Attachment 5 –
Revised Traffic Impact Assessment

Section 16 Planning Application for Proposed Amendments to an Approved Comprehensive Residential Development Scheme and Minor Relaxation of Gross Floor Area and Building Height Restrictions at Various Lots in D.D. 385 and Adjoining Government Land, Tai Lam Chung, Tuen Mun

Traffic Impact Assessment Report

December 2025

AECOM

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1 INTRODUCTION

1.1 Background

1.1.1 The Application Site is located in Tai Lam Chung Valley between Tsuen Wan and Tuen Mun. The proposed development comprises 2,670 nos. of residential flats and site formation works for village houses and provision of public facilities. The location of Application Site is shown in **Figure 1.1**.

1.1.2 The Application Site is mainly zoned "Comprehensive Development Area" ("CDA") under the Approved So Kwun Wat Outline Zoning Plan (OZP) no. S/TM-SKW/15. A previous scheme comprising 1,560 nos. of residential flats with average flat size of 49.0m^2 was approved in 2002 under the planning application A/TM-SKW/32 (hereinafter referred to as the "Approved Scheme").

1.1.3 The Applicant is now proposing a higher domestic plot ratio of 2.107 which comprises of 2,670 nos. of residential units with an average flat size of about 40.6m^2 (hereinafter referred to as "Proposed Scheme") with the site formation works for village houses and provision of public facilities remain unchanged from the Approved Scheme.

1.1.4 AECOM Asia Co. Ltd. was commissioned by the Applicant as the Traffic Consultant to prepare a TIA report in support of the Section 16 planning application.

1.2 Objectives

1.2.1 The main objectives of this report are as follows-

- Outline the proposed development parameters and internal transport facilities, internal road arrangement etc.;
- Review the current traffic condition in the vicinity of the Application Site;
- Estimate the future public transport demand of the proposed development and develop enhancement on public transport services if necessary;
- Estimate the potential traffic generations and attractions of the proposed development;
- Produce traffic forecasts on the surrounding road network at the adopted design year;
- Assess traffic impact on the surrounding road network induced from the proposed development; and
- Develop traffic improvement proposal(s) if necessary.

1.3 Structure of TIA Report

1.3.1 Following this introductory chapter, the TIA is structured as follows:

- **Chapter 2**: Proposed Development, describes the development schedule of the proposed development and its internal traffic facilities provisions, access arrangement, etc.;
- **Chapter 3**: Existing Traffic Condition, reviews the current traffic conditions in the vicinity;

- **Chapter 4**: Future Public Transport Proposal, elaborates the anticipated public transport demand and discusses the future possible public transport proposal;
- **Chapter 5**: Traffic Forecasting, describes the traffic forecasting methodology and presents the estimated traffic flows in design year;
- **Chapter 6**: Traffic Impact Assessment, assesses the traffic impact induced on the surrounding road network and recommends improvement schemes, if considered necessary;
- **Chapter 7**: Traffic Impact Assessment on Sensitivity Test, adopts traffic model as traffic forecasting and reassesses the traffic impact induced on the surrounding road network and recommends improvement schemes, if considered necessary;
- **Chapter 8**: Construction Traffic Impact Assessment, assesses the traffic impact on the surround road network during constructions stage and recommends improvement schemes, if considered necessary;
- **Chapter 9**: Summary and Conclusion, summarizes the findings of the study and presents the conclusion of this TIA.

2 PROPOSED DEVELOPMENT

2.1 Development Schedule

2.1.1 **Table 2.1** summarizes the development schedule of the Proposed Scheme with comparison to the Approved Scheme. The proposed indicative Master Layout Plan (MLP) under the current application is illustrated in **Figure 2.1** for reference.

Table 2.1 Indicative Development Schedule of the Development Site

Development Parameters	Approved Scheme	Proposed Scheme
Development Site Area	47,070m^2	46,493m^2
Plot Ratio	1.8555	2.107
Domestic GFA	86,267	108,468
No. of Storeys	15-16	6-23
No. of Units	1,560	2,670
Average Flat Size	49m^2	40.6m^2

2.2 Proposed Development Access Arrangement

2.2.1 The location of vehicular run-in/out for the Proposed Development would be maintained at Luen Hong Lane near to Luen On San Tsuen. The proposed run-in/out is presented in **Figure 2.2**.

2.2.2 According to the approved Road Gazette 2728 Plan No. TMM4185 dated in May 2022, the road section at both ends of Luen Hong Lane would be widened to allow better vehicle manoeuvring. The approved road gazette plan is presented in **Annex A.**

2.3 Internal Parking and Servicing Facilities

2.3.1 The parking and loading/unloading facilities for the Proposed Development would be provided in accordance with the requirements as stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG). The respective requirements and proposed provision are summarized in **Table 2.2**.

2.3.2 Swept path analysis for the indicative MLP was also conducted as demonstrated in **Annex C**. The results have demonstrated that sufficient manoeuvring for the critical locations of loading/unloading bay as well as carparking spaces subject to further reviewed in detail design stage.

2.3.3 According to the draft lease plan clause 14(d)(ii)(II), (III) and 15(c), the public village parking spaces will be maintained and operated by the applicant subject to the agreement from relevant government departments. Relevant clause refer to **Annex E**.

Table 2.2 Parking and Servicing Facilities Provision

Parking/ Servicing Facilities	HKPSG Requirement		No. of Units / Blocks / GFA	Internal Transport Facilities		
				HKPSG Requirement		Proposed Provision
				Lower End	Upper End	
Proposed Residential Development (2,670 flats)						
Southern Site (1,557 flats)						
Residential Parking Spaces	Flat Size≤40m^2	1 space per 8 – 14 units(1)	909	65	114	91
	40m^2< Flat Size ≤70m^2	1 space per 3.33 – 5.83 units(2)	648	112	195	156
Northern Site (1,113 flats)						
Residential Parking Spaces	Flat Size≤40m^2	1 space per 8 – 14 units(1)	528	38	66	53
	40m^2< Flat Size ≤70m^2	1 space per 3.33 – 5.83 units(2)	568	98	171	137
	70m^2< Flat Size ≤100m^2	1 space per 1.67 – 2.92 units(3)	17	6	11	9
	Total		**2670**	**319**	**557**	**446(4)**
Visitor Parking Spaces	5 spaces per block		7	35		35
Motorcycle Parking Spaces	1 space per 100 – 150 units		2670	18	27	27
Loading / Unloading Bays	1 bay per block		7	7		8(5)
Bicycle Parking Spaces	1 bicycle parking space for every 30 flats with flat size smaller than 70m^2		2653	89		89
Retail (2000m^2 GFA)						
Retail Parking Spaces	1 space per 150m^2 – 300m^2 GFA		2000	7	14	10
Retail Loading / Unloading Bays	1 bay per 800m^2 – 1200m^2 GFA		2000	2	3	3
Motorcycle Parking Space	5%-10% of the total provision for private cars		-	1	1	1

Notes:

(1) According to the current HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 0.5 x 1.0 x 1.0 = 1 car space per 8.00-14.00 units.

(2) According to the current HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 1.2 x 1.0 x 1.0 = 1 car space per 3.33-5.83 units.

(3) According to the latest HKPSG, Parking Requirement = Global Parking Standard (GPS) x Demand Adjustment Ratio (R1) x Accessibility Adjustment Ratio (R2) x Development Intensity Adjustment Ratio (R3), i.e. 1 car space per 4-7 units x 2.4 x 1.0 x 1.0 = 1 car space per 1.67-2.92 units.

(4) Taken into consideration the proximity to public transport services, availability of public car parking space, traffic conditions and the illegal parking condition in the vicinity, it is proposed to adopt a GPS of 5 for calculating the carparking provision according to HKPSG.

(5) Additional loading/unloading bay will be provided to serve the 17 nos. of house situated at the east of the Proposed Development.

3 EXISTING TRAFFIC CONDITION

3.1 Existing Traffic Arrangement

3.1.1 The Application Site is located in the Tai Lam Chung Valley between Tsuen Wan and Tuen Mun as shown in **Figure 3.1**. The Tai Lam Chung Nullah runs down through the valley from the Tai Lam Chung Reservoir Main Dam and its reservoir beyond. The application site is located in a generally flat area on the east side of the river near the entrance to the valley.

3.1.2 Tai Lam Chung Road is a two-way single carriageway with one traffic lane at each direction. The signalised junction of Castle Peak Road – Tai Lam / Tai Lam Chung Road is the key junction connecting the development site to/from the surrounding area.

3.1.3 Luen Hong Lane is a single 2-lane carriageway with passing bay connecting with Luen Tai Street.

3.2 Traffic Survey

3.2.1 A total of 6 key junctions have been identified for assessment and listed in **Table 3.1** and shown in **Figure 3.1**.

Table 3.1 Surveyed Key Junctions for Assessment

Ref.	Junction	Type	Fig. No.
J1	Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam	Roundabout	3.2
J2	Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau	Roundabout	3.3
J3	Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road	Signal	3.4
J4	Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road	Signal	3.5
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road	Signal	3.6
J6	Tai Lam Chung Road / Luen Hong Lane	Priority	3.7

3.2.2 The existing layout of the above junctions are shown in **Figure 3.2** to **Figure 3.7**.

3.2.3 To investigate the current traffic condition of the identified critical junctions, manual classified traffic counts were conducted on 30 May 2023 during 7:30am – 9:30am and 5:00pm – 7:00pm.

3.2.4 The identified morning (AM) and evening (PM) peak hour are from 7:30am to 8:30am and from 5:30pm to 6:30pm respectively. The 2023 observed AM and PM peak hour traffic flows are shown in **Figure 3.8**.

3.3 Junction Assessment

3.3.1 Based on the 2023 observed traffic flows, capacity assessments were carried out in accordance with the methodology documented in the appendices of Transport Planning and Design Manual (TPDM) Volume 2 Chapter 4 for priority junction / roundabout. Signal junction assessments were based on TPDM Volume 4.

3.3.2 The existing junction performance of the critical junctions are summarized in **Table 3.2.** The junction calculation spreadsheets are enclosed in **Annex B**.

Table 3.2 Existing Junction Performance

Ref.	Junction	Indicator*	2023 Observed	
			AM Peak	PM Peak
J1	Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam	DFC	0.54	0.33
J2	Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau	DFC	0.27	0.12
J3	Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road	RC	>100%	>100%
J4	Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road	RC	>100%	>100%
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road	RC	>100%	>100%
J6	Tai Lam Chung Road / Luen Hong Lane	DFC	0.03	0.04

* RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout

3.3.3 At present, the concerned junctions are operating within capacity.

3.4 Road Link Capacity Assessments

3.4.1 Road link capacity assessments are also conducted to assess the existing flow/capacity ratio (i.e. V/C ratio) of the key road links in the vicinity of the subject site. The assessment results are summarized in **Table 3.3**.

Table 3.3 Road Link Capacity Assessments for Existing Year 2023

Ref.(1)	Road Link	Direction	Link Capacity(2) (pcu/hr)	Year 2023 Observed Traffic Flows (pcu/hr)		Flow/Capacity Ratio (V/C Ratio)	
				AM peak	PM Peak	AM peak	PM Peak
L1	Tuen Mun Road	EB	5,640	4,905	3,490	0.87	0.62
L2		WB	5,640	3,165	4,795	0.56	0.85
L3	Castle Peak Road – Tai Lam	EB	1,320	745	805	0.56	0.61
L4		WB	1,320	180	185	0.14	0.14
L5	Tai Lam Chung Road	NB	1,020	170	100	0.17	0.10
L6		SB	1,020	185	190	0.18	0.19
L7	Luen Hong Lane	EB	480	20	20	0.04	0.04
L8		WB	480	25	30	0.05	0.06
L9	Castle Peak Road – Tai Lam	EB	3,600	1,460	745	0.41	0.21
L10		WB	3,600	520	940	0.14	0.26
L11	Castle Peak Road – Tai Lam	EB	3,600	1,020	205	0.28	0.06
L12		WB	3,600	210	305	0.06	0.08
L13	Tuen Mun Road	EB	7,560	5,585	3,970	0.74	0.53
L14		WB	5,640	3,165	4,795	0.56	0.85
L15	Slip Road of Tuen Mun Road	EB	1,320	575	300	0.44	0.23
L16		WB	1,320	445	630	0.34	0.48
L17	Tuen Mun Road	WB	5,640	3,295	4,465	0.58	0.79
L18	Slip Road of Tuen Mun Road	EB	1,320	285	585	0.22	0.44

Note:
(1) Refer to **Figure 3.1**
(2) Derived with reference to Table 2.4.1.1 in TPDM Volume 2 – Chapter 2.4

3.4.2 The above link capacity assessment results indicate that all road links are operating at within capacities.

3.5 Existing Public Transport Facilities

3.5.1 At present, there is a GMB route 43B located at Tai Lam Chung Bus Terminus near Luen Hong Lane, which is around 500m (around 7-minute walk) away from the Proposed Development.

3.5.2 The franchised bus and green minibus (GMB) routes serving at Castle Peak Road – Tai Lam surrounding of the Proposed Development are summarized in the **Table 3.4**. The location of the bus stops and minibus stops are presented in **Figure 3.9**.

Table 3.4 Public Transport Services

Route No.	Origin / Destination			Frequency (min.) / Timetable
Franchised Bus (CTB)				
952	Chi Lok Fa Yuen	↔	Causeway Bay (Moreton Terrace) Bus Terminus	5 - 30
952C	So Kwun Wat	→	Kornhill Plaza, Kornhill Road	07:12、07:24、07:36(1)
	Sunway Gardens, King's Road	→	So Kwun Wat	18:10、18:15(1)
952P	Chi Lok Fa Yuen	→	Causeway Bay (Moreton Terrace) Bus Terminus	8 - 20
	So Kwun Wat			07:15、07:30、07:40、07:50
	Golden Beach			07:33
962	Lung Mun Oasis Bus Terminus	↔	Causeway Bay (Moreton Terrace) Bus Terminus	8 - 25
N952	Causeway Bay (Moreton Terrace) Bus Terminus	↔	Chi Lok Fa Yuen	00:50、01:10、05:10、05:40
N962	Lung Mun Oasis Bus Terminus	↔	Causeway Bay (Moreton Terrace) Bus Terminus	25 - 45
Franchised Bus (KMB)				
52X	Tuen Mun Central Bus Terminus	↔	Mong Kok (Park Avenue) Bus Terminus	5 - 25
52P	So Kwun Wat	→	Mong Kok (Park Avenue) Bus Terminus	08:00
53	YOHO Mall (Yuen Long)	↔	Nina Tower Bus Terminus	25 - 35
61A	Yau Oi (South) Bus Terminus	→	Tuen Mun Road Bus-Bus Interchange	06:50(1)
61M	Yau Oi (South) Bus Terminus	↔	Lai King North Bus Terminus	8 - 25
61P	So Kwun Wat Tsuen	↔	Tsuen Wan Station Bus Terminus	07:10、07:35、08:05 18:15、18:40、19:05(1)
252	Tuen Mun Road Bus-Bus Interchange	↺	So Kwun Wat	10 - 30(2)
	So Kwun Wat Tsuen	→	Tuen Mun Road Bus-Bus Interchange	20
	Tuen Mun Road Bus-Bus Interchange	→	18 Kwun Chui Road	20(1)

Route No.	Origin / Destination			Frequency (min.) / Timetable
261B	Sam Shing Public Transport Interchange	→	Kowloon Station Bus Terminus	07:25、07:35
N252	Mei Foo	→	Tuen Mun (Sam Shing Estate)	01:05、01:35
Franchised Bus (MTR Bus)				
K51	Fu Tai Estate Bus Terminus	↔	Tai Lam Chung	5 - 20
Green Mini-Bus (GMB)				
43B	Tuen Mun Town Centre (Ho Pong Street)	↔	Tai Lam Chung	18 - 30

Notes:
(1) Monday to Friday only
(2) Circular route
(3) Saturday, Sunday and Public Holiday
(4) No service on Sundays and public holidays

4 REVIEW ON FUTURE PUBLIC TRANSPORT DEMAND

4.1 Future Public Transport Demand

4.1.1 To review the appropriate public transport provision to be provided due to the population intake of the Proposed Development, the future public transport demand for the Proposed Development is reviewed with reference to the information/data as available in the Population By-Census 2021 and the Travel Characteristics Survey 2011 Final Report as available on Transport Department's website. The estimation of future public transport demand is summarized in **Table 4.1**.

Table 4.1 Estimation on Future Public Transport Demand for the Proposed Development

Parameters	Formula	Proposed Scheme
Estimated Population by Flats	2,670 Flats	7,476(1)
Estimated Population by Village Housing	80 Village House	224(1)
Total Estimated Population	(a)	7,700(2)
Average daily mechanised trips per person	(b)	1.83(3)
Peak hour factor (AM/PM) to daily total	(c)	12%(4)
Modal Split for Public Transport	(d)	73%(5)
Estimated public transport demand per hour during peak hours	(e) = (a) x (b) x (c) x (d)	**1,235**

Notes:
(1) The estimated population of the application site is estimated with an assumption of 2.8 persons / flat or village house.
(2) The total estimated population is the factor (a) of formula reflecting total population of subject site including flats and village house.
(3) The daily mechanised trip rate per population is 1.83 trips according to the Travel Characteristics Survey 2011 Final Report.
(4) The peak hour factor is about 12% of daily trips according to the Travel Characteristics Survey 2011 Final Report.
(5) Modal split for public transport is made reference with Table C109 of 2021 Population Cense.

4.2 Proposed Public Transport Facilities

4.2.1 As the subject site is in close proximity to the Tuen Mun Bus-Bus Interchange (BBI) which provides extensive bus connections to other major areas in Hong Kong. The "Kowloon Bound" provides bus routes connecting to Kowloon and Hong Kong island while the "Tuen Mun Bound" provides bus routes connecting to Tuen Mun and Yuen Long area.

4.2.2 Under the proposed scheme, there will be 2,670 units. As per **Table 4.1** above, it is estimated that the public transport demand during peak hour is 1,235 pax / hr. As the major public transport demand would likely to be destined to the two bounds of Tuen Mun Bus-Bus Interchange, a circular bus service is proposed between Tuen Mun BBI and the development site. The proposed new bus service would be a circular route with terminating point at the development site and an enroute bus stop at Tuen Mun BBI for passenger boarding and alighting. Nevertheless, the boarding / alighting point for this proposed circular bus service can be further reviewed / discussed with TD in

the subsequent detail design stage.

4.2.3 In order to serve public transport demand of 1,235 pax/hr (Refer to **Table 4.1**), it will require a total of 14 bus trips during peak hours with a total capacity of 1,260 pax/hr (i.e. 14 trips X 120 pax/bus X 75% occupancy rate).

4.2.4 For conservative assessment, it has been assumed that 65% of the passengers [around 9 bus trips] would take the proposed circular bus service to/from the Tuen Mun BBI while the remaining 35% [around 5 trips] would be served the proposed en-route bus stop at the proposed TI with enhanced frequency of existing bus services (e.g. bus routes 52X, 53, 61M, 952 and 962).

Table 4.2 Summary of Anticipated Future Public Transport Demand

Direction	**Public Transport Demand (pax/hr)** (a)	**Proposed Trips** (b) = (a) / 90pax[3]
To Tuen Mun BBI (New Circular Bus Service)	802[1]	9 trips
En-route Bus Stop with Existing Bus Services	433[2]	5 trips
Total	**1,235**	**14 trips**

Note:
(1) Total public transport demand of 1,235pax/hr x 65% (Circular Bus Service
(2) Total public transport demand of 1,235pax/hr x 35% (En-route stop at Proposed TI)
(3) Bus carrying capacity is estimated as 120 pax * 75% occupancy rate

4.2.5 To serve the additional public transport demand as derived in **Table 4.2**, two bus services have been proposed.

<u>En-route Bus Stop at the Subject Development</u>

4.2.6 Currently, there are few bus routes running along Castle Peak Road – Tai Lam. To cater the future transport demand as derived in **Table 4.2**, it is recommended to introduce an en-route bus stop within the subject development serving enhanced frequency of existing bus services. Potential bus routes such as 52X, 53, 61M, 952 and 962, could provide connections to various destinations. It is anticipated that each bus route only needs to enhance their frequency slightly (e.g. from 10mins to 8.5mins) which will have a negligible impact on current peak hour headway.

<u>Circular Service to Tuen Mun Bus-bus Interchange</u>

4.2.7 Given that TMRBBI offers extensive bus connections to major area across Hong Kong, it is considered appropriate to provide a dedicated bus service between the development site and the BBI. The proposed service would operate at an estimated peak-hour headway of approx. 7mins (i.e. 60mins / 9 trips).

4.2.8 The proposed circular bus routing is presented in **Annex D**.

4.2.9 In order to serve the public transport demand induced by the Proposed Development, total provision of 85m in length of bus bays would be proposed in the Proposed privately-operated Transport Interchange (TI) within the Proposed Development. To provide design flexibility, a 32m long bay has been reserved within the Proposed TI for potential future use by GMB, if required. The indicative layout of the transport

interchange is presented in **Figure 4.1**. Swept path analysis was conducted and demonstrated sufficient manoeuvring space would be allowed for 12.8m bus as presented in **Annex C**.

4.2.10 It should be noted that current demand split reflects existing conditions and will be reviewed during detailed design stage prior to population intake of the Proposed Development. Nonetheless, the proposed TI has provided two separate bus bays to allow flexibility for future changes in demand distribution.

4.2.11 The detailed arrangement of the proposed enhancement on public transport services would be subject to further review and consideration by relevant government departments and/or stakeholders in detailed design stage.

4.2.12 The applicant will be responsible for the construction, future management and maintenance of the Proposed TI.

4.2.13 It is noted that the proposed public transport plan and facilities in the TIA is for assessment purpose only. The final PTI layout and public transport plan to address the public transport demand arising from the development, including introduction of new routes or changes on existing public transport services, will be further reviewed in detailed design stage and decided by TD, subject to a host of factors including actual population intake date, prevailing public transport services at that time and etc."

5 TRAFFIC FORECASTING

5.1 Design Year

5.1.1 The proposed development is tentatively scheduled for completion in 2030. Year 2033 is therefore selected as a design year for assessment purpose (i.e. 3 years after the planned completion).

5.2 Traffic Forecast

5.2.1 Annual Growth Rate method is applied to estimate 2033 traffic forecast from the 2023 observed traffic flows. The annual growth rate is made reference to the planning data in 2019-based Territorial Population and Employment Data Matrix (TPEDM) which is available on Planning Department's website. **Table 5.1** shows the years 2019 and 2031 population planning data in Tuen Mun district.

Table 5.1 Planning Data of 2019-based TPEDM

Planning Data District	2019			2031			Annual Growth Rate
	Population	Employment	Total	Population	Employment	Total	
Tuen Mun	476,500	130,800	607,300	606,850	150,750	757,600	+1.86%

5.2.1 As shown in **Table 5.1**, the average growth rate as derived from TPEDM is about 1.86%.

5.2.2 Apart from the TPEDM, the Projections of Population Distribution in Tuen Mun district for year 2023-2031 as published by Planning Department is also reviewed. It was found that the average growth rate is about 1.46% from 2023 - 2031 and is summarized in **Table 5.2**.

Table 5.2 Projections of Population Distribution

District Council District	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Tuen Mun	506900	508800	539300	541600	554900	557600	573800	577700	577500	577300	586200
Average Traffic Growth Rate from 20121 to 2031 = 1.46% per annum											

5.2.3 Other than TPEDM and the Projections of Population Distribution from Planning Department, the historical traffic data from Annual Traffic Census (ATC) is also reviewed. The annual average daily traffic (AADT) flow and annual growths of the nearby counting stations from 2016 to 2023 as presented in the ATC reports published annually by Transport Department are summarized in **Table 5.3**.

Table 5.3 Historical Annual Daily Traffic (AADT) Flows from ATC

ATC Stn. No.	Road Name	A.A.D.T. (veh/day)							
		2016	2017	2018	2019	2020	2021	2022	2023
5012	Tuen Mun Road Expressway	123,250	129,590	129,160	133,340	127,640	127,800	121,740	124,650
5855	Tuen Mun Road Expressway	111,100	110,150	113,660	118,180	112,500	110,960	103,070	109,520
5857	Tuen Mun Road - Siu Lam	11,610	9,960	10,210	10,140	9,720	10,780	12,270	12,560
5657	Castle Peak Rd - Sham Tseng, Tsing Lung Tau & Tai Lam	12,350	12,160	12,460	12,370	12,830	13,550	13,140	13,440
6052	Castle Peak Rd - So Kwun Wat & Castle Peak Bay	19,490	19,600	20,270	20,130	19,300	20,070	20,540	22,250
Total		277,800	281,460	285,760	294,160	281,990	283,160	270,760	282,420
Average Traffic Growth Rate from 2016 to 2023 = 0.24% per annum									

5.2.4 As shown in **Table 5.3**, the average growth rate from 2016 to 2023 is about **0.24%** per annum according to the historical ATC data.

5.2.5 The Year 2019 Base District Traffic Models (BDTM) published by Transport Department was also referred to determine the traffic growth rates in Tuen Mun area. The projected traffic flows at the surrounding road network are summarized in **Table 5.4**.

Table 5.4 Traffic Flows Extracted from 2019-Based District Traffic Model

Road Links	AM		PM	
	2019	2031	2019	2031
Tai Lam Chung Road	141	775	127	665
Castle Peak Road – Tai Lam	482	1,224	1,033	1,781
Tuen Mun Road	10,622	11,504	10,586	11,076
Total	**11,245**	**13,503**	**11,746**	**13,522**
Growth Rates	**1.54%**		**1.18%**	

5.2.6 The projected traffic flows in BDTM revealed that the growth rate of traffic rate in the local road network would be increased by 1.54% and 1.18% per annum for AM and PM peak respectively.

Adopted Traffic Growth Factor

5.2.7 Based on the results given by TPEDM estimates and AADT historical data as well as BDTM, an annual growth rate of **1.86%** per annum is adopted for projecting the peak hour traffic flows from 2023 to 2033 for conservative assessments.

5.3 Planned / Potential Future Developments

5.3.1 It is noted that there are several planned / potential developments along Castle Peak Road – Tai Lam and in So Kwun Wat, and their locations are listed in **Figure 5.1** and **Table 5.5** respectively.

Table 5.5 Planned / Potential Future Development in the Vicinity

Ref.	Lot	Proposed Use	No. of Flats	Estimated Average Flat Size (sq.m)
1(1)	TMTL518	Private Housing	928	50
2(1)	TMTL546	Private Housing	1,586	60
3(2)	TMTL561	Private Housing	2,708	60
4(3)	TMTL463	Private Housing	800	60
5	TMTL520	Private Housing	693	60
6(4)	TMTL496	Private Housing	1326	60
7(5)	Light Public Housing at Lok On Pai	Public Housing	4200	25

Notes:
(1) Development parameters extracted from RNTPC Paper No. 9/17
(2) According to Amendment item A in RNTPC Paper No. 2/15 "Proposed Amendments to the Approved So Kwun Wat OZP No. S/TM-SKM/11" issued by Planning Department. The average flat sizes are extracted from RNTPC Paper No. 2/15
(3) Development parameters extracted from OZP
(4) Development parameters extracted from OZP
(5) Development parameters extracted from LC Paper No. CB(1)1123/2023(02)

5.3.2 Estimates of traffic generation and attraction volume are derived from the trip rates as stipulated in Annex D of Transport Planning and Design Manual (TPDM) Volume 1 Chapter 3 published by Transport Department. **Table 5.6** summarizes the estimated trip generations of the planned / potential future developments as listed in **Table 5.5**.

Table 5.6 Estimated Traffic Flows for Planned / Potential Future Developments in the Vicinity

Ref.		Estimated Trips (pcu/hr)			
		AM Peak		PM Peak	
		Generation	Attraction	Generation	Attraction
1 - TMTL518	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	67	39	27	34
2 - TMTL546	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	114	67	45	59
3 - TMTL561	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	194	115	77	100
4 – TMTL463	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	57	34	23	30
5 – TMTL520	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	50	29	20	26
6 – TMTL496	Adopted Trip Rate (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Flow (pcu/hr)	95	56	38	49
7 – Light Public Housing at Lok On Pai	Adopted Trip Rate (pcu/hr/flat) (1)	0.0071	0.0046	0.0112	0.014
	Estimated Flow (pcu/hr)	30	19	47	59

Notes:
(1) The adopted trip rates are referred to the Transport and Traffic Impact Assessment Report for "Proposed Light Public Housing Development and Associated Filling / Excavation of Land on a 3 Years Temporary Basis at Various Lots in D.D. 104 and Adjoining Government Land, Yau Pok Road, Yuen Long"

5.4 Trip Generation of the Proposed Development

5.4.1 Based on the development schedule as mentioned in **Section 2**, the adopted trip rate extracted from Annex D of TPDM Volume 1 Chapter 3 and the development trip generation and attraction for Approved Scheme is summarized in **Table 5.7**.

Table 5.7 Estimated Traffic Flows for the Proposed Development (Approved Scheme)

Application Site		Estimated Trips (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Site (a) – 1,560 flats	Adopted Trip Rates(1) (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Trips (pcu/hr)	113	67	45	58
Site (b) – 80 village house	Adopted Trip Rates(2) (pcu/hr/flat)	0.3012	0.2189	0.2235	0.3234
	Estimated Trips (pcu/hr)	25	18	18	26
Total (pcu/hr)		**138**	**85**	**63**	**84**

Note:
(1) TPDM mean trip rates for Private Housing: High-Density /R(A) with Ave. Flat Size of 60m^2
(2) TPDM mean trip rates for Private Housing: Low-Density /R(C) with Ave. Flat Size of 240m^2

Year 2033 Background Traffic Flows

5.4.2 The 2033 background traffic flows (without approved/proposed development) are derived by applying a growth rate of 1.86% p.a. on the 2023 observed flows upto the design year 2033 and superimpose the traffic flow as derived in **Table 5.6**. The year 2033 background traffic flows are presented in **Figure 5.2**.

Year 2033 Reference Traffic Flows

5.4.3 The 2033 reference traffic flows are derived by superimposing the potential traffic as induced by the Approved Scheme in **Table 5.7** onto the traffic flows in **Figure 5.2**.

5.4.4 The year 2033 reference traffic flows are presented in **Figure 5.3**.

Trip Generation of the Proposed Development in Design Scenario

5.4.5 In the design scenario of year 2033, it is adopted that Site (a) will increase the number of flats to 2,670 flats in accordance with the development schedule as listed in **Table 2.1**.

5.4.6 The estimated potential traffic generation and attraction of the Proposed Development in the Design Scenario of 2033 are shown in **Table 5.8**.

Table 5.8 Estimated Traffic Flows for the Proposed Development for Proposed Scheme

Application Site		Estimated Trips (pcu/hr)			
		AM Peak		PM Peak	
		Gen.	Att.	Gen.	Att.
Site (a) – 2,670 flats	Adopted Trip Rates(1) (pcu/hr/flat)	0.0718	0.0425	0.0286	0.037
	Estimated Trips (pcu/hr)	192	114	77	99
Site (b) – 80 village house	Adopted Trip Rates(2) (pcu/hr/flat)	0.3012	0.2189	0.2235	0.3234
	Estimated Trips (pcu/hr)	25	18	18	26
Retail – 2000m^2 GFA	Adopted Trip Rates(3) (pcu/hr/100m^2 GFA)	0.2296	0.2434	0.3100	0.3563
	Estimated Trips (pcu/hr)	5	5	7	8
Public Transport	Adopted Trip Rates(4)	-	-	-	-
	Estimated Trips (pcu/hr)	36	36	36	36
Total (pcu/hr)		**258**	**173**	**138**	**169**

Note:
(1) TPDM mean trip rates for Private Housing: High-Density /R(A) with Ave. Flat Size of 60m^2
(2) TPDM mean trip rates for Private Housing: Low-Density /R(C) with Ave. Flat Size of 240m^2
(3) TPDM mean trip rates for Retail / Shopping Complex (Office + Retail)
(4) Details calculation of trip generate / attraction by public transport refers to TIA Section 4.2 paragraph 4.2.2

5.4.7 As shown in **Table 5.8**, it is estimated that the Proposed Scheme would potentially generate 258 pcu/hr and attract 173 pcu/hr in the morning peak hour, and generate about 138 pcu/hr and attract 169 pcu/hr in the evening peak hour.

5.4.8 As compared with the Reference Scenario, the Proposed Development with domestic plot ratio of 2.107 would induce additional 2-way traffic 208 pcu/hr and 160 pcu/hr in morning and evening peak hour respectively. The comparison of development traffic of the application site in Reference and Design Scenarios are shown in **Table 5.9**.

Table 5.9 Comparison of Development Traffic in Reference and Design Scenarios

Application Site	Estimated Trips (pcu/hr)			
	AM Peak		PM Peak	
	Gen.	Att.	Gen.	Att.
Reference Scenario (a)	138	85	63	84
Design Scenario (b)	258	173	138	169
Net Difference = (b) – (a)	**+120**	**+88**	**+75**	**+85**
Total Two-way Traffic (pcu/hr)	**+208**		**+160**	

5.4.9 In addition to the additional development traffic induced by the Proposed Development, the potential increases in bus traffic included by at the Proposed Development are also taken into account.

5.4.10 As discussed in **Section 4**, it is proposed to introduce 14 trips of bus services during the peak hours to cater the public transport demand as induced by the Proposed

Development.

Year 2033 Design Traffic Flows

5.4.11 The year 2033 design flows are derived by superimposing (i) the net increases in development traffic of the Proposed Development as presented in **Table 5.9**; and (ii) the additional bus trips upon the available of the proposed transport interchange in the Application Site onto the year 2033 reference traffic flows (**Figure 5.3**).

5.4.12 The development traffic flows as well as the year 2033 design traffic flows are presented in **Figure 5.4** and **5.5** respectively.

6 TRAFFIC IMPACT ASSESSMENT

6.1 Junction Capacity Assessment

6.1.1 The operational performance of 6 critical junctions based on year 2033 traffic forecasts as mentioned in **Section 5** have been assessed.

6.1.2 A junction improvement at Junction of Castle Peak Road – Tai Lam / Tai Lam Chung Road (J5) is committed by the applicant under approved planning application (No. A/TM-SKW/26) as shown in **Figure 6.1**. As presented in **Figure 6.1**, an additional flare length would be implemented at Castle Peak Road (Tai Lam) while a pedestrian stagger crossing would be introduced at Tai Lam Chung Road westbound. This committed junction improvement layout will be taken into account for the junction capacity analysis.

6.1.3 The results of junction capacity assessment are summarized in **Table 6.1**.

Table 6.1 Junction Performance in 2033

Ref.	Junction	Indicator(1)	2033					
			Background Case (without Approved Scheme)		Reference Case (with Approved Scheme)		Design Case (with Proposed Scheme)	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
J1	Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam	DFC	0.65	0.40	0.79	0.49	0.80	0.51
J2	Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau	DFC	0.32	0.14	0.46	0.17	0.54	0.19
J3	Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road	RC	>100%	>100%	>100%	>100%	>100%	>100%
J4	Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road	RC	>100%	90%	>100%	78%	95%	69%
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road(2) (3)	RC	62%	92%	10%	42%	**-15%**	14%
J6	Tai Lam Chung Road / Luen Hong Lane(4)	DFC	0.04	0.05	0.22	0.16	0.39	0.29

Notes:
(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout
(2) Committed junction improvement layout refers **Figure 6.1**.
(3) Cycle time of 90s to be adopted
(4) The road layout of approved Road Gazette 2728 refers to **Annex A**

6.1.4 As shown in **Table 6.1**, all junctions will be operating within capacity in 2033 except J5.

6.2 Further Junction Improvement for Junction of Castle Peak Road – Tai Lam / Tai Lam Chung Road (J5)

6.2.1 To enhance junction capacity of J5, a left turn lane at Castle Peak Road – Tai Lam southbound will be proposed. Also, according to the latest requirement as stipulated in TPDM, the use of staggered crossing should be avoided. Therefore, the straight crossing at Tai Lam Chung Road will be adopted in the junction improvement scheme as illustrated in **Figure 6.2**. The junction performance is reassessed by taking into consideration the further junction improvement and the junction would operate with sufficient capacity as shown in **Table 6.2**.

Table 6.2 2033 Junction Performance with Further Improvement Scheme

Ref.	Junction	Indicator*	2033 Design Case	
			AM Peak	PM Peak
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road	RC	24%	59%

Notes:
(1) RC = Reserve Capacity for signal junction
(2) Cycle time of 90s to be adopted for design purpose

6.2.2 Apart from the junction assessments, queue length analysis for J5 with further improvement is also conducted for Design case of 2033. The analysis results are summarized in **Table 6.5**.

Table 6.3 Queue Length Analysis Result of J5 with Further Junction Improvement

Critical Arm	Available Length for Queuing (m)	2033 Design Case	
		AM Peak	PM Peak
Castle Peak Road – Tai Lam SB	42m(1) / 280m(2)	30m(1) / 36m(2)	18m(1) / 24m(2)
Castle Peak Road – Tai Lam NB	86m	12m	18m
Tai Lam Chung Road WB	95m	54m	36m

Notes:
(1) Traffic queue for flared lane (Castle Peak Road – Tai Lam straight and right turn traffic)
(2) Traffic queue for nearside lane (Castle Peak Road – Tai Lam left turn traffic)

6.3 Road Link Capacity Assessments

6.3.1 Road link capacity assessments are also conducted to assess the V/C ratio of the key road links in both the Reference and Design Cases of year 2033. The assessment results are summarized in **Table 6.6**.

Table 6.4 Road Link Capacity Assessment in Design Year 2033

Ref.(1)	Road Link	Direction	Link Capacity(2) (pcu/hr)	Year 2033 Traffic Flows (pcu/hr)				Flow/Capacity Ratio (V/C Ratio)			
				Reference Case		Design Case		Reference Case		Design Case	
				AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Tuen Mun Road	EB	5,640	5,245	3,730	5,265	3,745	0.93	0.66	0.93	0.66
L2		WB	5,640	3,385	5,125	3,415	5,155	0.60	0.91	0.61	0.91
L3	Castle Peak Road – Tai Lam	EB	1,320	990	1,045	1,050	1,110	0.75	0.79	0.80	0.84
L4		WB	1,320	300	260	365	300	0.23	0.20	0.28	0.23
L5	Tai Lam Chung Road	NB	1,020	295	210	380	290	0.29	0.21	0.37	0.28
L6		SB	1,020	365	290	485	360	0.36	0.28	0.48	0.35
L7	Luen Hong Lane	EB	1,020	110	110	200	195	0.11	0.11	0.20	0.19
L8		WB	1,020	165	95	290	175	0.16	0.09	0.28	0.17
L9	Castle Peak Road – Tai Lam	EB	3,600	2,085	1,030	2,105	1,050	0.58	0.29	0.58	0.29
L10		WB	3,600	725	1,275	745	1,295	0.20	0.35	0.21	0.36
L11	Castle	EB	3,600	1,580	390	1,595	395	0.44	0.11	0.44	0.11

L12	Peak Road – Tai Lam	WB	3,600	270	395	295	420	0.08	0.11	0.08	0.12
L13	Tuen Mun Road	EB	7,560	5,970	4,245	5,990	4,265	0.79	0.56	0.79	0.56
L14		WB	5,640	3,385	5,125	3,415	5,155	0.60	0.91	0.61	0.91
L15	Slip Road of Tuen Mun Road	EB	1,320	810	415	880	445	0.61	0.31	0.67	0.34
L16		WB	1,320	665	910	695	940	0.50	0.69	0.53	0.71
L17	Tuen Mun Road	WB	5,640	3,525	4,625	3,595	4,660	0.63	0.82	0.64	0.83
L18	Slip Road of Tuen Mun Road	EB	1,320	340	700	340	700	0.26	0.53	0.26	0.53

Note:
(1) Refer to **Figure 3.1**
(2) Derived with reference to Table 2.4.1.1 in TPDM Volume 2 – Chapter 2.4

6.3.2 The assessment results presented that Tuen Mun Road will be operating at capacity during the peak hours. However, the results reflected the effects on V/C ratios of the road links due to the Proposed Scheme is negligible. It should also be noted that an investigation study on Route 11 (section between Yuen Long and North Lantau) had commenced 2023 with a target to commissioning this major road by 2033. Subsequent to the commissioning of Route 11, the V/C ratio of the concerned road link are expected to improve.

6.3.3 Apart from Tuen Mun Road, all other road links will be operating with adequate capacities in both Reference and Design Case.

6.4 Pedestrian Assessment

Existing Pedestrian Condition

6.4.1 To review the existing pedestrian situation, pedestrian head count surveys have been conducted at the footpath sections in the vicinity of the subject site on 17 January 2025 during AM and PM peak period. The observed AM and PM peak hour fall within 8:10am to 9:10am and 5:10pm to 6:10pm respectively. The observed pedestrian flows are shown in **Figure 6.3**.

6.4.2 The footpath sections are assessed by the observed peak pedestrian flows with reference to the criteria of Level-Of-Service (LOS) from HCM 2000 as exhibited in TPDM. The LOS assessment results are summarized in **Table 6.7**.

Table 6.5 Existing Footpath Operation Performance

Location[1]	Clear Width (m)	Effective Width[2] (m) (a)	Observed 2-way Pedestrian (Ped/hr) (b)		Level-of-Services[3] (c) = (b) / (a) / 60mins	
			AM	PM	AM	PM
FP1	1.6	0.6	10	20	A	A
FP2	2.0	1.0	40	125	A	A
FP3	3.6	2.6	45	120	A	A
FP4	2.7	1.7	30	95	A	A

Note:
(1) Refer to **Figure 6.3**
(2) Effective width = Clear width – 0.5m dead width on both sides.
(3) Based on the criteria of LOS from HCM 2000 as exhibited in TPDM. In general, LOS A & B provide a good walking environment; LOS C & D are acceptable values; and LOS E & F reflect the design volume has approached or over the limit of walking capacity.

6.4.3 As shown in **Table 6.7**, it is indicated that the footpath sections in the vicinity of the subject site are currently operating at acceptable LOS during peak hours.

Future Pedestrian Condition

6.4.4 As discussed in **Section 4**, a transport interchange will be provided within the Proposed Development to cope with the public transport demand induced by the subject site. It is anticipated that the proposed transport interchange would serve most of the public transport demand to various destinations via Tuen Mun Bus-Bus interchange.

6.4.5 However, it is understood that the future public transport proposal as discussed in **Section 4.2** is still under reviewed by the relevant government departments as well as local stakeholders. To review the future pedestrian condition surrounding the Proposed Development, it is assumed that all the future public transport demand as derived in **Table 4.1** would use the Tai Lam Chung Bus Terminus to Tuen Mun BBI for conservative assessments.

6.4.6 Therefore, a set of future pedestrian flows on the key routes to Tai Lam Chung Bus Terminus in design year 2033 are derived by applying a growth rate of 1.86% p.a. (refers to **Section 5.2**) onto the observed pedestrian flows (**Figure 6.3**) upto the design year 2033 and superimposing the potential future public demand induced by the Proposed Development as derived in **Table 4.1** with anticipated pedestrian routing as demonstrated in **Figure 6.4**. The future year 2033 pedestrian flows are shown in **Figure 6.5.**

6.4.7 The LOS assessments for design year 2033 pedestrian flows are conducted, and the results are summarized in **Table 6.8**.

Table 6.6 2033 Design Pedestrian Assessment Results

Location(1)	Clear Width (m)	Effective Width(2) (m) (a)	Observed 2-way Pedestrian (Ped/hr) (b)		Level-of-Services(3) (c) = (b) / (a) / 60mins	
			AM	PM	AM	PM
FP1	1.6	0.6	145	160	A	A
FP2	2.0	1.0	1,115	1,215	B	B
FP3	3.6	2.6	1,255	1,345	A	A
FP4(4)	2.0	1.0	1,240	1,315	B	B

Note:
(1) Refer to **Figure 6.5**
(2) Effective width = Clear width – 0.5m dead width on both sides.
(3) Based on the criteria of LOS from HCM 2000 as exhibited in TPDM. In general, LOS A & B provide a good walking environment; LOS C & D are acceptable values; and LOS E & F reflect the design volume has approached or over the limit of walking capacity.
(4) The road layout of approved Road Gazette 2728 refers to **Annex A**

6.4.8 The LOS assessment results suggested that all the footpath sections will still be operating at acceptable LOS in design year 2033.

7 TRAFFIC IMPACT ASSESSMENT FOR SENSITIVITY TEST

7.1 Traffic Forecast for Sensitivity Test

7.1.1 To ensure a comprehensive review of the TIA report, a traffic model is carried out as a sensitivity test for traffic forecasting in this study.

7.1.2 For the projection of background traffic flows in Area of Influence, an in-house 2-tier modelling approach (Strategic Transport Model (STM) and Local Area Traffic Model (LATM)) have been adopted. Based on the planning data published on the website of Planning Department, together with other information (such as population distribution and employment type from Census) available in public domain, a simplified Strategic Transport Model (STM) was developed for cordoning board vehicle trip matrices for local area traffic modelling.

7.1.3 For the Local Area Traffic Model (LATM), the Base District Traffic Model (BDTM) "NTW1" covering Tai Lam Chung Area has been adopted as the base traffic model for this study.

7.1.4 The LATM has been validated against the 2025 traffic data in the area of influence to ensure that the base year LATM could satisfactorily replicate the base year traffic patterns and volumes before the model is used to produce future years traffic forecasts.

7.1.5 The STM cordoned matrices were fed into the LATM for projecting the traffic flows from year 2025 to year 2033. In addition, the trip ends of traffic zones were adjusted and controlled by the following parameters:

- The trip generations of the planned / potential future developments (listed in **Table 5.5**);
- Estimated traffic flows for the Proposed Development in Approved Scheme (listed in **Table 5.7**)

7.1.6 The year 2033 reference traffic flows for sensitivity test are shown in **Figure 7.1**.

7.1.7 The year 2033 design flows for sensitivity test are derived by superimposing (i) the net increases in development traffic of the Proposed Development as listed in Table 5.9; and (ii) the additional bus trips onto the year 2033 reference traffic flows for sensitivity (**Figure 7.1**). The year 2033 design traffic flows for sensitivity test are shown in **Figure 7.2**.

7.2 Junction Capacity Assessment under Sensitivity Test

7.2.1 The operational performances of the identified critical junctions are assessed with the derived year 2033 traffic flows for sensitivity test, and the assessment results are summarized in **Table 7.1**. The junction calculation sheets are shown in **Appendix B**.

Table 7.1 Sensitivity Test Junction Performance in 2033

Ref.	Junction	Indicator(1)	2033			
			Sensitivity Test (Reference Case)		Sensitivity Test (Design Case)	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam	DFC	0.81	0.68	0.82	0.71
J2	Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau	DFC	0.51	0.25	0.58	0.26
J3	Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road	RC	>100%	63%	>100%	60%
J4	Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road	RC	>100%	>100%	>100%	>100%
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road(2) (3)	RC	41%	80%	20%	43%
J6	Tai Lam Chung Road / Luen Hong Lane(4)	DFC	0.22	0.16	0.39	0.28

Notes:
(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout
(2) Proposed junction improvement layout refers **Figure 6.2**.
(3) Cycle time of 90s to be adopted
(4) The road layout of approved Road Gazette 2728 refers to **Annex A**

7.2.2 The assessments in **Table 7.1** have reflected that all junctions will be still operated within capacity under the sensitivity test scenario.

7.2.3 Apart from the junction assessments, queue length analysis for J5 with further improvement is also conducted for Sensitivity Test of 2033. The analysis results are summarized in **Table 7.2**.

Table 7.2 Queue Length Analysis Result of J5 under Sensitivity Test

Critical Arm	Available Length for Queuing (m)	2033 Sensitivity Test	
		AM Peak	PM Peak
Castle Peak Road – Tai Lam SB	42m(1) / 280m(2)	30m(1) / 36m(2)	30m(1) / 55m(2)
Castle Peak Road – Tai Lam NB	86m	12m	18m
Tai Lam Chung Road WB	95m	54m	30m

Notes:
(3) Traffic queue for flared lane (Castle Peak Road – Tai Lam straight and right turn traffic)
(4) Traffic queue for nearside lane (Castle Peak Road – Tai Lam left turn traffic)

8 REVIEW ON TRAFFIC IMPACT DURING CONSTRUCTION STAGE

8.1 Construction Year

8.1.1 Considering the completion of the Proposed Development is scheduled in 2030, the traffic impact induced by the construction traffic in year 2030 is assessed for conservative approach.

8.2 Traffic Forecast for Construction Stage

Growth Factor

8.2.1 As discussed in **Section 5**, an annual growth factor of 1.86% per annum as derived in **Table 5.1** is applied onto the traffic flows as observed in year 2023 to project the peak hour traffic flows from year 2023 to 2030.

Anticipated Construction Traffic

8.2.2 Taking into account of the site area of the Proposed Development, it is preliminary estimated that the construction traffic to/from the Application Site would be approximately 30 pcu/hr. The anticipated peak hourly construction traffic demand are summarized in **Table 8.1**.

Table 8.1 Anticipated Peak Hourly Construction Traffic

Anticipated Peak Hour Construction Traffic	
Generation	**Attraction**
30 pcu/hr	30 pcu/hr

8.2.3 The ingress and egress routes of the construction traffic are subject to approval of the Waste Management Plan and the future contactors/suppliers to be awarded. Nevertheless, it is assumed that construction trucks would mainly for delivery to/from Tuen Mun Area 38 fill bank.

8.2.4 The traffic forecasts are derived by applying a growth factor onto the observed background traffic flows and superimposing the traffic of the planned future development as listed in **Table 5.4** as well as the construction traffic as derived in **Table 8.1**. The future year 2030 traffic flows are presented in **Figure 8.1**.

8.3 Junction Assessments during Construction Stage

8.3.1 The performance of the road junctions are assessed with the derived 2030 traffic flows for the construction stage are summarized in **Table 8.2** respectively.

Table 8.2 Junction Performance in 2030 during Construction Stage

Ref.	Junction	Indicator(1)	2030 Construction Stage	
			AM Peak	PM Peak
J1	Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam	DFC	0.82	0.71
J2	Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau	DFC	0.93	0.27
J3	Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road	RC	>100%	60%
J4	Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road	RC	>100%	>100%
J5	Castle Peak Road – Tai Lam / Tai Lam Chung Road(2)	RC	54%	8%
J6	Tai Lam Chung Road / Luen Hong Lane(3)	DFC	0.39	0.29

Notes:
(1) RC = Reserve Capacity for signal junction; DFC = Design Flow / Capacity ratio for priority junction or roundabout
(2) Existing road layout refers to **Figure 3.6**
(3) Existing road layout refers to **Figure 3.7**

8.3.2 The assessment results in **Table 8.2** showed that the road junctions in the vicinity of the Proposed Development will be operating within capacities during the peak hours in year 2030 with the construction works at the subject site. The corresponding junction calculation sheets are attached in **Annex B**.

9 CONCLUSION

9.1 Summary

9.1.1 The Application Site covers various lots and adjacent Government land in DD 385, Tai Lam Chung, Tuen Mun, New Territories. The Site is bounded by Luen Hong Lane to the west with a development site area for private residential development of about 46,493m^2.

9.1.2 Compared to the Approved Scheme, the Applicant now proposed a higher domestic plot ratio of 2.107 which comprises of 2,670 nos. of residential units with an average flat size of about 40.6m^2.

9.1.3 The parking and loading/unloading facilities of the proposed development would be provided in accordance with the requirements as stipulated in the HKPSG.

9.1.4 In order to review the existing traffic condition, traffic count surveys were conducted at the following 6 identified critical junctions to investigate the traffic condition during commuting peak hours. At present, all the critical junctions are operating within capacity.

- Castle Peak Road – Tai Lam / Castle Peak Road – New Tai Lam (J1)
- Castle Peak Road – New Tai Lam / Castle Peak Road – Tsing Lung Tau (J2)
- Castle Peak Road – Tai Lam / Slip Road from Tuen Mun Road (J3)
- Castle Peak Road – Tai Lam / Slip Road to Tuen Mun Road (J4)
- Castle Peak Road – Tai Lam / Tai Lam Chung Road (J5)
- Tai Lam Chung Road / Luen Hong Lane (J6)

9.1.5 To serve the additional public transport demand as induced by the Proposed Development, additional bus trips will be introduced during the peak hours. Also, 3 nos. of bus layby and 4 nos. of GMB layby are proposed at proposed privately-operated transport interchange to cater for the potential transport demand arising from the proposed development.

9.1.6 By comparing the trip generation/ attractions of the proposed development under Approved Scheme and Proposed Scheme, the Proposed Scheme will induce additional 208 pcu/hr (two-way) during AM peak hour and 160 pcu/hr (two-way) during PM peak hour.

9.1.7 The proposed development is tentatively scheduled for completion in 2030. According to Guidelines and Requirements of TIA Studies, the TIA should assess at least 3 years after the planned completion of the Proposed Development. Hence, 2033 is adopted as the design year for this TIA.

9.1.8 In order to carry out traffic forecast and examine traffic impact due to the Proposed Development in year 2033, Annual Growth Rate method is applied to estimate the traffic forecast year 2033. The annual growth rate is made reference to 2019-based TPEDM, Projection of Population Distribution from Planning Department and the historical traffic data from ATC which is available on Transport Department's website. It is proposed to adopt an annual growth rate of 1.86% per annum for projecting the peak hour traffic flow from 2023 to 2033.

9.1.9 The 2033 reference traffic flows were derived based on the observed traffic demands and circulation pattern by adopting an appropriate growth rate with consideration of the planned developments within the vicinity and the anticipated trips generated by the Approved Scheme.

9.1.10 The additional trip due to the Proposed Scheme have been superimposed onto the anticipated 2033 reference traffic flows to produce 2033 design traffic flows.

9.1.11 Junction capacity assessment was conducted for both 2033 reference and design scenarios, taking into consideration the committed junction improvement at Junction of Castle Peak Road – Tai Lam / Tai Lam Chung Road (J5) under previously approved planning application and the approved gazette plan of Luen Hong Lane (J6). The results revealed that all junctions would be operating within capacity under the design case in 2033 except for J5. In light of this, further junction improvement scheme at J5 is formulated for improving the junction performance and will be carried out by the project proponent prior to the completion of the Proposed Development. With the said further junction improvement scheme, J5 would operate with sufficient capacity in 2033 design case. In addition, a traffic model as sensitivity test for comprehensive review is also conducted in this study, and the test results indicated that the key road junctions in the vicinity of the Proposed Development would still be operate within their capacity in year 2033 under the sensitivity test scenario.

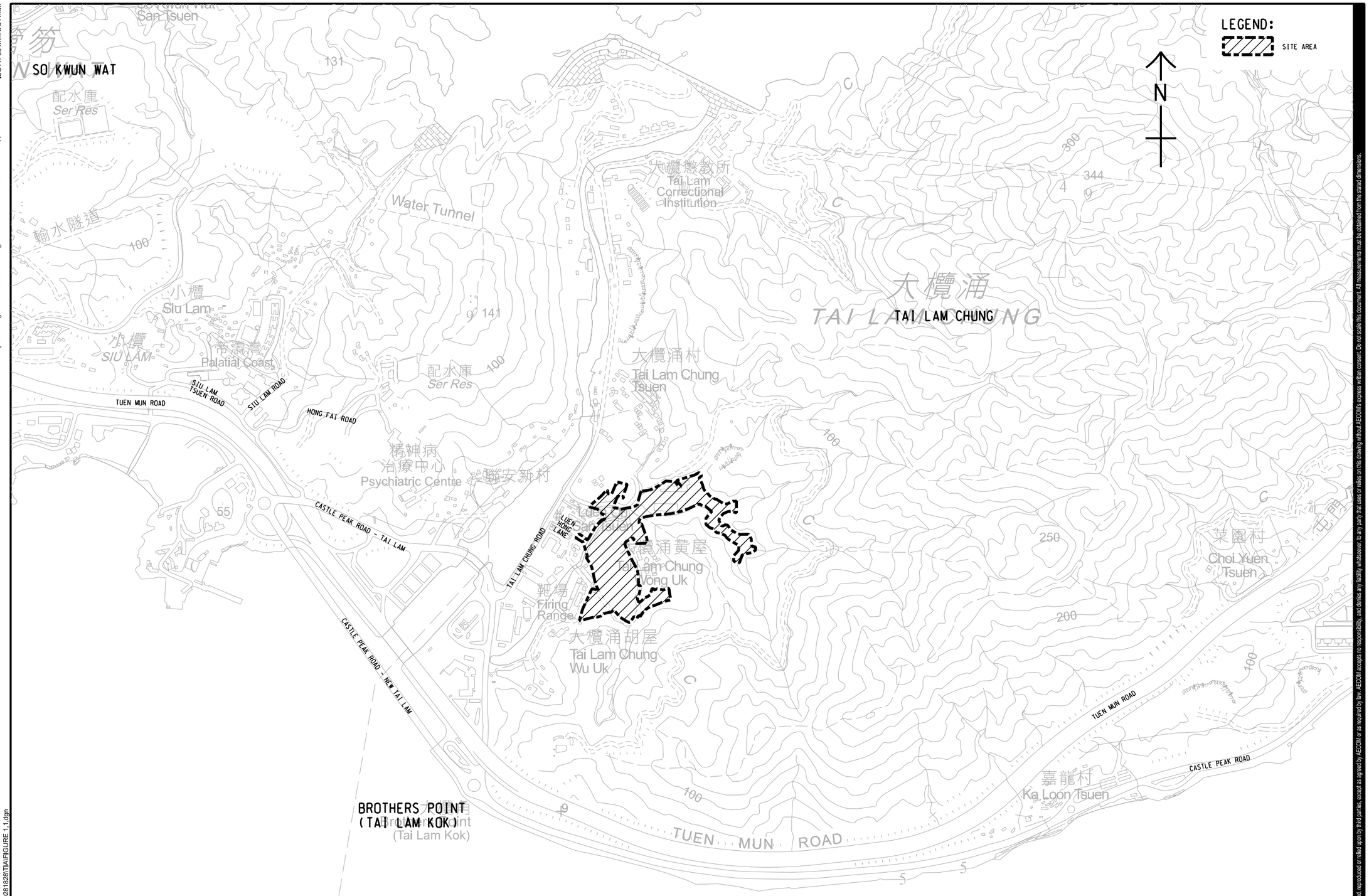
9.1.12 The performance of footpath surrounding the subject site will also operate in adequate capacity together with the proposed public transport demand induced by the Proposed Development.

9.1.13 The traffic impact during the construction stage is also reviewed. Taking into consideration the site area of the subject site, it is preliminary estimated that the construction to/from the Application Site would be approximately 30 pcu/hr, and is assumed that the construction traffic would be mainly for delivery to/from Tuen Mun Area 38 fill bank subject to further construction arrangement by the future contractor. The results revealed that all junctions will be operating within capacity in year 2030 (i.e. completion year of the proposed development).

9.2 Conclusion

9.2.1 In light of the findings of this TIA, it is concluded that there is no insurmountable traffic impact imposed onto the local road network due to the Proposed Development. With the proposed mitigation measures in place, the Proposed Development is technically feasible in traffic terms.

Figure



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 8/4/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 1.1.dgn

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 1 : 10000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
SITE LOCATION

SHEET NUMBER
圖紙編號
FIGURE 1.1

ISO A1 594mm x 841mm

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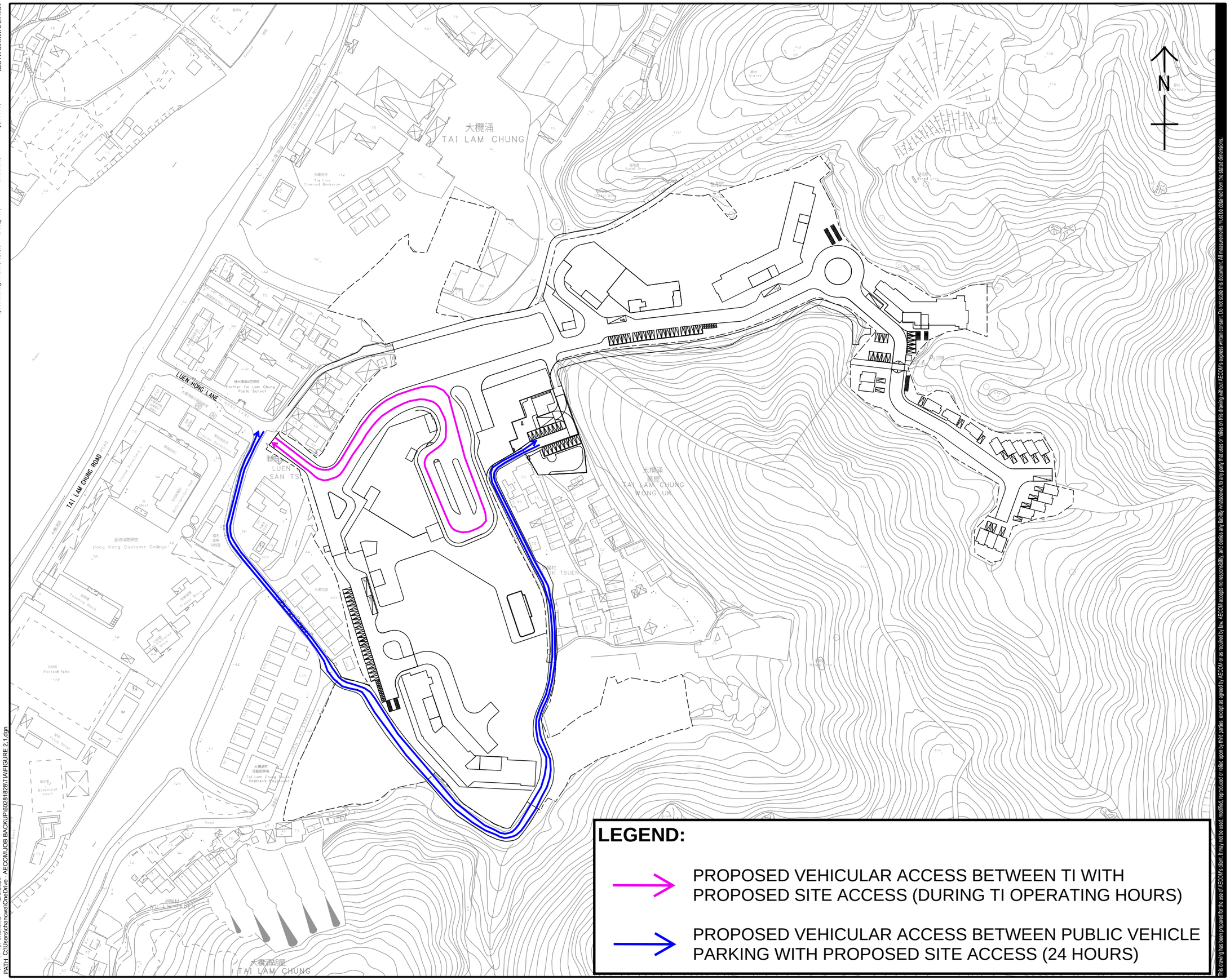

LEGEND:

PROPOSED VEHICULAR ACCESS BETWEEN TI WITH PROPOSED SITE ACCESS (DURING TI OPERATING HOURS)

PROPOSED VEHICULAR ACCESS BETWEEN PUBLIC VEHICLE PARKING WITH PROPOSED SITE ACCESS (24 HOURS)

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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SCALE 比例 — **DIMENSION UNIT** 尺寸單位

A3 1 : 2000

KEY PLAN
索引圖

PROJECT NO. 項目編號 — **CONTRACT NO.** 合約編號

60281828

SHEET TITLE
圖紙名稱

INDICATIVE MASTER LAYOUT PLAN

SHEET NUMBER
圖紙編號

FIGURE 2.1

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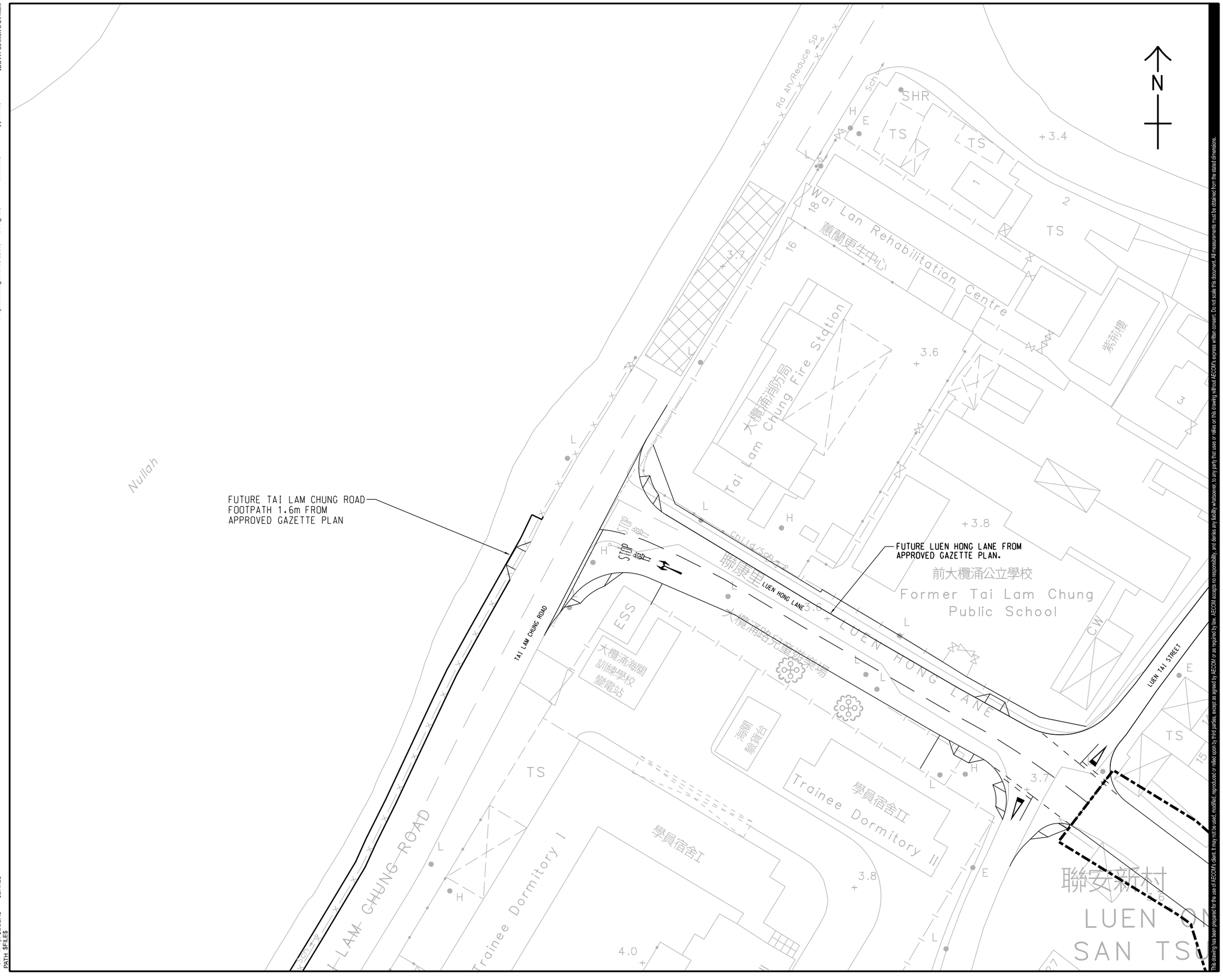
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 2.1.dgn

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



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PATH: $FILE$

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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SCALE 比例 — **DIMENSION UNIT** 尺寸單位

A3 1 : 500

KEY PLAN
索引圖

PROJECT NO. 項目編號 — **CONTRACT NO.** 合約編號

60281828

SHEET TITLE
圖紙名稱

VEHICULAR ACCESS ARRANGEMENT

SHEET NUMBER
圖紙編號

FIGURE 2.2

ISO A1 594mm x 841mm

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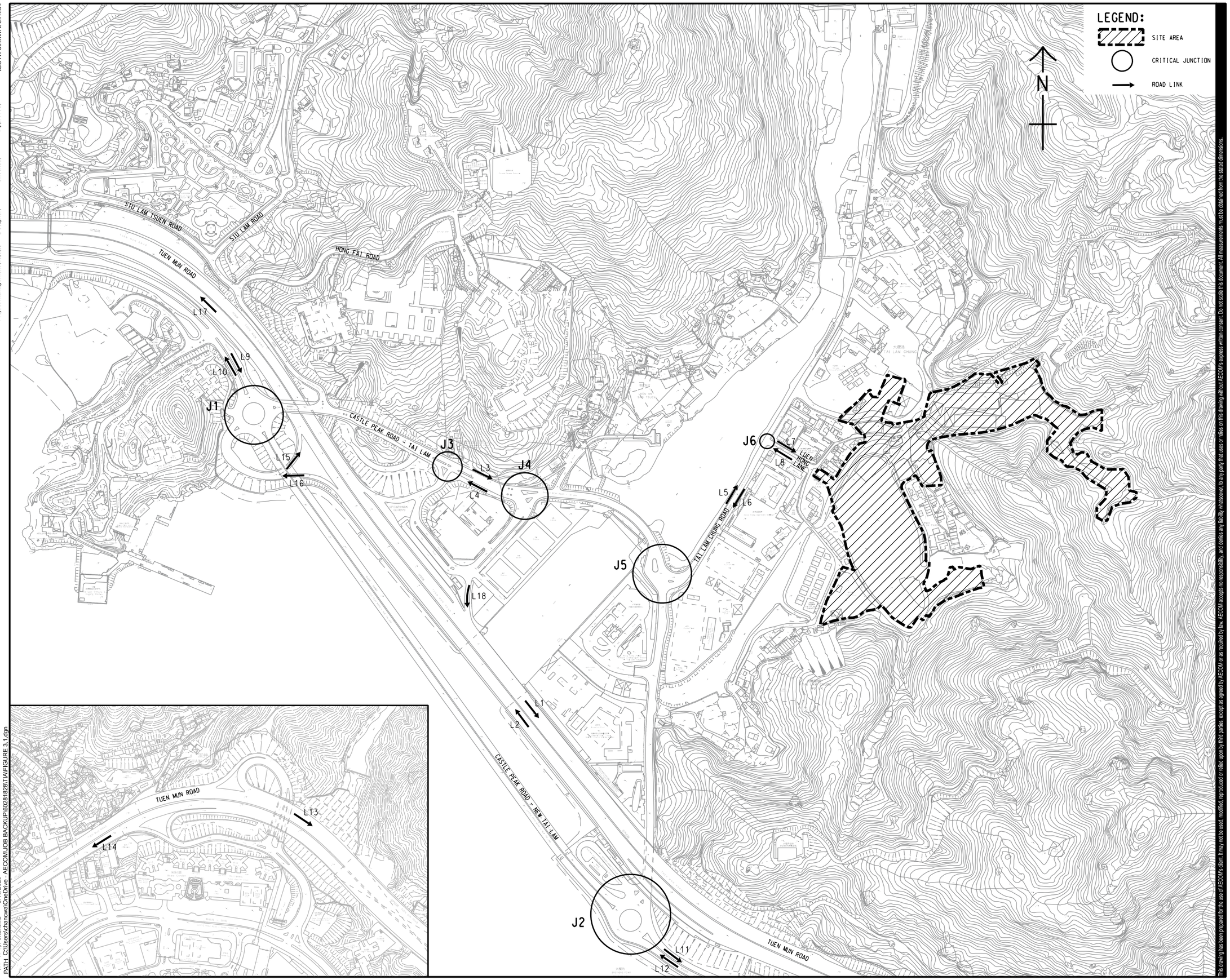

Plot File by: chancwa 9/10/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 3.1.dgn

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PROJECT
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階段

SCALE 比例
A3 1 : 5000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
CRITICAL JUNCTIONS AND ROAD LINK

SHEET NUMBER
圖紙編號
FIGURE 3.1

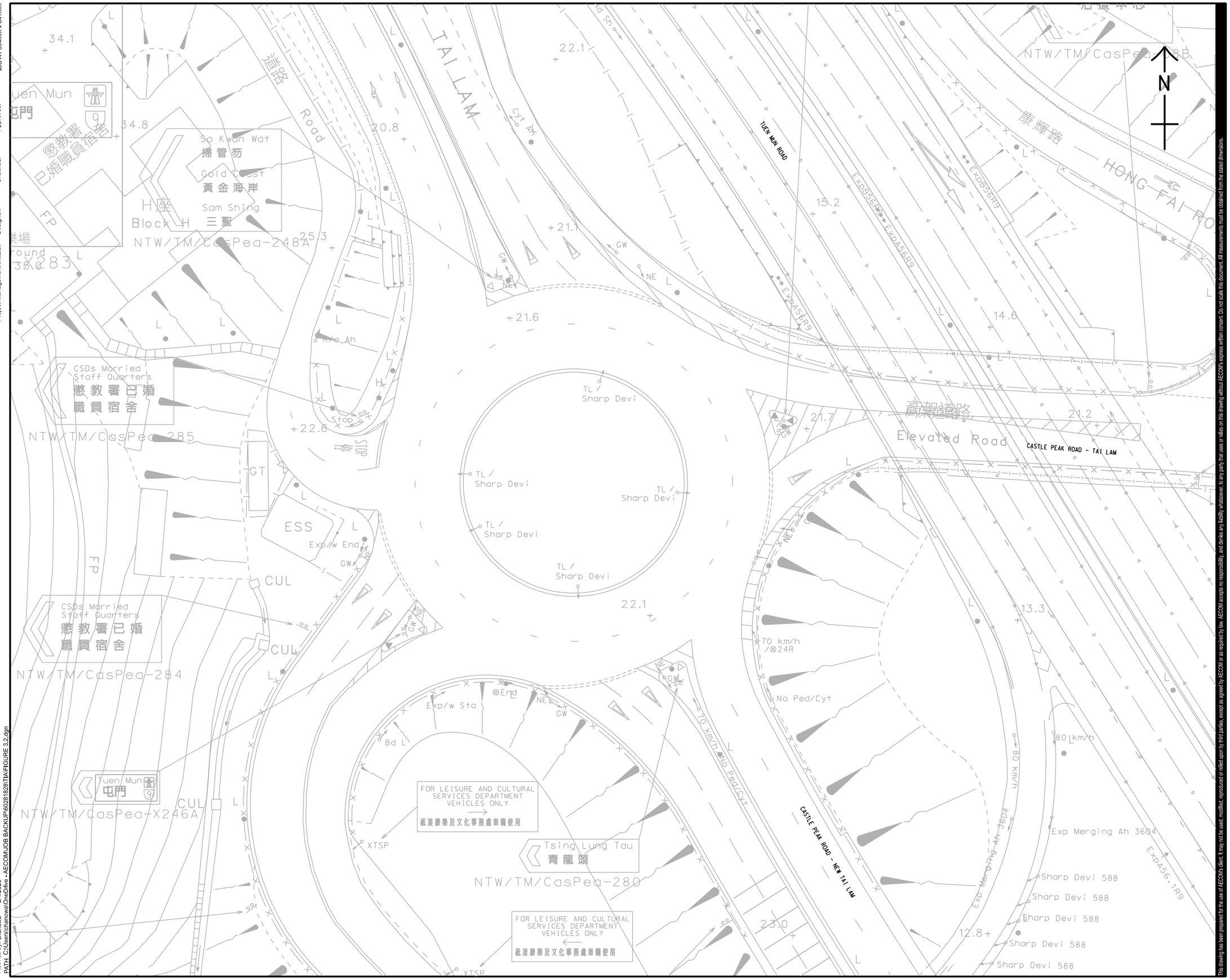
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD – TAI LAM / CASTLE PEAK ROAD – NEW TAI LAM (J1)

SHEET NUMBER
圖紙編號

FIGURE 3.2

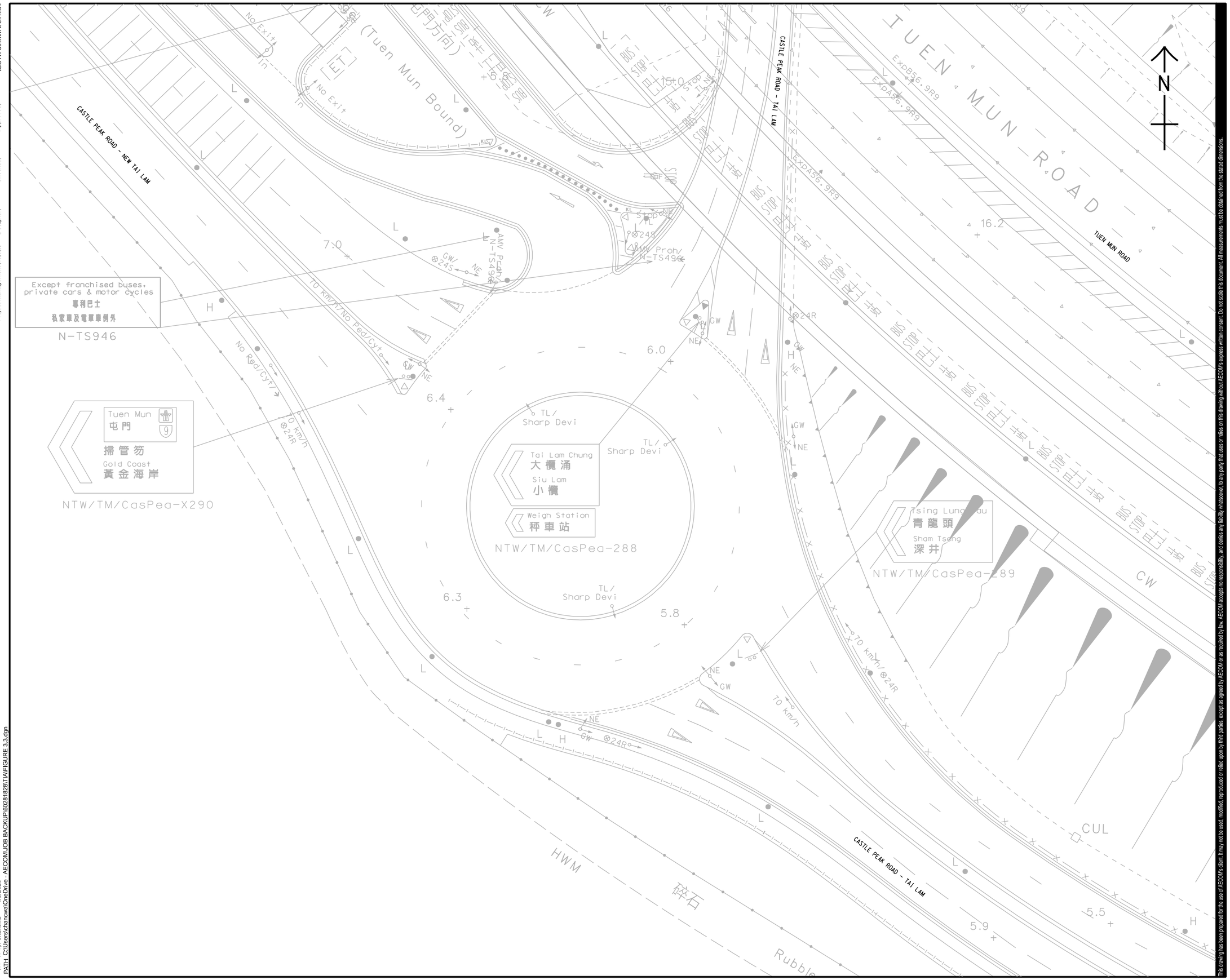
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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狀況

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

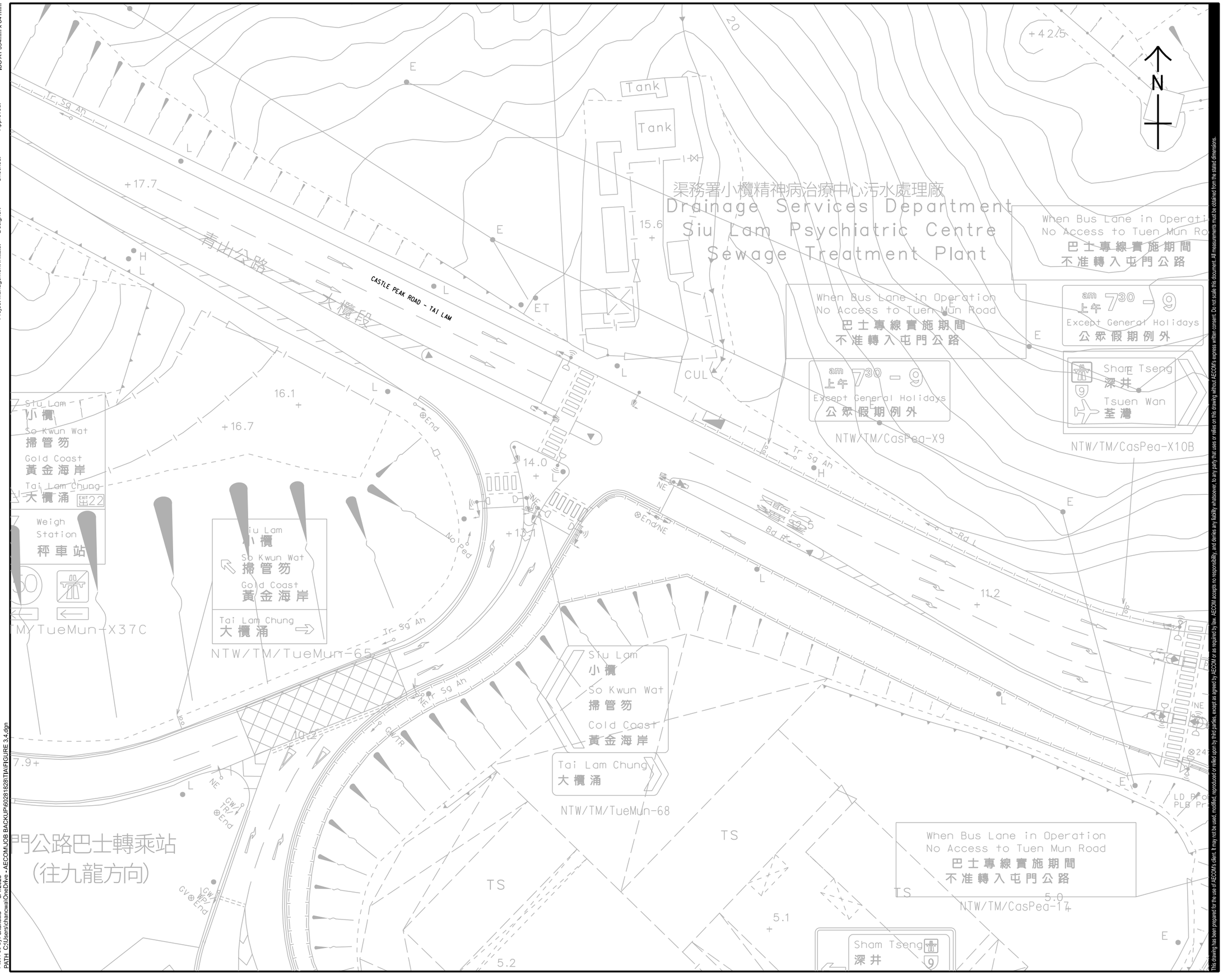
SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD – NEW TAI LAM / CASTLE PEAK ROAD – TSING LUNG TAU(J2)

SHEET NUMBER
圖紙編號

FIGURE 3.3

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - TAI LAM / SLIP ROAD FROM TUEN MUN ROAD (J3)

SHEET NUMBER
圖紙編號

FIGURE 3.4

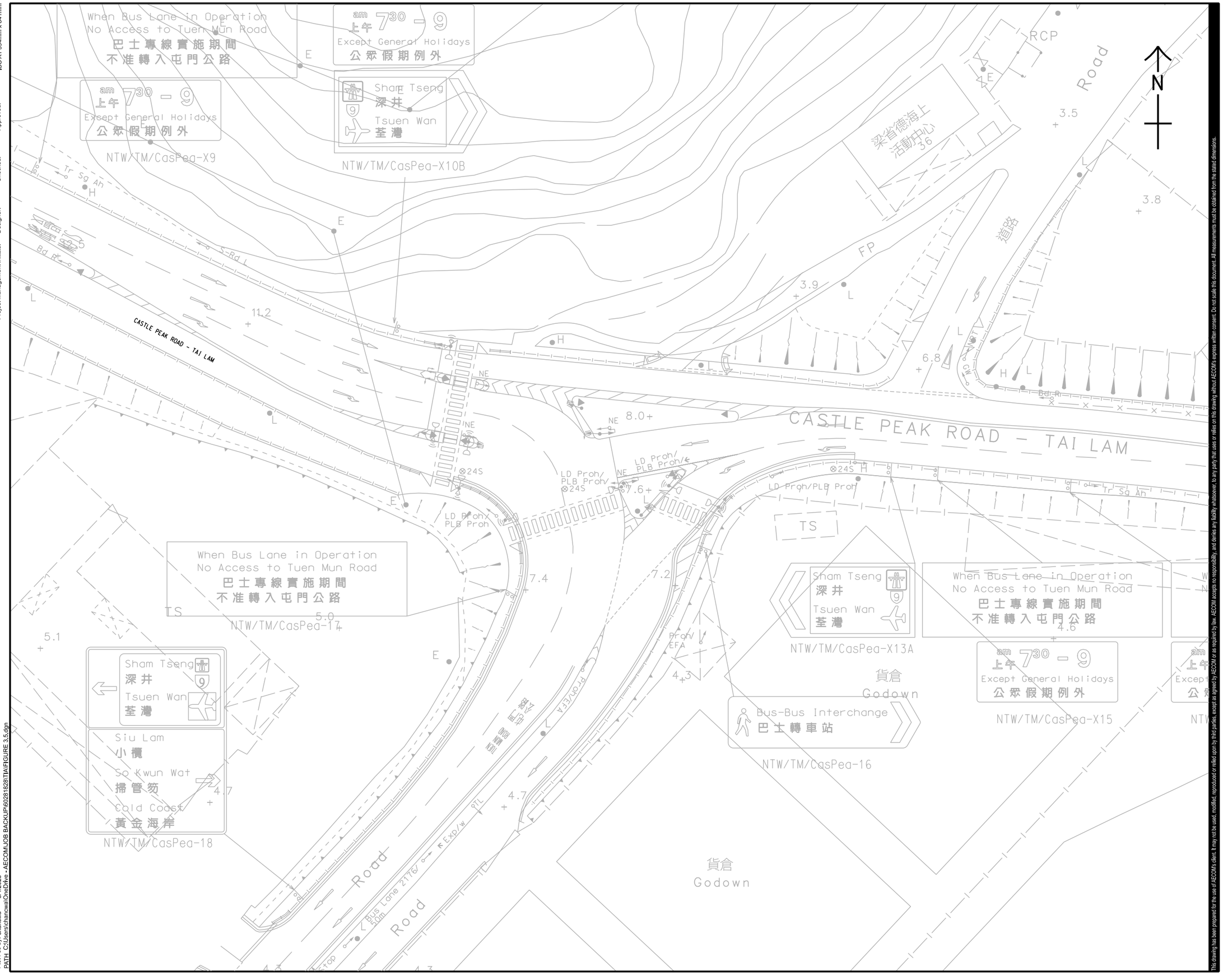
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 3.5.dgn

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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD – TAI LAM / SLIP ROAD TO TUEN MUN ROAD (J4)

SHEET NUMBER
圖紙編號

FIGURE 3.5

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Hong Kong Customs College
香港海關學院
Correctional Institution
Tai Lam Region
大欖區懲教機構

NTW/TM/CasPea-272B

Cycle Parking Place-Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 -停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於停泊架。
4.此泊車處會不定期被中止使用，以清理存放的單車。

N-TS895

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1.此單車泊車處會不定期被中止使用，以清理存放的單車。
2.中止前最少十四天會張貼有關中止使用的通告，公眾在通告指明的日期後，不要存放單車在泊車處。
3.當泊車處被中止時，單車不准停泊。
4.在中止使用期間存放在此泊車處的單車，當局會收得及移走單車。

N-TS896

P Cyc/ N-TS895

P Cyc/ N-TS896

BUS STOP 巴士站

NE GW

NRT/E FB

Proh/E FB

ONE GW

Tr Sig Ahead

Pipeline 導管

TAI LAM CHUNG ROAD

CASTLE PEAK ROAD - TAI LAM

香港警務處
大欖涌車輛檢驗中心

足球場
Football Field

籃球場
Basketball Court

Road

TS

CW

ESS

ARCH

Stop

Exp/way

+3.7 +4.7 +4.2 +3.9 +4.1 +4.4 +5.1

N

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CLIENT 業主

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SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN 索引圖

PROJECT NO. 項目編號 60281828

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

EXISTING JUNCTIONLAYOUT OF CASTLE PEAK ROAD - TAI LAM / TAI LAM CHUNG ROAD (J5)

SHEET NUMBER 圖紙編號

FIGURE 3.6

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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PROJECT
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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位

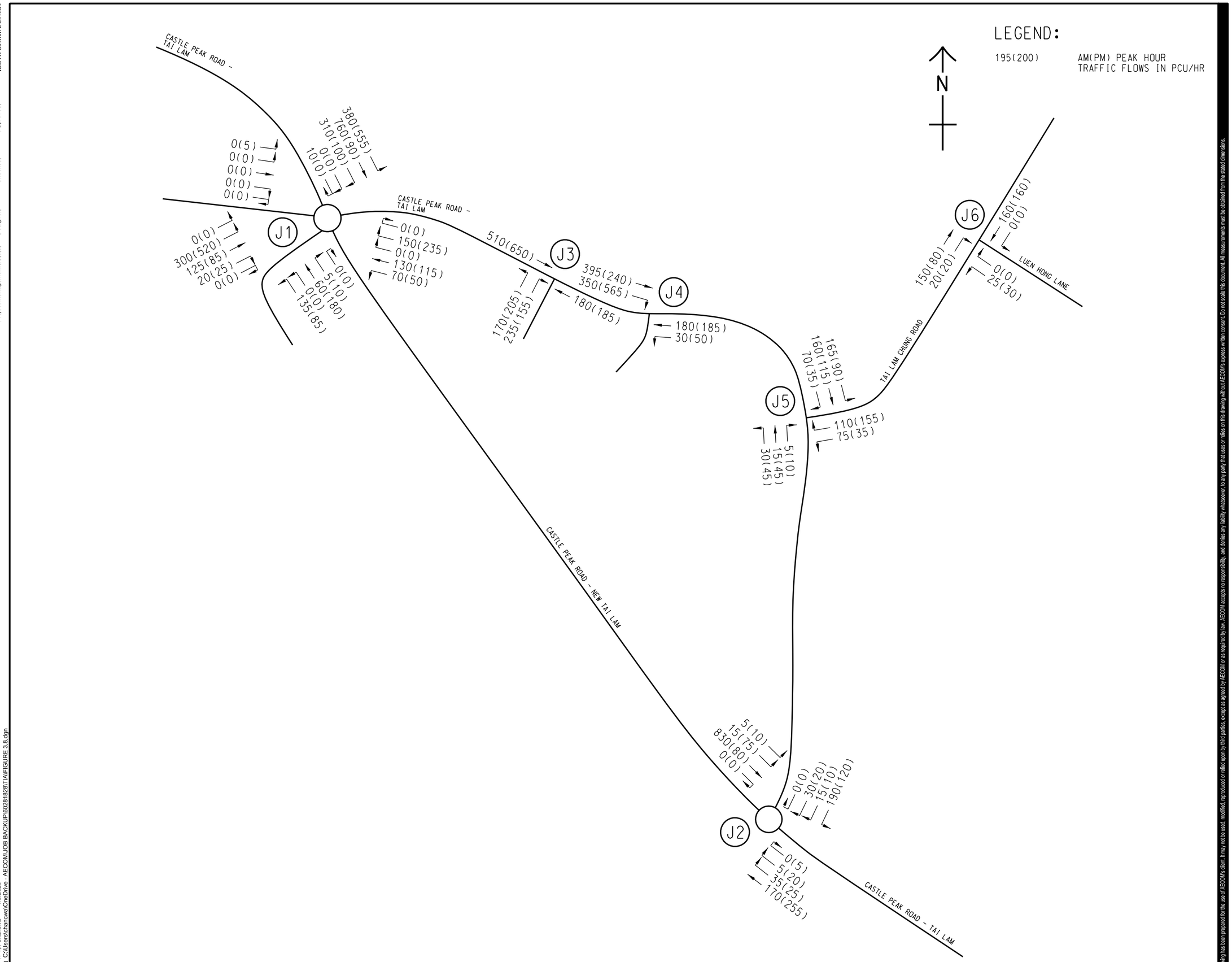
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING JUNCTION LAYOUT OF TAI LAM CHUNG ROAD / LUEN HONG LANE (J6)

SHEET NUMBER
圖紙編號
FIGURE 3.7



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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PROJECT
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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2023 OBSERVED TRAFFIC FLOWS

SHEET NUMBER
圖紙編號
FIGURE 3.8

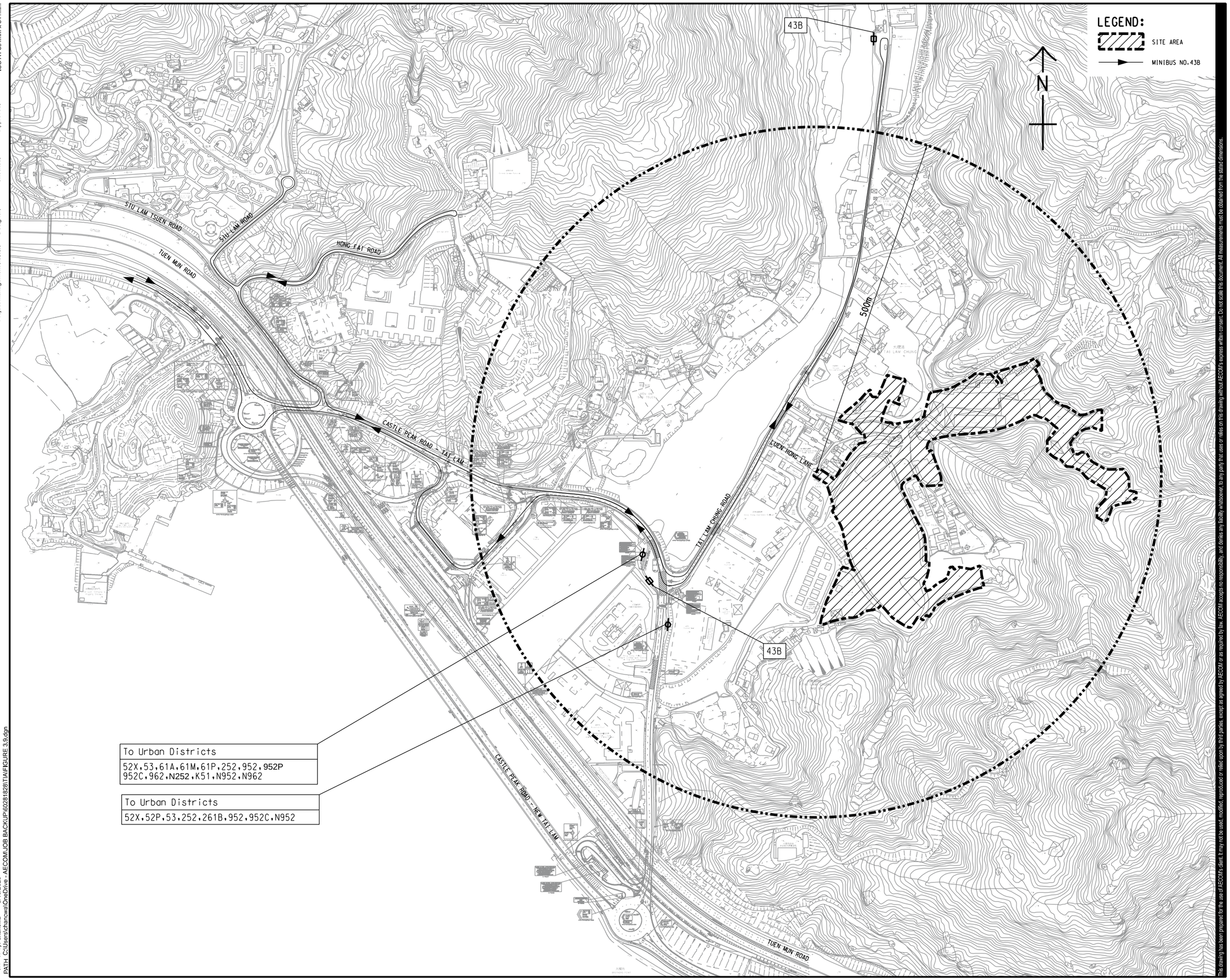
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: chancwa 8/10/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TA\FIGURE 3.9.dgn

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT
業主

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 修改說明	CHK. 核核

STATUS
階段

SCALE 比例
A3 1 : 5000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
EXISTING PUBLIC TRANSPORT FACILITIES

SHEET NUMBER
圖紙編號
FIGURE 3.9

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

LEGEND:

BUS BAY

PEDESTRIAN ROUTING

11.6m

42m

4.1m

3m

4m

42m

3.5m

7m

3.5m

3.5m

INDICATIVE PASSENGER QUEUING AREA

MIN. 2m FOOTPATH TO BE MAINTAINED

MIN. 3m FOOTPATH TO BE MAINTAINED

INDICATIVE LOCATION FOR STAFF ANCILLARY FACILITIES

N

E 道路 Road

黃屋村 WONG UK TSUEN

大欖花園

Plot File by: setocf
PATH: P:\PROJECTS\60281828\DRAWINGS\REPORT\TIA\FIGURE 4.1.dgn
11/12/2025

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PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 內容簡要	CHK. 核查

STATUS 階段

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN 索引圖

PROJECT NO. 項目編號 60281828

CONTRACT NO. 合約編號

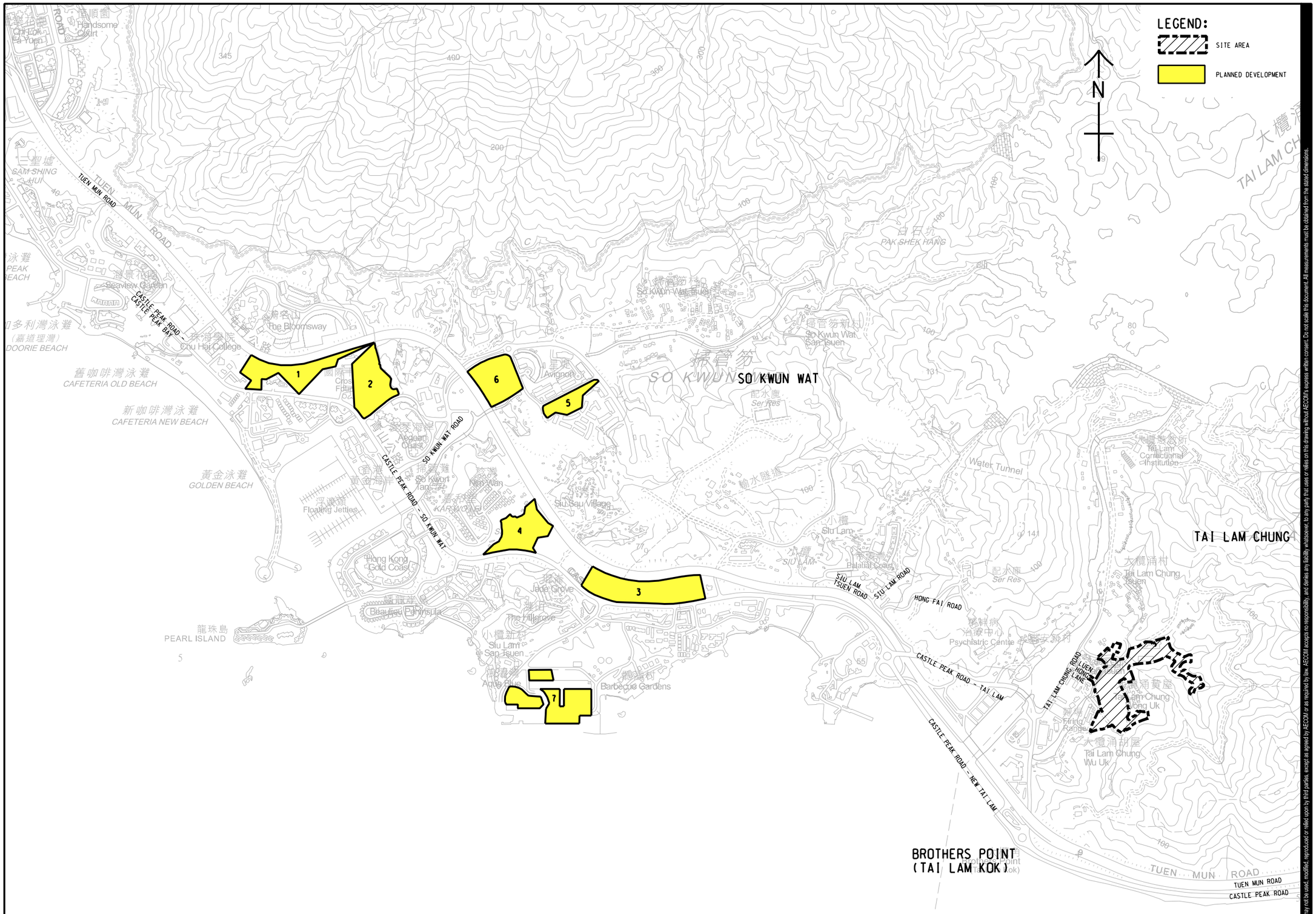
SHEET TITLE 圖紙名稱

INDICATIVE LAYOUT FOR □ TRANSPORT INTERCHANGE (TI)□

SHEET NUMBER 圖紙編號

FIGURE 4.1

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm



AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
狀況

SCALE 比例
A3 1 : 15000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

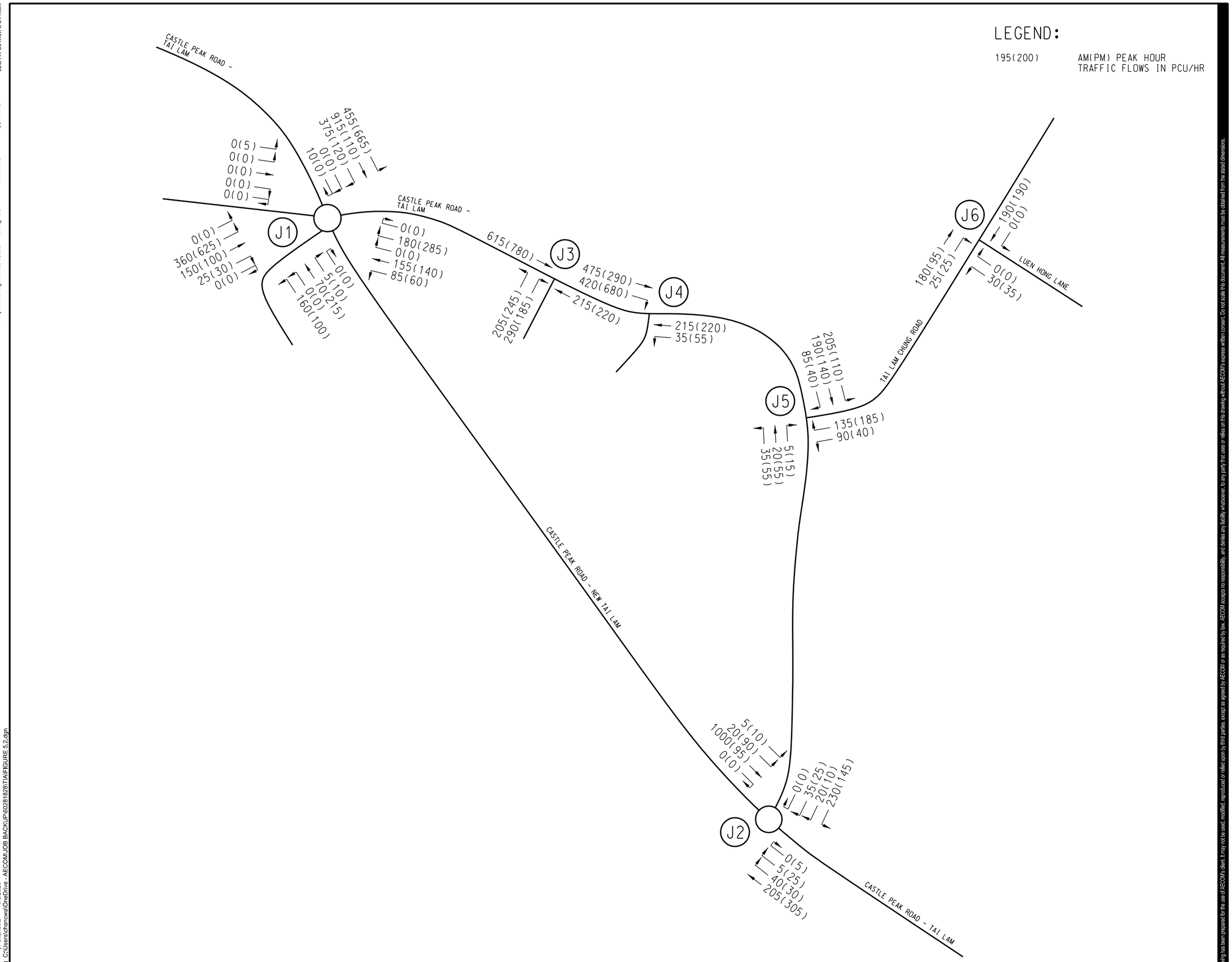
PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
PLANNED DEVELOPMENTS

SHEET NUMBER
圖紙編號
FIGURE 5.1

Plot File by: $USER$ $DATE$
PATH: $FILE$



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 4/8/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 5.2.dgn

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

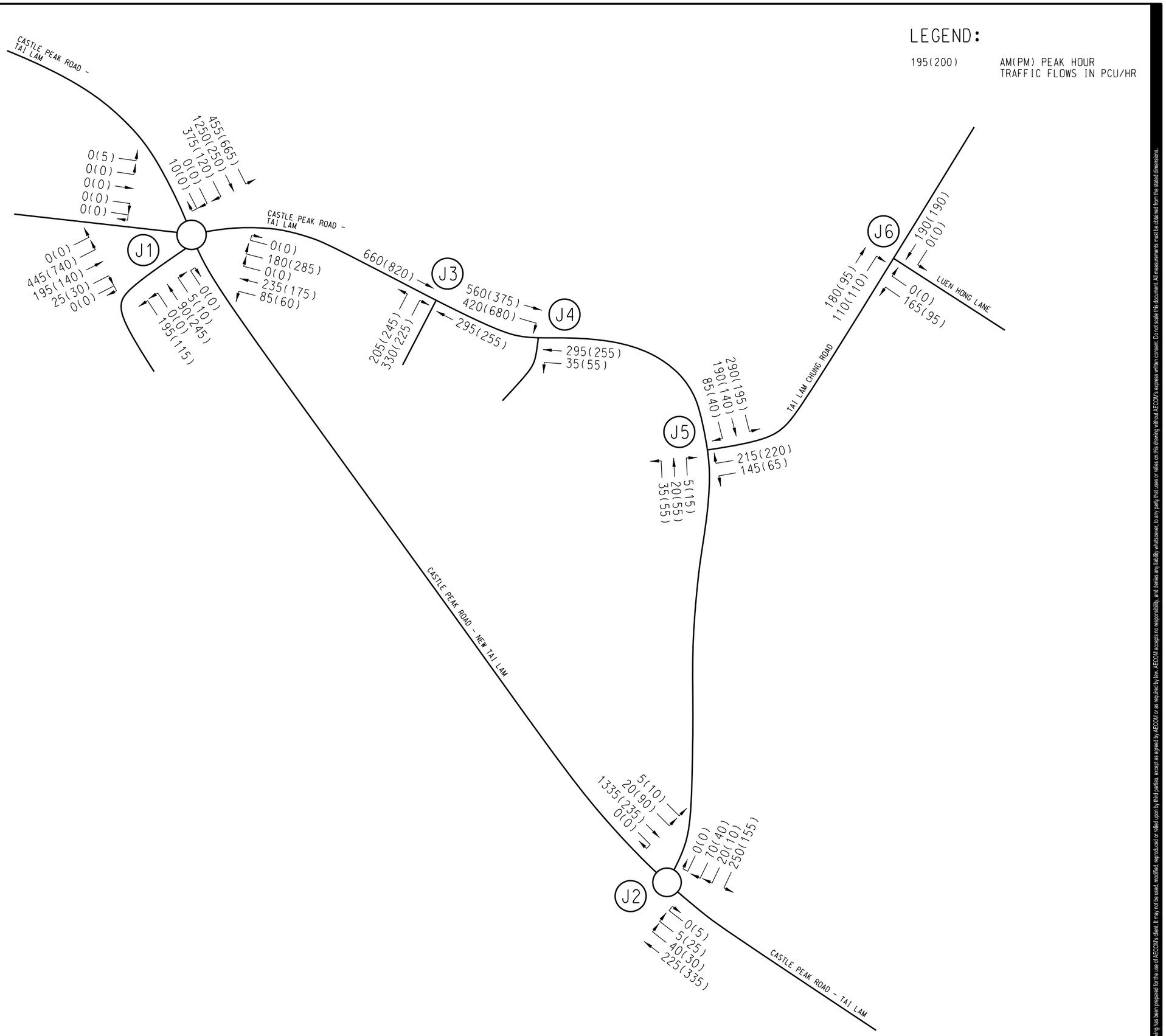
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2033 BACKGROUND TRAFFIC FLOWS

SHEET NUMBER
圖紙編號
FIGURE 5.2



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 9/10/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 5.3.dgn

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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修訂

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STATUS
階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

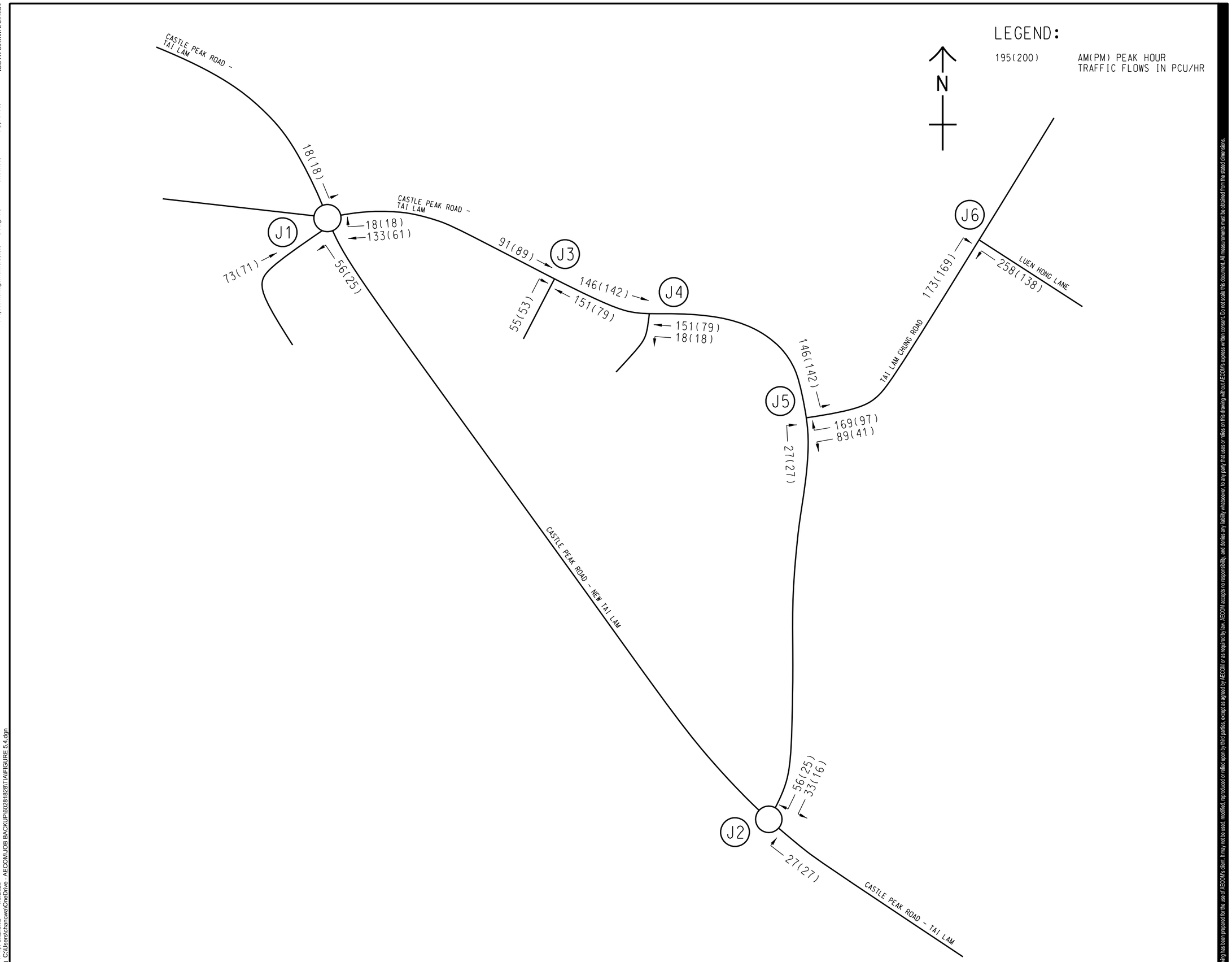
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2033 REFERENCE TRAFFIC FLOWS

SHEET NUMBER
圖紙編號
FIGURE 5.3



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 4/8/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 5.4.dgn

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

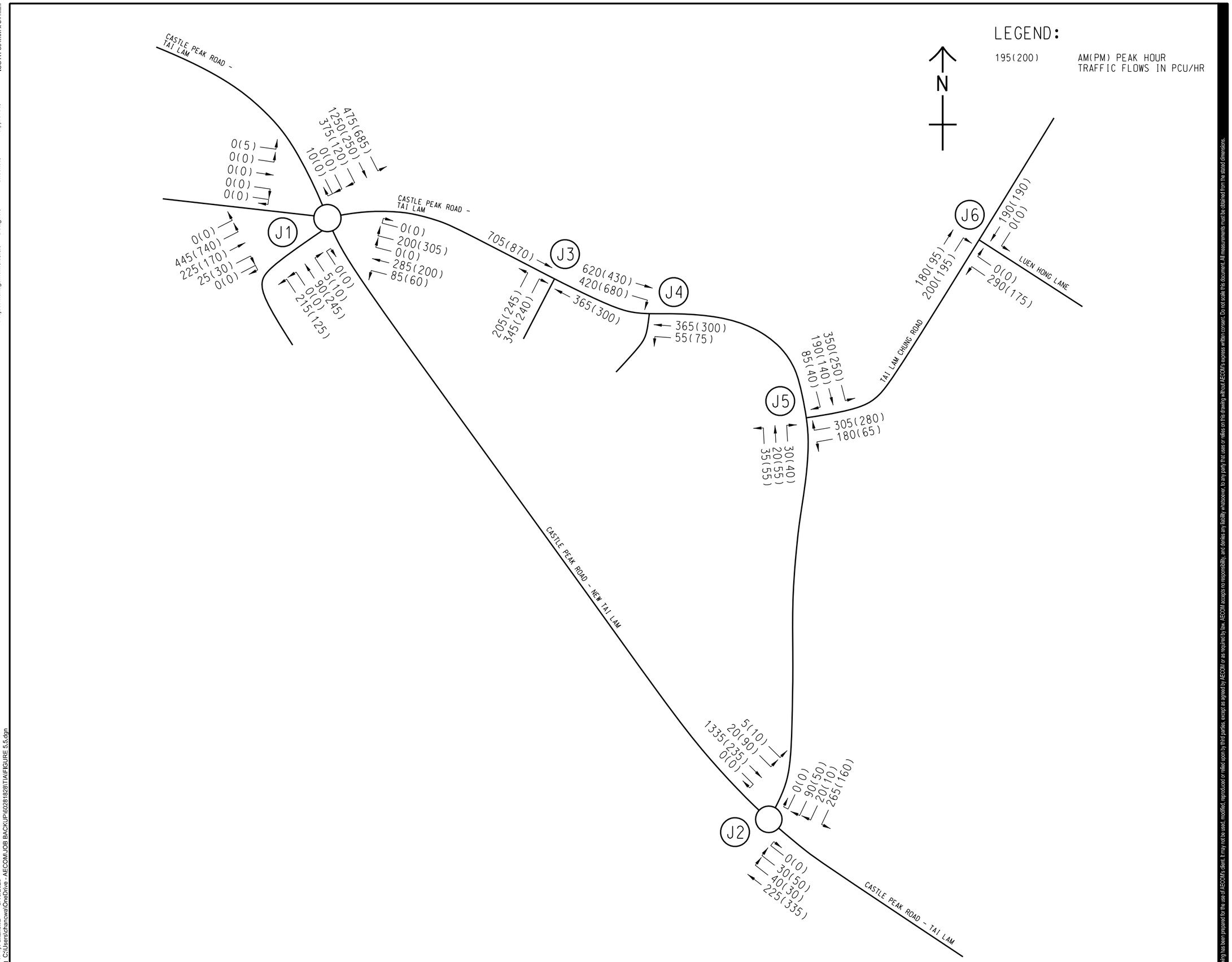
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
DEVELOPMENT TRAFFIC FLOW (PROPOSED SCHEME)

SHEET NUMBER
圖紙編號
FIGURE 5.4



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 9/10/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 5.5.dgn

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PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS 階段

SCALE 比例 A3 N.T.S.

DIMENSION UNIT 尺寸單位

KEY PLAN 索引圖

PROJECT NO. 項目編號 60281828

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

YEAR 2033 DESIGN TRAFFIC FLOWS

SHEET NUMBER 圖紙編號

FIGURE 5.5

M/CasPea-X12A

CASTLE PEAK ROAD (TAI LAM)

Hong Kong Customs College
香港海關學院
Correctional Institution
Tai Lam Region
大欖區懲教機構

NTW/TM/CasPea-272B

Cycle Parking Place-Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處-停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過24小時。
3.單車必須停放於停泊架。
4.此泊車處會不定期被中止使用，以清理存放的單車。

N-TS895

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1.此單車泊車處會不定期被中止使用，以清理存放的單車。
2.中止前最少十四天會張貼有關中止使用的通告，公眾在通告指明的日期後，不要存放單車在泊車處。
3.當泊車處被中止後，單車不准停泊。
4.在中止使用期間存放在此泊車處的單車，當局會收例提管及移走單車。

N-TS896

EXISTING BEAM BARRIER TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

Tai Lam Chung Road 大欖涌道

TAI LAM CHUNG ROAD

Pipeline 導管

EXISTING ROAD MARKING TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

EXISTING RAILING TO BE REMOVED

EXISTING BEAM BARRIER TO BE REMOVED

EXISTING RAILING TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

EXISTING SIGNALISED CROSSING TO BE REMOVED

Castle Peak Road - Tai Lam
青山公路 - 大欖段

香港警務處
大欖涌車輛檢驗中心

LEGEND:

TS102(6)	NEW TRAFFIC SIGN WITH NUMBER AND SIZE CODE
RM1104	ROAD MARKING CODE NO.
	EXISTING TRAFFIC SIGN TO BE RELOCATED
	BOLLARD (KEEP LEFT) - NON-ILLUMINATED RETRO-REFLECTIVE TYPE
	BOLLARD (KEEP LEFT) -ILLUMINATED TYPE
	PROPOSED DROP KERB WITH HAZARD WARNING TILES / BLOCKS (FERER TO HyD STANDARD DRAWING NOS. H1117,H5118-H5124)
	TYPE 2 RAILINGS AT JUNCTIONS
	TYPE 2 RAILINGS

AECOM

PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT 業主

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STATUS 階段

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN 索引圖

PROJECT NO. 項目編號 60281828

CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

PLANNED JUNCTION IMPROVEMENT SCHEME AT CASTLE PEAK ROAD - TAI LAM / TAI LAM CHUNG ROAD

SHEET NUMBER 圖紙編號

FIGURE 6.1

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

CUT LINE A-A

EXISTING ROAD MARKING TO BE REMOVED

CASTLE PEAK ROAD (TAI LAM)

EXISTING ROAD MARKING TO BE REMOVED

CASTLE PEAK ROAD (TAI LAM)

TS409(6)

RM1029

EXISTING ROAD MARKING TO BE REMOVED

FUTURE TAI LAM CHUNG ROAD FOOTPATH (1.6m) FROM APPROVED GAZETTE PLAN

TS102/ TS115

RM1033

RM1013

RM1104

RM1019

RM1025

RM1001

RM1037

EXISTING TRAFFIC SIGNAL TO BE RELOCATED

2m FOOTPATH TO BE PROVIDED

EXISTING BEAM BARRIER TO BE REMOVED

TAI LAM CHUNG ROAD

RM1107

RM1035

RM1029

TS409(6)

EXISTING SIGN TO BE RELOCATE

RM1007

TS115(7)

TS109

RM1011

RM1075

RM1076

MIN. 2m FOOTPATH TO BE MAINTAINED

EXISTING RAILING TO BE REMOVED

RM1875 & RM1076

EXISTING ROAD MARKING TO BE REMOVED

EXISTING DROP KERB

MIN. 3m FOOTPATH TO BE MAINTAINED

EXISTING BEAM BARRIER TO BE REMOVED

EXISTING BICYCLE RACK TO BE RELOCATED

EXISTING DROP KERB TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

RM1027

RM1025

EXISTING SIGNALISED CROSSING TO BE REMOVED

CUT LINE A-A

Hong Kong Customs College 香港海關學院 Correctional Institution Tai Lam Region 大欖區懲教機構

NTW/TM/CasPea-272B

Tai Lam Chung Road 大欖涌道

Castle Peak Road - Tai Lam 青山公路 - 大欖段

Parking Place-Parking Advice

1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 -停泊須知

1.此泊車處是供單車使用。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於車泊架。
4.此泊車處會不定期被中止使用，以清理遺放的單車。

N-TS895

General Advice to Public

1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 day(s) prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知

1.此單車泊車處會不定期被中止使用，以清理遺放的單車
2.中止前最少十四天會張貼有關中止使用的通告。公眾不應在通告所列的日期後，不要將單車在泊車處。
3.當泊車處被中止時，單車不准停泊。
4.在中止使用期間將放在此泊車處的單車，當局會依例清理及移走單車。

N-TS896

PROPOSED METHOD OF CONTROL:

1 2 3 4

LEGEND:

- TS102(6) — NEW TRAFFIC SIGN WITH NUMBER AND SIZE CODE
- RM1104 — ROAD MARKING CODE NO.
- EXISTING TRAFFIC SIGN TO BE RELOCATED
- BOLLARD (KEEP LEFT) - NON-ILLUMINATED RETRO-REFLECTIVE TYPE
- BOLLARD (KEEP LEFT) -ILLUMINATED TYPE
- PROPOSED DROP KERB WITH HAZARD WARNING TILES / BLOCKS (FERER TO HyD STANDARD DRAWING NOS. H1117,H5118-H5124)
- TYPE 2 RAILINGS AT JUNCTIONS
- TYPE 2 RAILINGS
- RM1025 — PROPOSED ROAD MARKING
- PLANNED JUNCTION IMPROVEMENT
- PROPOSED JUNCTION IMPROVEMENT

Plot File by: chancwa 4/11/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 6.2-SK2.dgn

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT
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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE 比例
A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

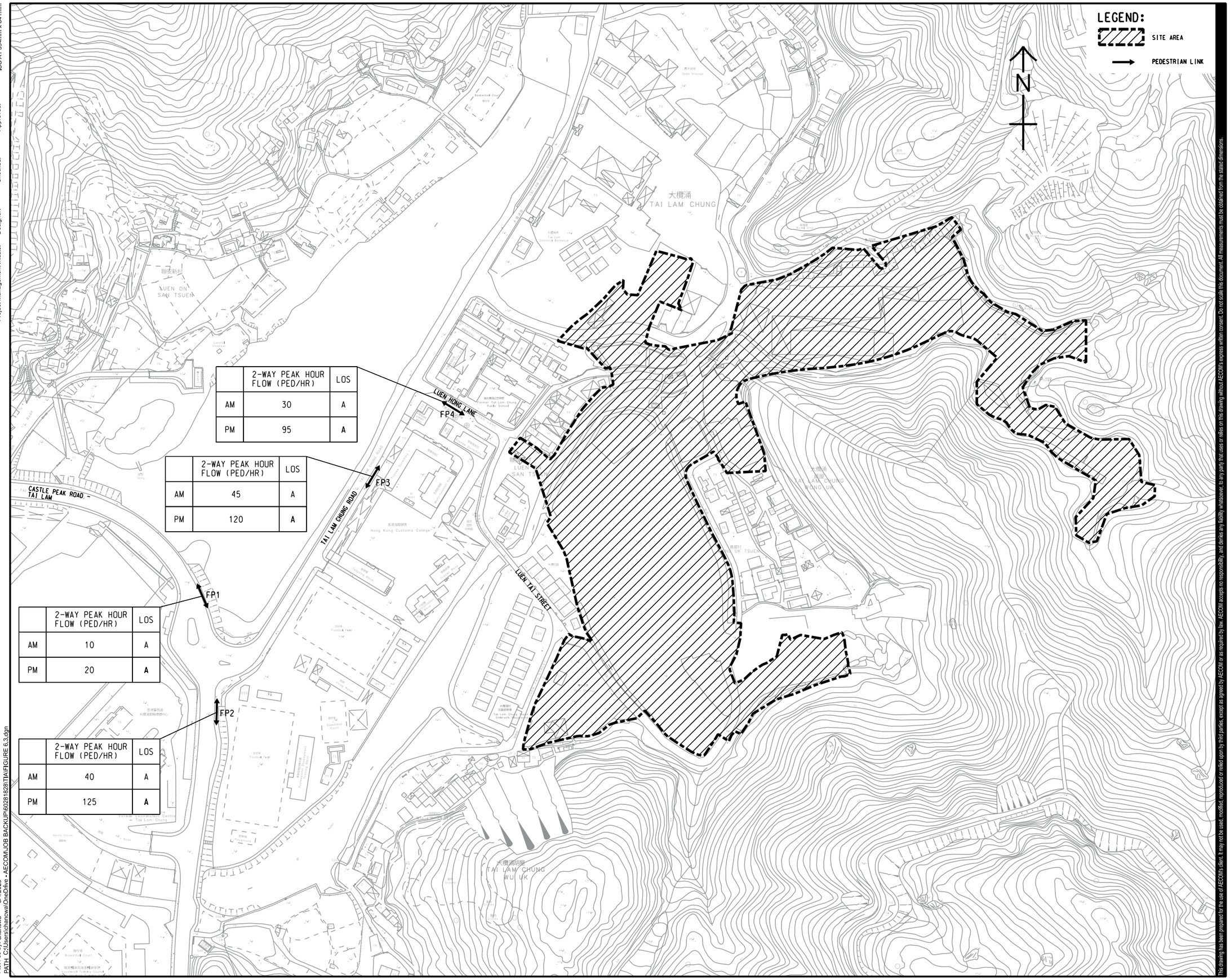
CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

PROPOSED FURTHER JUNCTION IMPROVEMENT SCHEME AT CASTLE PEAK ROAD - TAI LAM / TAI LAM CHUNG ROAD

SHEET NUMBER
圖紙編號

FIGURE 6.2



	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	30	A
PM	95	A

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	45	A
PM	120	A

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	10	A
PM	20	A

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	40	A
PM	125	A

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 1 : 2500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2024 OBSERVED PEDESTRIAN FLOWS

SHEET NUMBER
圖紙編號
FIGURE 6.3

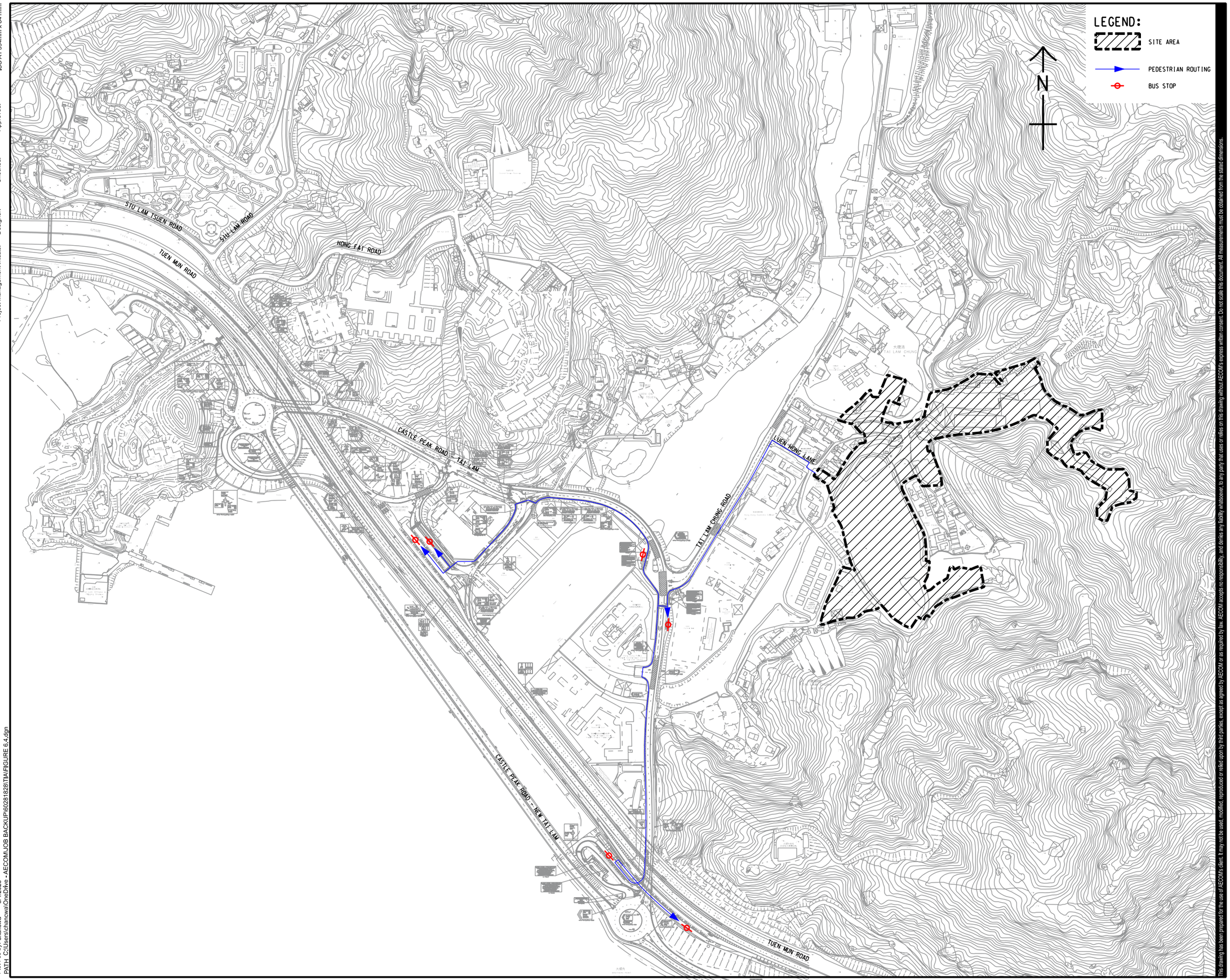
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



Plot File by: chancwa 8/4/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 6.4.dgn

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT
業主

SUN HUNG KAI REAL ESTATE AGENCY LTD. 新鴻基地產代理有限公司

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS
階段

SCALE 比例
A3 1 : 5000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

PEDESTRIAN ROUTING TO EXISITING BUS STOPS

SHEET NUMBER
圖紙編號

FIGURE 6.4

LEGEND:
SITE AREA
PEDESTRIAN LINK

N

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	1240	B
PM	1315	B

FP4

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	1255	A
PM	1345	A

FP3

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	145	A
PM	160	A

FP1

	2-WAY PEAK HOUR FLOW (PED/HR)	LOS
AM	1115	B
PM	1215	B

FP2

CASTLE PEAK ROAD - TAI LAM
TAI LAM CHUNG ROAD
LUEN TAI STREET
LUEN HONG LANE
LUEN ON SAN TSUEN
大欖涌 TAI LAM CHUNG
大欖涌 TAI LAM CHUNG WU UK
Hong Kong Customs College
Lingnan Tai Lam Chung Public School
Tai Lam Chung Children's Park
Vehicle Examination Centre — Tai Lam Chung

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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核

STATUS
階段

SCALE 比例
A3 1 : 2500

DIMENSION UNIT 尺寸單位

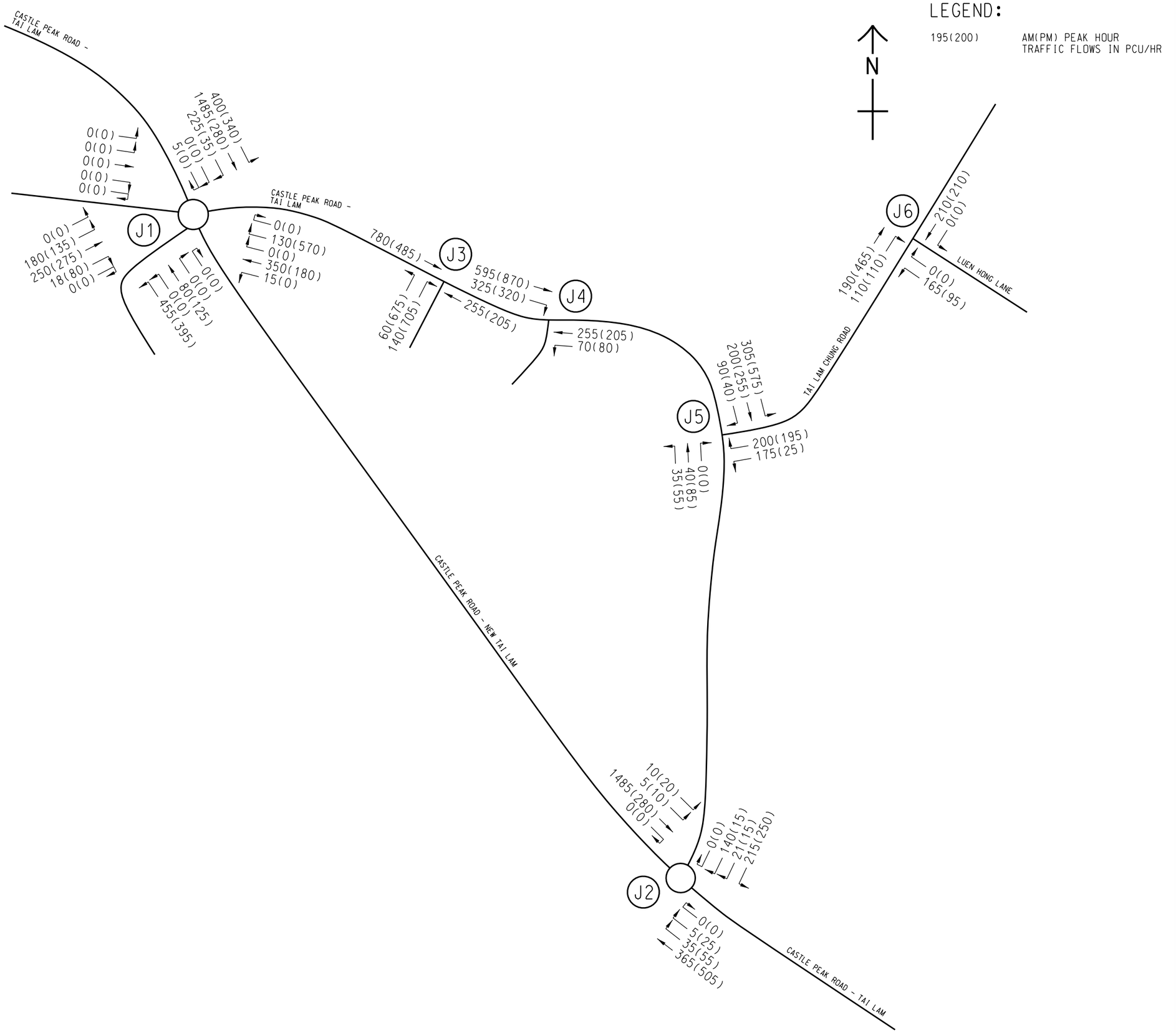
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2033 DESIGN PEDESTRIAN FLOWS

SHEET NUMBER
圖紙編號
FIGURE 6.5



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 4/11/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 7.1.dgn

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PROJECT 項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS 階段

SCALE 比例 A3 N.T.S.

DIMENSION UNIT 尺寸單位

KEY PLAN 索引圖

PROJECT NO. 項目編號 60281828

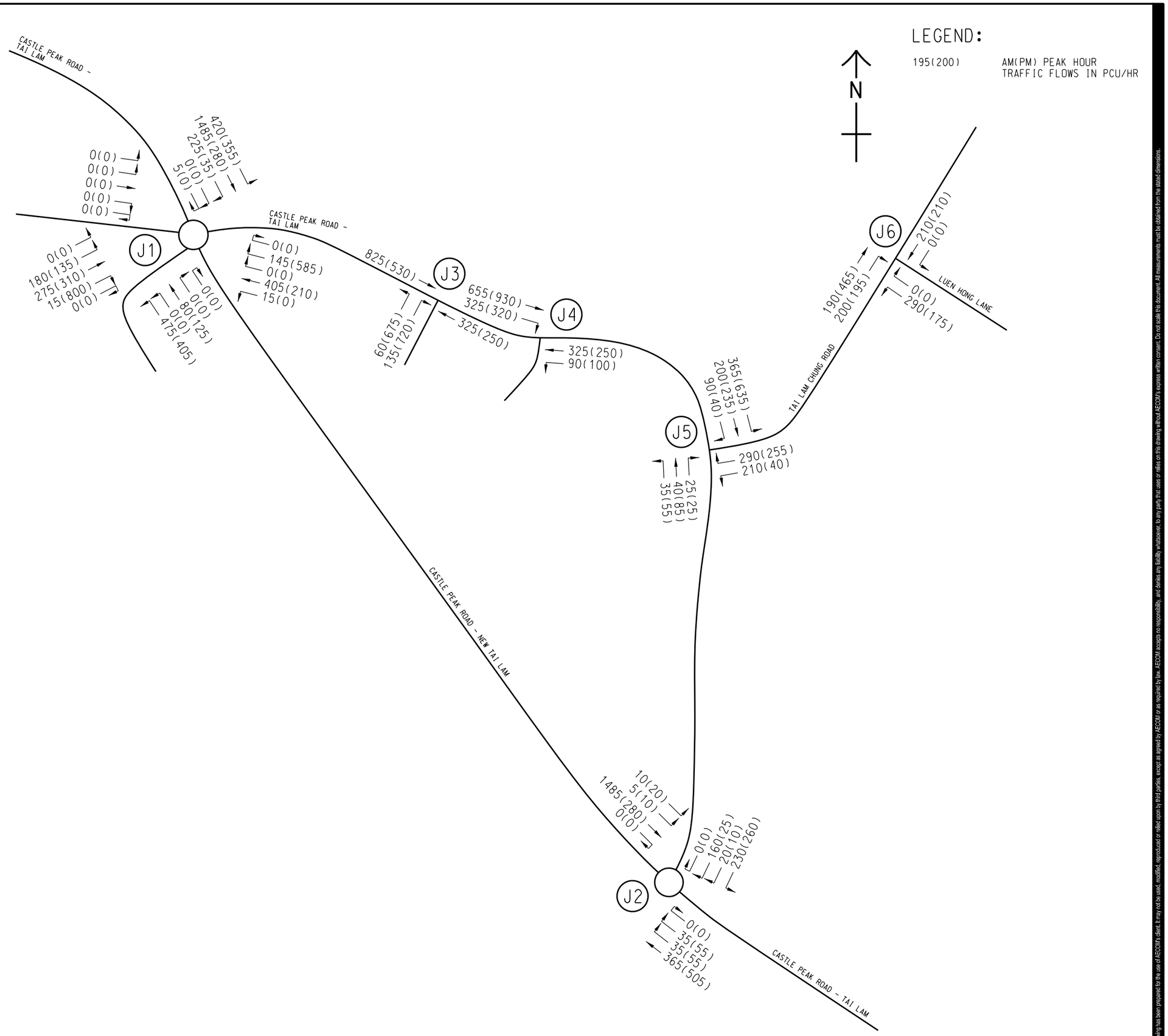
CONTRACT NO. 合約編號

SHEET TITLE 圖紙名稱

YEAR 2033 REFERENCE FLOWS FOR SENSITIVITY TEST

SHEET NUMBER 圖紙編號

FIGURE 7.1



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

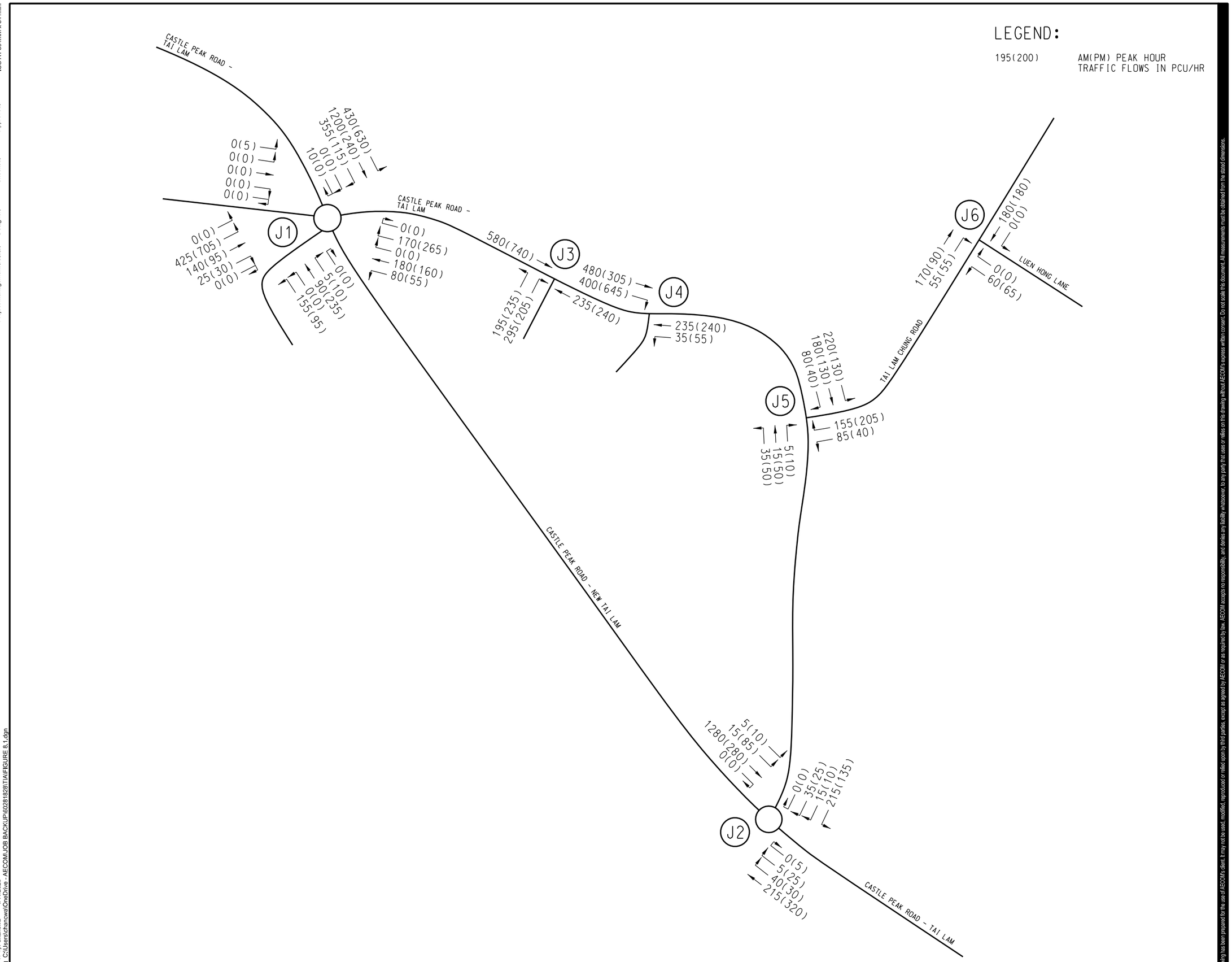
KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2033 DESIGN FLOWS FOR SENSITIVITY TEST

SHEET NUMBER
圖紙編號
FIGURE 7.2



Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: chancwa 4/11/2025
PATH: C:\Users\chancwa\OneDrive - AECOM\JOB BACKUP\60281828\TIA\FIGURE 8.1.dgn

AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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STATUS
階段

SCALE 比例
A3 N.T.S.

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

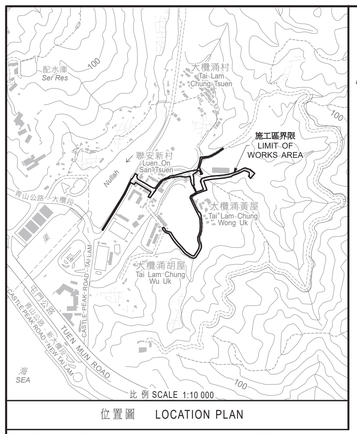
CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
YEAR 2030 CONSTRUCTION TRAFFIC FLOWS

SHEET NUMBER
圖紙編號
FIGURE 8.1

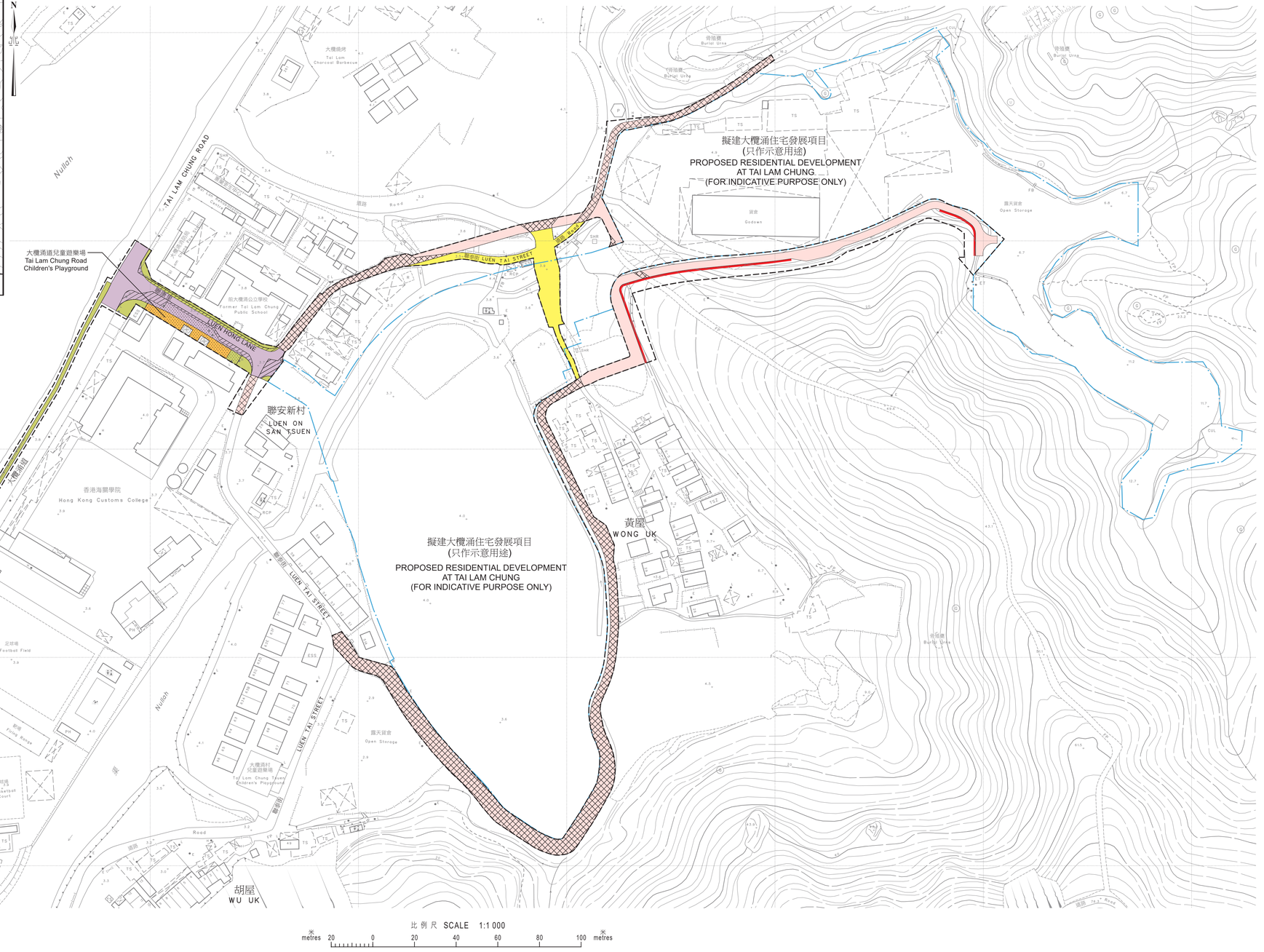
Annex A

Approved Gazette Plan for Luen Hong Lane



比例 SCALE 1:10 000

位置圖 LOCATION PLAN



比例尺 SCALE 1:1 000

米 metres 20 0 20 40 60 80 100 米 metres

註釋 NOTES:

1. 除在其他方面指定外，所有量度以米為單位。
   ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. 所有水平均為約數，以米為單位，並基於香港主水平基準上。
   ALL LEVELS ARE APPROXIMATE VALUES AND IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
3. 如有需要，施工區界限內部分現有行車道、行人路及鄉村通路或會分階段暫時封閉及實施臨時交通安排，以便進行工程。
   SECTIONS OF THE EXISTING CARRIAGEWAYS, FOOTPATHS AND VILLAGE ACCESSES WITHIN THE LIMIT OF WORKS AREA MAY BE TEMPORARILY CLOSED IN PHASES AND TEMPORARY TRAFFIC ARRANGEMENT WILL BE IMPLEMENTED TO FACILITATE WORKS AS AND WHEN REQUIRED.
4. 如有需要，斜坡穩固工程或會在施工區界限之內進行。
   SLOPE STABILIZATION WORKS MAY BE CARRIED OUT WITHIN THE LIMIT OF WORKS AREA AS AND WHEN REQUIRED.

圖例 LEGEND:

- 施工區界限 LIMIT OF WORKS AREA
- 擬建鄉村通路 PROPOSED VILLAGE ACCESS
- 現有行車道將永久封閉及改建為行人路 EXISTING CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH
- 現有行人路將永久封閉及改建為行車道 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO CARRIAGEWAY
- 現有大欖涌通兒童遊樂場將永久封閉及改建為行車道 EXISTING TAI LAM CHUNG ROAD CHILDREN'S PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO CARRIAGEWAY
- 現有大欖涌通兒童遊樂場將永久封閉及改建為行人路 EXISTING TAI LAM CHUNG ROAD CHILDREN'S PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH
- 現有大欖涌通兒童遊樂場將永久封閉及改建為路旁帶 EXISTING TAI LAM CHUNG ROAD CHILDREN'S PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO VERGE
- 現有鄉村通路將於重置工程完成後永久封閉 EXISTING VILLAGE ACCESS TO BE PERMANENTLY CLOSED UPON COMPLETION OF REPROVISIONING WORKS
- 現有行車道將暫時封閉及重建 EXISTING CARRIAGEWAY TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
- 現有行人路將暫時封閉及重建 EXISTING FOOTPATH TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
- 現有鄉村通路將暫時封閉及重建 EXISTING VILLAGE ACCESS TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
- 擬建擋土構築物 PROPOSED RETAINING STRUCTURE
- 擬建大欖涌住宅發展項目的擬議地段界線(只作示意用途) PROPOSED LOT BOUNDARY OF PROPOSED RESIDENTIAL DEVELOPMENT AT TAI LAM CHUNG (FOR INDICATIVE PURPOSE ONLY)

批註 Endorsed by

陳美寶 CHAN Mable
運輸及房屋局常任秘書長(運輸)
Permanent Secretary for
Transport and Housing (Transport)

日期 Date

核准 Approved by

蔡繩珍 K C CHOI
總產業測量師/土地供應
地政總署
Chief Estate Surveyor / Land Supply
Lands Department

日期 Date

地政總署 土地供應組
Land Supply Section
Lands Department

圖則由屯門測量處繪製
Plan Prepared by District Survey Office, Tuen Mun

圖則名稱 PLAN TITLE

根據《道路（工程、使用及補償）條例》（第370章）而在憲報公布之圖則
PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)

工程名稱 PROJECT TITLE

屯門大欖涌的擬建道路工程
PROPOSED ROAD WORKS AT TAI LAM CHUNG, TUEN MUN

檔案編號 File No.L/M(1) to LD LS 269/CPD/LT/66 Pt.III & LD DSO/TM/W 2001/44

測量圖編號 Survey Sheet No. 6-SW-24A & 24B

發展藍圖編號 Layout Plan No. --

參考圖編號 Reference Plan No. 60281828/GAZ/005 (LandsD)

圖則編號 PLAN No. TMM4185

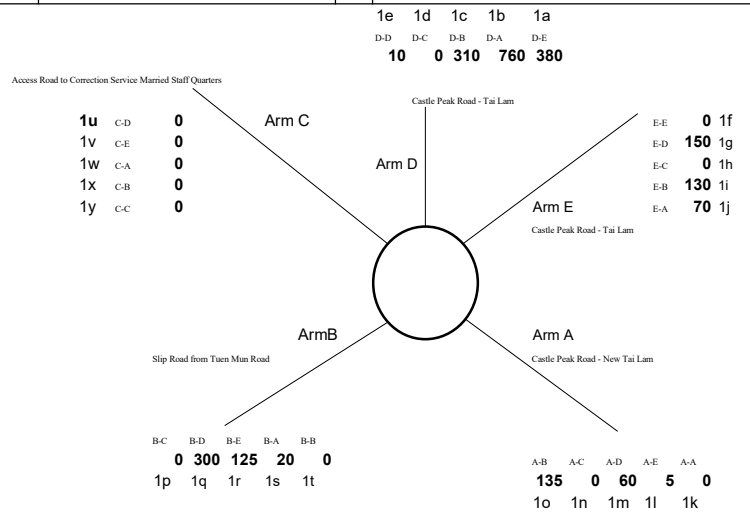
日期 Date 08/03/2021

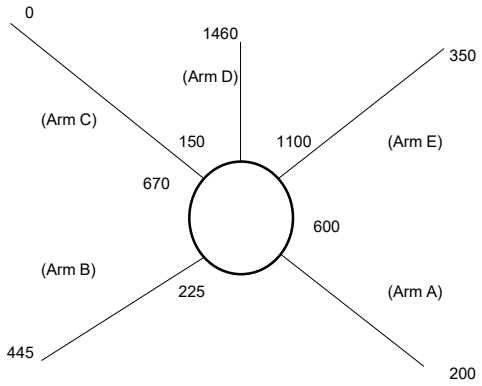
Annex B

Junction Capacity Calculation Sheets

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2023 AM Observe Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





5

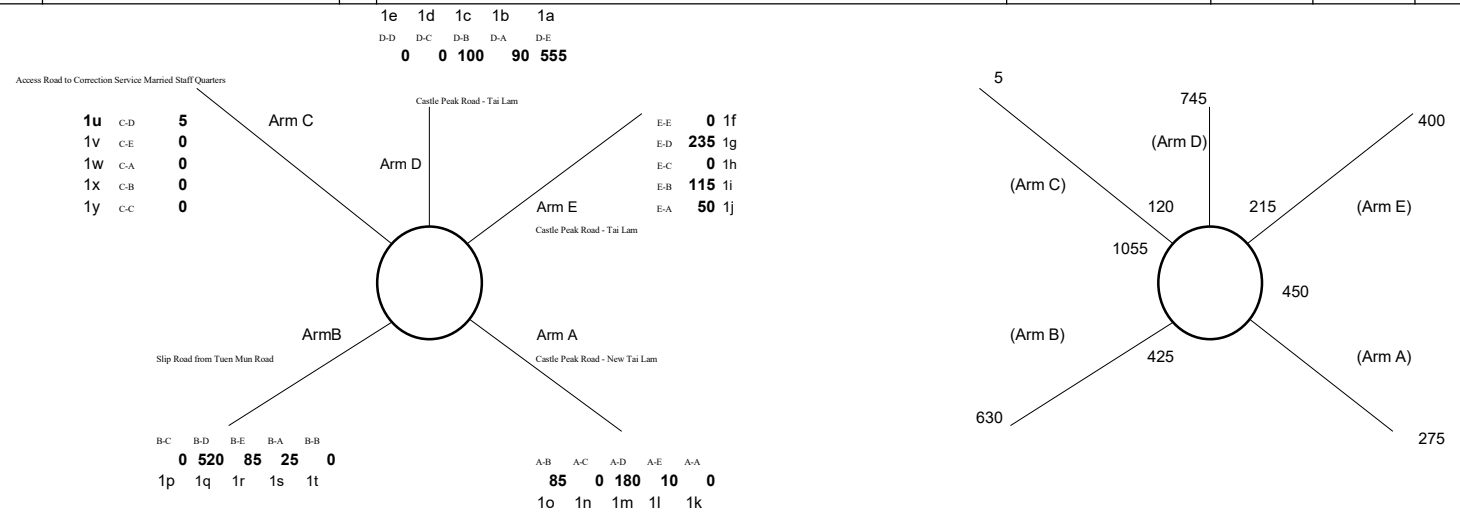
ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	200	445	0	1460	350
Qc= Circulating flow across entry (pcu/h)	600	225	670	150	1100
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2122	2058	690	2706	1282
DFC = Design flow/Capacity = Q/Qe	0.09	0.22	0.00	0.54	0.27

TOTAL ENTRY FLOWS = 2455 PCU

CRITICAL DFC = 0.54

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2023 PM Observe Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025



8

ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	275	630	5	745	400
Qc= Circulating flow across entry (pcu/h)	450	425	1055	120	215
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2227	1938	556	2728	1800
DFC = Design flow/Capacity = Q/Qe	0.12	0.33	0.01	0.27	0.22

TOTAL ENTRY FLOWS = 2055 PCU

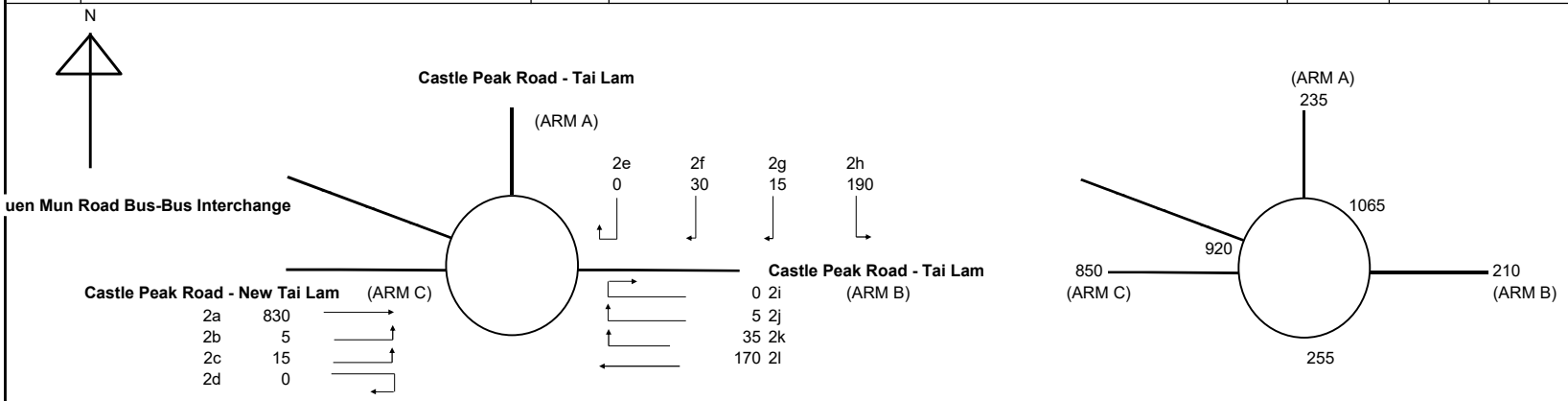
CRITICAL DFC = 0.33

Filename : Tai Lam Chung Signal Calculation.xlsm / J1_OBS_PM

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2023 Observed Traffic Flow - AM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	235	210	850	
Qc= Circulating flow across entry (pcu/h)	920	1065	255	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1150	1964	3219	
DFC = Design flow/Capacity = Q/Qe	0.20	0.11	0.26	

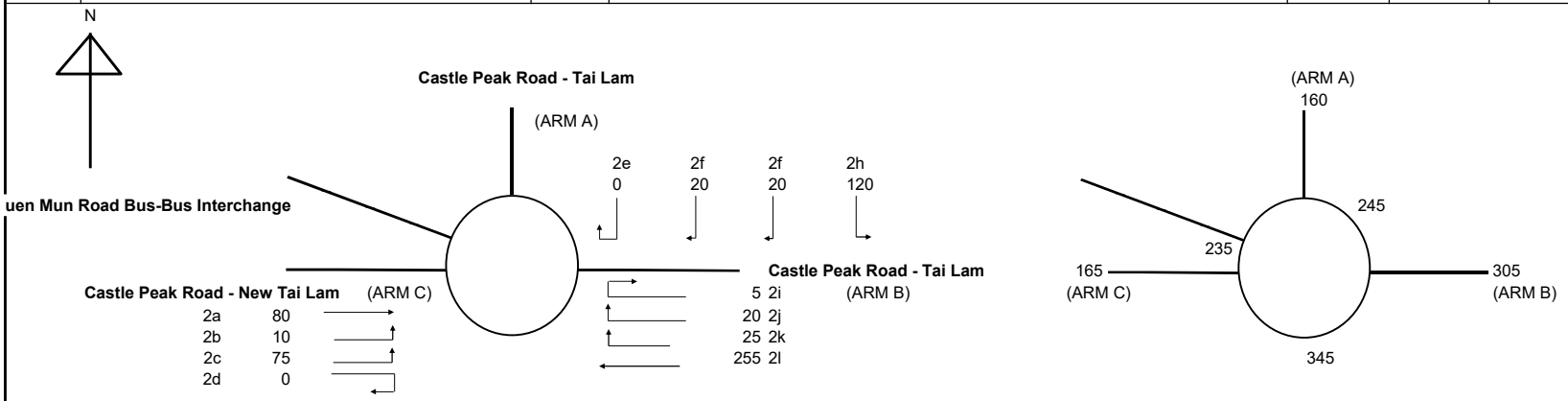
TOTAL ENTRY FLOWS 1295 PCU

CRITICAL DFC 0.26

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2023 Observed Traffic Flow - PM	Project No.	Prepared By	Checked By	Date
							9/十月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	160	305	165	
Qc= Circulating flow across entry (pcu/h)	235	245	345	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1523	2566	3143	
DFC = Design flow/Capacity = Q/Qe	0.11	0.12	0.05	

TOTAL ENTRY FLOWS 630 PCU

CRITICAL DFC 0.12

Job Title	:		Checked By		Note:
Junction Name	:	Castle Peak Road - Tai Lam / Tuen Mun Road	Reviewed By		
Junction No	:	J3			
Design Year	:	2023	Design Date	十月 20 6:11:01 下午	
AM/PM	:	AM Peak			
State	:	Observed Flows			

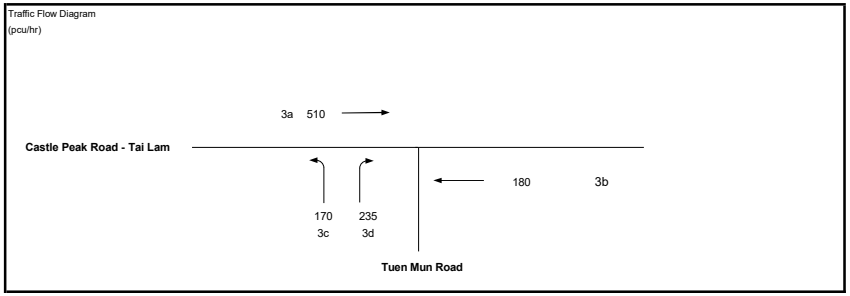
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

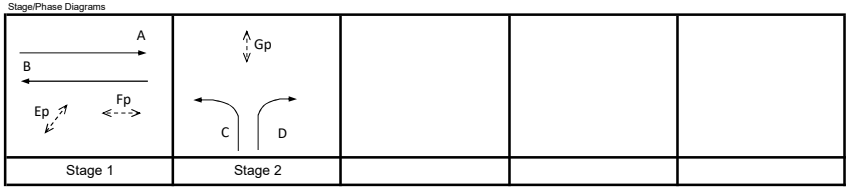
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	2	
Cycle time	C =	90	sec
Sum(y)	Y =	0.220	
Lost time	L =	9	sec
Total Flow	=	10,195	pcu

Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	24	sec
Min. Cycle Time C_m	= L/(1-Y)	=	12	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
$R.C._{ult}$	= (Y_{ult}-Y)/Yx100%	=	279.2	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	12	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 269%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		510		510			4100	0.124	0.124
↑	B	1	4.500	1				1		0		2065		180		180			2065	0.087	
↰	C	2	3.500	1	15			1		0		1965	170			170	100%		1786	0.095	0.095
↱	D	2	4.500	1		25	0	1		0		2065			235	235		100%	1948	0.121	

Pedestrian Crossing				GM		FGM			
	Ep	1	min.	5	+	5	=	10	sec
	Fp	1	min.	5	+	6	=	11	sec
	Gp	2	min.	8	+	7	=	15	sec

Job No.	:	Designed By	
Job Title	:	Checked By	
Junction Name	: Castle Peak Road - Tai Lam / Tuen Mun Road	Reviewed By	
Junction No	: J3		
Design Year	: 2023	Design Date	十月 20 6:11:01 下午
AM/PM	: PM Peak		
State	: Observed Flows		

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

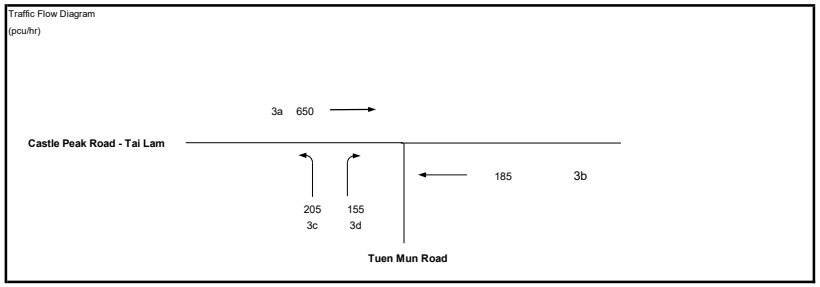
AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

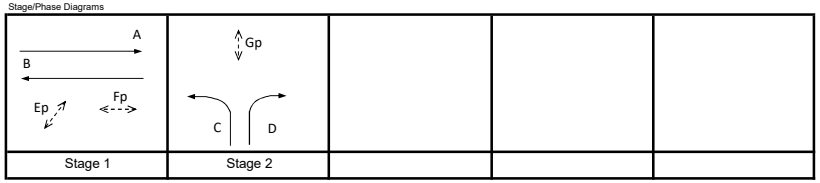
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.273	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	25	sec
Min. Cycle Time C_m	= L/(1-Y)	=	12	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	204.6	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	13	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 196%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		650		650			4100	0.159	0.159
↑	B	1	4.500	1				1		0		2065		185		185			2065	0.090	
↰	C	2	3.500	1	15			1		0		1965	205			205	100%		1786	0.115	0.115
↱	D	2	4.500	1		25	0	1		0		2065			155	155		100%	1948	0.080	
Pedestrian Crossing				GM		FGM															
	Ep	1	min.	5	+	5	=	10	sec												
	Fp	1	min.	5	+	6	=	11	sec												
	Gp	2	min.	8	+	7	=	15	sec												

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2023	Design Date	十月 20	6:11:01 下午
AM/PM	:	AM Peak			
State	:	Observed Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

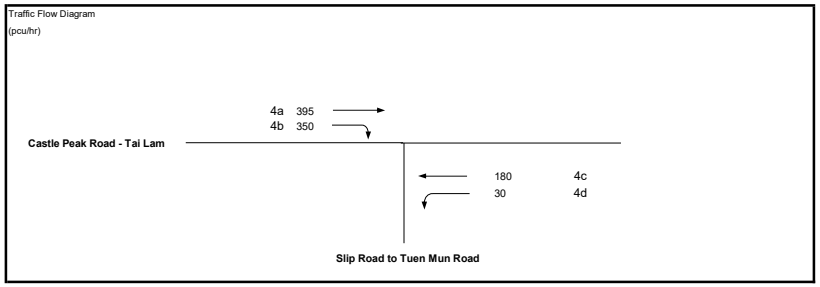
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

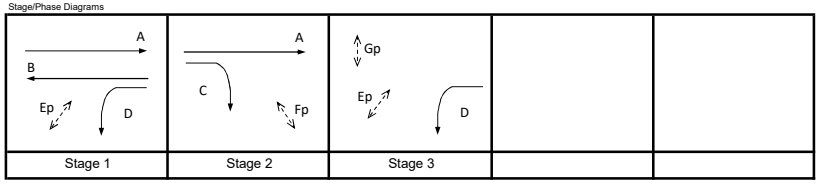
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.189	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y) =		65	sec
Min. Cycle Time C_m	= L/(1-Y)	=	39	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	248.9	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	41	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



I/G = 5 I/G = 5 G = 22 I/G = 2

Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 207%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		395		395			1965	0.201	
↑	B	1	3.500	1				0		0		2105		180		180			2105	0.086	0.086
↰	D	1,3	3.000	1	15			1		0		1915	30			30	100%		1741	0.017	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			350	350		100%	3376	0.104	0.104

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2023	Design Date	十月 20	6:11:01 下午
AM/PM	:	AM Peak			
State	:	Observed Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

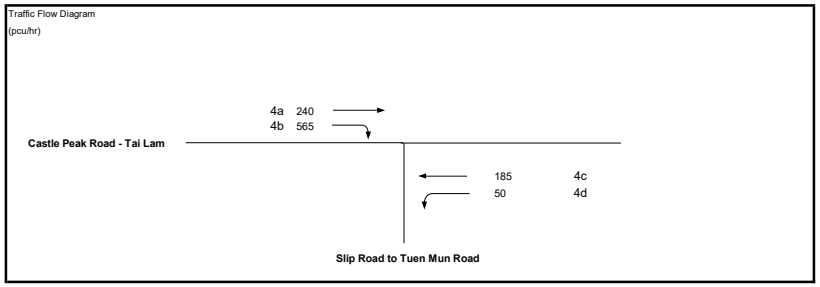
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

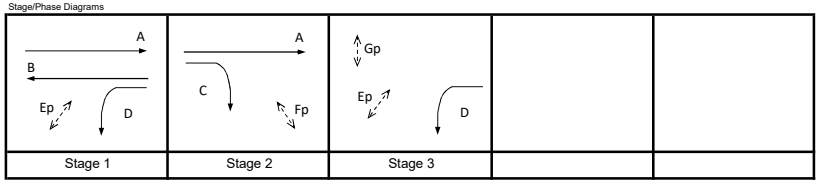
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.255	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	71	sec
Min. Cycle Time C_m	= L/(1-Y)	=	43	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	158.6	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	45	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 127%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		240		240			1965	0.122	
↑	B	1	3.500	1				0		0		2105		185		185			2105	0.088	0.088
↰	D	1,3	3.000	1	15			1		0		1915	50			50	100%		1741	0.029	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			565	565		100%	3376	0.167	0.167

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

Job No.	:		Designed By		Reminder: Enter "P" next to the pedestrian phase under column B
Job Title	:		Checked By		Note:
Junction Name	:	Castle Peak Road - Tai Lam / Tai Lam Chung Road	Reviewed By		
Junction No	:	J5			
Design Year	:	2023	Design Date	十月 20 6:11:01 下午	
AM/PM	:	AM Peak			
State	:	Observed Flows			

JUNCTION CAPACITY CALCULATION

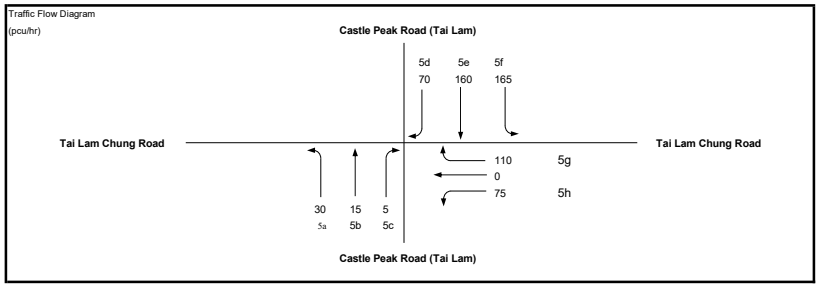
AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2023 AM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

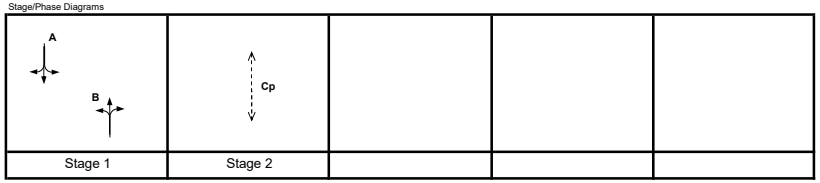
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	2
Cycle time		C =	60 sec
Sum(y)		Y =	0.210
Lost time		L =	24 sec
Total Flow		=	6,035 pcu
Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	52 sec
Min. Cycle Time C_m	= L/(1-Y)	=	30 sec
Y_{ult}	= 0.9-0.0075 × L	=	0.720
R.C.-$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	242.9 %
Practical Cycle Time C_o	= 0.9 × L/(0.9-Y)	=	31 sec
Y_{max}	= 1-L/C	=	0.600

Stage/Phase Diagrams



I/G = 4 G = 18 I/G = 3

5

Critical Case : A,Cp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 157%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	20	20	0	1		0		1965	165	160	70	395	42%	18%	1881	0.210	0.210
↑	B	1	3.500	1	15			1		0		1965	30	0		30	100%		1786	0.017	
↱	B	1	3.500	1		15	0	0		0		2105		15	5	20		25%	2054	0.010	

Pedestrian Crossing GM FGM

Cp 2 min. 9 + 9 = 18 sec

Job No.	:		Designed By		Reminder: Enter "P" next to the pedestrian phase under column B
Job Title	:		Checked By		Note:
Junction Name	:	Castle Peak Road - Tai Lam / Tai Lam Chung Road	Reviewed By		
Junction No	:	J5			
Design Year	:	2023	Design Date	十月 20 6:11:01 下午	
AM/PM	:	PM Peak			
State	:	Observed Flows			

JUNCTION CAPACITY CALCULATION

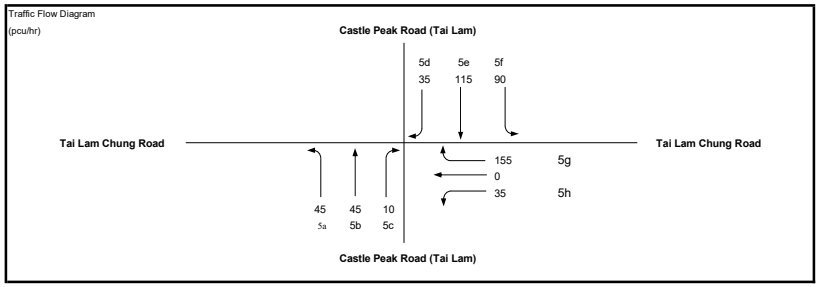
AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2023 PM Peak Observed Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

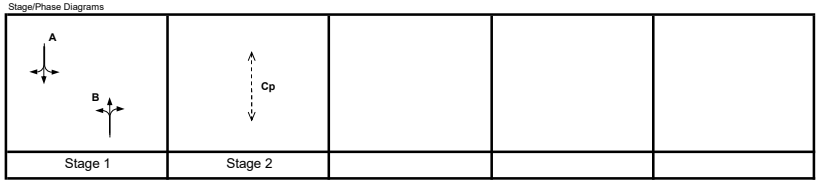
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	2
Cycle time		C =	60 sec
Sum(y)		Y =	0.127
Lost time		L =	24 sec
Total Flow		=	6,035 pcu
Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	47 sec
Min. Cycle Time C_m	= L/(1-Y)	=	27 sec
Y_{ult}	= 0.9-0.0075 × L	=	0.720
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	467.3 %
Practical Cycle Time C_p	= 0.9 × L/(0.9-Y)	=	28 sec
Y_{max}	= 1-L/C	=	0.600

Stage/Phase Diagrams



I/G = 4 G = 18 I/G = 3

5

Critical Case : A,Cp

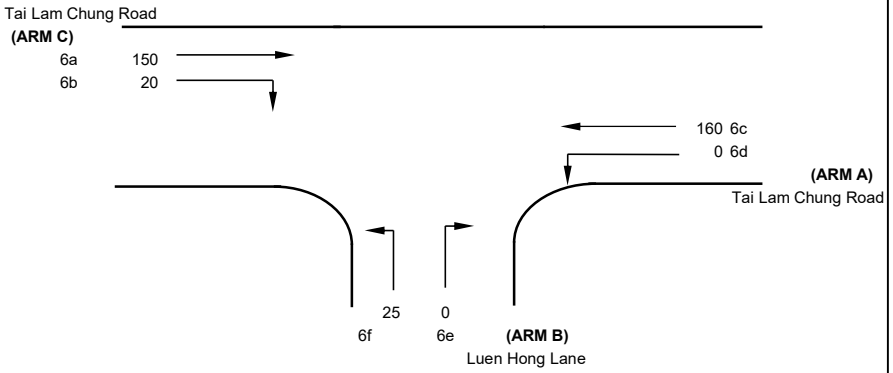
R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 326%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	20	20	0	1		0		1965	90	115	35	240	38%	15%	1891	0.127	0.127
↑	B	1	3.500	1	15			1		0		1965	45	1		46	97%		1791	0.026	
↱	B	1	3.500	1		15	0	0		0		2105		44	10	54		19%	2066	0.026	
Pedestrian Crossing				GM		FGM															
	Cp	2	min.	9	+	9	=	18	sec												

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2023 AM Observed Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	160	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	150	(pcu/hr)
q c-b	=	20	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	25	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	549
Q b-c	=	759
Q c-b	=	679
Q b-ac	=	759

CRITICAL DFC = 0.03

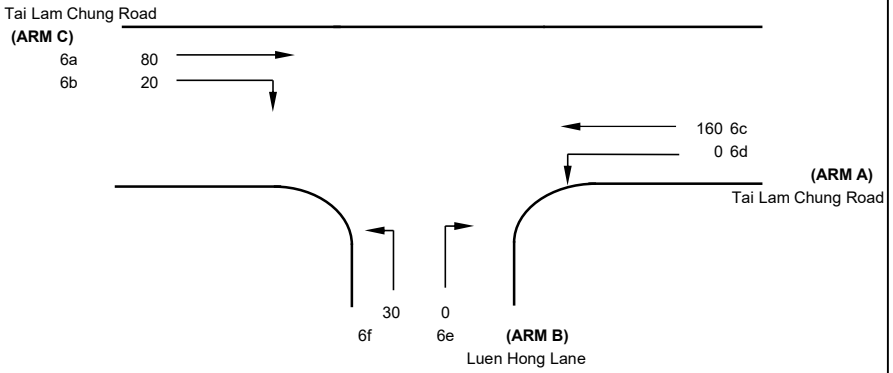
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.03
DFC c-b	=	0.03
DFC b-ac	=	0.03

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2023 AM Observed Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	160	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	80	(pcu/hr)
q c-b	=	20	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	30	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	561
Q b-c	=	759
Q c-b	=	679
Q b-ac	=	759

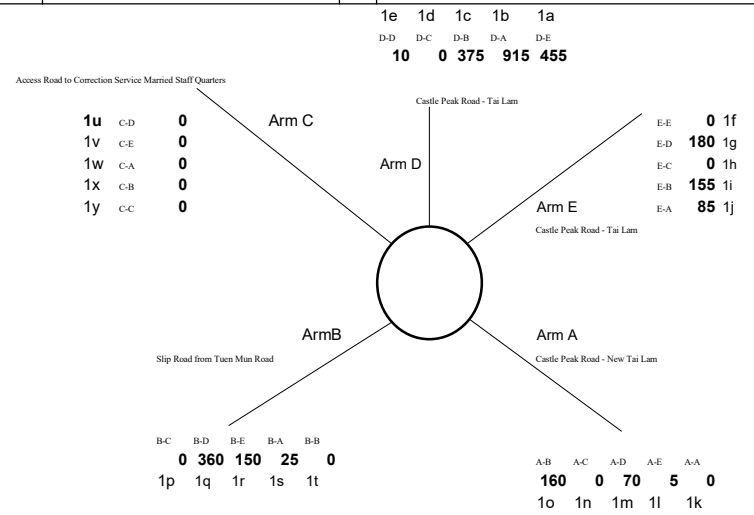
CRITICAL DFC = 0.04

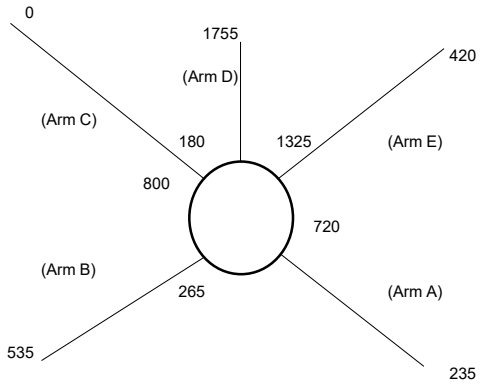
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.04
DFC c-b	=	0.03
DFC b-ac	=	0.04

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 AM Background Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





10

ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	235	535	0	1755	420
Qc= Circulating flow across entry (pcu/h)	720	265	800	180	1325
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2038	2034	645	2684	1151
DFC = Design flow/Capacity = Q/Qe	0.12	0.26	0.00	0.65	0.37

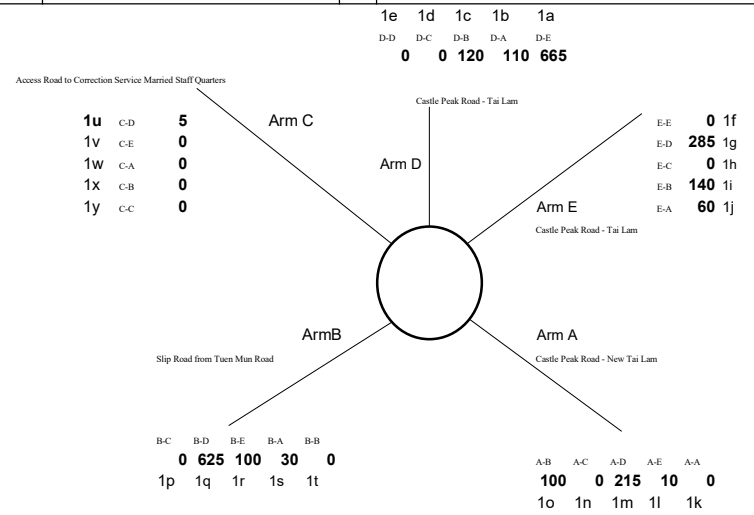
TOTAL ENTRY FLOWS = 2945 PCU

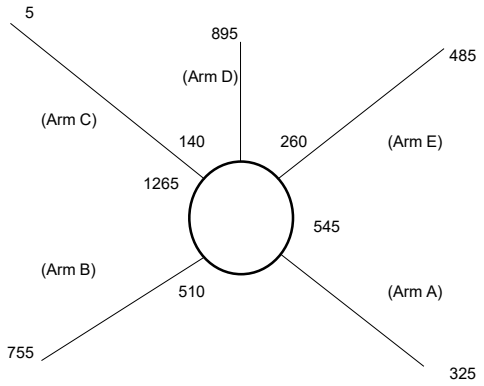
CRITICAL DFC = 0.65

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 PM Background Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





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ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	325	755	5	895	485
Qc= Circulating flow across entry (pcu/h)	545	510	1265	140	260
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2161	1886	483	2713	1774
DFC = Design flow/Capacity = Q/Qe	0.15	0.40	0.01	0.33	0.27

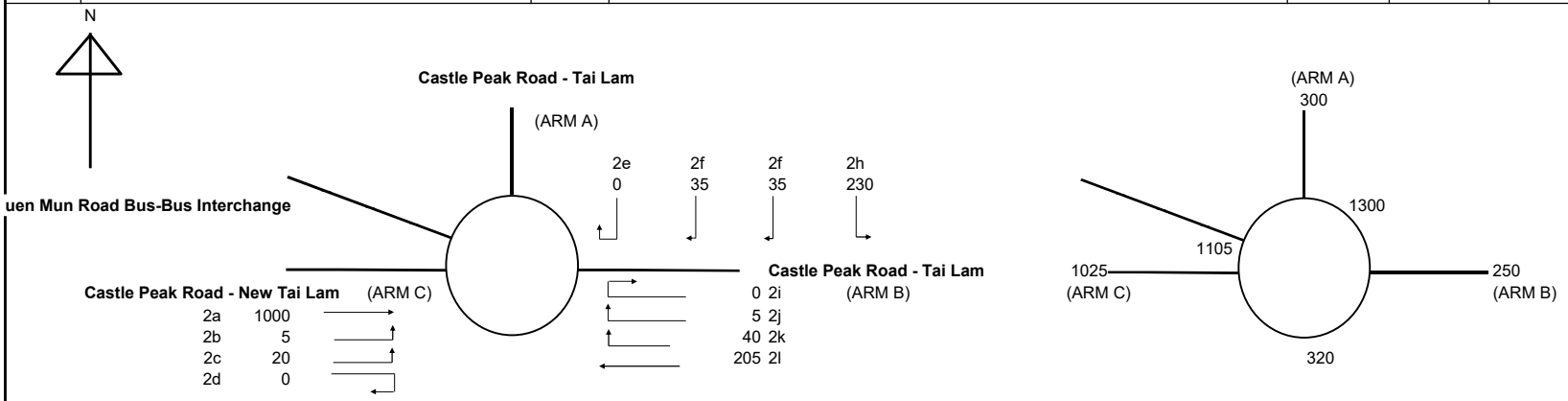
TOTAL ENTRY FLOWS = 2465 PCU

CRITICAL DFC = 0.40

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Background Traffic Flow - AM	Project No.	Prepared By	Checked By	Date
							9/十月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	300	250	1025	
Qc= Circulating flow across entry (pcu/h)	1105	1300	320	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1049	1791	3164	
DFC = Design flow/Capacity = Q/Qe	0.29	0.14	0.32	

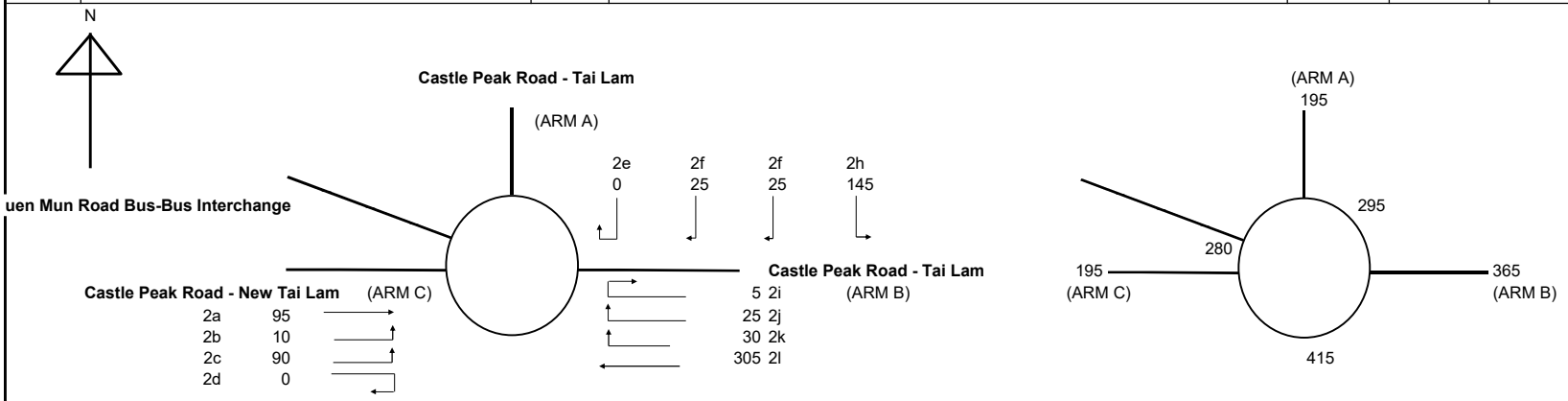
TOTAL ENTRY FLOWS 1575 PCU

CRITICAL DFC 0.32

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Background Traffic Flow - PM	Project No.	Prepared By	Checked By	Date
							9/十月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	195	365	195	
Qc= Circulating flow across entry (pcu/h)	280	295	415	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1498	2529	3083	
DFC = Design flow/Capacity = Q/Qe	0.13	0.14	0.06	

TOTAL ENTRY FLOWS 755 PCU

CRITICAL DFC 0.14

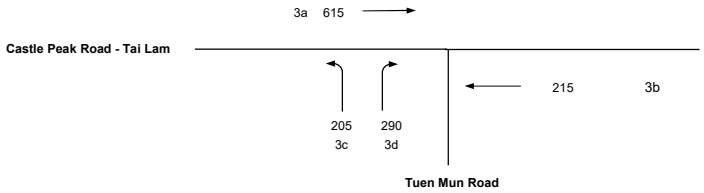
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 AM Background Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

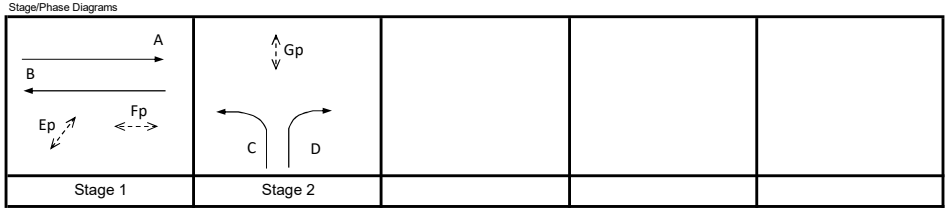
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	2		
Cycle time	C =	90	sec	
Sum(y)	Y =	0.265		
Lost time	L =	9	sec	
Total Flow	=	10,195	pcu	

Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	25	sec
Min. Cycle Time C_m	= L/(1-Y)	=	12	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	214.4	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	13	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 206%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		615		615			4100	0.150	0.150
↑	B	1	4.500	1				1		0		2065		215		215			2065	0.104	
↰	C	2	3.500	1	15			1		0		1965	205			205	100%		1786	0.115	0.115
↱	D	2	4.500	1		25	0	1		0		2065			290	290		100%	1948	0.149	

Pedestrian Crossing				GM		FGM			
Ep	1	min.	5	+	5	=	10	sec	
Fp	1	min.	5	+	6	=	11	sec	
Gp	2	min.	8	+	7	=	15	sec	

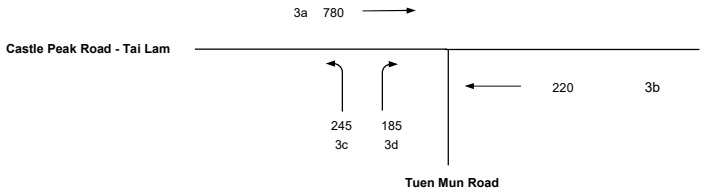
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 PM Background Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

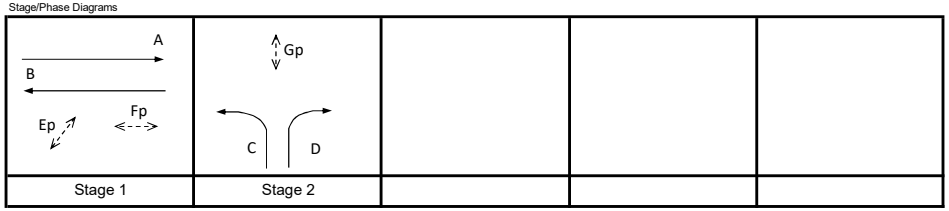
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.327	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	28	sec
Min. Cycle Time C_m	= L/(1-Y)	=	13	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	154.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	14	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 147%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		780		780			4100	0.190	0.190
↑	B	1	4.500	1				1		0		2065		220		220			2065	0.107	
↰	C	2	3.500	1	15			1		0		1965	245			245	100%		1786	0.137	0.137
↱	D	2	4.500	1		25	0	1		0		2065			185	185		100%	1948	0.095	

Pedestrian Crossing				GM		FGM				
	Ep	1	min.	5	+	5	=	10	sec	
	Fp	1	min.	5	+	6	=	11	sec	
	Gp	2	min.	8	+	7	=	15	sec	

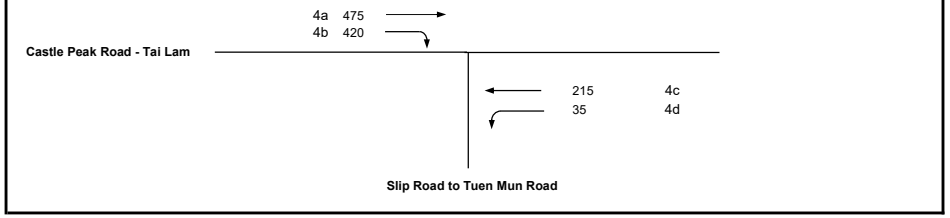
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 AM Background Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

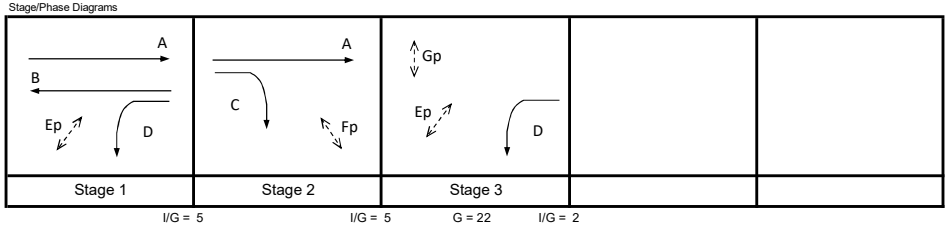
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.227	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	69	sec
Min. Cycle Time C_m	= L/(1-Y)	=	41	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	191.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	43	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 156%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		475		475			1965	0.242	
↑	B	1	3.500	1				0		0		2105		215		215			2105	0.102	0.102
↰	D	1,3	3.000	1	15			1		0		1915	35			35	100%		1741	0.020	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			420	420		100%	3376	0.124	0.124

Pedestrian Crossing			GM		FGM				
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

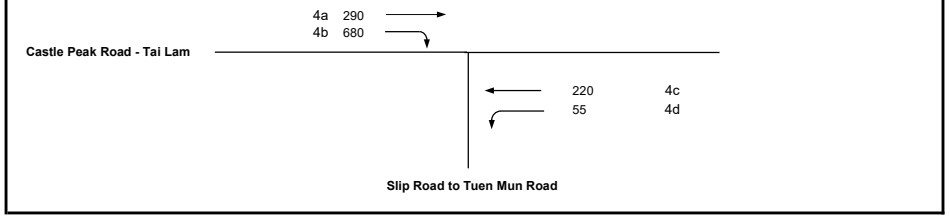
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 PM Background Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

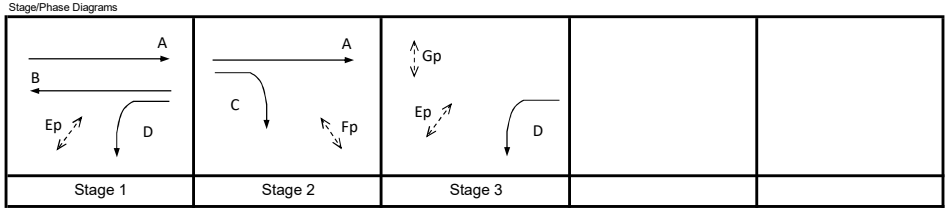
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.306	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	76	sec
Min. Cycle Time C_m	= L/(1-Y)	=	46	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	115.7	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	48	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 90%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		290		290			1965	0.148	
↑	B	1	3.500	1				0		0		2105		220		220			2105	0.105	0.105
↰	D	1,3	3.000	1	15			1		0		1915	55			55	100%		1741	0.032	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			680	680		100%	3376	0.201	0.201

Pedestrian Crossing			GM		FGM				
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

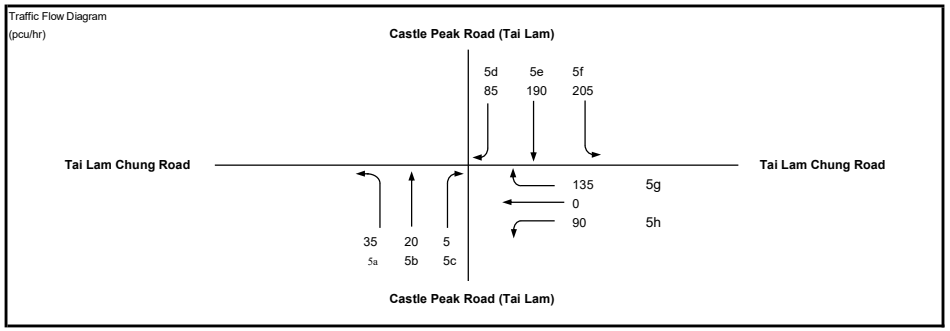
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2033 AM Background Traffic Flows	DESIGN:	CHECK:	JOB NO:	DATE: 十月 25

J5

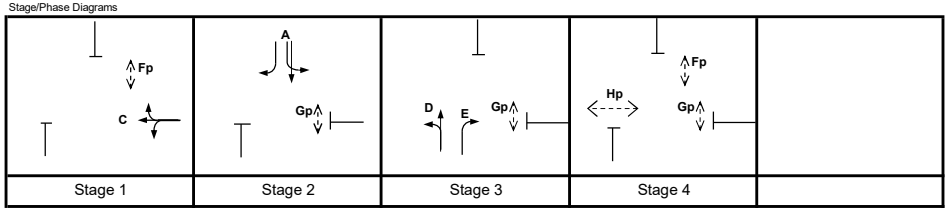
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.340	
Lost time	L =	35	sec
Total Flow	=	7,950	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	87	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	53	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.638	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	87.5	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	56	sec
Y_{max}	$= 1-L/C$	=	0.611	

Stage/Phase Diagrams



Critical Case : C,A,D,Hp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 62%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	2	3.300	1	12	10	0	1		0		1945	205	190	0	395	52%	0%	1827	0.216	0.216
	C	1	3.600	1	12	25	0	1		0		1975	90	0	135	225	40%	60%	1819	0.124	0.124
	D	3	3.300	1	15			1		0		1945	35	20		55	64%		1829	0.030	
	E	3	3.300	1		10	0	0		0		2085			5	5		100%	1813	0.003	

Pedestrian Crossing			GM		FGM			
Fp	1,4	min.	6	+	12	=	18	sec
Gp	2,3,4	min.	6	+	11	=	17	sec
Hp	4	min.	5	+	11	=	16	sec

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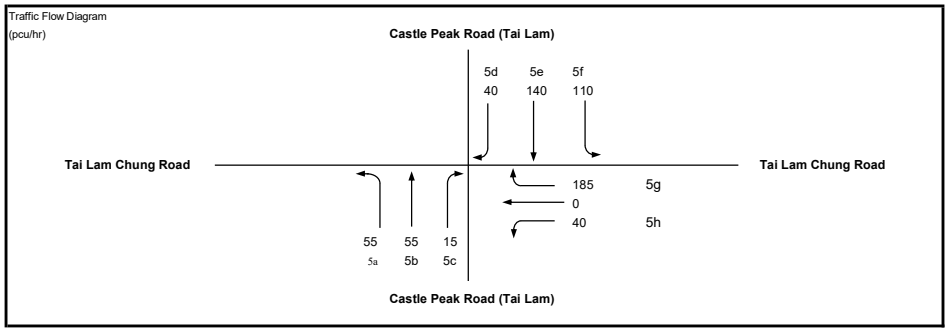
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2033 PM Background Traffic Flows	DESIGN:	CHECK:	JOB NO:	DATE: 十月 25

J5

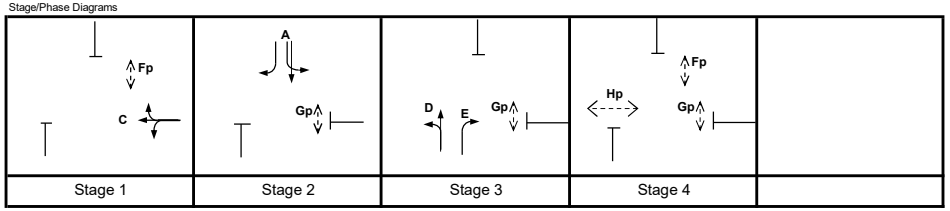
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.317	
Lost time	L =	29	sec
Total Flow	=	7,950	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	71	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	42	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.683	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	115.3	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	45	sec
Y_{max}	$= 1-L/C$	=	0.678	

Stage/Phase Diagrams



Critical Case : C,A,D,Hp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 92%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	A	2	3.300	1	12	10	0	1		0		1945	110	140	0	250	44%	0%	1844	0.136	0.136
	C	1	3.600	1	12	25	0	1		0		1975	40	0	185	225	18%	82%	1843	0.122	0.122
	D	3	3.300	1	15			1		0		1945	55	55		110	50%		1852	0.059	0.059
	E	3	3.300	1		10	0	0		0		2085			15	15		100%	1813	0.008	

Pedestrian Crossing			GM		FGM			
Fp	1,4	min.	6	+	12	=	18	sec
Gp	2,3,4	min.	6	+	11	=	17	sec
Hp	4	min.	5	+	11	=	16	sec

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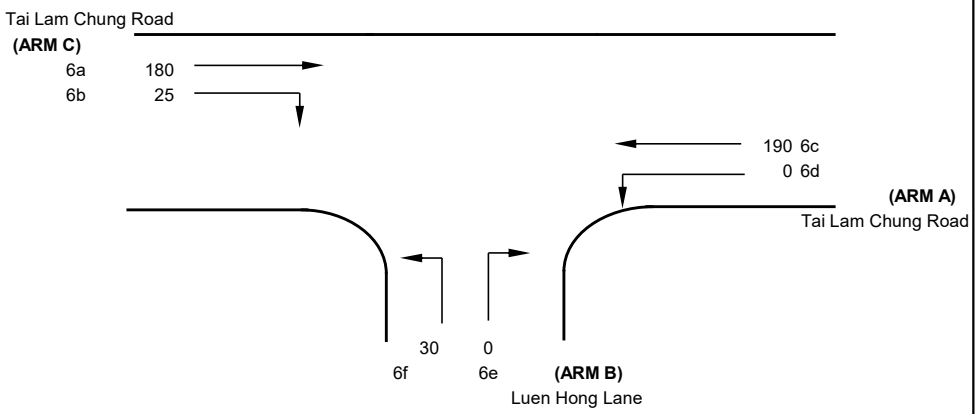
PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 AM Background Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



J6

NOTES : (GEOMETRIC INPUT DATA)

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	180	(pcu/hr)
q c-b	=	25	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	30	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	534
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.04

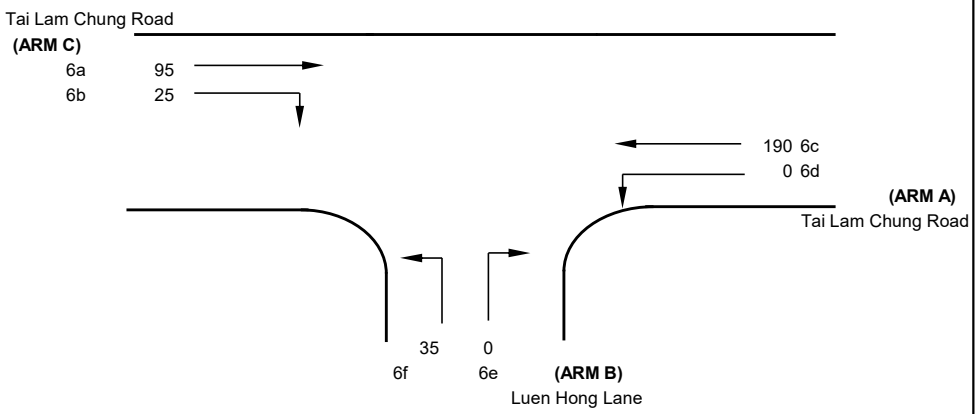
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.04
DFC c-b	=	0.04
DFC b-ac	=	0.04

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 PM Background Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



J6

NOTES : (GEOMETRIC INPUT DATA)

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	95	(pcu/hr)
q c-b	=	25	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	35	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	548
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

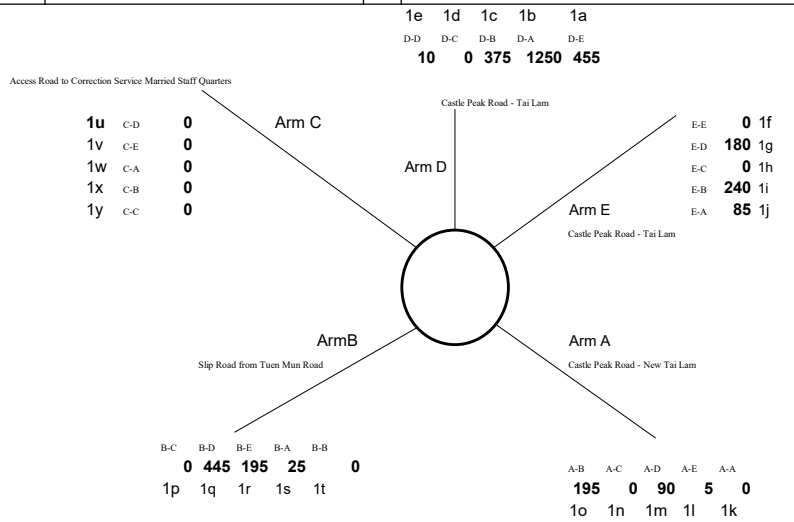
CRITICAL DFC = 0.05

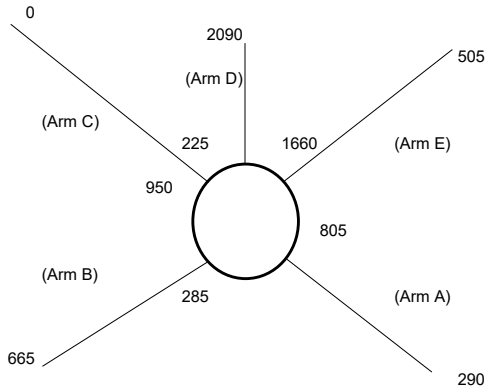
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.05
DFC c-b	=	0.04
DFC b-ac	=	0.05

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 AM Reference Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





16

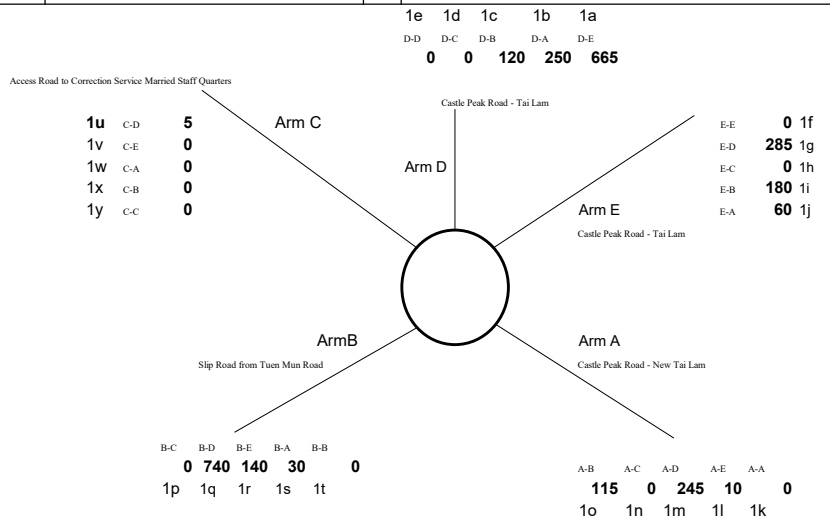
ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	290	665	0	2090	505
Qc= Circulating flow across entry (pcu/h)	805	285	950	225	1660
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1979	2022	593	2650	955
DFC = Design flow/Capacity = Q/Qe	0.15	0.33	0.00	0.79	0.53

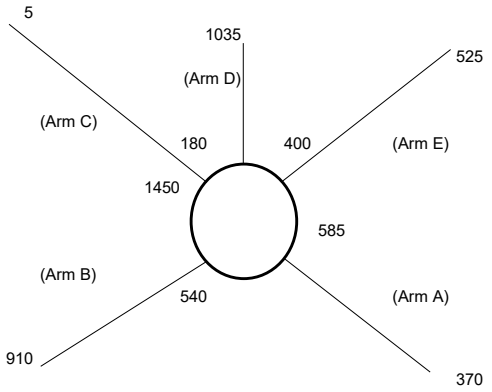
TOTAL ENTRY FLOWS = 3550 PCU

CRITICAL DFC = 0.79

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 PM Reference Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





17

ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	370	910	5	1035	525
Qc= Circulating flow across entry (pcu/h)	585	540	1450	180	400
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2133	1868	419	2684	1692
DFC = Design flow/Capacity = Q/Qe	0.17	0.49	0.01	0.39	0.31

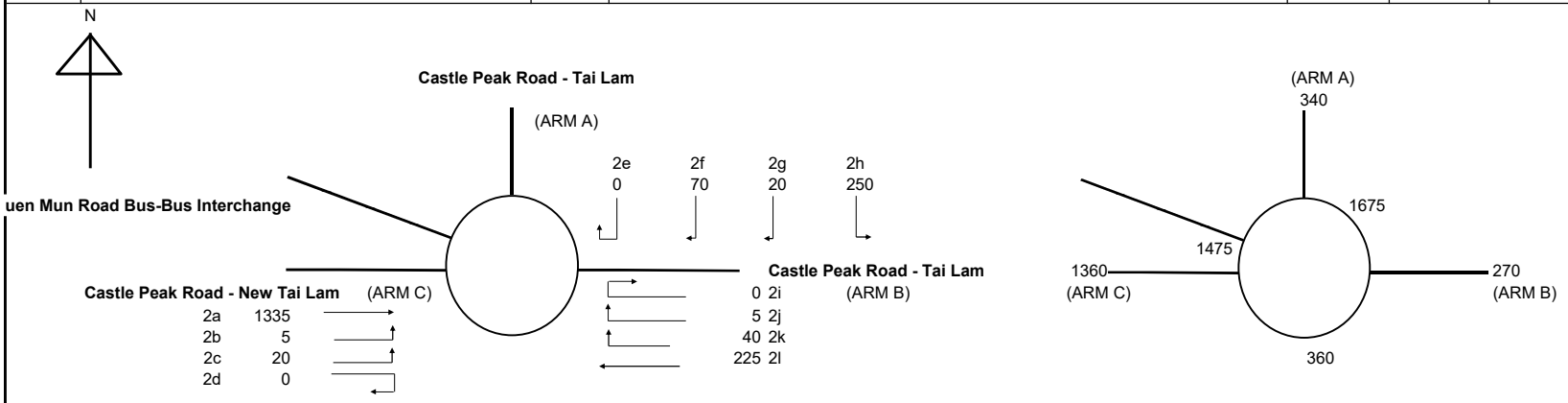
TOTAL ENTRY FLOWS = 2845 PCU

CRITICAL DFC = 0.49

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Reference Traffic Flow - AM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	340	270	1360	
Qc= Circulating flow across entry (pcu/h)	1475	1675	360	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	847	1516	3130	
DFC = Design flow/Capacity = Q/Qe	0.40	0.18	0.43	

TOTAL ENTRY FLOWS 1970 PCU

CRITICAL DFC 0.43

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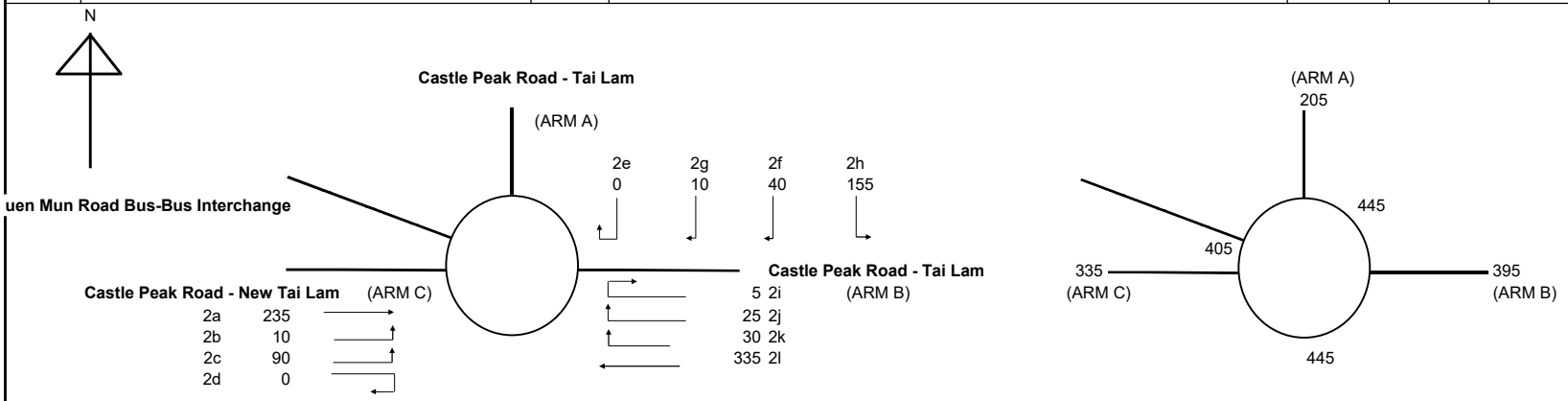
ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Reference Traffic Flow - PM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	205	395	335	
Qc= Circulating flow across entry (pcu/h)	405	445	445	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1430	2419	3057	
DFC = Design flow/Capacity = Q/Qe	0.14	0.16	0.11	

TOTAL ENTRY FLOWS 935 PCU

CRITICAL DFC 0.16

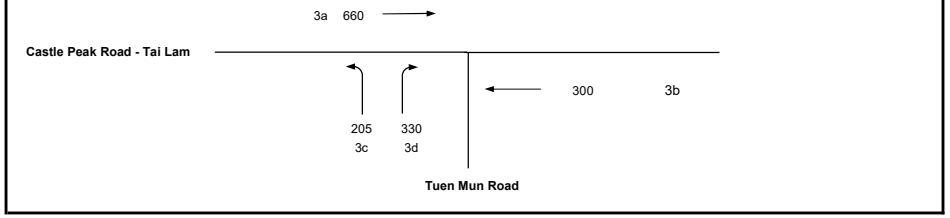
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 AM Reference Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

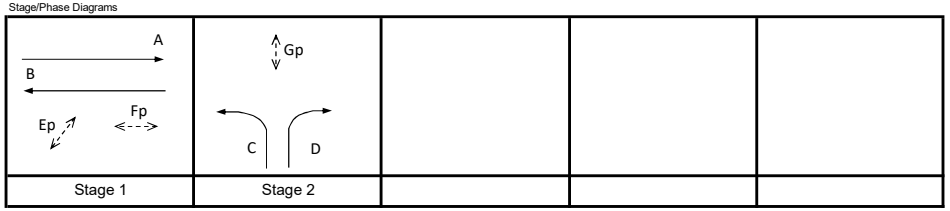
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.276	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	26	sec
Min. Cycle Time C_m	= L/(1-Y)	=	12	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	201.9	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	13	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 194%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		660		660			4100	0.161	0.161
↑	B	1	4.500	1				1		0		2065		300		300			2065	0.145	
↰	C	2	3.500	1	15			1		0		1965	205			205	100%		1786	0.115	0.115
↱	D	2	4.500	1		25	0	1		0		2065			330	330		100%	1948	0.169	

Pedestrian Crossing				GM		FGM				
	Ep	1	min.	5	+	5	=	10	sec	
	Fp	1	min.	5	+	6	=	11	sec	
	Gp	2	min.	8	+	7	=	15	sec	

Job No.	:	Designed By	
Job Title	:	Checked By	
Junction Name	: Castle Peak Road - Tai Lam / Tuen Mun Road	Reviewed By	
Junction No	: J3		
Design Year	: 2033	Design Date	十月 20 6:11:01 下午
AM/PM	: PM		
State	: Reference Traffic Flows		

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

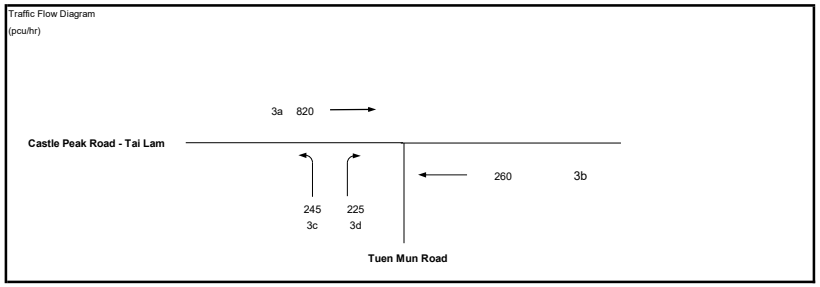
AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 PM Reference Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

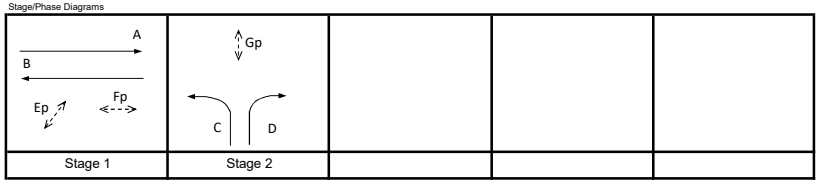
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.337	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	28	sec
Min. Cycle Time C_m	= L/(1-Y)	=	14	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	146.9	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	14	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 140%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		820		820			4100	0.200	0.200
↑	B	1	4.500	1				1		0		2065		260		260			2065	0.126	
↰	C	2	3.500	1	15			1		0		1965	245			245	100%		1786	0.137	0.137
↱	D	2	4.500	1		25	0	1		0		2065			225	225		100%	1948	0.115	
Pedestrian Crossing				GM		FGM															
	Ep	1	min.	5	+	5	=	10	sec												
	Fp	1	min.	5	+	6	=	11	sec												
	Gp	2	min.	8	+	7	=	15	sec												

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2033	Design Date	十月 20	6:11:01 下午
AM/PM	:	AM			
State	:	Reference Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

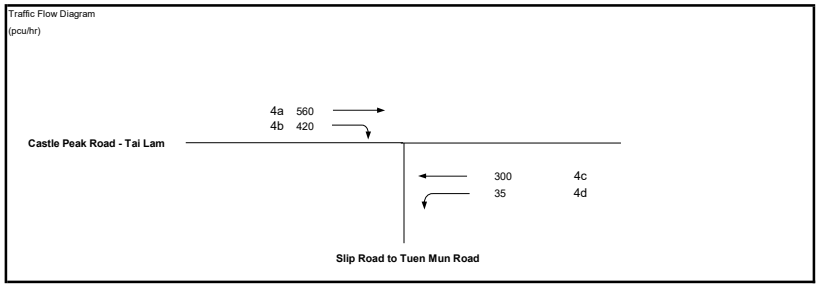
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 AM Reference Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

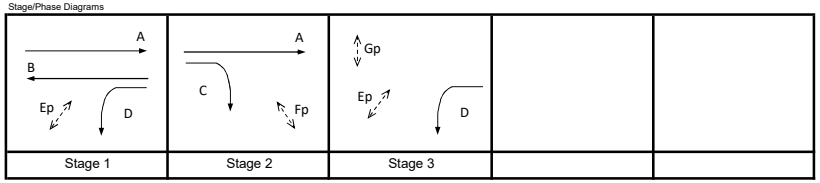
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.267	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y) =		72	sec
Min. Cycle Time C_m	= L/(1-Y)	=	44	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	147.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	45	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 117%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		560		560			1965	0.285	
↑	B	1	3.500	1				0		0		2105		300		300			2105	0.143	0.143
↰	D	1,3	3.000	1	15			1		0		1915	35			35	100%		1741	0.020	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			420	420		100%	3376	0.124	0.124

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2033	Design Date	十月 20	6:11:01 下午
AM/PM	:	PM			
State	:	Reference Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

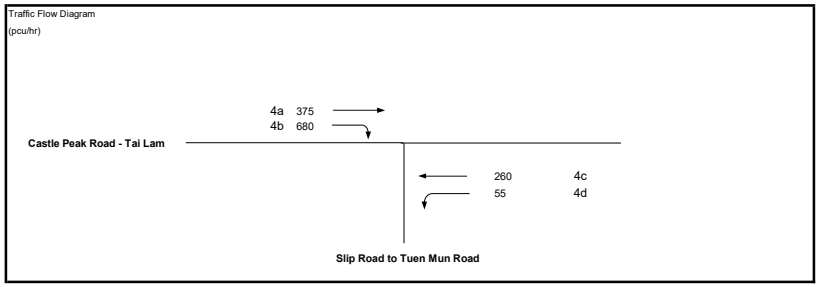
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 PM Reference Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

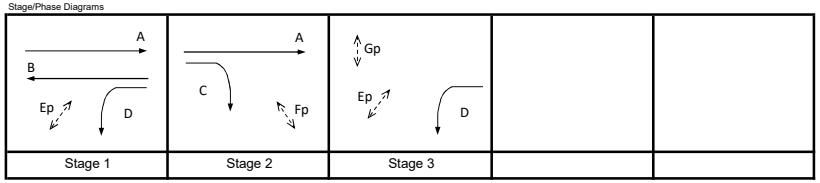
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.325	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	79	sec
Min. Cycle Time C_m	= L/(1-Y)	=	47	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	103.1	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	50	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 78%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		375		375			1965	0.191	
↑	B	1	3.500	1				0		0		2105		260		260			2105	0.124	0.124
↰	D	1,3	3.000	1	15			1		0		1915	55			55	100%		1741	0.032	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			680	680		100%	3376	0.201	0.201

Pedestrian Crossing				GM		FGM				
	Ep	1,3	min.	7	+	14	=	21	sec	
	Fp	2	min.	5	+	7	=	12	sec	
	Gp	3	min.	11	+	11	=	22	sec	

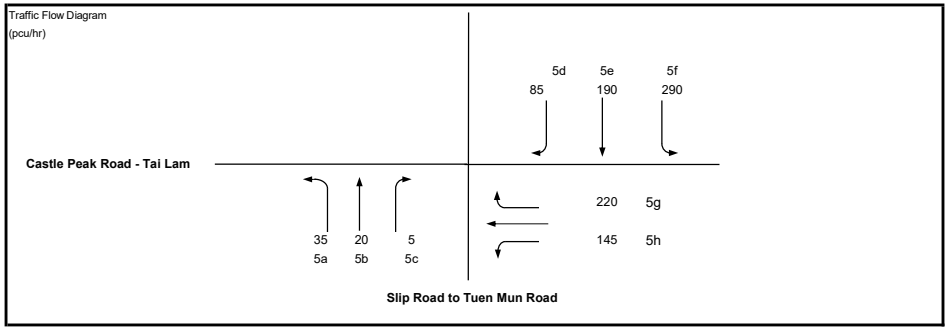
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2033 AM Reference Traffic Flows with planned improvement scheme	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

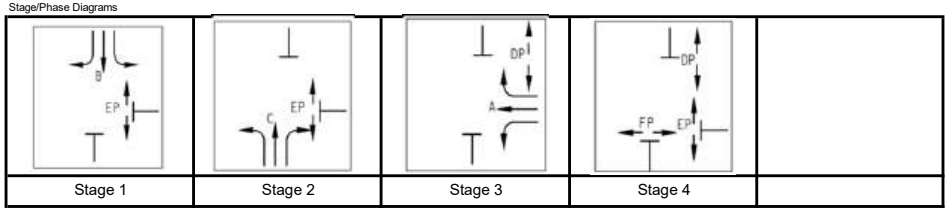
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.463	
Lost time	L =	39	sec
Total Flow	=	10,075	pcu

Optimum Cycle C_o	= (1.5×L+5)/(1-Y) =	118	sec
Min. Cycle Time C_m	= L/(1-Y) =	73	sec
Y_{ult}	= 0.9-0.0075×L =	0.608	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100% =	31.1	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y) =	80	sec
Y_{max}	= 1-L/C =	0.567	

Stage/Phase Diagrams



Stage 1	Stage 2	Stage 3	Stage 4	
I/G = 5	G = 5 I/G = 6		I/G = 7 G = 16 I/G = 2	5

Critical Case : B,C,A,Fp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 10%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	B	1	3.500	1	12	0	0	1		0		1965	290	190		480	60%		1827	0.263	0.263
	B	1	3.500	1	0	25	0	0		0		2105			85	85		100%	1986	0.043	
	A	3	3.600	1	12	25	0	1		0		1975	145	0	220	365	40%	60%	1819	0.201	0.201
	C	2	3.300	1	15			1		0		1945	35	20		55	64%		1829	0.030	
	C	2	3.300	1		10	0	0		0		2085			5	5		100%	1813	0.003	

#DIV/0!

Pedestrian Crossing			GM		FGM			
Dp	1,4	min.	6	+	12	=	18	sec
Ep	1,2,4	min.	6	+	11	=	17	sec
Fp	4	min.	5	+	11	=	16	sec

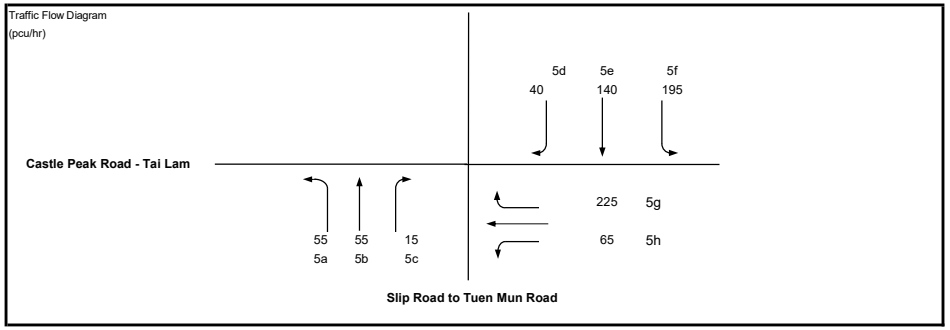
JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Castle Peak Road - Tai Lam / Tai Lam Chung Road	2033 PM Reference Traffic Flows with planned improvement scheme	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

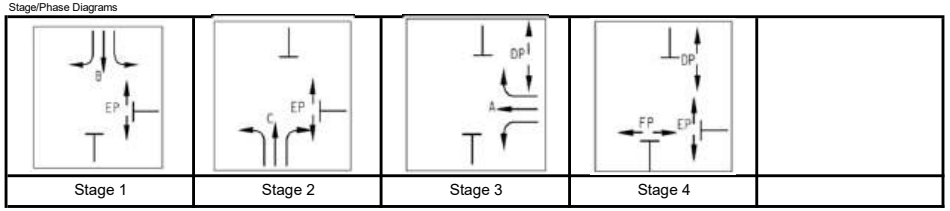
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.402	
Lost time	L =	33	sec
Total Flow	=	10,035	pcu

Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	91	sec
Min. Cycle Time C_m	= L/(1-Y)	=	55	sec
Y_{ult}	= 0.9-0.0075×L	=	0.653	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	62.3	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	60	sec
Y_{max}	= 1-L/C	=	0.633	

Stage/Phase Diagrams



I/G = 5 I/G = 6 I/G = 7 G = 16 I/G = 2

5

Critical Case : B,C,A,Fp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 42%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
	B	1	3.300	1	12	0	0	1		0		1945	195	140		335	58%		1813	0.185	0.185
	B	1	3.300	1	0	25	0	0		0		2085			40	40		100%	1967	0.020	
	A	3	3.600	1	12	25	0	1		0		1975	65	0	225	290	22%	78%	1838	0.158	0.158
	C	2	3.300	1	15			1		0		1945	55	55		110	50%		1852	0.059	0.059
	C	2	3.300	1		10	0	0		0		2085			15	15		100%	1813	0.008	

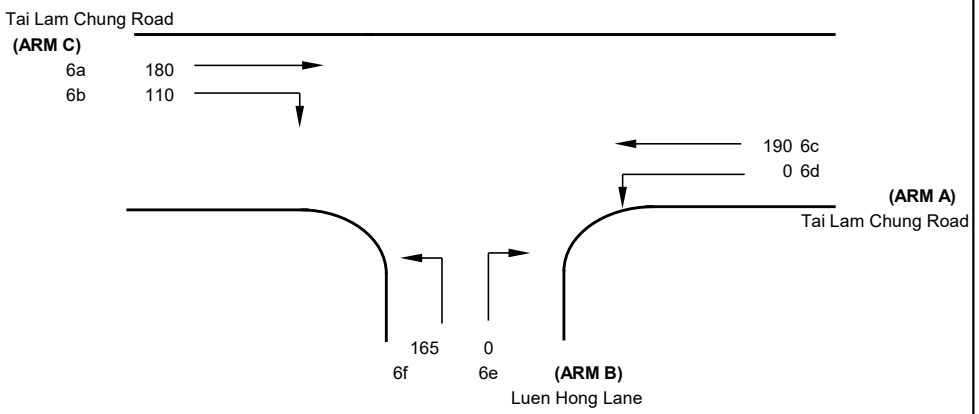
#DIV/0!

Pedestrian Crossing				GM		FGM			
Dp	1,4	min.	6	+	12	=	18	sec	
Ep	1,2,4	min.	6	+	11	=	17	sec	
Fp	4	min.	5	+	11	=	16	sec	

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 AM Reference Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	180	(pcu/hr)
q c-b	=	110	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	165	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	501
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.22

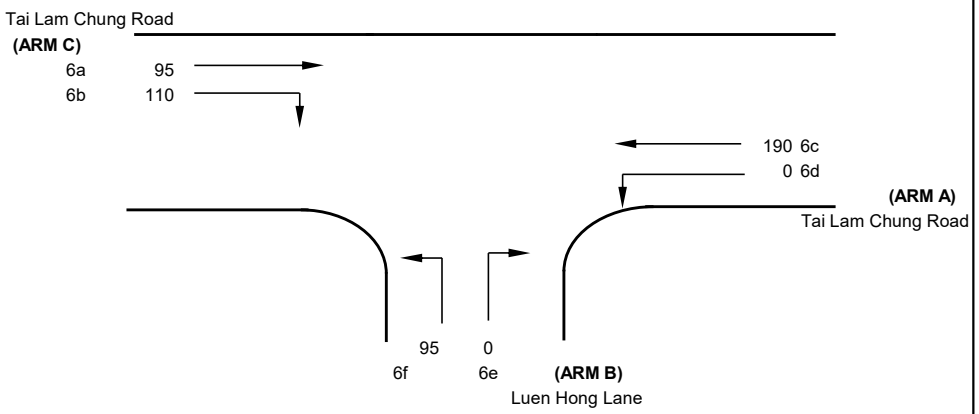
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.22
DFC c-b	=	0.16
DFC b-ac	=	0.22

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 PM Reference Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	95	(pcu/hr)
q c-b	=	110	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	95	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	516
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.16

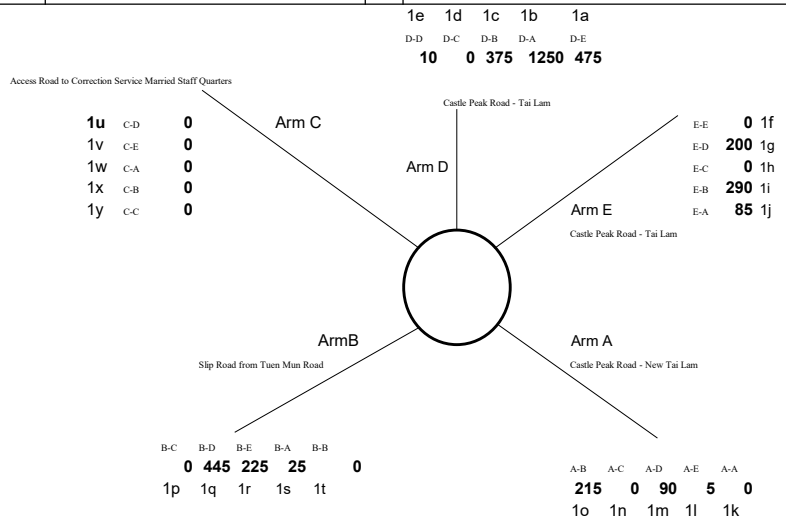
COMPARISION OF DESIGN FLOW TO CAPACITY :

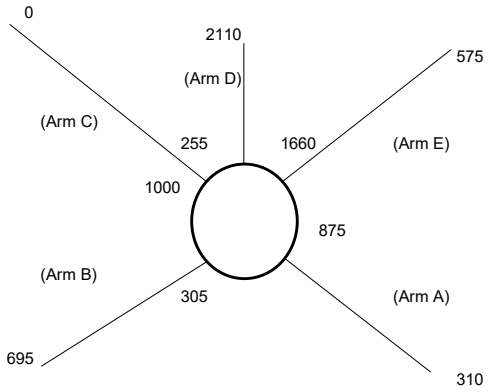
DFC b-a	=	0.00
DFC b-c	=	0.13
DFC c-b	=	0.16
DFC b-ac	=	0.13

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 AM Design Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	310	695	0	2110	575
Qc= Circulating flow across entry (pcu/h)	875	305	1000	255	1660
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1930	2010	575	2628	955
DFC = Design flow/Capacity = Q/Qe	0.16	0.35	0.00	0.80	0.60

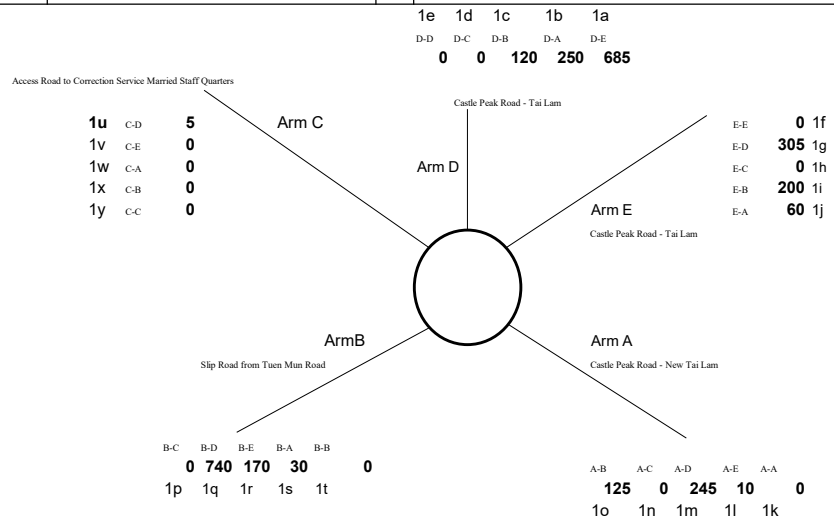
TOTAL ENTRY FLOWS = 3690 PCU

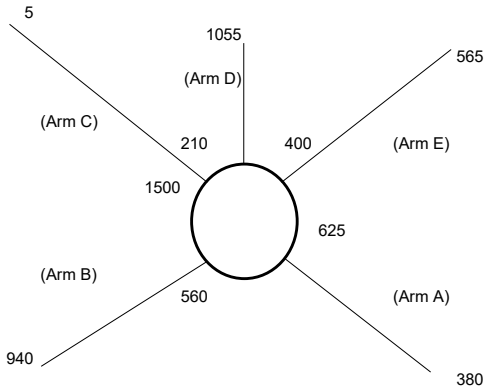
CRITICAL DFC = 0.80

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 PM Design Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十月 2025





ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	380	940	5	1055	565
Qc= Circulating flow across entry (pcu/h)	625	560	1500	210	400
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2105	1856	401	2661	1692
DFC = Design flow/Capacity = Q/Qe	0.18	0.51	0.01	0.40	0.33

TOTAL ENTRY FLOWS = 2945 PCU

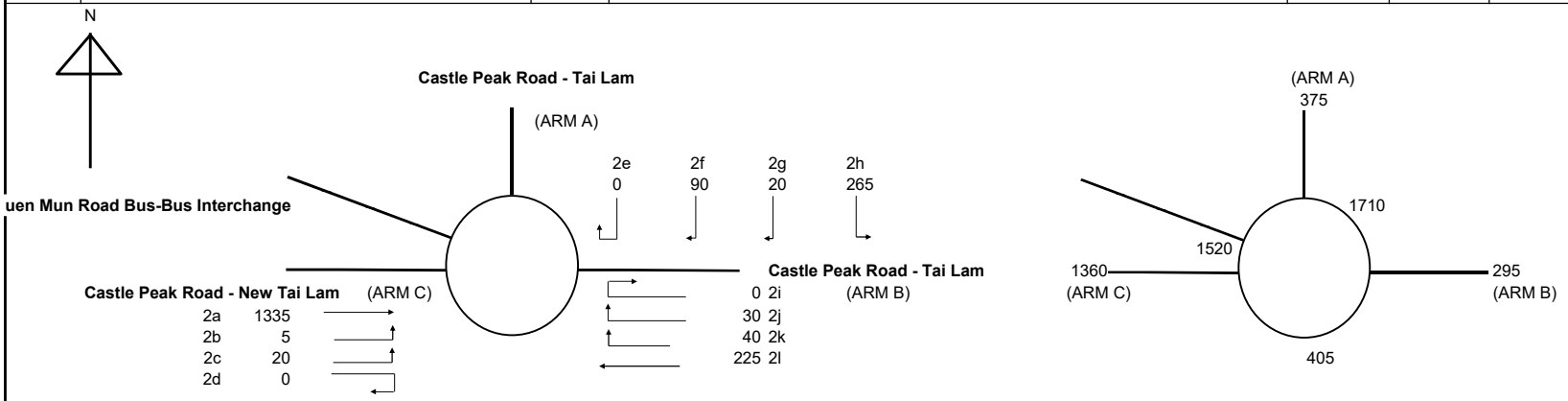
CRITICAL DFC = 0.51

Filename : Tai Lam Chung Signal Calculation.xlsm / J1_DES_PM

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Design Traffic Flow - AM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	375	295	1360	
Qc= Circulating flow across entry (pcu/h)	1520	1710	405	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	823	1490	3091	
DFC = Design flow/Capacity = Q/Qe	0.46	0.20	0.44	

TOTAL ENTRY FLOWS 2030 PCU

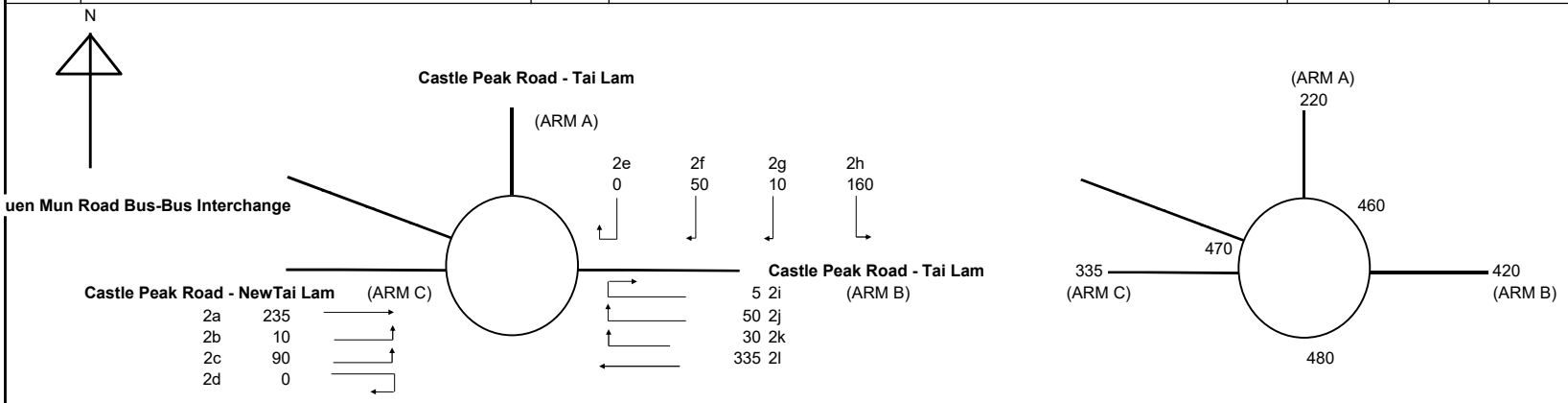
CRITICAL DFC 0.46

Filename : https://aecom-my.sharepoint.com/personal/gary_lei_aecom_com/Docume

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Design Traffic Flow - PM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	220	420	335	
Qc= Circulating flow across entry (pcu/h)	470	460	480	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1395	2408	3028	
DFC = Design flow/Capacity = Q/Qe	0.16	0.17	0.11	

TOTAL ENTRY FLOWS 975 PCU

CRITICAL DFC 0.17

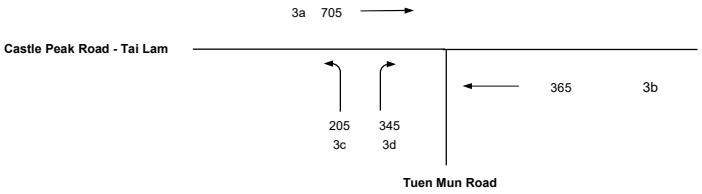
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 AM Design Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

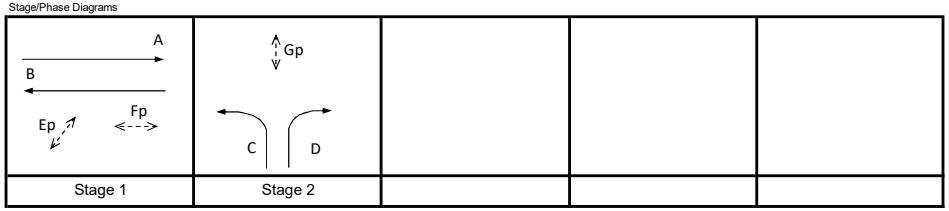
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	2	
Cycle time	C =	90	sec
Sum(y)	Y =	0.287	
Lost time	L =	9	sec
Total Flow	=	10,195	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	26	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	13	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.833	
R.C.$_{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	190.4	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	13	sec
Y_{max}	$= 1-L/C$ =	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 183%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		705		705			4100	0.172	0.172
↑	B	1	4.500	1				1		0		2065		365		365			2065	0.177	
↰	C	2	3.500	1	15			1		0		1965	205			205	100%		1786	0.115	0.115
↱	D	2	4.500	1		25	0	1		0		2065			345	345		100%	1948	0.177	

Pedestrian Crossing			GM		FGM			
Ep	1	min.	5	+	5	=	10	sec
Fp	1	min.	5	+	6	=	11	sec
Gp	2	min.	8	+	7	=	15	sec

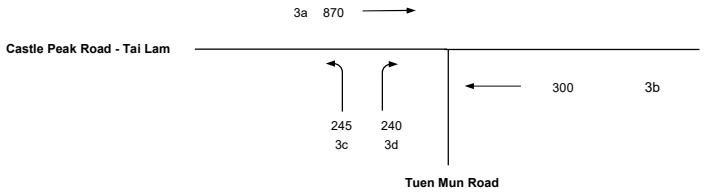
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 PM Design Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

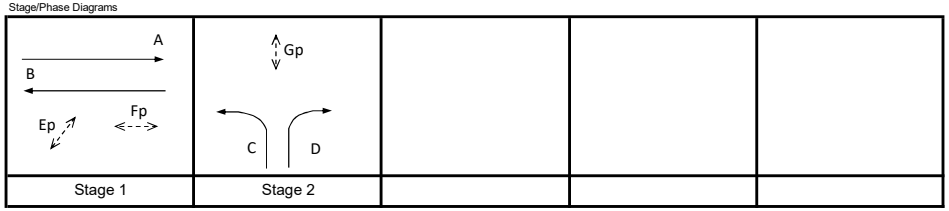
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	2	
Cycle time	C =	90	sec
Sum(y)	Y =	0.349	
Lost time	L =	9	sec
Total Flow	=	10,195	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	28	sec
Min. Cycle Time C_m	= L/(1-Y) =	14	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.833	
R.C.$_{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	138.3	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	15	sec
Y_{max}	= 1-L/C =	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 132%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		870		870			4100	0.212	0.212
↑	B	1	4.500	1				1		0		2065		300		300			2065	0.145	
↰	C	2	3.500	1	15			1		0		1965	245			245	100%		1786	0.137	0.137
↱	D	2	4.500	1		25	0	1		0		2065			240	240		100%	1948	0.123	

Pedestrian Crossing				GM		FGM			
Ep	1	min.	5	+	5	=	10	sec	
Fp	1	min.	5	+	6	=	11	sec	
Gp	2	min.	8	+	7	=	15	sec	

JUNCTION CAPACITY CALCULATION

AECOM

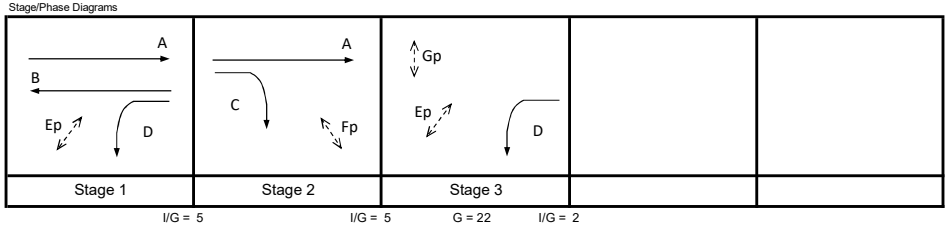
Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 AM Design Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

Traffic Flow Diagram
(pcu/hr)

No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.298	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	75	sec
Min. Cycle Time C_m	= L/(1-Y)	=	46	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	121.6	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	48	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 95%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		620		620			1965	0.316	
↑	B	1	3.500	1				0		0		2105		365		365			2105	0.173	0.173
↰	D	1,3	3.000	1	15			1		0		1915	55			55	100%		1741	0.032	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			420	420		100%	3376	0.124	0.124

Pedestrian Crossing			GM		FGM				
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

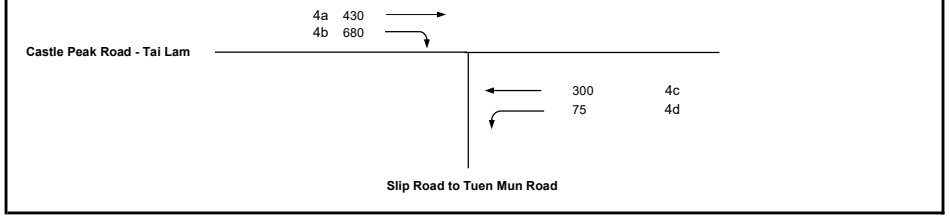
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 PM Design Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

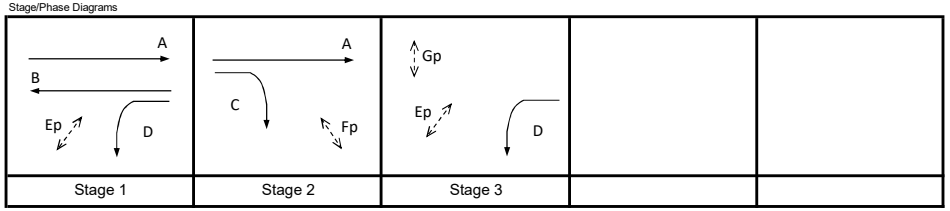
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	90	sec
Sum(y)	Y =	0.344	
Lost time	L =	32	sec
Total Flow	=	9,564	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	81	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	49	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.660	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	91.9	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	52	sec
Y_{max}	$= 1-L/C$	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 69%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		430		430			1965	0.219	
↑	B	1	3.500	1				0		0		2105		300		300			2105	0.143	0.143
↰	D	1,3	3.000	1	15			1		0		1915	75			75	100%		1741	0.043	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			680	680		100%	3376	0.201	0.201

Pedestrian Crossing			GM		FGM				
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

JUNCTION CAPACITY CALCULATION

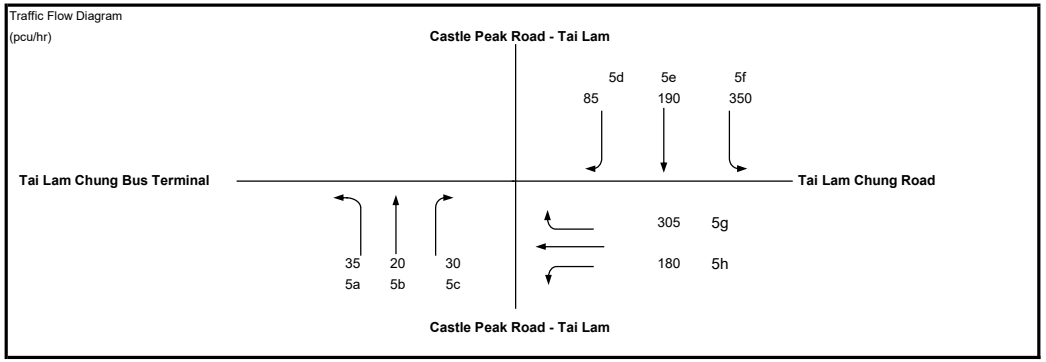
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Design Traffic Flows with proposed improvement scheme	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

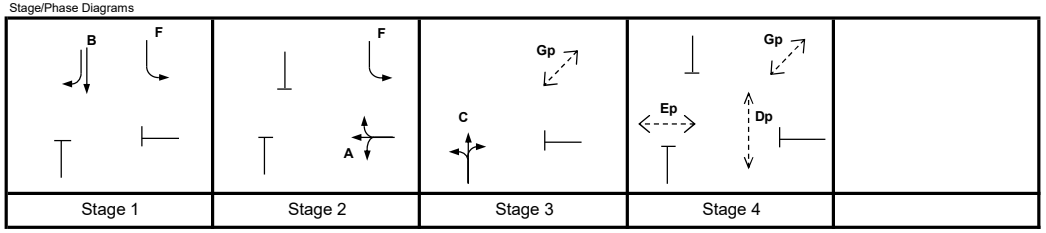
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.426	
Lost time	L =	37	sec
Total Flow	=	9,669	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	105	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	64	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.623	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	46.2	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	70	sec
Y_{max}	$= 1-L/C$	=	0.589	

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 24%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
↓	B	1	3.500	1		25	0	0		0	-421	2105		190	85	275		31%	1653	0.166	0.166	5
↑	C	2	3.380	1	30			1		0		1953	35	6		41	85%		1873	0.022		1
↑→	C	2	3.370	1		25	0	0		0		2092		14	30	44		68%	2010	0.022		1
↑	A	3	3.600	1	30	25	0	1		0		1975	180	0	305	485	37%	63%	1870	0.259	0.259	9
→	F	1,2	3.500	1	15			1		0		1965	350			350	100%		1786	0.196		6

Pedestrian Crossing			GM		FGM				
Dp	4	min.	5	+	7	=	12	sec	
Ep	4	min.	5	+	10	=	15	sec	
Gp	3,4	min.	5	+	5	=	10	sec	

JUNCTION CAPACITY CALCULATION

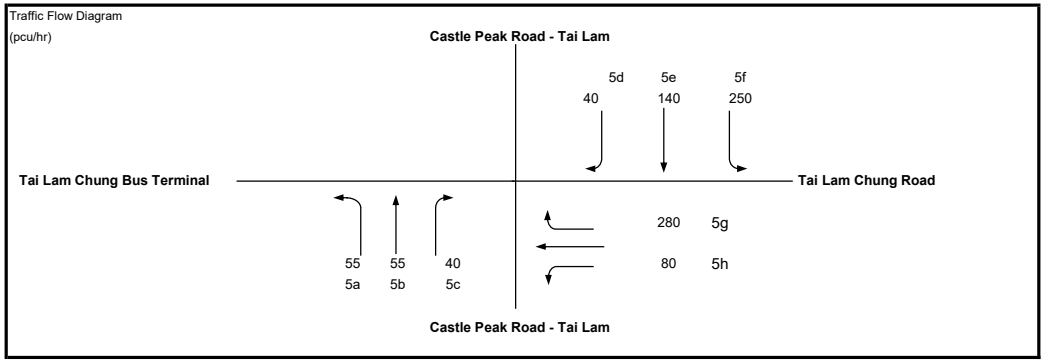
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Design Traffic Flows with planned improvement scheme	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

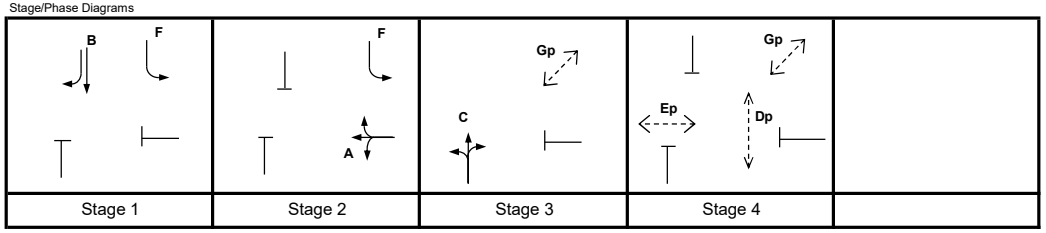
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.339	
Lost time	L =	36	sec
Total Flow	=	9,669	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	89	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	55	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.630	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	85.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	58	sec
Y_{max}	$= 1-L/C$	=	0.600	

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 59%

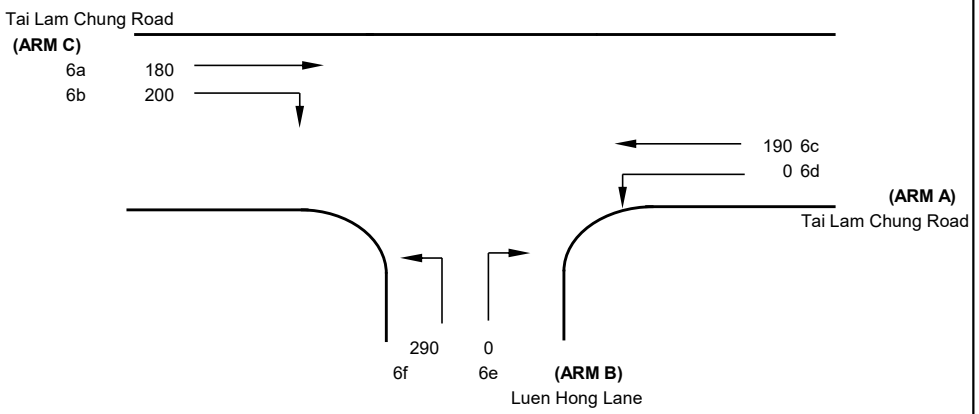
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
	B	1	3.500	1		25	0	0		0	-421	2105		140	40	180		22%	1662	0.108	0.108	3
	C	2	3.380	1	30			1		0		1953	55	17		72	76%		1881	0.038	0.038	1
	C	2	3.370	1		25	0	0		0		2092		38	40	78		51%	2029	0.038		1
	A	3	3.600	1	30	25	0	1		0		1975	80	0	280	360	22%	78%	1867	0.193	0.193	6
	F	1,2	3.500	1	15			1		0		1965	250			250	100%		1786	0.140		4

Pedestrian Crossing			GM		FGM			
Dp	4	min.	5	+	7	=	12	sec
Ep	4	min.	5	+	10	=	15	sec
Gp	3,4	min.	5	+	5	=	10	sec

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 AM Design Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	180	(pcu/hr)
q c-b	=	200	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	290	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	467
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.39

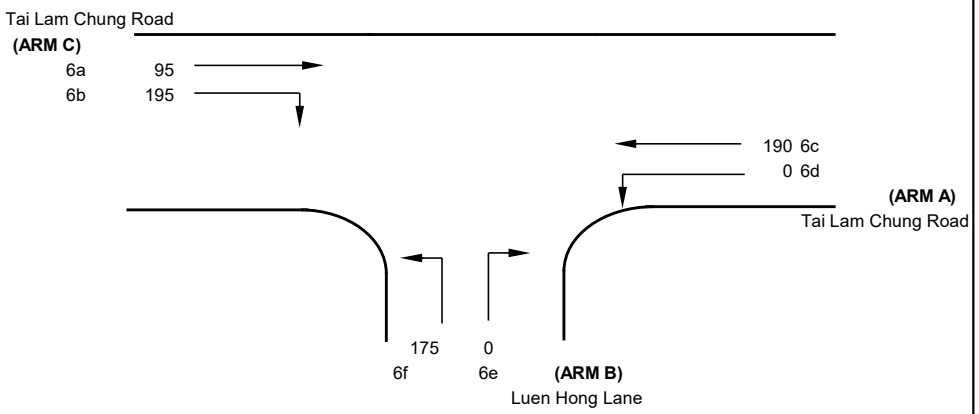
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.39
DFC c-b	=	0.30
DFC b-ac	=	0.39

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 PM Design Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	95	(pcu/hr)
q c-b	=	195	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	175	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	483
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.29

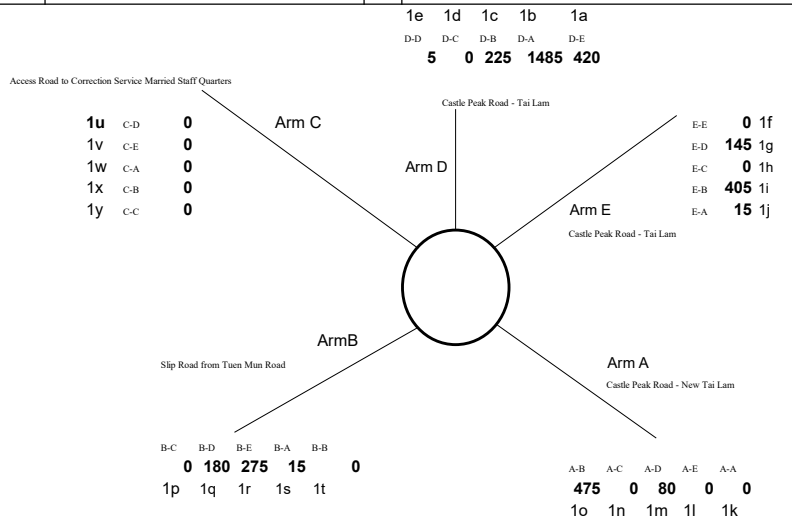
COMPARISION OF DESIGN FLOW TO CAPACITY :

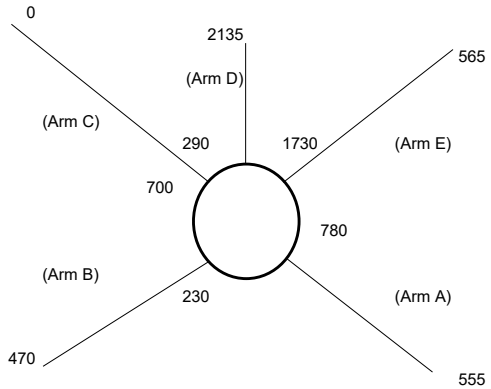
DFC b-a	=	0.00
DFC b-c	=	0.23
DFC c-b	=	0.29
DFC b-ac	=	0.23

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2030 AM Construction Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十二月 2025





29

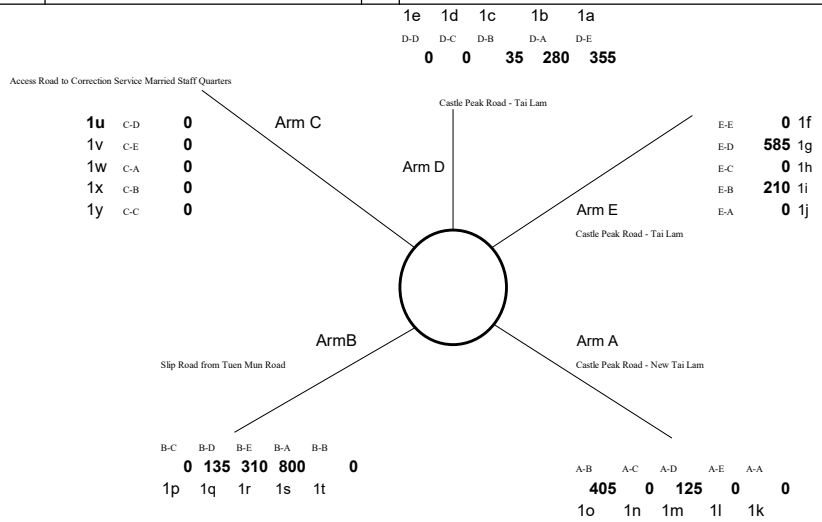
ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	555	470	0	2135	565
Qc= Circulating flow across entry (pcu/h)	780	230	700	290	1730
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1996	2055	679	2601	914
DFC = Design flow/Capacity = Q/Qe	0.28	0.23	0.00	0.82	0.62

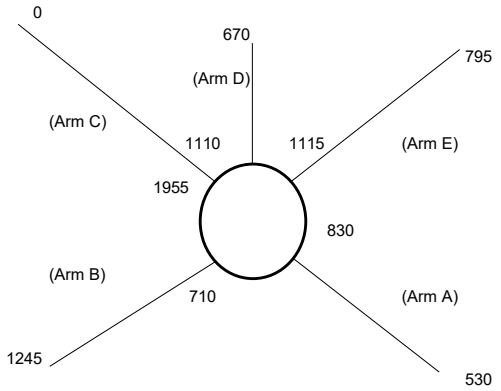
TOTAL ENTRY FLOWS = 3710 PCU

CRITICAL DFC = 0.82

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2030 PM Construction Traffic Flows	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十二月 2025





30

ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	530	1245	0	670	795
Qc= Circulating flow across entry (pcu/h)	830	710	1955	1110	1115
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1961	1766	243	1989	1273
DFC = Design flow/Capacity = Q/Qe	0.27	0.71	0.00	0.34	0.62

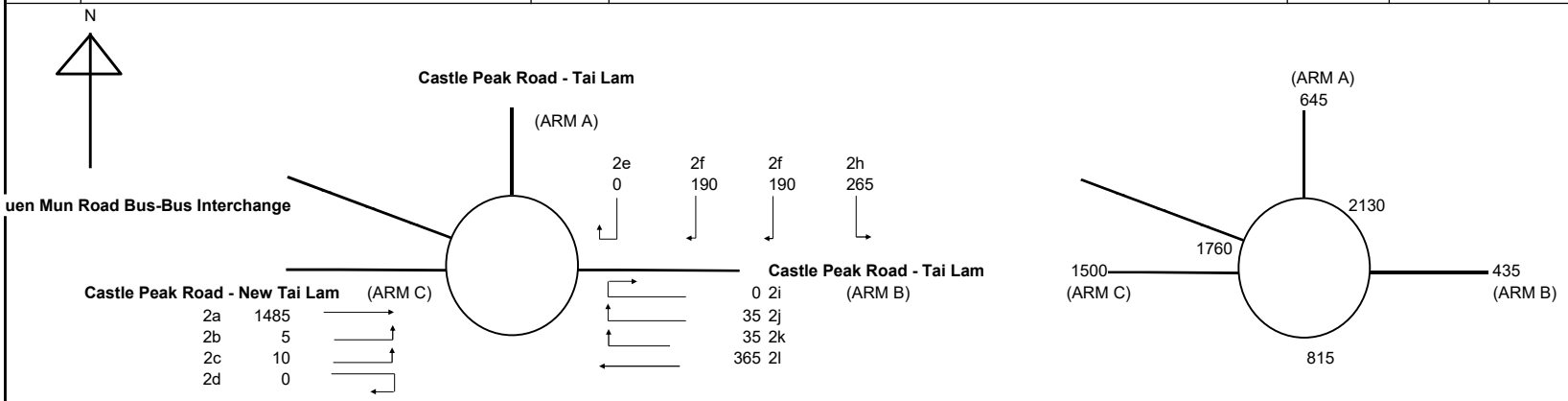
TOTAL ENTRY FLOWS = 3240 PCU

CRITICAL DFC = 0.71

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2030 Construction Traffic Flow - AM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	645	435	1500	
Qc= Circulating flow across entry (pcu/h)	1760	2130	815	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	692	1182	2742	
DFC = Design flow/Capacity = Q/Qe	0.93	0.37	0.55	

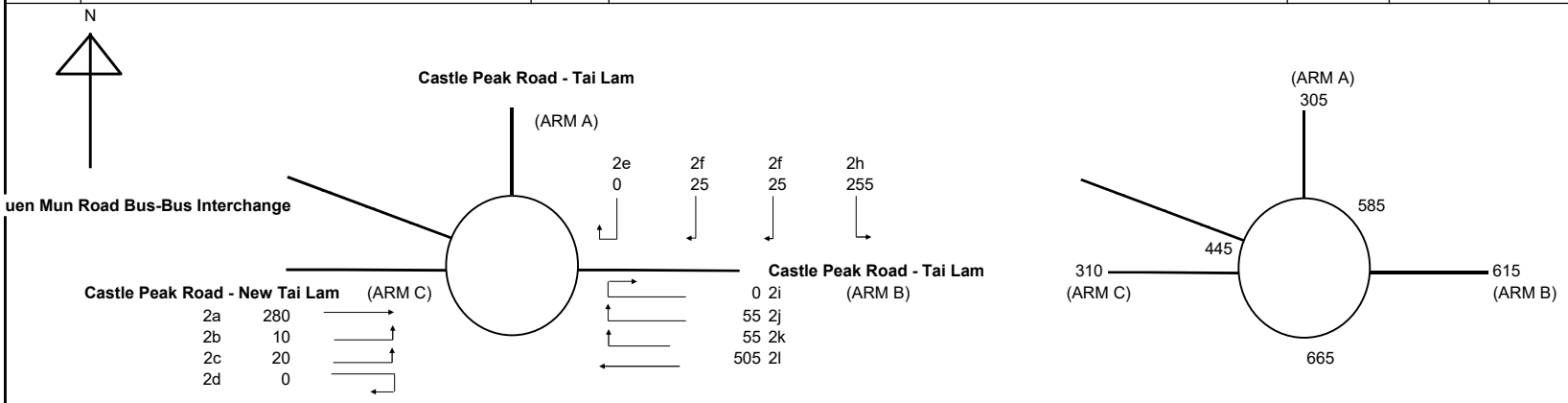
TOTAL ENTRY FLOWS 2580 PCU

CRITICAL DFC 0.93

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2030 Construction Traffic Flow - PM	Project No.	Prepared By	Checked By	Date
							2/十二月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	305	615	310	
Qc= Circulating flow across entry (pcu/h)	445	585	665	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1408	2316	2870	
DFC = Design flow/Capacity = Q/Qe	0.22	0.27	0.11	

TOTAL ENTRY FLOWS 1230 PCU

CRITICAL DFC 0.27

Filename : https://aecom-my.sharepoint.com/personal/gary_lei_aecom_com/Docume

Job No.	:		Designed By		Reminder: Enter "P" next to the pedestrian phase under column B
Job Title	:		Checked By		Note:
Junction Name	:	Castle Peak Road - Tai Lam / Tuen Mun Road	Reviewed By		
Junction No	:	J3			
Design Year	:	2030	Design Date	十月 20 6:11:01 下午	
AM/PM	:	AM			
State	:	Construction Traffic Flows			

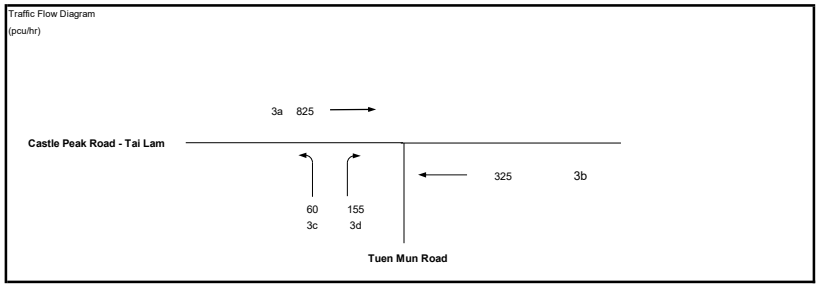
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2030 AM Construction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

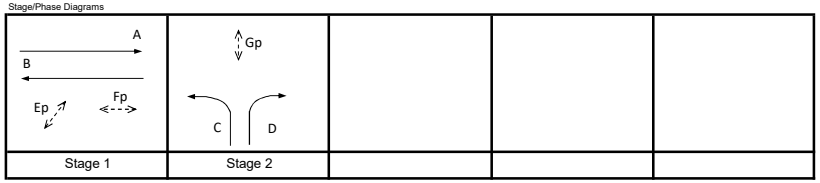
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.201	
Lost time		L =	21	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	46	sec
Min. Cycle Time C_m	= L/(1-Y)	=	26	sec
Y_{ult}	= 0.9-0.0075×L	=	0.743	
$R.C._{ult}$	= (Y_{ult}-Y)/Yx100%	=	269.0	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	27	sec
Y_{max}	= 1-L/C	=	0.767	

Stage/Phase Diagrams



I/G = 5 G = 15 I/G = 2 5

Critical Case : A,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 243%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		825		825			4100	0.201	0.201
↑	B	1	4.500	1				1		0		2065		325		325			2065	0.157	
↰	C	2	3.500	1	15			1		0		1965	60			60	100%		1786	0.034	
↱	D	2	4.500	1		25	0	1		0		2065			155	155		100%	1948	0.080	
Pedestrian Crossing				GM		FGM															
	Ep	1	min.	5	+	5	=	10	sec												
	Fp	1	min.	5	+	6	=	11	sec												
	Gp	2	min.	8	+	7	=	15	sec												

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Tuen Mun Road	Reviewed By		
Junction No	:	J3			
Design Year	:	2030	Design Date	十月 20	6:11:01 下午
AM/PM	:	PM			
State	:	Construction Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

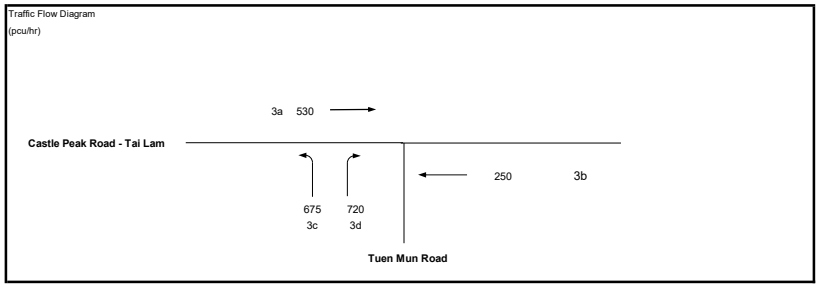
AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2030 PM Construction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J3

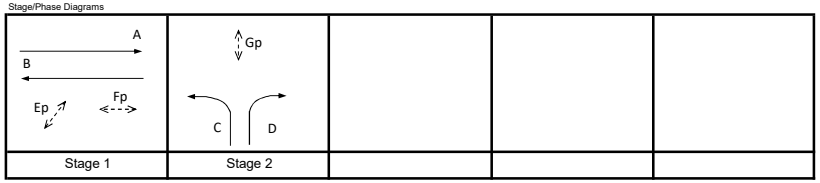
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.507	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	38	sec
Min. Cycle Time C_m	= L/(1-Y)	=	18	sec
Y_{ult}	= 0.9-0.0075 × L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	64.2	%
Practical Cycle Time C_p	= 0.9 × L/(0.9-Y)	=	21	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 60%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		530		530			4100	0.129	0.129
↑	B	1	4.500	1				1		0		2065		250		250			2065	0.121	
↰	C	2	3.500	1	15			1		0		1965	675			675	100%		1786	0.378	0.378
↱	D	2	4.500	1		25	0	1		0		2065			720	720		100%	1948	0.370	

Pedestrian Crossing			GM		FGM		
Ep	1	min.	5	+	5	=	10 sec
Fp	1	min.	5	+	6	=	11 sec
Gp	2	min.	8	+	7	=	15 sec

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2030	Design Date	十月 20	6:11:01 下午
AM/PM	:	AM			
State	:	Construction Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

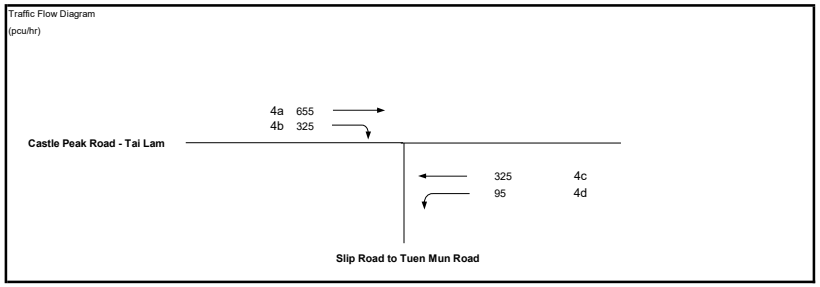
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2030 AM Construction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

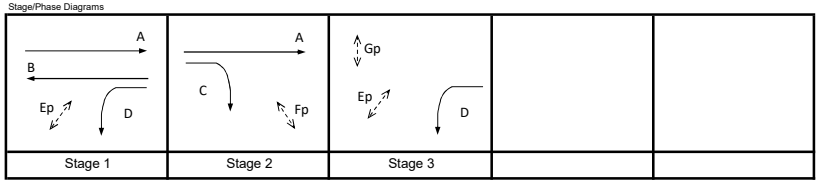
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.251	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	71	sec
Min. Cycle Time C_m	= L/(1-Y)	=	43	sec
Y_{ult}	= 0.9-0.0075 × L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	163.3	%
Practical Cycle Time C_p	= 0.9 × L/(0.9-Y)	=	44	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



I/G = 5 I/G = 5 G = 22 I/G = 2

Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 131%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		655		655			1965	0.333	
↑	B	1	3.500	1				0		0		2105		325		325			2105	0.154	0.154
↰	D	1,3	3.000	1	15			1		0		1915	95			95	100%		1741	0.055	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			325	325		100%	3376	0.096	0.096

Pedestrian Crossing			GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec
Fp	2	min.	5	+	7	=	12	sec
Gp	3	min.	11	+	11	=	22	sec

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	Reviewed By		
Junction No	:	J4			
Design Year	:	2030	Design Date	十月 20	6:11:01 下午
AM/PM	:	PM			
State	:	Construction Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

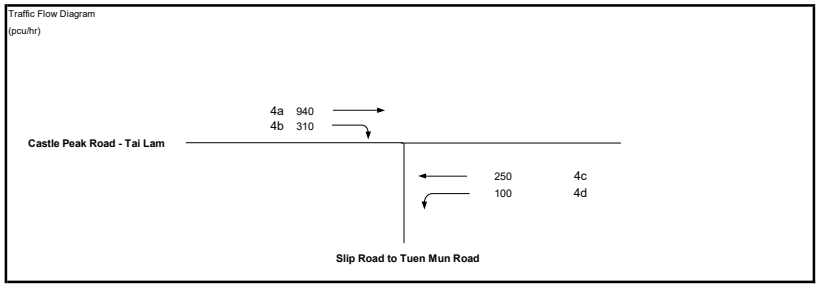
AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2030 PM Construction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

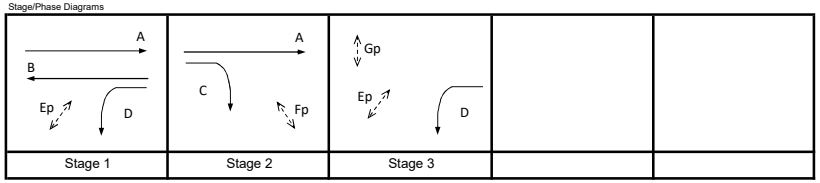
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.211	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y) =		67	sec
Min. Cycle Time C_m	= L/(1-Y)	=	41	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	213.4	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	42	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



I/G = 5 I/G = 5 G = 22 I/G = 2

Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 175%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		940		940			1965	0.478	
↑	B	1	3.500	1				0		0		2105		250		250			2105	0.119	0.119
↰	D	1,3	3.000	1	15			1		0		1915	100			100	100%		1741	0.057	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			310	310		100%	3376	0.092	0.092

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road (Tai Lam) / Tai Lam Chung Road	Reviewed By		
Junction No	:	J5			
Design Year	:	2030	Design Date	十月 20	6:11:01 下午
AM/PM	:	AM Peak			
State	:	Contruction Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

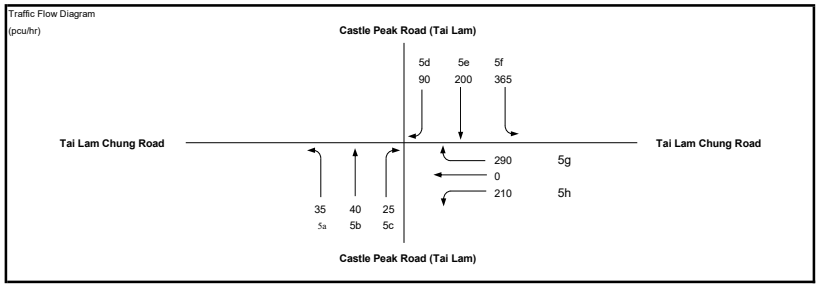
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2030 AM Peak Contruction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

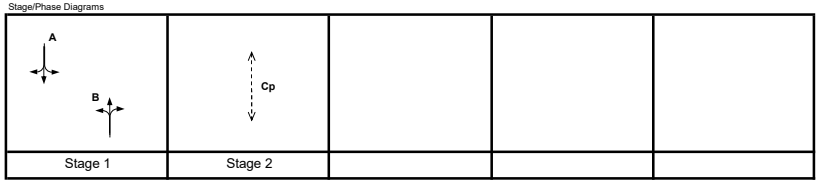
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle	N =	2	
Cycle time	C =	60	sec
Sum(y)	Y =	0.351	
Lost time	L =	24	sec
Total Flow	=	6,035	pcu
Optimum Cycle C_o = (1.5 × L+5)/(1-Y)	=	63	sec
Min. Cycle Time C_m = L/(1-Y)	=	37	sec
Y_{ult} = 0.9-0.0075 × L	=	0.720	
$R.C._{ult}$ = $(Y_{ult}-Y)/Yx100\%$	=	105.3	%
Practical Cycle Time C_o = 0.9 × L/(0.9-Y)	=	39	sec
Y_{max} = 1-L/C	=	0.600	

Stage/Phase Diagrams



I/G = 4 G = 18 I/G = 3

5

Critical Case : A,Cp

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 54%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	20	20	0	1		0		1965	365	200	90	655	56%	14%	1868	0.351	0.351
↑	B	1	3.500	1	15			1		0		1965	35	13		48	73%		1831	0.026	
↱	B	1	3.500	1		15	0	0		0		2105		27	25	52		48%	2009	0.026	

Pedestrian Crossing GM FGM

Cp 2 min. 9 + 9 = 18 sec

Job No.	:		Designed By		
Job Title	:		Checked By		
Junction Name	:	Castle Peak Road (Tai Lam) / Tai Lam Chung Road	Reviewed By		
Junction No	:	J5			
Design Year	:	2030	Design Date	十月 20	6:11:01 下午
AM/PM	:	PM Peak			
State	:	Contruction Traffic Flows			

Reminder: Enter "P" next to the pedestrian phase under column B

Note:

JUNCTION CAPACITY CALCULATION

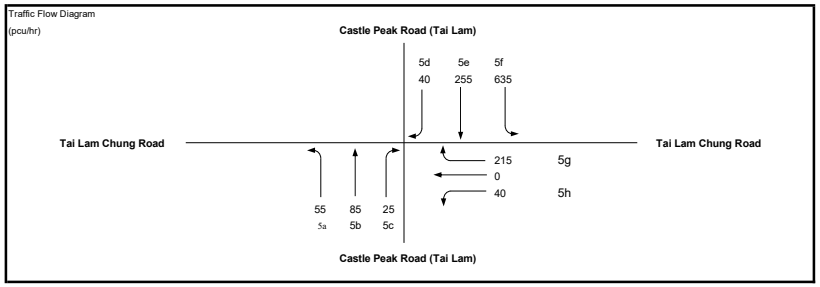
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2030 PM Peak Contruction Traffic Flows	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

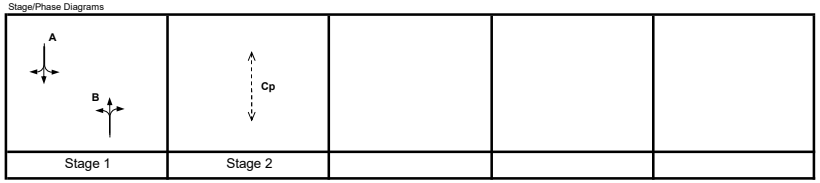
(pcu/hr)



No. of stages per cycle	N =	2	
Cycle time	C =	60	sec
Sum(y)	Y =	0.499	
Lost time	L =	24	sec
Total Flow	=	6,035	pcu

Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	82	sec
Min. Cycle Time C_m	= L/(1-Y)	=	48	sec
Y_{ult}	= 0.9-0.0075 × L	=	0.720	
R.C.-$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	44.3	%
Practical Cycle Time C_o	= 0.9 × L/(0.9-Y)	=	54	sec
Y_{max}	= 1-L/C	=	0.600	

Stage/Phase Diagrams



I/G = 4 G = 18 I/G = 3

5

Critical Case : A,Cp

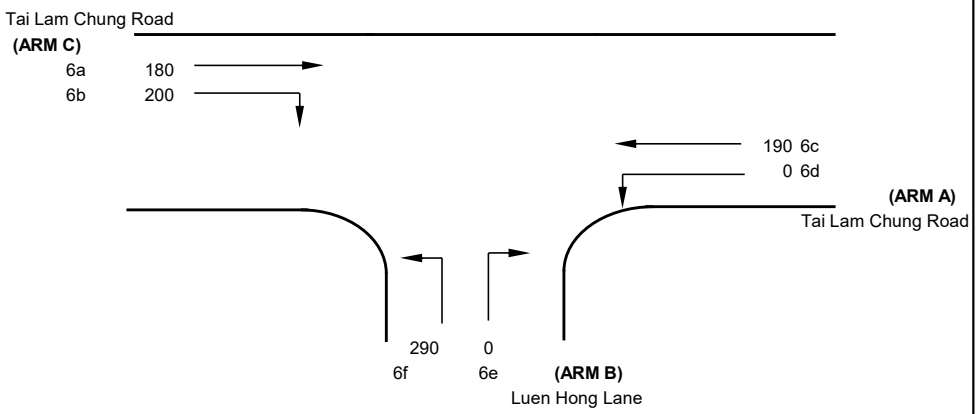
R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 8%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↓	A	1	3.500	1	20	20	0	1		0		1965	635	255	40	930	68%	4%	1864	0.499	0.499
↑	B	1	3.500	1	15			1		0		1965	55	23		78	70%		1836	0.043	
↱	B	1	3.500	1		15	0	0		0		2105		62	25	87		29%	2046	0.043	
Pedestrian Crossing				GM		FGM															
	Cp	2	min.	9	+	9	=	18	sec												

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2030 AM Contruction Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	180	(pcu/hr)
q c-b	=	200	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	290	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	467
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.39

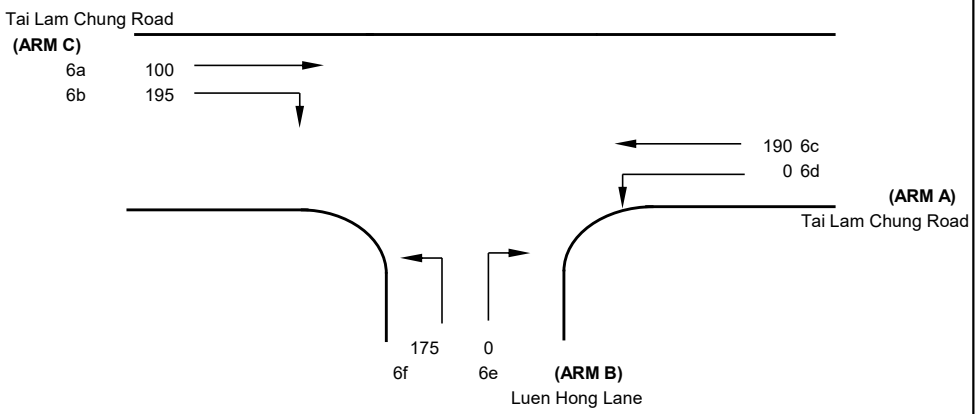
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.39
DFC c-b	=	0.30
DFC b-ac	=	0.39

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2030 PM Construction Traffic Flows	Designed By :	Checked By :	Job No. :	Date : 十二月 25



J6

NOTES : (GEOMETRIC INPUT DATA)

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	190	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	100	(pcu/hr)
q c-b	=	195	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	175	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	482
Q b-c	=	750
Q c-b	=	672
Q b-ac	=	750

CRITICAL DFC = 0.29

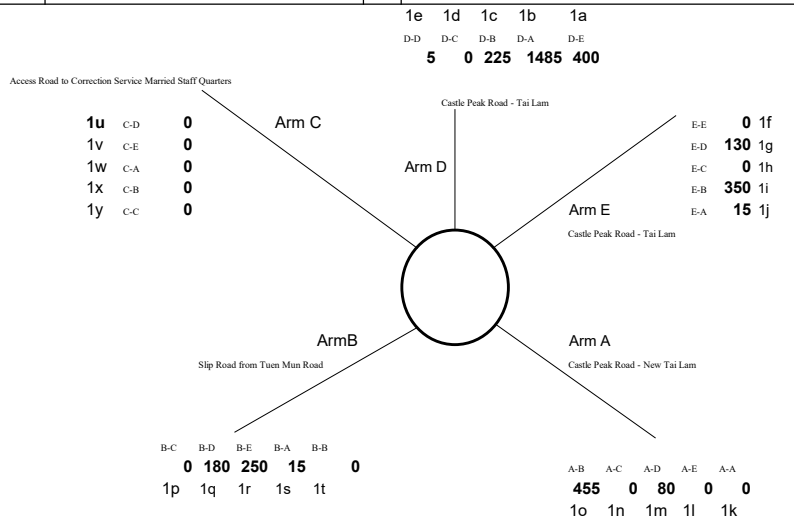
COMPARISION OF DESIGN FLOW TO CAPACITY :

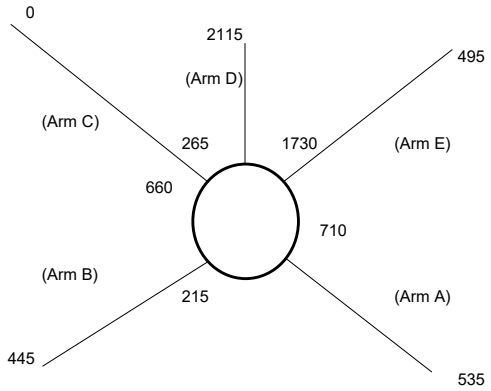
DFC b-a	=	0.00
DFC b-c	=	0.23
DFC c-b	=	0.29
DFC b-ac	=	0.23

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 AM Reference Traffic Flows (Sensitivity Test)	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十一月 2025





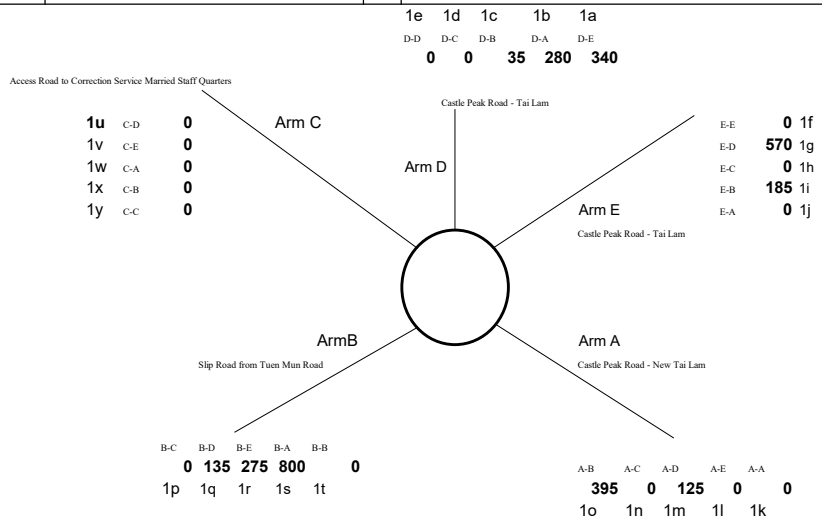
62

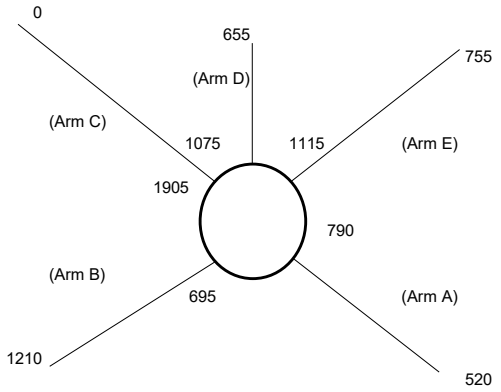
ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	535	445	0	2115	495
Qc= Circulating flow across entry (pcu/h)	710	215	660	265	1730
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	2045	2064	693	2620	914
DFC = Design flow/Capacity = Q/Qe	0.26	0.22	0.00	0.81	0.54

TOTAL ENTRY FLOWS = 3590 PCU

CRITICAL DFC = 0.81

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 PM Reference Traffic Flows (Sensitivity Test)	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十一月 2025





63

ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	520	1210	0	655	755
Qc= Circulating flow across entry (pcu/h)	790	695	1905	1075	1115
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1989	1775	261	2016	1273
DFC = Design flow/Capacity = Q/Qe	0.26	0.68	0.00	0.32	0.59

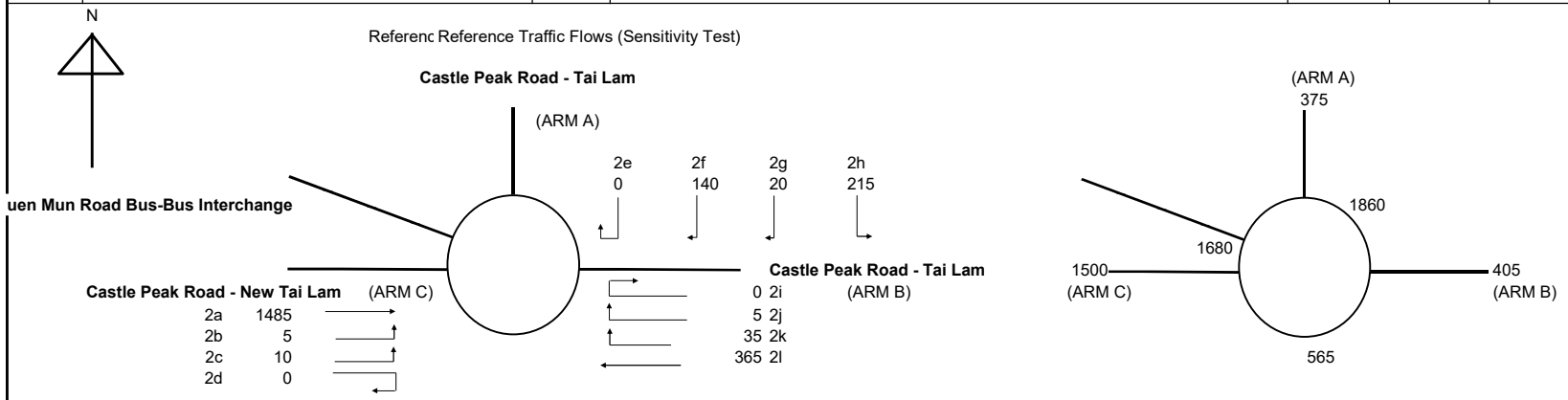
TOTAL ENTRY FLOWS = 3140 PCU

CRITICAL DFC = 0.68

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Reference Traffic Flow (Sensitivity Test) - AM	Project No.	Prepared By	Checked By	Date
							4/十一月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	375	405	1500	
Qc= Circulating flow across entry (pcu/h)	1680	1860	565	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	736	1380	2955	
DFC = Design flow/Capacity = Q/Qe	0.51	0.29	0.51	

TOTAL ENTRY FLOWS 2280 PCU

CRITICAL DF(0.51

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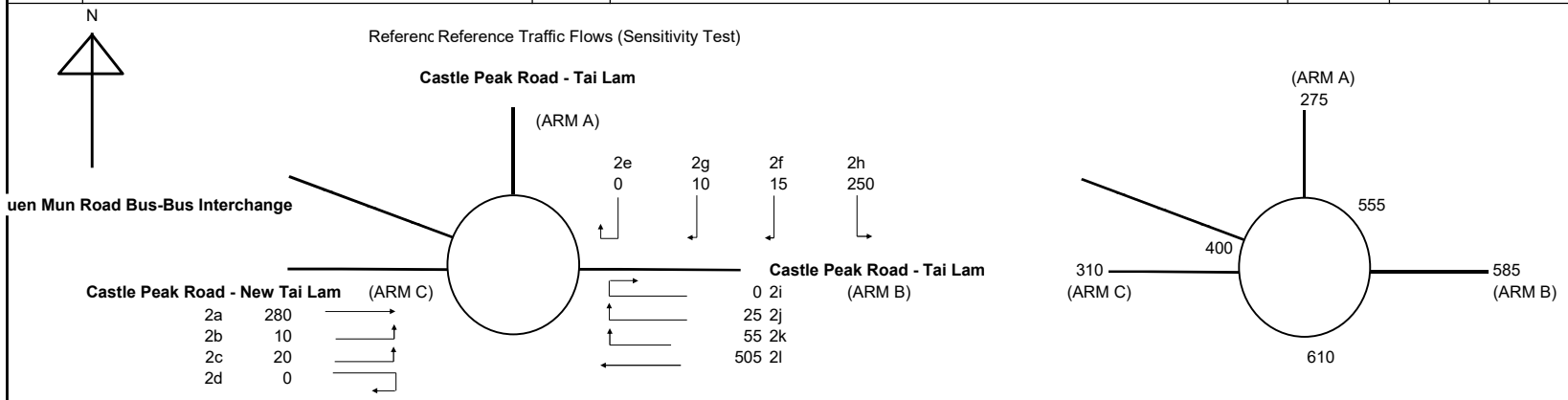
ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Reference Traffic Flow (Sensitivity Test) - PM	Project No.	Prepared By	Checked By	Date
							4/十一月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	275	585	310	
Qc= Circulating flow across entry (pcu/h)	400	555	610	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1433	2338	2917	
DFC = Design flow/Capacity = Q/Qe	0.19	0.25	0.11	

TOTAL ENTRY FLOWS 1170 PCU

CRITICAL DFC 0.25

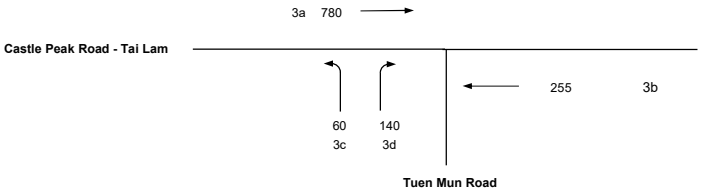
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 AM Reference Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

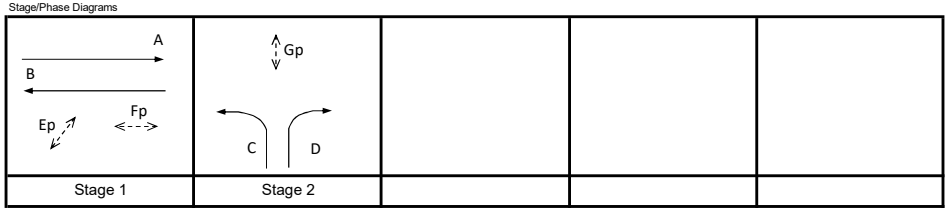
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.224	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	24	sec
Min. Cycle Time C_m	= L/(1-Y)	=	12	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	271.9	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	12	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 262%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		780		780			4100	0.190	0.190
↑	B	1	4.500	1				1		0		2065		255		255			2065	0.123	
↰	C	2	3.500	1	15			1		0		1965	60			60	100%		1786	0.034	0.034
↱	D	2	4.500	1		25	0	1		0		2065			140	140		100%	1948	0.072	

Pedestrian Crossing				GM		FGM			
Ep	1	min.	5	+	5	=	10	sec	
Fp	1	min.	5	+	6	=	11	sec	
Gp	2	min.	8	+	7	=	15	sec	

Job No. :
Job Title :
Junction Name : Castle Peak Road - Tai Lam / Tuen Mun Road
Junction No : J3 033 Reference Traffic Flow (Sensitivity Test) - AM
Design Year : 2033
AM/PM : PM
State rence Traffic Flows Reference Traffic Flows (Sensitivity Test)

Designed By
Checked By
Reviewed By
Design Date 十月 20 6:11:01 下午

Reminder: Enter "P" next to the pedestrian phase under column B
Note:

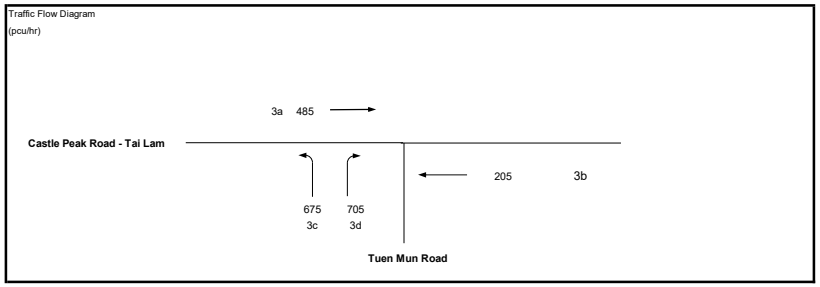
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 PM Reference Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

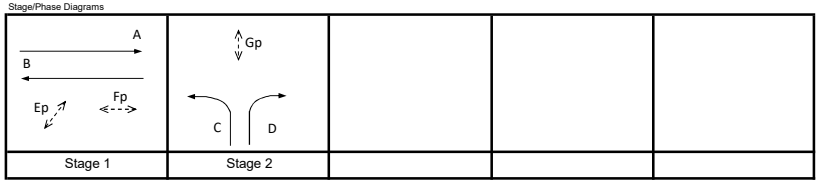
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.496	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5 × L+5)/(1-Y)	=	37	sec
Min. Cycle Time C_m	= L/(1-Y)	=	18	sec
Y_{ult}	= 0.9-0.0075 × L	=	0.833	
R.C.-$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	67.8	%
Practical Cycle Time C_o	= 0.9 × L/(0.9-Y)	=	20	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5 5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 63%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		485		485			4100	0.118	0.118
↑	B	1	4.500	1				1		0		2065		205		205			2065	0.099	
↰	C	2	3.500	1	15			1		0		1965	675			675	100%		1786	0.378	0.378
↱	D	2	4.500	1		25	0	1		0		2065			705	705		100%	1948	0.362	
Pedestrian Crossing				GM		FGM															
	Ep	1	min.	5	+	5	=	10	sec												
	Fp	1	min.	5	+	6	=	11	sec												
	Gp	2	min.	8	+	7	=	15	sec												

Job No. :
Job Title :
Junction Name : Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road
Junction No : J4 033 Reference Traffic Flow (Sensitivity Test) - AM
Design Year : 2033
AM/PM : AM
State rence Traffic Flows Reference Traffic Flows (Sensitivity Test)

Designed By
Checked By
Reviewed By
Design Date 十月 20 6:11:01 下午

Reminder: Enter "P" next to the pedestrian phase under column B
Note:

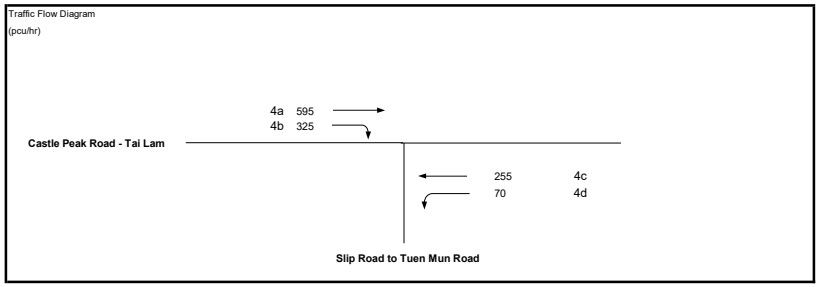
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 AM Reference Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

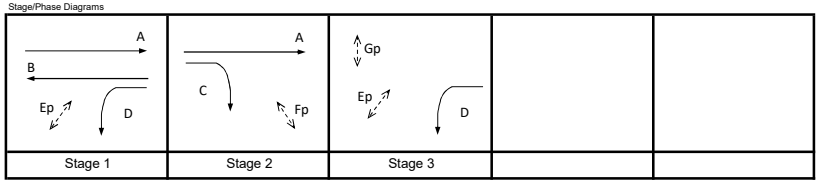
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.217	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y) =		68	sec
Min. Cycle Time C_m	= L/(1-Y)	=	41	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	203.6	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	42	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



I/G = 5 I/G = 5 G = 22 I/G = 2

Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 167%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		595		595			1965	0.303	
↑	B	1	3.500	1				0		0		2105		255		255			2105	0.121	0.121
↰	D	1,3	3.000	1	15			1		0		1915	70			70	100%		1741	0.040	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			325	325		100%	3376	0.096	0.096

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

Job No. :
Job Title :
Junction Name : Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road
Junction No : J4 033 Reference Traffic Flow (Sensitivity Test) - AM
Design Year : 2033
AM/PM : PM
State rence Traffic Flows Reference Traffic Flows (Sensitivity Test)

Designed By
Checked By
Reviewed By
Design Date 十月 20 6:11:01 下午

Reminder: Enter "P" next to the pedestrian phase under column B
Note:

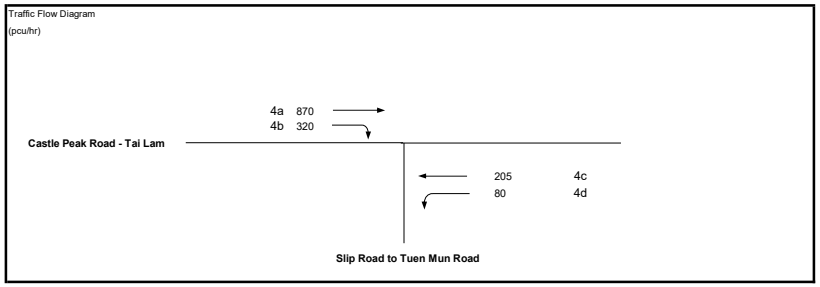
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 PM Reference Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

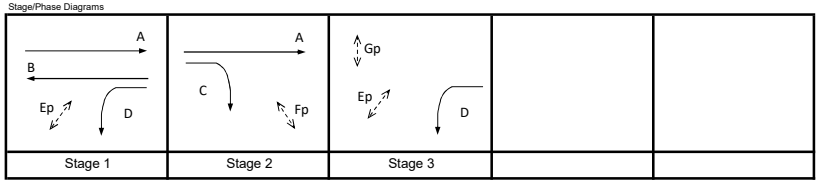
J4

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	3	
Cycle time		C =	90	sec
Sum(y)		Y =	0.192	
Lost time		L =	32	sec
Total Flow		=	9,564	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	66	sec
Min. Cycle Time C_m	= L/(1-Y)	=	40	sec
Y_{ult}	= 0.9-0.0075×L	=	0.660	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	243.4	%
Practical Cycle Time C_o	= 0.9×L/(0.9-Y)	=	41	sec
Y_{max}	= 1-L/C	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 202%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		870		870			1965	0.443	
↑	B	1	3.500	1				0		0		2105		205		205			2105	0.097	0.097
↰	D	1,3	3.000	1	15			1		0		1915	80			80	100%		1741	0.046	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			320	320		100%	3376	0.095	0.095

Pedestrian Crossing				GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec	
Fp	2	min.	5	+	7	=	12	sec	
Gp	3	min.	11	+	11	=	22	sec	

JUNCTION CAPACITY CALCULATION

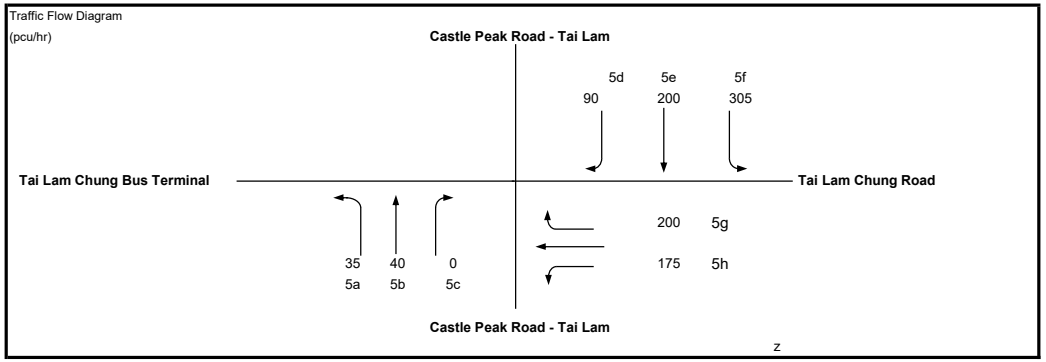
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Reference Traffic Flows with proposed improvement scheme (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

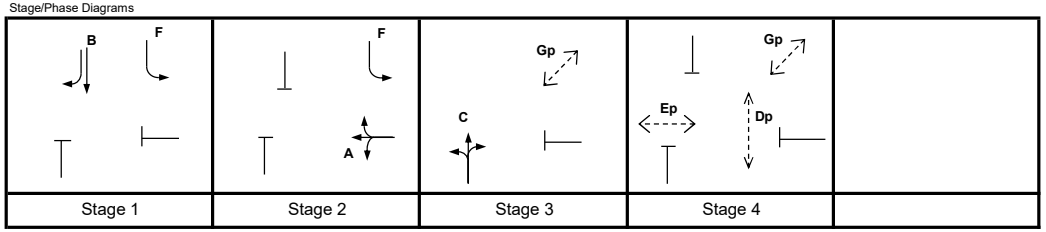
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.376	
Lost time	L =	37	sec
Total Flow	=	9,669	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	97	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	59	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.623	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	65.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	64	sec
Y_{max}	$= 1-L/C$	=	0.589	

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 41%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
	B	1	3.500	1		25	0	0		0	-421	2105		200	90	290		31%	1653	0.175	0.175	5
	C	2	3.380	1	30			1		0		1953	35	0		35	99%		1861	0.019		1
	C	2	3.370	1		25	0	0		0		2092		40	0	40		0%	2092	0.019		1
	A	3	3.600	1	30	25	0	1		0		1975	175	0	200	375	47%	53%	1871	0.200	0.200	7
	F	1,2	3.500	1	15			1		0		1965	305			305	100%		1786	0.171		5

Pedestrian Crossing				GM		FGM			
	Dp	4	min.	5	+	7	=	12	sec
	Ep	4	min.	5	+	10	=	15	sec
	Gp	3,4	min.	5	+	5	=	10	sec

JUNCTION CAPACITY CALCULATION

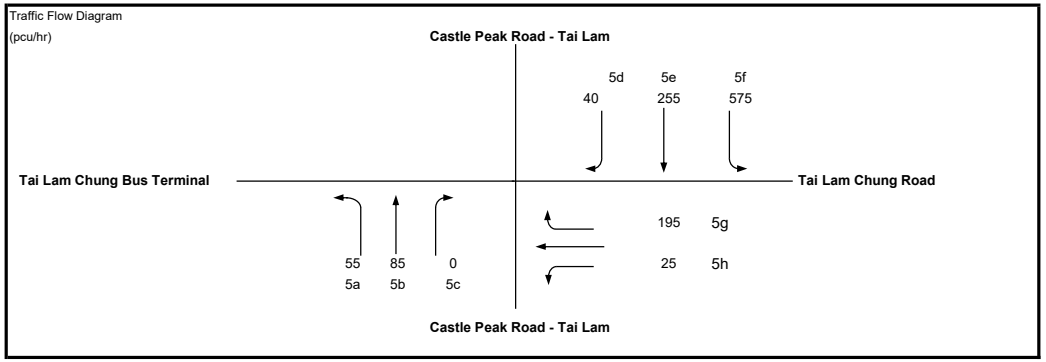
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Reference Traffic Flows with planned improvement scheme (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

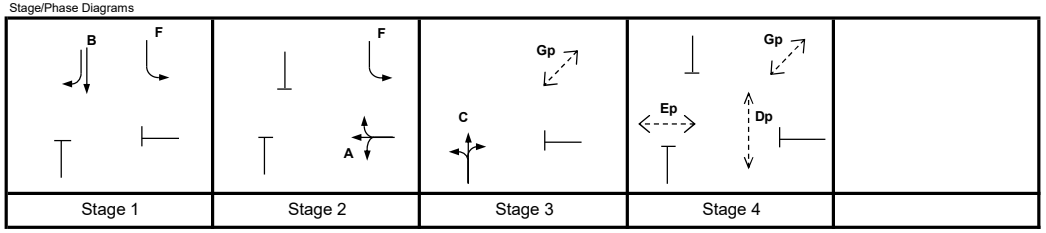
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.295	
Lost time	L =	37	sec
Total Flow	=	9,669	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	86	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	52	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.623	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	111.3	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	55	sec
Y_{max}	$= 1-L/C$	=	0.589	

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 80%

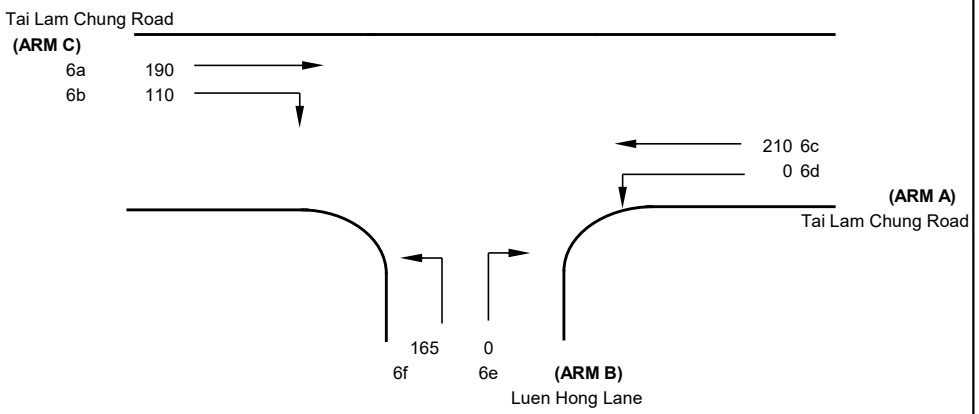
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
	B	1	3.500	1		25	0	0		0	-421	2105		255	40	295		14%	1670	0.177	0.177	5
	C	2	3.380	1	30			1		0		1953	55	11		66	83%		1875	0.035		1
	C	2	3.370	1		25	0	0		0		2092		74	0	74		0%	2092	0.035		1
	A	3	3.600	1	30	25	0	1		0		1975	25	0	195	220	11%	89%	1865	0.118	0.118	4
	F	1,2	3.500	1	15			1		0		1965	575			575	100%		1786	0.322		10

Pedestrian Crossing				GM		FGM			
	Dp	4	min.	5	+	7	=	12	sec
	Ep	4	min.	5	+	10	=	15	sec
	Gp	3,4	min.	5	+	5	=	10	sec

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 AM Reference Traffic Flows (Sensitivity Test)	Designed By :	Checked By :	Job No. :	Date : 十一月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	210	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	190	(pcu/hr)
q c-b	=	110	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	165	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	494
Q b-c	=	744
Q c-b	=	666
Q b-ac	=	744

CRITICAL DFC = 0.22

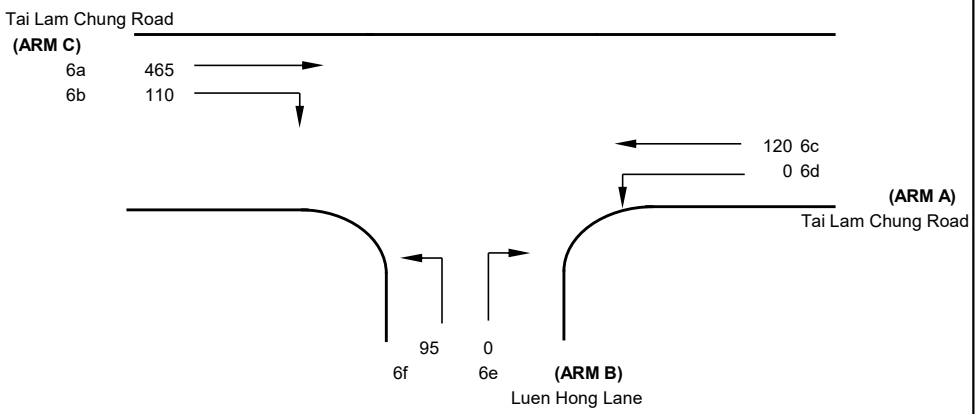
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.22
DFC c-b	=	0.17
DFC b-ac	=	0.22

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 PM Reference Traffic Flows (Sensitivity Test)	Designed By :	Checked By :	Job No. :	Date : 十一月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	120	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	465	(pcu/hr)
q c-b	=	110	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	95	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	472
Q b-c	=	770
Q c-b	=	690
Q b-ac	=	770

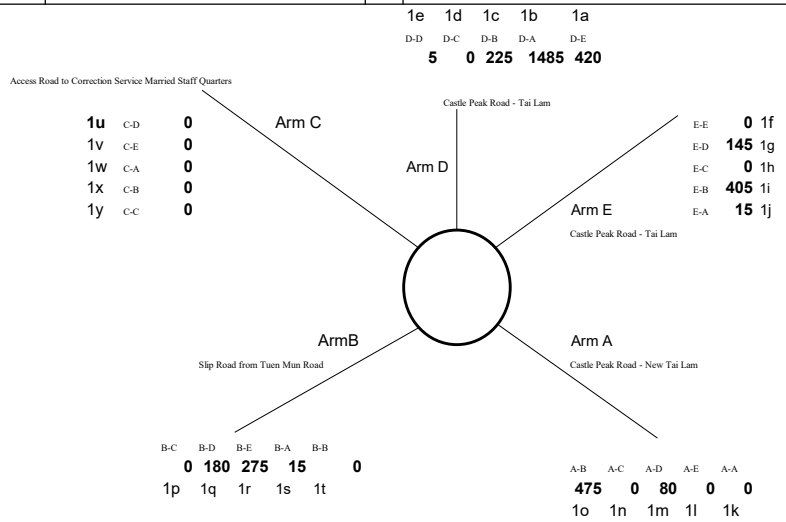
CRITICAL DFC = 0.16

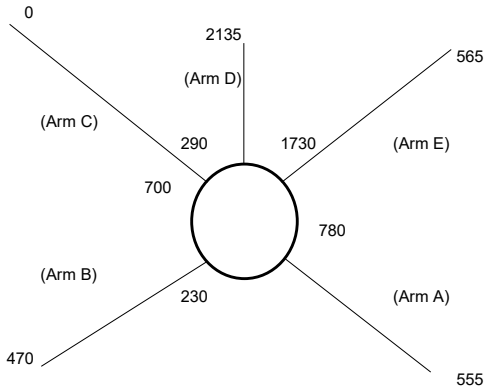
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.12
DFC c-b	=	0.16
DFC b-ac	=	0.12

ROUNDABOUT CAPACITY CALCUL **AECOM**

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 AM Design Traffic Flows (Sensitivity Test)	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十一月 2025





ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	555	470	0	2135	565
Qc= Circulating flow across entry (pcu/h)	780	230	700	290	1730
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1996	2055	679	2601	914
DFC = Design flow/Capacity = Q/Qe	0.28	0.23	0.00	0.82	0.62

TOTAL ENTRY FLOWS = 3725 PCU

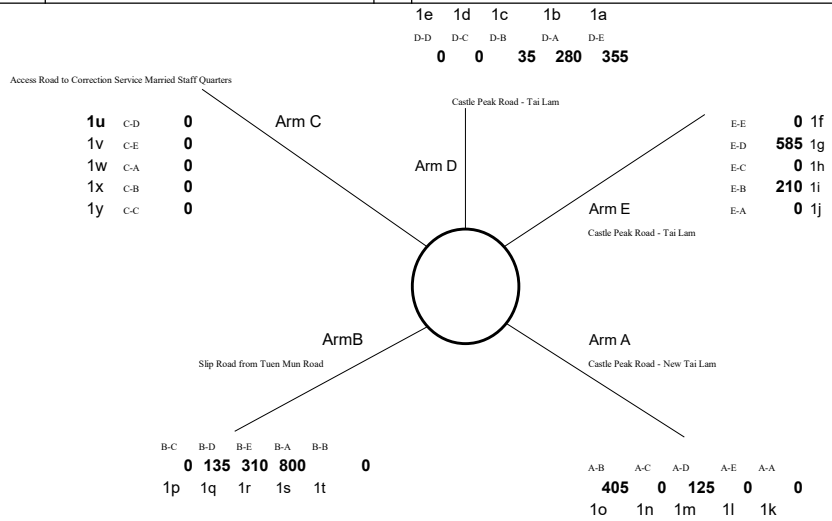
CRITICAL DFC = 0.82

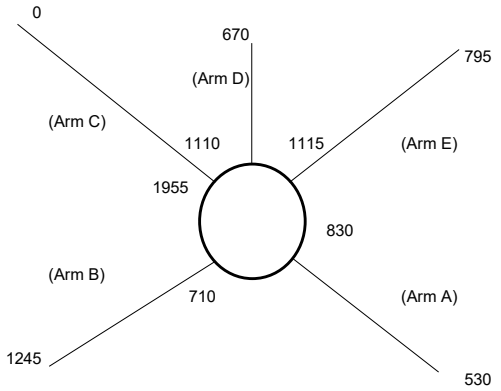
Filename : Tai Lam Chung Signal Calculation.xlsm / J1_MDES_AM

ROUNDABOUT CAPACITY CALCUL

AECOM

Junction	Junction J1 - Castle Peak Road - Tai Lam / Castle Peak Road - New Tai Lam Roundabout	cenar	2033 PM Design Traffic Flows (Sensitivity Test)	Project No.	Prepared By	Checked By	Date
				-	MK	JL	十一月 2025





ARM	A	B	C	D	E
INPUT PARAMETERS:					
V = Approach half width (m)	7.30	7.30	3.30	7.30	5.50
E = Entry width (m)	9.00	9.00	5.80	11.30	7.00
L = Effective length of flare (m)	13.00	15.00	5.00	15.00	15.00
R = Entry radius (m)	22.00	10.00	5.00	72.00	25.00
D = Inscribed circle diameter (m)	60.00	60.00	60.00	60.00	60.00
A = Entry angle (degree)	35.00	60.00	70.00	45.00	45.00
Q = Entry flow (pcu/h)	530	1245	0	670	795
Qc= Circulating flow across entry (pcu/h)	830	710	1955	1110	1115
OUTPUT PARAMETERS:					
S = Sharpness of flare = 1.6(E-V)/L	0.21	0.18	0.80	0.43	0.16
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.99	0.85	0.71	0.98	0.96
X2= V + ((E-V)/(1+2S))	8.50	8.55	4.26	9.46	6.64
M = EXP((D-60)/10)	1	1	1	1	1
F = 303*X2	2575	2590	1291	2866	2011
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	1.25	1.25
Fc= 0.21*Td(1+0.2*X2)	0.71	0.71	0.49	0.76	0.61
Qe= K(F-Fc*Qc)	1961	1766	243	1989	1273
DFC = Design flow/Capacity = Q/Qe	0.27	0.71	0.00	0.34	0.62

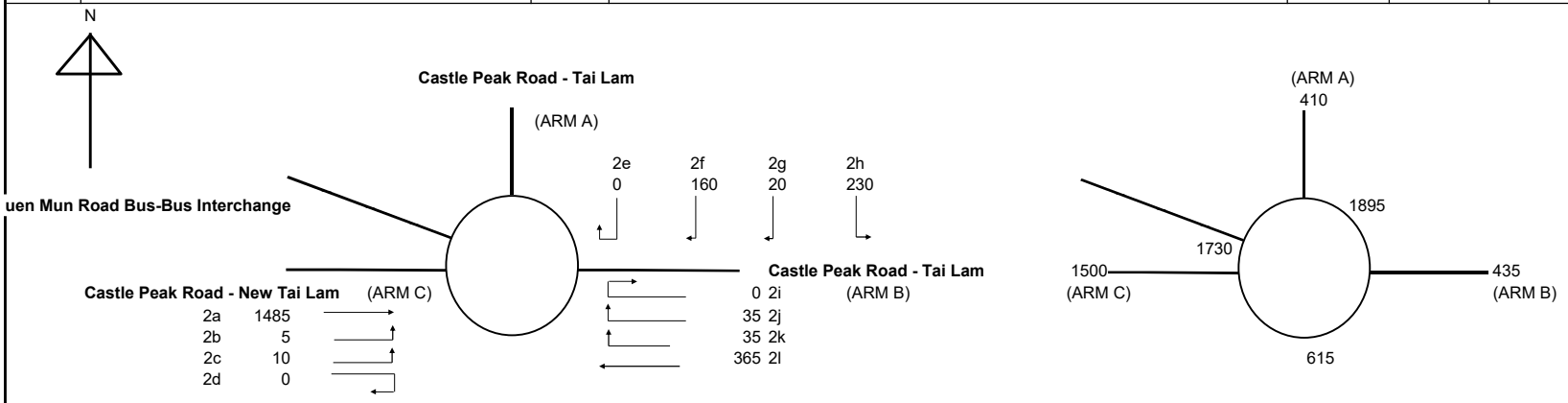
TOTAL ENTRY FLOWS = 3240 PCU

CRITICAL DFC = 0.71

ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Design Traffic Flow (Sensitivity Test) - AM	Project No.	Prepared By	Checked By	Date
							4/十一月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	410	435	1500	
Qc= Circulating flow across entry (pcu/h)	1730	1895	615	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	709	1354	2913	
DFC = Design flow/Capacity = Q/Qe	0.58	0.32	0.52	

TOTAL ENTRY FLOWS 2345 PCU

CRITICAL DFC 0.58

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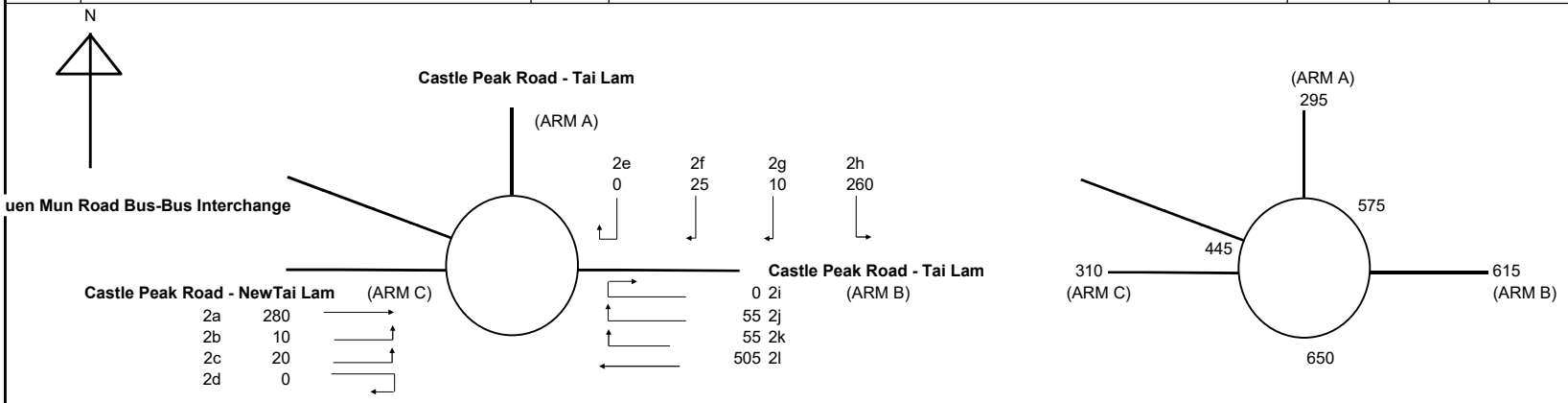
ROUNDABOUT CAPACITY CALCULATIO

AECOM

Junction	Junction J2 - Castle Peak Road - New Tai Lam / Castle Peak Road - Tai Lam Roundabout	Scenario	Year 2033 Design Traffic Flow (Sensitivity Test) - PM	Project No.	Prepared By	Checked By	Date
							4/十一月/25



ARM	A	B	C	D
INPUT PARAMETERS:				
V = Approach half width (m)	3.00	7.80	10.00	
E = Entry width (m)	10.20	11.00	13.30	
L = Effective length of flare (m)	12.50	8.00	10.00	
R = Entry radius (m)	80.00	80.00	50.00	
D = Inscribed circle diameter (m)	60.00	60.00	60.00	
A = Entry angle (degree)	45.00	45.00	45.00	
Q = Entry flow (pcu/h)	295	615	310	
Qc= Circulating flow across entry (pcu/h)	445	575	650	
OUTPUT PARAMETERS:				
S = Sharpness of flare = 1.6(E-V)/L	0.92	0.64	0.53	
K = 1-0.00347(A-30)-0.978(1/R-0.05)	0.98	0.98	0.98	
X2= V + ((E-V)/(1+2S))	5.53	9.20	11.61	
M = EXP((D-60)/10)	1.00	1.00	1.00	
F = 303*X2	1676	2789	3516	
Td= 1+(0.5/(1+M))	1.25	1.25	1.25	
Fc= 0.21*Td(1+0.2*X2)	0.55	0.75	0.87	
Qe= K(F-Fc*Qc)	1408	2324	2883	
DFC = Design flow/Capacity = Q/Qe	0.21	0.26	0.11	

TOTAL ENTRY FLOWS 1220 PCU

CRITICAL DFC 0.26

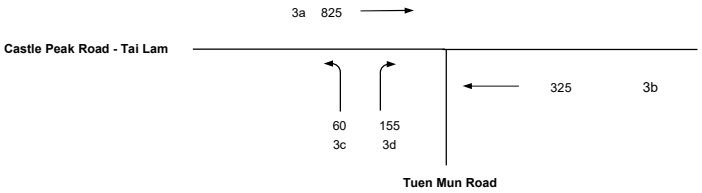
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 AM Design Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

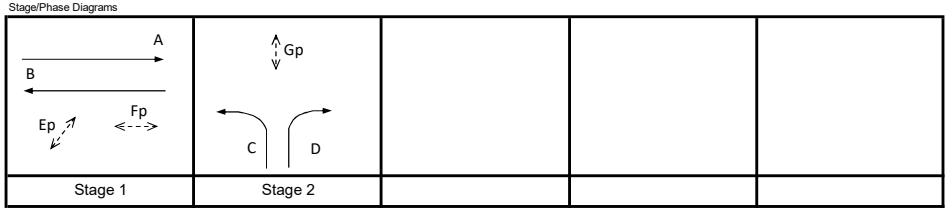
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.201	
Lost time		L =	21	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	46	sec
Min. Cycle Time C_m	= L/(1-Y)	=	26	sec
Y_{ult}	= 0.9-0.0075×L	=	0.743	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	269.0	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	27	sec
Y_{max}	= 1-L/C	=	0.767	

Stage/Phase Diagrams



I/G = 5 G = 15 I/G = 2

5

Critical Case : A,Gp

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 243%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		825		825			4100	0.201	0.201
↑	B	1	4.500	1				1		0		2065		325		325			2065	0.157	
↰	C	2	3.500	1	15			1		0		1965	60			60	100%		1786	0.034	
↱	D	2	4.500	1		25	0	1		0		2065			155	155		100%	1948	0.080	

Pedestrian Crossing			GM		FGM			
Ep	1	min.	5	+	5	=	10	sec
Fp	1	min.	5	+	6	=	11	sec
Gp	2	min.	8	+	7	=	15	sec

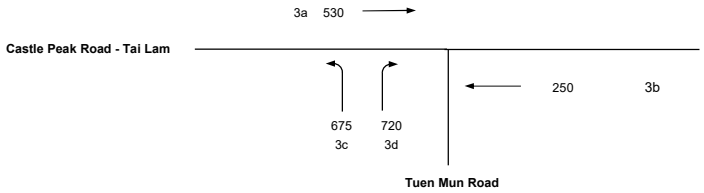
JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Castle Peak Road - Tai Lam / Tuen Mun Road	2033 PM Design Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

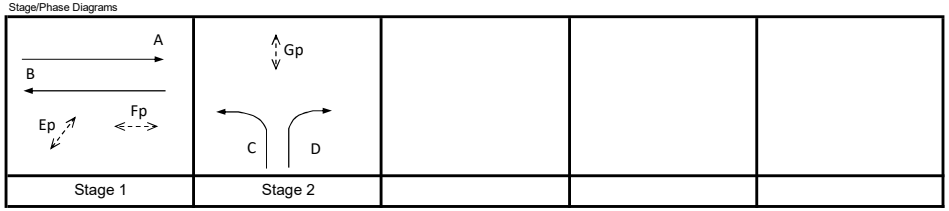
J3

Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle		N =	2	
Cycle time		C =	90	sec
Sum(y)		Y =	0.507	
Lost time		L =	9	sec
Total Flow		=	10,195	pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	38	sec
Min. Cycle Time C_m	= L/(1-Y)	=	18	sec
Y_{ult}	= 0.9-0.0075×L	=	0.833	
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	64.2	%
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	21	sec
Y_{max}	= 1-L/C	=	0.900	

Stage/Phase Diagrams



I/G = 6 I/G = 5

5

Critical Case : A,C

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 60%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1	3.650	2				1		0		4100		530		530			4100	0.129	0.129
↑	B	1	4.500	1				1		0		2065		250		250			2065	0.121	
↰	C	2	3.500	1	15			1		0		1965	675			675	100%		1786	0.378	0.378
↱	D	2	4.500	1		25	0	1		0		2065			720	720		100%	1948	0.370	

Pedestrian Crossing				GM		FGM				
Ep	1	min.	5	+	5	=	10	sec		
Fp	1	min.	5	+	6	=	11	sec		
Gp	2	min.	8	+	7	=	15	sec		

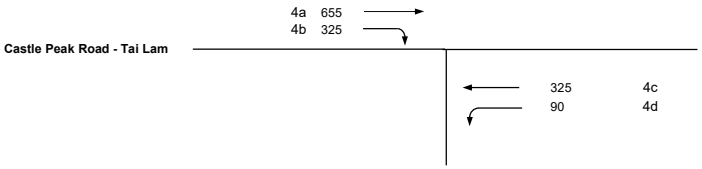
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 AM Design Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

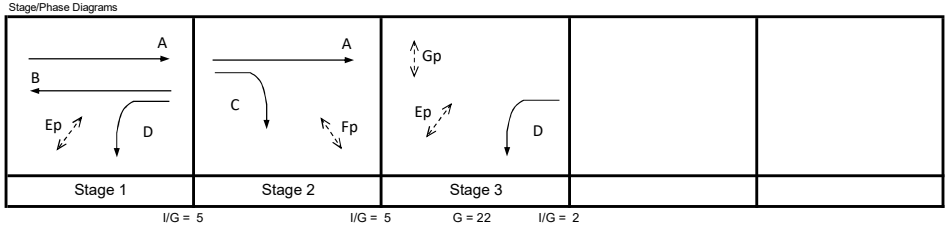
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	90	sec
Sum(y)	Y =	0.251	
Lost time	L =	32	sec
Total Flow	=	9,564	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$ =	71	sec
Min. Cycle Time C_m	$= L/(1-Y)$ =	43	sec
Y_{ult}	$= 0.9-0.0075 \times L$ =	0.660	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$ =	163.3	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$ =	44	sec
Y_{max}	$= 1-L/C$ =	0.644	

Stage/Phase Diagrams



I/G = 5 I/G = 5 G = 22 I/G = 2

Critical Case : B,C,Gp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 131%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		655		655			1965	0.333	
↑	B	1	3.500	1				0		0		2105		325		325			2105	0.154	0.154
↰	D	1,3	3.000	1	15			1		0		1915	90			90	100%		1741	0.052	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			325	325		100%	3376	0.096	0.096

Pedestrian Crossing			GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec
Fp	2	min.	5	+	7	=	12	sec
Gp	3	min.	11	+	11	=	22	sec

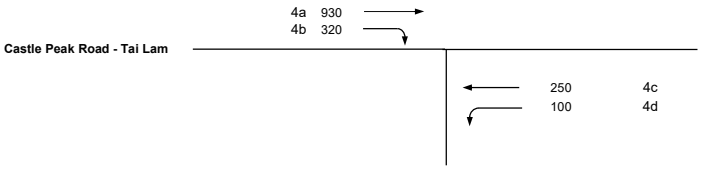
JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Castle Peak Road - Tai Lam / Slip Road to Tuen Mun Road	2033 PM Design Traffic Flows (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J4

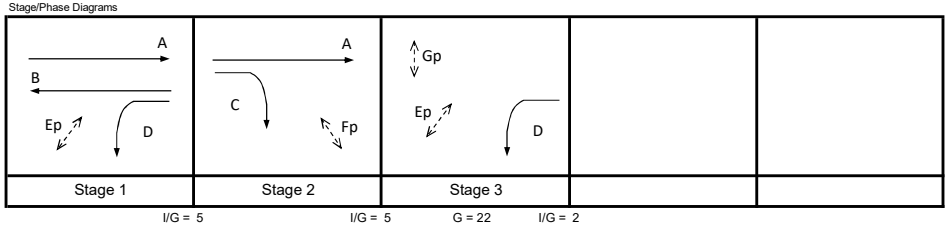
Traffic Flow Diagram
(pcu/hr)



No. of stages per cycle	N =	3	
Cycle time	C =	90	sec
Sum(y)	Y =	0.214	
Lost time	L =	32	sec
Total Flow	=	9,564	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	67	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	41	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.660	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	209.1	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	42	sec
Y_{max}	$= 1-L/C$	=	0.644	

Stage/Phase Diagrams



Critical Case : B,C,Gp

R.C.(C) $= (0.9xY_{max}-Y)/Yx100\%$ = 172%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*
↑	A	1,2	3.500	1				1		0		1965		930		930			1965	0.473	
↑	B	1	3.500	1				0		0		2105		250		250			2105	0.119	0.119
↰	D	1,3	3.000	1	15			1		0		1915	100			100	100%		1741	0.057	
↱	C	2	3.500	2		25	0	0		0	-631.5	4210			320	320		100%	3376	0.095	0.095

Pedestrian Crossing			GM		FGM			
Ep	1,3	min.	7	+	14	=	21	sec
Fp	2	min.	5	+	7	=	12	sec
Gp	3	min.	11	+	11	=	22	sec

JUNCTION CAPACITY CALCULATION

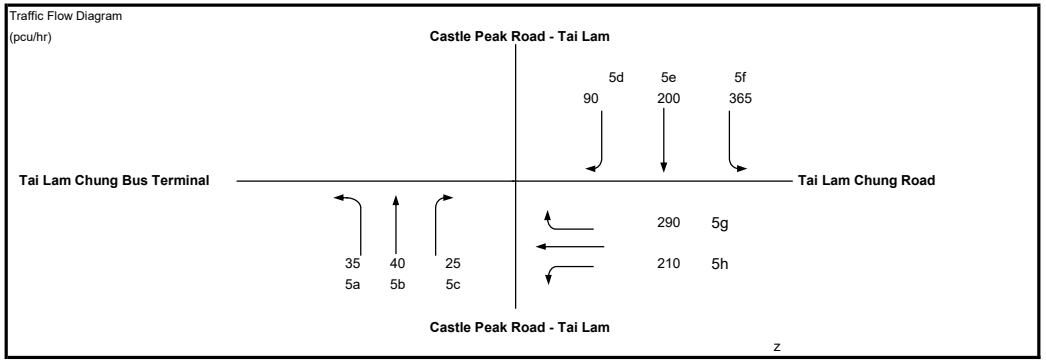
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Design Traffic Flows with proposed improvement scheme (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

Traffic Flow Diagram

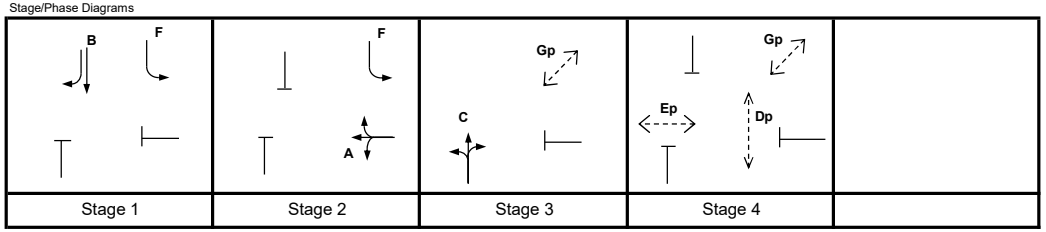
(pcu/hr)



No. of stages per cycle	N =	4	
Cycle time	C =	90	sec
Sum(y)	Y =	0.443	
Lost time	L =	37	sec
Total Flow	=	9,669	pcu

Optimum Cycle C_o	$= (1.5 \times L+5)/(1-Y)$	=	109	sec
Min. Cycle Time C_m	$= L/(1-Y)$	=	66	sec
Y_{ult}	$= 0.9-0.0075 \times L$	=	0.623	
$R.C._{ult}$	$= (Y_{ult}-Y)/Yx100\%$	=	40.6	%
Practical Cycle Time C_p	$= 0.9 \times L/(0.9-Y)$	=	73	sec
Y_{max}	$= 1-L/C$	=	0.589	

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = $(0.9xY_{max}-Y)/Yx100\%$ = 20%

MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
	B	1	3.500	1		25	0	0		0	-421	2105		200	90	290		31%	1653	0.175	0.175	5
	C	2	3.380	1	30			1		0		1953	35	13		48	73%		1884	0.026		1
	C	2	3.370	1		25	0	0		0		2092		27	25	52		48%	2033	0.026		1
	A	3	3.600	1	30	25	0	1		0		1975	210	0	290	500	42%	58%	1871	0.267	0.267	9
	F	1,2	3.500	1	15			1		0		1965	365			365	100%		1786	0.204		6

Pedestrian Crossing				GM		FGM			
	Dp	4	min.	5	+	7	=	12	sec
	Ep	4	min.	5	+	10	=	15	sec
	Gp	3,4	min.	5	+	5	=	10	sec

JUNCTION CAPACITY CALCULATION

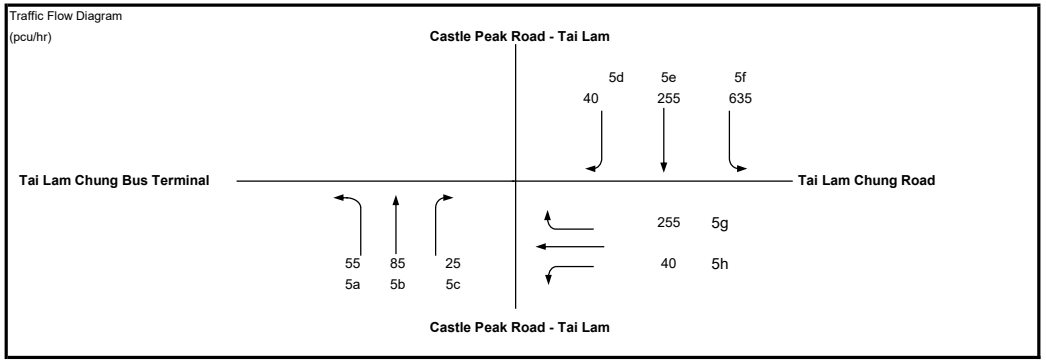
AECOM

Junction J5 - Castle Peak Road (Tai Lam) / Tai Lam Chung Road	2032 AM Design Traffic Flows with planned improvement scheme (Sensitivity Test)	DESIGN:	CHECK:	#VALUE!	DATE: 十月 20

J5

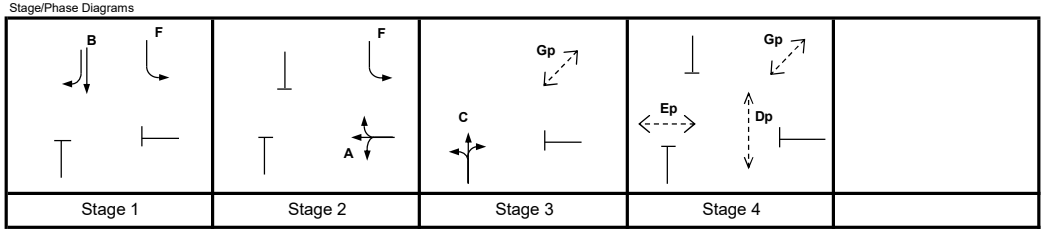
Traffic Flow Diagram

(pcu/hr)



No. of stages per cycle		N =	4
Cycle time		C =	90 sec
Sum(y)		Y =	0.377
Lost time		L =	36 sec
Total Flow		=	9,669 pcu
Optimum Cycle C_o	= (1.5×L+5)/(1-Y)	=	95 sec
Min. Cycle Time C_m	= L/(1-Y)	=	58 sec
Y_{ult}	= 0.9-0.0075×L	=	0.630
R.C.$_{ult}$	= (Y_{ult}-Y)/Yx100%	=	67.3 %
Practical Cycle Time C_p	= 0.9×L/(0.9-Y)	=	62 sec
Y_{max}	= 1-L/C	=	0.600

Stage/Phase Diagrams



Critical Case : B,A,C,Ep

R.C.(C) = (0.9xY_{max}-Y)/Yx100% = 43%

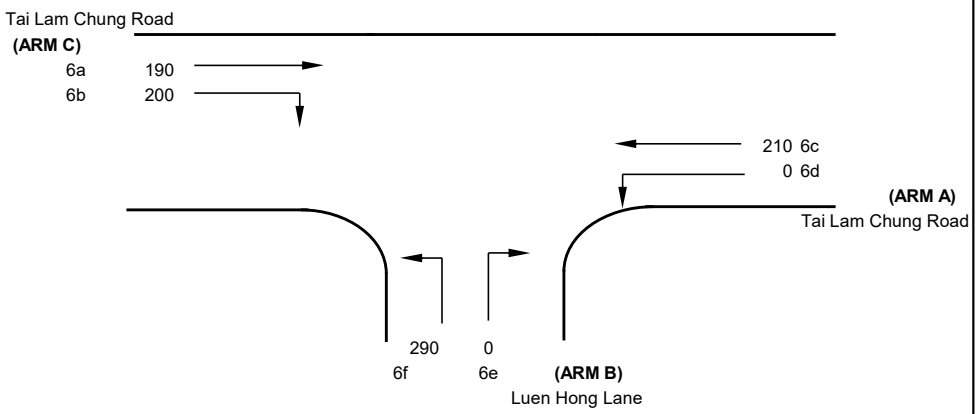
MOVEMENT	PHASE	STAGE	LANE WIDTH (m)	NO. OF LANES	RADIUS (m) LEFT	RADIUS (m) RIGHT	OPPOSING TRAFFIC	NEAR SIDE LANE	UPHILL GRADIENT (%)	GRADIENT EFFECT (pcu/hr)	ADDITIONAL CAPACITY (pcu/hr)	STRAIGHT-AHEAD SAT. FLOW (pcu/hr)	FLOW (pcu/hr) LEFT	FLOW (pcu/hr) STRAIGHT AHEAD	FLOW (pcu/hr) RIGHT	TOTAL FLOW (pcu/hr)	PROPORTION OF TURNING VEHICLES (%) LEFT	PROPORTION OF TURNING VEHICLES (%) RIGHT	REVISED SAT. FLOW (pcu/hr)	FLOW FACTOR *y*	CRITICAL *y*	Queue Length (Per Vehicle)
	B	1	3.500	1		25	0	0		0	-421	2105		255	40	295		14%	1670	0.177	0.177	5
	C	2	3.380	1	30			1		0		1953	55	24		79	70%		1887	0.042	0.042	1
	C	2	3.370	1		25	0	0		0		2092		61	25	86		29%	2056	0.042		2
	A	3	3.600	1	30	25	0	1		0		1975	40	0	255	295	14%	86%	1866	0.158	0.158	5
	F	1,2	3.500	1	15			1		0		1965	635			635	100%		1786	0.355		11

Pedestrian Crossing				GM		FGM			
	Dp	4	min.	5	+	7	=	12	sec
	Ep	4	min.	5	+	10	=	15	sec
	Gp	3,4	min.	5	+	5	=	10	sec

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 AM Design Traffic Flows (Sensitivity Test)	Designed By :	Checked By :	Job No. :	Date : 十一月 25



J6

NOTES : (GEOMETRIC INPUT DATA)

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	210	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	190	(pcu/hr)
q c-b	=	200	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	290	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	460
Q b-c	=	744
Q c-b	=	666
Q b-ac	=	744

CRITICAL DFC = 0.39

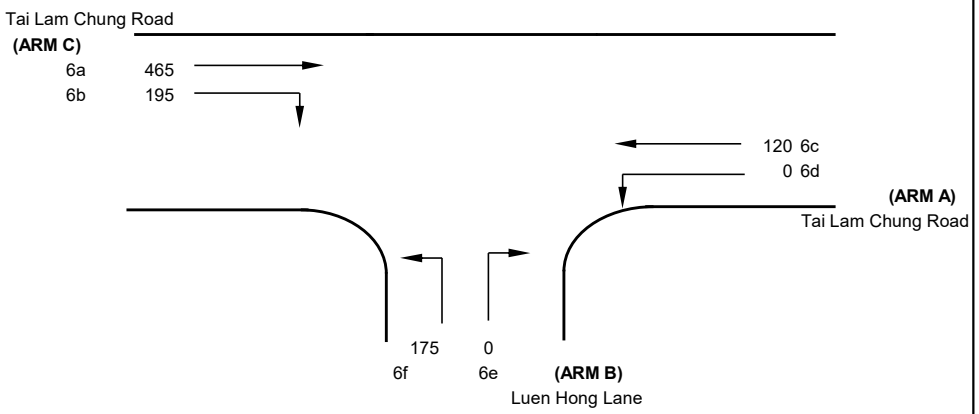
COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.39
DFC c-b	=	0.30
DFC b-ac	=	0.39

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Tai Lam Chung Road / Luen Hong Lane	2033 PM Design Traffic Flows (Sensitivity Test)	Designed By :	Checked By :	Job No. :	Date : 十一月 25



NOTES : (GEOMETRIC INPUT DATA) J6

W	= Major Road Width (6.4 - 20.0)
W cr	= Central Reserve width (1.2 - 9.0, kerbed central reserve only)
W b-a	= Lane width available to vehicle waiting in stream b-a (2.05 - 4.7)
W b-c	= Lane width available to vehicle waiting in stream b-c (2.05 - 4.7)
W c-b	= Lane width available to vehicle waiting in stream c-b (2.05 - 4.7)
Vl b-a	= Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
Vr b-a	= Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
Vr b-c	= Visibilitu to the right for vehicles waiting in stream b-c (17.0 - 250.0)
Vr c-b	= Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
D	= Stream-specific B-A
E	= Stream-specific B-C
F	= Stream-specific C-B
Y	= (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	7.55	(metres)
W cr	=	0	(metres)
q a-b	=	0	(pcu/hr)
q a-c	=	120	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4	(metres)
Vr c-b	=	50	(metres)
q c-a	=	465	(pcu/hr)
q c-b	=	195	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	5.7	(metres)
W b-c	=	5.7	(metres)
Vl b-a	=	20	(metres)
Vr b-a	=	16	(metres)
Vr b-c	=	16	(metres)
q b-a	=	0	(pcu/hr)
q b-c	=	175	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.996740
E	=	1.081063
F	=	0.967827
Y	=	0.739525

THE CAPACITY OF MOVEMENT :

Q b-a	=	440
Q b-c	=	770
Q c-b	=	690
Q b-ac	=	770

CRITICAL DFC = 0.28

COMPARISION OF DESIGN FLOW TO CAPACITY :

DFC b-a	=	0.00
DFC b-c	=	0.23
DFC c-b	=	0.28
DFC b-ac	=	0.23

Annex C

Swept Path Analysis

ISO A1 594mm x 841mm

Project Management Initials: Designer: Checked: Approved:

CUT LINE A-A

CASTLE PEAK ROAD (TAI LAM)

EXISTING ROAD MARKING TO BE REMOVED

EXISTING ROAD MARKING TO BE REMOVED

CASTLE PEAK ROAD (TAI LAM)

TS409(6)

RM1029

EXISTING ROAD MARKING TO BE REMOVED

FUTURE TAI LAM CHUNG ROAD FOOTPATH (1.6m) FROM APPROVED GAZETTE PLAN

TS102/ TS115

RM1038

RM1013

RM1104

RM1001 RM1037

RM1025

RM1019

EXISTING TRAFFIC SIGNAL TO BE RELOCATED

2m FOOTPATH TO BE PROVIDED

EXISTING BEAM BARRIER TO BE REMOVED

TAI LAM CHUNG ROAD

RM1029

TS409(6)

EXISTING SIGN TO BE RELOCATE

RM1017

RM1035

RM1029

RM1037

TS115(7)

TS109

RM1011

RM1075 RM1076

TS115(7)

EXISTING ROAD MARKING TO BE REMOVED

EXISTING DROP KERB

EXISTING RAILING TO BE REMOVED

MIN. 2.5m FOOTPATH TO BE MAINTAINED

RM1011

3.38m

3.37m

RM1104

RM1001

EXISTING BEAM BARRIER TO BE REMOVED

EXISTING BICYCLE RACK TO BE RELOCATED

EXISTING DROP KERB TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

RM1027

RM1025

EXISTING SIGNALISED CROSSING TO BE REMOVED

CUT LINE A-A

Hong Kong Customs College 香港海關學院 Correctional Institution Tai Lam Region 大欖區懲教機構

NTW/TM/CasPea-272B

Tai Lam Chung Road 大欖涌道

Castle Peak Road - Tai Lam 青山公路 - 大欖段

Weigh Station 秤車站

NTW/TM/CasPea-2

N-TS895

N-TS896

Parking Place-Parking Advice

1. No parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處-停泊須知

1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於單泊架。
4.此泊車處會不定期被中止使用，以清理丟放的單車。

General Advice to Public

1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知

1.此單泊車處會不定期被中止使用，以清理丟放自單車。
2.中止使用公十四天會張貼有關中止使用的通告。公眾在通告所列的日期後，不要丟放單車在泊車處。
3.當泊車處被中止時，單車不准參泊。
4.在中止使用期間丟放在此泊車處的單車，當局會收拘並管放單車。

LEGEND:

TS102(6)	NEW TRAFFIC SIGN WITH NUMBER AND SIZE CODE
RM1104	ROAD MARKING CODE NO.
	EXISTING TRAFFIC SIGN TO BE RELOCATED
	BOLLARD (KEEP LEFT) - NON-ILLUMINATED RETRO-REFLECTIVE TYPE
	BOLLARD (KEEP LEFT) -ILLUMINATED TYPE
	PROPOSED DROP KERB WITH HAZARD WARNING TILES / BLOCKS (FERER TO HyD STANDARD DRAWING NOS. H1117,H5118-H5124)
	TYPE 2 RAILINGS AT JUNCTIONS
	TYPE 2 RAILINGS
RM1026	PROPOSED ROAD MARKING

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AECOM

PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT
業主

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 有修改處	CHK. 核對

STATUS
階段

SCALE 比例: A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱

SWEPT PATH DIAGRAM OF 12.8m BUS FOR THE PROPOSED JUNCTION IMPROVEMENT AT CASTLE PEAK ROAD - TAI LAM (SOUTHBOUND)

SHEET NUMBER
圖紙編號

ANNEX C SK1

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

CUT LINE A-A

CASTLE PEAK ROAD (TAI LAM)

EXISTING ROAD MARKING TO BE REMOVED

EXISTING ROAD MARKING TO BE REMOVED

CASTLE PEAK ROAD (TAI LAM)

TS409(6)

RM1029

EXISTING ROAD MARKING TO BE REMOVED

FUTURE TAI LAM CHUNG ROAD FOOTPATH (1.6m) FROM APPROVED GAZETTE PLAN

Hong Kong Customs College 香港海關學院 Correctional Institution Tai Lam Region 大欖區懲教機構

NTW/TM/CasPea-272B

TS102/ TS115

RM1033

RM1013

RM1104

RM1019

RM1025

EXISTING TRAFFIC SIGNAL TO BE RELOCATED

2m FOOTPATH TO BE PROVIDED

Tai Lam Chung Road 大欖涌道

EXISTING BEAM BARRIER TO BE REMOVED

TAI LAM CHUNG ROAD

RM1029

TS409(6)

EXISTING SIGN TO BE RELOCATE

RM1001

RM1007

RM1035

RM1037

RM1011

TS115(7)

TS109

RM1075 & RM1076

Castle Peak Road - Tai Lam 青山公路 - 大欖段

Tai Lam Chung Road 大欖涌道

EXISTING ROAD MARKING TO BE REMOVED

EXISTING DROP KERB

EXISTING RAILING TO BE REMOVED

MIN. 2.5m FOOTPATH TO BE MAINTAINED

EXISTING BEAM BARRIER TO BE REMOVED

EXISTING BICYCLE RACK TO BE RELOCATED

EXISTING DROP KERB TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

EXISTING SIGNALISED CROSSING TO BE REMOVED

RM1027

RM1025

CUT LINE A-A

Parking Place - Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 - 停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於車泊架。
4.此泊車處會不定期被中止使用，以清理存放的單車。

N-TS895

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1.此單車泊車處會不定期被中止使用，以清理存放的單車。
2.中止使用最少十四天會張貼有關中止使用的通告。公眾在通告指明的日期後，不得存放單車在泊車處。
3.當泊車處被中止時，單車不准停泊。
4.在中止使用期間存放在此泊車處的單車，當局會收拾並管放那些單車。

N-TS896

LEGEND:

TS102(6)	NEW TRAFFIC SIGN WITH NUMBER AND SIZE CODE
RM1104	ROAD MARKING CODE NO.
	EXISTING TRAFFIC SIGN TO BE RELOCATED
	BOLLARD (KEEP LEFT) - NON-ILLUMINATED RETRO-REFLECTIVE TYPE
	BOLLARD (KEEP LEFT) -ILLUMINATED TYPE
	PROPOSED DROP KERB WITH HAZARD WARNING TILES / BLOCKS (FERER TO HyD STANDARD DRAWING NOS. H1117,H5118-H5124)
	TYPE 2 RAILINGS AT JUNCTIONS
	TYPE 2 RAILINGS
RM1026	PROPOSED ROAD MARKING

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PROJECT
SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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ISSUE/REVISION

I/R 修訂	DATE 日期	DESCRIPTION 事項摘要	CHK. 核對

STATUS

SCALE 比例: A3 1 : 500

DIMENSION UNIT 尺寸單位:

KEY PLAN

PROJECT NO. 項目編號: 60281828

CONTRACT NO. 合約編號:

SHEET TITLE
SWEPT PATH DIAGRAM OF 12.8m BUS FOR THE PROPOSED JUNCTION IMPROVEMENT AT CASTLE PEAK ROAD - TAI LAM (NORTHBOUND)

SHEET NUMBER
ANNEX C SK2

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

CUT LINE A-A

CASTLE PEAK ROAD (TAI LAM)

EXISTING ROAD MARKING TO BE REMOVED

EXISTING ROAD MARKING TO BE REMOVED

CASTLE PEAK ROAD (TAI LAM)

TS409(6)

RM1029

EXISTING ROAD MARKING TO BE REMOVED

FUTURE TAI LAM CHUNG ROAD FOOTPATH (1.6m) FROM APPROVED GAZETTE PLAN

Hong Kong Customs College
香港海關學院
Correctional Institution
Tai Lam Region
大欖區懲教機構

NTW/TM/CasPea-272B

TS102/ TS115

RM1038

RM1013

RM1104

RM1001

RM1025

RM1019

EXISTING TRAFFIC SIGNAL TO BE RELOCATED

2m FOOTPATH TO BE PROVIDED

Tai Lam Chung Road
大欖涌道

EXISTING BEAM BARRIER TO BE REMOVED

TAI LAM CHUNG ROAD

RM1029

TS409(6)

RM1104

RM1107

RM1017

RM1035

RM1037

EXISTING SIGN TO BE RELOCATE

TS115(7)

TS109

RM1075 & RM1076

Castle Peak Road - Tai Lam
青山公路 - 大欖段

Tai Lam Chung Road
大欖涌道

EXISTING ROAD MARKING TO BE REMOVED

EXISTING DROP KERB

EXISTING RAILING TO BE REMOVED

MIN. 2.5m FOOTPATH TO BE MAINTAINED

EXISTING BEAM BARRIER TO BE REMOVED

RM1011

RM1027

RM1025

EXISTING BICYCLE RACK TO BE RELOCATED

EXISTING DROP KERB TO BE REMOVED

EXISTING DROP KERB TO BE REMOVED

EXISTING SIGNALISED CROSSING TO BE REMOVED

Parking Place - Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 - 停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於單泊架。
4.此泊車處會不定期被中止使用，以清理遺放的單車。

N-TS895

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place.
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1.此單泊車處會不定期被中止使用，以清理遺放的單車。
2.中止期最少十四天會張貼有關中止使用的通告。公眾在通告所列的日期後，不得停放單車於泊車處。
3.當泊車處被中止時，單車不准停泊。
4.在中止使用期間管理處在泊車處的單車，會用會被拘束及移走單車。

N-TS896

Castle Peak Road - Tai Lam
青山公路 - 大欖段

香港警務處
車輛檢驗中心

Weigh Station
秤車站

NTW/TM/CasPea-2

CUT LINE A-A

LEGEND:

TS102(6)	NEW TRAFFIC SIGN WITH NUMBER AND SIZE CODE
RM1104	ROAD MARKING CODE NO.
	EXISTING TRAFFIC SIGN TO BE RELOCATED
	BOLLARD (KEEP LEFT) - NON-ILLUMINATED RETRO-REFLECTIVE TYPE
	BOLLARD (KEEP LEFT) -ILLUMINATED TYPE
	PROPOSED DROP KERB WITH HAZARD WARNING TILES / BLOCKS (FERER TO HyD STANDARD DRAWING NOS. H1117,H5118-H5124)
	TYPE 2 RAILINGS AT JUNCTIONS
	TYPE 2 RAILINGS
RM1026	PROPOSED ROAD MARKING

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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 修改摘要	CHK. 核核

STATUS
階段

SCALE 比例 A3 1 : 500

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號 60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
SWEPT PATH DIAGRAM OF 12.8m BUS FOR THE PROPOSED JUNCTION IMPROVEMENT AT CASTLE PEAK ROAD - TAI LAM (WESTBOUND)

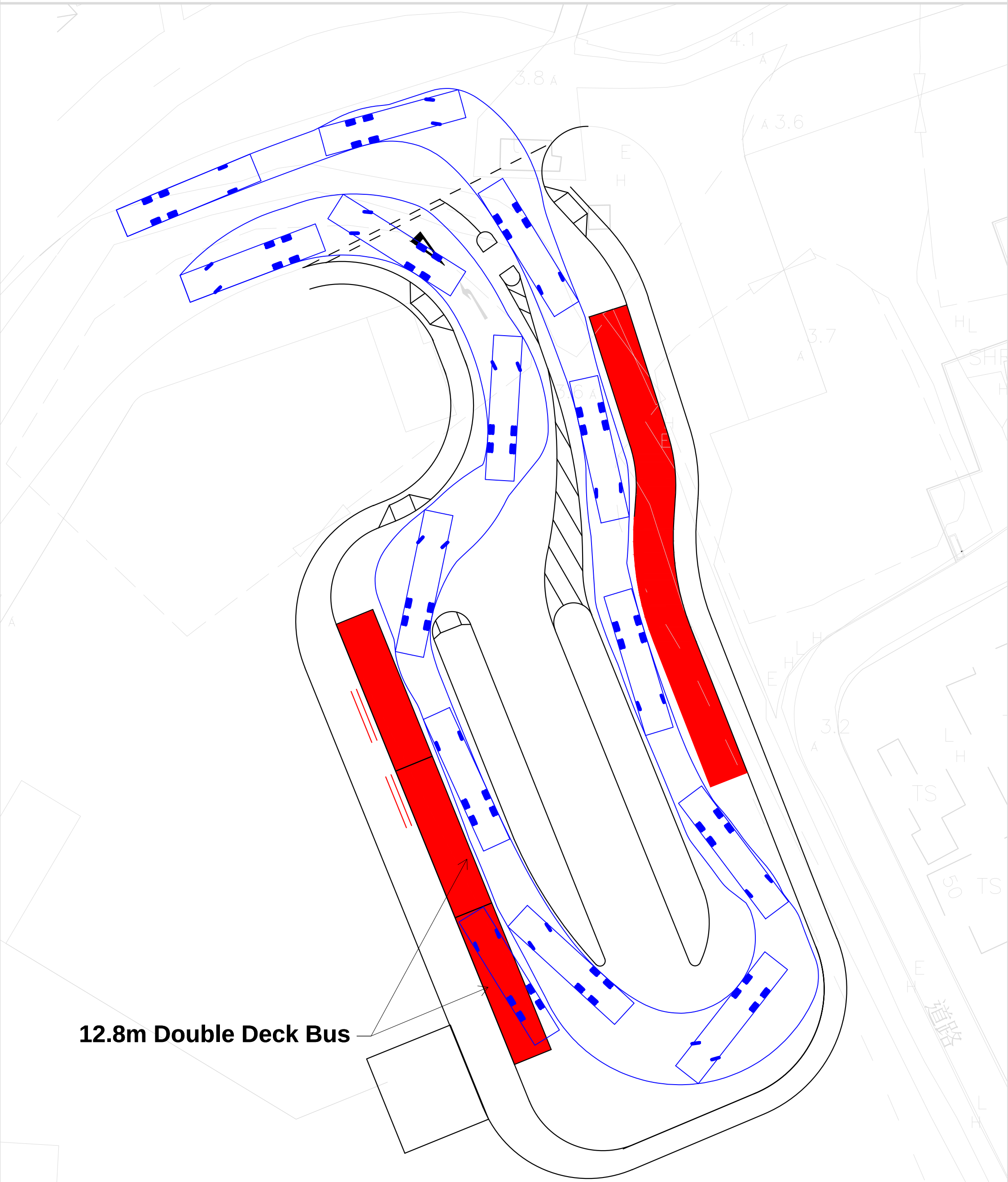
SHEET NUMBER
圖紙編號
ANNEX C SK3

12.8m Double Deck Bus

ANNEX C - SWEPT PATH DIAGRAM AT TI

1:300 (A3)

Annex C - SK5



ANNEX C - SWEPT PATH DIAGRAM AT TI

1:300 (A3) Annex C - SK6

ANNEX C - SWEPT PATH DIAGRAM AT LUEN HONG LANE / LUEN TAI STREET JUNCTION

1:300 (A3)

Annex C - SK7

ANNEX C - SWEPT PATH DIAGRAM AT LUEN HONG LANE / LUEN TAI STREET JUNCTION

1:300 (A3)

Annex C - SK8

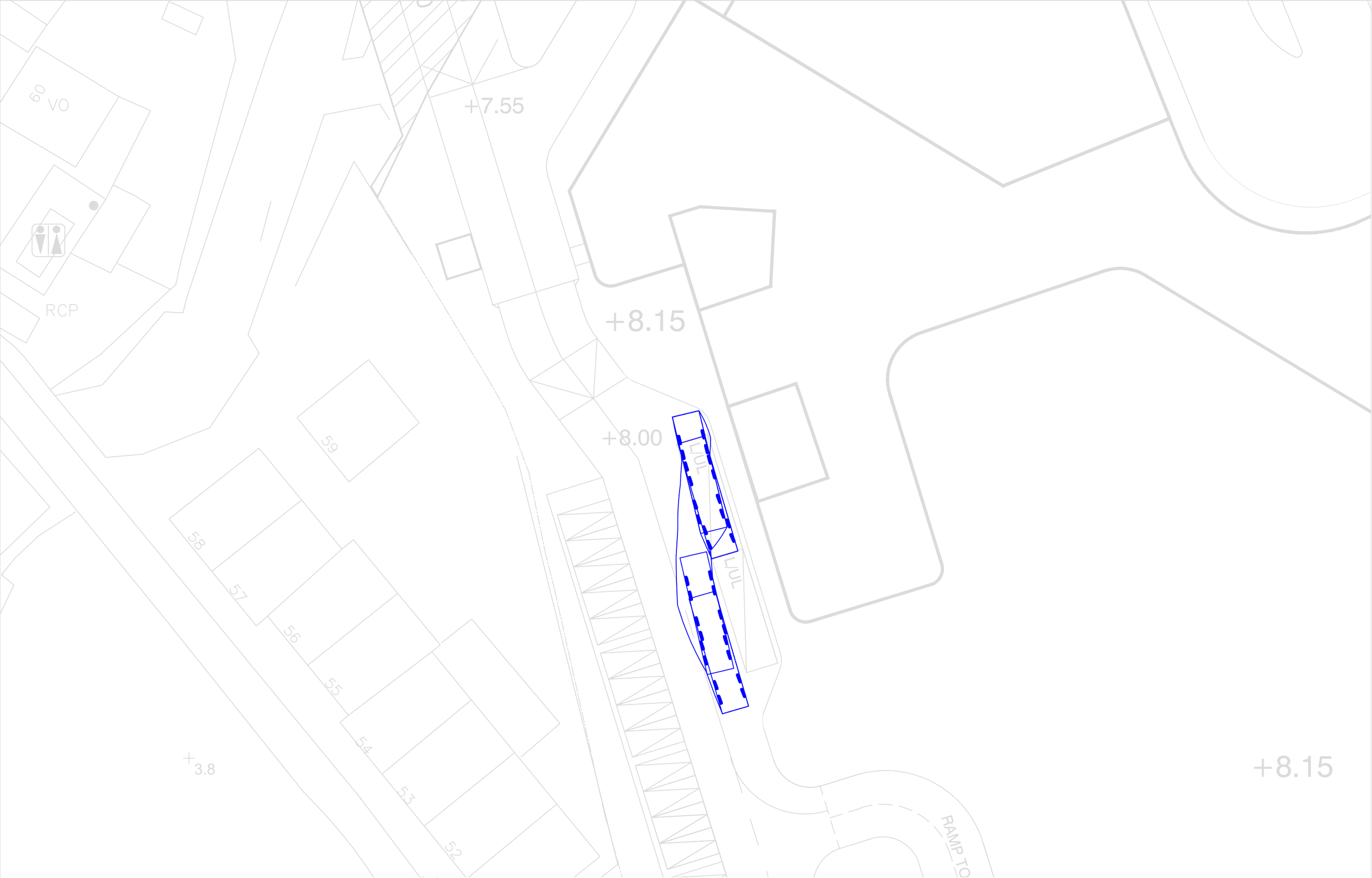
ANNEX C - SWEPT PATH DIAGRAM AT LUEN HONG LANE / LUEN TAI STREET JUNCTION

1:300 (A3)

Annex C - SK9

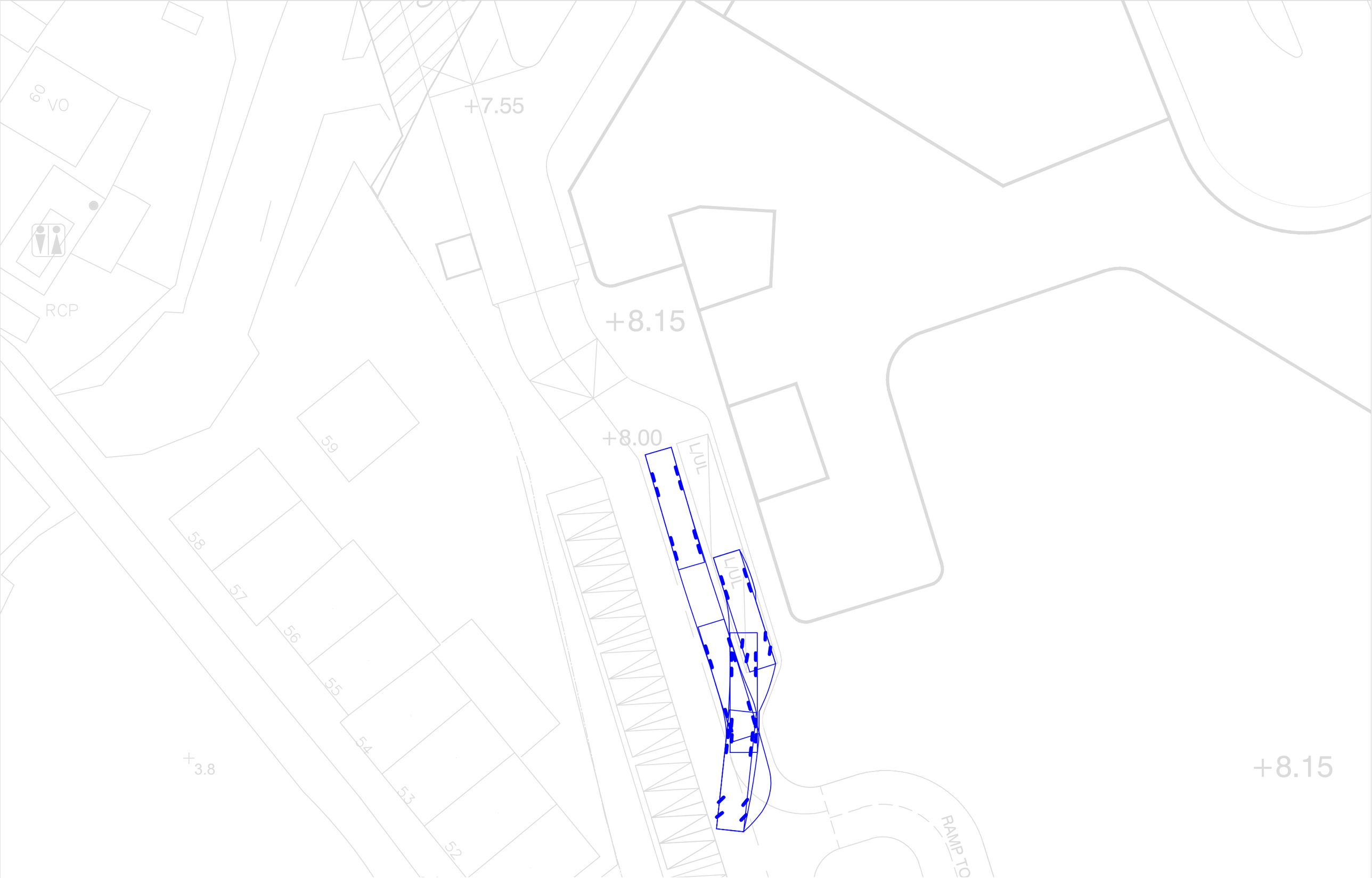
ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (INGRESS)

1:300 (A3) **Annex C - SK10**

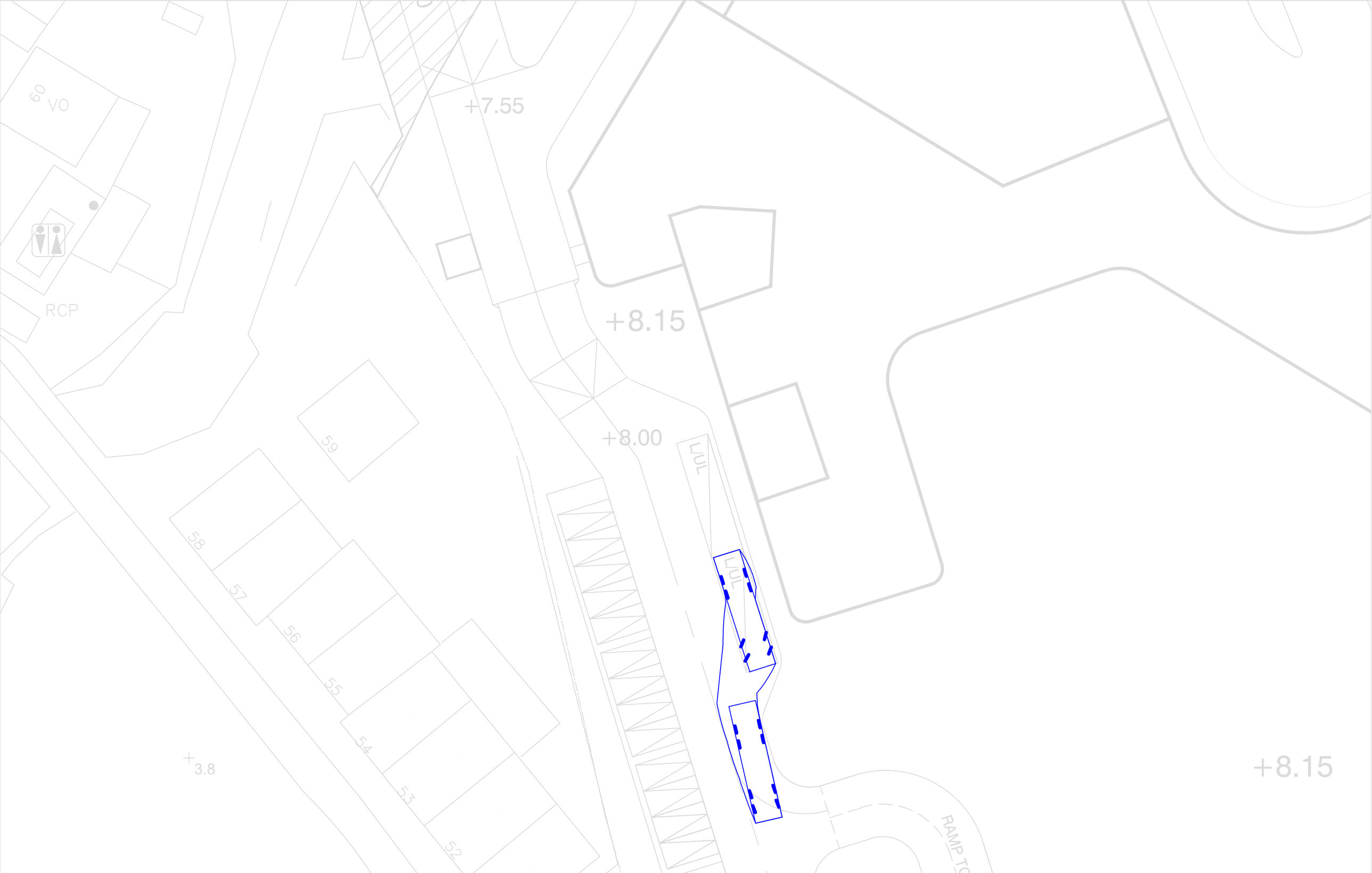


ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (EGRESS)

1:300 (A3) **Annex C - SK11**



ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (INGRESS)
1:300 (A3)
Annex C - SK12



ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (EGRESS)
1:300 (A3) **Annex C - SK13**

Sewage Treatment Plant

+8.15

RAMP TO B/F

Covered
Landscape

+8.15

+8.00

L/UL

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (INGRESS)

1:300 (A3)

Annex C - SK14

Sewage Treatment Plant

+8.15

RAMP TO B/F

Covered
Landscape

+8.15

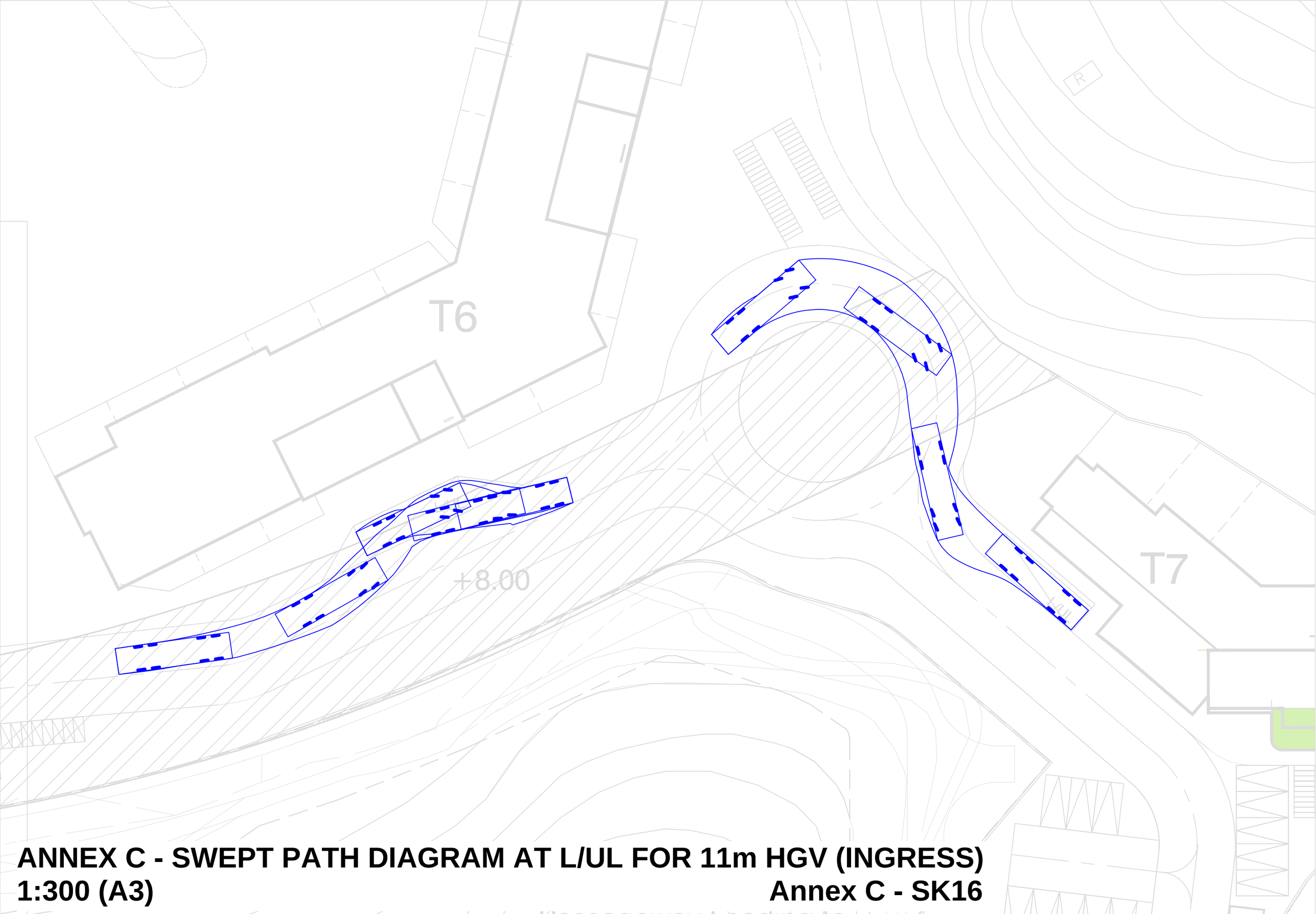
+8.00

L/UL

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (EGRESS)

1:300 (A3)

Annex C - SK15



ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (INGRESS)

1:300 (A3)

Annex C - SK16

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (EGRESS)

1:300 (A3) **Annex C - SK17**

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (INGRESS)
1:300 (A3) **Annex C - SK18**

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR 11m HGV (EGRESS)
1:300 (A3) **Annex C - SK19**

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR FIRE ENGINE (INGRESS)
1:300 (A3) **Annex C - SK20**

ANNEX C - SWEPT PATH DIAGRAM AT L/UL FOR FIRE ENGINE (EGRESS)
1:300 (A3)

Annex C - SK21

FUTURE TAI LAM CHUNG ROAD
FOOTPATH 1.6m FROM
APPROVED GAZETTE PLAN

FUTURE LUEN HONG LANE FROM
APPROVED GAZETTE PLAN.

STOP

ANNEX C - SWEPT PATH DIAGRAM AT JUNCTION LUEN HONG LANE / TAI LAM CHUNG ROAD

1:300 (A3)

Annex C - SK22

Annex D

Proposed Bus Routing

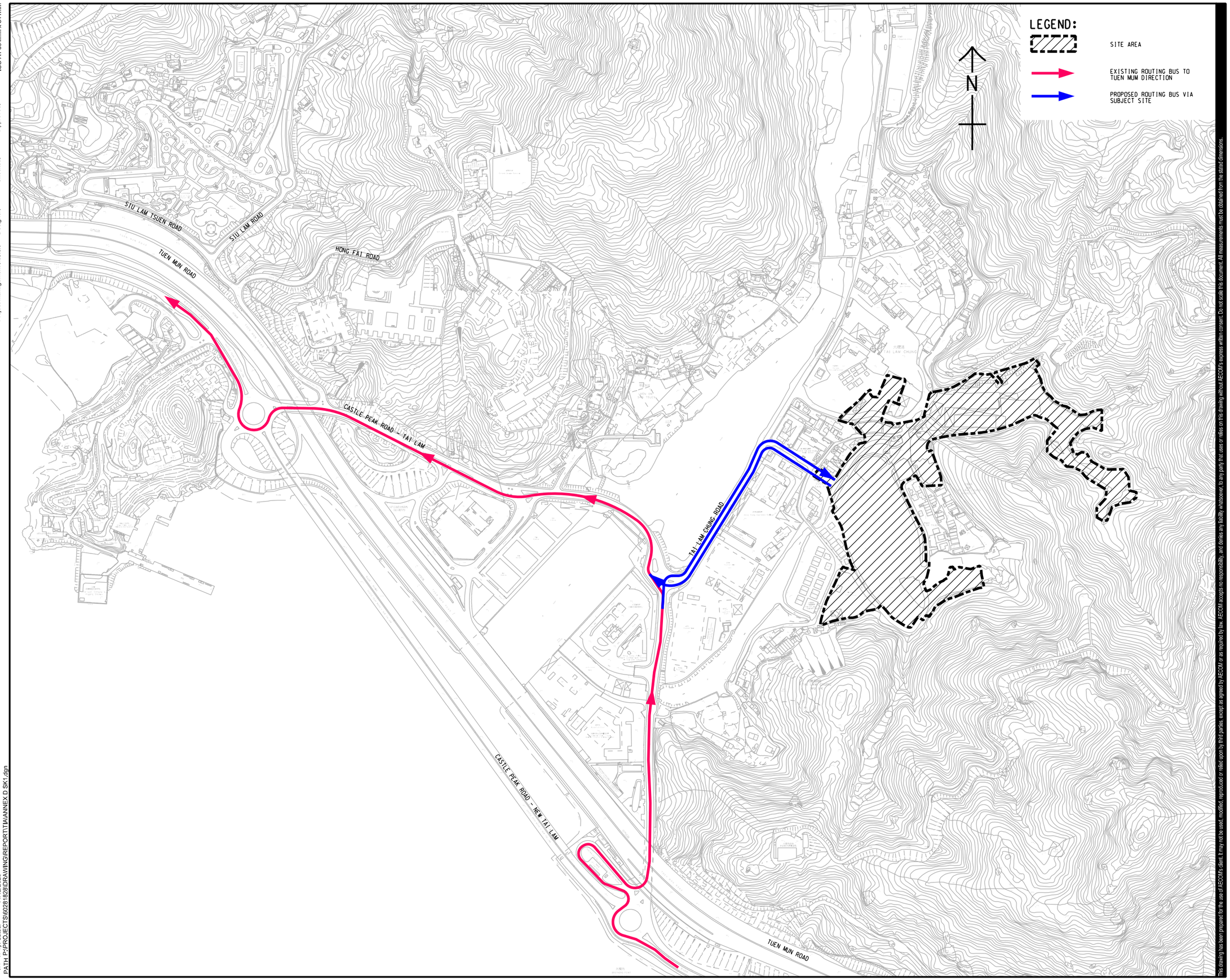
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對

STATUS
階段

SCALE 比例
A3 1 : 5000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
PROPOSED BUS ROUTING WITH EN-ROUTE AT THE SUBJECT DEVELOPMENT

SHEET NUMBER
圖紙編號
ANNEX D - SK1

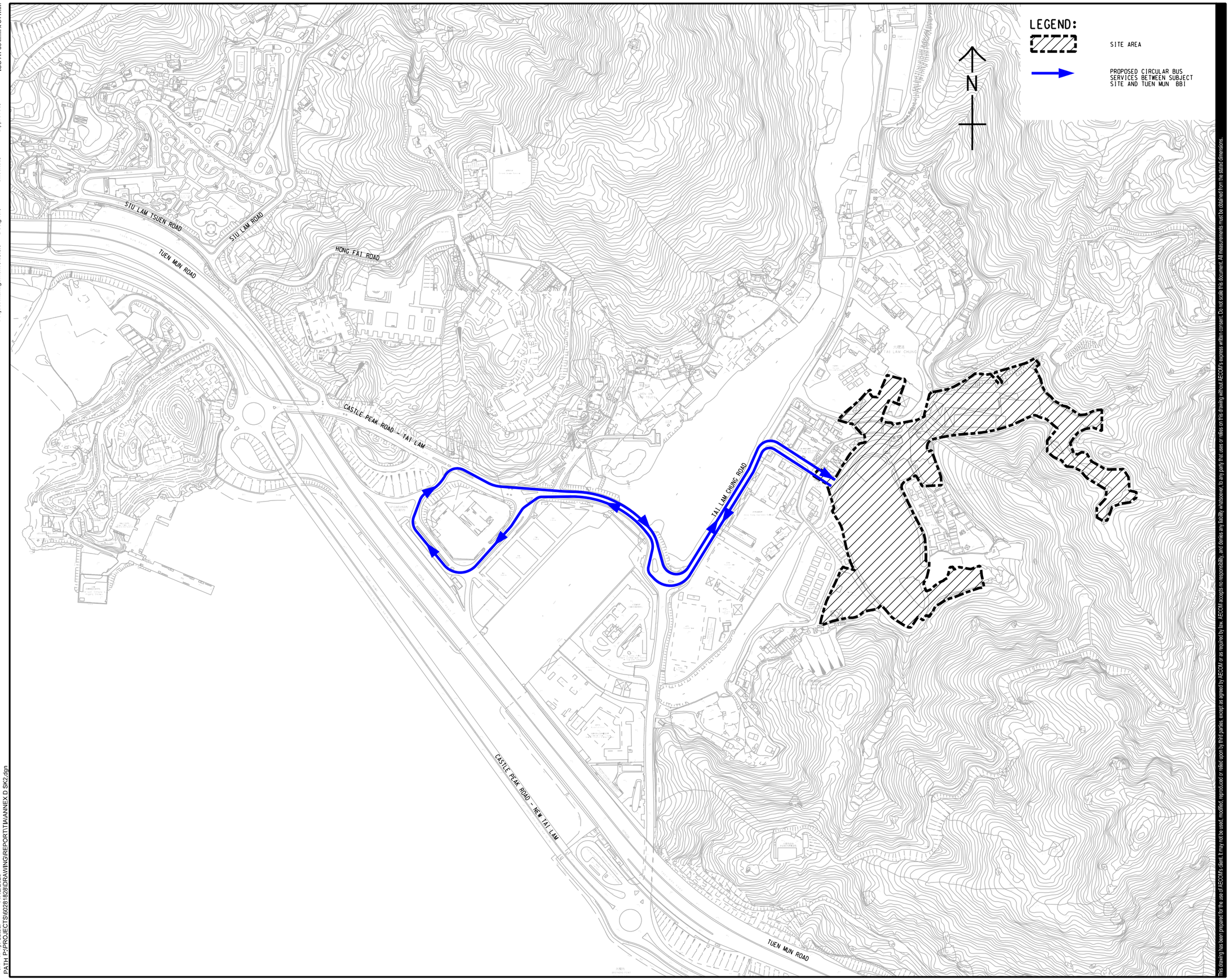
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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PROJECT
項目

SECTION 16 PLANNING APPLICATION FOR PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND, TAI LAM CHUNG, TUEN MUN

CLIENT
業主

SUN HUNG KAI REAL ESTATE AGENCY LTD. 新鴻基地產代理有限公司

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容簡要	CHK. 核對

STATUS
階段

SCALE 比例
A3 1 : 5000

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號
60281828

CONTRACT NO. 合約編號

SHEET TITLE
圖紙名稱
PROPOSED BUS CIRCULAR SERVICE TO TUEN MUN BUS-BUS INTERCHANGE

SHEET NUMBER
圖紙編號
ANNEX D - SK2

Annex E

Extracted From Draft Land Grant of TMTL417

Commence and continue to operate the Public Open Space and the Public Car Park Clause 14(d)(ii)

(II) Submit or cause to be submitted to the Director of Planning and the District Officer (Tuen Mun) for their written approval a management plan for the Public Car Park containing, among others, such details as the Director of Planning and the District Officer (Tuen Mun) may require including opening hours and any fee to be charged (which management plan as approved by the Director of Planning and the District Officer (Tuen Mun) is hereinafter referred to as "the Approved PCP Management Plan") and no amendment, variation, alteration, modification or substitution to the Approved PCP Management Plan shall be made by the Grantee thereafter except with the prior written approval of the Director of Planning and the District Officer (Tuen Mun) or except as required by the Director of Planning and the District Officer (Tuen Mun); and

(III) Subject to the aforesaid approvals, open and commence to operate the Public Open Space and the Public Car Park.

Possession of the Orange Areas
Clause 15(c)

The remaining portion or portions of the Orange Areas shall be re-delivered up to the Government on demand. The Government reserves the right to take back possession of the remaining portion or portions of the Orange Areas or any part or parts thereof for any purpose (as to which the decision of the Director shall be final and conclusive) as and when it sees fit without any payment or compensation whatsoever to the Grantee, provided always that the Government shall not be compelled to take back possession of the remaining portion or portions of the Orange Areas or any part thereof until the Director shall confirm in writing that the Government agrees to take back possession of the remaining portion or portions of the Orange Areas or any part thereof.