Date	MAY 2026	Figure No.	2.1	Rev.	-



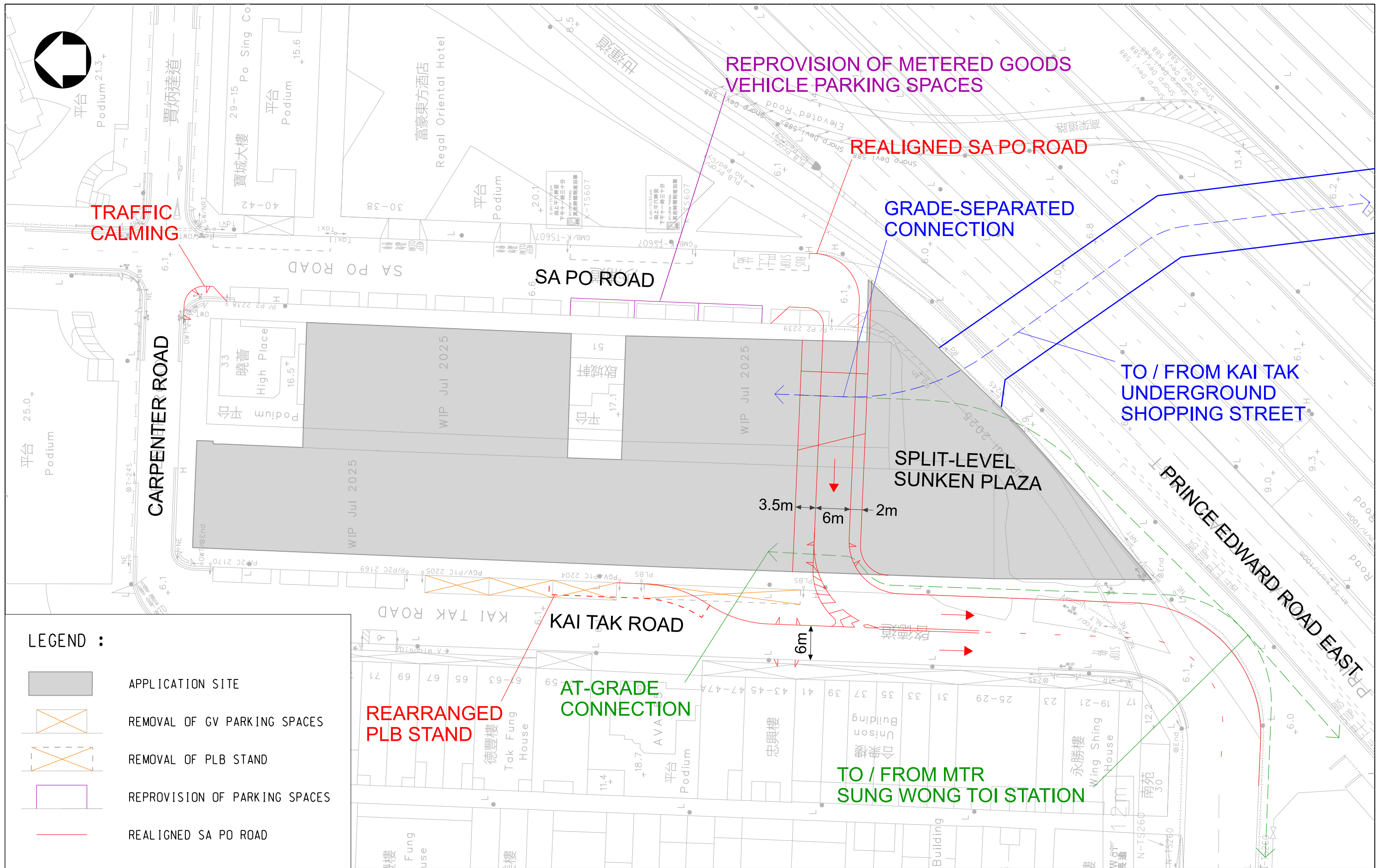
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 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				VEHICULAR ACCESS LOCATION (FROM PREVIOUSLY APPROVED TIA)					
Designed	HL	Checked	RP	Scale	1:1000(A3)	Date	MAY 2026	Figure No.	2.2	Rev.	-



Consultant		Project Title				Drawing Title					
 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				VEHICULAR ACCESS LOCATION					
Designed	HL	Checked	RP	Scale	1:1000(A3)	Date	MAY 2026	Figure No.	2.3	Rev.	-



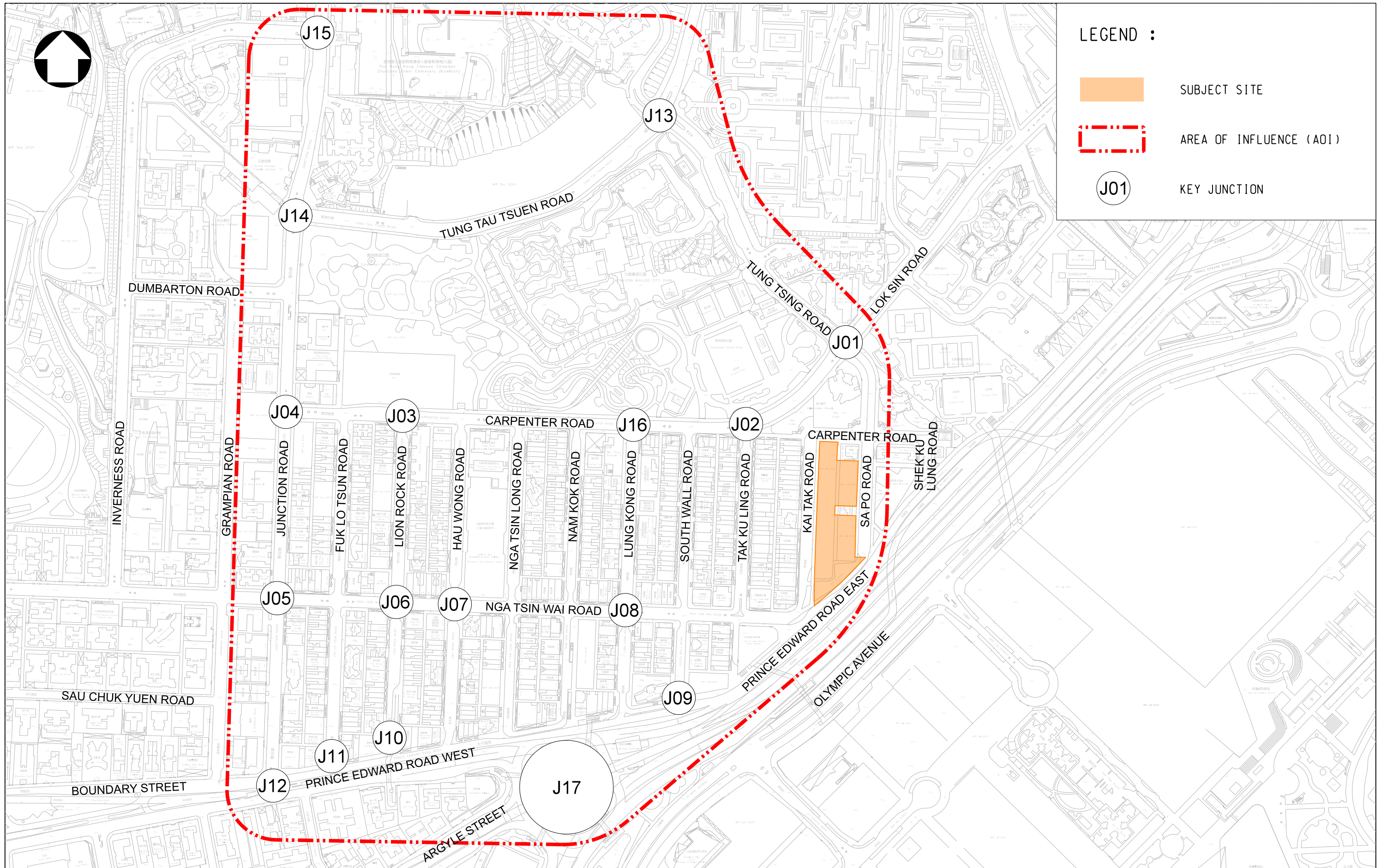
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aurecon www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				AFFECTED METERED PARKING SPACES LOCATION			
Designed	HL	Checked	RP	Scale	1:600 (A3)	Date	MAY 2026	Figure No.	2.4
								Rev.	-



LEGEND :

- APPLICATION SITE
- REMOVAL OF GV PARKING SPACES
- REMOVAL OF PLB STAND
- REPROVISION OF PARKING SPACES
- REALIGNED SA PO ROAD

Consultant		Project Title			Drawing Title				
aurecon		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)			SCHEMATIC REALIGNMENT OF SA PO ROAD (FROM PREVIOUSLY APPROVED TIA)				
www.aurecongroup.com		Designed HL		Checked RP	Scale 1:600 (A3)	Date MAY 2026	Figure No.	2.5	Rev. -

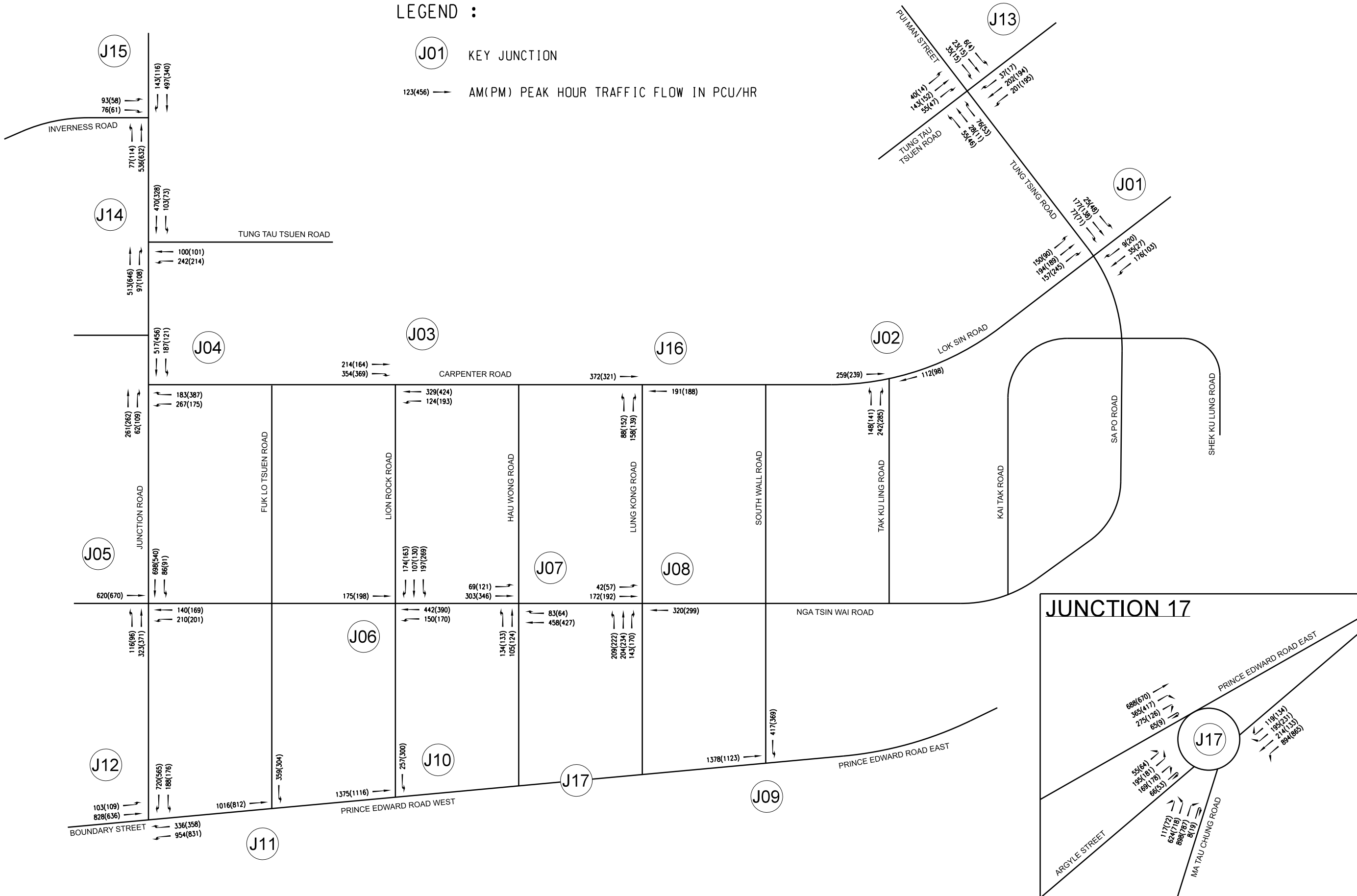


Consultant aurecon www.aurecongroup.com	Project Title URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)	Drawing Title IDENTIFIED KEY JUNCTIONS				
		Designed HL	Checked RP	Scale 1:3500(A3)	Date MAY 2026	Figure No. 3.1

LEGEND :

J01 KEY JUNCTION

123(456) → AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR

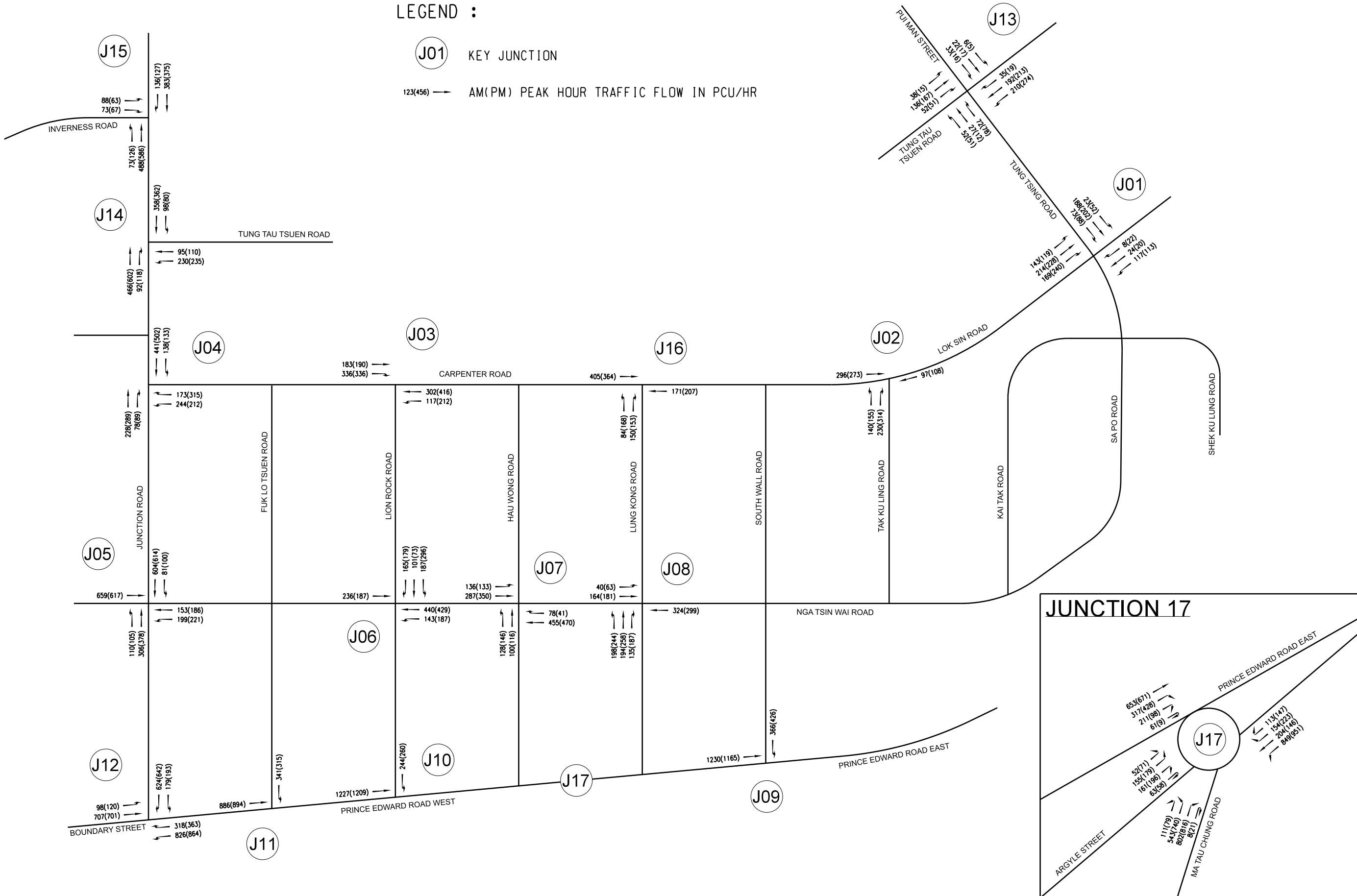


Consultant aurecon www.aurecongroup.com	Project Title URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)	Drawing Title 2019 OBSERVED TRAFFIC FLOW (WEEKDAY)				
		Designed	HL	Checked	JY	Scale
						NTS
		Date	NOV 2025	Figure No.	3.2	Rev.
						-

LEGEND :

J01 KEY JUNCTION

123(456) → AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR



Consultant

aurecon
www.aurecongroup.com

Project Title

URBAN RENEWAL AUTHORITY
KAI TAK ROAD / SA PO ROAD
DEVELOPMENT SCHEME (KC-015)

Drawing Title

2019 OBSERVED TRAFFIC FLOW (WEEKEND)

Designed

HL

Checked

JY

Scale

NTS

Date

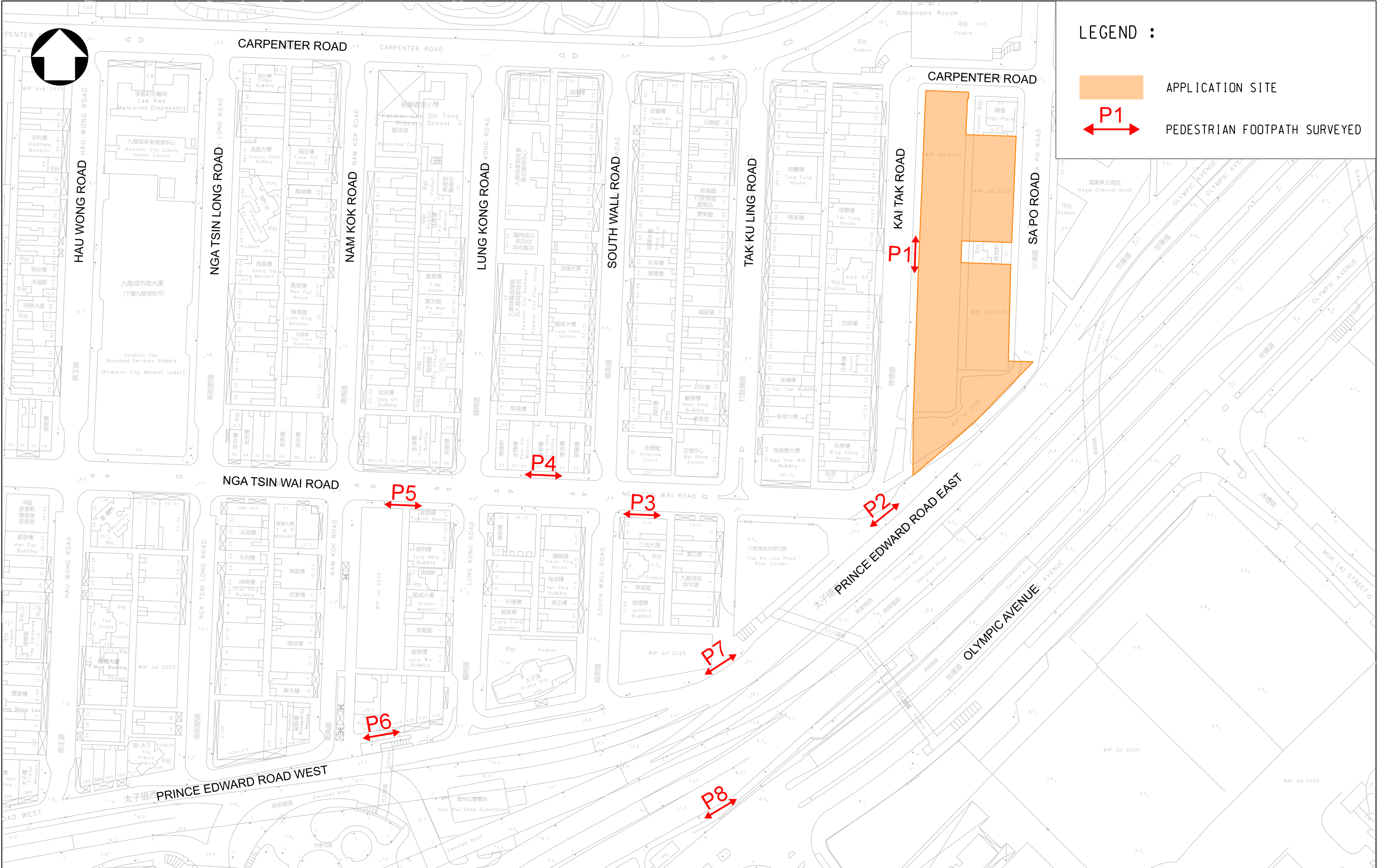
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Figure No.

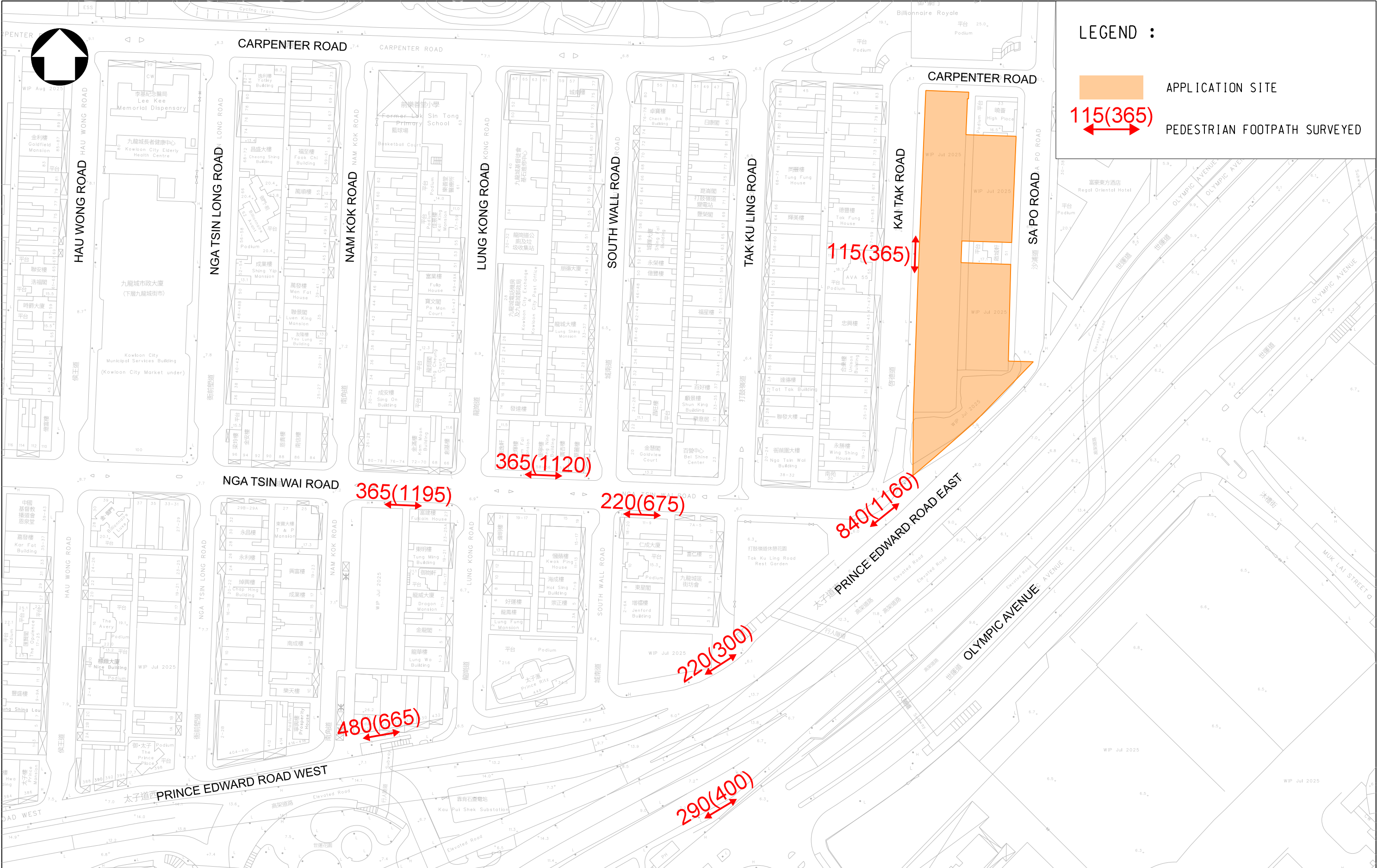
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Rev.

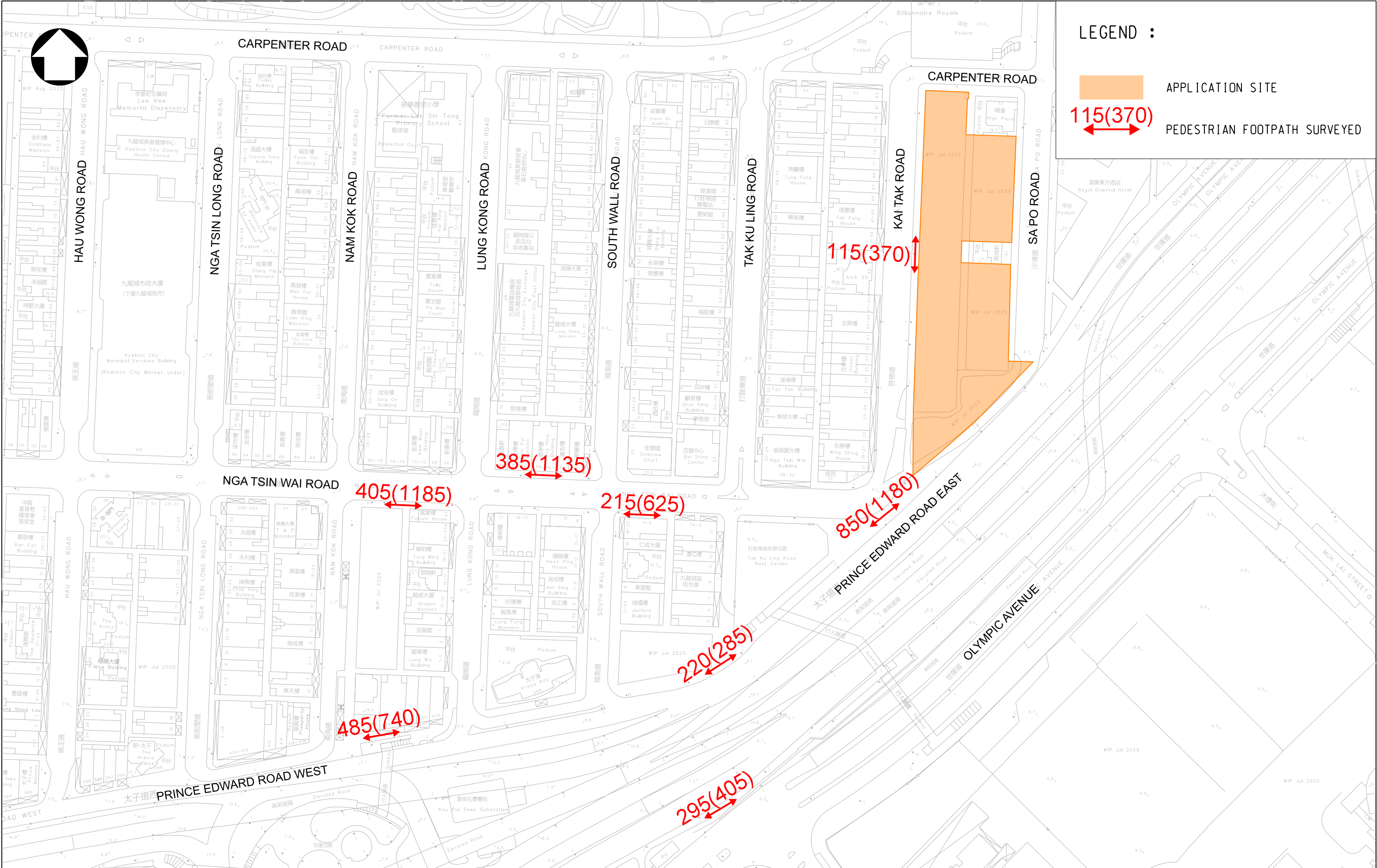
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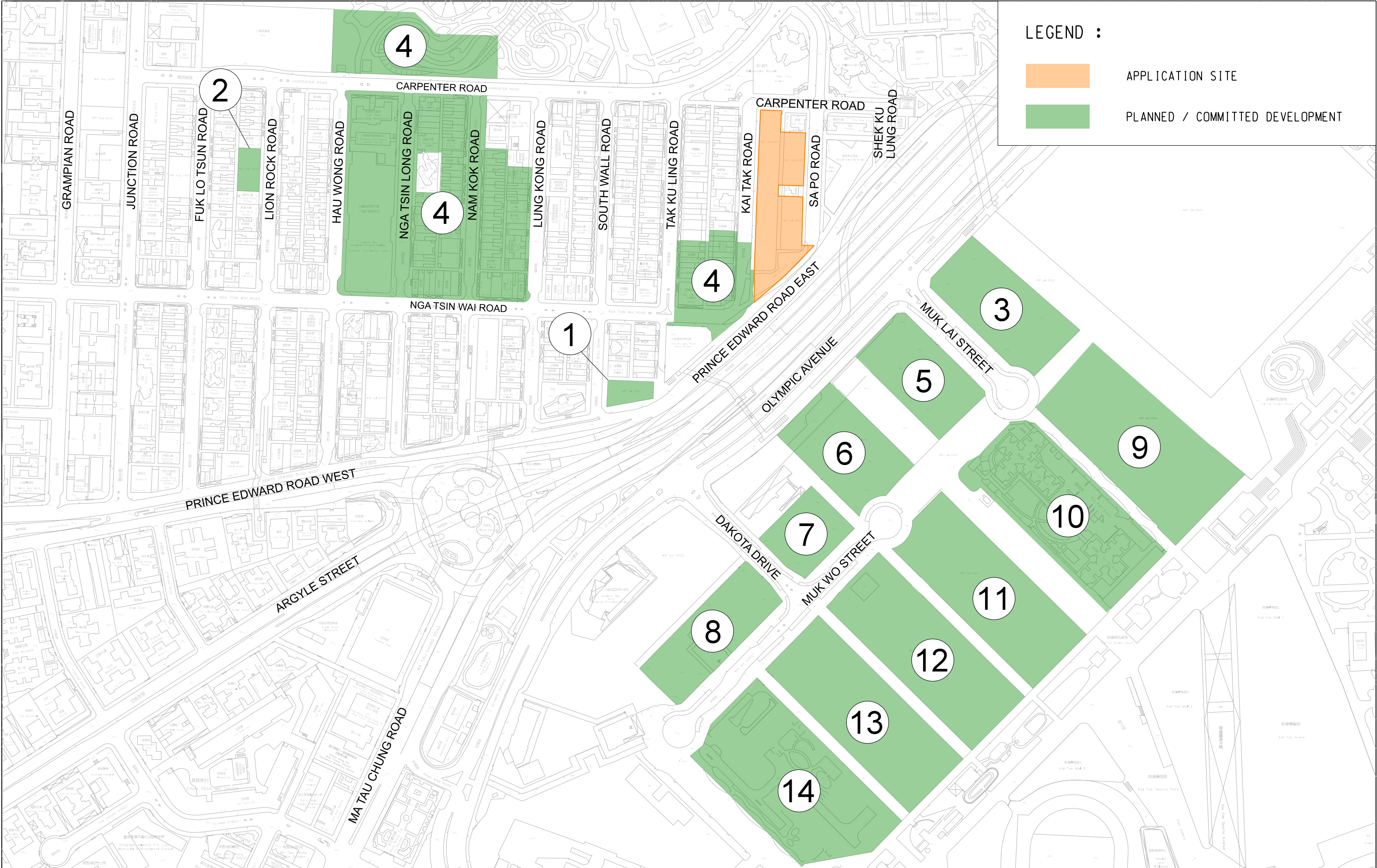
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 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				IDENTIFIED PEDESTRIAN WALKWAYS			
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								Rev.	-



Consultant		Project Title				Drawing Title			
aurecon www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				2025 OBSERVED PEDESTRIAN FLOW (WEEKDAY)			
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									Rev. -



Consultant		Project Title				Drawing Title			
aurecon www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				2025 OBSERVED PEDESTRIAN FLOW (WEEKEND)			
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								Rev.	-

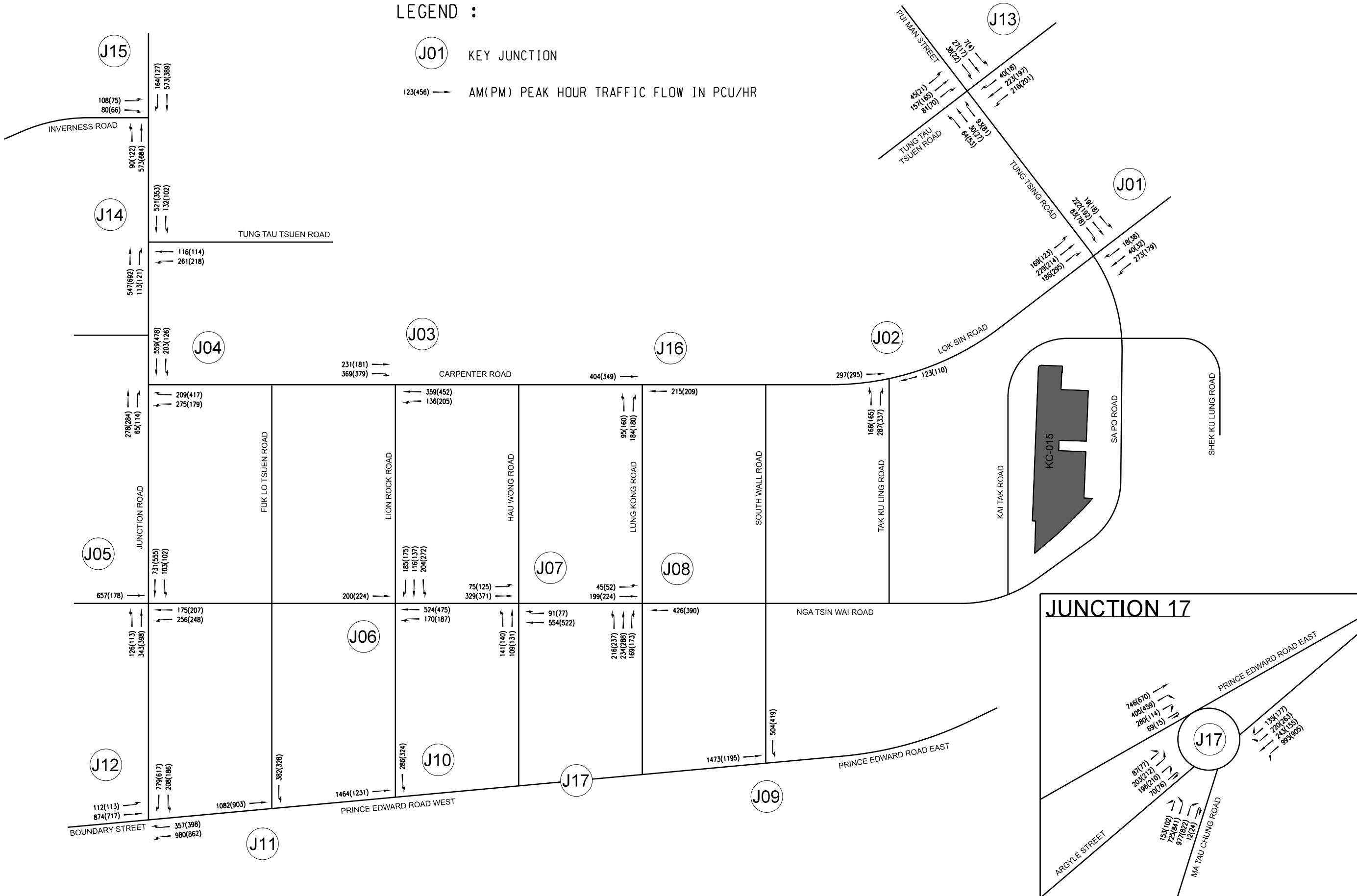


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LEGEND :

J01 KEY JUNCTION

123(456) → AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR

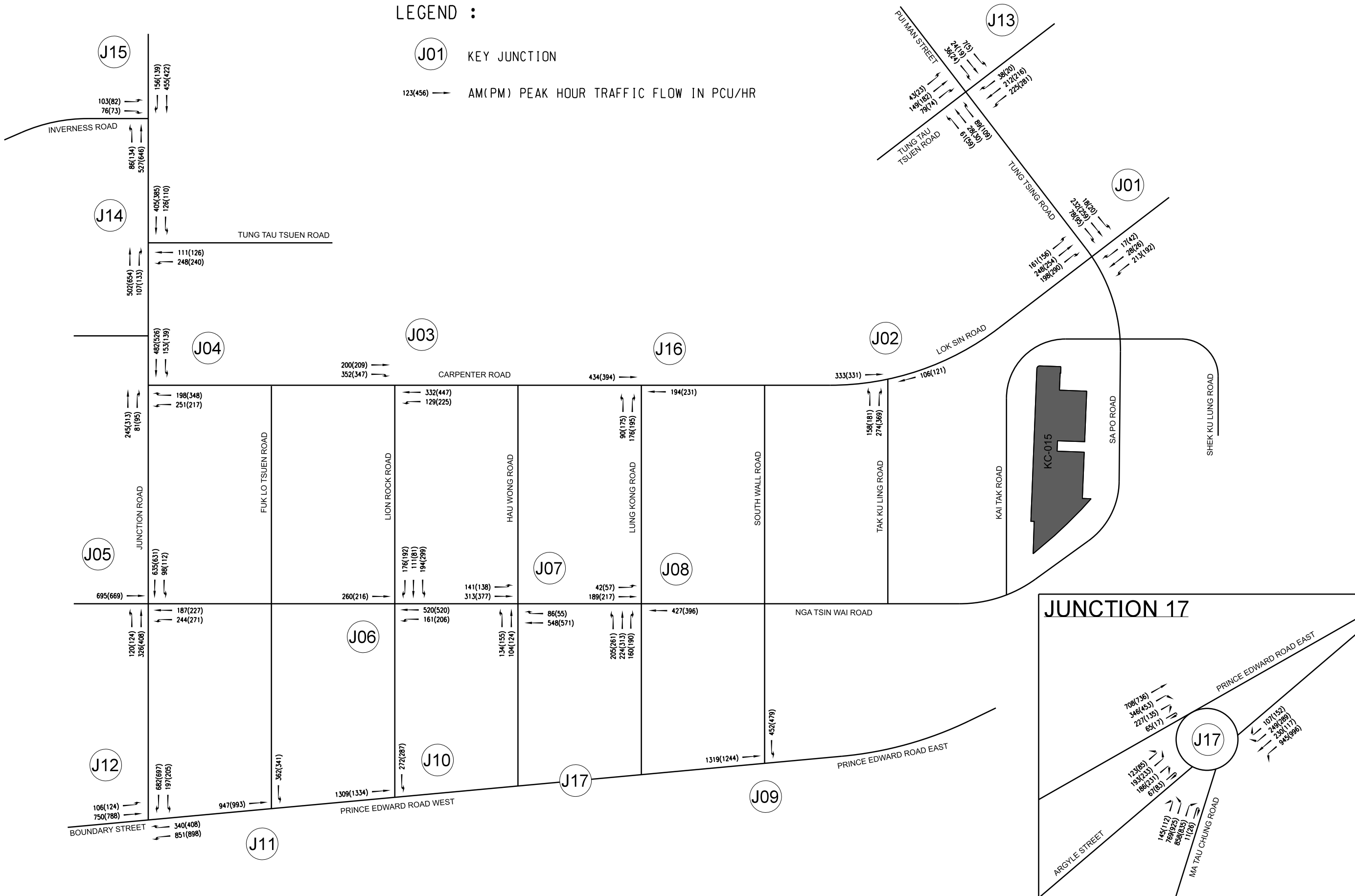


consultant  www.aurecongroup.com	Project Title		Drawing Title											
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			Designed	HL	Checked	RP	Scale	NTS	Date	APR 2026	Figure No.	5.1	Rev.	-

LEGEND :

J01 KEY JUNCTION

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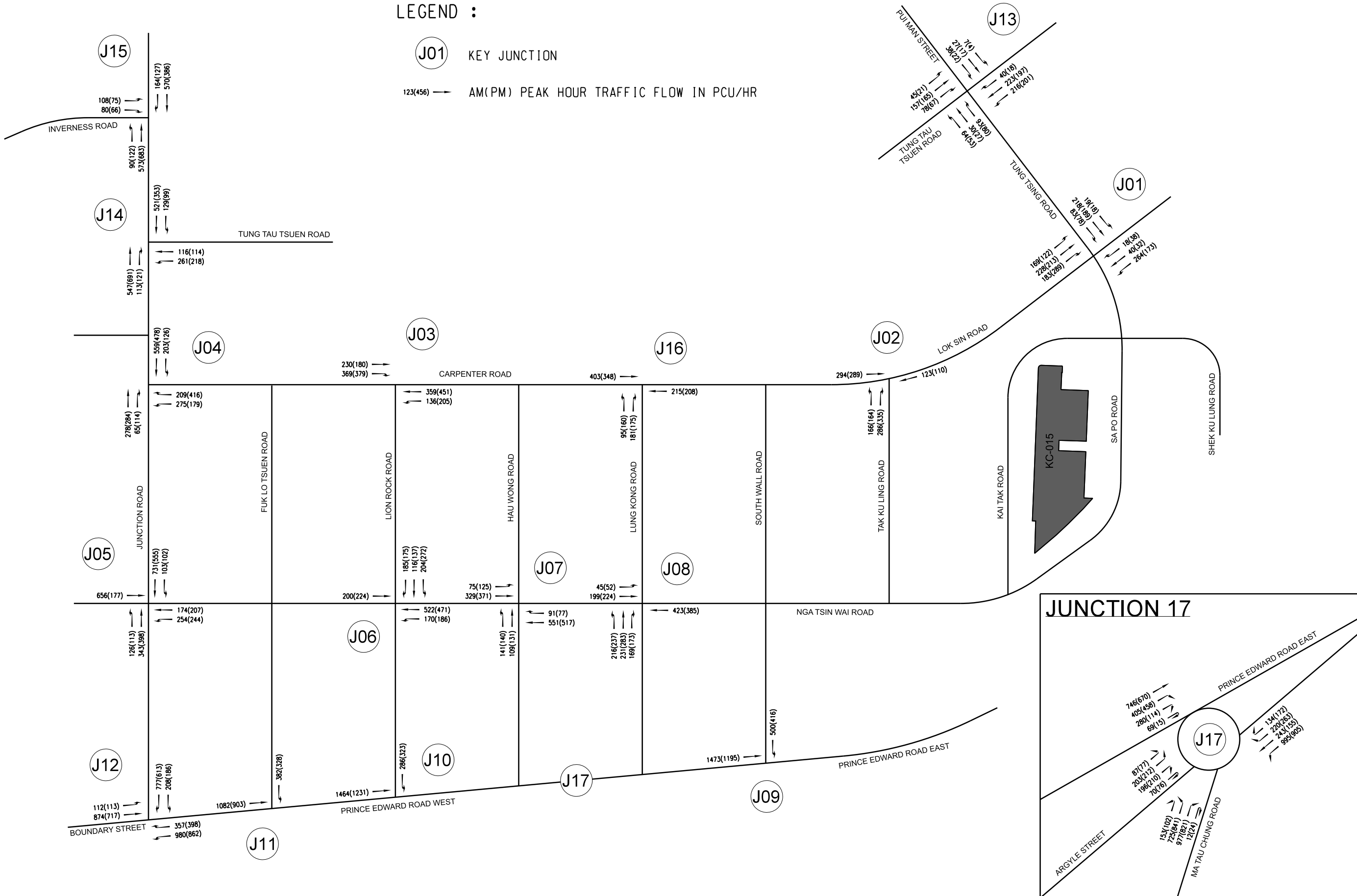


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Designed	HL	Checked	RP	Scale	NTS	Date	APR 2026	Figure No.
								5.2
						Rev.	-	

LEGEND :

J01 KEY JUNCTION

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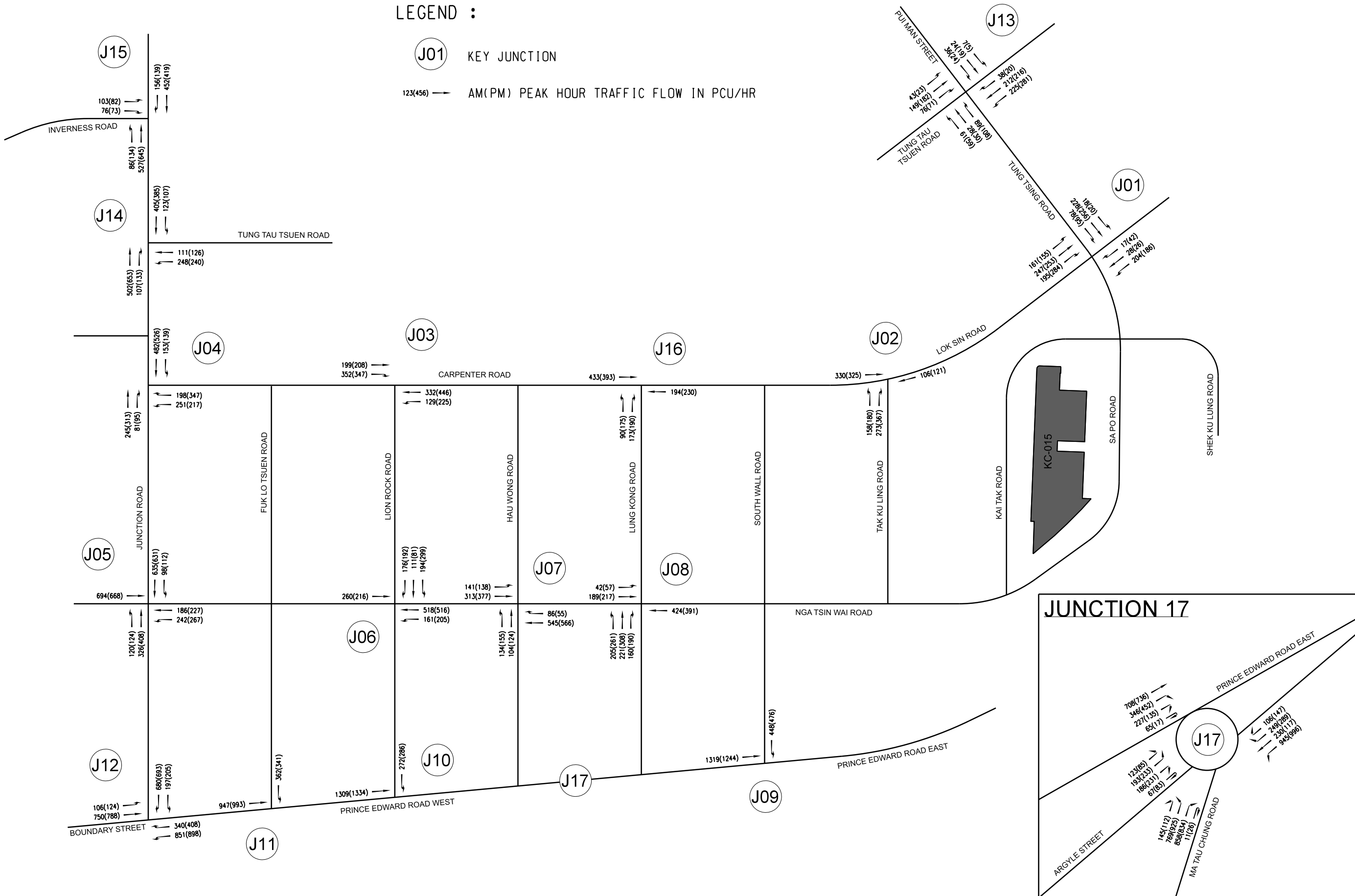


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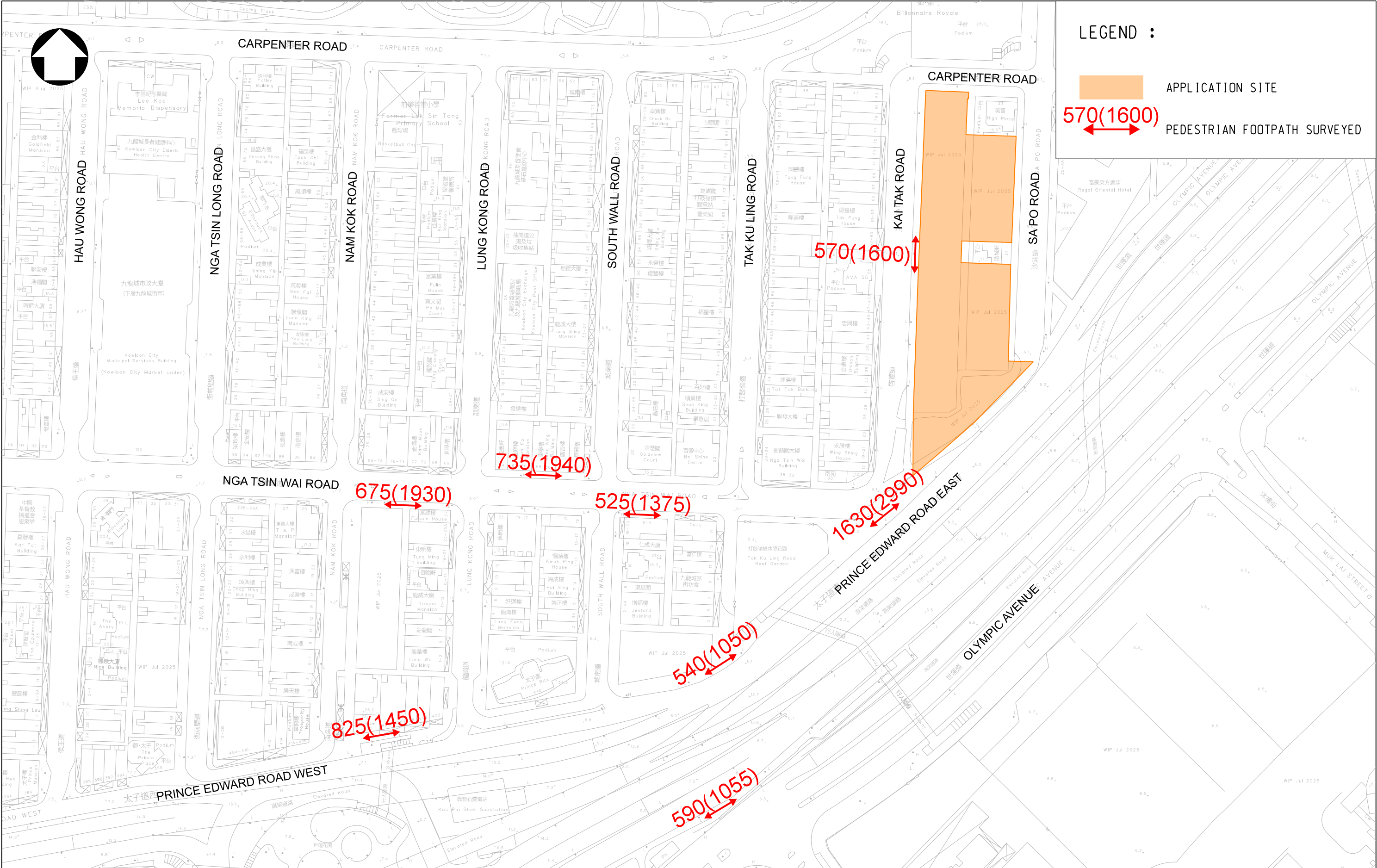
LEGEND :

J01 KEY JUNCTION

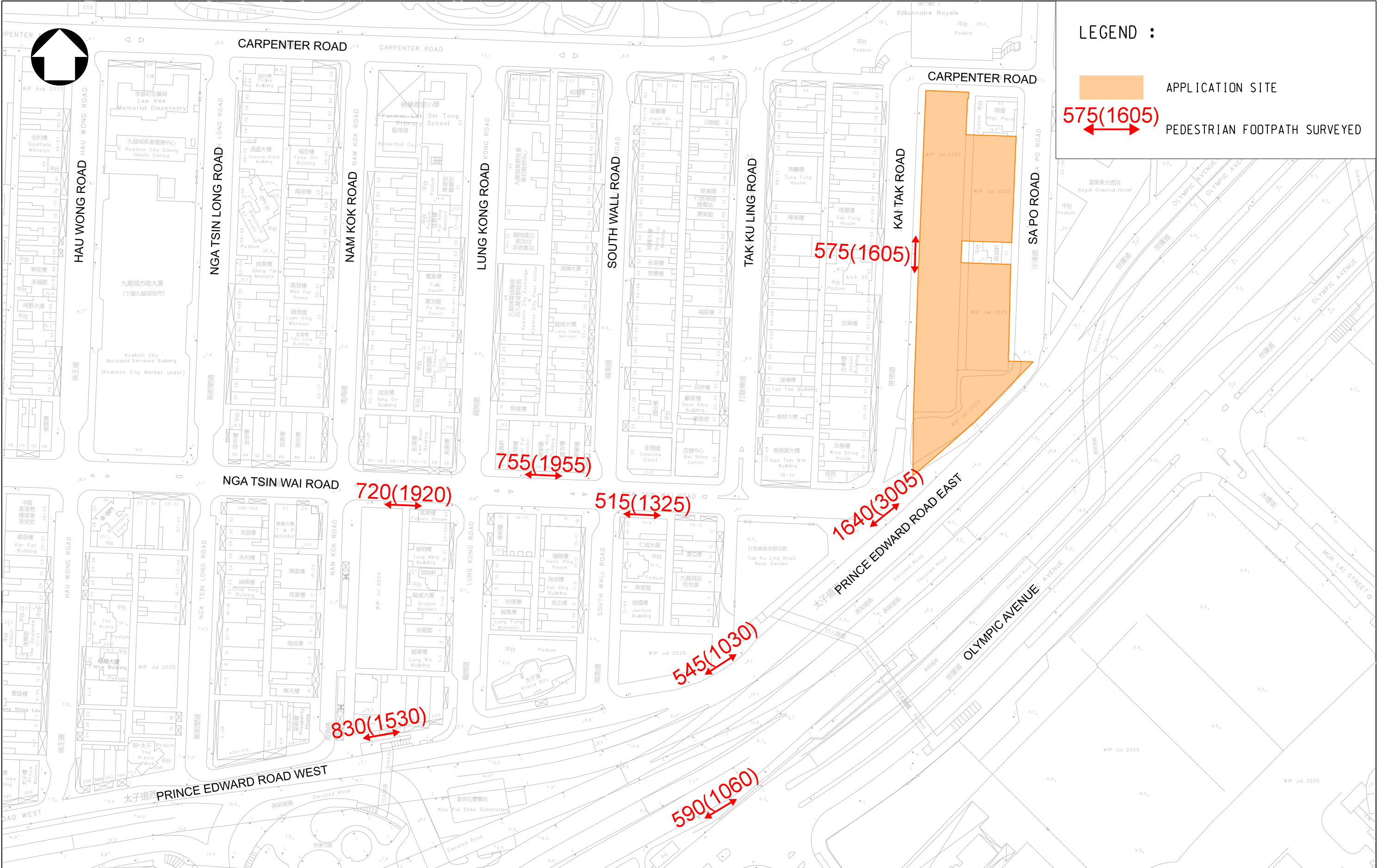
123(456) → AM(PM) PEAK HOUR TRAFFIC FLOW IN PCU/HR



consultant  www.aurecongroup.com	Project Title																	
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			Drawing Title															
			2033 DESIGN TRAFFIC FLOW (WEEKEND)															
Designed			HL	Checked		RP	Scale		NTS	Date		APR 2026	Figure No.		5.4	Rev.		-



Consultant		Project Title				Drawing Title					
 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				2023 REFERENCE PEDESTRIAN FLOW (WEEKDAY)					
Designed	HL	Checked	RP	Scale	1:1500(A3)	Date	MAY 2026	Figure No.	5.5	Rev.	-



LEGEND :



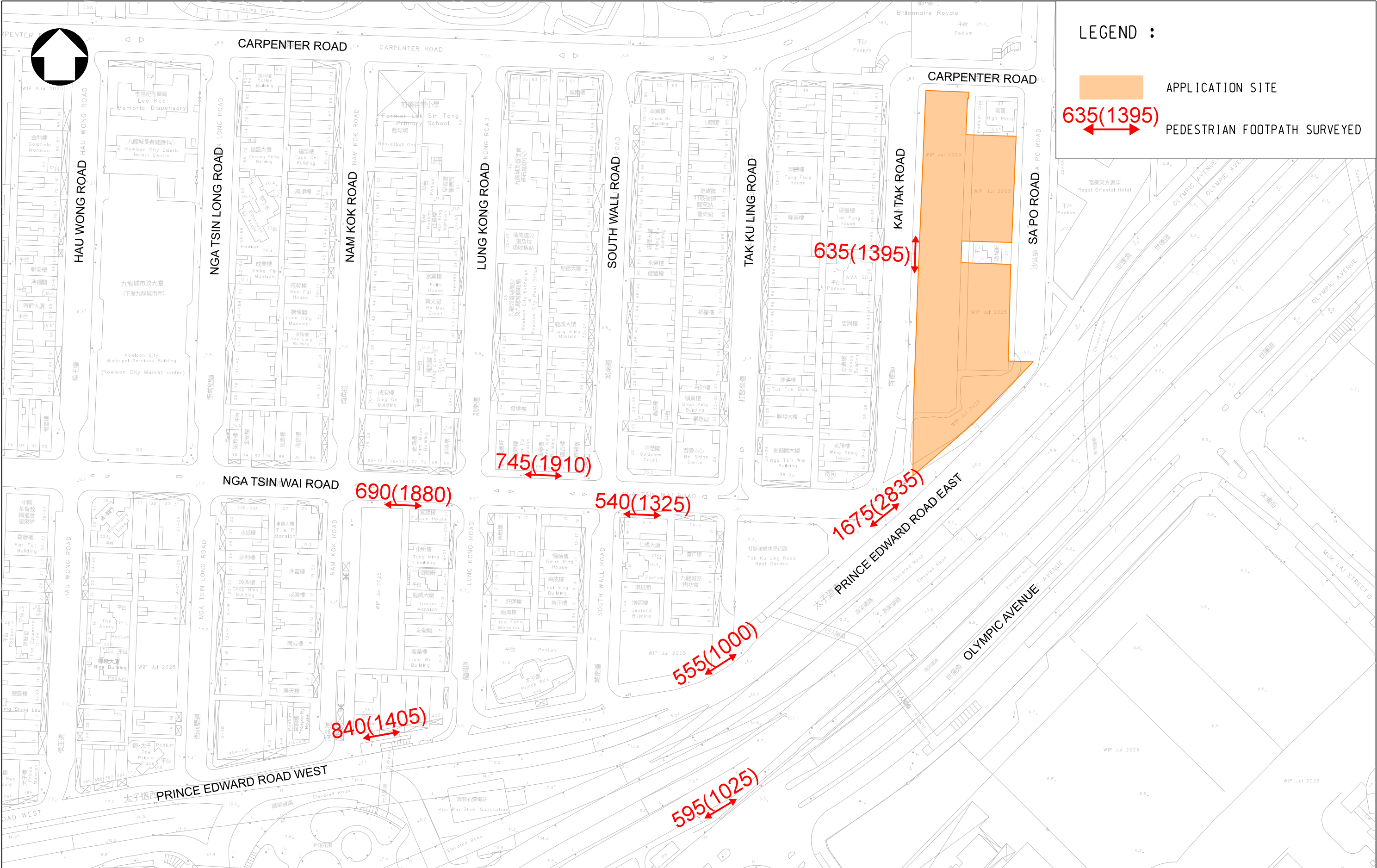
APPLICATION SITE

575(1605)



PEDESTRIAN FOOTPATH SURVEYED

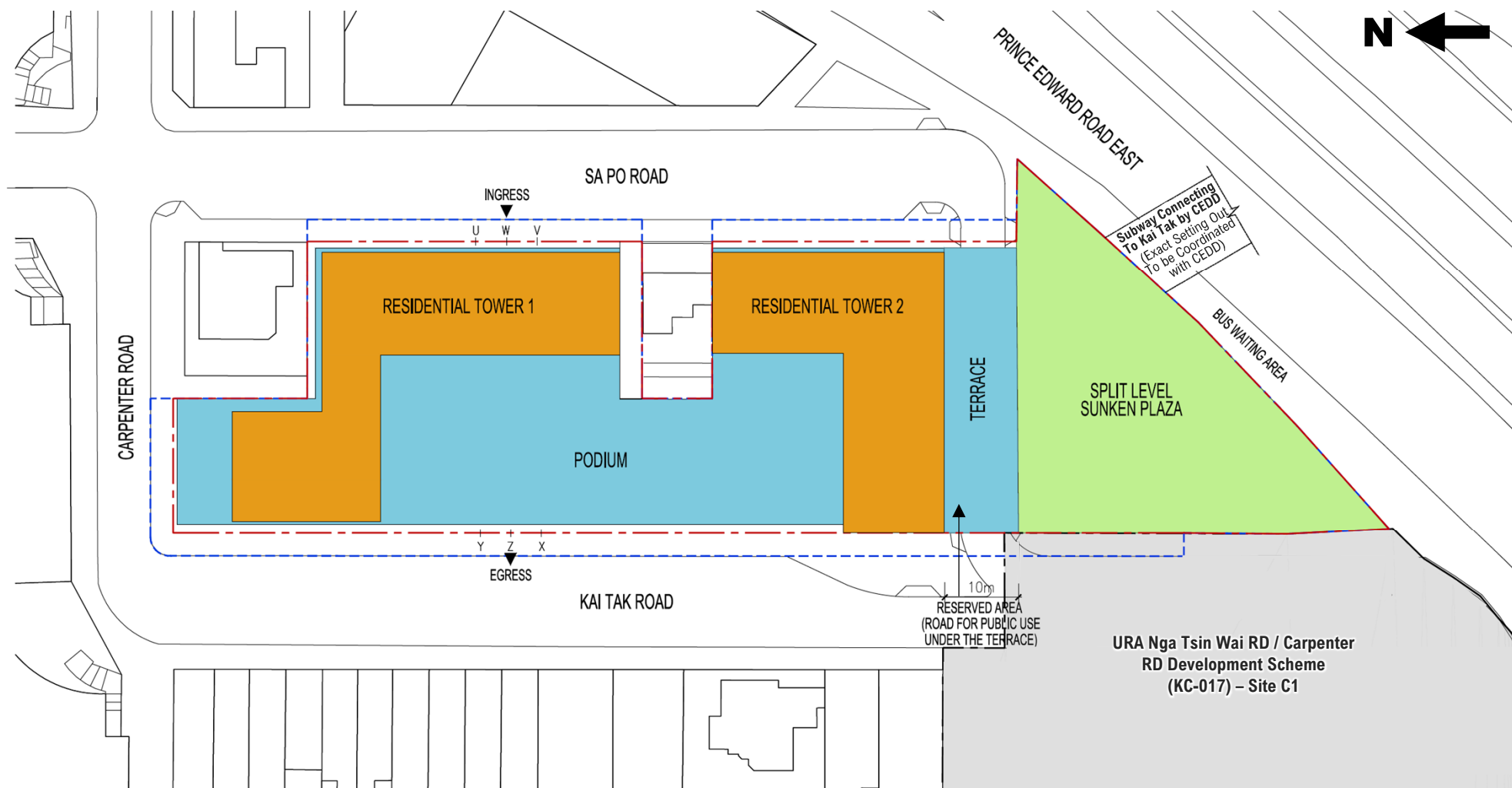
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									Rev.



Consultant		Project Title				Drawing Title			
 www.aurecongroup.com		URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)				2033 DESIGN PEDESTRIAN FLOW (WEEKDAY)			
Designed	HL	Checked	RP	Scale	1:1500(A3)	Date	MAY 2026	Figure No.	5.7
									Rev. -

Appendix A

Notional Design



NOT TO SCALE

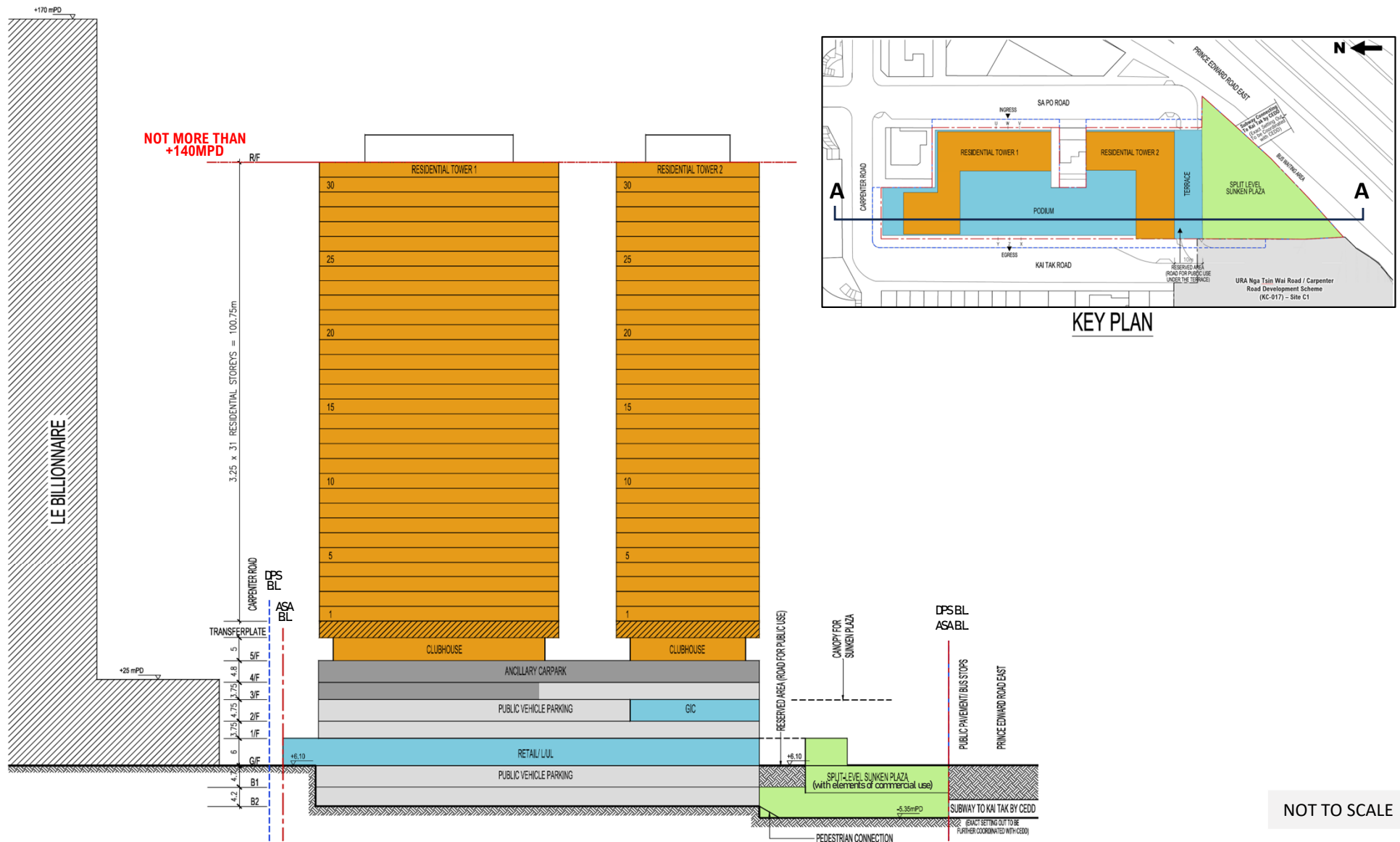
Remarks:
This S16 Planning Application is a “non-scheme-based” submission. This notional design layout is solely for illustration purpose and for conducting necessary technical assessments. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S16 Planning Application.

- DSP Boundary
- Application Site Area
(Area Zoned “R(A)”)

NOTIONAL BLOCK PLAN
URA KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)
VISUAL IMPACT ASSESSMENT



Figure 2.1



Remarks:
This S16 Planning Application is a “non-scheme-based” submission. This notional design layout is solely for illustration purpose and for conducting necessary technical assessments. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S16 Planning Application.

- DSP Boundary
- Application Site Area (Area Zoned “R(A)”)

NOTIONAL SECTION PLAN

URA KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)

VISUAL IMPACT ASSESSMENT

Appendix B

Technical Note on Public Vehicle Park of URA Kai Tak Road / Sa Po Road Development Scheme (KC-015)

Hugo Li

From: Hon Yeung LI [REDACTED]
Sent: 2025年4月15日星期二 15:26
To: Hugo Li
Cc: Dickens Lo; Leon Ting; Chan, Lily; Vincent Ka Lok CHOW
Subject: Fw: KC-015 - Technical Note on Public Vehicle Park of Urban Renewal Authority Kai Tak Road / Sa Po Road Development Scheme

[External email] This email was sent from outside Aurecon. Do not click links or open attachments unless you were expecting the email and know that the content is safe.

Dear Hugo,

I refer to the captioned Technical Note.

Considering the proposed provision of 195 nos. of PVP car parking spaces, which is determined using the principles set out in TD DC no. 4/2022 with the latest parking demand survey and would lead to a more conservative number compared with the approach adopted in the 2019 TIA, I have no objection in principle to your proposed 195 nos. of PVP car parking spaces under KC-015.

Regards,
Simon LI
EK/KC, TEK,TD
[REDACTED]

----- Forwarded by Hon Yeung LI/TD/HKSARG on 15/04/2025 09:35 AM -----

From: "Hugo Li" [REDACTED]
To: [REDACTED] <[REDACTED]>
Cc: "Dickens Lo" [REDACTED], "Leon Ting" [REDACTED], "Chan, Lily" [REDACTED]
Date: 11/04/2025 10:41 AM
Subject: KC-015 - Technical Note on Public Vehicle Park of Urban Renewal Authority Kai Tak Road / Sa Po Road Development Scheme

Dear Simon,

We have been appointed by Urban Renewal Authority to carry out the Study on the Technical Note on Public Vehicle Park of Urban Renewal Authority Kai Tak Road / Sa Po Road Development Scheme. Please find the enclosed TN of the captioned study for your review and comment.

Due to the tight programme of this project, your prompt response on or before 25 April 2025 would be very much appreciated.

Should you have any queries, please contact Mr. Hugo Li on [REDACTED] or via email: [REDACTED]

Best regards,

Hugo Li
Assistant Traffic Engineer, Aurecon
Tel: [REDACTED]

At Aurecon, we encourage flexible working. If you receive an email from us outside your work hours, we don't expect you to read it, act on it, or reply until you return.

Unit 1608, 16/F, Tower B, Manulife Financial Centre, 223 – 231 Wai Yip Street, Kwun Tong, Kowloon Hong Kong S. A. R.

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Aurecon Hong Kong Limited
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223-231 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong

T +852 3664 6888
F +852 3664 6999
E hongkong@aurecongroup.com
W aurecongroup.com



Your ref:
Our ref: 523348/SO017/OC001/HL
Date: 11 April 2025

By POST

Transport Department
Urban Regional Office
Traffic Engineering (Kln.) Division
Kln. District Central Section
8/F, Mongkok Government Offices
30 Luen Wan Street
Mongkok
Kowloon

Attn: Mr LI Hon Yeung, Simon
Engr/Kowloon City

Dear Mr LI

**Term Traffic Study and Assessment Consultancy Services
for the Urban Renewal Authority Projects
Technical Note on Public Vehicle Park of Urban Renewal Authority Kai Tak Road / Sa Po Road
Development Scheme**

We have been appointed by Urban Renewal Authority to carry out the Study on the Technical Note on Public Vehicle Park of Urban Renewal Authority Kai Tak Road / Sa Po Road Development Scheme. Please find the enclosed TN of the captioned study for your review and comment.

Due to the tight programme of this project, your prompt response on or before 25 April 2025 would be very much appreciated.

Should you have any queries, please contact Mr. Hugo Li on tel: [REDACTED] or via email: [REDACTED]

Yours sincerely
for and on behalf of
Aurecon Hong Kong Limited

A handwritten signature in blue ink, appearing to be "Jacky Yeung", written over a light blue circular stamp.

Jacky YEUNG
Project Manager

Encl

cc URA Chan, Lily (by email)

**SC-2023/003 Term Traffic
Study and Assessment
Consultancy Services for
the Urban Renewal
Authority Projects**

**Technical Note on
Public Vehicle Park of
Urban Renewal
Authority Kai Tak Road
/ Sa Po Road
Development Scheme
(KC-015)**

Urban Renewal Authority

Reference: 523348

Revision: 0

2025-04-11

1 BACKGROUND

- 1.1 Urban Renewal Authority (URA) appointed Aurecon Hong Kong Limited (Aurecon) in January 2023 to undertake Term Traffic Study and Assessment Consultancy Services for the Urban Renewal Authority Projects.
- 1.2 URA issued Service Order No. 017 to Aurecon in February 2025 to conduct a traffic study revisiting the proposed parking provision at the public vehicle park (PVP) of the proposed Urban Renewal Authority Kai Tak Road / Sa Po Road Development Scheme (KC-015).
- 1.3 This Technical Note aims to update the estimation of the unmet parking demand in the vicinity of KC-015 from two approaches: (i) same parking catchment area and same approach on projecting the future parking demand as in the KC-015 TIA approved by TD in 2019 (the 2019 Approved TIA) and (ii) Transport Department Departmental Circular No. 4/2022 (DC4/2022).

2 PUBLIC CAR PARKING DEMAND AND PROVISION AT KC-015

Development Site

- 2.1 KC-015 is bounded by Sa Po Road to the east, Prince Edward Road East to the south, Kai Tak Road to the west, and Carpenter Road to the north, as shown in **Figure 2.1**. The project is expected to be completed by 2030.

Approach 1 – the 2019 Approved TIA

- 2.2 In the 2019 Approved TIA, the parking demand surveys were conducted on weekdays and weekends for the eastern part of Kowloon City Action Area 3 (KC-AA3), which approximately covers the area of 300-meter from KC-015, as shaded blue in **Figure 2.2**.
- 2.3 The latest parking demand surveys were conducted on 21 February 2025 (Friday), 22 February 2025 (Saturday), and 23 February 2025 (Sunday), with the illegal parking and utilisation of the on-street metered parking within the parking catchment were recorded. The survey results are summarized in **Table 2.1** and **Table 2.2**, the peak period for parking demand occurred in weekend daytime, which would be adopted for the later analysis.

Table 2.1 Approach 1 – Surveyed Car Parking Demand (Weekday)

Road	No. of on-street metered parking space ^{(1) (2)}	Daytime Demand		Midnight Demand	
		No. of Illegal Parking	Total On-street Demand	No. of Illegal Parking	Total On-street Demand
Shek Ku Lung Road	9	1	10	0	9
Sa Po Road	2	10	12	9	11
Kai Tak Road	3	22	25	13	16
Tak Ku Ling Road	16	19	35	9	25
South Wall Road	32	26	58	0	24
Lung Kong Road	33	21	54	2	35
Nam Kok Road	47	11	58	0	31
Carpenter Road	18	11	29	0	13
Total	160	121	281	33	164

Note:

- (1) The number of on-street metered parking spaces was determined based on on-site observations and HKeMeter data
- (2) Includes accessible parking space
- (3) Includes both metered and illegal parking

Table 2.2 Approach 1 – Surveyed Car Parking Demand (Weekend)

Road	No. of on-street metered parking space ^{(1) (2)}	Daytime Demand		Midnight Demand	
		No. of Illegal Parking	Total On-street Demand	No. of Illegal Parking	Total On-street Demand
Shek Ku Lung Road	9	1	10	0	8
Sa Po Road	2	13	15	5	7
Kai Tak Road	3	21	24	10	12
Tak Ku Ling Road	16	25	41	7	23
South Wall Road	32	21	53	1	33
Lung Kong Road	33	30	63	9	42
Nam Kok Road	47	12	59	0	30
Carpenter Road	18	15	33	0	17
Total	160	138	298	32	172

Note:

- (1) The number of on-street metered parking spaces was determined based on on-site observations and HKeMeter data
 (2) Includes accessible parking space
 (3) Includes both metered and illegal parking

2.4 Comparing the latest survey results with the 2019 Approved TIA (**Table 2.3**), the 2025 on-street parking demands are generally lower than those in 2018.

Table 2.3 Car Parking Demand in 2019 Approved TIA

Road	Daytime Demand			Midnight Demand		
	Metered	Illegal	Total	Metered	Illegal	Total
Weekday						
2025 Survey	160	121	281	160	33	164
2018 Survey	149	122	271	149	140	289
Weekend						
2025 Survey	160	138	298	160	32	172
2018 Survey	149	166	315	149	149	298

2.5 In projecting the parking demand for year 2033 (i.e., the completion year +3 years), a growth factor was derived from the traffic volumes at road links within the parking catchment, and the traffic volumes were extracted from the 2019-based Base District Traffic Models (BDTM) issued by Transport Department. The concerned road links are shown in **Figure 2.3** and the growth factor is derived in **Table 2.4**.

Table 2.4 2019 and 2031 Traffic Flows from 2019-based BDTM

Year	Summation of Traffic Volumes at Road Links in Figure 2.3 (pcu/hr)	Annual Growth Rate (p.a.) between year 2019 and 2031
2019	5,384.2	-0.71%
2031	4,941.5	

2.6 As shown in **Table 2.4**, the traffic forecasts from BDTM indicate a negative growth of -0.71% p.a. from 2019 to 2031. However, a nominal growth rate of +0.5% per annum is adopted for projecting the 2025 surveyed parking demand to 2033.

- 2.7 In **Table 2.5**, the projected 2033 car parking demand is estimated to be 310 nos., about 138 on-street metered parking spaces would be available within the parking catchment upon redevelopment of KC-015, hence the 2033 unmet parking demand estimated under Approach 1 is 172 nos.

Table 2.5 Approach 1 – 2033 Unmet Car Parking Demand

Parameters	Approach 1 Calculations	
Surveyed peak on-street car parking demand (weekend daytime)	A	298 nos.
Traffic growth factor (from 2019-based BDTM)	B	0.5% p.a.
2033 on-street car parking demand	$C = A \times (1 + B)^8$	310 nos.
Number of on-street metered parking spaces to be retained upon redevelopment of KC-015	D	138 parking spaces
2033 unmet car parking demand estimated under Approach 1	$E = D - C$	172 nos.

Approach 2 – TD’s Departmental Circular No.4/2022

- 2.8 According to TD DC4/2022, an PVP generally serves an area within 500m from it. Given that the western portion of KC-AA3/ west of Nam Kok Road falls within KC-017’s parking catchment and the area on south side of Prince Edward Road East is severed by this wide thoroughfare, these two areas are therefore excluded from the service catchment of the proposed PVP in KC-015. The 500m parking catchment of KC-015 is illustrated in **Figure 2.4**.
- 2.9 Parking surveys in the 500m parking catchment were conducted on 21–23 February 2025 (for roads within the 300m from KC-015) and on 29–31 March 2025 (for roads outside the 300m but within 500m from KC-015). The results are summarised in **Tables 2.6** and **2.7**.
- 2.10 **Tables 2.6** and **2.7** shown that there was a total of approximately 300 nos. of on-street parking demand recorded in daytime, and approximately 170 nos. in midnight. The peak period occurred in weekend daytime, which will be adopted in the later analysis.
- 2.11 The future unmet parking demand shall take into account the parking needs arising from those adjacent committed/ planned developments without ancillary parking facilities. Two redevelopment sites located within the catchment area, as shown in **Table 2.8** and **Figure 2.5**, are currently under construction and were identified having no ancillary parking facility. Their parking demand calculated according to the mid-range requirement of the current HKPSG is presented in **Table 2.9**.
- 2.12 While the residents’ car parking requirement stipulated in HKPSG are ownership-related/ home-end demand corresponding to the maximum demand during night-time, some of these ownership-related demands would remain in the catchment area during day-time. Additionally, it is assumed that visitors’ need for a parking space would primarily arise during day-time. A traffic survey at residential development “Upper East”, which has similar transport characteristics as the two redevelopment sites mentioned above, was carried out to obtain data on the proportion of ownership-related parking demand that might remain during day-time. The parking demands of the two redevelopment sites are summarized in **Table 2.10**.

Table 2.6 Approach 2 – Surveyed Car Parking Demand (Weekday)

Road	No. of on-street metered parking space ^{(1) (2)}	Daytime Demand		Midnight Demand	
		No. of Illegal Parking	Total On-street Demand	No. of Illegal Parking	Total On-street Demand
Shek Ku Lung Road	9	1	10	0	9
Sa Po Road	2	10	12	9	11
Kai Tak Road	3	22	25	13	16
Tak Ku Ling Road	16	19	35	9	25
South Wall Road	32	26	58	0	24
Lung Kong Road	33	21	54	2	35
Nam Kok Road	47	11	58	0	31
Carpenter Road	18	11	29	0	13
Tung Tsing Road	0	3	3	1	1
Lok Sin Road	0	0	0	0	0
Tung Lei Road	4	0	4	0	4
Tung Tau Tsuen Road	0	1	1	3	3
Tung Lung Road	0	3	3	1	1
Tung Kwong Road	0	0	0	0	0
Total	164	128	292	9	173

Note:

- (1) The number of on-street metered parking spaces was determined based on on-site observations and HKeMeter data
- (2) Includes accessible parking space
- (3) Includes both metered and illegal parking

Table 2.7 Approach 2 – Surveyed Car Parking Demand (Weekend)

Road	No. of on-street metered parking space ^{(1) (2)}	Daytime Demand		Midnight Demand	
		No. of Illegal Parking	Total On-street Demand	No. of Illegal Parking	Total On-street Demand
Shek Ku Lung Road	9	1	10	0	8
Sa Po Road	2	13	15	5	7
Kai Tak Road	3	21	24	10	12
Tak Ku Ling Road	16	25	41	7	23
South Wall Road	32	21	53	1	33
Lung Kong Road	33	30	63	9	42
Nam Kok Road	47	12	59	0	30
Carpenter Road	18	15	33	0	17
Tung Tsing Road	0	3	3	0	0
Lok Sin Road	0	0	0	0	0
Tung Lei Road	4	0	2	0	2
Tung Tau Tsuen Road	0	2	2	1	1
Tung Lung Road	0	2	2	2	2
Tung Kwong Road	0	0	0	0	0
Total	164	143	307	13	177

Note:

- (1) The number of on-street metered parking spaces was determined based on on-site observations and HKeMeter data
- (2) Includes accessible parking space
- (3) Includes both metered and illegal parking

Table 2.8 Committed / Planned Development Without Ancillary Parking

Ref No.	Planned/ Committed Development	Proposed Use	No. of Units
1	456-464 Prince Edward Road West	Residential	200 Flats ⁽¹⁾
2	Eight Southpark	Residential	313 Flats ⁽²⁾

Note:

- (1) From BD's Monthly Digest, the total GFA for domestic use is 5,793 m², it is assumed that the average flat size is similar to that of Eight Southpark, and is about 29m², the estimated number of flats is therefore 200.
- (2) Information from BD's Monthly Digest.

Table 2.9 Car Parking Demand of the Two Adjacent Redevelopment Sites

Ref No.	Planned/ Committed Development ^{(1) (2)}	Residents Parking ⁽³⁾	Visitors Parking
1	456-464 Prince Edward Road West	14	5
2	Eight Southpark	21	5
Total		35	10

Note:

- (1) Maximum domestic plot ratio under Ma Tau Kok OZP S/K10/30 is 7.5.
- (2) Assumed no retails.
- (3) Benchmarking 2021 HKPSG mid-range requirement.

Table 2.10 Unmet Car Parking Demand of the Two Adjacent Redevelopment Sites

Demand Type		Residents' Parking Demand	Visitors' Parking Demand	Total
		Ownership-related/ home-end	Usage-related/ destination-end	
Physical parking space required during peak period	Day-time	67% ⁽¹⁾	100%	33
		35 ⁽²⁾ x 67% = 23	10 ⁽²⁾ x 100% = 10	
	Night-time	100%	0%	35
		35 ⁽²⁾ x 100% = 35	10 ⁽²⁾ x 0 % = 0	

Note:

- (1) Refer to para. 2.13, the proportion of ownership-related parking demand that might remain during day-time at "Upper East" was 67%.

	Upper East	456-464 PERW	Eight Southpark
Location	Sung On Street, To Kwa Wan	South Wall Street, Kowloon City	Nam Kok Road, Kowloon City
PT within 300m	Yes	Yes	Yes
Total GFA	30,210m ²	5,793m ²	9,135m ²
No. of residential units	1,008	200	313
Average flat size	30m ²	29m ²	29m ²

- (2) Refer to **Table 2.9**

2.13 The 2033 unmet parking demand estimated from adopting DC4/2022 is 195 nos. and detailed in **Table 2.11**, below.

Table 2.11 Approach 2 – 2033 Unmet Parking Demand

Parameters	Approach 2 Calculations	
Surveyed peak on-street car parking demand (weekend daytime)	A	307 nos.
Parking demand of committed/ planned developments remain in KC-015 parking catchment during weekend daytime t ⁽¹⁾	B	33 nos.
2033 on-street car parking demand	C = A + B	340 nos.
Number of on-street metered parking spaces to be retained upon redevelopment of KC-015	D	145 parking spaces
2033 unmet car parking demand estimated under Approach 2	E = D – C	195 nos.

Note:

(1) Refer to **Table 2.10**

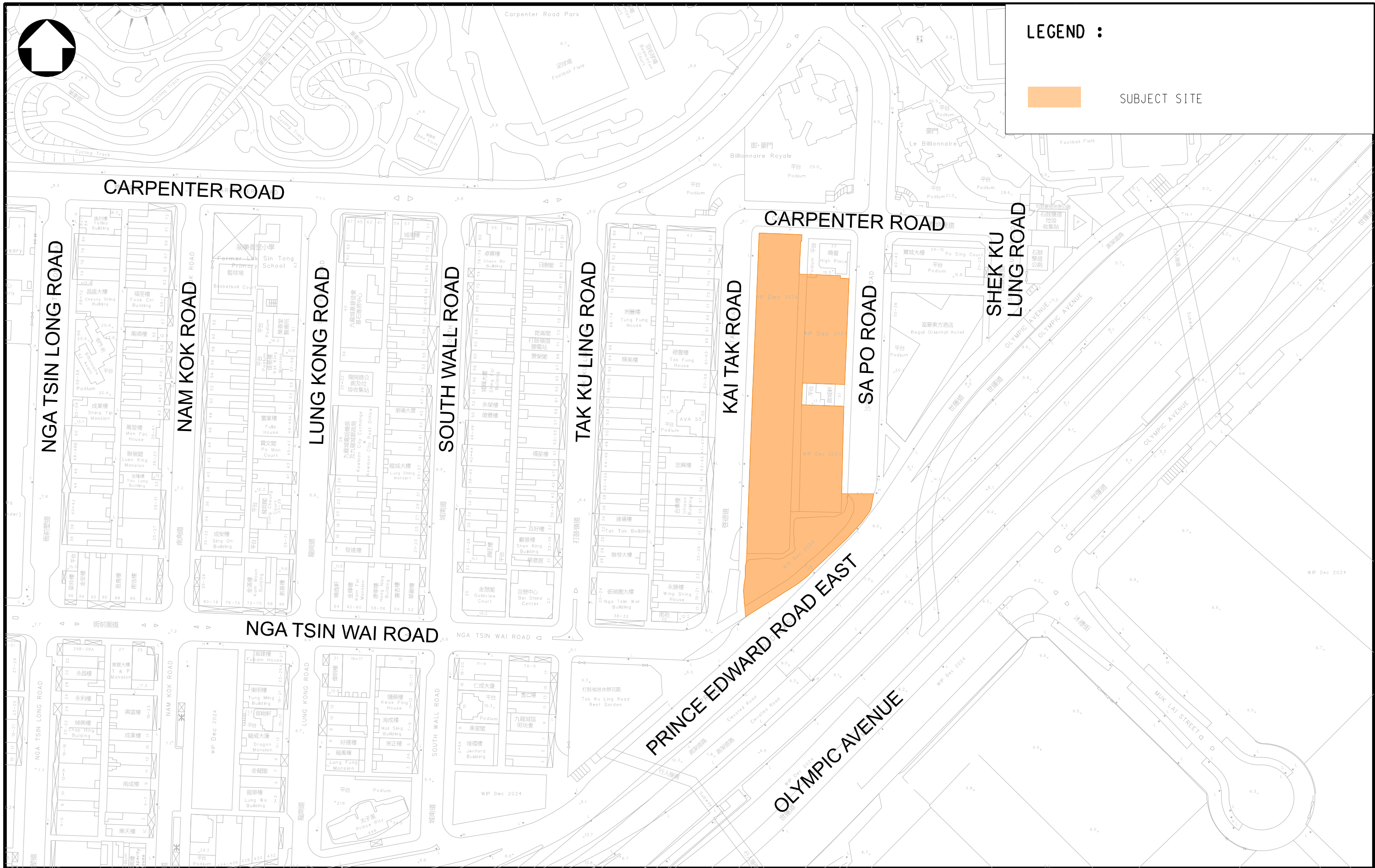
PVP parking spaces will be provided within KC-015

2.14 **Table 2.12** recapitulates the 2033 unmet parking demand derived from different approaches and survey data. It is suggested to adopt the results estimated from the approach stipulated in TD's Departmental Circular No. 4/2022. To conclude, a total of **195 nos.** of car parking spaces to cater for the future unmet parking demand will be provided in the proposed PVP in KC-015.

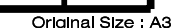
Table 2.12 2033 Unmet Parking Demand

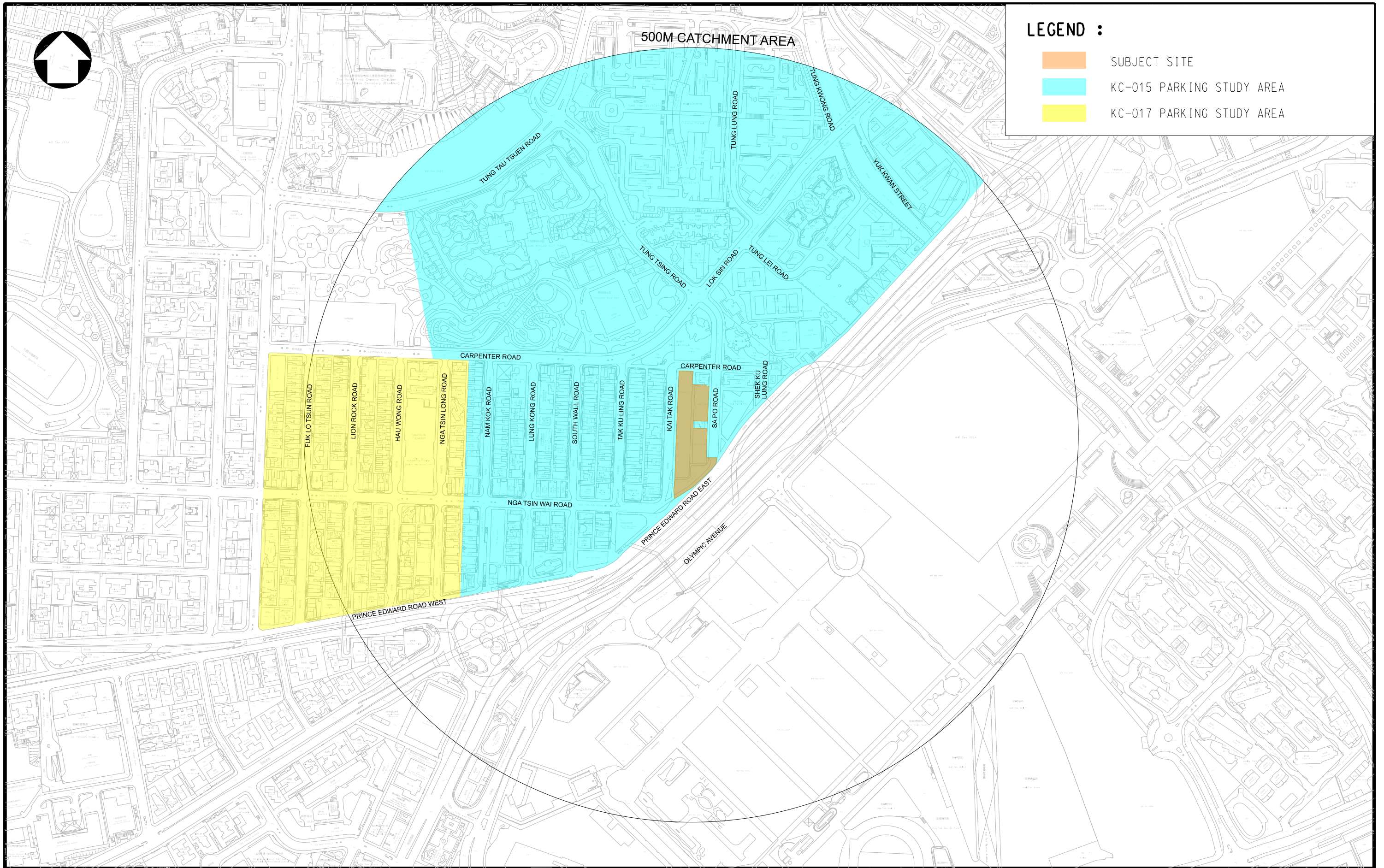
Parameters	Approach 1 2019 Approved TIA		Approach 2 DC 4/2022
	2018 Survey Data	2025 Survey Data	2025 Survey Data
2033 on-street car parking demand (nos.)	342	310	340
Number of on-street metered parking spaces to be retained upon redevelopment of KC-015 (nos.)	125	138	145
2033 unmet car parking demand (nos.)	217	172	195

Figure



Client		Consultant	 www.aurecongroup.com	Project Title	URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)	Drawing Title						
						SITE LOCATION						
						Designed	HL	Checked	JY	Scale	N.T.S.	Date

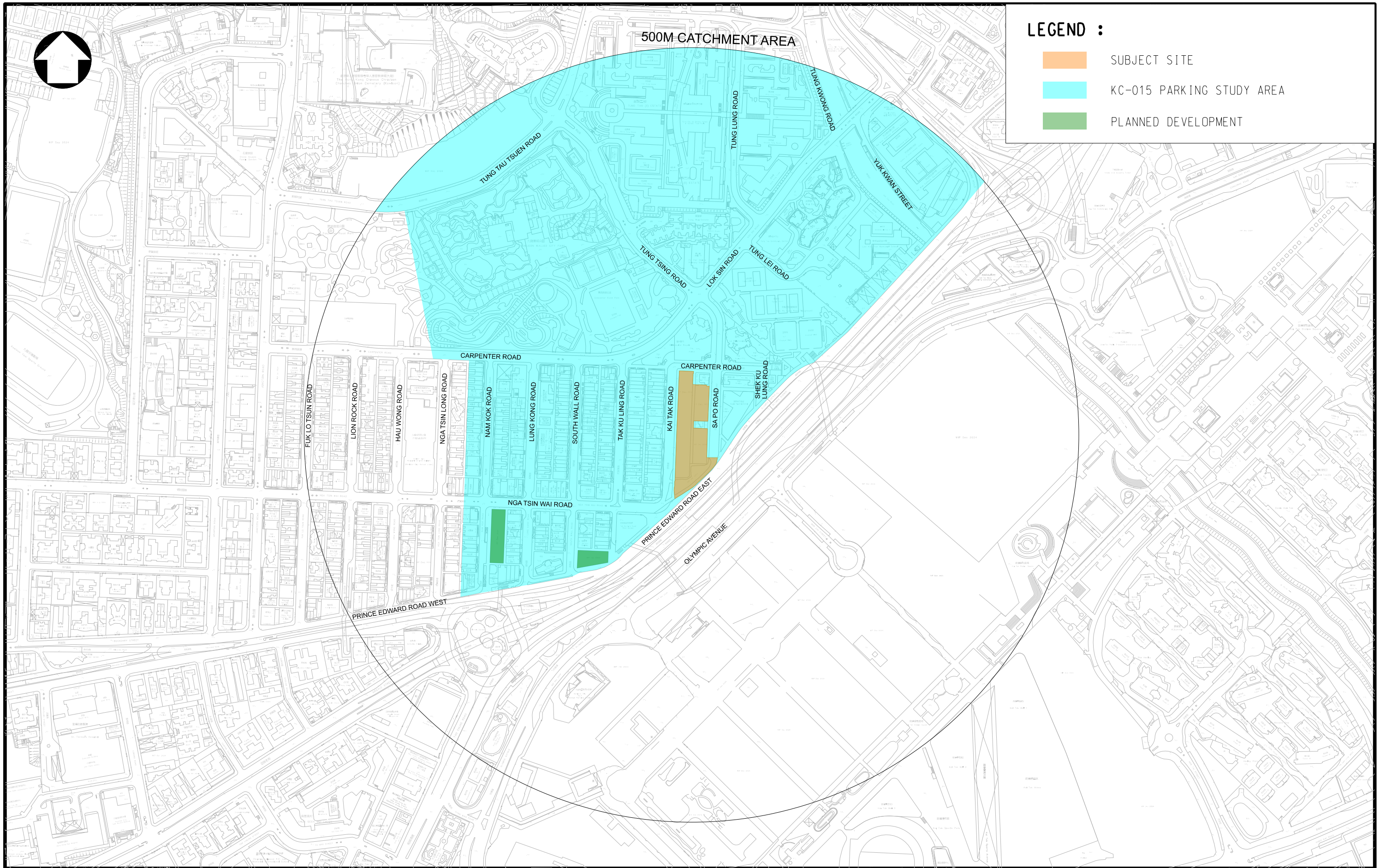




LEGEND :

- SUBJECT SITE
- KC-015 PARKING STUDY AREA
- KC-017 PARKING STUDY AREA

Client	 市區重建局 URBAN RENEWAL AUTHORITY	Consultant	 www.aurecongroup.com	Project Title	URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)	Drawing Title											
						PARKING STUDY AREA											
						Designed	HL	Checked	JY	Scale	N.T.S.	Date	APR 2025	Figure No.	2.4	Rev.	-



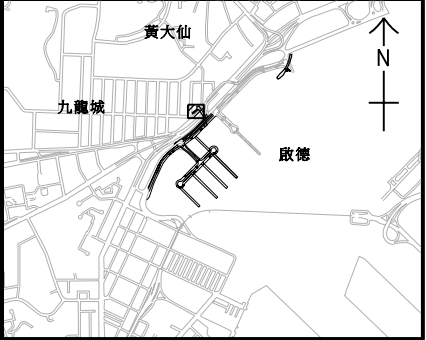
LEGEND :

- SUBJECT SITE
- KC-015 PARKING STUDY AREA
- PLANNED DEVELOPMENT

Client	Consultant	Project Title	Drawing Title					
 市區重建局 URBAN RENEWAL AUTHORITY	 www.aurecongroup.com	URBAN RENEWAL AUTHORITY KAI TAK ROAD / SA PO ROAD DEVELOPMENT SCHEME (KC-015)	PLANNED DEVELOPMENT WITHIN THE PARKING STUDY AREA					
			Designed HL	Checked JY	Scale N.T.S.	Date APR 2025	Figure No. 2.5	Rev. -

Appendix C

USS Entrance at Sa Po Road (Extract from Kowloon City District Council Paper)



位置圖

比例 A3 1 : 40000

圖例:

- 現有沙浦道/啟德道小園地受擬建行人隧道影響範圍
- 擬建行人隧道升降機
- 擬建行車道
- 擬建行人路

工程名稱
工務計劃項目第469CL號
啟德發展計劃 -
擬建北面停機坪第5B期基建工程

PWP ITEM NO. 469CL
KAI TAK DEVELOPMENT -
PROPOSED STAGE 5B INFRASTRUCTURE WORKS
AT FORMER NORTH APRON AREA

圖則名稱

第5B期基建工程 -
受工程影響的現有沙浦道/
啟德道小園地範圍

圖則編號 plan no.

SK1661

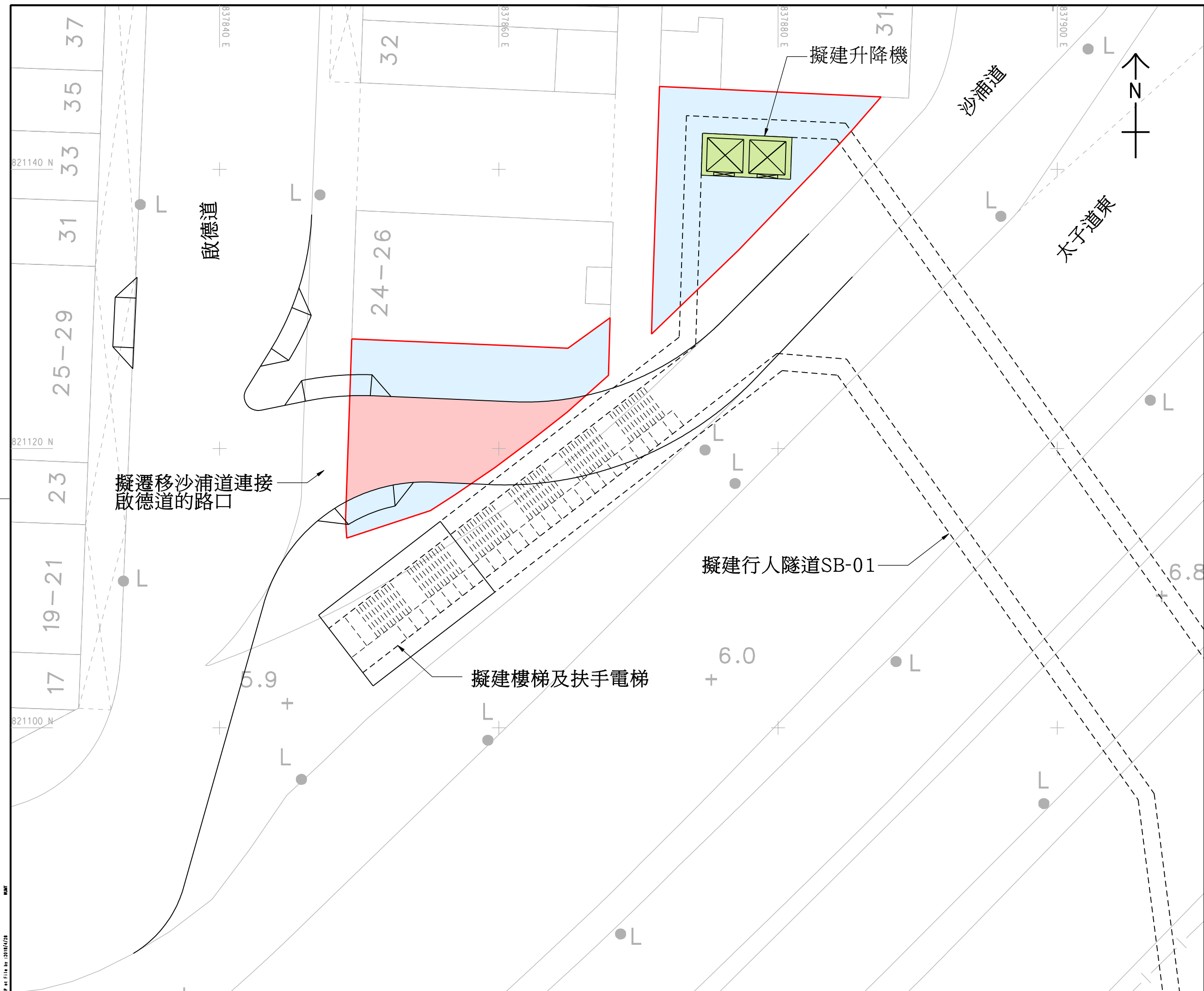
比例

A3 1 : 250

辦事處 office

東 拓 展 處
EAST
DEVELOPMENT OFFICE

CEDD 土木工程拓展署
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT



Appendix D

Junction Calculation Sheets

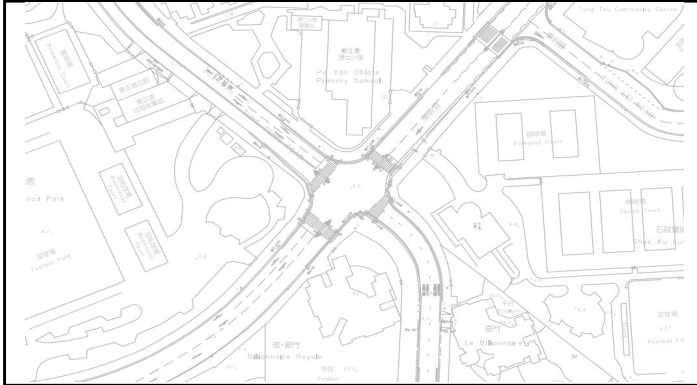
TRAFFIC SIGNAL CALCULATION SHEET



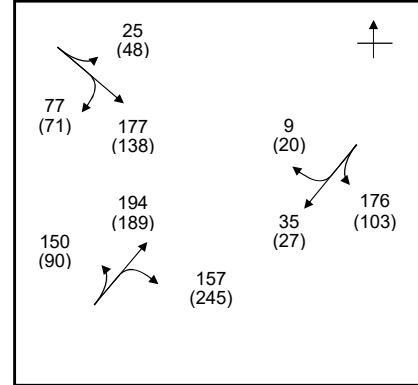
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 Junction : Tung Tsing Road / Lok Sin Road / Sa Po Road
 Description : Observed (Weekday)

Job No. : 529168
 Junction Index : J01
 Design Year : 2019

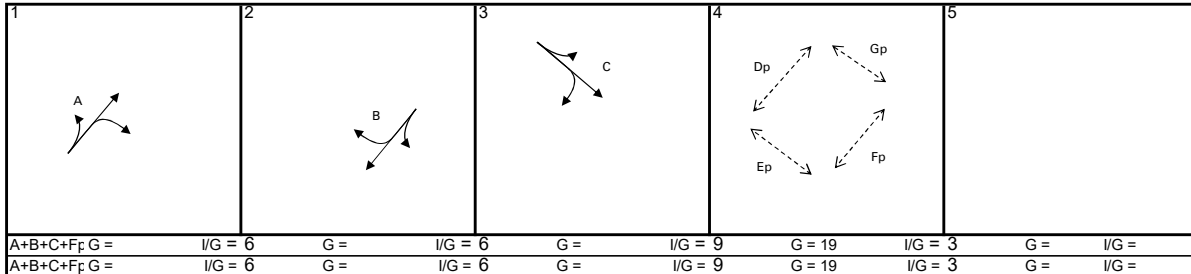
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			240	63%	1830	0.131	256	35%	1865	0.137
A	1	3.000	N	25	N		261	60%	1985	0.131	268	91%	1950	0.137
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		220	80% / 4%	1920	0.115	150	69% / 13%	1920	0.078
Tung Tsing Road SB														
C	3	3.000	Y	20			136	18%	1890	0.072	124	39%	1860	0.067
C	3	3.000	N	25	N		143	54%	1990	0.072	133	53%	1990	0.067
Pedestrian Crossing														
Dp	4		9GM+	9FG=	18	sec								
Ep	4		9GM+	9FG=	18	sec								
Fp	4		9GM+	10FG=	19	sec								
Gp	4		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.318	Sum of Critical y Y			0.282
							Lost Time L (sec)			40	Lost Time L (sec)			40
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.557	Practical Y Ypr			0.573
							Reserve Capacity RC			75%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25
 Checked by : JY Date : Nov-25

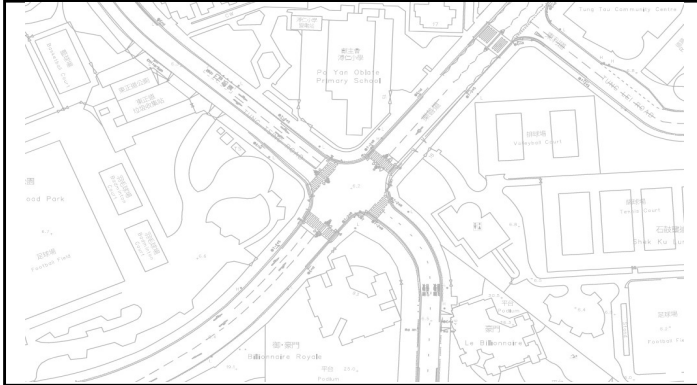
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 Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

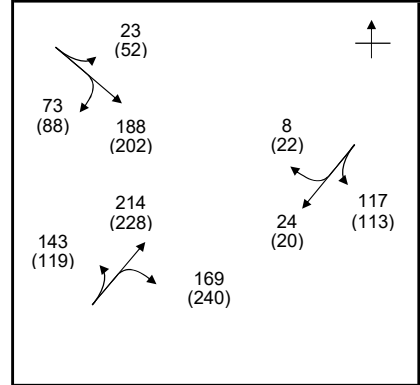


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Junction :	Tung Tsing Road / Lok Sin Road / Sa Po Road	Junction Index :	J01
Description :	Observed (Weekend)	Design Year :	2019

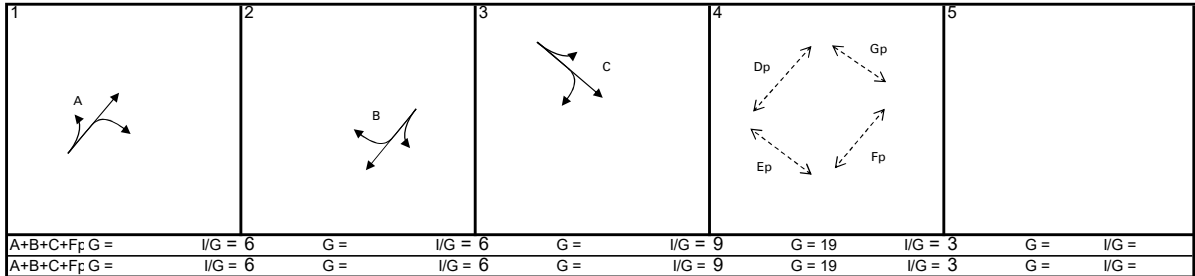
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			253	57%	1835	0.138	285	42%	1855	0.154
A	1	3.000	N	25	N		273	62%	1980	0.138	302	79%	1960	0.154
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		149	79% / 5%	1920	0.078	155	73% / 14%	1915	0.081
Tung Tsing Road SB														
C	3	3.000	Y	20			138	17%	1890	0.073	165	32%	1870	0.088
C	3	3.000	N	25	N		146	50%	1995	0.073	177	50%	1995	0.089

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

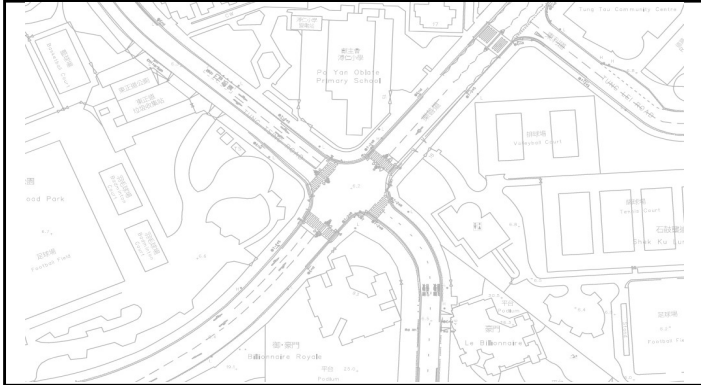
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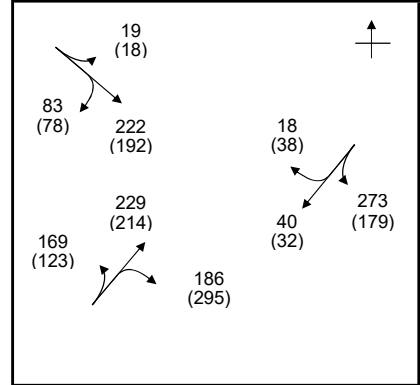


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Junction :	Tung Tsing Road / Lok Sin Road / Sa Po Road	Junction Index :	J01
Description :	Reference (Weekday)	Design Year :	2033

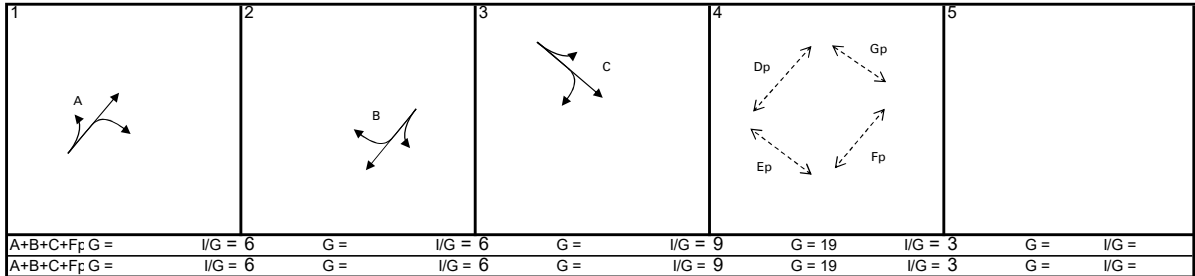
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			281	60%	1830	0.154	309	40%	1860	0.166
A	1	3.000	N	25	N		303	61%	1980	0.153	323	91%	1950	0.166
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		331	82% / 5%	1915	0.173	249	72% / 15%	1915	0.130
Tung Tsing Road SB														
C	3	3.000	Y	20			158	12%	1900	0.083	140	13%	1895	0.074
C	3	3.000	N	25	N		166	50%	1995	0.083	148	53%	1990	0.074
Pedestrian Crossing														
Dp	4		9GM+	9FG=	18	sec								
Ep	4		9GM+	9FG=	18	sec								
Fp	4		9GM+	10FG=	19	sec								
Gp	4		9GM+	9FG=	18	sec								
Notes :							AM Peak		A+B+C+Fp	PM Peak		A+B+C+Fp		
							Sum of Critical y Y		0.410	Sum of Critical y Y		0.371		
							Lost Time L (sec)		40	Lost Time L (sec)		40		
							Cycle Time c (sec)		105	Cycle Time c (sec)		110		
							Practical Y Ypr		0.557	Practical Y Ypr		0.573		
							Reserve Capacity RC		36%	Reserve Capacity RC		55%		

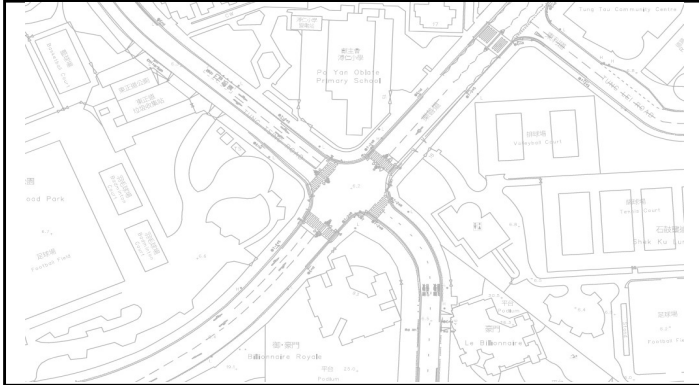
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TRAFFIC SIGNAL CALCULATION SHEET

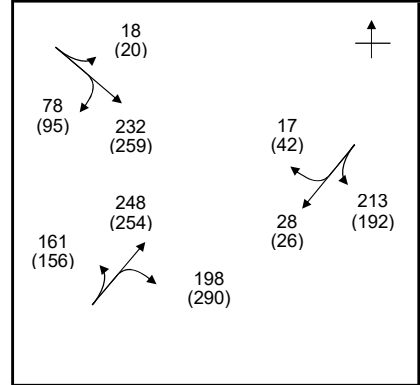


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tsing Road / Lok Sin Road / Sa Po Road	Junction Index :	J01
Description :	Reference (Weekend)	Design Year :	2033

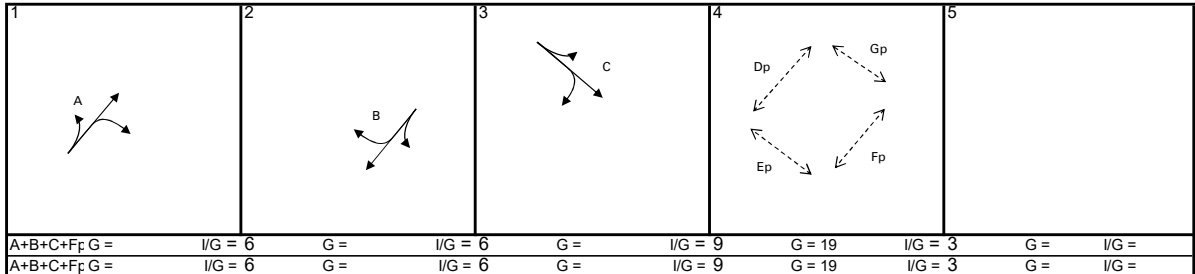
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			292	55%	1840	0.159	340	46%	1850	0.184
A	1	3.000	N	25	N		315	63%	1980	0.159	360	81%	1960	0.184
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		258	83% / 7%	1915	0.135	260	74% / 16%	1910	0.136
Tung Tsing Road SB														
C	3	3.000	Y	20			160	11%	1900	0.084	182	11%	1900	0.096
C	3	3.000	N	25	N		168	46%	2000	0.084	192	49%	1995	0.096
Pedestrian Crossing														
Dp	4		9GM+	9FG=	18	sec								
Ep	4		9GM+	9FG=	18	sec								
Fp	4		9GM+	10FG=	19	sec								
Gp	4		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.378	Sum of Critical y Y			0.416
							Lost Time L (sec)			40	Lost Time L (sec)			40
							Cycle Time c (sec)			90	Cycle Time c (sec)			100
							Practical Y Ypr			0.500	Practical Y Ypr			0.540
							Reserve Capacity RC			32%	Reserve Capacity RC			30%

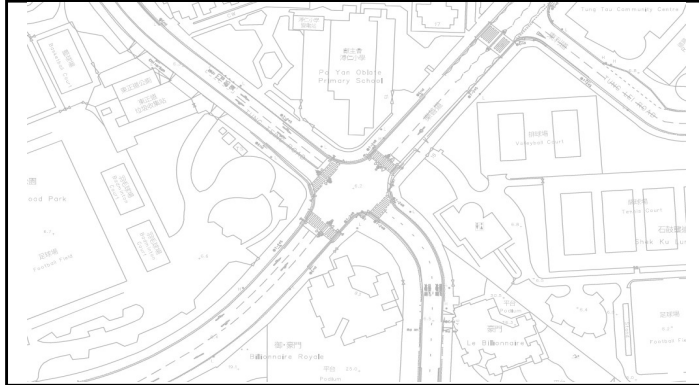
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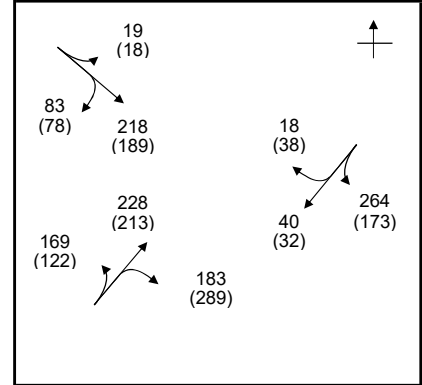


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tsing Road / Lok Sin Road / Sa Po Road	Junction Index :	J01
Description :	Design (Weekday)	Design Year :	2033

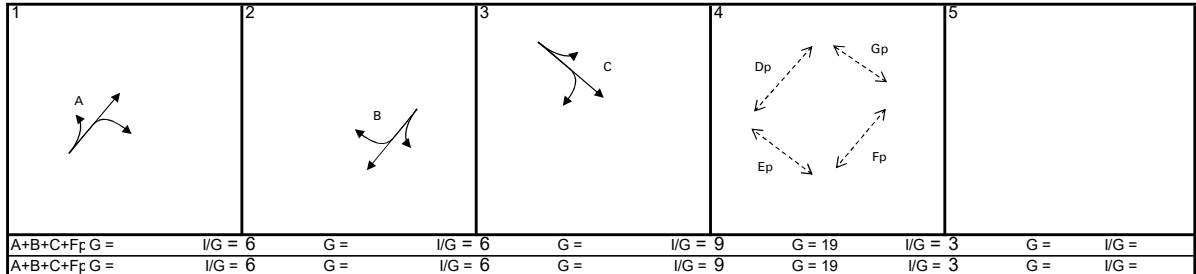
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			279	61%	1830	0.152	305	40%	1860	0.164
A	1	3.000	N	25	N		301	61%	1985	0.152	319	91%	1950	0.164
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		322	82% / 6%	1915	0.168	243	71% / 16%	1915	0.127
Tung Tsing Road SB														
C	3	3.000	Y	20			156	12%	1900	0.082	139	13%	1895	0.073
C	3	3.000	N	25	N		164	51%	1995	0.082	146	53%	1990	0.073
Pedestrian Crossing														
Dp	4		9GM+	9FG=	18	sec								
Ep	4		9GM+	9FG=	18	sec								
Fp	4		9GM+	10FG=	19	sec								
Gp	4		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.403	Sum of Critical y Y			0.364
							Lost Time L (sec)			40	Lost Time L (sec)			40
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.557	Practical Y Ypr			0.573
							Reserve Capacity RC			38%	Reserve Capacity RC			57%

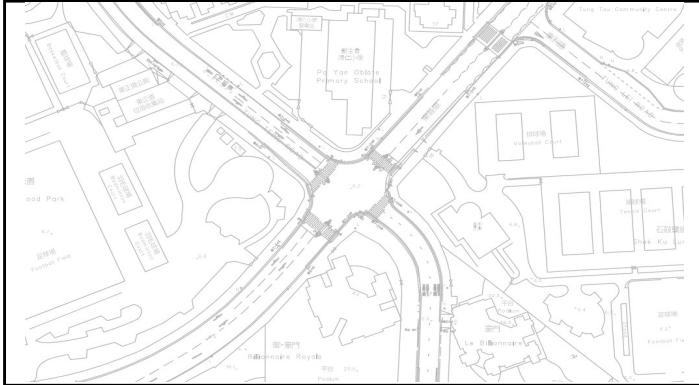
Designed by :	HL	Date :	Nov-25	Junction Index :	J01
Checked by :	JY	Date :	Nov-25	Sheet No. :	1

TRAFFIC SIGNAL CALCULATION SHEET

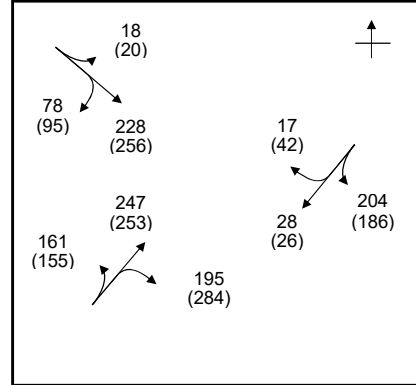


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tsing Road / Lok Sin Road / Sa Po Road	Junction Index :	J01
Description :	Design (Weekend)	Design Year :	2033

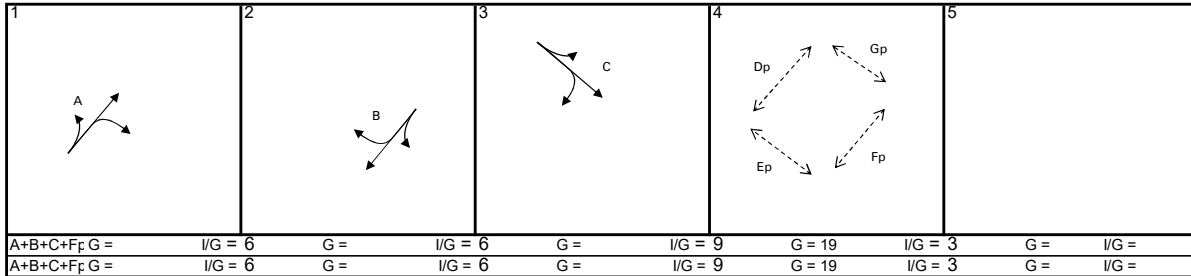
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Lok Sin Road EB														
A	1	3.000	Y	20			290	56%	1840	0.158	336	46%	1850	0.182
A	1	3.000	N	25	N		313	62%	1980	0.158	356	80%	1960	0.182
Lok Sin Road WB														
B	2	4.000	Y	25 / 25	N		249	82% / 7%	1915	0.130	254	73% / 17%	1910	0.133
Tung Tsing Road SB														
C	3	3.000	Y	20			158	11%	1900	0.083	181	11%	1900	0.095
C	3	3.000	N	25	N		166	47%	2000	0.083	190	50%	1995	0.095
Pedestrian Crossing														
Dp	4		9GM+	9FG=	18	sec								
Ep	4		9GM+	9FG=	18	sec								
Fp	4		9GM+	10FG=	19	sec								
Gp	4		9GM+	9FG=	18	sec								
Notes :							AM Peak		A+B+C+Fp	PM Peak		A+B+C+Fp		
							Sum of Critical y Y		0.371	Sum of Critical y Y		0.410		
							Lost Time L (sec)		40	Lost Time L (sec)		40		
							Cycle Time c (sec)		90	Cycle Time c (sec)		100		
							Practical Y Ypr		0.500	Practical Y Ypr		0.540		
							Reserve Capacity RC		35%	Reserve Capacity RC		32%		

Designed by :	HL	Date :	Nov-25	Junction Index :	J01
Checked by :	JY	Date :	Nov-25	Sheet No. :	2

TRAFFIC SIGNAL CALCULATION SHEET

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Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Carpenter Road / Tak Ku Ling Road

Junction Index : J02

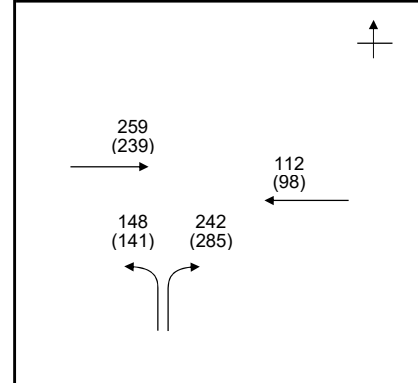
Description : Observed (Weekday)

Design Year : 2019

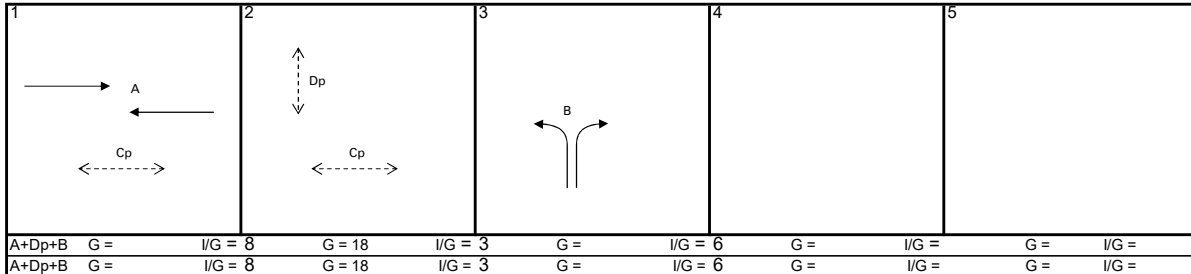
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Carpenter Road EB														
A	1	5.500	Y				259		2165	0.120	239		2165	0.110
Carpenter Road WB														
A	1	4.000	Y				112		2015	0.056	98		2015	0.049
Tak Ku Ling Road NB														
B	3	3.500	Y	20			148		1830	0.081	141		1830	0.077
B	3	3.500	Y	25	N		242		1855	0.130	285		1855	0.154
Pedestrian Crossing														
Cp	1,2		9GM+	9FG=	18	sec								
Dp	2		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+Dp+B	PM Peak			A+Dp+B
							Sum of Critical <i>y</i> Y			0.250	Sum of Critical <i>y</i> Y			0.264
							Lost Time L (sec)			33	Lost Time L (sec)			33
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical <i>Y</i> Ypr			0.617	Practical <i>Y</i> Ypr			0.630
							Reserve Capacity RC			>100%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25

Junction Index : J02

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

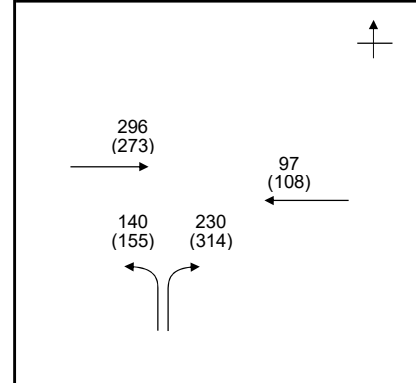
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Carpenter Road / Tak Ku Ling Road
Description : Observed (Weekend)

Job No. : 529168
Junction Index : J02
Design Year : 2019

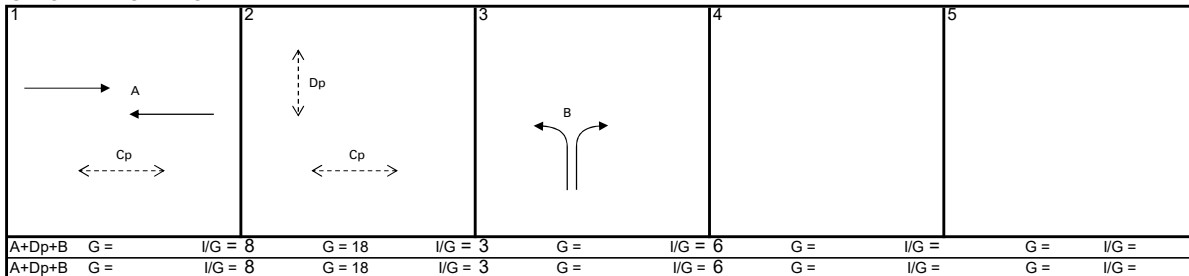
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

GENERAL INFORMATION							AM Peak				PM Peak			
Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Carpenter Road EB														
A	1	5.500	Y				296		2165	0.137	273		2165	0.126
Carpenter Road WB														
A	1	4.000	Y				97		2015	0.048	108		2015	0.054
Tak Ku Ling Road NB														
B	3	3.500	Y	20			140		1830	0.077	155		1830	0.085
B	3	3.500	Y	25	N		230		1855	0.124	314		1855	0.169
Pedestrian Crossing														
Cp	1,2		9GM+	9FG=	18	sec								
Dp	2		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+Dp+B	PM Peak			A+Dp+B
							Sum of Critical y Y		0.261		Sum of Critical y Y		0.295	
							Lost Time L (sec)		33		Lost Time L (sec)		33	
							Cycle Time c (sec)		90		Cycle Time c (sec)		100	
							Practical Y Ypr		0.570		Practical Y Ypr		0.603	
							Reserve Capacity RC		>100%		Reserve Capacity RC		>100%	

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J02
Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Carpenter Road / Tak Ku Ling Road

Junction Index : J02

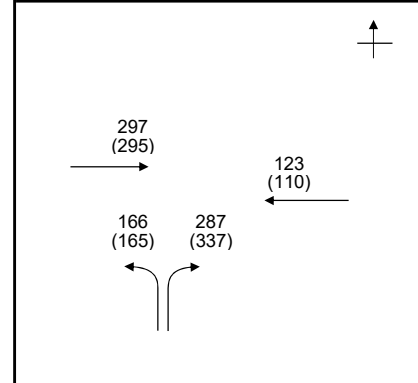
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Design Year : 2033

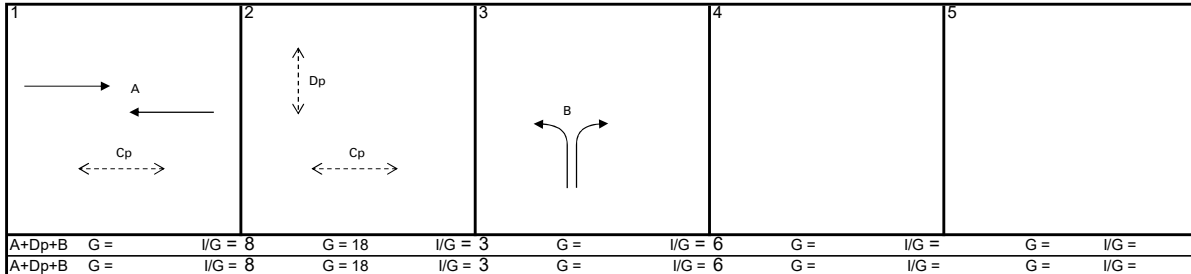
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM

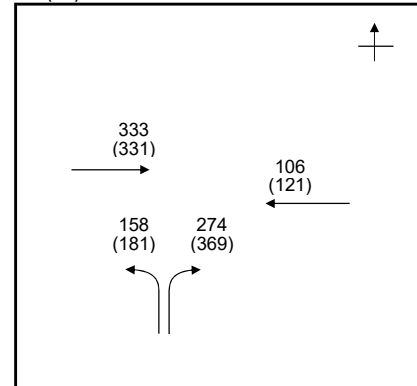
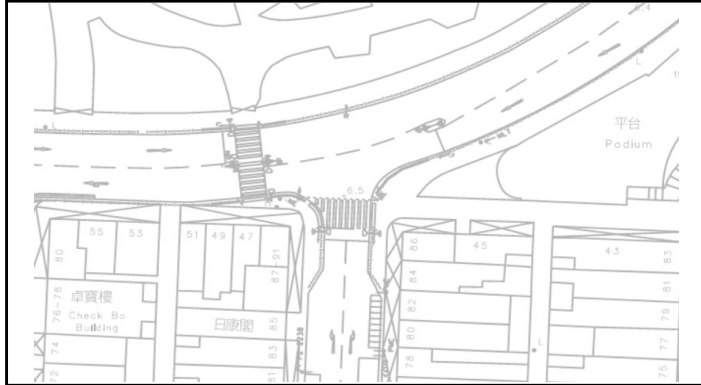


CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Carpenter Road EB														
A	1	5.500	Y				297		2165	0.137	295		2165	0.136
Carpenter Road WB														
A	1	4.000	Y				123		2015	0.061	110		2015	0.055
Tak Ku Ling Road NB														
B	3	3.500	Y	20			166		1830	0.091	165		1830	0.090
B	3	3.500	Y	25	N		287		1855	0.155	337		1855	0.182
Pedestrian Crossing														
Cp	1,2		9GM+	9FG=	18	sec								
Dp	2		9GM+	9FG=	18	sec								
Notes :							AM Peak		A+Dp+B	PM Peak		A+Dp+B		
							Sum of Critical <i>y</i> Y		0.292	Sum of Critical <i>y</i> Y		0.318		
							Lost Time <i>L</i> (sec)		33	Lost Time <i>L</i> (sec)		33		
							Cycle Time <i>c</i> (sec)		105	Cycle Time <i>c</i> (sec)		110		
							Practical <i>Y</i> Ypr		0.617	Practical <i>Y</i> Ypr		0.630		
							Reserve Capacity RC		>100%	Reserve Capacity RC		98%		

Job No. : **529168**
Junction Index : J02
Design Year : 2033

AM (PM) Peak Hour Traffic Flows



1	2	3	4	5
$A + D_p + B$ $G =$ $I/G = 8$	$G = 18$ $I/G = 3$	$G =$ $I/G = 6$	$G =$ $I/G =$	$G =$ $I/G =$
$A + D_p + B$ $G =$ $I/G = 8$	$G = 18$ $I/G = 3$	$G =$ $I/G = 6$	$G =$ $I/G =$	$G =$ $I/G =$

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Junction Index : J02

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

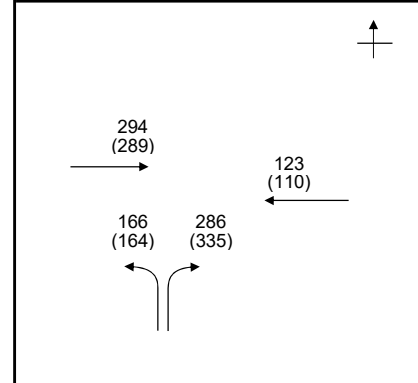


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Carpenter Road / Tak Ku Ling Road	Junction Index :	J02
Description :	Design (Weekday)	Design Year :	2033

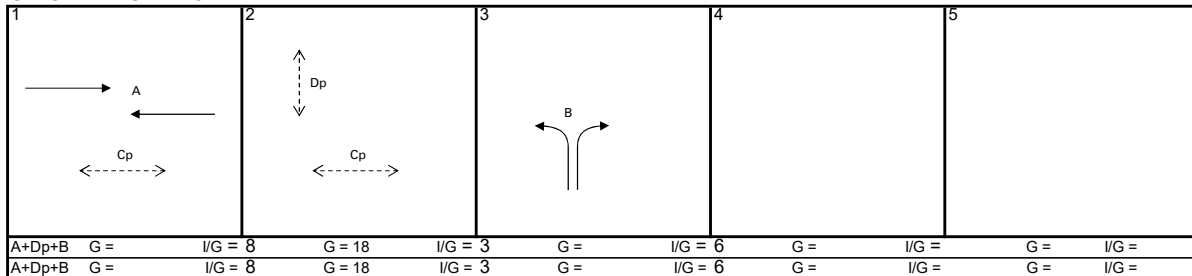
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Carpenter Road							AM Peak				PM Peak			
Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Carpenter Road EB														
A	1	5.500	Y				294		2165	0.136	289		2165	0.133
Carpenter Road WB														
A	1	4.000	Y				123		2015	0.061	110		2015	0.055
Tak Ku Ling Road NB														
B	3	3.500	Y	20			166		1830	0.091	164		1830	0.090
B	3	3.500	Y	25	N		286		1855	0.154	335		1855	0.181
Pedestrian Crossing														
Cp	1,2		9GM+	9FG=	18	sec								
Dp	2		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+Dp+B	PM Peak			A+Dp+B
							Sum of Critical y Y			0.290	Sum of Critical y Y			0.314
							Lost Time L (sec)			33	Lost Time L (sec)			33
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.617	Practical Y Ypr			0.630
							Reserve Capacity RC			>100%	Reserve Capacity RC			>100%

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Checked by : JY Date : Nov-25

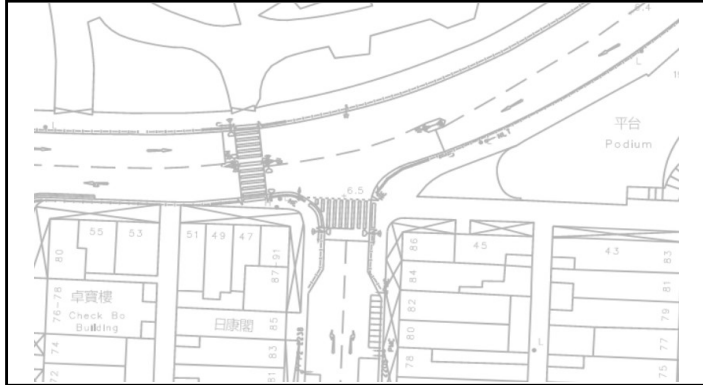
Junction Index : J02
Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

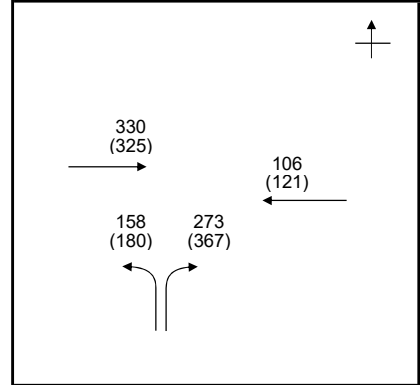


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Carpenter Road / Tak Ku Ling Road	Junction Index :	J02
Description :	Design (Weekend)	Design Year :	2033

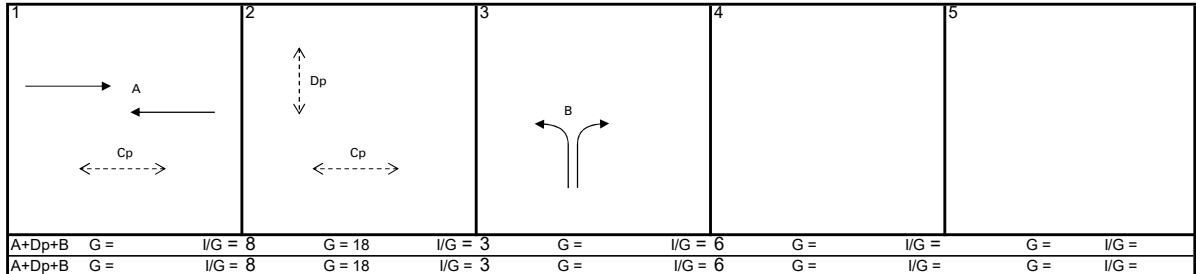
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Carpenter Road EB														
A	1	5.500	Y				330		2165	0.152	325		2165	0.150
Carpenter Road WB														
A	1	4.000	Y				106		2015	0.053	121		2015	0.060
Tak Ku Ling Road NB														
B	3	3.500	Y	20			158		1830	0.086	180		1830	0.098
B	3	3.500	Y	25	N		273		1855	0.147	367		1855	0.198
Pedestrian Crossing														
Cp	1,2		9GM+	9FG=	18	sec								
Dp	2		9GM+	9FG=	18	sec								
Notes :							AM Peak			A+Dp+B	PM Peak			A+Dp+B
							Sum of Critical <i>y</i> Y			0.300	Sum of Critical <i>y</i> Y			0.348
							Lost Time L (sec)			33	Lost Time L (sec)			33
							Cycle Time c (sec)			90	Cycle Time c (sec)			100
							Practical <i>Y</i> Ypr			0.570	Practical <i>Y</i> Ypr			0.603
							Reserve Capacity RC			90%	Reserve Capacity RC			73%

Designed by :	HL	Date :	Nov-25	Junction Index :	J02
Checked by :	JY	Date :	Nov-25	Sheet No. :	2

TRAFFIC SIGNAL CALCULATION SHEET

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Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

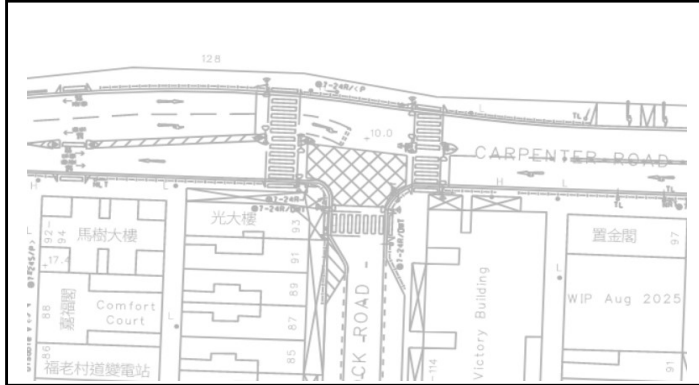
Junction : Carpenter Road / Lion Rock Road

Junction Index : J03

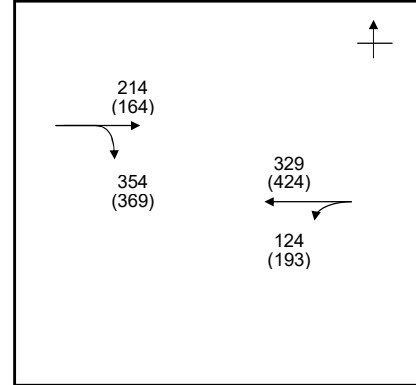
Description : Observed (Weekday)

Design Year : 2019

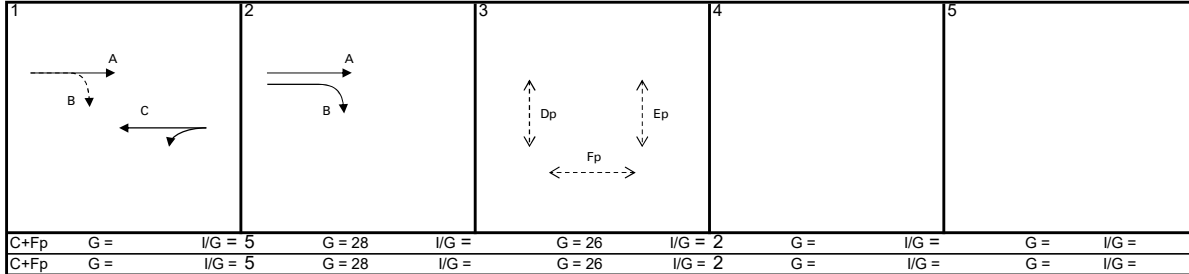
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Carpenter Road EB														
A	1,2	3.500	Y				214		1965	0.109	164		1965	0.083
B	1,2	3.500	N	20	Y		354		1745	0.203	369		1745	0.211
Carpenter Road WB														
C	1	4.500	Y	15			453	27%	2010	0.225	617	31%	2000	0.309
Pedestrian Crossing														
Dp	3		11GM+	8FG=	19	sec								
Ep	3		8GM+	7FG=	15	sec								
Fp	3		5GM+	11FG=	16	sec								
Notes :							AM Peak			C+Fp	PM Peak			C+Fp
							Sum of Critical <i>y</i> Y			0.225	Sum of Critical <i>y</i> Y			0.309
							Lost Time <i>L</i> (sec)			60	Lost Time <i>L</i> (sec)			60
							Cycle Time <i>c</i> (sec)			125	Cycle Time <i>c</i> (sec)			120
							Practical <i>Y</i> Ypr			0.468	Practical <i>Y</i> Ypr			0.450
							Reserve Capacity RC			>100%	Reserve Capacity RC			46%

Designed by : HL Date : Nov-25

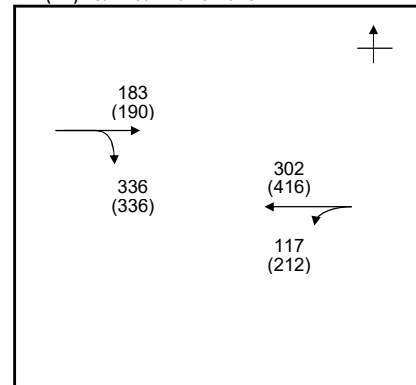
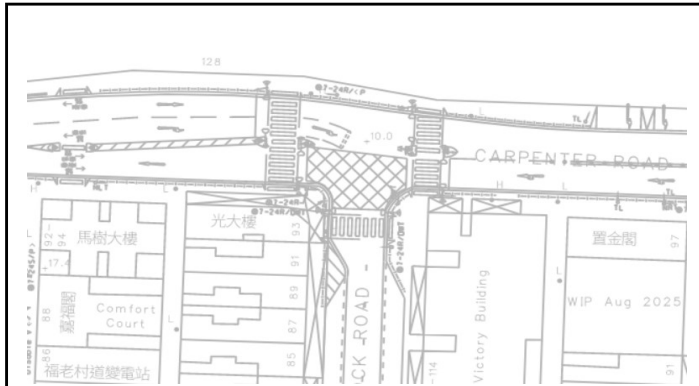
Junction Index : J03

Checked by : JY Date : Nov-25

Sheet No. : 1

Job No. : **529168**
Junction Index : J03
Design Year : 2019

AM (PM) Peak Hour Traffic Flows



1			2			3			4			5		
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				

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Junction Index : J03

Sheet No. : 2

Design Year	: 2033
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1	2	3	4	5
$C+F_p$ $G =$ $I/G = 5$	$G = 28$ $I/G =$	$G = 26$ $I/G = 2$	$G =$ $I/G =$	$G =$ $I/G =$
$C+F_p$ $G =$ $I/G = 5$	$G = 28$ $I/G =$	$G = 26$ $I/G = 2$	$G =$ $I/G =$	$G =$ $I/G =$

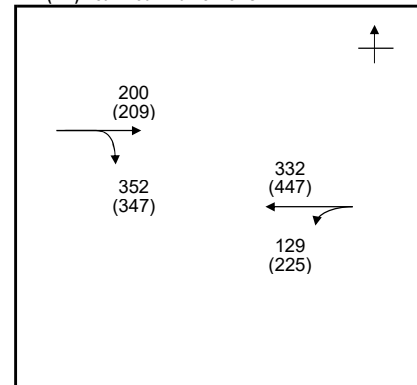
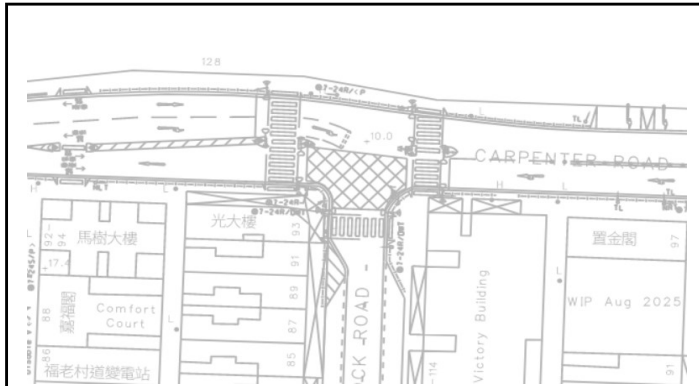
Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Carpenter Road EB														
A	1,2	3.500	Y				231		1965	0.118	181		1965	0.092
B	1,2	3.500	N	20	Y		369		1745	0.211	379		1745	0.217
Carpenter Road WB														
C	1	4.500	Y	15			495	27%	2010	0.246	657	31%	2005	0.328
Pedestrian Crossing														
Dp	3		11GM+	8FG=	19	sec								
Ep	3		8GM+	7FG=	15	sec								
Fp	3		5GM+	11FG=	16	sec								
Notes :							AM Peak		C+F _p	PM Peak		C+F _p		
							Sum of Critical <i>y Y</i>		0.246	Sum of Critical <i>y Y</i>		0.328		
							Lost Time <i>L</i> (sec)		60	Lost Time <i>L</i> (sec)		60		
							Cycle Time <i>c</i> (sec)		125	Cycle Time <i>c</i> (sec)		120		
							Practical <i>Y Ypr</i>		0.468	Practical <i>Y Ypr</i>		0.450		
							Reserve Capacity <i>RC</i>		90%	Reserve Capacity <i>RC</i>		37%		

Junction Index : J03

Sheet No. : 1

Job No. : **529168**
Junction Index : J03
Design Year : 2033

AM (PM) Peak Hour Traffic Flows



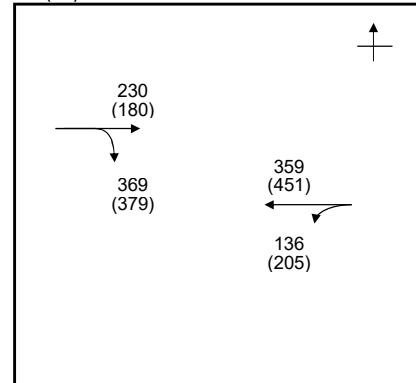
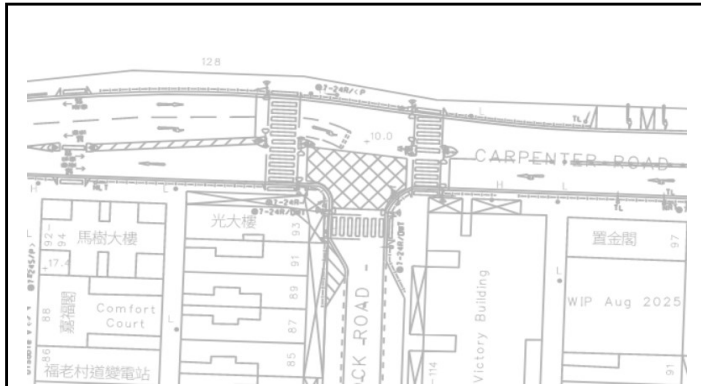
1			2			3			4			5		
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				

[illegible]

Junction Index : J03
Sheet No. : 2

Design Year	:	2033
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AM (PM) Peak Hour Traffic Flows



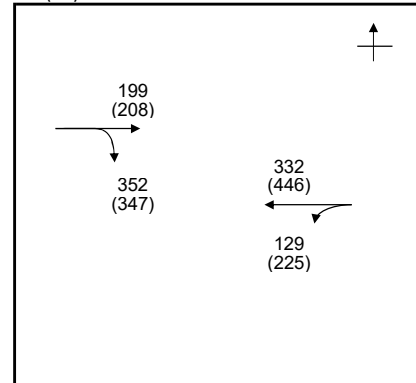
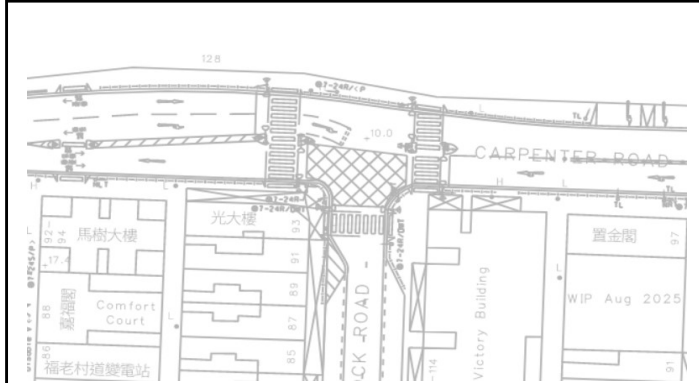
1	2	3	4	5
$C+F_p$	$G =$	$I/G = 5$	$G = 28$	$I/G =$
$C+F_p$	$G =$	$I/G = 5$	$G = 28$	$I/G =$

[illegible]

Sheet No. : 1

Design Year	: 2033
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AM (PM) Peak Hour Traffic Flows



1			2			3			4			5		
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				
C+Fp	G =	I/G = 5	G = 28	I/G =	G = 26	I/G = 2	G =	I/G =	G =	I/G =				

[illegible]

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

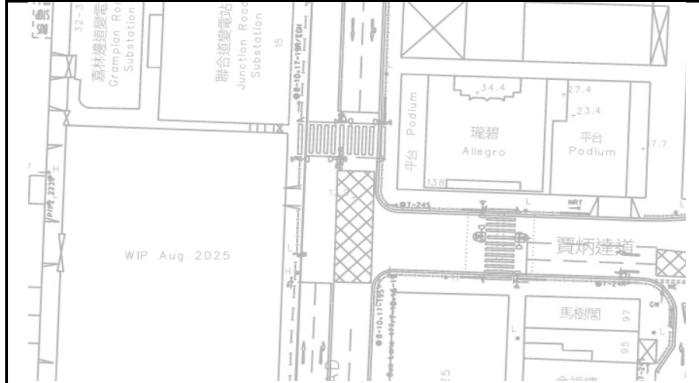
Junction : Junction Road / Carpenter Road

Junction Index : J04

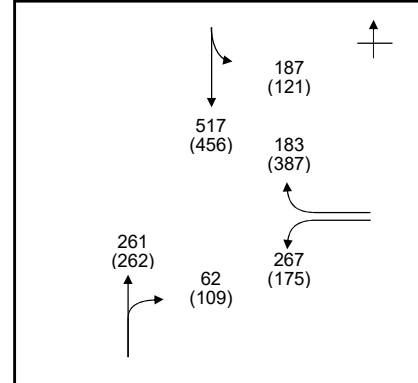
Description : Observed (Weekday)

Design Year : 2019

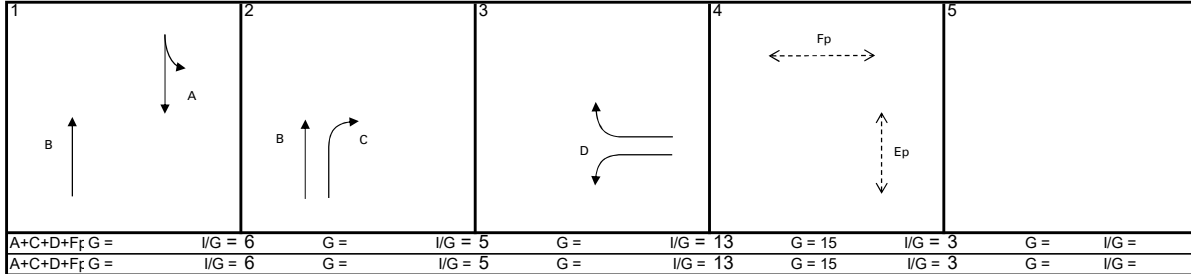
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		330	57%	1835	0.180	272	44%	1855	0.147
A	1	3.250	N				374		2080	0.180	305		2080	0.147
Junction Road NB														
B	1,2	3.000	Y				261		1915	0.136	262		1915	0.137
C	2	2.500	N	20	N		62		1865	0.033	109		1865	0.058
Carpenter Road WB														
D	3	3.000	Y	15			267		1740	0.153	175		1740	0.101
D	3	3.000	N	20	N		183		1910	0.096	387		1910	0.203
Pedestrian Crossing														
Ep	4		7GM+	7FG=	14	sec								
Fp	4		7GM+	8FG=	15	sec								
Notes :							AM Peak			A+C+D+Fp	PM Peak			A+C+D+Fp
							Sum of Critical y Y		0.367		Sum of Critical y Y		0.408	
							Lost Time L (sec)		39		Lost Time L (sec)		39	
							Cycle Time c (sec)		125		Cycle Time c (sec)		120	
							Practical Y Ypr		0.619		Practical Y Ypr		0.608	
							Reserve Capacity RC		69%		Reserve Capacity RC		49%	

Designed by : HL Date : Nov-25

Junction Index : J04

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

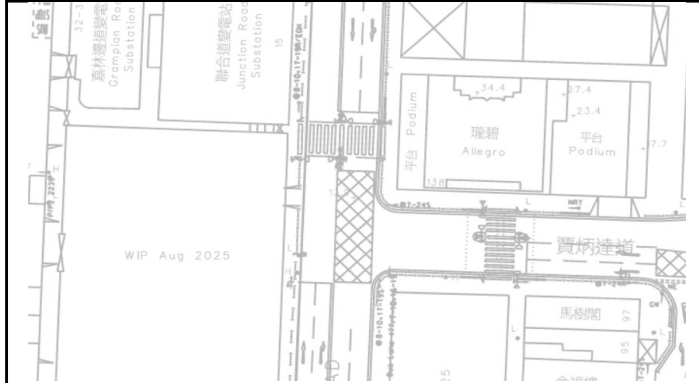
Junction : Junction Road / Carpenter Road

Junction Index : J04

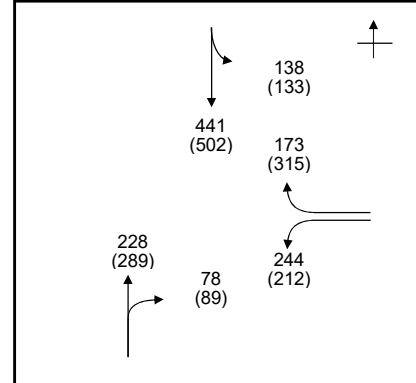
Description : Observed (Weekend)

Design Year : 2019

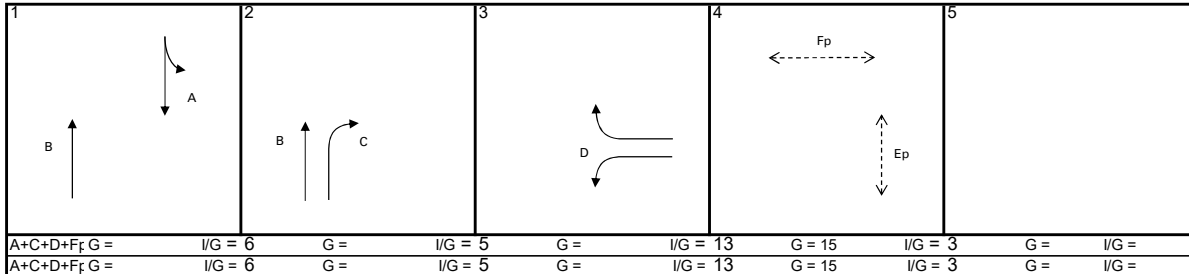
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		272	51%	1845	0.147	300	44%	1860	0.161
A	1	3.250	N				307		2080	0.148	335		2080	0.161
Junction Road NB														
B	1,2	3.000	Y				228		1915	0.119	289		1915	0.151
C	2	2.500	N	20	N		78		1865	0.042	89		1865	0.048
Carpenter Road WB														
D	3	3.000	Y	15			244		1740	0.140	212		1740	0.122
D	3	3.000	N	20	N		173		1910	0.091	315		1910	0.165
Pedestrian Crossing														
Ep	4		7GM+	7FG=	14	sec								
Fp	4		7GM+	8FG=	15	sec								
Notes :							AM Peak			A+C+D+Fp	PM Peak			A+C+D+Fp
							Sum of Critical y Y			0.330	Sum of Critical y Y			0.374
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.581	Practical Y Ypr			0.595
							Reserve Capacity RC			76%	Reserve Capacity RC			59%

Designed by : HL Date : Nov-25

Junction Index : J04

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

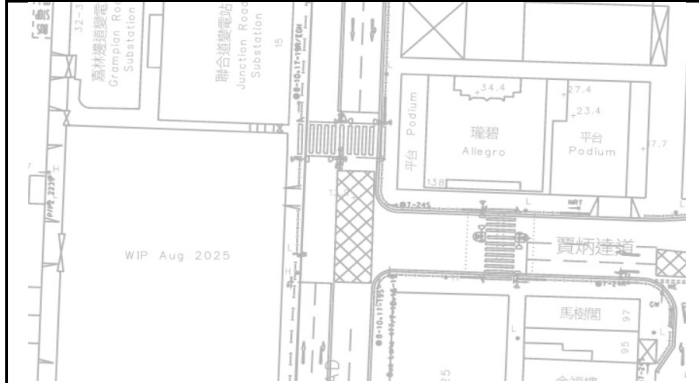
Junction : Junction Road / Carpenter Road

Junction Index : J04

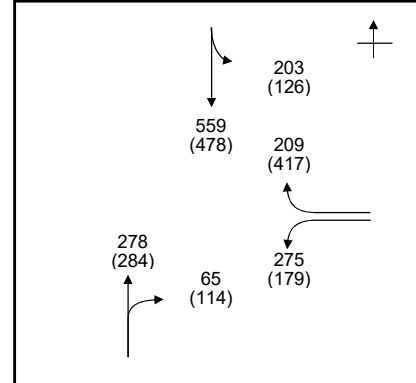
Description : Reference (Weekday)

Design Year : 2033

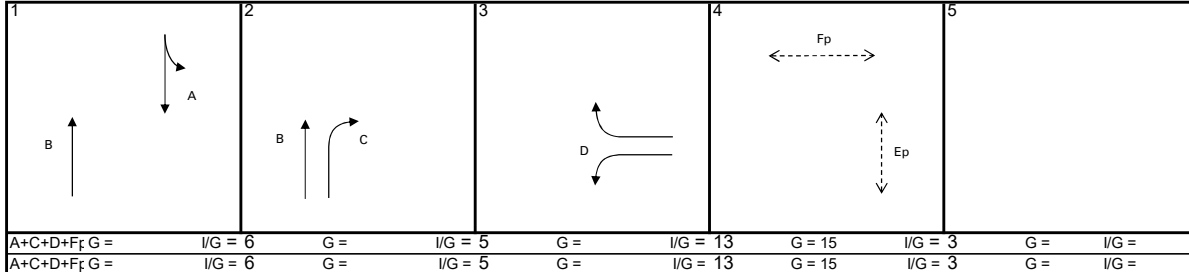
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		357	57%	1835	0.195	285	44%	1860	0.153
A	1	3.250	N				405		2080	0.195	319		2080	0.153
Junction Road NB														
B	1,2	3.000	Y				278		1915	0.145	284		1915	0.148
C	2	2.500	N	20	N		65		1865	0.035	114		1865	0.061
Carpenter Road WB														
D	3	3.000	Y	15			275		1740	0.158	179		1740	0.103
D	3	3.000	N	20	N		209		1910	0.109	417		1910	0.218
Pedestrian Crossing														
Ep	4		7GM+	7FG=	14	sec								
Fp	4		7GM+	8FG=	15	sec								
Notes :							AM Peak			A+C+D+Fp	PM Peak			A+C+D+Fp
							Sum of Critical y Y			0.388	Sum of Critical y Y			0.433
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.619	Practical Y Ypr			0.608
							Reserve Capacity RC			60%	Reserve Capacity RC			40%

Designed by : HL Date : Nov-25

Junction Index : J04

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

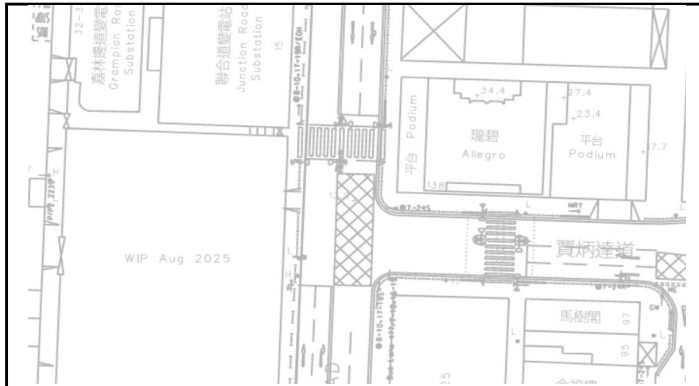
Junction : Junction Road / Carpenter Road

Junction Index : J04

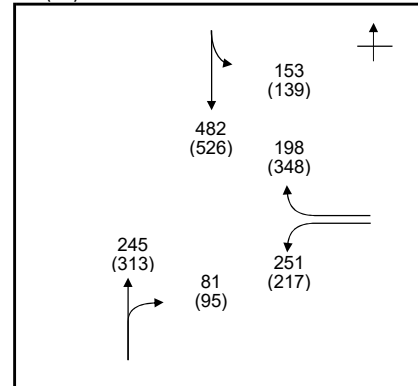
Description : Reference (Weekend)

Design Year : 2033

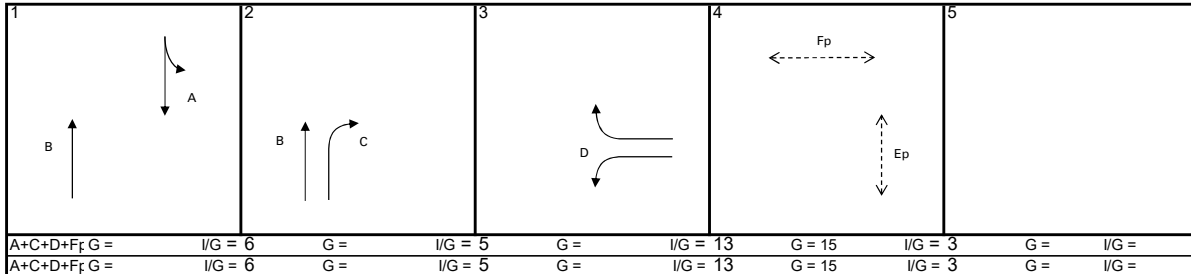
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		299	51%	1845	0.162	314	44%	1860	0.169
A	1	3.250	N				336		2080	0.162	351		2080	0.169
Junction Road NB														
B	1,2	3.000	Y				245		1915	0.128	313		1915	0.163
C	2	2.500	N	20	N		81		1865	0.043	95		1865	0.051
Carpenter Road WB														
D	3	3.000	Y	15			251		1740	0.144	217		1740	0.125
D	3	3.000	N	20	N		198		1910	0.104	348		1910	0.182
Pedestrian Crossing														
Ep	4		7GM+	7FG=	14	sec								
Fp	4		7GM+	8FG=	15	sec								
Notes :							AM Peak			A+C+D+Fp	PM Peak			A+C+D+Fp
							Sum of Critical y Y			0.350	Sum of Critical y Y			0.402
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.581	Practical Y Ypr			0.595
							Reserve Capacity RC			66%	Reserve Capacity RC			48%

Designed by : HL Date : Nov-25

Junction Index : J04

Checked by : JY Date : Nov-25

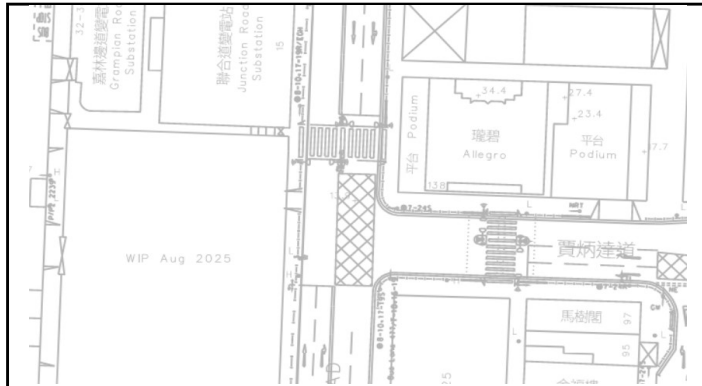
Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

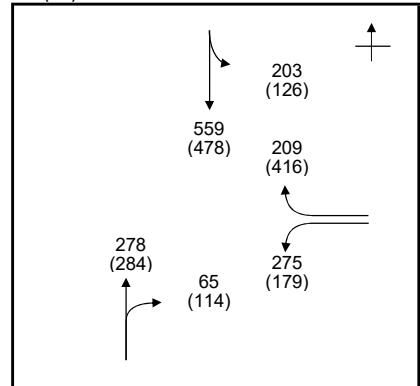


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Junction Road / Carpenter Road	Junction Index :	J04
Description :	Design (Weekday)	Design Year :	2033

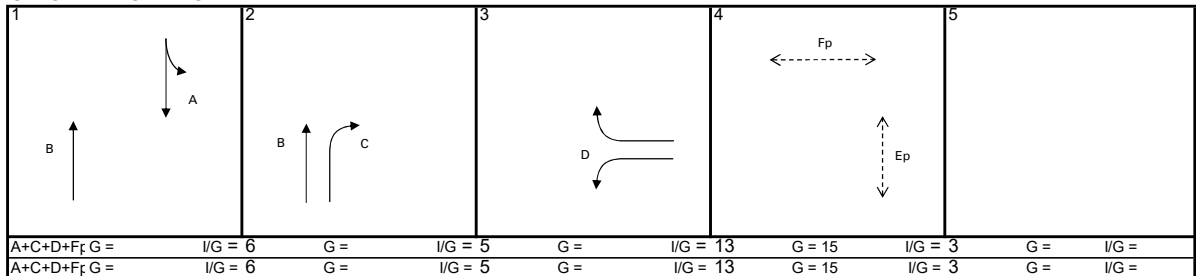
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		357	57%	1835	0.195	285	44%	1860	0.153
A	1	3.250	N				405		2080	0.195	319		2080	0.153
Junction Road NB														
B	1,2	3.000	Y				278		1915	0.145	284		1915	0.148
C	2	2.500	N	20	N		65		1865	0.035	114		1865	0.061
Carpenter Road WB														
D	3	3.000	Y	15			275		1740	0.158	179		1740	0.103
D	3	3.000	N	20	N		209		1910	0.109	416		1910	0.218

Designed by : HL Date : Nov-25
 Checked by : JY Date : Nov-25

Junction Index : J04
 Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

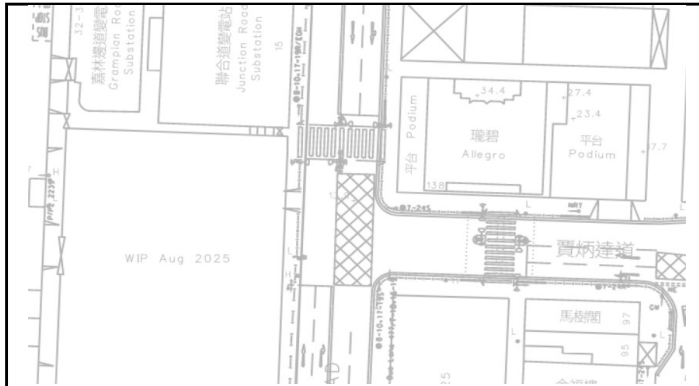
Junction : Junction Road / Carpenter Road

Junction Index : J04

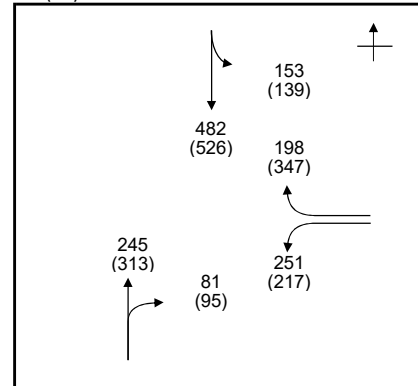
Description : Design (Weekend)

Design Year : 2033

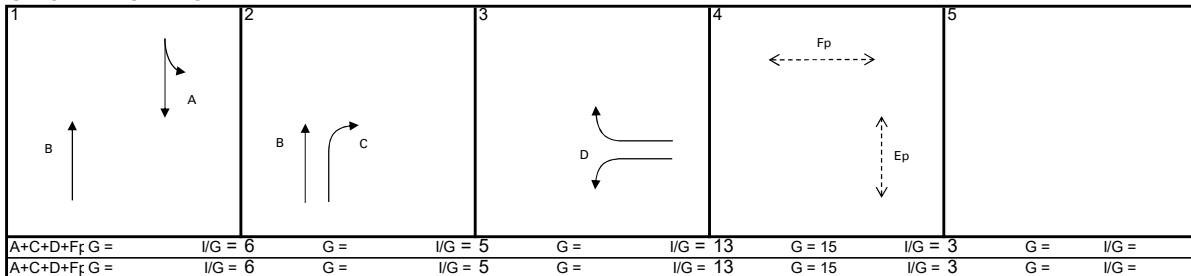
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.250	Y	15	N		299	51%	1845	0.162	314	44%	1860	0.169
A	1	3.250	N				336		2080	0.162	351		2080	0.169
Junction Road NB														
B	1,2	3.000	Y				245		1915	0.128	313		1915	0.163
C	2	2.500	N	20	N		81		1865	0.043	95		1865	0.051
Carpenter Road WB														
D	3	3.000	Y	15			251		1740	0.144	217		1740	0.125
D	3	3.000	N	20	N		198		1910	0.104	347		1910	0.182

Designed by : HL Date : Nov-25

Junction Index : J04

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

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Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

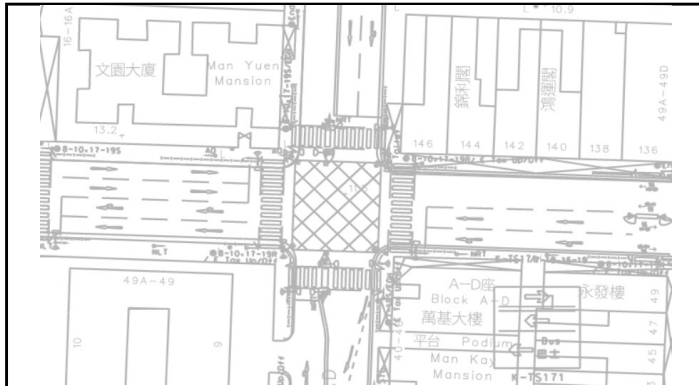
Junction : Junction Road / Nga Tsin Wai Road

Junction Index : J05

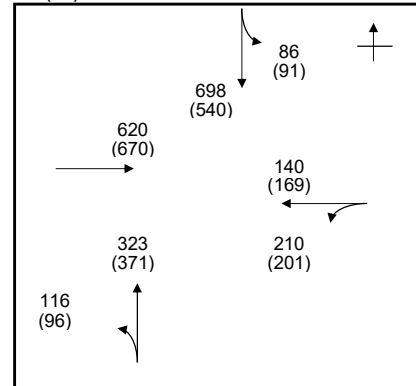
Description : Observed (Weekday)

Design Year : 2019

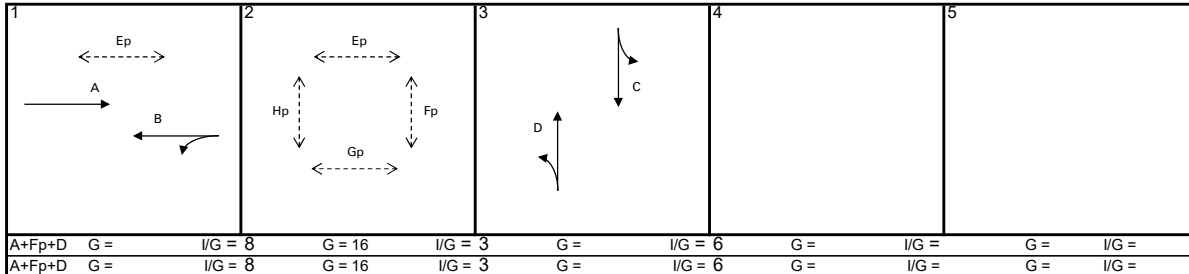
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				299		1915	0.156	323		1915	0.169
A	1	3.000	N				321		2055	0.156	347		2055	0.169
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		210	100%	1830	0.115	201	100%	1830	0.110
B	1	3.250	N				140		2080	0.067	169		2080	0.081
Junction Road NB														
D	3	3.500	Y	25			439	26%	1935	0.227	467	21%	1940	0.241
Junction Road SB														
C	3	3.000	Y	25	N		376	23%	1890	0.199	302	30%	1880	0.161
C	3	3.000	N				408		2055	0.199	329		2055	0.160
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak			A+Fp+D	PM Peak			A+Fp+D
							Sum of Critical y Y			0.383	Sum of Critical y Y			0.410
							Lost Time L (sec)			31	Lost Time L (sec)			31
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.677	Practical Y Ypr			0.668
							Reserve Capacity RC			77%	Reserve Capacity RC			63%

Designed by : HL Date : Nov-25

Junction Index : J05

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

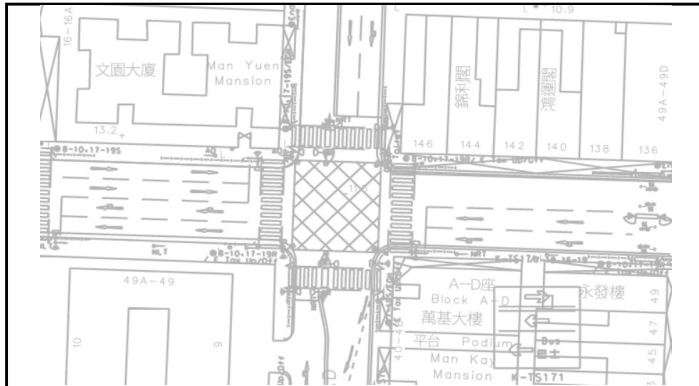
Junction : Junction Road / Nga Tsin Wai Road

Junction Index : J05

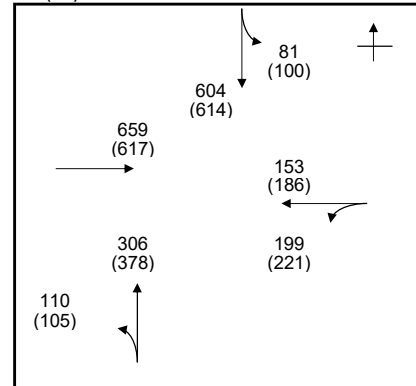
Description : Observed (Weekend)

Design Year : 2019

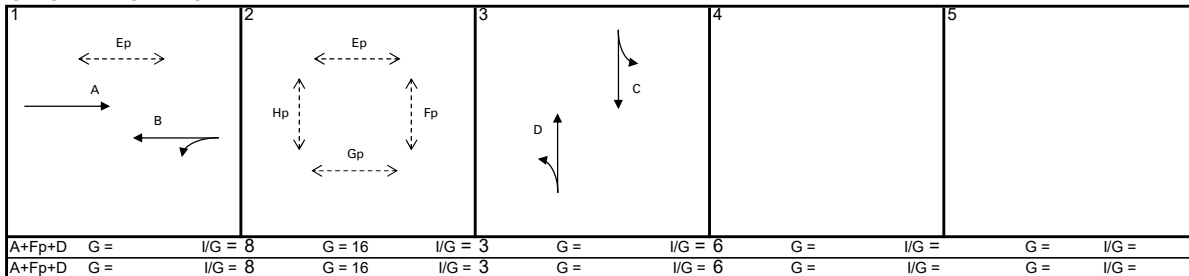
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				318		1915	0.166	298		1915	0.156
A	1	3.000	N				341		2055	0.166	319		2055	0.155
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		199	100%	1830	0.109	221	100%	1830	0.121
B	1	3.250	N				153		2080	0.074	186		2080	0.089
Junction Road NB														
D	3	3.500	Y	25			416	26%	1935	0.215	483	22%	1940	0.249
Junction Road SB														
C	3	3.000	Y	25	N		328	25%	1885	0.174	341	29%	1880	0.181
C	3	3.000	N				357		2055	0.174	373		2055	0.182
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak			A+Fp+D	PM Peak			A+Fp+D
							Sum of Critical y Y			0.381	Sum of Critical y Y			0.405
							Lost Time L (sec)			31	Lost Time L (sec)			31
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.646	Practical Y Ypr			0.657
							Reserve Capacity RC			70%	Reserve Capacity RC			62%

Designed by : HL Date : Nov-25

Junction Index : J05

Checked by : JY Date : Nov-25

Sheet No. : 2

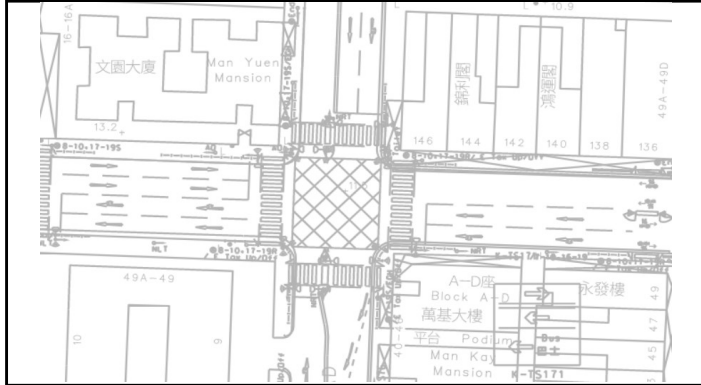
TRAFFIC SIGNAL CALCULATION SHEET



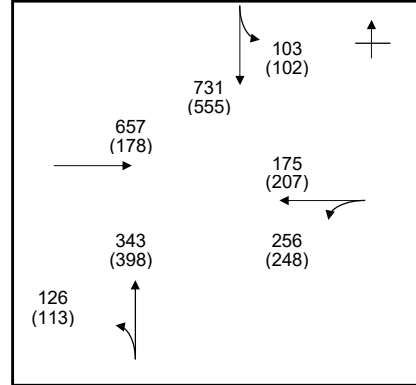
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Junction Road / Nga Tsin Wai Road
Description : Reference (Weekday)

Job No. : 529168
Junction Index : J05
Design Year : 2033

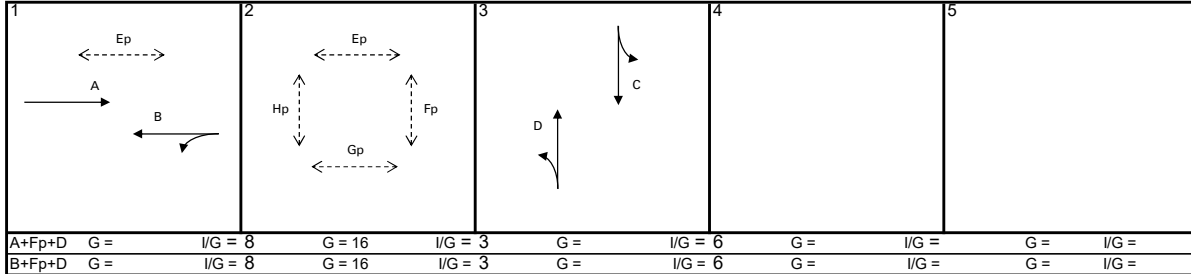
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				317		1915	0.166	86		1915	0.045
A	1	3.000	N				340		2055	0.165	92		2055	0.045
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		256	100%	1830	0.140	248	100%	1830	0.136
B	1	3.250	N				175		2080	0.084	207		2080	0.100
Junction Road NB														
D	3	3.500	Y	25			469	27%	1935	0.242	511	22%	1940	0.263
Junction Road SB														
C	3	3.000	Y	25	N		399	26%	1885	0.212	314	32%	1880	0.167
C	3	3.000	N				435		2055	0.212	343		2055	0.167
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak			A+Fp+D	PM Peak			B+Fp+D
							Sum of Critical y Y			0.408	Sum of Critical y Y			0.399
							Lost Time L (sec)			31	Lost Time L (sec)			31
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.677	Practical Y Ypr			0.668
							Reserve Capacity RC			66%	Reserve Capacity RC			67%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J05
Sheet No. : 3

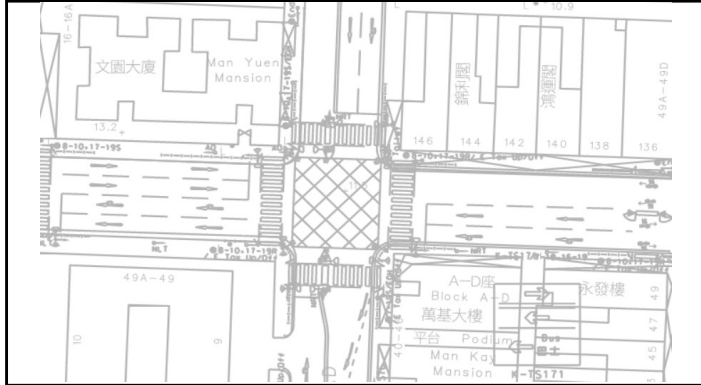
TRAFFIC SIGNAL CALCULATION SHEET



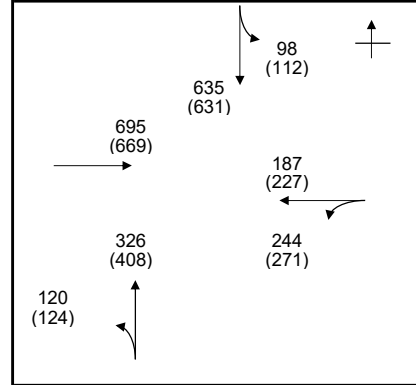
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Junction Road / Nga Tsin Wai Road
Description : Reference (Weekend)

Job No. : 529168
Junction Index : J05
Design Year : 2033

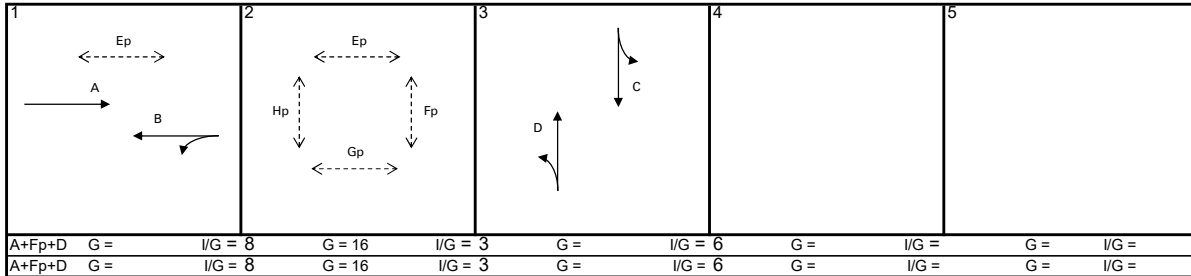
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				335		1915	0.175	323		1915	0.169
A	1	3.000	N				360		2055	0.175	346		2055	0.168
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		244	100%	1830	0.133	271	100%	1830	0.148
B	1	3.250	N				187		2080	0.090	227		2080	0.109
Junction Road NB														
D	3	3.500	Y	25			446	27%	1935	0.230	532	23%	1940	0.274
Junction Road SB														
C	3	3.000	Y	25	N		351	28%	1885	0.186	355	32%	1880	0.189
C	3	3.000	N				382		2055	0.186	388		2055	0.189
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak		A+Fp+D	PM Peak		A+Fp+D		
							Sum of Critical y Y		0.406	Sum of Critical y Y		0.443		
							Lost Time L (sec)		31	Lost Time L (sec)		31		
							Cycle Time c (sec)		110	Cycle Time c (sec)		115		
							Practical Y Ypr		0.646	Practical Y Ypr		0.657		
							Reserve Capacity RC		59%	Reserve Capacity RC		48%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J05
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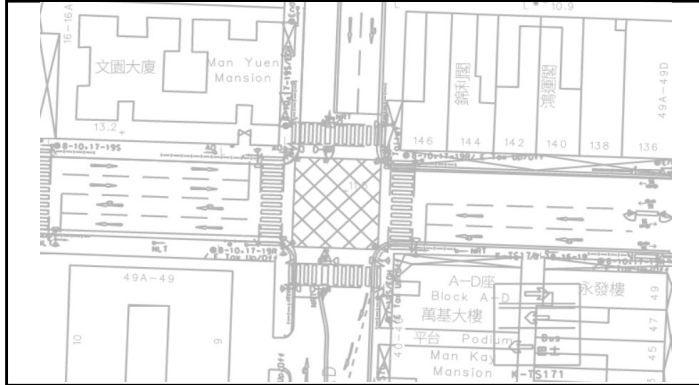
TRAFFIC SIGNAL CALCULATION SHEET



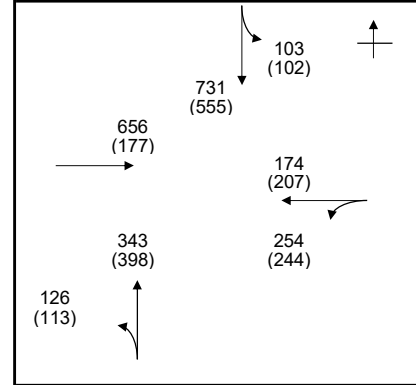
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Junction Road / Nga Tsin Wai Road
Description : Design (Weekday)

Job No. : 529168
Junction Index : J05
Design Year : 2033

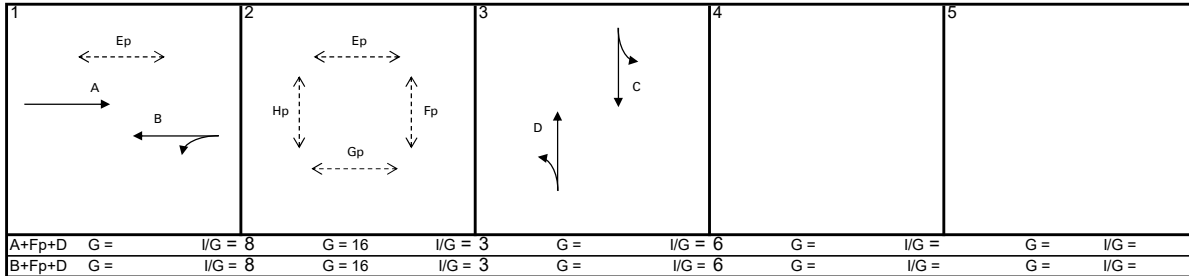
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				316		1915	0.165	85		1915	0.044
A	1	3.000	N				340		2055	0.165	92		2055	0.045
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		254	100%	1830	0.139	244	100%	1830	0.133
B	1	3.250	N				174		2080	0.084	207		2080	0.100
Junction Road NB														
D	3	3.500	Y	25			469	27%	1935	0.242	511	22%	1940	0.263
Junction Road SB														
C	3	3.000	Y	25	N		399	26%	1885	0.212	314	32%	1880	0.167
C	3	3.000	N				435		2055	0.212	343		2055	0.167
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak			A+Fp+D	PM Peak			B+Fp+D
							Sum of Critical y Y			0.408	Sum of Critical y Y			0.397
							Lost Time L (sec)			31	Lost Time L (sec)			31
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.677	Practical Y Ypr			0.668
							Reserve Capacity RC			66%	Reserve Capacity RC			68%

Designed by : HL Date : Nov-25
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Junction Index : J05
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TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

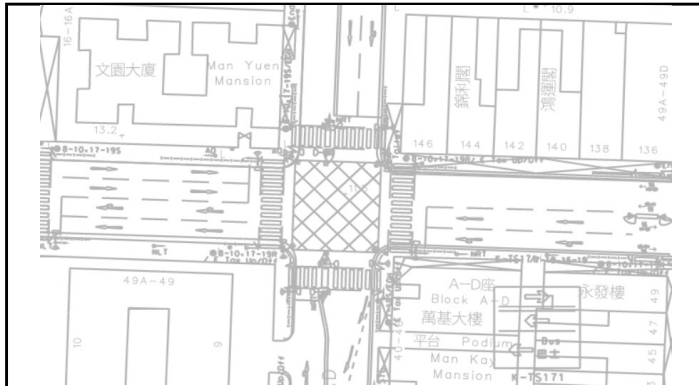
Junction : Junction Road / Nga Tsin Wai Road

Junction Index : J05

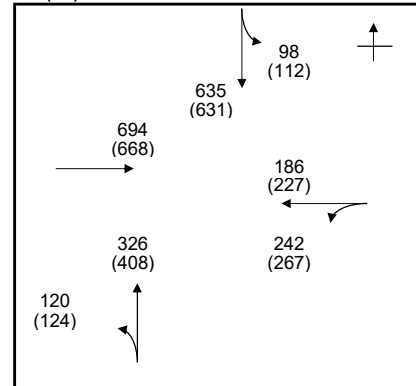
Description : Design (Weekend)

Design Year : 2033

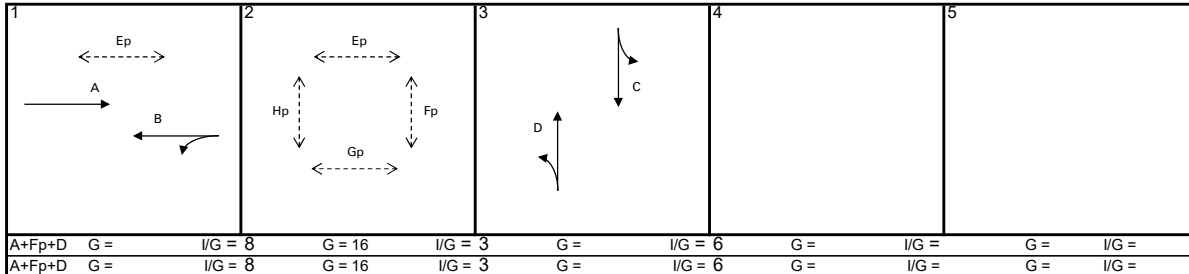
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				335		1915	0.175	322		1915	0.168
A	1	3.000	N				359		2055	0.175	346		2055	0.168
Nga Tsin Wai Road WB														
B	1	3.250	Y	25	N		242	100%	1830	0.132	267	100%	1830	0.146
B	1	3.250	N				186		2080	0.089	227		2080	0.109
Junction Road NB														
D	3	3.500	Y	25			446	27%	1935	0.230	532	23%	1940	0.274
Junction Road SB														
C	3	3.000	Y	25	N		351	28%	1885	0.186	355	32%	1880	0.189
C	3	3.000	N				382		2055	0.186	388		2055	0.189
Pedestrian Crossing														
Ep	1,2		5GM+	11FG=	16	sec								
Fp	2		5GM+	11FG=	16	sec								
Gp	2		5GM+	11FG=	16	sec								
Hp	2		5GM+	11FG=	16	sec								
Notes :							AM Peak			A+Fp+D	PM Peak			A+Fp+D
							Sum of Critical y Y			0.405	Sum of Critical y Y			0.443
							Lost Time L (sec)			31	Lost Time L (sec)			31
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.646	Practical Y Ypr			0.657
							Reserve Capacity RC			59%	Reserve Capacity RC			49%

Designed by : HL Date : Nov-25

Junction Index : J05

Checked by : JY Date : Nov-25

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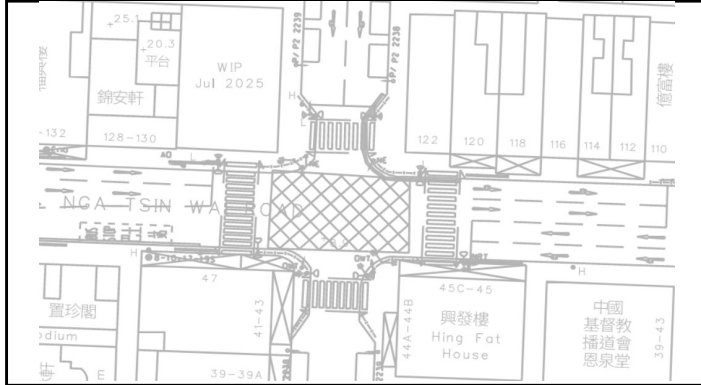
TRAFFIC SIGNAL CALCULATION SHEET



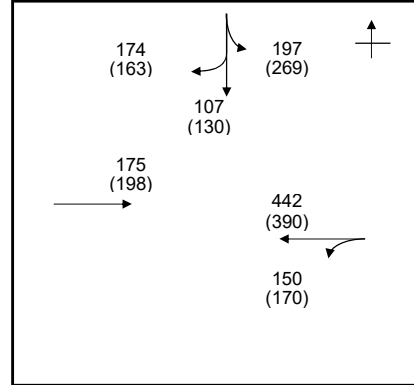
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Observed (Weekday)

Job No. : 529168
Junction Index : J06
Design Year : 2019

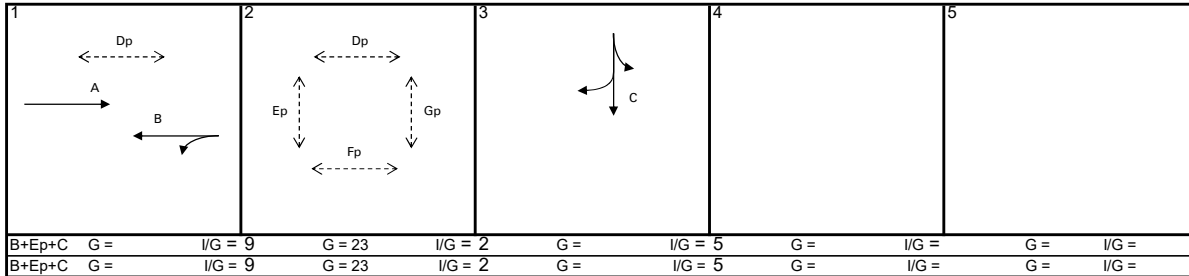
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				84		1915	0.044	96		1915	0.050
A	1	3.000	N				91		2055	0.044	102		2055	0.050
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		284	53%	1890	0.150	267	64%	1875	0.142
B	2	3.000	N				308		2055	0.150	293		2055	0.143
Lion Rock Road SB														
C	3	3.500	Y	20			228	86%	1845	0.124	269	100%	1830	0.147
C	3	3.500	N	25	N		250	70%	2020	0.124	293	56%	2035	0.144
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak			B+E _p +C	PM Peak			B+E _p +C
							Sum of Critical y Y			0.274	Sum of Critical y Y			0.290
							Lost Time L (sec)			37	Lost Time L (sec)			37
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Y_{pr}			0.634	Practical Y Y_{pr}			0.623
							Reserve Capacity RC			>100%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
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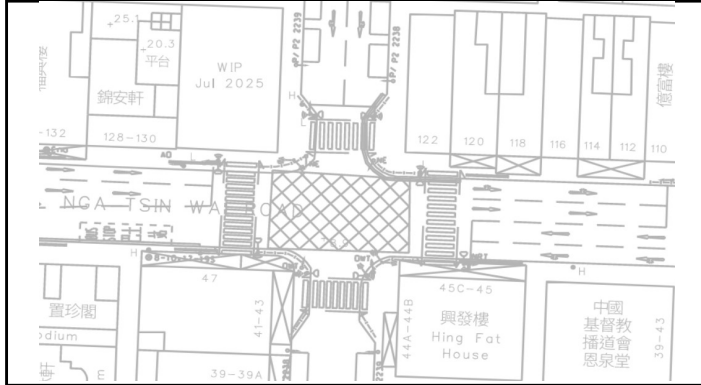
TRAFFIC SIGNAL CALCULATION SHEET



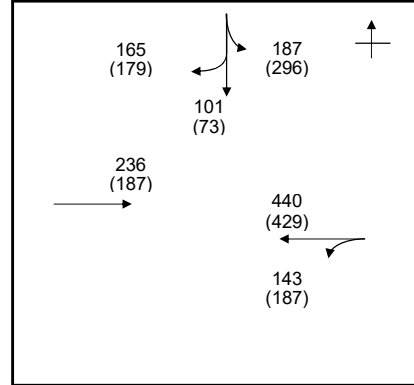
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Observed (Weekend)

Job No. : 529168
Junction Index : J06
Design Year : 2019

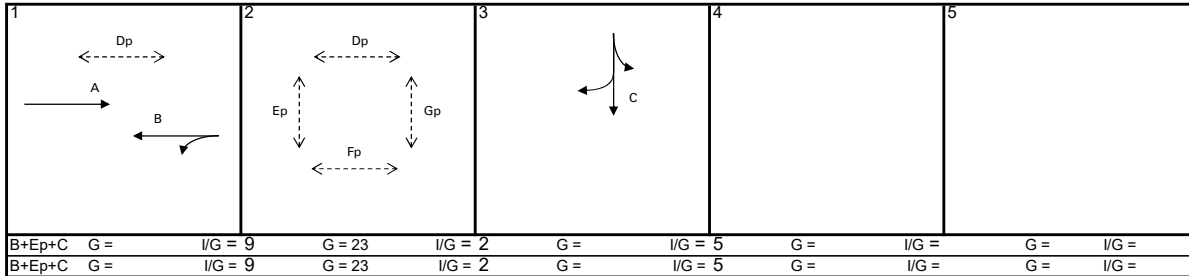
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				114		1915	0.060	90		1915	0.047
A	1	3.000	N				122		2055	0.059	97		2055	0.047
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		279	51%	1890	0.148	294	64%	1875	0.157
B	2	3.000	N				304		2055	0.148	322		2055	0.157
Lion Rock Road SB														
C	3	3.500	Y	20			216	87%	1845	0.117	296	100%	1830	0.162
C	3	3.500	N	25	N		237	70%	2020	0.117	252	71%	2020	0.125
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.265	Sum of Critical y Y		0.319		
							Lost Time L (sec)		37	Lost Time L (sec)		37		
							Cycle Time c (sec)		110	Cycle Time c (sec)		115		
							Practical Y Ypr		0.597	Practical Y Ypr		0.610		
							Reserve Capacity RC		>100%	Reserve Capacity RC		92%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
Sheet No. : 2

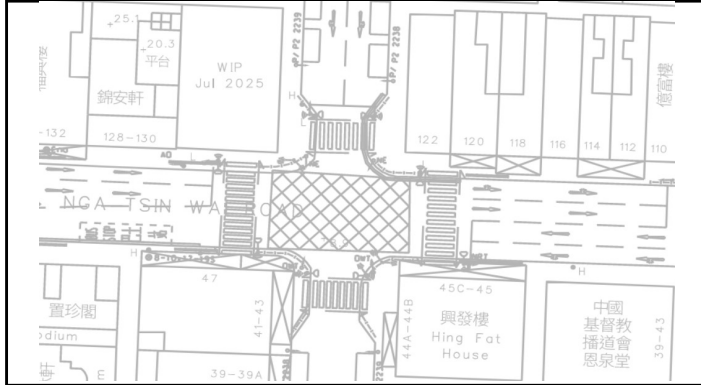
TRAFFIC SIGNAL CALCULATION SHEET



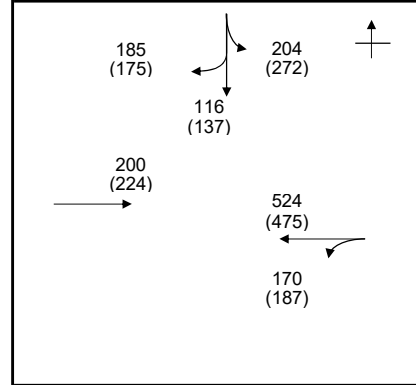
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Reference (Weekday)

Job No. : 529168
Junction Index : J06
Design Year : 2033

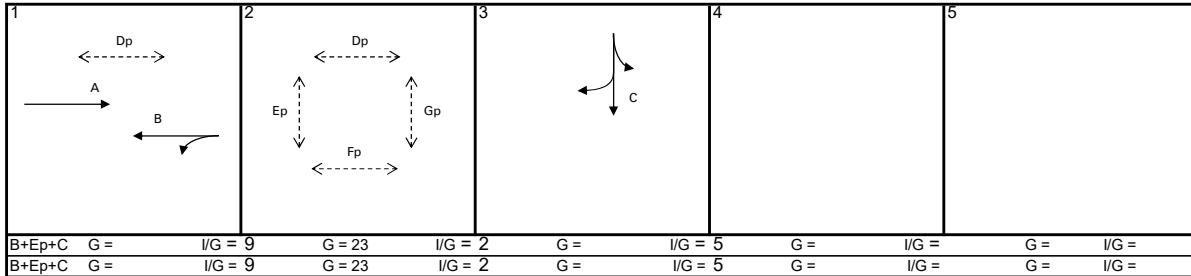
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				96		1915	0.050	108		1915	0.056
A	1	3.000	N				104		2055	0.051	116		2055	0.056
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		333	51%	1895	0.176	316	59%	1880	0.168
B	2	3.000	N				361		2055	0.176	346		2055	0.168
Lion Rock Road SB														
C	3	3.500	Y	20			241	85%	1850	0.130	276	99%	1830	0.151
C	3	3.500	N	25	N		264	70%	2020	0.131	308	57%	2035	0.151
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.306	Sum of Critical y Y		0.320		
							Lost Time L (sec)		37	Lost Time L (sec)		37		
							Cycle Time c (sec)		125	Cycle Time c (sec)		120		
							Practical Y Ypr		0.634	Practical Y Ypr		0.623		
							Reserve Capacity RC		>100%	Reserve Capacity RC		95%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
Sheet No. : 1

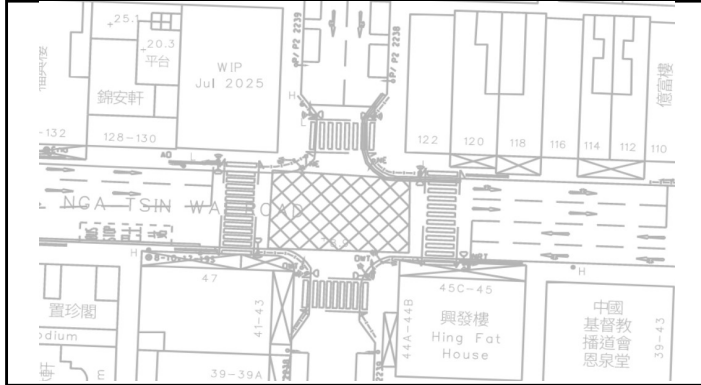
TRAFFIC SIGNAL CALCULATION SHEET



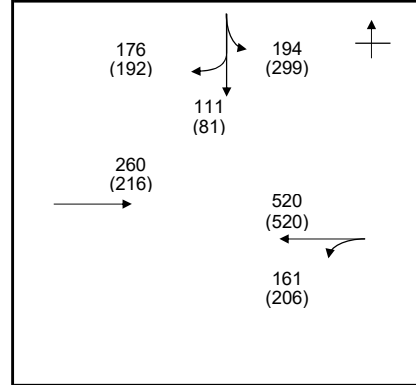
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Reference (Weekend)

Job No. : 529168
Junction Index : J06
Design Year : 2033

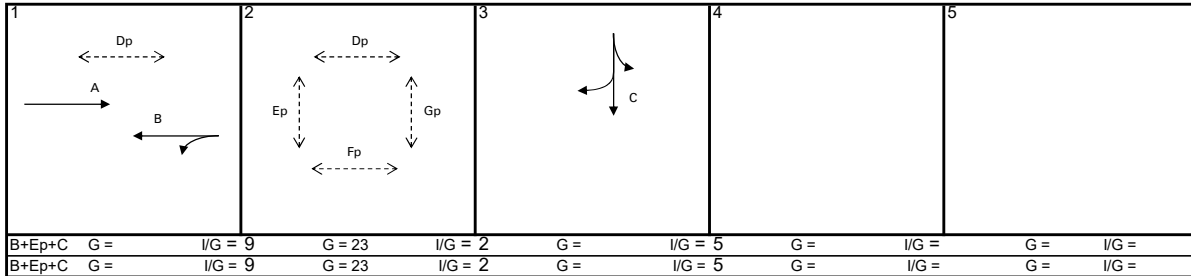
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				125		1915	0.065	104		1915	0.054
A	1	3.000	N				135		2055	0.066	112		2055	0.055
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		327	49%	1895	0.173	347	59%	1880	0.185
B	2	3.000	N				354		2055	0.172	379		2055	0.184
Lion Rock Road SB														
C	3	3.500	Y	20			230	84%	1850	0.124	299	100%	1830	0.163
C	3	3.500	N	25	N		251	70%	2020	0.124	273	70%	2020	0.135
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.297	Sum of Critical y Y		0.348		
							Lost Time L (sec)		37	Lost Time L (sec)		37		
							Cycle Time c (sec)		110	Cycle Time c (sec)		115		
							Practical Y Ypr		0.597	Practical Y Ypr		0.610		
							Reserve Capacity RC		>100%	Reserve Capacity RC		75%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
Sheet No. : 2

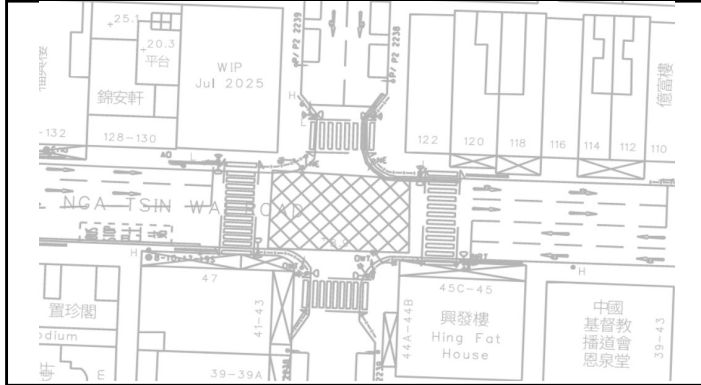
TRAFFIC SIGNAL CALCULATION SHEET



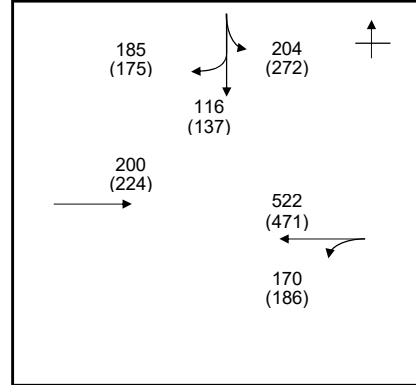
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Design (Weekday)

Job No. : 529168
Junction Index : J06
Design Year : 2033

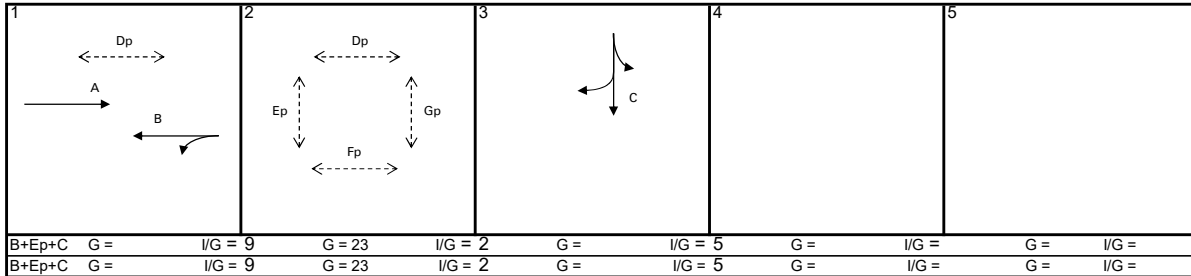
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				96		1915	0.050	108		1915	0.056
A	1	3.000	N				104		2055	0.051	116		2055	0.056
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		332	51%	1890	0.176	314	59%	1880	0.167
B	2	3.000	N				360		2055	0.175	343		2055	0.167
Lion Rock Road SB														
C	3	3.500	Y	20			241	85%	1850	0.130	276	99%	1830	0.151
C	3	3.500	N	25	N		264	70%	2020	0.131	308	57%	2035	0.151
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.306	Sum of Critical y Y		0.318		
							Lost Time L (sec)		37	Lost Time L (sec)		37		
							Cycle Time c (sec)		125	Cycle Time c (sec)		120		
							Practical Y Ypr		0.634	Practical Y Ypr		0.623		
							Reserve Capacity RC		>100%	Reserve Capacity RC		96%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
Sheet No. : 1

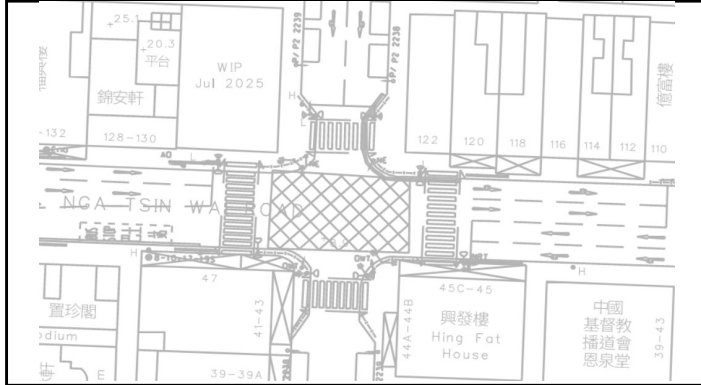
TRAFFIC SIGNAL CALCULATION SHEET



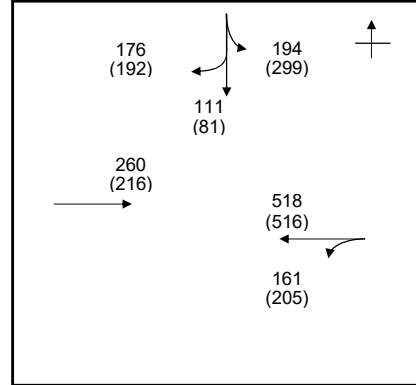
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lion Rock Road
Description : Design (Weekend)

Job No. : 529168
Junction Index : J06
Design Year : 2033

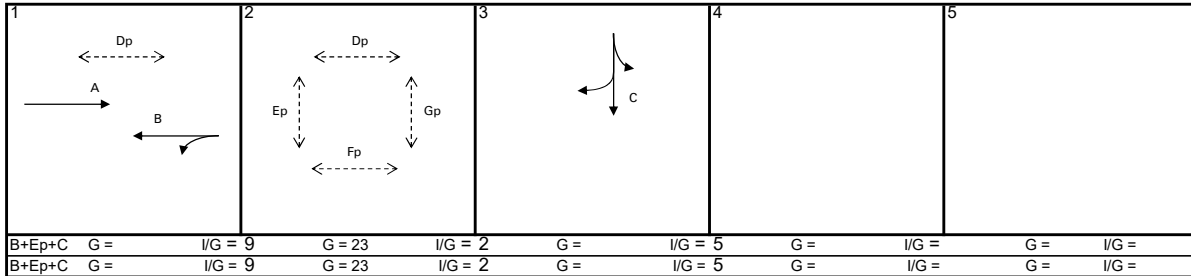
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y				125		1915	0.065	104		1915	0.054
A	1	3.000	N				135		2055	0.066	112		2055	0.055
Nga Tsin Wai Road WB														
B	2	3.500	Y	20	N		326	49%	1895	0.172	345	59%	1880	0.184
B	2	3.000	N				353		2055	0.172	376		2055	0.183
Lion Rock Road SB														
C	3	3.500	Y	20			230	84%	1850	0.124	299	100%	1830	0.163
C	3	3.500	N	25	N		251	70%	2020	0.124	273	70%	2020	0.135
Pedestrian Crossing														
Dp	1,2		5GM+	8FG=	13	sec								
Ep	2		9GM+	14FG=	23	sec								
Fp	2		5GM+	7FG=	12	sec								
Gp	2		9GM+	14FG=	23	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.296	Sum of Critical y Y		0.347		
							Lost Time L (sec)		37	Lost Time L (sec)		37		
							Cycle Time c (sec)		110	Cycle Time c (sec)		115		
							Practical Y Ypr		0.597	Practical Y Ypr		0.610		
							Reserve Capacity RC		>100%	Reserve Capacity RC		76%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J06
Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

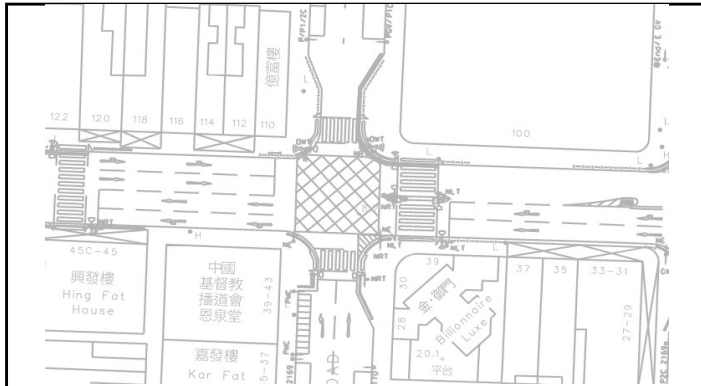
Junction : Nga Tsin Wai Road / Hau Wong Road

Junction Index : J07

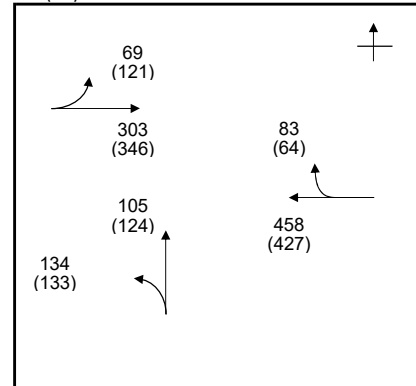
Description : Observed (Weekday)

Design Year : 2019

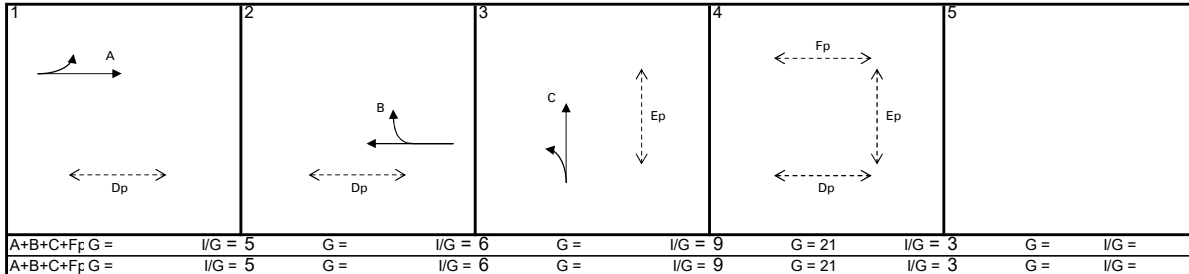
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Nga Tsin Wai Road EB														
A	1	3.000	Y	15	N		175	39%	1840	0.095	218	56%	1815	0.120
A	1	3.250	N				197		2080	0.095	249		2080	0.120
Nga Tsin Wai Road WB														
B	2	3.000	Y				264		1915	0.138	239		1915	0.125
B	2	3.000	N	20	N		277	30%	2010	0.138	252	25%	2015	0.125
Hau Wong Road NB														
C	3	3.000	Y	15			134		1740	0.077	133		1740	0.076
C	3	3.000	Y				105		1915	0.055	124		1915	0.065
Pedestrian Crossing														
Dp	1,2,4		8GM+	9FG=	17	sec								
Ep	4		6GM+	7FG=	13	sec								
Fp	4		9GM+	12FG=	21	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical <i>y</i> Y			0.310	Sum of Critical <i>y</i> Y			0.322
							Lost Time <i>L</i> (sec)			41	Lost Time <i>L</i> (sec)			41
							Cycle Time <i>c</i> (sec)			125	Cycle Time <i>c</i> (sec)			120
							Practical <i>Y</i> Ypr			0.605	Practical <i>Y</i> Ypr			0.593
							Reserve Capacity RC			95%	Reserve Capacity RC			84%

Designed by : HL Date : Nov-25

Junction Index : J07

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

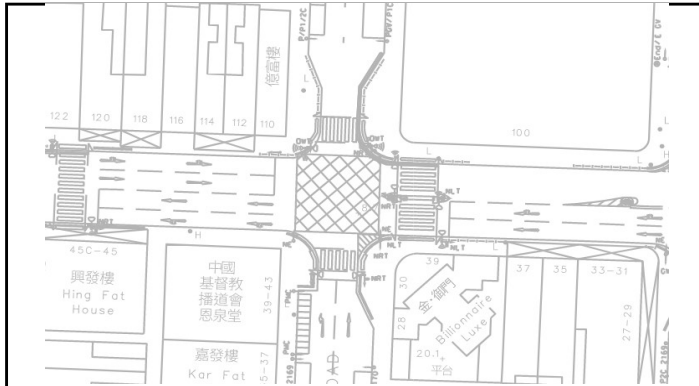
Junction : Nga Tsin Wai Road / Hau Wong Road

Junction Index : J07

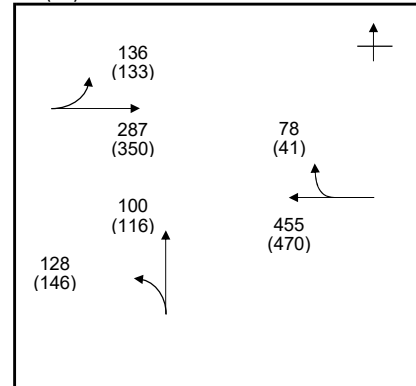
Description : Observed (Weekend)

Design Year : 2019

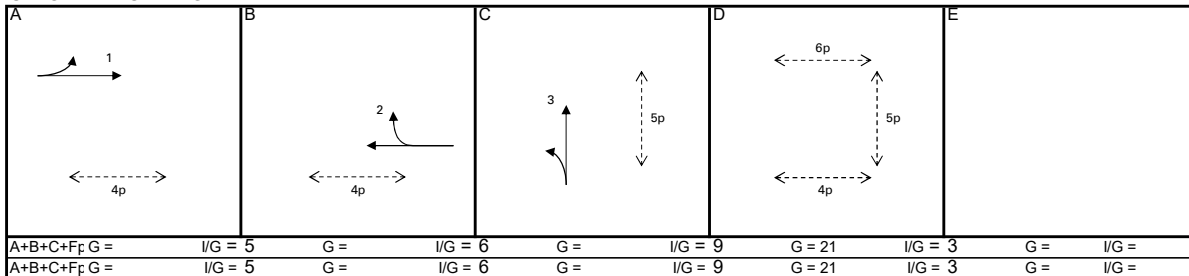
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y	15	N		196	69%	1790	0.109	225	59%	1810	0.124
A	1	3.250	N				227		2080	0.109	258		2080	0.124
Nga Tsin Wai Road WB														
B	2	3.000	Y				260		1915	0.136	248		1915	0.130
B	2	3.000	N	20	N		273	29%	2010	0.136	263	16%	2030	0.130
Hau Wong Road NB														
C	3	3.000	Y	15			128		1740	0.074	146		1740	0.084
C	3	3.000	Y				100		1915	0.052	116		1915	0.061
Pedestrian Crossing														
Dp	1,2,4		8GM+	9FG=	17	sec								
Ep	4		6GM+	7FG=	13	sec								
Fp	4		9GM+	12FG=	21	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.319	Sum of Critical y Y			0.338
							Lost Time L (sec)			41	Lost Time L (sec)			41
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.565	Practical Y Ypr			0.579
							Reserve Capacity RC			77%	Reserve Capacity RC			71%

Designed by : HL Date : Nov-25

Junction Index : J07

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

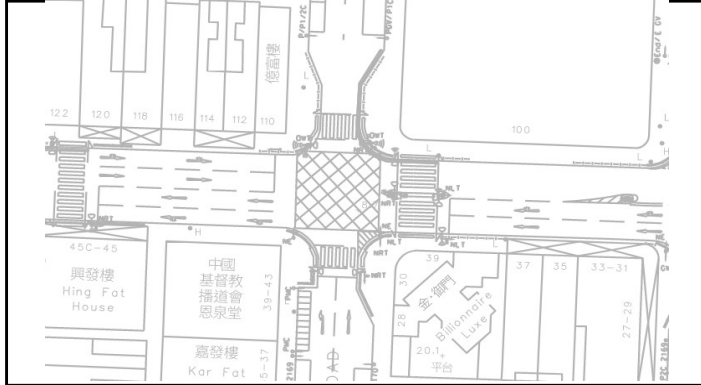
Junction : Nga Tsin Wai Road / Hau Wong Road

Junction Index : J07

Description : Reference (Weekday)

Design Year : 2033

JUNCTION LAYOUT



TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

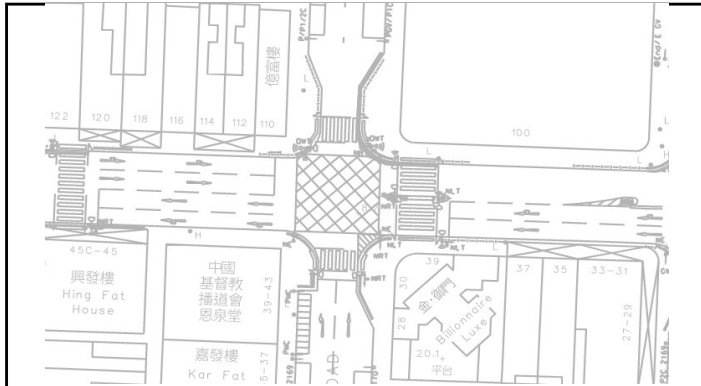
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Junction Index : J07

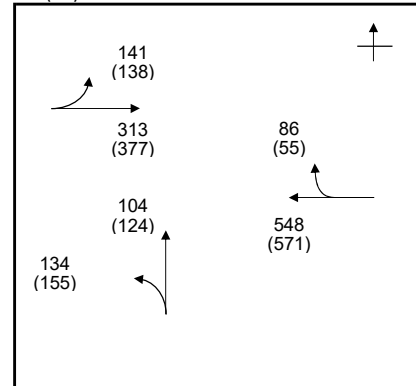
Description : Reference (Weekend)

Design Year : 2033

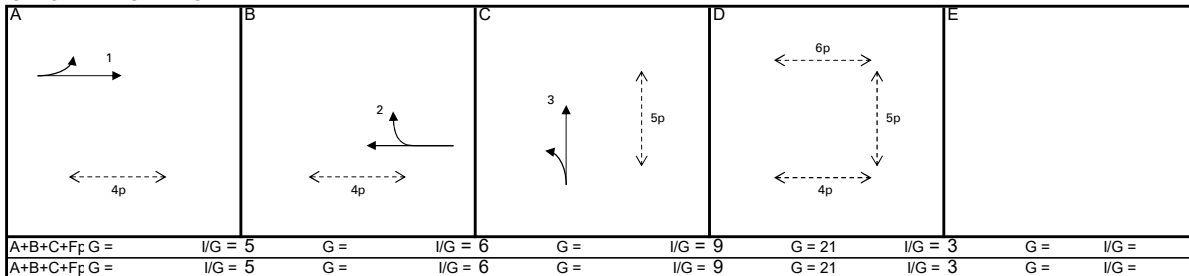
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Nga Tsin Wai Road EB														
A	1	3.000	Y	15	N		210	67%	1795	0.117	240	58%	1810	0.133
A	1	3.250	N				244		2080	0.117	275		2080	0.132
Nga Tsin Wai Road WB														
B	2	3.000	Y				309		1915	0.161	304		1915	0.159
B	2	3.000	N	20	N		325	26%	2015	0.161	322	17%	2030	0.159
Hau Wong Road NB														
C	3	3.000	Y	15			134		1740	0.077	155		1740	0.089
C	3	3.000	Y				104		1915	0.054	124		1915	0.065
Pedestrian Crossing														
Dp	1,2,4		8GM+	9FG=	17	sec								
Ep	4		6GM+	7FG=	13	sec								
Fp	4		9GM+	12FG=	21	sec								
Notes :							AM Peak		A+B+C+Fp	PM Peak		A+B+C+Fp		
							Sum of Critical <i>y</i> Y		0.356	Sum of Critical <i>y</i> Y		0.380		
							Lost Time <i>L</i> (sec)		41	Lost Time <i>L</i> (sec)		41		
							Cycle Time <i>c</i> (sec)		110	Cycle Time <i>c</i> (sec)		115		
							Practical <i>Y</i> Ypr		0.565	Practical <i>Y</i> Ypr		0.579		
							Reserve Capacity RC		59%	Reserve Capacity RC		52%		

Designed by : HL Date : Nov-25

Junction Index : J07

Checked by : JY Date : Nov-25

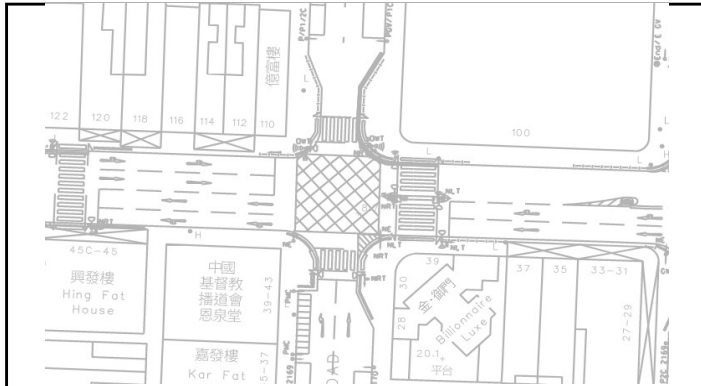
Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

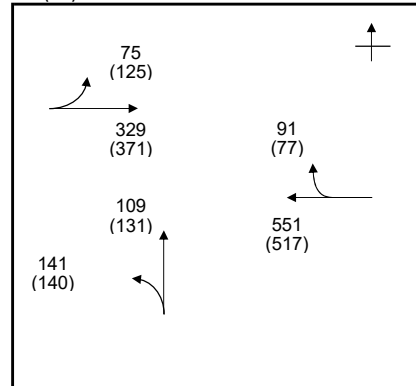


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Nga Tsin Wai Road / Hau Wong Road	Junction Index :	J07
Description :	Design (Weekday)	Design Year :	2033

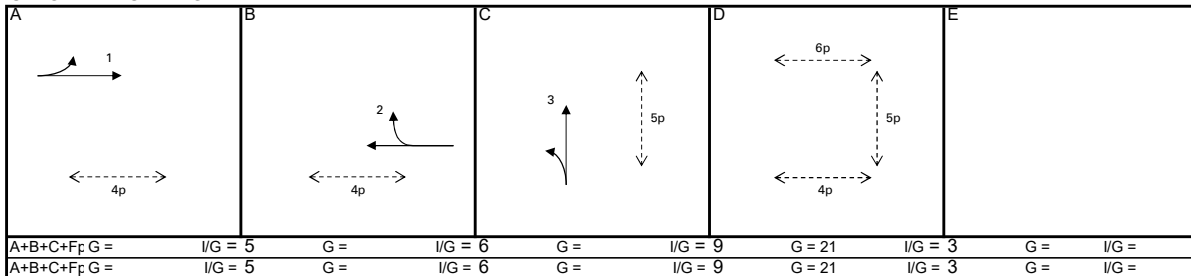
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Nga Tsin Wai Road EB														
A	1	3.000	Y	15	N		190	39%	1840	0.103	231	54%	1815	0.127
A	1	3.250	N				214		2080	0.103	265		2080	0.127
Nga Tsin Wai Road WB														
B	2	3.000	Y				313		1915	0.163	289		1915	0.151
B	2	3.000	N	20	N		329	28%	2015	0.163	305	25%	2015	0.151
Hau Wong Road NB														
C	3	3.000	Y	15			141		1740	0.081	140		1740	0.080
C	3	3.000	Y				109		1915	0.057	131		1915	0.068
Pedestrian Crossing														
Dp	1,2,4		8GM+	9FG=	17	sec								
Ep	4		6GM+	7FG=	13	sec								
Fp	4		9GM+	12FG=	21	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical <i>y</i> Y			0.348	Sum of Critical <i>y</i> Y			0.359
							Lost Time L (sec)			41	Lost Time L (sec)			41
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical <i>Y</i> Ypr			0.605	Practical <i>Y</i> Ypr			0.593
							Reserve Capacity RC			74%	Reserve Capacity RC			65%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J07
Sheet No. : 3

TRAFFIC SIGNAL CALCULATION SHEET

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

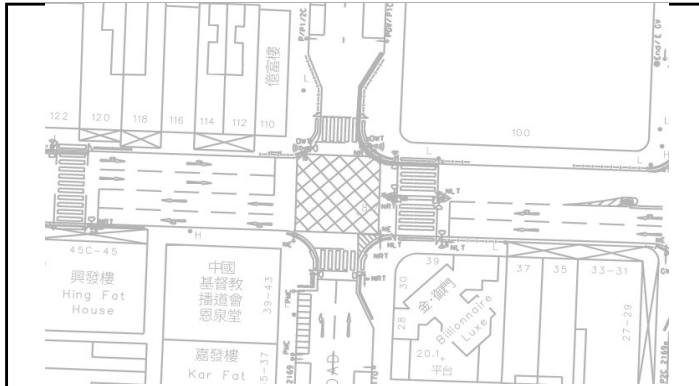
Junction : Nga Tsin Wai Road / Hau Wong Road

Junction Index : J07

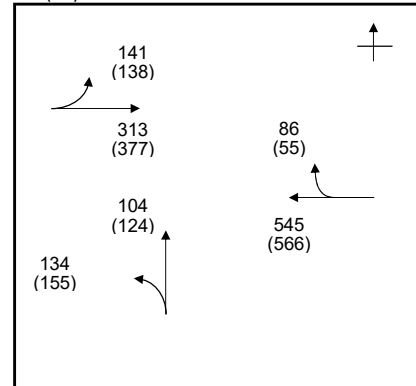
Description : Design (Weekend)

Design Year : 2033

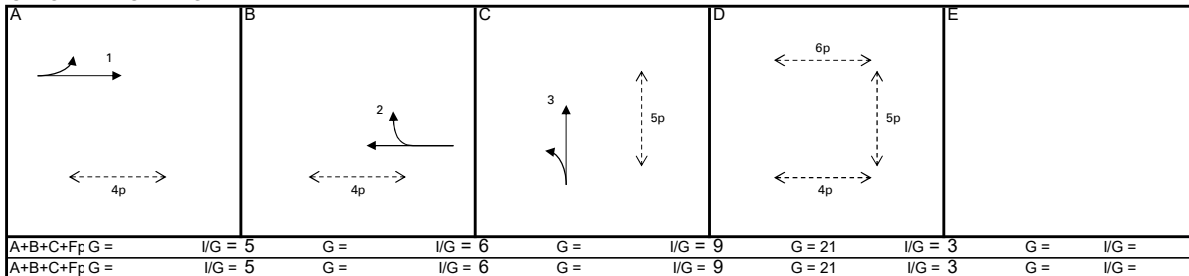
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	3.000	Y	15	N		210	67%	1795	0.117	240	58%	1810	0.133
A	1	3.250	N				244		2080	0.117	275		2080	0.132
Nga Tsin Wai Road WB														
B	2	3.000	Y				307		1915	0.160	302		1915	0.158
B	2	3.000	N	20	N		324	27%	2015	0.161	319	17%	2030	0.157
Hau Wong Road NB														
C	3	3.000	Y	15			134		1740	0.077	155		1740	0.089
C	3	3.000	Y				104		1915	0.054	124		1915	0.065
Pedestrian Crossing														
Dp	1,2,4		8GM+	9FG=	17	sec								
Ep	4		6GM+	7FG=	13	sec								
Fp	4		9GM+	12FG=	21	sec								
Notes :														
							AM Peak		A+B+C+Fp		PM Peak		A+B+C+Fp	
							Sum of Critical y Y		0.355		Sum of Critical y Y		0.379	
							Lost Time L (sec)		41		Lost Time L (sec)		41	
							Cycle Time c (sec)		110		Cycle Time c (sec)		115	
							Practical Y Ypr		0.565		Practical Y Ypr		0.579	
							Reserve Capacity RC		59%		Reserve Capacity RC		53%	

Designed by : HL Date : Nov-25

Junction Index : J07

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

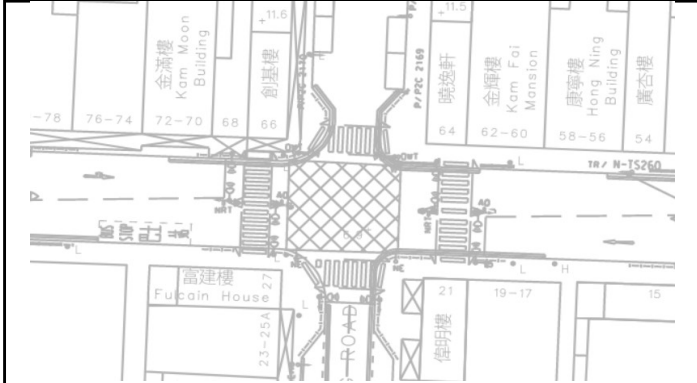
Junction : Nga Tsin Wai Road / Lung Kong Road

Junction Index : J08

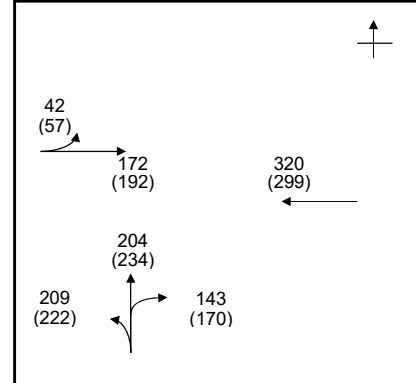
Description : Observed (Weekday)

Design Year : 2019

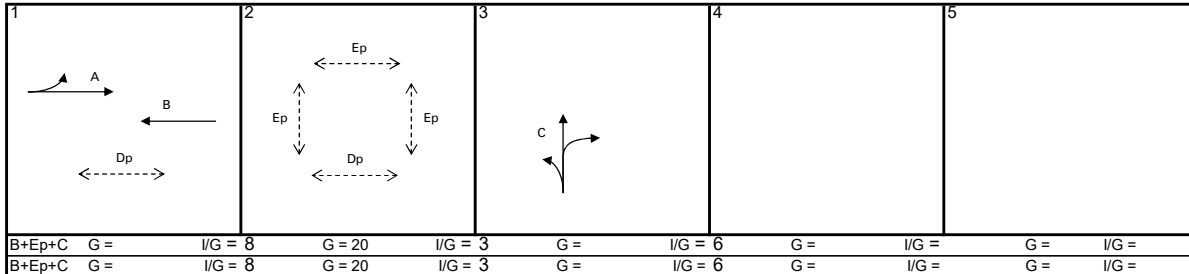
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	5.500	Y	20			214	20%	2135	0.100	249	23%	2130	0.117
Nga Tsin Wai Road WB														
B	1	5.500	Y				320		2165	0.148	299		2165	0.138
Lung Kong Road NB														
C	3	3.000	Y	20			274	76%	1810	0.151	310	72%	1815	0.171
C	3	3.000	Y	25	N		282	51%	1860	0.152	316	54%	1855	0.170
Pedestrian Crossing														
Dp	1,2		10GM+	10FG=	20	sec								
Ep	2		10GM+	10FG=	20	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical y Y		0.299	Sum of Critical y Y		0.309		
							Lost Time L (sec)		35	Lost Time L (sec)		35		
							Cycle Time c (sec)		120	Cycle Time c (sec)		115		
							Practical Y Ypr		0.638	Practical Y Ypr		0.626		
							Reserve Capacity RC		>100%	Reserve Capacity RC		>100%		

Designed by : HL Date : Nov-25

Junction Index : J08

Checked by : JY Date : Nov-25

Sheet No. : 1

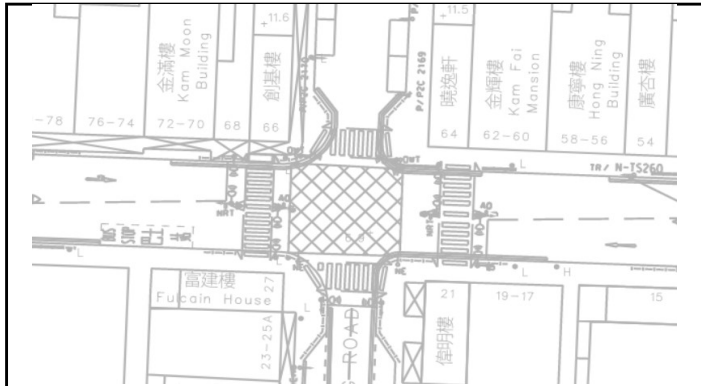
TRAFFIC SIGNAL CALCULATION SHEET



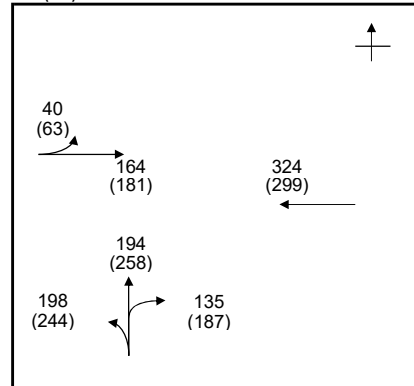
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lung Kong Road
Description : Observed (Weekend)

Job No. : 529168
Junction Index : J08
Design Year : 2019

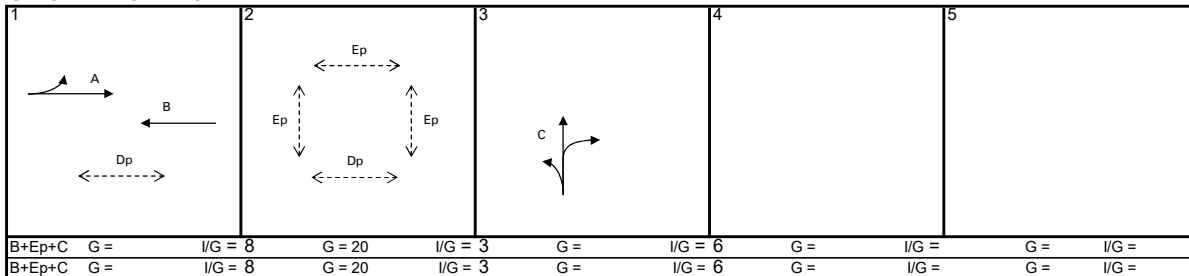
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak				
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	
Nga Tsin Wai Road EB															
A	1	5.500	Y	20			204	20%	2135	0.096	244	26%	2125	0.115	
Nga Tsin Wai Road WB															
B	1	5.500	Y				324		2165	0.150	299		2165	0.138	
Lung Kong Road NB															
C	3	3.000	Y	20			260	76%	1810	0.144	341	72%	1815	0.188	
C	3	3.000	Y	25	N		267	51%	1860	0.144	348	54%	1855	0.188	
Pedestrian Crossing															
Dp	1,2		10GM+	10FG=	20	sec									
Ep	2		10GM+	10FG=	20	sec									
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C			
							Sum of Critical y Y		0.293	Sum of Critical y Y		0.326			
							Lost Time L (sec)		35	Lost Time L (sec)		35			
							Cycle Time c (sec)		105	Cycle Time c (sec)		110			
							Practical Y Ypr		0.600	Practical Y Ypr		0.614			
							Reserve Capacity RC		>100%	Reserve Capacity RC		88%			

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J08
Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

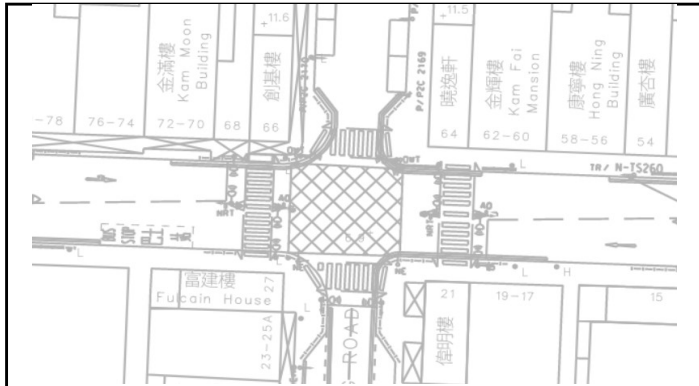
Junction : Nga Tsin Wai Road / Lung Kong Road

Junction Index : J08

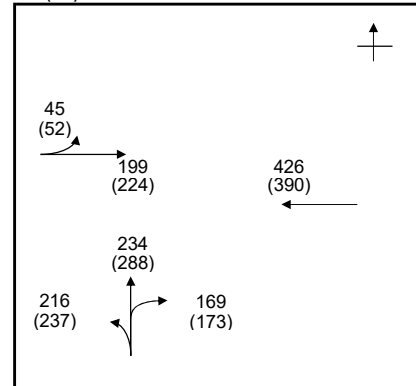
Description : Reference (Weekday)

Design Year : 2033

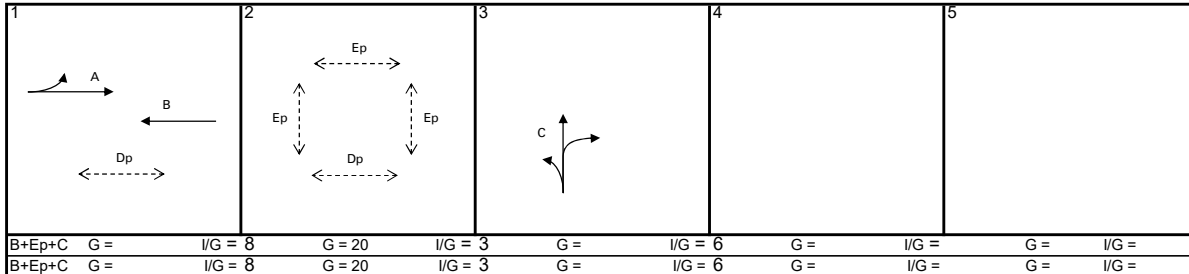
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Nga Tsin Wai Road EB														
A	1	5.500	Y	20			244	18%	2135	0.114	276	19%	2135	0.129
Nga Tsin Wai Road WB														
B	1	5.500	Y				426		2165	0.197	390		2165	0.180
Lung Kong Road NB														
C	3	3.000	Y	20			306	71%	1820	0.168	345	69%	1820	0.190
C	3	3.000	Y	25	N		313	54%	1855	0.169	353	49%	1860	0.190
Pedestrian Crossing														
Dp	1,2		10GM+	10FG=	20	sec								
Ep	2		10GM+	10FG=	20	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical <i>y</i> Y		0.365	Sum of Critical <i>y</i> Y		0.370		
							Lost Time <i>L</i> (sec)		35	Lost Time <i>L</i> (sec)		35		
							Cycle Time <i>c</i> (sec)		120	Cycle Time <i>c</i> (sec)		115		
							Practical <i>Y</i> <i>Ypr</i>		0.638	Practical <i>Y</i> <i>Ypr</i>		0.626		
							Reserve Capacity RC		74%	Reserve Capacity RC		69%		

Designed by : HL Date : Nov-25

Junction Index : J08

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

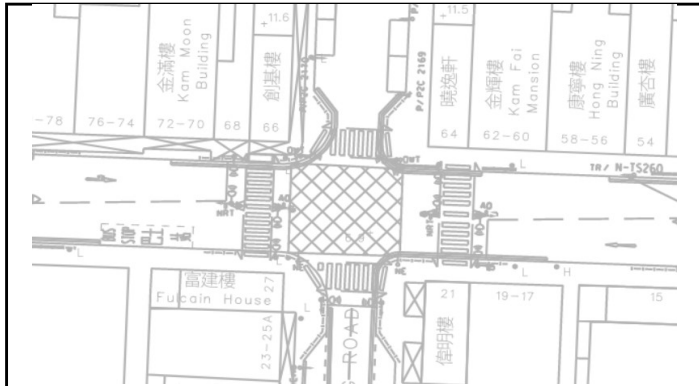
Junction : Nga Tsin Wai Road / Lung Kong Road

Junction Index : J08

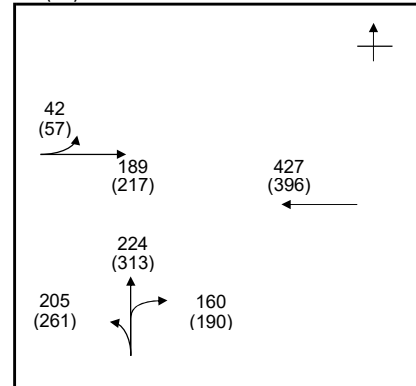
Description : Reference (Weekend)

Design Year : 2033

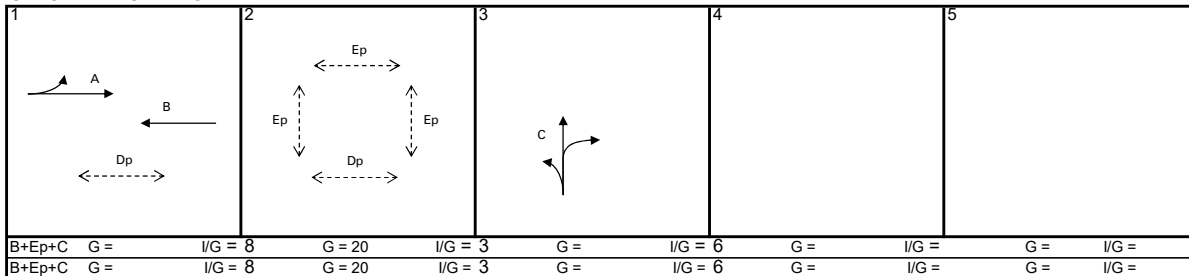
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	5.500	Y	20			231	18%	2135	0.108	274	21%	2130	0.129
Nga Tsin Wai Road WB														
B	1	5.500	Y				427		2165	0.197	396		2165	0.183
Lung Kong Road NB														
C	3	3.000	Y	20			292	70%	1820	0.160	378	69%	1820	0.208
C	3	3.000	Y	25	N		297	54%	1855	0.160	386	49%	1860	0.208
Pedestrian Crossing														
Dp	1,2		10GM+	10FG=	20	sec								
Ep	2		10GM+	10FG=	20	sec								
Notes :							AM Peak			B+Ep+C	PM Peak			B+Ep+C
							Sum of Critical y Y			0.358	Sum of Critical y Y			0.391
							Lost Time L (sec)			35	Lost Time L (sec)			35
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.600	Practical Y Ypr			0.614
							Reserve Capacity RC			68%	Reserve Capacity RC			57%

Designed by : HL Date : Nov-25

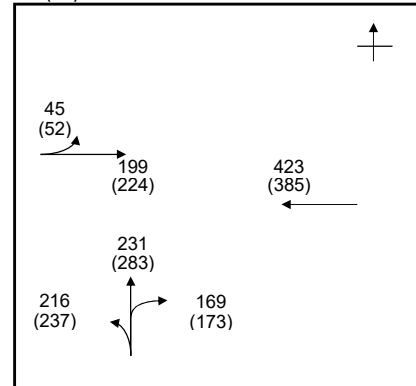
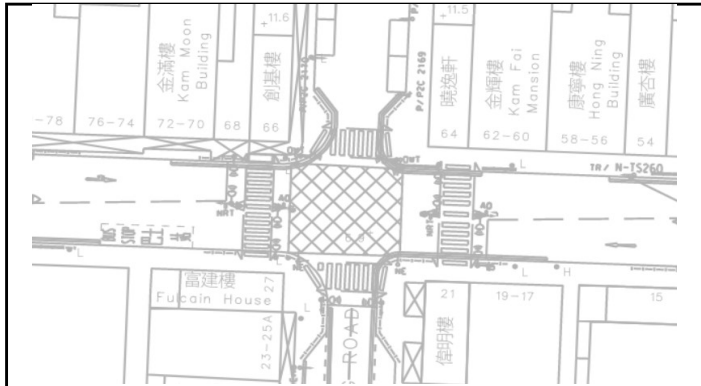
Junction Index : J08

Checked by : JY Date : Nov-25

Sheet No. : 2

Design Year	:	2033
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AM (PM) Peak Hour Traffic Flows



1	2	3	4	5
$B+Ep+C$ $G =$ $I/G = 8$	$G = 20$ $I/G = 3$	$G =$ $I/G = 6$	$G =$ $I/G =$	$G =$ $I/G =$
$B+Ep+C$ $G =$ $I/G = 8$	$G = 20$ $I/G = 3$	$G =$ $I/G = 6$	$G =$ $I/G =$	$G =$ $I/G =$

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Nga Tsin Wai Road EB														
A	1	5.500	Y	20			244	18%	2135	0.114	276	19%	2135	0.129
Nga Tsin Wai Road WB														
B	1	5.500	Y				423		2165	0.195	385		2165	0.178
Lung Kong Road NB														
C	3	3.000	Y	20			305	71%	1820	0.168	343	69%	1820	0.188
C	3	3.000	Y	25	N		311	54%	1855	0.168	350	49%	1860	0.188
Pedestrian Crossing														
Dp	1,2		10GM+	10FG=	20	sec								
Ep	2		10GM+	10FG=	20	sec								
Notes :							AM Peak		B+Ep+C	PM Peak		B+Ep+C		
							Sum of Critical <i>y Y</i>		0.363	Sum of Critical <i>y Y</i>		0.366		
							Lost Time <i>L</i> (sec)		35	Lost Time <i>L</i> (sec)		35		
							Cycle Time <i>c</i> (sec)		120	Cycle Time <i>c</i> (sec)		115		
							Practical <i>Y Ypr</i>		0.638	Practical <i>Y Ypr</i>		0.626		
							Reserve Capacity <i>RC</i>		76%	Reserve Capacity <i>RC</i>		71%		

Junction Index : J08

Sheet No. : 1

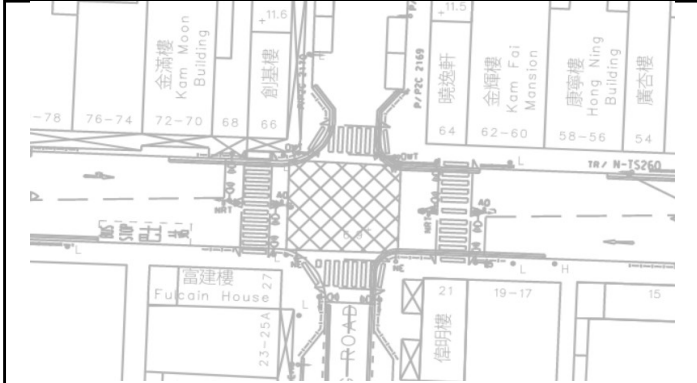
TRAFFIC SIGNAL CALCULATION SHEET



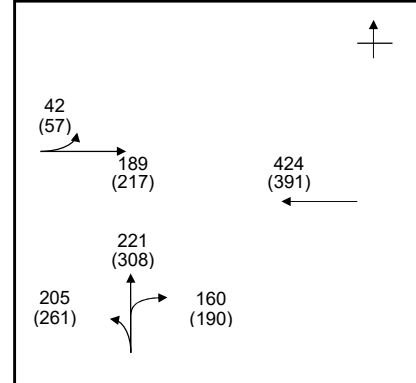
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Nga Tsin Wai Road / Lung Kong Road
Description : Design (Weekend)

Job No. : 529168
Junction Index : J08
Design Year : 2033

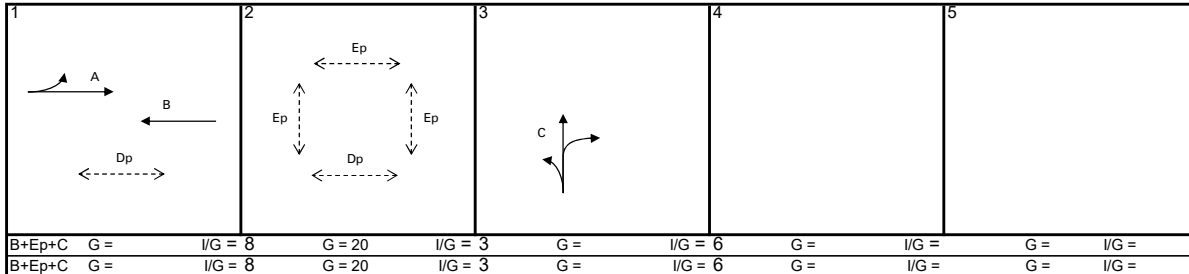
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Nga Tsin Wai Road EB														
A	1	5.500	Y	20			231	18%	2135	0.108	274	21%	2130	0.129
Nga Tsin Wai Road WB														
B	1	5.500	Y				424		2165	0.196	391		2165	0.181
Lung Kong Road NB														
C	3	3.000	Y	20			290	71%	1820	0.159	375	70%	1820	0.206
C	3	3.000	Y	25	N		296	54%	1855	0.160	384	49%	1860	0.206
Pedestrian Crossing														
Dp	1,2		10GM+	10FG=	20	sec								
Ep	2		10GM+	10FG=	20	sec								
Notes :							AM Peak			B+Ep+C	PM Peak			B+Ep+C
							Sum of Critical y Y			0.355	Sum of Critical y Y			0.387
							Lost Time L (sec)			35	Lost Time L (sec)			35
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.600	Practical Y Ypr			0.614
							Reserve Capacity RC			69%	Reserve Capacity RC			59%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J08
Sheet No. : 2

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J09 Prince Edward Road West / South Wall Road

Designed by: HL

Scheme: Observed (Weekday)

Checked by: JY

Design Year: 2019

Job No.: 529168

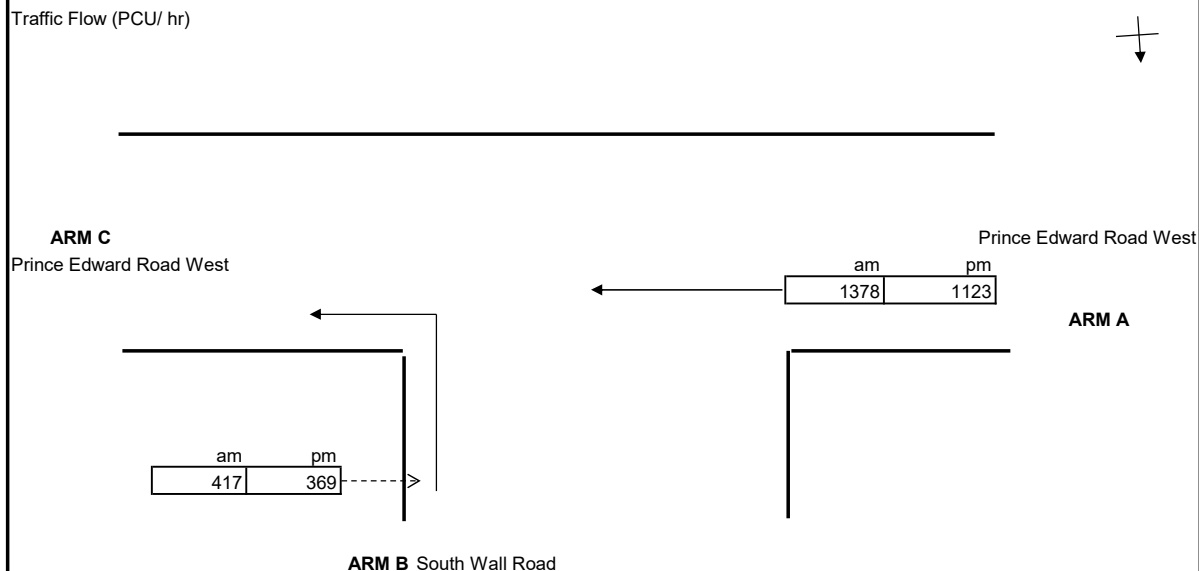
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: South Wall Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	16.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.00
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.10
	Vr(b-c)	95		F	0.59
	Vr(c-b)			Y	0.45

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1378	1123
	q(b-a)	0	0
	q(b-c)	417	369
	f	1.00	1.00
CAPACITIES	Q(b-a)	215	237
	Q(b-c)	573	619
	Q(c-b)	305	329
	Q(b-ac)	573	619
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.728	0.596
	c-a	0.000	0.000
Critical DFC		0.73	0.60

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)			
Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J09 Prince Edward Road West / South Wall Road		Designed by: HL	
Scheme: Observed (Weekend)		Checked by: JY	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	
ARM A: Prince Edward Road West			
ARM B: South Wall Road			
ARM C: Prince Edward Road West			
Traffic Flow (PCU/ hr)			
GEOMETRY			
Major road width	W	16.00	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
			w(b-c)
			w(c-b)
Visibilities	Vr(b-a)		Calculated
	VI(b-a)		D
	Vr(b-c)	95	E
	Vr(c-b)		F
			Y
ANALYSIS			
		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1230	1165
	q(b-a)	0	0
	q(b-c)	366	426
	f	1.00	1.00
CAPACITIES	Q(b-a)	227	233
	Q(b-c)	600	611
	Q(c-b)	319	325
	Q(b-ac)	600	611
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.610	0.697
	c-a	0.000	0.000
Critical DFC		0.61	0.70
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1 + 0.094(w(b-a) - 3.65))(1 + 0.0009(Vr(b-a) - 120))(1 + 0.0006(VI(b-a) - 150))$ $E = (1 + 0.094(w(b-c) - 3.65))(1 + 0.0009(Vr(b-c) - 120))$ $F = (1 + 0.094(w(c-b) - 3.65))(1 + 0.0009(Vr(c-b) - 120))$ $Y = 1 - 0.0345W$ 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			

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J09 Prince Edward Road West / South Wall Road

Designed by: HL

Scheme: Reference (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

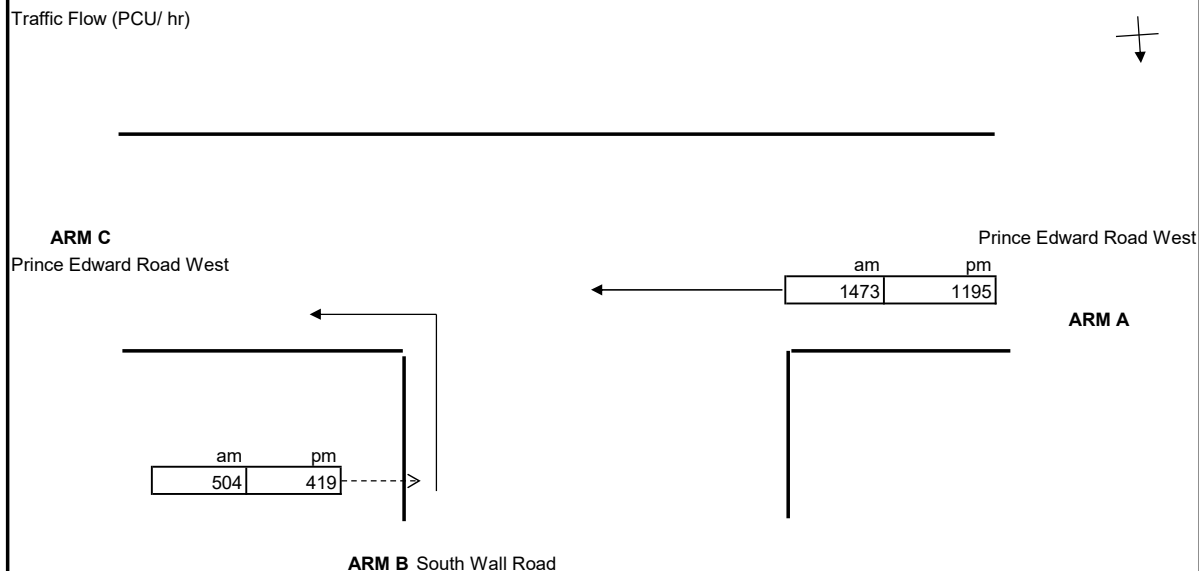
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: South Wall Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	16.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.00
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.10
	Vr(b-c)	95		F	0.59
	Vr(c-b)			Y	0.45

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1473	1195
	q(b-a)	0	0
	q(b-c)	504	419
	f	1.00	1.00
CAPACITIES	Q(b-a)	206	230
	Q(b-c)	556	606
	Q(c-b)	296	322
	Q(b-ac)	556	606
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.906	0.691
	c-a	0.000	0.000
Critical DFC		0.91	0.69

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J09 Prince Edward Road West / South Wall Road

Designed by: HL

Scheme: Reference (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

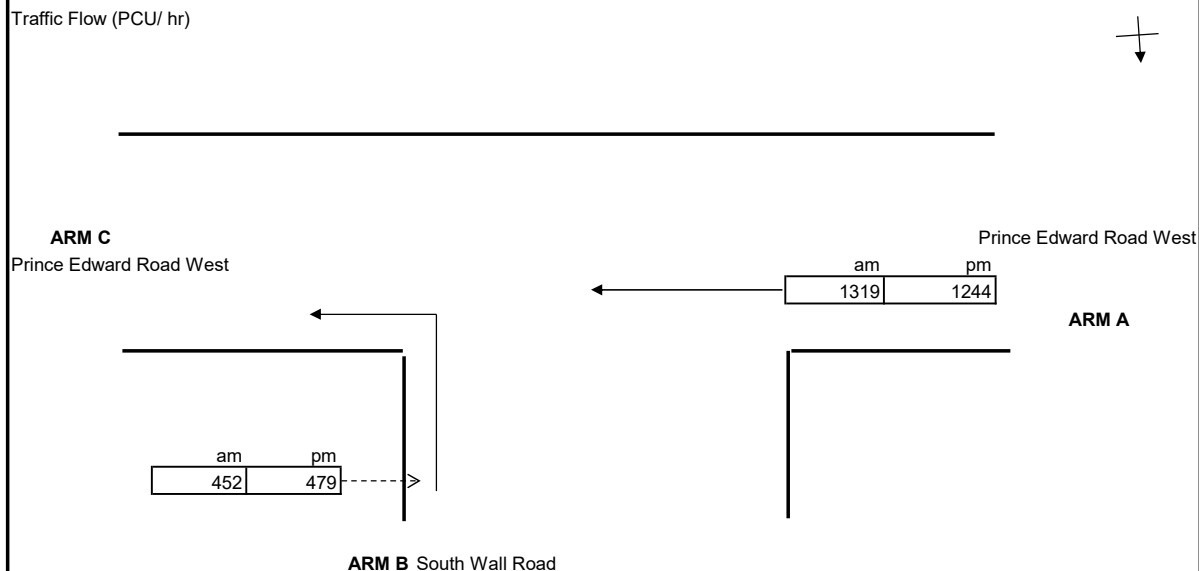
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: South Wall Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	16.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.00
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.10
	Vr(b-c)	95		F	0.59
	Vr(c-b)			Y	0.45

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1319	1244
	q(b-a)	0	0
	q(b-c)	452	479
	f	1.00	1.00
CAPACITIES	Q(b-a)	220	226
	Q(b-c)	584	597
	Q(c-b)	311	318
	Q(b-ac)	584	597
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.774	0.802
	c-a	0.000	0.000
Critical DFC		0.77	0.80

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J09 Prince Edward Road West / South Wall Road

Designed by: HL

Scheme: Design (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

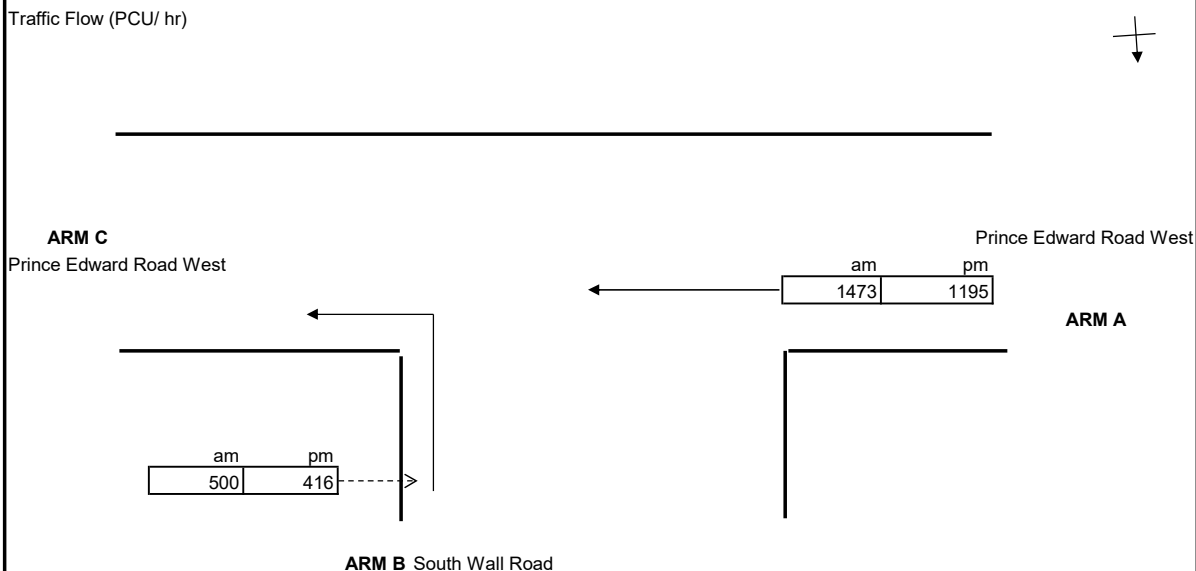
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: South Wall Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	16.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.00
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.10
	Vr(b-c)	95		F	0.59
	Vr(c-b)			Y	0.45

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1473	1195
	q(b-a)	0	0
	q(b-c)	500	416
	f	1.00	1.00
CAPACITIES	Q(b-a)	206	230
	Q(b-c)	556	606
	Q(c-b)	296	322
	Q(b-ac)	556	606
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.899	0.686
	c-a	0.000	0.000
Critical DFC		0.90	0.69

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J09 Prince Edward Road West / South Wall Road

Designed by: HL

Scheme: Design (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

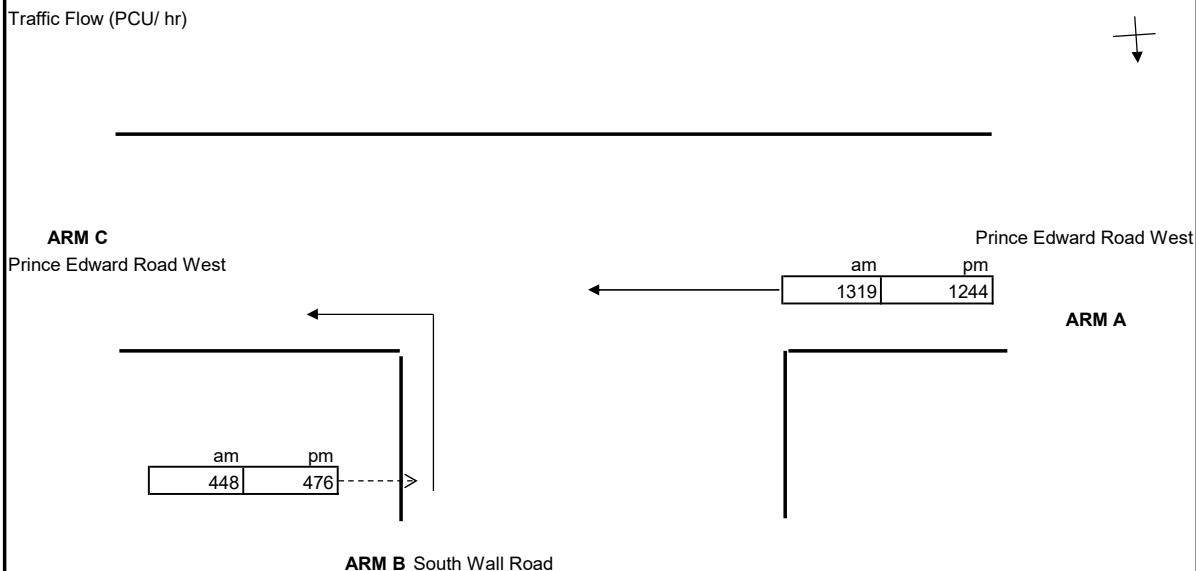
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: South Wall Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	16.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.00
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.10
	Vr(b-c)	95		F	0.59
	Vr(c-b)			Y	0.45

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1319	1244
	q(b-a)	0	0
	q(b-c)	448	476
	f	1.00	1.00
CAPACITIES	Q(b-a)	220	226
	Q(b-c)	584	597
	Q(c-b)	311	318
	Q(b-ac)	584	597
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.767	0.797
	c-a	0.000	0.000
Critical DFC		0.77	0.80

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)			
Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J10 Prince Edward Road West / Lion Rock Road		Designed by: HL	
Scheme: Observed (Weekday)		Checked by: JY	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	
ARM A: Prince Edward Road West			
ARM B: Lion Rock Rock			
ARM C: Prince Edward Road West			
Traffic Flow (PCU/ hr)			
GEOMETRY			
Major road width	W	20.00	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
			w(b-c)
			w(c-b)
Visibilities	Vr(b-a)		Calculated
	VI(b-a)		D
	Vr(b-c)	35	E
	Vr(c-b)		F
			Y
ANALYSIS			
		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1375	1116
	q(b-a)	0	0
	q(b-c)	257	300
	f	1.00	1.00
CAPACITIES	Q(b-a)	252	267
	Q(b-c)	639	671
	Q(c-b)	346	363
	Q(b-ac)	639	671
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.402	0.447
	c-a	0.000	0.000
Critical DFC		0.40	0.45
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ $f = \text{proportion of minor traffic turning left}$ $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams			
- In accordance with TPDM V2.4			

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

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J10 Prince Edward Road West / Lion Rock Road

Designed by: HL

Scheme: Observed (Weekend)

Checked by: JY

Design Year: 2019

Job No.: 529168

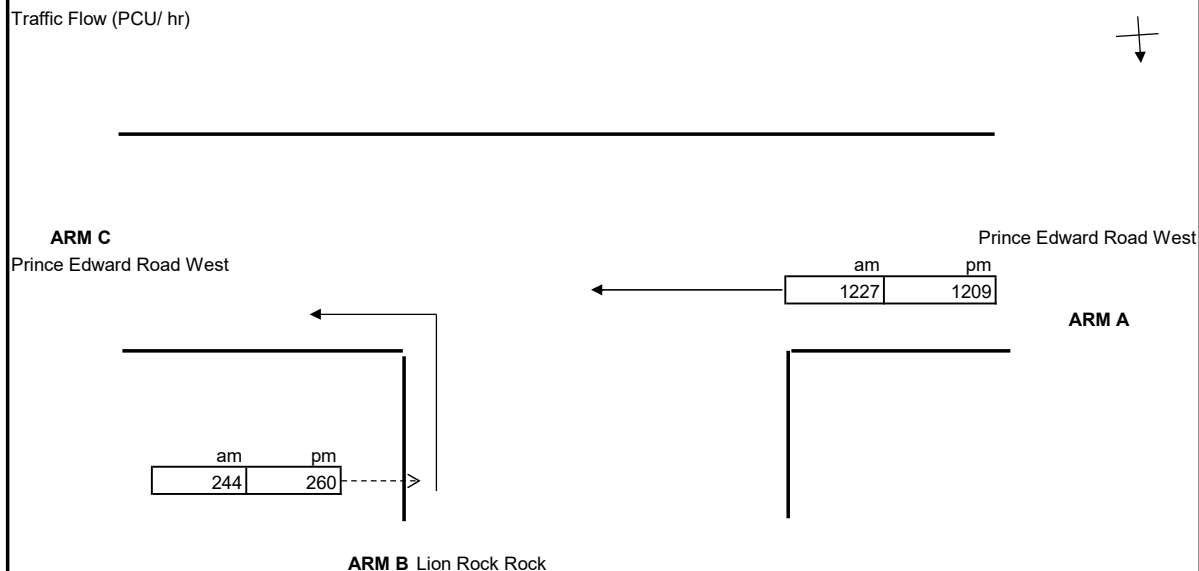
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Lion Rock Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.50
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.08
	Vr(b-c)	35		F	0.59
	Vr(c-b)			Y	0.31

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1227	1209
	q(b-a)	0	0
	q(b-c)	244	260
	f	1.00	1.00
CAPACITIES	Q(b-a)	261	262
	Q(b-c)	658	660
	Q(c-b)	355	357
	Q(b-ac)	658	660
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.371	0.394
	c-a	0.000	0.000
Critical DFC		0.37	0.39

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

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

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

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

$$Y = 1-0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J10 Prince Edward Road West / Lion Rock Road

Designed by: HL

Scheme: Reference (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

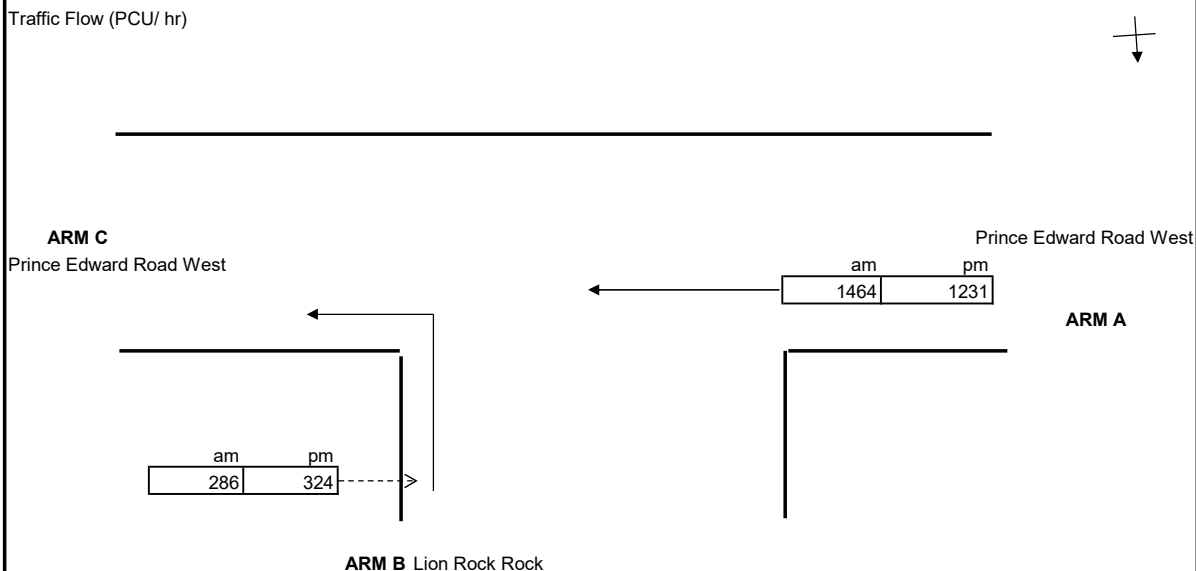
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Lion Rock Rock

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.50
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.08
	Vr(b-c)	35		F	0.59
	Vr(c-b)			Y	0.31

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1464	1231
	q(b-a)	0	0
	q(b-c)	286	324
	f	1.00	1.00
CAPACITIES	Q(b-a)	246	260
	Q(b-c)	629	657
	Q(c-b)	340	355
	Q(b-ac)	629	657
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.455	0.493
	c-a	0.000	0.000
Critical DFC		0.46	0.49

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J10 Prince Edward Road West / Lion Rock Road

Designed by: HL

Scheme: Reference (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

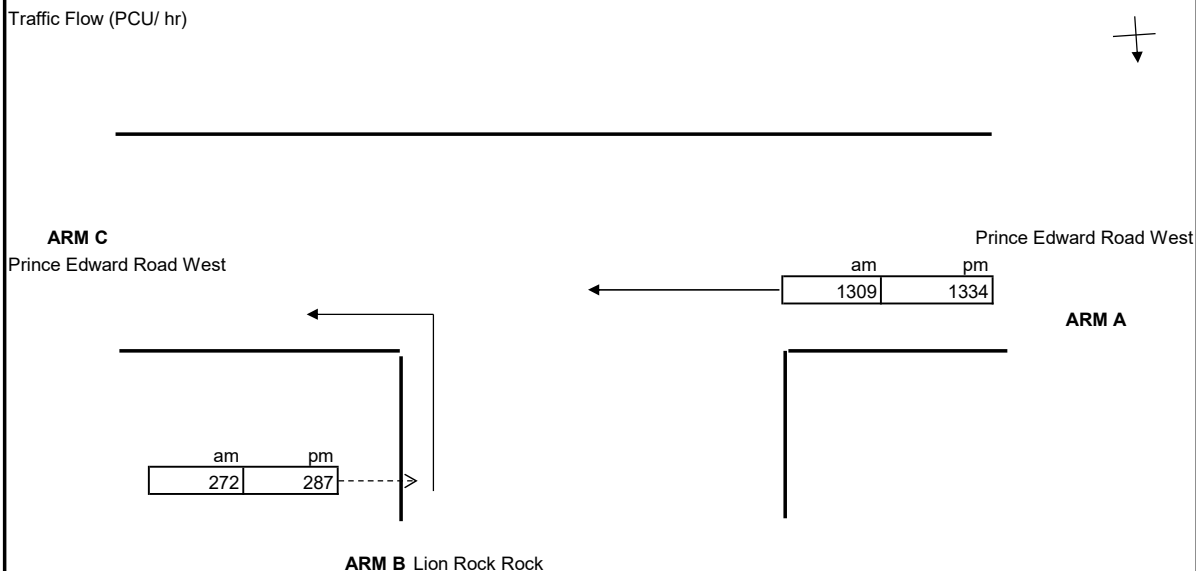
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Lion Rock Rock

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.50
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.08
	Vr(b-c)	35		F	0.59
	Vr(c-b)			Y	0.31

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1309	1334
	q(b-a)	0	0
	q(b-c)	272	287
	f	1.00	1.00
CAPACITIES	Q(b-a)	256	254
	Q(b-c)	648	644
	Q(c-b)	350	348
	Q(b-ac)	648	644
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.420	0.445
	c-a	0.000	0.000
Critical DFC		0.42	0.45

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

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

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

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

$$Y = 1-0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J10 Prince Edward Road West / Lion Rock Road

Designed by: HL

Scheme: Design (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

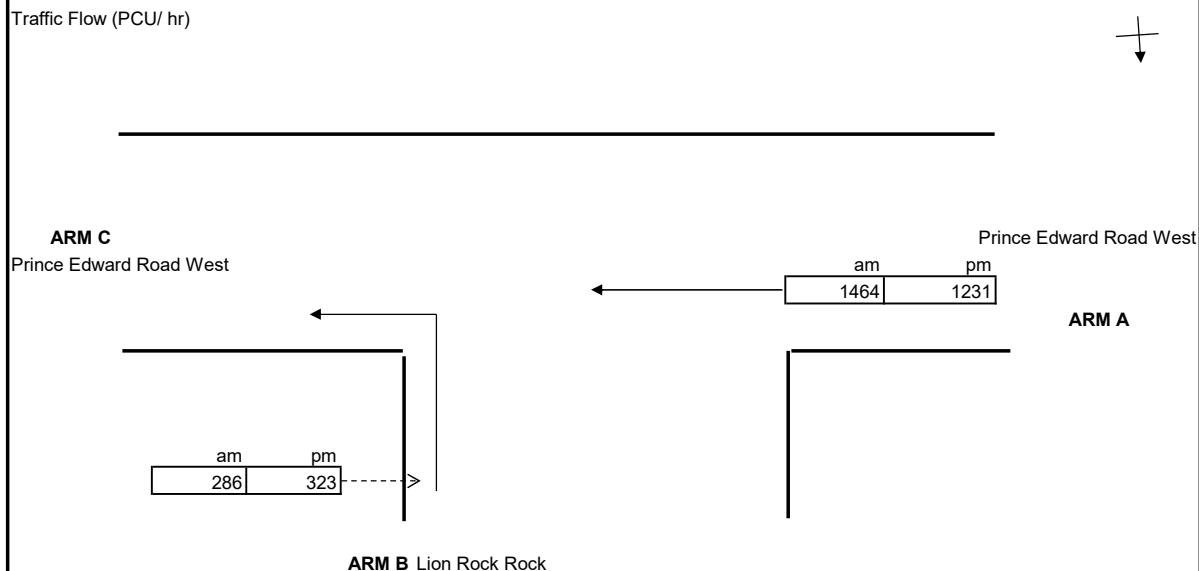
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Lion Rock Rock

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.50
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.08
	Vr(b-c)	35		F	0.59
	Vr(c-b)			Y	0.31

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1464	1231
	q(b-a)	0	0
	q(b-c)	286	323
	f	1.00	1.00
CAPACITIES	Q(b-a)	246	260
	Q(b-c)	629	657
	Q(c-b)	340	355
	Q(b-ac)	629	657
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.455	0.492
	c-a	0.000	0.000
Critical DFC		0.46	0.49

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J10 Prince Edward Road West / Lion Rock Road

Designed by: HL

Scheme: Design (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

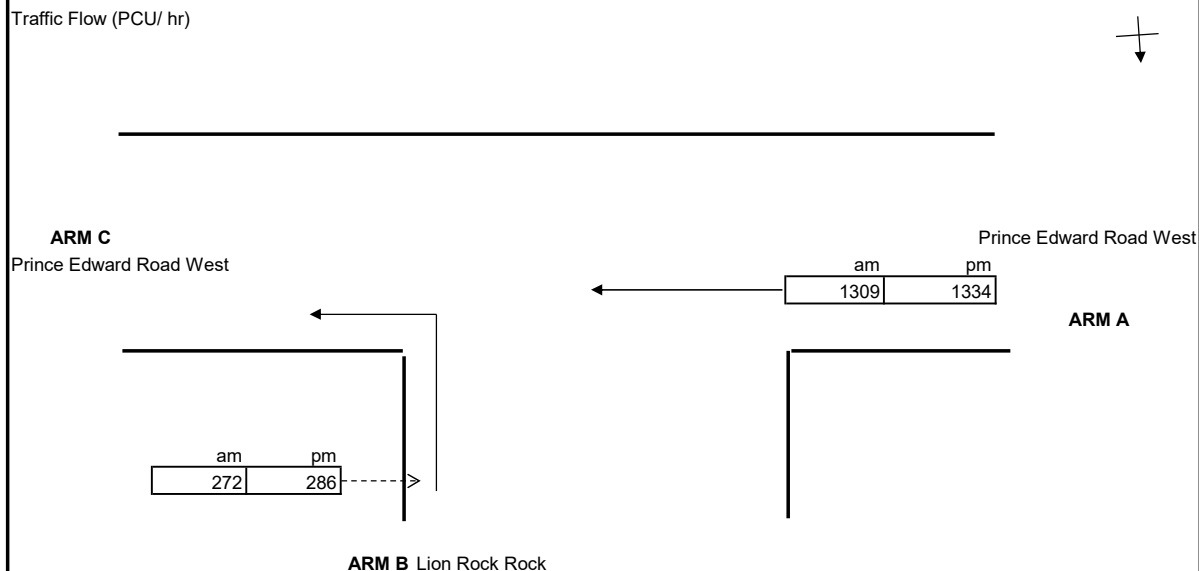
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Lion Rock Rock

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.00	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	5.50
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.08
	Vr(b-c)	35		F	0.59
	Vr(c-b)			Y	0.31

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1309	1334
	q(b-a)	0	0
	q(b-c)	272	286
	f	1.00	1.00
CAPACITIES	Q(b-a)	256	254
	Q(b-c)	648	644
	Q(c-b)	350	348
	Q(b-ac)	648	644
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.420	0.444
	c-a	0.000	0.000
Critical DFC		0.42	0.44

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

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

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

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

$$Y = 1-0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)			
Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road		Designed by: HL	
Scheme: Observed (Weekday)		Checked by: JY	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	
ARM A: Prince Edward Road West			
ARM B: Fuk Lo Tsun Road			
ARM C: Prince Edward Road West			
Traffic Flow (PCU/ hr)			
GEOMETRY			
Major road width	W	20.50	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
			w(b-c)
			w(c-b)
Visibilities	Vr(b-a)		Calculated
	VI(b-a)		D
	Vr(b-c)	60	E
	Vr(c-b)		F
			Y
ANALYSIS			
		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1016	812
	q(b-a)	0	0
	q(b-c)	359	304
	f	1.00	1.00
CAPACITIES	Q(b-a)	277	288
	Q(b-c)	1013	1047
	Q(c-b)	373	386
	Q(b-ac)	1013	1047
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.354	0.290
	c-a	0.000	0.000
Critical DFC		0.35	0.29
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ $f = \text{proportion of minor traffic turning left}$ $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams			
- In accordance with TPDM V2.4			

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

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)			
Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road		Designed by: HL	
Scheme: Observed (Weekend)		Checked by: JY	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	
ARM A: Prince Edward Road West			
ARM B: Fuk Lo Tsun Road			
ARM C: Prince Edward Road West			
Traffic Flow (PCU/ hr)			
GEOMETRY			
Major road width	W	20.50	Lane widths
Central Reserve width	Wcr	0.00	w(b-a)
			w(b-c)
			w(c-b)
Visibilities	Vr(b-a)		Calculated
	VI(b-a)		D
	Vr(b-c)	60	E
	Vr(c-b)		F
			Y
ANALYSIS			
		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	886	894
	q(b-a)	0	0
	q(b-c)	341	315
	f	1.00	1.00
CAPACITIES	Q(b-a)	284	284
	Q(b-c)	1035	1034
	Q(c-b)	381	381
	Q(b-ac)	1035	1034
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.330	0.305
	c-a	0.000	0.000
Critical DFC		0.33	0.30
Where VI and Vr are visibility distances to the left or right of the respective streams $D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(VI(b-a)-150))$ $E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$ $F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))$ $Y = 1-0.0345W$ $f = \text{proportion of minor traffic turning left}$ $Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams			
- In accordance with TPDM V2.4			

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

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road

Designed by: HL

Scheme: Reference (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

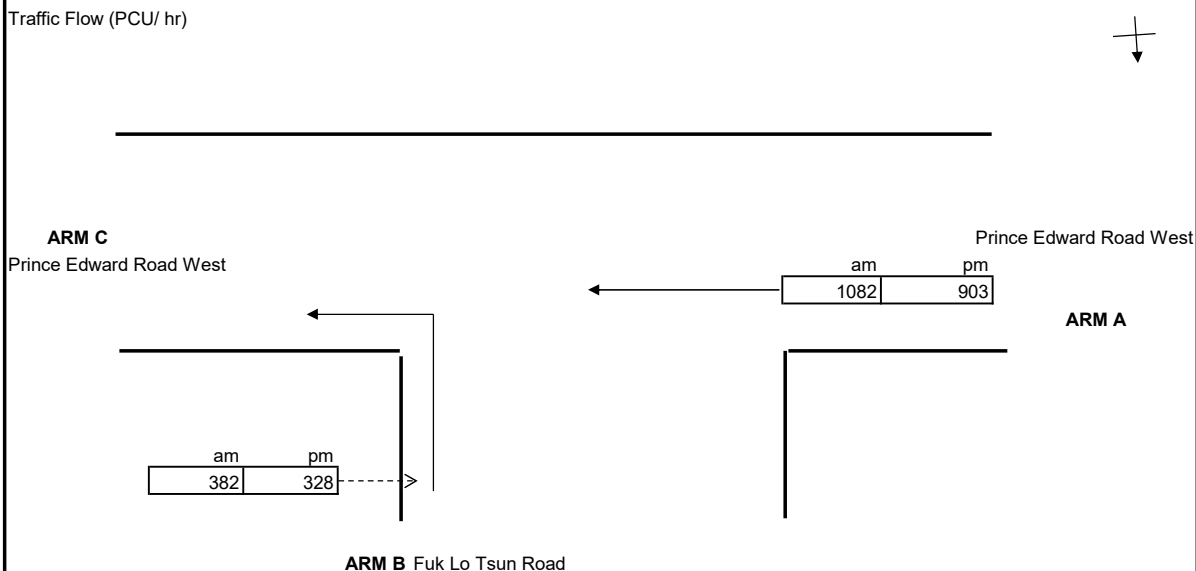
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Fuk Lo Tsun Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.50	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	10.90
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.59
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.29

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1082	903
	q(b-a)	0	0
	q(b-c)	382	328
	f	1.00	1.00
CAPACITIES	Q(b-a)	273	283
	Q(b-c)	1002	1032
	Q(c-b)	369	380
	Q(b-ac)	1002	1032
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.381	0.318
	c-a	0.000	0.000
Critical DFC		0.38	0.32

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

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

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

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

$Y = 1 - 0.0345W$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road

Designed by: HL

Scheme: Reference (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

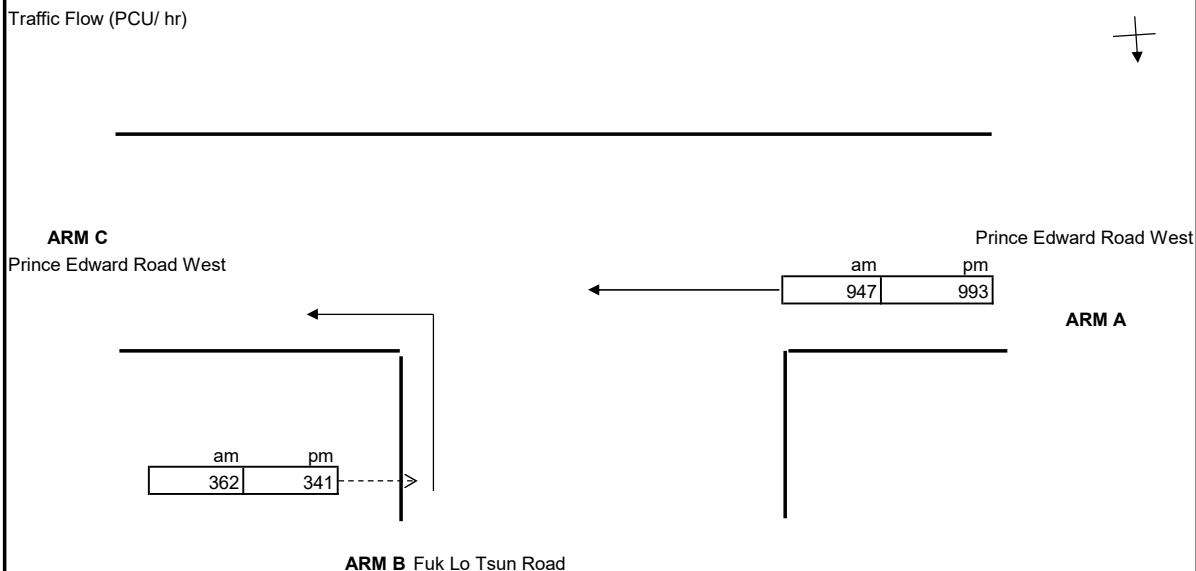
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Fuk Lo Tsun Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.50	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	10.90
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.59
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.29

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	947	993
	q(b-a)	0	0
	q(b-c)	362	341
	f	1.00	1.00
CAPACITIES	Q(b-a)	281	278
	Q(b-c)	1025	1017
	Q(c-b)	377	375
	Q(b-ac)	1025	1017
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.353	0.335
	c-a	0.000	0.000
Critical DFC		0.35	0.34

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road

Designed by: HL

Scheme: Design (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

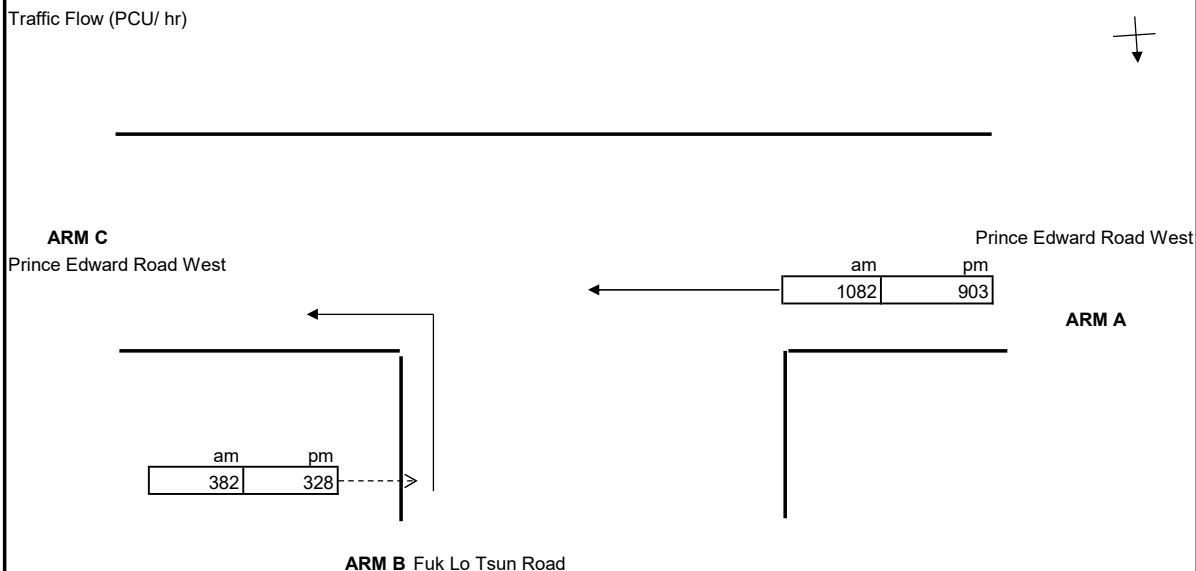
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ARM A: Prince Edward Road West

ARM B: Fuk Lo Tsun Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.50	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	10.90
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.59
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.29

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	1082	903
	q(b-a)	0	0
	q(b-c)	382	328
	f	1.00	1.00
CAPACITIES	Q(b-a)	273	283
	Q(b-c)	1002	1032
	Q(c-b)	369	380
	Q(b-ac)	1002	1032
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.381	0.318
	c-a	0.000	0.000
Critical DFC		0.38	0.32

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

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

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

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

$Y = 1 - 0.0345W$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J11 Prince Edward Road West / Fuk Lo Tsun Road

Designed by: HL

Scheme: Design (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

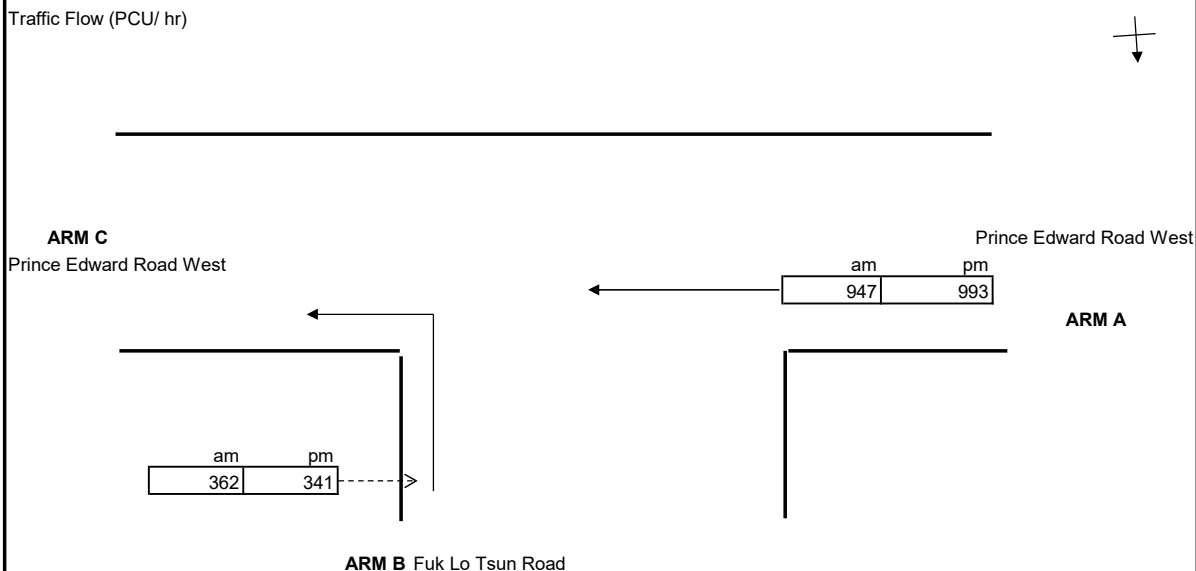
Date : 5/2/2026

ARM A: Prince Edward Road West

ARM B: Fuk Lo Tsun Road

ARM C: Prince Edward Road West

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	20.50	Lane widths	w(b-a)	0.00
Central Reserve width	Wcr	0.00		w(b-c)	10.90
				w(c-b)	0.00
Visibilities	Vr(b-a)		Calculated	D	0.53
	VI(b-a)			E	1.59
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.29

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	0	0
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	947	993
	q(b-a)	0	0
	q(b-c)	362	341
	f	1.00	1.00
CAPACITIES	Q(b-a)	281	278
	Q(b-c)	1025	1017
	Q(c-b)	377	375
	Q(b-ac)	1025	1017
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.353	0.335
	c-a	0.000	0.000
Critical DFC		0.35	0.34

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

TRAFFIC SIGNAL CALCULATION SHEET

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Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

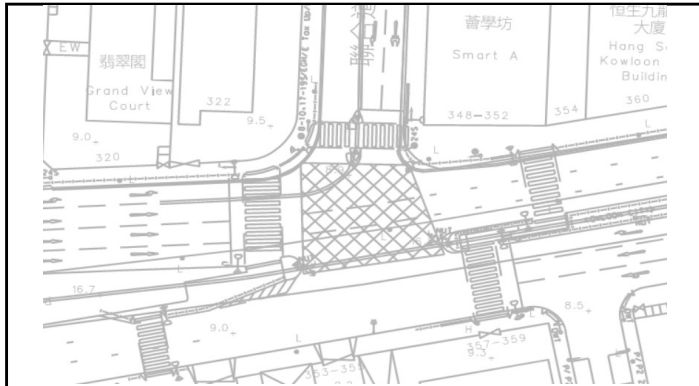
Junction : Prince Edward Road West / Junction Road

Junction Index : J12

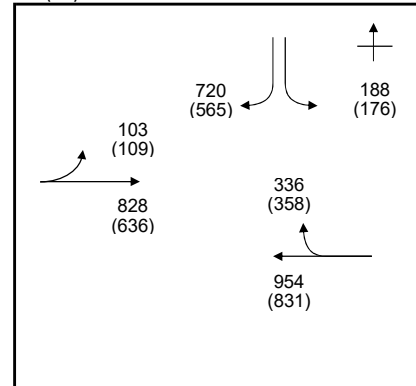
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Design Year : 2019

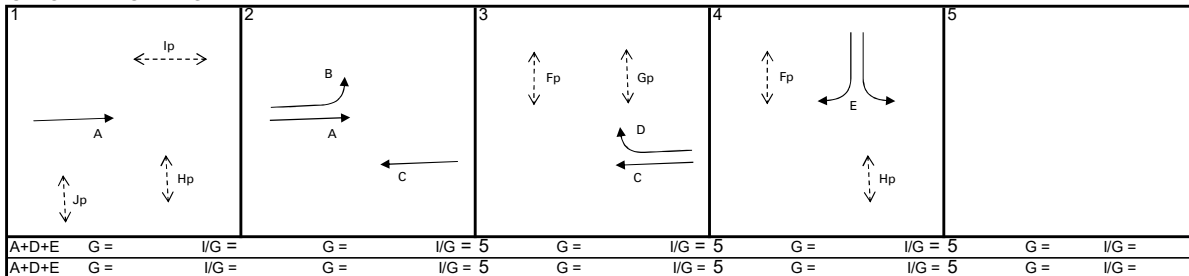
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak				
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	
Prince Edward Road West EB															
B	2	3.000	Y	25			103		1805	0.057	109		1805	0.060	
A	1,2	3.500	N				285		2105	0.135	219		2105	0.104	
A	1,2	3.500	N				284		2105	0.135	218		2105	0.104	
A	1,2	3.000	Y				259		1915	0.135	199		1915	0.104	
Prince Edward Road West WB															
C	2,3	4.000	Y				469		2015	0.233	409		2015	0.203	
C	2,3	3.250	N				485		2080	0.233	422		2080	0.203	
D	3	3.250	Y	30	N		336		1850	0.182	358		1850	0.194	
Junction Road SB															
E	4	3.500	Y	30 / 30	N		441	43% / 57%	1870	0.236	360	49% / 51%	1870	0.193	
E	4	3.250	N	30	N		467		1980	0.236	381		1980	0.192	
Pedestrian Crossing															
Fp	3,4		7GM+	13FG=	20	sec									
Gp	3		5GM+	9FG=	14	sec									
Hp	1,4		5GM+	9FG=	14	sec									
Ip	1		7GM+	5FG=	12	sec									
Jp	1		7GM+	7FG=	14	sec									
Notes :							AM Peak			A+D+E	PM Peak			A+D+E	
							Sum of Critical y Y			0.553	Sum of Critical y Y			0.490	
							Lost Time L (sec)			12	Lost Time L (sec)			12	
							Cycle Time c (sec)			120	Cycle Time c (sec)			115	
							Practical Y Ypr			0.810	Practical Y Ypr			0.806	
							Reserve Capacity RC			47%	Reserve Capacity RC			64%	

Designed by : HL Date : Nov-25

Junction Index : J12

Checked by : JY Date : Nov-25

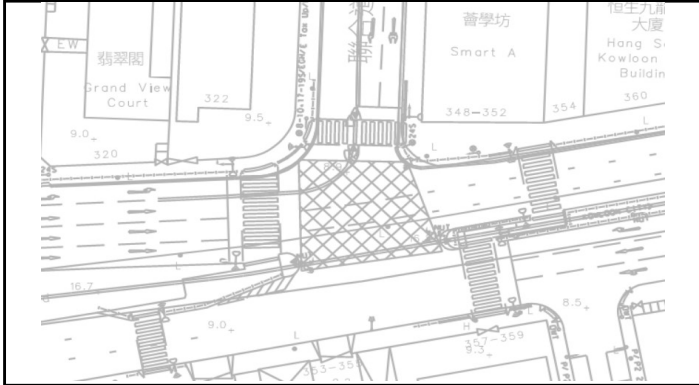
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TRAFFIC SIGNAL CALCULATION SHEET

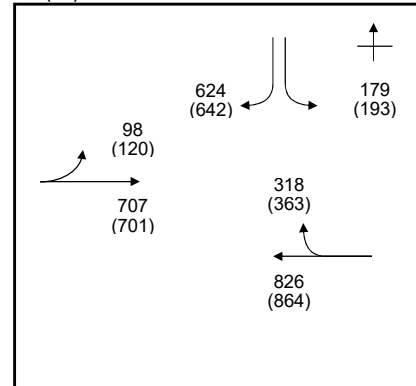
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Prince Edward Road West / Junction Road
Description : Observed (Weekend)

Job No. : 529168
Junction Index : J12
Design Year : 2019

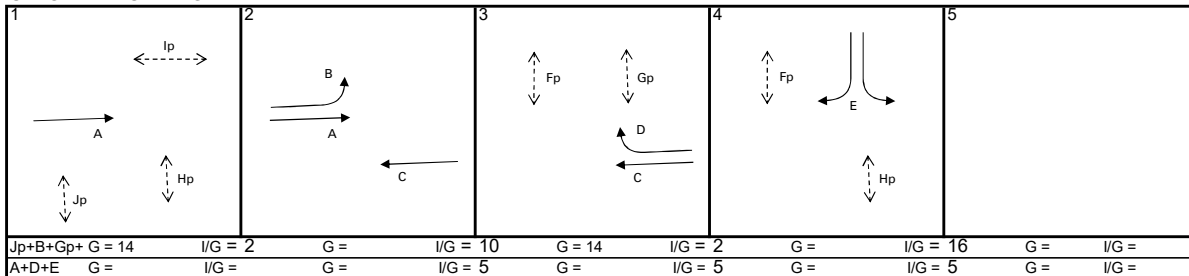
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Prince Edward Road West EB														
B	2	3.000	Y	25			98		1805	0.054	120		1805	0.066
A	1,2	3.500	N				243		2105	0.115	241		2105	0.114
A	1,2	3.500	N				243		2105	0.115	241		2105	0.114
A	1,2	3.000	Y				221		1915	0.115	219		1915	0.114
Prince Edward Road West WB														
C	2,3	4.000	Y				406		2015	0.201	425		2015	0.211
C	2,3	3.250	N				420		2080	0.202	439		2080	0.211
D	3	3.250	Y	30	N		318		1850	0.172	363		1850	0.196
Junction Road SB														
E	4	3.500	Y	30 / 30	N		390	46% / 54%	1870	0.209	406	48% / 52%	1870	0.217
E	4	3.250	N	30	N		413		1980	0.209	429		1980	0.217
Pedestrian Crossing														
Fp	3,4		7GM+	13FG=	20	sec								
Gp	3		5GM+	9FG=	14	sec								
Hp	1,4		5GM+	9FG=	14	sec								
Ip	1		7GM+	5FG=	12	sec								
Jp	1		7GM+	7FG=	14	sec								
Notes :							AM Peak		Jp+B+Gp+E		PM Peak			A+D+E
							Sum of Critical y Y			0.263	Sum of Critical y Y			0.528
							Lost Time L (sec)			56	Lost Time L (sec)			12
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.420	Practical Y Ypr			0.802
							Reserve Capacity RC			60%	Reserve Capacity RC			52%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J12
Sheet No. : 2

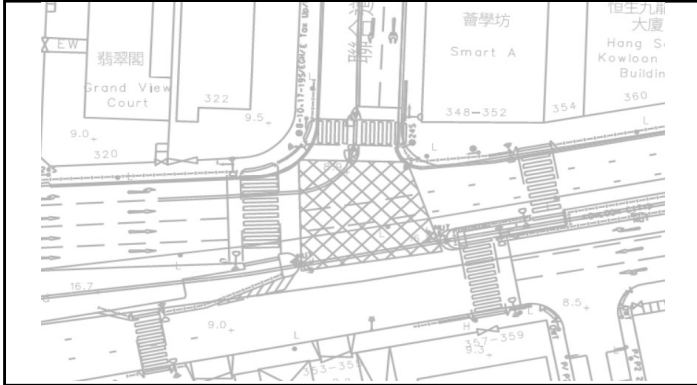
TRAFFIC SIGNAL CALCULATION SHEET



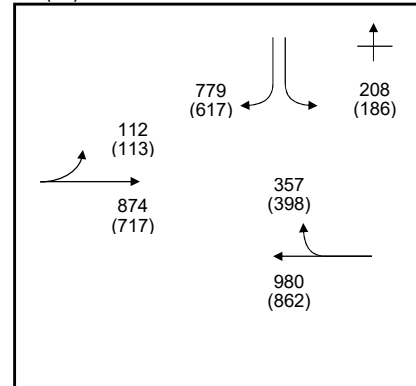
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Prince Edward Road West / Junction Road
Description : Reference (Weekday)

Job No. : 529168
Junction Index : J12
Design Year : 2033

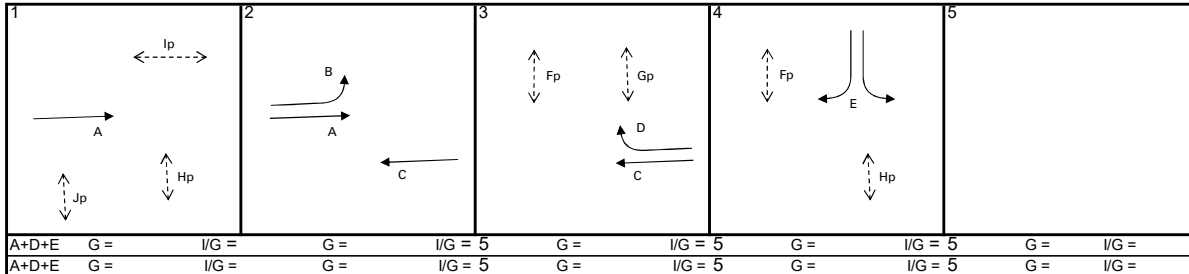
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Prince Edward Road West EB														
B	2	3.000	Y	25			112		1805	0.062	113		1805	0.063
A	1,2	3.500	N				300		2105	0.143	246		2105	0.117
A	1,2	3.500	N				301		2105	0.143	247		2105	0.117
A	1,2	3.000	Y				273		1915	0.143	224		1915	0.117
Prince Edward Road West WB														
C	2,3	4.000	Y				482		2015	0.239	424		2015	0.210
C	2,3	3.250	N				498		2080	0.239	438		2080	0.211
D	3	3.250	Y	30	N		357		1850	0.193	398		1850	0.215
Junction Road SB														
E	4	3.500	Y	30 / 30	N		480	43% / 57%	1870	0.257	390	48% / 52%	1870	0.209
E	4	3.250	N	30	N		507		1980	0.256	413		1980	0.209
Pedestrian Crossing														
Fp	3,4		7GM+	13FG=	20	sec								
Gp	3		5GM+	9FG=	14	sec								
Hp	1,4		5GM+	9FG=	14	sec								
Ip	1		7GM+	5FG=	12	sec								
Jp	1		7GM+	7FG=	14	sec								
Notes :							AM Peak		A+D+E	PM Peak		A+D+E		
							Sum of Critical y Y		0.593	Sum of Critical y Y		0.541		
							Lost Time L (sec)		12	Lost Time L (sec)		12		
							Cycle Time c (sec)		120	Cycle Time c (sec)		115		
							Practical Y Ypr		0.810	Practical Y Ypr		0.806		
							Reserve Capacity RC		37%	Reserve Capacity RC		49%		

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J12
Sheet No. : 1

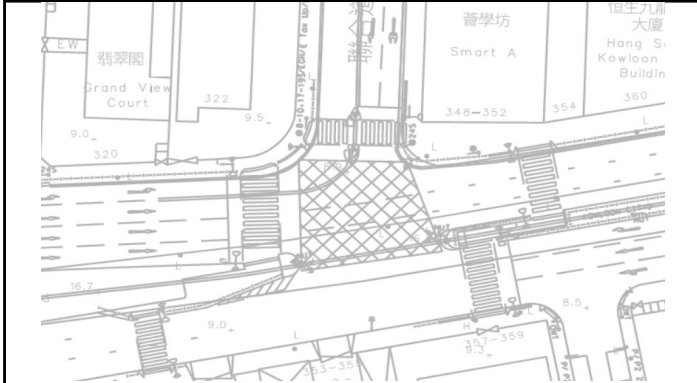
TRAFFIC SIGNAL CALCULATION SHEET



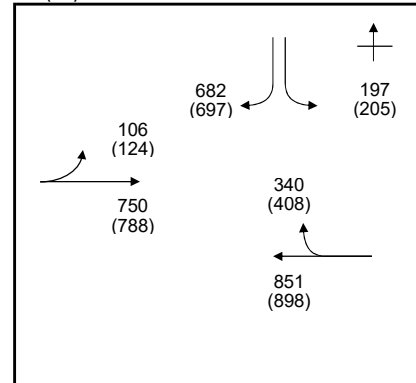
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Prince Edward Road West / Junction Road
Description : Reference (Weekend)

Job No. : 529168
Junction Index : J12
Design Year : 2033

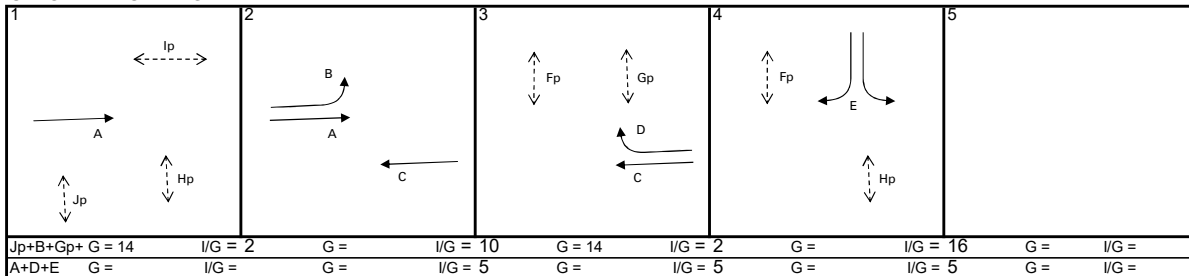
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Prince Edward Road West EB														
B	2	3.000	Y	25			106		1805	0.059	124		1805	0.069
A	1,2	3.500	N				258		2105	0.123	271		2105	0.129
A	1,2	3.500	N				258		2105	0.123	271		2105	0.129
A	1,2	3.000	Y				234		1915	0.122	246		1915	0.128
Prince Edward Road West WB														
C	2,3	4.000	Y				419		2015	0.208	442		2015	0.219
C	2,3	3.250	N				432		2080	0.208	456		2080	0.219
D	3	3.250	Y	30	N		340		1850	0.184	408		1850	0.221
Junction Road SB														
E	4	3.500	Y	30 / 30	N		427	46% / 54%	1870	0.228	438	47% / 53%	1870	0.234
E	4	3.250	N	30	N		452		1980	0.228	464		1980	0.234
Pedestrian Crossing														
Fp	3,4		7GM+	13FG=	20	sec								
Gp	3		5GM+	9FG=	14	sec								
Hp	1,4		5GM+	9FG=	14	sec								
Ip	1		7GM+	5FG=	12	sec								
Jp	1		7GM+	7FG=	14	sec								
Notes :							AM Peak		Jp+B+Gp+E		PM Peak			A+D+E
							Sum of Critical y Y			0.287	Sum of Critical y Y			0.584
							Lost Time L (sec)			56	Lost Time L (sec)			12
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.420	Practical Y Ypr			0.802
							Reserve Capacity RC			46%	Reserve Capacity RC			37%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J12
Sheet No. : 2

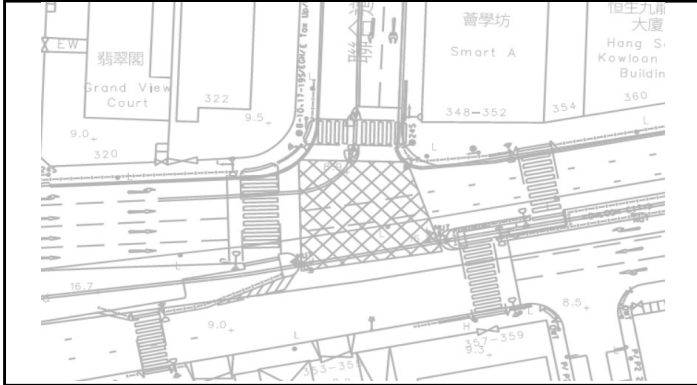
TRAFFIC SIGNAL CALCULATION SHEET



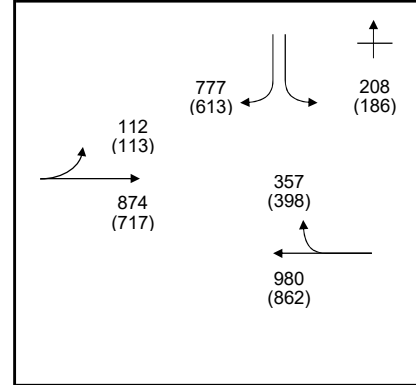
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Prince Edward Road West / Junction Road
Description : Design (Weekday)

Job No. : 529168
Junction Index : J12
Design Year : 2033

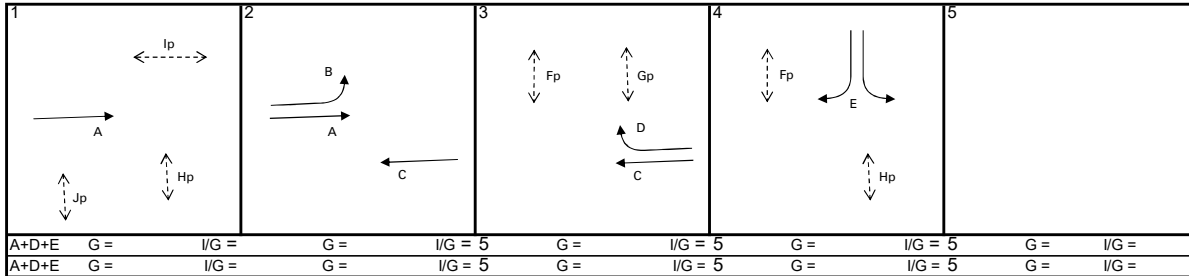
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak				
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	
Prince Edward Road West EB															
B	2	3.000	Y	25			112		1805	0.062	113		1805	0.063	
A	1,2	3.500	N				300		2105	0.143	246		2105	0.117	
A	1,2	3.500	N				301		2105	0.143	247		2105	0.117	
A	1,2	3.000	Y				273		1915	0.143	224		1915	0.117	
Prince Edward Road West WB															
C	2,3	4.000	Y				482		2015	0.239	424		2015	0.210	
C	2,3	3.250	N				498		2080	0.239	438		2080	0.211	
D	3	3.250	Y	30	N		357		1850	0.193	398		1850	0.215	
Junction Road SB															
E	4	3.500	Y	30 / 30	N		479	43% / 57%	1870	0.256	388	48% / 52%	1870	0.207	
E	4	3.250	N	30	N		506		1980	0.256	411		1980	0.208	
Pedestrian Crossing															
Fp	3,4		7GM+	13FG=	20	sec									
Gp	3		5GM+	9FG=	14	sec									
Hp	1,4		5GM+	9FG=	14	sec									
Ip	1		7GM+	5FG=	12	sec									
Jp	1		7GM+	7FG=	14	sec									
Notes :							AM Peak			A+D+E	PM Peak			A+D+E	
							Sum of Critical y Y			0.592	Sum of Critical y Y			0.540	
							Lost Time L (sec)			12	Lost Time L (sec)			12	
							Cycle Time c (sec)			120	Cycle Time c (sec)			115	
							Practical Y Ypr			0.810	Practical Y Ypr			0.806	
							Reserve Capacity RC			37%	Reserve Capacity RC			49%	

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J12
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TRAFFIC SIGNAL CALCULATION SHEET

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Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

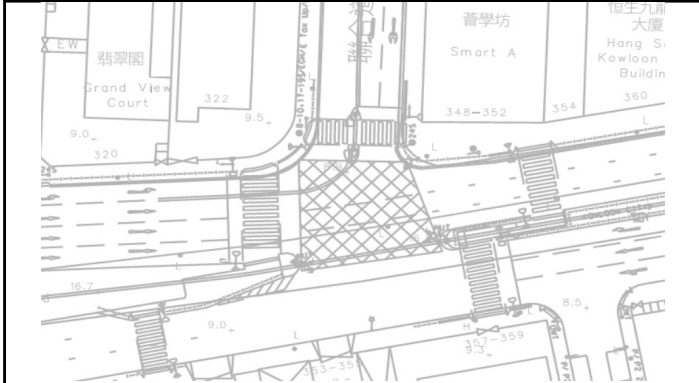
Junction : Prince Edward Road West / Junction Road

Junction Index : J12

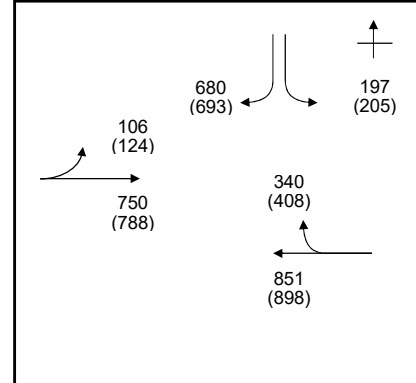
Description : Design (Weekend)

Design Year : 2033

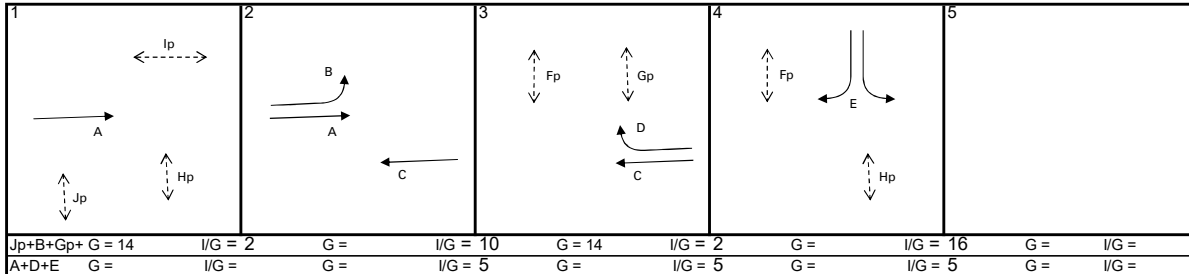
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Prince Edward Road West EB														
B	2	3.000	Y	25			106		1805	0.059	124		1805	0.069
A	1,2	3.500	N				258		2105	0.123	271		2105	0.129
A	1,2	3.500	N				258		2105	0.123	271		2105	0.129
A	1,2	3.000	Y				234		1915	0.122	246		1915	0.128
Prince Edward Road West WB														
C	2,3	4.000	Y				419		2015	0.208	442		2015	0.219
C	2,3	3.250	N				432		2080	0.208	456		2080	0.219
D	3	3.250	Y	30	N		340		1850	0.184	408		1850	0.221
Junction Road SB														
E	4	3.500	Y	30 / 30	N		426	46% / 54%	1870	0.228	436	47% / 53%	1870	0.233
E	4	3.250	N	30	N		451		1980	0.228	462		1980	0.233
Pedestrian Crossing														
Fp	3,4		7GM+	13FG=	20	sec								
Gp	3		5GM+	9FG=	14	sec								
Hp	1,4		5GM+	9FG=	14	sec								
Ip	1		7GM+	5FG=	12	sec								
Jp	1		7GM+	7FG=	14	sec								
Notes :							AM Peak		Jp+B+Gp+E		PM Peak			A+D+E
							Sum of Critical y Y			0.287	Sum of Critical y Y			0.583
							Lost Time L (sec)			56	Lost Time L (sec)			12
							Cycle Time c (sec)			105	Cycle Time c (sec)			110
							Practical Y Ypr			0.420	Practical Y Ypr			0.802
							Reserve Capacity RC			47%	Reserve Capacity RC			38%

Designed by : HL Date : Nov-25

Junction Index : J12

Checked by : JY Date : Nov-25

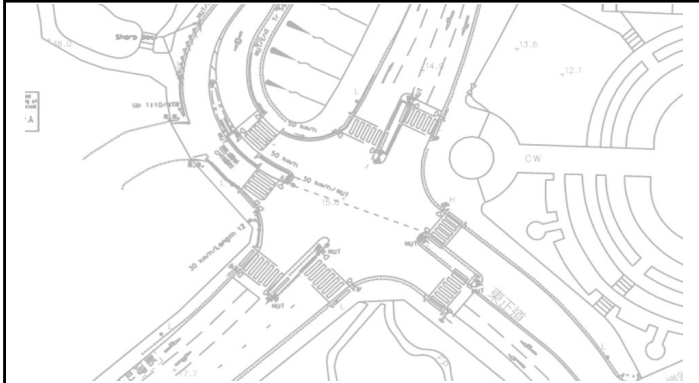
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TRAFFIC SIGNAL CALCULATION SHEET

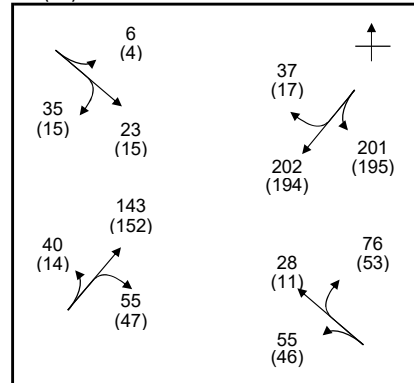


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Junction Index :	J13
Description :	Observed (Weekday)	Design Year :	2019

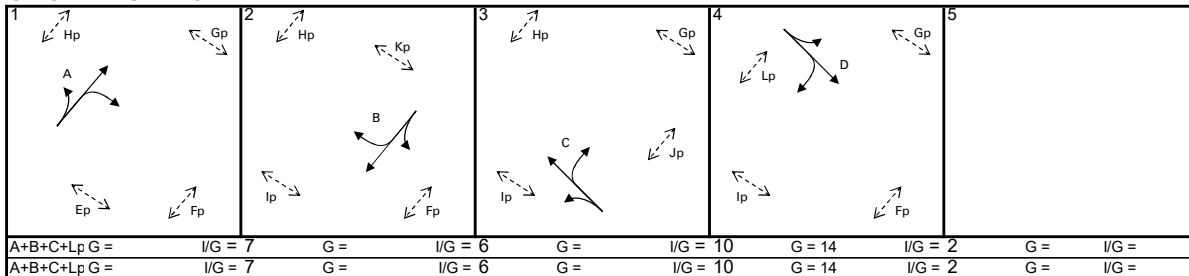
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			117	34%	1870	0.063	106	13%	1925	0.055
A	1	3.000	N	12	N		121	45%	1945	0.062	107	44%	1950	0.055
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			202	100%	1690	0.120	195	100%	1685	0.116
B	2	2.750	N	14	N		238	16%	1995	0.119	211	8%	2015	0.105
Tung Tsing Road NB														
C	3	2.750	Y	11			55		1665	0.033	46		1665	0.028
C	3	3.250	N	11	N		104	73%	1890	0.055	64	83%	1870	0.034
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		64	9% / 55%	1990	0.032	34	12% / 44%	2010	0.017
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
Ip	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical y Y			0.237	Sum of Critical y Y			0.205
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			90	Cycle Time c (sec)			90
							Practical Y Ypr			0.540	Practical Y Ypr			0.540
							Reserve Capacity RC			>100%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

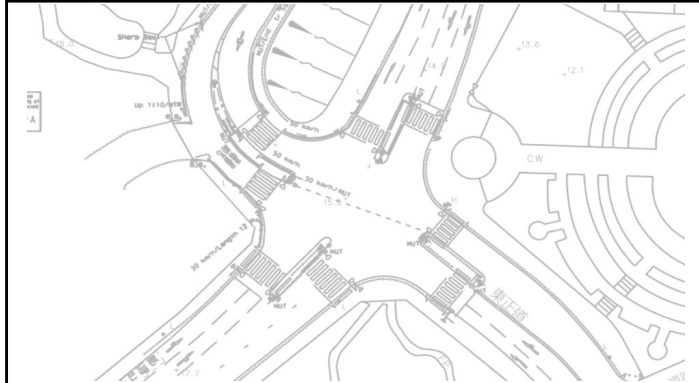
Junction Index : J13
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TRAFFIC SIGNAL CALCULATION SHEET

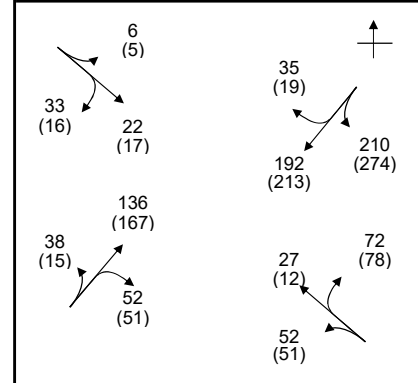


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Junction Index :	J13
Description :	Observed (Weekend)	Design Year :	2019

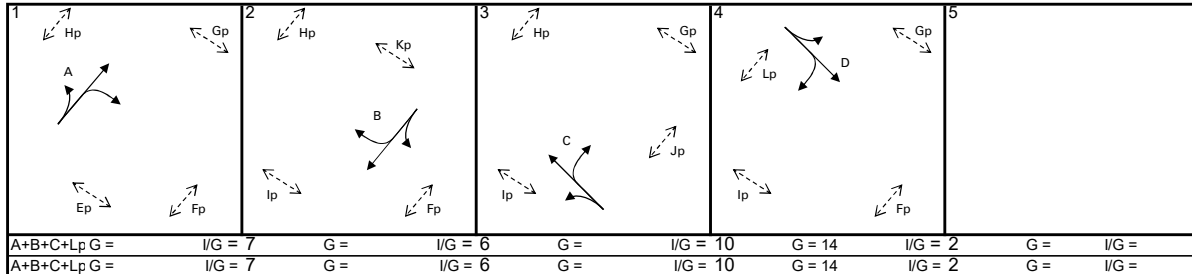
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			111	34%	1870	0.059	116	13%	1930	0.060
A	1	3.000	N	12	N		115	45%	1945	0.059	117	44%	1950	0.060
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			210	100%	1685	0.125	274	100%	1685	0.163
B	2	2.750	N	14	N		227	15%	1995	0.114	232	8%	2010	0.115
Tung Tsing Road NB														
C	3	2.750	Y	11			52		1665	0.031	51		1665	0.031
C	3	3.250	N	11	N		99	73%	1890	0.052	90	87%	1860	0.048
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		61	10% / 54%	1990	0.031	38	13% / 42%	2015	0.019
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
lp	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical y Y			0.236	Sum of Critical y Y			0.271
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			90	Cycle Time c (sec)			90
							Practical Y Ypr			0.540	Practical Y Ypr			0.540
							Reserve Capacity RC			>100%	Reserve Capacity RC			99%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

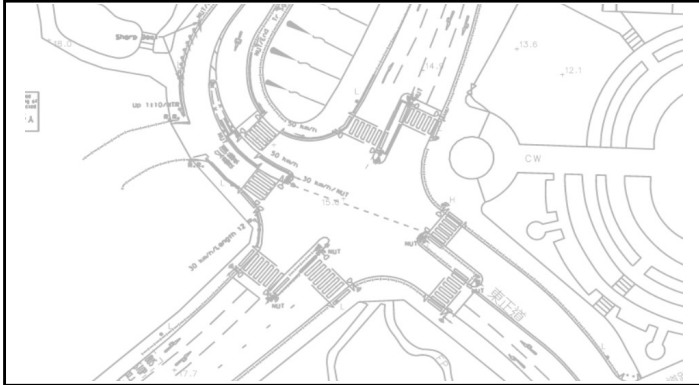
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Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

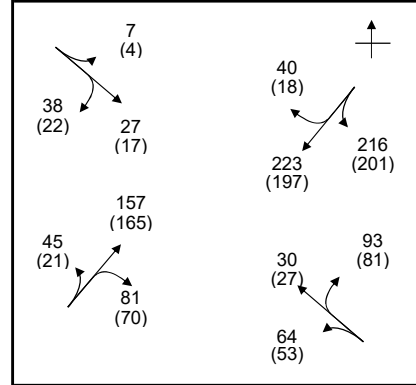


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Junction Index :	J13
Description :	Reference (Weekday)	Design Year :	2033

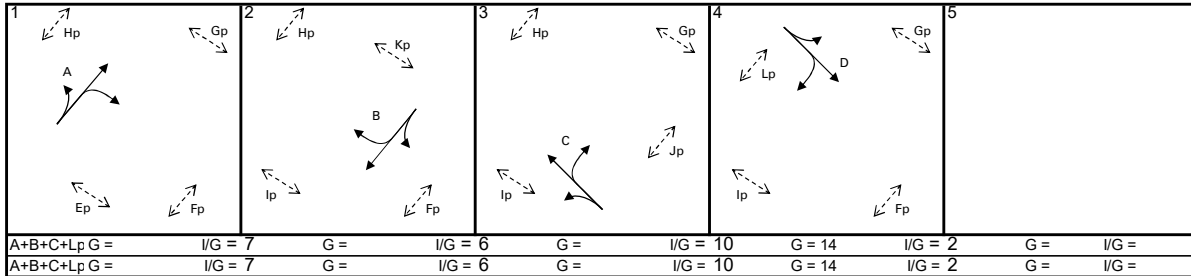
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			140	32%	1875	0.075	128	16%	1920	0.067
A	1	3.000	N	12	N		143	57%	1920	0.074	128	55%	1925	0.066
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			220	98%	1690	0.130	201	100%	1685	0.119
B	2	2.750	N	14	N		259	15%	1995	0.130	215	8%	2010	0.107
Tung Tsing Road NB														
C	3	2.750	Y	11			64		1665	0.038	53		1665	0.032
C	3	3.250	N	11	N		123	76%	1885	0.065	108	75%	1885	0.057
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		72	10% / 53%	1995	0.036	43	9% / 51%	2000	0.022
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
Ip	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical <i>y</i> Y			0.270	Sum of Critical <i>y</i> Y			0.243
							Lost Time <i>L</i> (sec)			36	Lost Time <i>L</i> (sec)			36
							Cycle Time <i>c</i> (sec)			90	Cycle Time <i>c</i> (sec)			90
							Practical <i>Y</i> Ypr			0.540	Practical <i>Y</i> Ypr			0.540
							Reserve Capacity RC			100%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

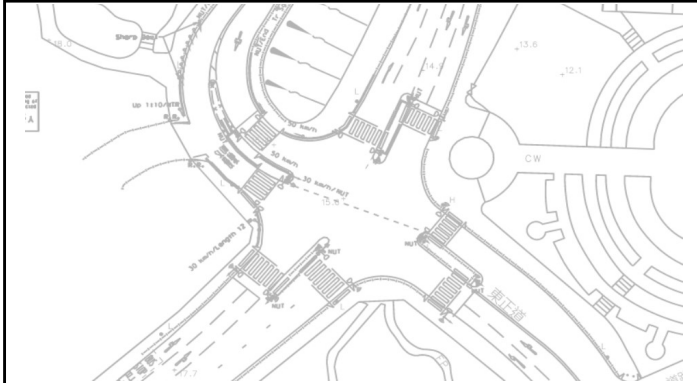
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Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

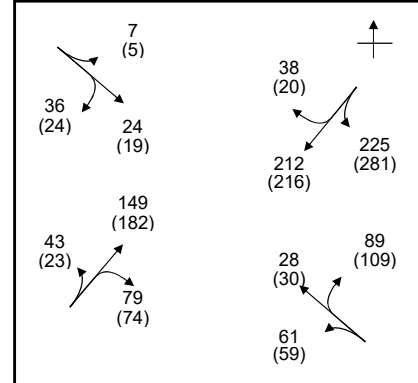


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Junction Index :	J13
Description :	Reference (Weekend)	Design Year :	2033

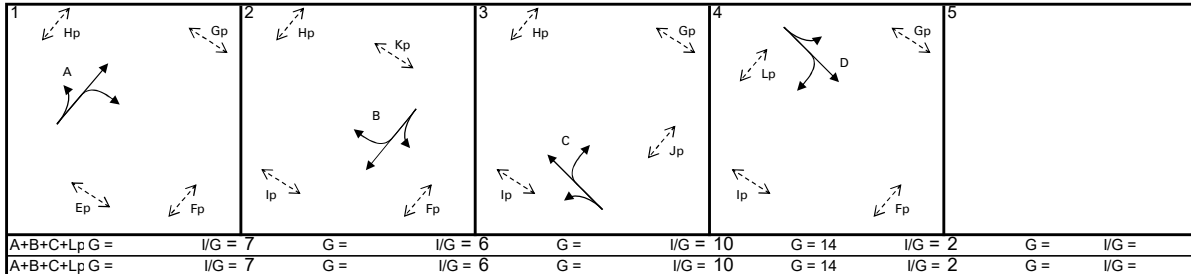
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			134	32%	1875	0.071	139	17%	1915	0.073
A	1	3.000	N	12	N		137	58%	1915	0.072	140	53%	1930	0.073
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			225	100%	1685	0.134	281	100%	1685	0.167
B	2	2.750	N	14	N		250	15%	1995	0.125	236	8%	2010	0.117
Tung Tsing Road NB														
C	3	2.750	Y	11			61		1665	0.037	59		1665	0.035
C	3	3.250	N	11	N		117	76%	1885	0.062	139	78%	1880	0.074
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		67	10% / 54%	1990	0.034	48	10% / 50%	2000	0.024
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
Ip	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical <i>y</i> Y			0.267	Sum of Critical <i>y</i> Y			0.313
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			90	Cycle Time c (sec)			90
							Practical <i>Y</i> Ypr			0.540	Practical <i>Y</i> Ypr			0.540
							Reserve Capacity RC			>100%	Reserve Capacity RC			72%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J13
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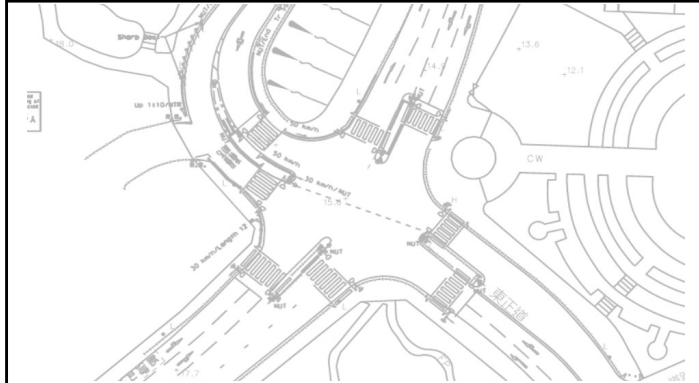
TRAFFIC SIGNAL CALCULATION SHEET



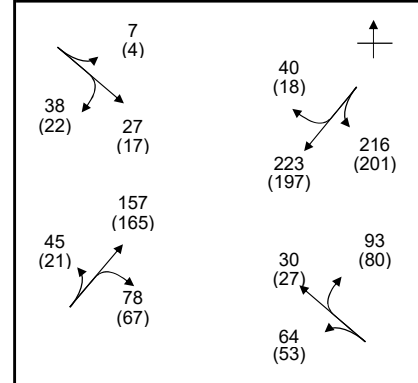
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
 Junction : Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street
 Description : Design (Weekday)

Job No. : 529168
 Junction Index : J13
 Design Year : 2033

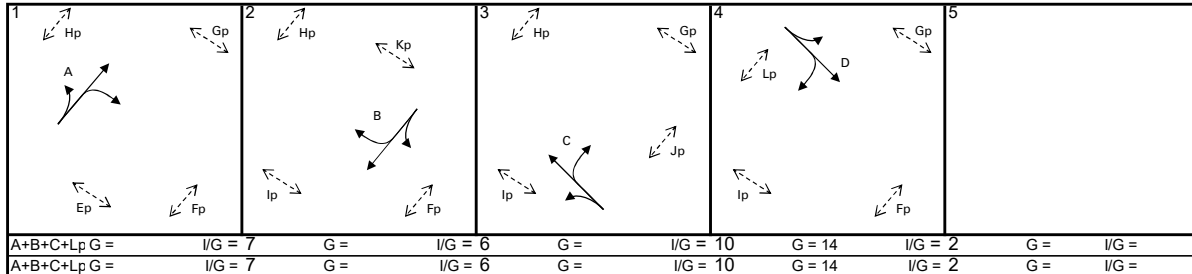
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			138	33%	1875	0.074	126	17%	1915	0.066
A	1	3.000	N	12	N		142	55%	1925	0.074	127	53%	1930	0.066
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			220	98%	1690	0.130	201	100%	1685	0.119
B	2	2.750	N	14	N		259	15%	1995	0.130	215	8%	2010	0.107
Tung Tsing Road NB														
C	3	2.750	Y	11			64		1665	0.038	53		1665	0.032
C	3	3.250	N	11	N		123	76%	1885	0.065	107	75%	1890	0.057
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		72	10% / 53%	1995	0.036	43	9% / 51%	2000	0.022
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
Ip	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical y Y			0.269	Sum of Critical y Y			0.242
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			90	Cycle Time c (sec)			90
							Practical Y Ypr			0.540	Practical Y Ypr			0.540
							Reserve Capacity RC			>100%	Reserve Capacity RC			>100%

Designed by : HL Date : Nov-25
 Checked by : JY Date : Nov-25

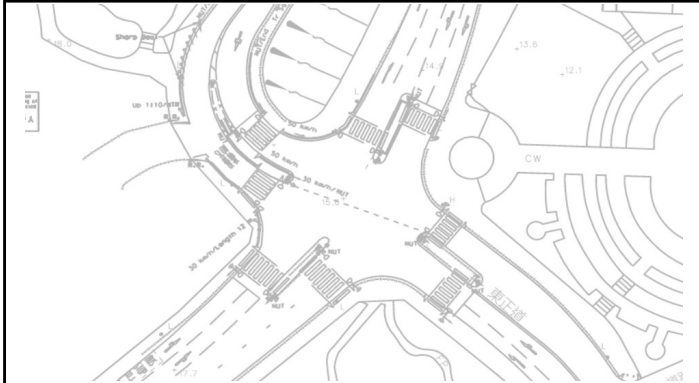
Junction Index : J13
 Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

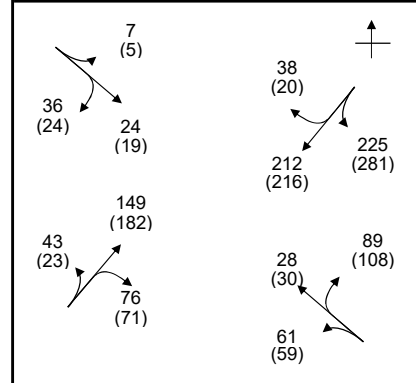


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Tung Tau Tsuen Road / Tung Tsing Road / Pui Man Street	Junction Index :	J13
Description :	Design (Weekend)	Design Year :	2033

JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM

1	2	3	4	5
A+B+C+Lp G = I/G = 7	G = I/G = 6	G = I/G = 10	G = 14 I/G = 2	G = I/G =
A+B+C+Lp G = I/G = 7	G = I/G = 6	G = I/G = 10	G = 14 I/G = 2	G = I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Tung Tau Tsuen Road EB														
A	1	3.500	Y	10			132	33%	1875	0.070	137	17%	1915	0.072
A	1	3.000	N	12	N		136	56%	1920	0.071	139	51%	1930	0.072
Tung Tau Tsuen Road WB														
B	2	3.250	Y	10			225	100%	1685	0.134	281	100%	1685	0.167
B	2	2.750	N	14	N		250	15%	1995	0.125	236	8%	2010	0.117
Tung Tsing Road NB														
C	3	2.750	Y	11			61		1665	0.037	59		1665	0.035
C	3	3.250	N	11	N		117	76%	1885	0.062	138	78%	1880	0.073
Pui Man Street SB														
D	4	5.500	Y	11 / 11	N		67	10% / 54%	1990	0.034	48	10% / 50%	2000	0.024
Pedestrian Crossing														
Ep	1		6GM+	6FG=	12	sec								
Fp	1,2,4		6GM+	6FG=	12	sec								
Gp	1,3,4		6GM+	6FG=	12	sec								
Hp	1,2,3		6GM+	6FG=	12	sec								
Ip	2,3,4		7GM+	7FG=	14	sec								
Jp	3		5GM+	5FG=	10	sec								
Kp	2		7GM+	7FG=	14	sec								
Lp	4		7GM+	7FG=	14	sec								
Notes :							AM Peak			A+B+C+Lp	PM Peak			A+B+C+Lp
							Sum of Critical <i>y</i> Y			0.266	Sum of Critical <i>y</i> Y			0.312
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			90	Cycle Time c (sec)			90
							Practical <i>Y</i> Ypr			0.540	Practical <i>Y</i> Ypr			0.540
							Reserve Capacity RC			>100%	Reserve Capacity RC			73%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J13
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TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Junction Road / Tung Tau Tsuen Road

Junction Index : J14

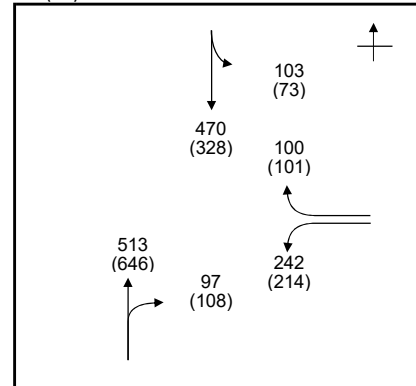
Description : Observed (Weekday)

Design Year : 2019

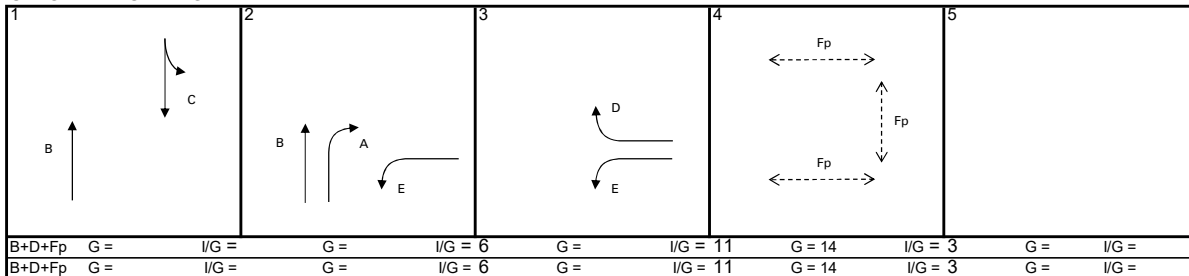
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		275	37%	1895	0.145	192	38%	1890	0.102
C	1	3.000	N				298		2055	0.145	209		2055	0.102
Junction Road NB														
B	1,2	2.750	Y				513		1890	0.271	646		1890	0.342
A	2	3.250	N	16	N		97		1900	0.051	108		1900	0.057
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			242		1665	0.145	214		1665	0.129
D	3	3.500	N	11	N		100		1850	0.054	101		1850	0.055
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak			B+D+Fp	PM Peak			B+D+Fp
							Sum of Critical y Y			0.325	Sum of Critical y Y			0.396
							Lost Time L (sec)			32	Lost Time L (sec)			32
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.670	Practical Y Ypr			0.660
							Reserve Capacity RC			>100%	Reserve Capacity RC			67%

Designed by : HL Date : Nov-25

Junction Index : J14

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Sheet No. : 1

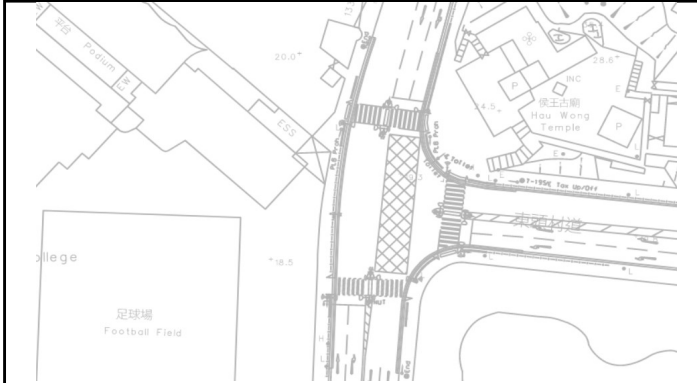
TRAFFIC SIGNAL CALCULATION SHEET



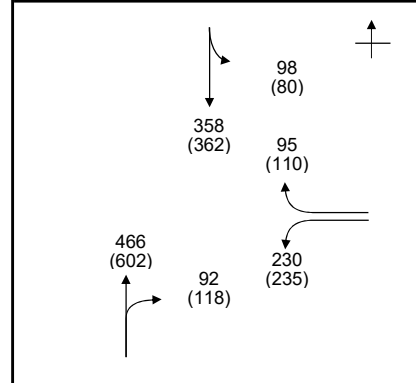
Job Title : Project KC-015 at Kai Tak Road / Sa Po Road
Junction : Junction Road / Tung Tau Tsuen Road
Description : Observed (Weekend)

Job No. : 529168
Junction Index : J14
Design Year : 2019

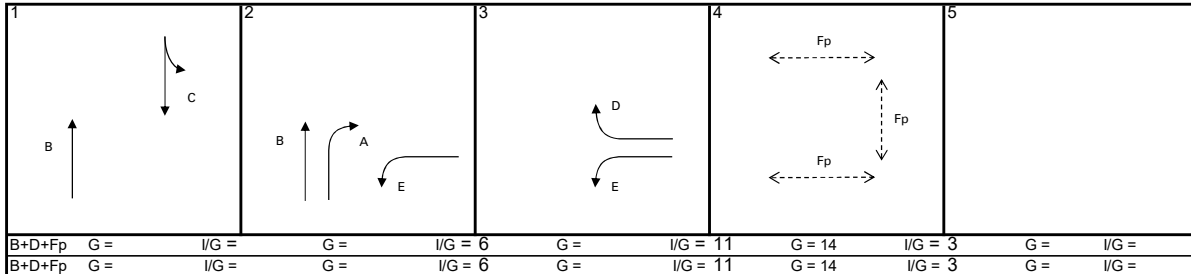
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		218	45%	1875	0.116	212	38%	1895	0.112
C	1	3.000	N				238		2055	0.116	230		2055	0.112
Junction Road NB														
B	1,2	2.750	Y				466		1890	0.247	602		1890	0.319
A	2	3.250	N	16	N		92		1900	0.048	118		1900	0.062
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			230		1665	0.138	235		1665	0.141
D	3	3.500	N	11	N		95		1850	0.051	110		1850	0.059
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak			B+D+Fp	PM Peak			B+D+Fp
							Sum of Critical y Y			0.298	Sum of Critical y Y			0.378
							Lost Time L (sec)			32	Lost Time L (sec)			32
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.638	Practical Y Ypr			0.650
							Reserve Capacity RC			>100%	Reserve Capacity RC			72%

Designed by : HL Date : Nov-25
Checked by : JY Date : Nov-25

Junction Index : J14
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TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Junction Road / Tung Tau Tsuen Road

Junction Index : J14

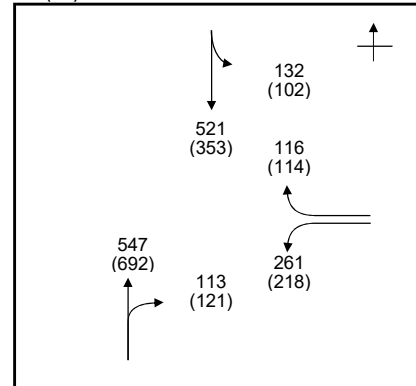
Description : Reference (Weekday)

Design Year : 2033

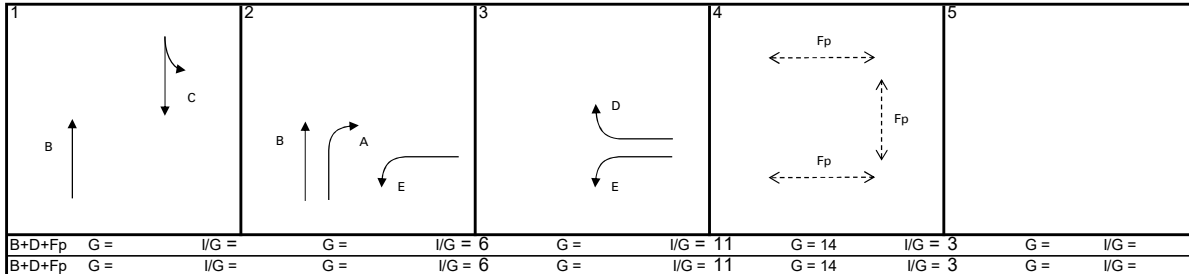
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		312	42%	1880	0.166	217	47%	1870	0.116
C	1	3.000	N				341		2055	0.166	238		2055	0.116
Junction Road NB														
B	1,2	2.750	Y				547		1890	0.289	692		1890	0.366
A	2	3.250	N	16	N		113		1900	0.059	121		1900	0.064
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			261		1665	0.157	218		1665	0.131
D	3	3.500	N	11	N		116		1850	0.063	114		1850	0.062
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak			B+D+Fp	PM Peak			B+D+Fp
							Sum of Critical y Y			0.352	Sum of Critical y Y			0.428
							Lost Time L (sec)			32	Lost Time L (sec)			32
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.670	Practical Y Ypr			0.660
							Reserve Capacity RC			90%	Reserve Capacity RC			54%

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Junction Index : J14

Checked by : JY Date : Nov-25

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TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Junction Road / Tung Tau Tsuen Road

Junction Index : J14

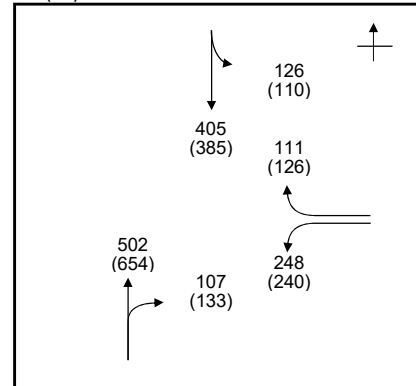
Description : Reference (Weekend)

Design Year : 2033

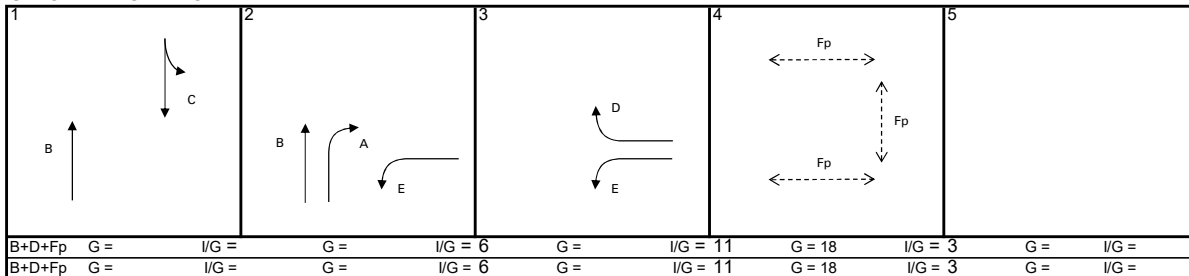
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		253	50%	1865	0.136	236	47%	1870	0.126
C	1	3.000	N				278		2055	0.135	259		2055	0.126
Junction Road NB														
B	1,2	2.750	Y				502		1890	0.266	654		1890	0.346
A	2	3.250	N	16	N		107		1900	0.056	133		1900	0.070
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			248		1665	0.149	240		1665	0.144
D	3	3.500	N	11	N		111		1850	0.060	126		1850	0.068
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak		B+D+Fp	PM Peak		B+D+Fp		
							Sum of Critical y Y		0.326	Sum of Critical y Y		0.414		
							Lost Time L (sec)		36	Lost Time L (sec)		36		
							Cycle Time c (sec)		110	Cycle Time c (sec)		115		
							Practical Y Ypr		0.605	Practical Y Ypr		0.618		
							Reserve Capacity RC		86%	Reserve Capacity RC		49%		

Designed by : HL Date : Nov-25

Junction Index : J14

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET



Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

Junction : Junction Road / Tung Tau Tsuen Road

Junction Index : J14

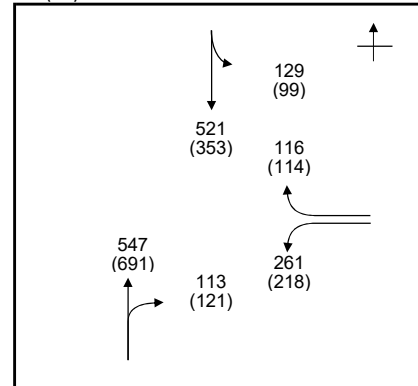
Description : Design (Weekday)

Design Year : 2033

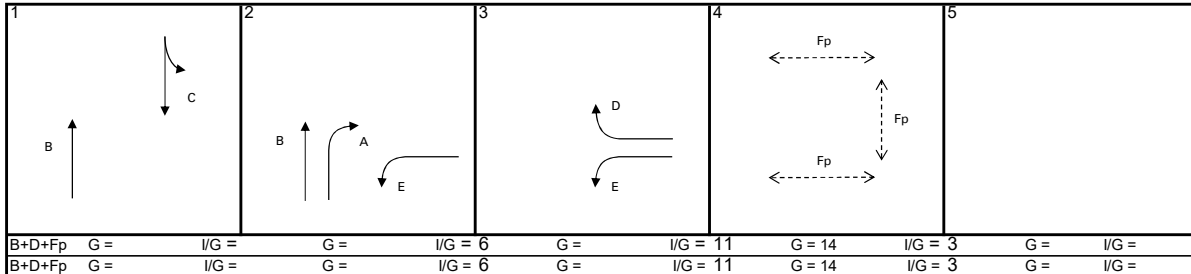
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		311	41%	1885	0.165	216	46%	1875	0.115
C	1	3.000	N				339		2055	0.165	236		2055	0.115
Junction Road NB														
B	1,2	2.750	Y				547		1890	0.289	691		1890	0.366
A	2	3.250	N	16	N		113		1900	0.059	121		1900	0.064
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			261		1665	0.157	218		1665	0.131
D	3	3.500	N	11	N		116		1850	0.063	114		1850	0.062
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak			B+D+Fp	PM Peak			B+D+Fp
							Sum of Critical y Y			0.352	Sum of Critical y Y			0.427
							Lost Time L (sec)			32	Lost Time L (sec)			32
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.670	Practical Y Ypr			0.660
							Reserve Capacity RC			90%	Reserve Capacity RC			54%

Designed by : HL Date : Nov-25

Junction Index : J14

Checked by : JY Date : Nov-25

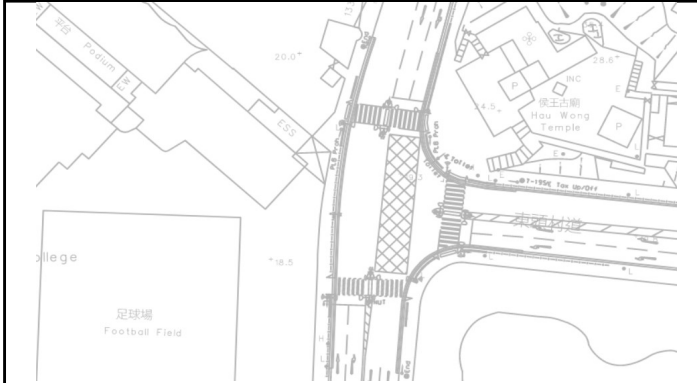
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TRAFFIC SIGNAL CALCULATION SHEET

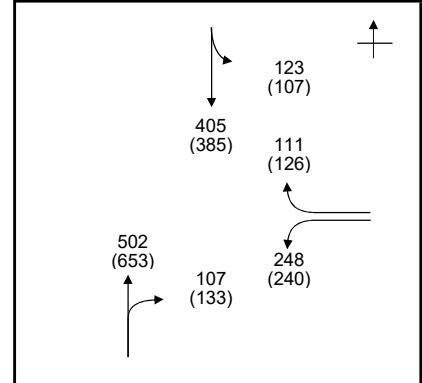


Job Title :	Project KC-015 at Kai Tak Road / Sa Po Road	Job No. :	529168
Junction :	Junction Road / Tung Tau Tsuen Road	Junction Index :	J14
Description :	Design (Weekend)	Design Year :	2033

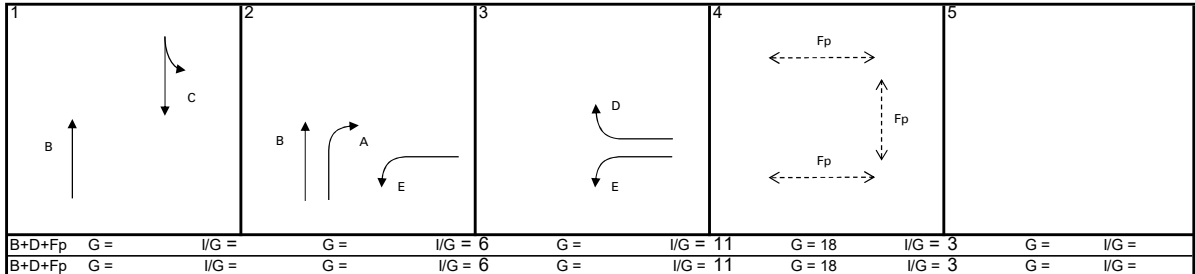
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

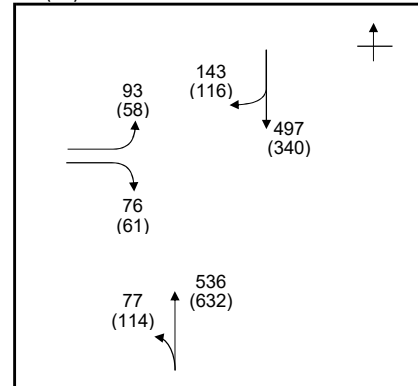
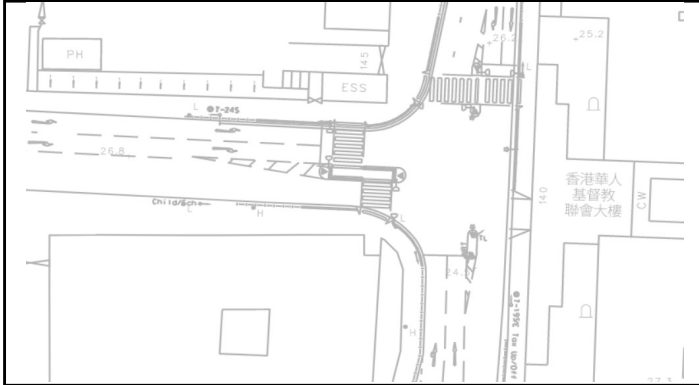
Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
C	1	3.750	Y	11	N		251	49%	1865	0.135	235	46%	1875	0.125
C	1	3.000	N				277		2055	0.135	257		2055	0.125
Junction Road NB														
B	1,2	2.750	Y				502		1890	0.266	653		1890	0.346
A	2	3.250	N	16	N		107		1900	0.056	133		1900	0.070
Tung Tau Tsuen Road WB														
E	2,3	3.250	Y	9			248		1665	0.149	240		1665	0.144
D	3	3.500	N	11	N		111		1850	0.060	126		1850	0.068
Pedestrian Crossing														
Fp	4		8GM+	10FG=	18	sec								
Notes :							AM Peak			B+D+Fp	PM Peak			B+D+Fp
							Sum of Critical y			0.326	Sum of Critical y			0.414
							Lost Time L (sec)			36	Lost Time L (sec)			36
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.605	Practical Y Ypr			0.618
							Reserve Capacity RC			86%	Reserve Capacity RC			49%

Designed by : HL Date : Nov-25
 Checked by : JY Date : Nov-25

Junction Index : J14
 Sheet No. : 2

Design Year	: 2019
-------------	--------

AM (PM) Peak Hour Traffic Flows



1	2	3	4	5
$A+B+C+F_p \quad G =$ $A+B+C+F_p \quad G =$	$I/G = 7$ $I/G = 7$	$G =$ $I/G = 5$	$G =$ $I/G = 9$	$G = 18$ $G = 18$
				$I/G = 3$ $I/G = 3$
				$G =$ $G =$
				$I/G =$ $I/G =$

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Junction Road SB														
A	1	3.000	Y				497		1915	0.260	340		1915	0.178
A	1	3.000	N	15	N		143		1870	0.076	116		1870	0.062
Junction Road NB														
B	2	3.400	Y	12	N		292	26%	1895	0.154	355	32%	1880	0.189
B	2	3.200	N				321		2075	0.155	391		2075	0.188
Inverness Road														
C	3	3.300	Y	12			93		1730	0.054	58		1730	0.034
C	3	3.100	N	15	N		76		1875	0.041	61		1875	0.033
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical <i>y Y</i>			0.468	Sum of Critical <i>y Y</i>			0.400
							Lost Time <i>L</i> (sec)			39	Lost Time <i>L</i> (sec)			39
							Cycle Time <i>c</i> (sec)			125	Cycle Time <i>c</i> (sec)			120
							Practical <i>Y Ypr</i>			0.619	Practical <i>Y Ypr</i>			0.608
							Reserve Capacity <i>RC</i>			32%	Reserve Capacity <i>RC</i>			52%

Junction Index : J15
Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

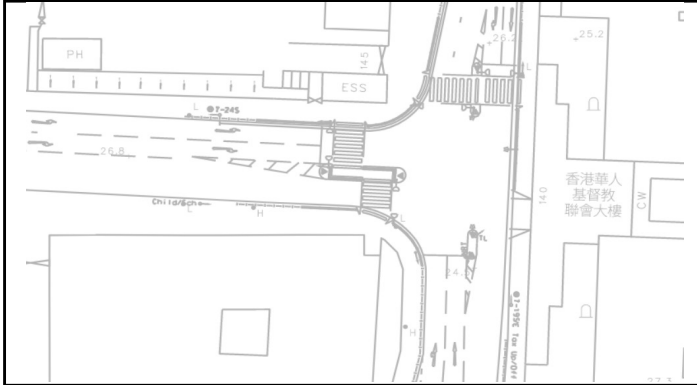
Junction : Junction Road / Inverness Road

Junction Index : J15

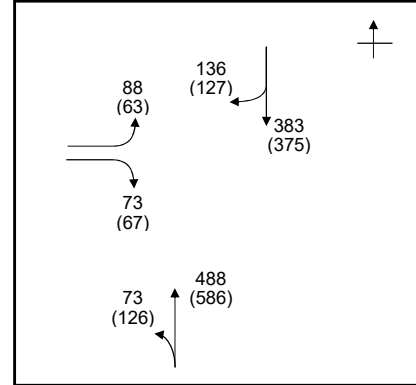
Description : Observed (Weekend)

Design Year : 2019

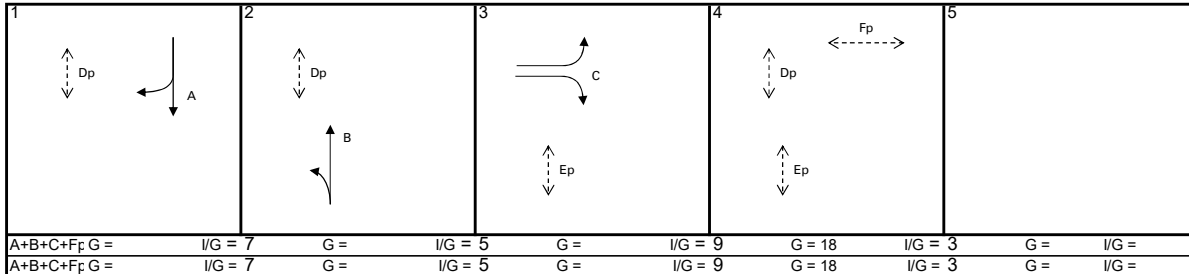
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.000	Y				383		1915	0.200	375		1915	0.196
A	1	3.000	N	15	N		136		1870	0.073	127		1870	0.068
Junction Road NB														
B	2	3.400	Y	12	N		267	27%	1890	0.141	337	37%	1870	0.180
B	2	3.200	N				294		2075	0.142	375		2075	0.181
Inverness Road														
C	3	3.300	Y	12			88		1730	0.051	63		1730	0.036
C	3	3.100	N	15	N		73		1875	0.039	67		1875	0.036
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y		0.393		Sum of Critical y Y		0.413	
							Lost Time L (sec)		39		Lost Time L (sec)		39	
							Cycle Time c (sec)		110		Cycle Time c (sec)		115	
							Practical Y Ypr		0.581		Practical Y Ypr		0.595	
							Reserve Capacity RC		48%		Reserve Capacity RC		44%	

Designed by : HL Date : Nov-25

Junction Index : J15

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

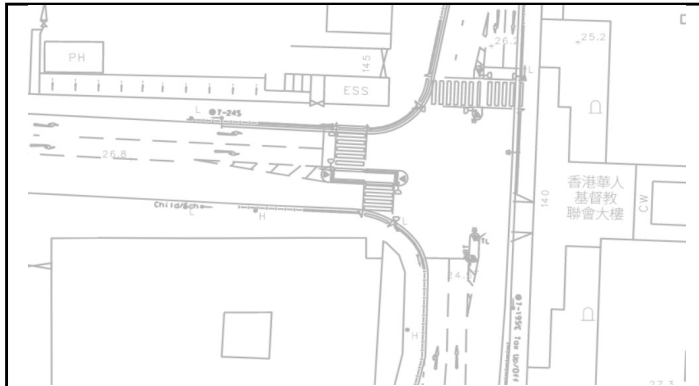
Junction : Junction Road / Inverness Road

Junction Index : J15

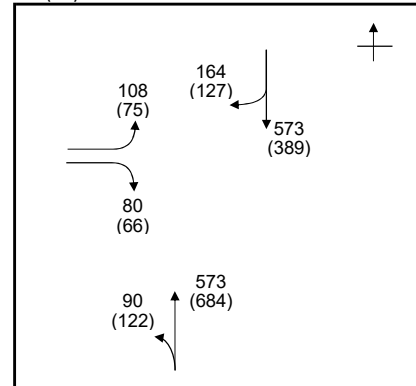
Description : Reference (Weekday)

Design Year : 2033

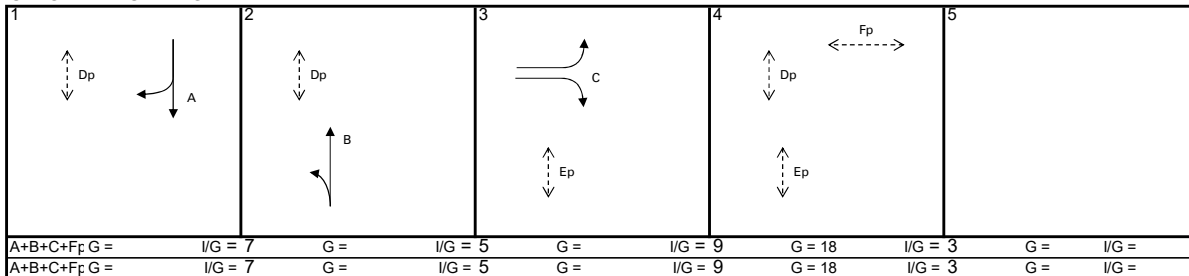
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width <i>w</i> (m)	Nearside Lane? (Y/N)	Turning Radius <i>r</i> (m)	Opposed Turn? (Y/N)	Uphill Gradient <i>g</i> (%)	AM Peak				PM Peak			
							Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>	Design Flow <i>q</i> (pcu/hr)	Turning Proportion <i>f</i>	Saturation Flow <i>S</i> (pcu/hr)	Flow Factor <i>y</i>
Junction Road SB														
A	1	3.000	Y				573		1915	0.299	389		1915	0.203
A	1	3.000	N	15	N		164		1870	0.088	127		1870	0.068
Junction Road NB														
B	2	3.400	Y	12	N		316	28%	1890	0.167	383	32%	1880	0.204
B	2	3.200	N				347		2075	0.167	423		2075	0.204
Inverness Road														
C	3	3.300	Y	12			108		1730	0.062	75		1730	0.043
C	3	3.100	N	15	N		80		1875	0.043	66		1875	0.035
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak		A+B+C+Fp	PM Peak		A+B+C+Fp		
							Sum of Critical <i>y</i> Y		0.529	Sum of Critical <i>y</i> Y		0.450		
							Lost Time <i>L</i> (sec)		39	Lost Time <i>L</i> (sec)		39		
							Cycle Time <i>c</i> (sec)		125	Cycle Time <i>c</i> (sec)		120		
							Practical <i>Y</i> Ypr		0.619	Practical <i>Y</i> Ypr		0.608		
							Reserve Capacity RC		17%	Reserve Capacity RC		35%		

Designed by : HL Date : Nov-25

Junction Index : J15

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

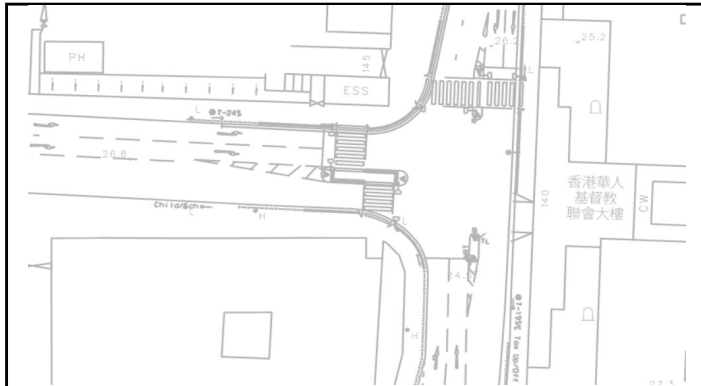
Junction : Junction Road / Inverness Road

Junction Index : J15

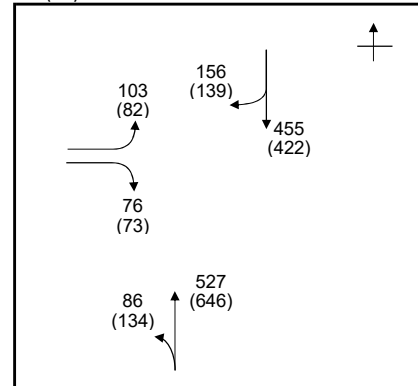
Description : Reference (Weekend)

Design Year : 2033

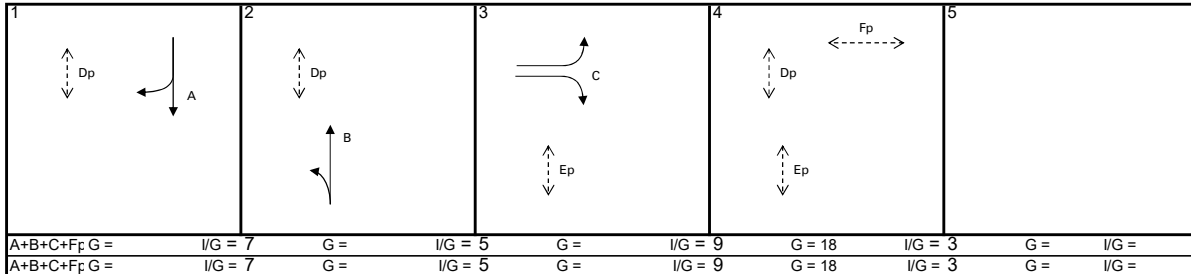
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.000	Y				455		1915	0.238	422		1915	0.220
A	1	3.000	N	15	N		156		1870	0.083	139		1870	0.074
Junction Road NB														
B	2	3.400	Y	12	N		292	29%	1885	0.155	370	36%	1870	0.198
B	2	3.200	N				321		2075	0.155	410		2075	0.198
Inverness Road														
C	3	3.300	Y	12			103		1730	0.060	82		1730	0.047
C	3	3.100	N	15	N		76		1875	0.041	73		1875	0.039
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.452	Sum of Critical y Y			0.466
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.581	Practical Y Ypr			0.595
							Reserve Capacity RC			29%	Reserve Capacity RC			28%

Designed by : HL Date : Nov-25

Junction Index : J15

Checked by : JY Date : Nov-25

Sheet No. : 2

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

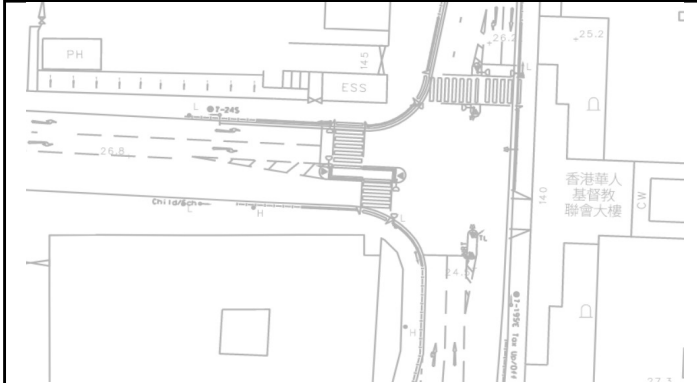
Junction : Junction Road / Inverness Road

Junction Index : J15

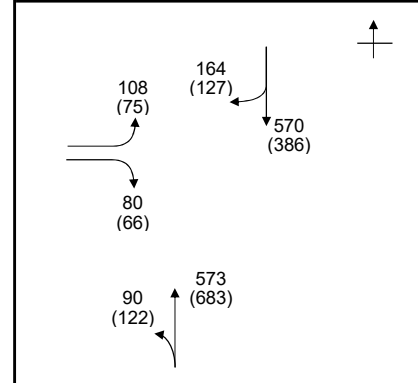
Description : Design (Weekday)

Design Year : 2033

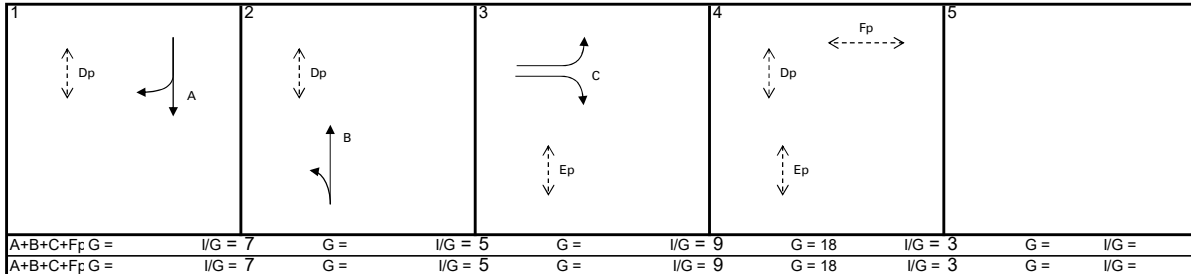
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.000	Y				570		1915	0.298	386		1915	0.202
A	1	3.000	N	15	N		164		1870	0.088	127		1870	0.068
Junction Road NB														
B	2	3.400	Y	12	N		316	28%	1890	0.167	383	32%	1880	0.204
B	2	3.200	N				347		2075	0.167	422		2075	0.203
Inverness Road														
C	3	3.300	Y	12			108		1730	0.062	75		1730	0.043
C	3	3.100	N	15	N		80		1875	0.043	66		1875	0.035
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.527	Sum of Critical y Y			0.449
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			125	Cycle Time c (sec)			120
							Practical Y Ypr			0.619	Practical Y Ypr			0.608
							Reserve Capacity RC			17%	Reserve Capacity RC			35%

Designed by : HL Date : Nov-25

Junction Index : J15

Checked by : JY Date : Nov-25

Sheet No. : 1

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

Job Title : Project KC-015 at Kai Tak Road / Sa Po Road

Job No. : 529168

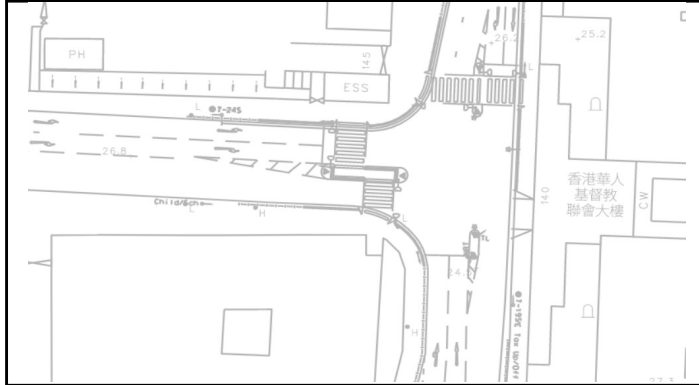
Junction : Junction Road / Inverness Road

Junction Index : J15

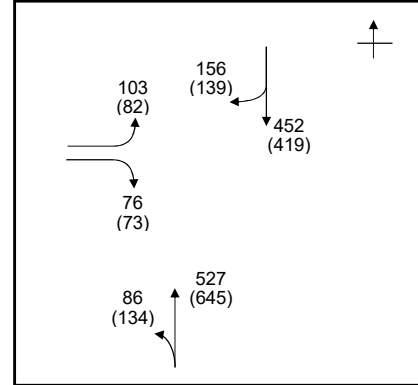
Description : Design (Weekend)

Design Year : 2033

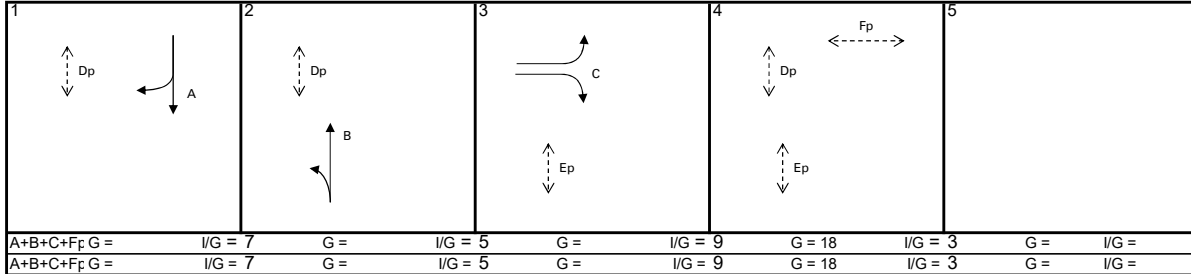
JUNCTION LAYOUT



AM (PM) Peak Hour Traffic Flows



STAGE / PHASE DIAGRAM



CAPACITY CALCULATION

Phase	Stage	Lane Width w (m)	Nearside Lane? (Y/N)	Turning Radius r (m)	Opposed Turn? (Y/N)	Uphill Gradient g (%)	AM Peak				PM Peak			
							Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y	Design Flow q (pcu/hr)	Turning Proportion f	Saturation Flow S (pcu/hr)	Flow Factor y
Junction Road SB														
A	1	3.000	Y				452		1915	0.236	419		1915	0.219
A	1	3.000	N	15	N		156		1870	0.083	139		1870	0.074
Junction Road NB														
B	2	3.400	Y	12	N		292	29%	1885	0.155	369	36%	1870	0.197
B	2	3.200	N				321		2075	0.155	410		2075	0.198
Inverness Road														
C	3	3.300	Y	12			103		1730	0.060	82		1730	0.047
C	3	3.100	N	15	N		76		1875	0.041	73		1875	0.039
Pedestrian Crossing														
Dp	4		7GM+	7FG=	14	sec								
Ep	4		6GM+	9FG=	15	sec								
Fp	4		10GM+	8FG=	18	sec								
Notes :							AM Peak			A+B+C+Fp	PM Peak			A+B+C+Fp
							Sum of Critical y Y			0.450	Sum of Critical y Y			0.464
							Lost Time L (sec)			39	Lost Time L (sec)			39
							Cycle Time c (sec)			110	Cycle Time c (sec)			115
							Practical Y Ypr			0.581	Practical Y Ypr			0.595
							Reserve Capacity RC			29%	Reserve Capacity RC			28%

Designed by : HL Date : Nov-25

Junction Index : J15

Checked by : JY Date : Nov-25

Sheet No. : 2

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Observed (Weekday)

Checked by: JY

Design Year: 2019

Job No.: 529168

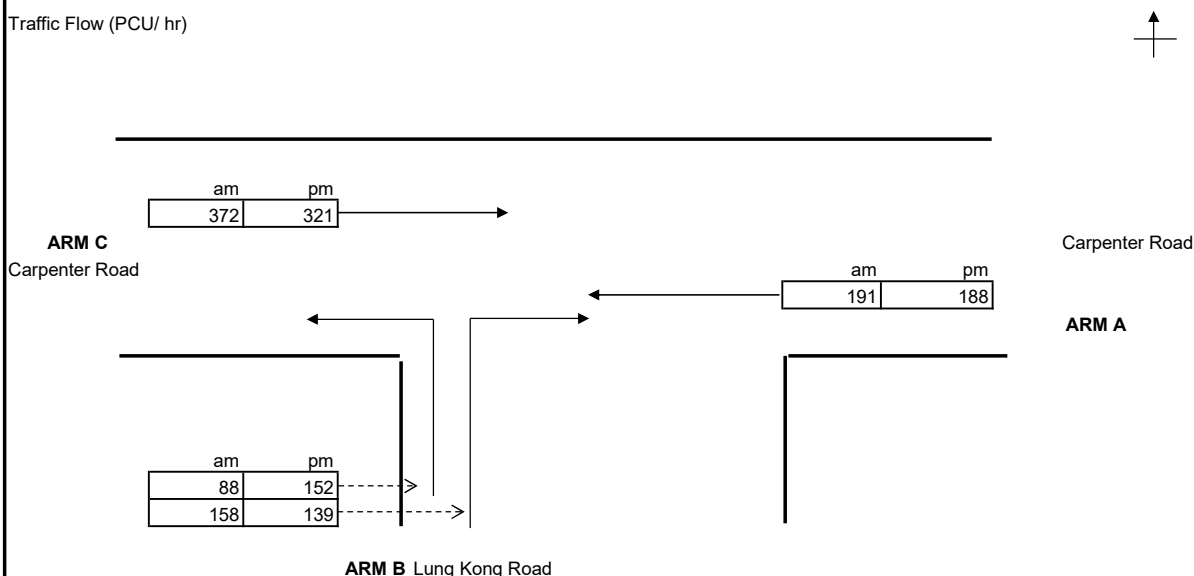
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	372	321
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	191	188
	q(b-a)	158	139
	q(b-c)	88	152
	f	0.36	0.52
CAPACITIES	Q(b-a)	475	483
	Q(b-c)	694	694
	Q(c-b)	408	409
	Q(b-ac)	535	574
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.459	0.507
	c-a	0.207	0.178
Critical DFC		0.46	0.51

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Observed (Weekend)

Checked by: JY

Design Year: 2019

Job No.: 529168

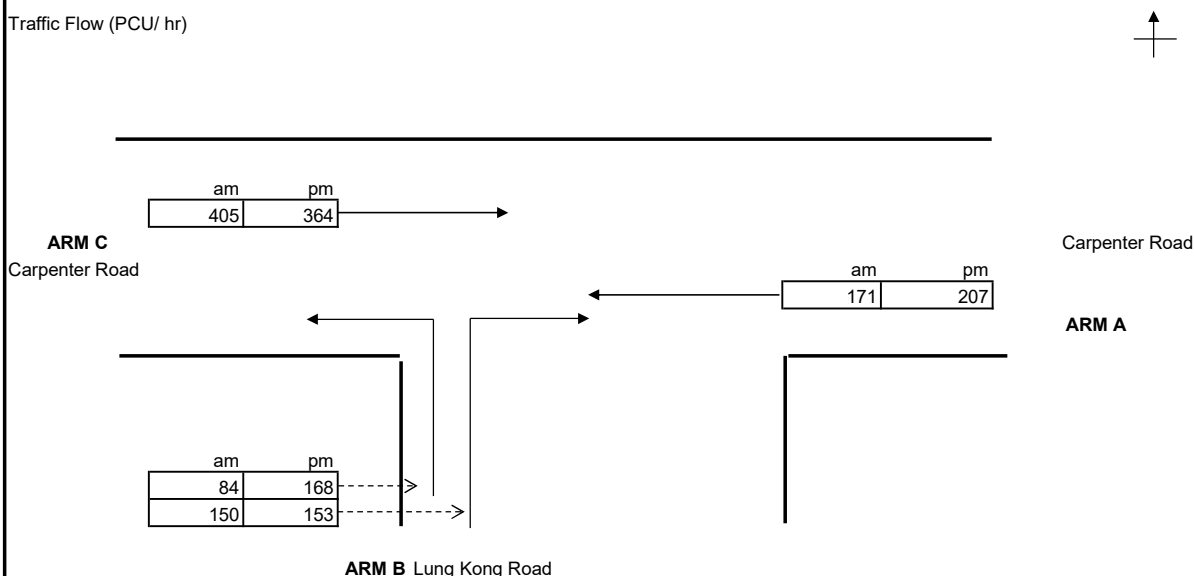
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	405	364
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	171	207
	q(b-a)	150	153
	q(b-c)	84	168
	f	0.36	0.52
CAPACITIES	Q(b-a)	475	473
	Q(b-c)	699	690
	Q(c-b)	411	406
	Q(b-ac)	537	566
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.436	0.567
	c-a	0.225	0.202
Critical DFC		0.44	0.57

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Reference (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

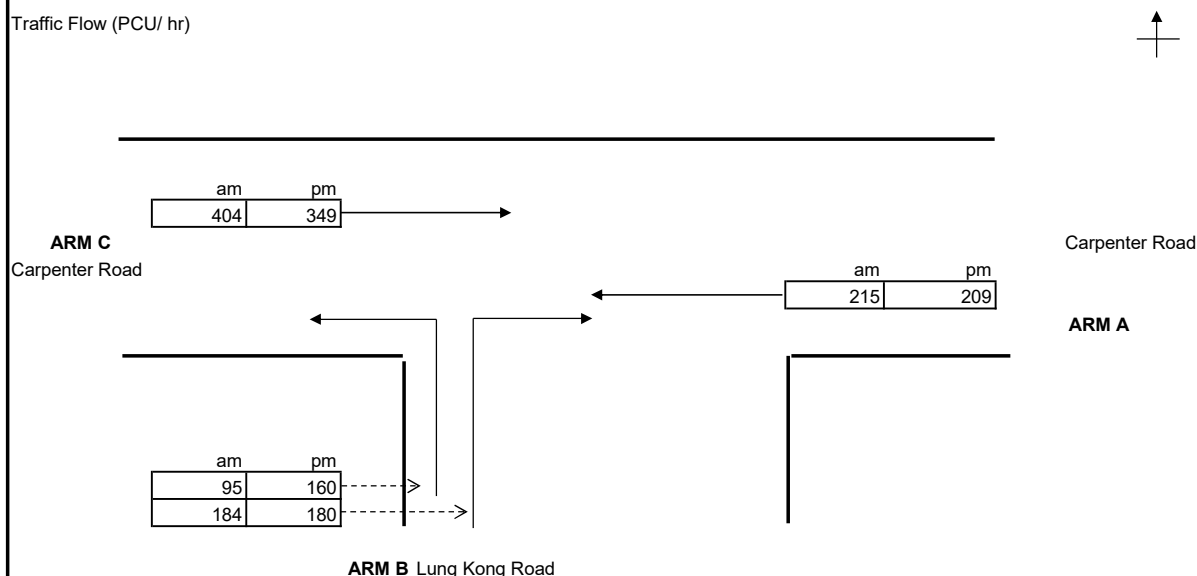
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	404	349
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	215	209
	q(b-a)	184	180
	q(b-c)	95	160
	f	0.34	0.47
CAPACITIES	Q(b-a)	465	474
	Q(b-c)	688	689
	Q(c-b)	405	406
	Q(b-ac)	523	556
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.534	0.612
	c-a	0.224	0.194
Critical DFC		0.53	0.61

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Reference (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

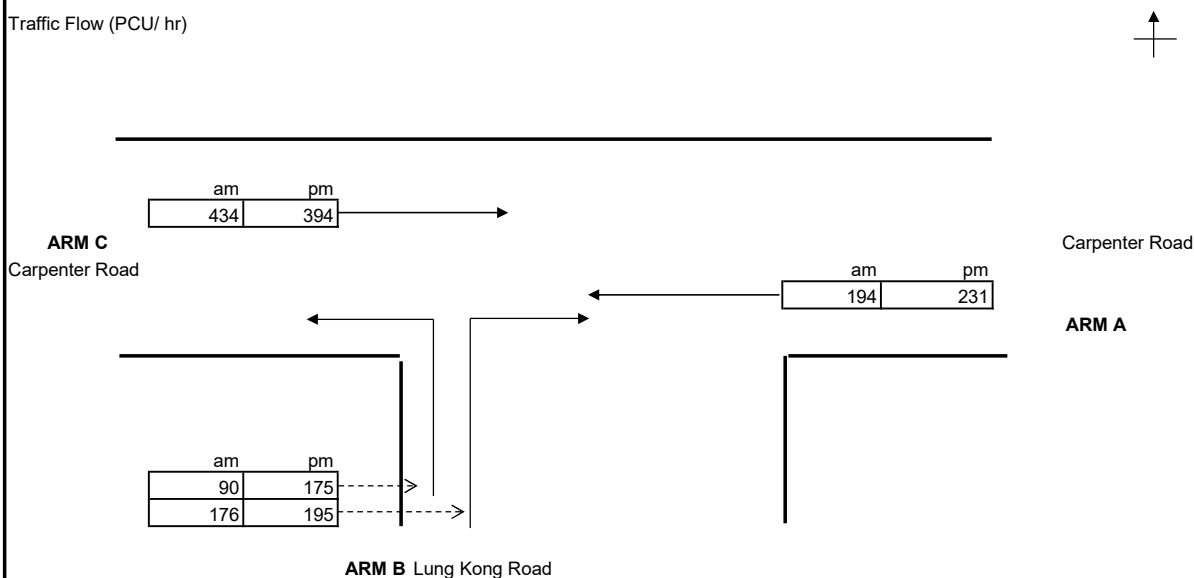
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	434	394
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	194	231
	q(b-a)	176	195
	q(b-c)	90	175
	f	0.34	0.47
CAPACITIES	Q(b-a)	465	463
	Q(b-c)	693	684
	Q(c-b)	408	403
	Q(b-ac)	524	546
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.508	0.677
	c-a	0.241	0.219
Critical DFC		0.51	0.68

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Design (Weekday)

Checked by: JY

Design Year: 2033

Job No.: 529168

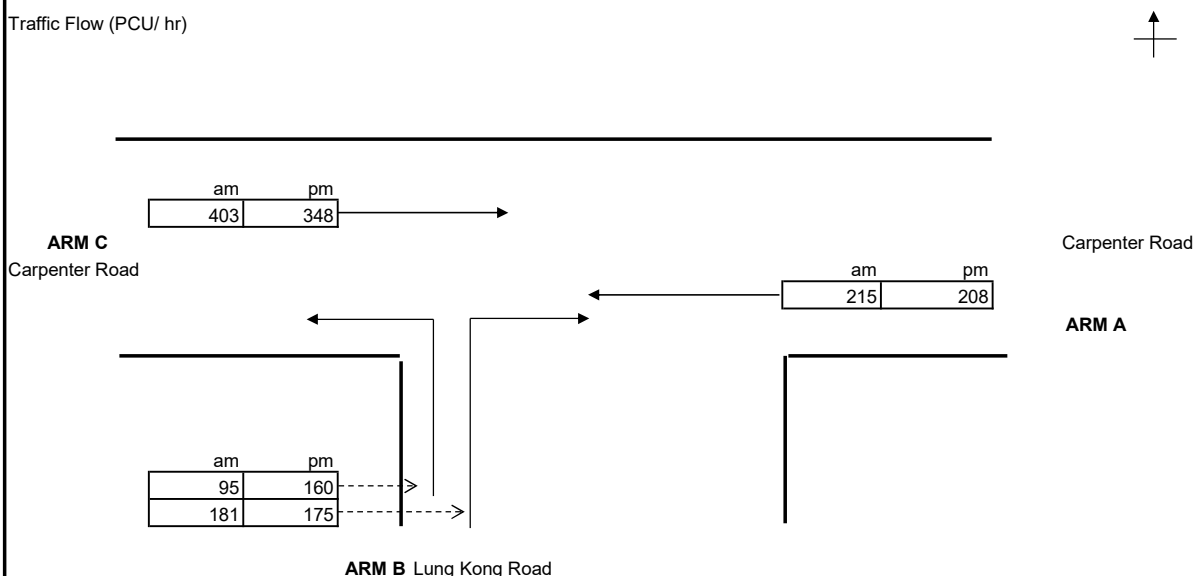
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	403	348
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	215	208
	q(b-a)	181	175
	q(b-c)	95	160
	f	0.34	0.48
CAPACITIES	Q(b-a)	465	475
	Q(b-c)	688	689
	Q(c-b)	405	406
	Q(b-ac)	523	558
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.527	0.601
	c-a	0.224	0.193
Critical DFC		0.53	0.60

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

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

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

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

$$Y = 1 - 0.0345W$$

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

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

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation



(Single Lane Minor Arm B)

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road

Junction: J16 Lung Kong Road / Carpenter Road

Designed by: HL

Scheme: Design (Weekend)

Checked by: JY

Design Year: 2033

Job No.: 529168

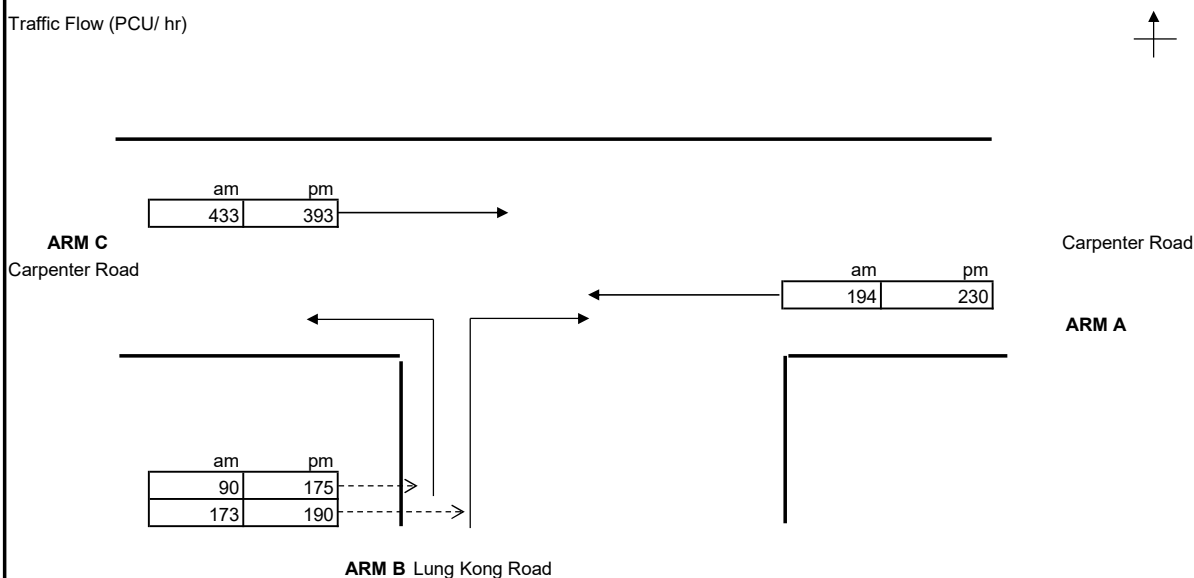
Date : 5/2/2026

ARM A: Carpenter Road

ARM B: Lung Kong Road

ARM C: Carpenter Road

Traffic Flow (PCU/ hr)



GEOMETRY

Major road width	W	9.00	Lane widths	w(b-a)	4.00
Central Reserve width	Wcr	0.00		w(b-c)	4.20
				w(c-b)	0.00
Visibilities	Vr(b-a)	57	Calculated	D	0.91
	VI(b-a)	45		E	0.99
	Vr(b-c)	60		F	0.59
	Vr(c-b)			Y	0.69

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS	q(c-a)	433	393
	q(c-b)	0	0
	q(a-b)	0	0
	q(a-c)	194	230
	q(b-a)	173	190
	q(b-c)	90	175
	f	0.34	0.48
CAPACITIES	Q(b-a)	466	463
	Q(b-c)	693	684
	Q(c-b)	408	403
	Q(b-ac)	524	548
	Q(c-a)	1800	1800
DFC's	c-b	0.000	0.000
	b-ac	0.502	0.666
	c-a	0.241	0.218
Critical DFC		0.50	0.67

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

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

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

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

$$Y = 1 - 0.0345W$$

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

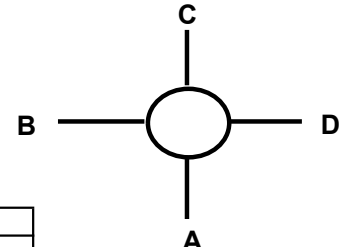
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J17 Olympic Garden Roundabout		Designed by: HL	
Scheme: Observed (Weekday)		Checked by: JY	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East



GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	8	117	624	898	934	1,647
B	169	66	55	195	1,909	485
C	365	275	65		1,455	705
D		214	195	119	948	528

Flow in pcu/hr

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	19	72	718	787	686	1,596
B	178	53	64	181	1,898	476
C	417	126	9		1,352	552
D		133	231	134	802	498

Flow in pcu/hr

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	$Q_E(AM)$	$Q_E(PM)$	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2134	2278	0.77	0.70
B	1.04	6.51	54.60	1972	1.01	0.49	1088	1093	0.45	0.44
C	1.04	8.69	54.60	2633	1.01	0.58	1859	1921	0.38	0.29
D	0.94	9.33	54.60	2826	1.01	0.61	2104	2187	0.25	0.23

Critical Arm: **A** **A**

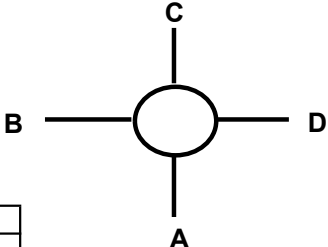
DFC: **0.77** **0.70**

*- In accordance with TPDM V2.4 Appendix

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J17 Olympic Garden Roundabout		Designed by: KL	
Scheme: Observed (Weekend)		Checked by: PK	
Design Year: 2019	Job No.: 529168	Date : 5/2/2026	

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East



GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	8	111	543	802	806	1,464
B	161	63	52	155	1,681	431
C	317	211	61		1,302	589
D		204	154	113	821	471
Flow in pcu/hr						

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	21	79	740	816	681	1,656
B	196	58	71	179	1,956	504
C	428	98	9		1,417	535
D		146	223	147	810	516
Flow in pcu/hr						

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	$Q_E(AM)$	$Q_E(PM)$	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2208	2281	0.66	0.73
B	1.04	6.51	54.60	1972	1.01	0.49	1204	1064	0.36	0.47
C	1.04	8.69	54.60	2633	1.01	0.58	1951	1882	0.30	0.28
D	0.94	9.33	54.60	2826	1.01	0.61	2177	2183	0.22	0.24

Critical Arm: **A** **A**
 DFC: **0.66** **0.73**

*- In accordance with TPDM V2.4 Appendix

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION



Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J17 Olympic Garden Roundabout		Designed by: HL	
Scheme: Reference (Weekday)		Checked by: JY	
Design Year: 2033	Job No.: 529168	Date : 5/2/2026	

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East

GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	12	153	725	977	1,017	1,867
B	196	70	87	203	2,138	556
C	405	280	69		1,593	754
D		243	220	135	1,032	598
Flow in pcu/hr						

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	24	102	841	822	800	1,789
B	210	76	77	212	2,142	575
C	459	114	15		1,521	588
D		155	263	177	898	595
Flow in pcu/hr						

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	$Q_E(AM)$	$Q_E(PM)$	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2085	2212	0.90	0.81
B	1.04	6.51	54.60	1972	1.01	0.49	971	969	0.57	0.59
C	1.04	8.69	54.60	2633	1.01	0.58	1776	1819	0.42	0.32
D	0.94	9.33	54.60	2826	1.01	0.61	2057	2133	0.29	0.28

Critical Arm: **A** **A**
 DFC: **0.90** **0.81**

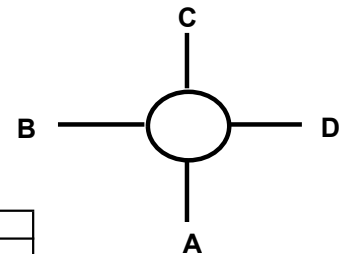
*- In accordance with TPDM V2.4 Appendix

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION



Job Title:	Project KC-015 at Kai Tak Road / Sa Po Road		
Junction:	J17 Olympic Garden Roundabout	Designed by:	HL
Scheme:	Reference (Weekend)	Checked by:	JY
Design Year:	2033	Job No.:	529168
		Date :	5/2/2026

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East



GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	11	145	769	858	945	1,783
B	186	67	123	193	2,059	569
C	346	227	65		1,422	638
D		230	249	107	902	586

Flow in pcu/hr

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	26	112	925	835	793	1,898
B	231	83	85	233	2,244	632
C	453	135	17		1,560	605
D		117	289	152	945	558

Flow in pcu/hr

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	Q_E (AM)	Q_E (PM)	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2127	2216	0.84	0.86
B	1.04	6.51	54.60	1972	1.01	0.49	1011	917	0.56	0.69
C	1.04	8.69	54.60	2633	1.01	0.58	1879	1796	0.34	0.34
D	0.94	9.33	54.60	2826	1.01	0.61	2131	2106	0.28	0.26

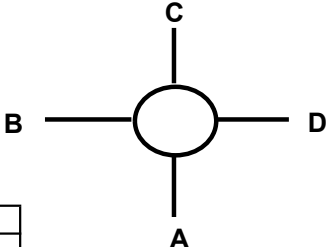
Critical Arm: **A** **A**
 DFC: **0.84** **0.86**

*- In accordance with TPDM V2.4 Appendix

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J17 Olympic Garden Roundabout		Designed by: HL	
Scheme: Design (Weekday)		Checked by: JY	
Design Year: 2033	Job No.: 529168	Date : 5/2/2026	

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East



GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	12	153	725	977	1,016	1,867
B	196	70	87	203	2,137	556
C	405	280	69		1,592	754
D		243	220	134	1,032	597
Flow in pcu/hr						

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	24	102	841	821	795	1,788
B	210	76	77	212	2,136	575
C	458	114	15		1,515	587
D		155	263	172	897	590
Flow in pcu/hr						

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	$Q_E(AM)$	$Q_E(PM)$	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2086	2215	0.90	0.81
B	1.04	6.51	54.60	1972	1.01	0.49	971	972	0.57	0.59
C	1.04	8.69	54.60	2633	1.01	0.58	1777	1823	0.42	0.32
D	0.94	9.33	54.60	2826	1.01	0.61	2057	2133	0.29	0.28

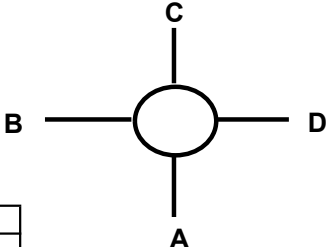
Critical Arm: **A** **A**
 DFC: **0.90** **0.81**

*- In accordance with TPDM V2.4 Appendix

SIMPLIFIED ROUNDABOUT CAPACITY CALCULATION

Job Title: Project KC-015 at Kai Tak Road / Sa Po Road			
Junction: J17 Olympic Garden Roundabout		Designed by: HL	
Scheme: Design (Weekend)		Checked by: JY	
Design Year: 2033	Job No.: 529168	Date : 5/2/2026	

ARM A: Ma Tau Chung Road
 ARM B: Argyle Street
 ARM C: Prince Edward Road West
 ARM D: Prince Edward Road East



GEOMETRY *							
ARM	v (m)	e (m)	L (m)	r (m)	D (m)	Φ	S
A	7.30	10.20	13.2	30	100	40	0.4
B	5.40	7.80	6.6	25	100	20	0.6
C	7.20	9.60	12.6	100	100	30	0.3
D	7.20	9.60	60	100	100	60	0.1

AM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	11	145	769	858	944	1,783
B	186	67	123	193	2,058	569
C	346	227	65		1,421	638
D		230	249	106	902	585
Flow in pcu/hr						

PM FLOWS						
from/to	A	B	C	D	Circ	Entry
A	26	112	925	834	788	1,897
B	231	83	85	233	2,238	632
C	452	135	17		1,554	604
D		117	289	147	944	553
Flow in pcu/hr						

CALCULATIONS *									DFC	
ARM	K	X_2	M	F	t_D	f_c	Q_E (AM)	Q_E (PM)	AM	PM
A	0.98	9.00	54.60	2728	1.01	0.59	2128	2219	0.84	0.86
B	1.04	6.51	54.60	1972	1.01	0.49	1012	920	0.56	0.69
C	1.04	8.69	54.60	2633	1.01	0.58	1880	1800	0.34	0.34
D	0.94	9.33	54.60	2826	1.01	0.61	2131	2107	0.27	0.26

Critical Arm: **A** **A**
 DFC: **0.84** **0.86**

*- In accordance with TPDM V2.4 Appendix

Appendix E

Level of Services

Table E-1 Description of Level-of-Service Definition (HCM 2000)

LOS	Flow Rate (ped/min/m)	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 exist, 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.

Source:

(i) HCM 2000

(ii) Para. 10.5.2.2, Chapter 10, Volume 6, TPDM

Appendix F

Planned/ Committed Developments

Table F-1 Planned / Committed Developments

Ref No.	Planned/ Committed Developments ⁽¹⁾	Proposed Uses ⁽¹⁾	Parameters ⁽¹⁾
1	456-464 Prince Edward Road West	Residential & Commercial	No. of Flats = 97 Average Flat Size = About 60 m ² Commercial GFA = 1,158 m ²
2	65-75 Lion Rock Road	Residential & Commercial	No. of Flats = 150 Average Flat Size = About 35 m ² Commercial GFA = 640 m ²
3	New Kowloon Inland Lot No. 6590 (Part), Kowloon (A/K22/38)	Residential & Commercial	No. of Flats = 930 Average Flat Size = About 44 m ² Commercial GFA = 6,270 m ²
4	URA Project at Nga Tsin Wai Road / Carpenter Road (KC-017)	Residential, Commercial & GIC	No. of Flats = 4,350 Average Flat Size = About 60 m ² Commercial GFA = 25,302 m ² GIC GFA = 47,000 m ²
5	Kai Tak Development Site 2A3 Private Housing	Residential	No. of Flats = 149 Average Flat Size = About 60 m ²
6	Kai Tak Development Site 2A4 Private Housing	Residential	No. of Flats = 164 Average Flat Size = About 60 m ²
7	Kai Tak Development Site 2A5(B) Private Housing	Residential	No. of Flats = 84 Average Flat Size = About 60 m ²
8	Kai Tak Development Site 2A10 Private Housing	Residential	No. of Flats = 153 Average Flat Size = About 60 m ²
9	Kai Tak Development Site 2B1 Public Housing	Residential	No. of Flats = 1,800 Average Flat Size = About 40 m ²
10	Kai Tak Development Site 2B2 Public Housing	Residential	No. of Flats = 1,840 Average Flat Size = About 40 m ²
11	Kai Tak Development Site 2B3 Public Housing	Residential	No. of Flats = 1,280 Average Flat Size = About 50 m ²
12	Kai Tak Development Site 2B4 Public Housing	Residential	No. of Flats = 1,840 Average Flat Size = About 40 m ²
13	Kai Tak Development Site 2B5 Public Housing	Residential	No. of Flats = 1,740 Average Flat Size = About 40 m ²
14	Kai Tak Development Site 2B6 Public Housing	Residential	No. of Flats = 2,050 Average Flat Size = About 40 m ²

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