Proposed Concrete Batching Plant in "Industrial" Zone at Nos.13- 17 Wah Sing Street, Kwai Chung S16 Planning Application

(Planning Application No: A/KC/509)

Appendix II

Revised Traffic Impact Assessment

Traffic Impact Assessment Final Report May 2025

Prepared by: CKM Asia Limited

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1.0 INTRODUCTION

Background

- 1.1 The Subject Site is located at 13 17 Wah Sing Street in Kwai Chung. Figure 1.1 shows the location of the Subject Site.
- 1.2 On 24th May 2024, the Town Planning Board ("TPB") approved the S16 Planning Application of Proposed minor relaxation of plot ratio restriction for Permitted Warehouse Use (excluding Dangerous Goods Godown) in "Industrial" Zone at the Subject Site (TPB ref: A/KC/505) ("the Approved Warehouse"). The Owner now intends to redevelop the Subject Site into a Proposed Concrete Batching Plant ("Proposed Concrete Batching Plant").
- 1.3 CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Owner to conduct a traffic impact assessment in support of the Proposed Concrete Batching Plant. This report presents the findings of the Traffic Impact Assessment.

Structure of Report

1.4 The report is structured as follows:

Chapter One	-	Gives the background of the project;
Chapter Two	-	Describes the existing situation;
Chapter Three	-	Explains the Proposed Concrete Batching Plant and presents
		the internal transport facilities provided;
Chapter Four	-	Describes the traffic impact analysis;
Chapter Five	-	Gives the overall conclusion.

2.0 EXISTING SITUATION

The Subject Site

2.1 The Subject Site fronts onto Wah Sing Street to the east and Kwai Chung Town Lot 111 RP in DD445 to the west and south.

Public Transport Facilities

2.2 The Subject Site is well-served by public transport facilities, and access to these services is convenient. Details of public transport services operating in the vicinity of the Subject Site are given in Table 2.1 and shown in Figure 2.1.

TABLE 2.1ROAD-BASEDPUBLICTRANSPORTSERVICESOPERATINGNEAR THE SUBJECT SITE

Route	Routing	Frequency (minutes)
KMB 30	Cheung Sha Wan – Allway Gardens	25 – 30
KMB 31	Tsuen Wan West Station – Shek Lei (Circular)	10 – 20
KMB 31B	Olympic Station – Shek Lei (Tai Loong Street)	12 – 25
KMB 31M	Shek Lei (Lei Pui Street) – Kwai Fong Station	5 –15
KMB 31P ⁽¹⁾	Shek Lei Commercial Complex \rightarrow Kwai Fong Station	AM Peak
KMB 32	Olympic Station – Shek Wai Kok	20 – 28
KMB 32H	Cheung Shan – Lai Chi Kok	30 - 60
KMB 32M	Kwai Fong Station – Cheung Shan (Circular)	15 – 25
KMB 33A	Mong Kok (Park Avenue) – Tsuen Wan (Nina Tower)	17 – 25
KMB 34	Tsuen Wan (Bayview Garden) – Kwai Shing (Central)	12 – 20
KMB 35A	Tsim Sha Tsui East – On Yam Estate	5 – 20
KMB 35X ⁽²⁾	On Yam Estate – Tsim Sha Tsui East	AM, PM Peak
KMB 36A	Cheung Sha Wan (Sham Mong Road) – Lei Muk Shue	15 – 30
KMB 36B	Jordan (West Kowloon Station) – Lei Muk Shue	12 – 25
KMB 36M	Kwai Fong Station – Lei Muk Shue	5 – 12
KMB 36X ⁽¹⁾	Lei Muk Shue – Tsim Sha Tsui East (Mody Road)	AM, PM Peak
KMB 37	Kwai Shing (Central) – Olympic Station	12 – 20
KMB 37M	Kwai Hing Station → Kwai Shing Central (Circular)	8 – 20
KMB 38	Kwai Shing (East) – Ping Tin	6 – 20
KMB 38A	Mei Foo – Riviera Gardens	20 – 30
KMB 38B ⁽¹⁾	Riviera Gardens – Shek Mun Estate	AM, PM Peak
KMB 38P ⁽¹⁾	Kwai Shing (Central) – Ping Tin	AM, PM Peak
KMB 40	Laguna City – Tsuen Wan (Belvedere Garden)	11 – 25
KMB 40A ⁽¹⁾	Ping Tin – Kwai Hing Station	AM, PM Peak
KMB 40P	Tsuen Wan (Nina Tower) – Kwun Tong Ferry	8 – 30
KMB 40E ⁽¹⁾	Nai Chung – Kwai Chung (Kwai Fong Estate)	AM, PM Peak
KMB 40X	Wu Kai Sha Station – Kwai Chung Estate	6 – 20
KMB 42C	Cheung Hang Estate – Lam Tin Station	5 – 15
KMB 43	Cheung Hong Estate – Tsuen Wan West Station	12 – 20
KMB 43A	Cheung Wang Estate – Shek Lei (Tai Loong Street)	6 – 20
KMB 43D ⁽¹⁾	Cheung Wang Estate → Kwai Shing	AM Peak
KMB 43S ⁽¹⁾	Shek Yam → Hong Kong Science Park	AM Peak
KMB 44M	Tsing Yi Station – Kwai Chung Estate	11 – 20
KMB 46P ⁽²⁾	Mei Tin – Kwai Fong Station (Circular)	10 – 30
KMB 46X	Mei Foo – Hin Keng	5 – 20
KMB 47A	Kwai Fong (South) – Shui Chuen O	20 – 30
KMB 47X	Kwai Shing (East) – Chun Shek	6 – 20
	when Motor Bus I WB Long Win Bus CTB Citybus CMB	

Note: KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – Citybus GMB – Green Minibus (1) Monday to Friday. No services on Sundays and Public Holidays

(2) Monday to Saturday. No services on Sundays and Public Holidays

(O) Overnight service

TABLE 2.1ROAD-BASEDPUBLICTRANSPORTSERVICESOPERATINGNEAR THE SUBJECT SITE (CONT'D)

Route	Routing	Frequency (minutes)
KMB 57M	Lai King (North) – Shan King Estate	11 – 30
KMB 58M	Kwai Fong Station – Leung King Estate	3 – 15
KMB 59A	Kwai Fong (Kwai Tsui Estate) – Tuen Mun Pier Head	6 - 60
KMB 61M	Lai King (North) – Yau Oi (South)	8 – 25
KMB 67M	Kwai Fong Station – Siu Hong Court	5 – 20
KMB 69M	Kwai Fong Station – Tin Shui Wai Town Centre	5 – 30
KMB 69P ⁽²⁾	Tin Shui Wai Station → Kwai Fong Station	AM Peak
KMB 73P ⁽¹⁾	Tai Mei Tuk – Tsuen Wan (Nina Tower)	AM Peak
KMB 73P ⁽¹⁾	Tsuen Wan (Nina Tower) → Tai Mei Tuk	PM Peak
KMB 235M	Kwai Fong Station – On Yam Estate	5 – 15
KMB 237A ⁽²⁾	Kwai Shing (Central) \rightarrow Tsim Sha Tsui East (Mody Road)	AM Peak
KMB 240X ⁽¹⁾	Wong Nai Tau – Kwai Hing Station	AM, PM Peak
KMB 260C ⁽¹⁾	Sam Shing Estate – Kwai Fong Station	AM, PM Peak
KMB 265M	Lai Yiu Estate – Tin Heng Estate	5 – 35
KMB 269A ⁽²⁾	Wetland Park Road → Kwai Chung (Kwai Fong Estate)	AM Peak
KMB 269M	Cho Yiu – Tin Yan Estate	12 – 25
KMB 272P ⁽²⁾	Tai Po (Fu Heng) – Kwai Hing Station	AM, PM Peak
KMB 290	Choi Ming – Tsuen Wan West Station	10 – 20
KMB 290A	Choi Ming – Tsuen Wan West Station	10 – 25
KMB 290B ⁽¹⁾	Tsuen Wan West Station – Tseung Kwan O Industrial Estate	AM, PM Peak
KMB 290E ⁽¹⁾	Tseung Kwan O Industrial Estate – Tseun Wan West Station	AM, PM Peak
KMB 290X	Lohas Park Station – Tsuen Wan West Station	15 – 35
KMB 935 ⁽²⁾	Shek Lei (Tai Loong Street) – Wan Chai (Fleming Road)	AM, PM Peak
KMB 936	Shek Wai Kok → Causeway Bay (Cotton Path)	AM Peak
KMB 936	Causeway Bay (Cotton Path) → Shek Wai Kok	PM Peak
KMB 936A ⁽²⁾	Tsuen Wan (Shek Wai Kok) → Causeway Bay (Cotton Path)	AM Peak
KMB 936A ⁽¹⁾	Causeway Bay (Cotton Path) → Lei Muk Shue	PM Peak
KMB N237 ^(O)	Mei Foo – Kwai Shing (Circular)	30
KMB N260 ^(O)	Mei Foo – Tuen Mun Pier Head	20 - 30
KMB N269 ^(O)	Mei Foo – Tin Tsz	10 – 25
KMB N290 ^(O)	Tsuen Wan West Station → Lohas Park Station	2 per day
KMB X42P ⁽¹⁾	Cheung On Estate \rightarrow Lam Tin Station	AM Peak
LWB A30	Lei Muk Shue – Airport (Ground Transportation Centre)	30 - 60
LWB A32	Airport (Ground Transportation Centre) – Kwai Chung Estate	30 - 60
LWB E32	Asiaworld-Expo – Kwai Fong (South)	11 – 30
LWB E32A	Tung Chung Development Pier – Kwai Fong (South)	12 – 30
LWB NA32 ^(O)	Hzmb Hong Kong Port – Kwai Chung Estate	2 – 3 per day
CTB 930	Tsuen Wan – Exhibition Centre Station	10 – 30
CTB 930B ⁽¹⁾	Kwai Shing (East) → Causeway Bay (Moreton Terrace)	AM Peak
CTB N930 ^(O)	Causeway Bay (Moreton Terrace) → Tsuen Wan	1 per day
CTB N930 ^(O)	Tsuen Wan → Causeway Bay (Moreton Terrace)	2 per day
GMB 83A	Tsuen Wan (Chuen Lung Street) – On Yam Estate	8 – 30
GMB 86	Tsuen Wan West Station – Shek Lei Estate	10 – 20
GMB 86A ^(O)	Tsuen Wan (Chuen Lung Street) – Shek Lei Estate	15 – 30
GMB 86M	Tsuen Wan (Chuen Lung Street) – Shek Lei Estate	5 – 20
GMB 87K	Kwai Fong Station – Tsuen Wan West Station	6 – 10
GMB 89A	Kwai Hing Station – Tsuen Wan (Ho Pui Street)	8 – 18
GMB 89B	Tsuen Wan West Station – Kwai Shing East Estate	10 – 12
GMB 89M	Kwai Fong Station – Kwai Shing East Estate	5 – 15
GMB 89P	Kwai Chung (Shek Tau Street) – Kwai Fong (Circular)	15
Note: KMB - Kov	wloon Motor Bus LWB – Long Win Bus CTB – Citybus GMB – Gr	een Minibus

Note: KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – Citybus GMB – Green Minibus (1) Monday to Friday. No services on Sundays and Public Holidays

(2) Monday to Saturday. No services on Sundays and Public Holidays (O) Overnight service

TABLE 2.1ROAD-BASEDPUBLICTRANSPORTSERVICESOPERATINGNEAR THE SUBJECT SITE (CONT'D)

Route	Routing	Frequency (minutes)
GMB 89S	Kwai Fong Station – Kwai Shing Circuit (Circular)	5 – 15
GMB 94	Shek Wai Kok Estate – Kwai Shing Circuit	8 – 15
GMB 94A	Lei Muk Shue Estate – Kwai Shing Circuit	10 – 15
GMB 302	Hong Kong Garden – Kwai Fong Station	5 – 30
GMB 302	Bellagio – Kwai Fong Station	AM Peak
GMB 313	Fuk Loi Estate – Princess Margaret Hospital	6 – 11
GMB 401	Tsing Yi Ferry Terminus – Shek Yam Estate	7 – 10
GMB 403	Shek Lei Estate – Sha Tin Wai (Circular)	20
GMB 403P	Shek Lei Estate – Shatin Town Centre	6 – 20
GMB 403X	Tai Wai Station – Shek Lei Estate (Circular)	12 – 15
GMB 406 ⁽¹⁾	Shek Lei Estate – Kwai Shing Circuit (Circular)	AM Peak
GMB 407	Cheung Wang Estate – Princess Margaret Hospital	4 – 10
GMB 410	Shek Yam Estate – Princess Margaret Hospital	15 – 20
Noto KMD Ko	And an Mater Due LIMP Long Min Due CTD Citybue CMD Cree	

Note: KMB – Kowloon Motor Bus LWB – Long Win Bus CTB – Citybus GMB – Green Minibus

(1) Monday to Friday. No services on Sundays and Public Holidays

(2) Monday to Saturday. No services on Sundays and Public Holidays

(O) Overnight service

Pedestrian Facilities

2.3 In the vicinity of the Subject Site, footpaths are provided alongside roads, and footbridges are provided across Kwai Chung Road.

Existing Traffic Flows

- 2.4 To quantify the existing traffic flows in the vicinity of the Subject Site, manual classified counts were conducted on Thursday, 10th October 2024 at the following junctions:
 - J01 Junction of Kwai Chung Road / Kwai On Road / Kwai Yik Road;
 - J02 Junction of Tai Lin Pai Road / Kwai On Road;
 - J03 Junction of Tai Lin Pai Road / Kung Yip Street;
 - J04 Junction of Kung Yip Street / Wah Sing Street;
 - J05 Junction of Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road; and
 - J06 Junction of Tai Lin Pai Road / San Kwai Street.
- 2.5 In view that junction of Kwai Chung Road / Tai Lin Pai Road is not a signal controlled or a priority junction, the junction performance assessment is not conducted.
- 2.6 The existing road network, the locations of these surveyed junctions and the area of influence ("AOI") are shown in Figure 2.2 and the junction layouts are shown in Figures 2.3 2.8.
- 2.7 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. The AM and PM peak hours identified from the surveys are found to be between 0900 1000 hours and 1700 1800 hours respectively. Figure 2.9 presents the 2024 observed AM and PM peak hour traffic flows in pcu/hour.

Queueing of Taxis for Refilling Liquefied Petroleum Gas ("LPG") at J02

- 2.8 Since queuing of taxis for refilling liquefied petroleum gas occurs during the PM peak hour along Tai Lin Pai Road northbound near its junction with Kwai On Road, the effect of taxi queueing is only considered for the PM peak hour junction capacity analysis.
- 2.9 In the junction analysis, the queueing of taxis is regarded as "dead vehicles" occupying part of the slow lane of Tai Lin Pai Road northbound. Despite the presence of the "dead vehicles", the remaining lane width could still serve 2 northbound traffic movements.

Performance of the Surveyed Junctions

2.10 The existing performance of the surveyed junctions are calculated based on the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"), which is published by the Transport Department. The results of the performance of junctions are summarised in Table 2.2, and detailed calculations of junction performance are found in Appendix A.

Ref.	Junction	Type of	AM Peak	PM Peak
		Junction	Hour	Hour
		(Parameter)		
J01	Kwai Chung Road / Kwai On Road / Kwai Yik Road	Signal (RC)	36%	42%
J02	Tai Lin Pai Road / Kwai On Road	Priority (RFC)	0.648	0.542 ⁽¹⁾
J03	Tai Lin Pai Road / Kung Yip Street	Signal (RC)	86%	92%
J04	Kung Yip Street / Wah Sing Street	Priority (RFC)	0.330	0.294
J05	Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road	Signal (RC)	34%	50%
J06	Tai Lin Pai Road / San Kwai Street	Priority (RFC)	0.197	0.148
Note	RC – Reserve Capacity REC – Ratio of Flow t	o Canacity		

TABLE 2.2 EXISTING JUNCTION PERFORMANCE

Note: RC – Reserve Capacity RFC – Ratio of Flow to Capacity ⁽¹⁾ The effect of taxi queueing is considered.

2.11 The results in Table 2.2 show that the junctions analysed operate with capacity.

3.0 THE PROPOSED CONCRETE BATCHING PLANT

Development Schedule

3.1 The Proposed Concrete Batching Plant has 4 production lines with peak concrete production capacity of 100m³/hour/line. Sufficient loading / unloading facilities which meet the operational requirements are provided within the Proposed Concrete Batching Plant.

Vehicular Access Points

3.2 The vehicular access to the Proposed Concrete Batching Plant is provided at Wah Sing Street.

Operation of Proposed Concrete Batching Plant

- 3.3 The Proposed Concrete Batching Plant has 2 main activities which generate traffic: (a) delivery of concrete from the Proposed Concrete Batching Plant, and (b) delivery of raw materials, such as aggregate, cementitious materials, etc, to the Proposed Concrete Batching Plant.
- 3.4 Details of vehicle movements related to the concrete production and raw material delivery, are presented in Table 3.1.

TABLE 3.1DETAILS OF DELIVERY TO / FROM THE PROPOSED CONCRETE
BATCHING PLANT

Type of	Type of	Typical Vehicle	Traffic Generation (veh/hour)			
Delivery	Vehicle	Dimension (Approx.)	Peak	Peak Raw	Evening	
			Concrete	Material		
			Production ⁽²⁾	Delivery		
Concrete mixer	truck [a]					
Concrete	Concrete 10m(L) x 2.5m(W)		Max. 40 ⁽¹⁾	4	2	
	mixer truck					
Raw material d	elivery truck [b]				
Aggregate/	Aggregate/	Heavy Goods	16	40	7	
sand	sand truck	Vehicle: 10m(L) x				
Admixture	Admixture	2.5m(W)	0	1	0	
	truck					
Waste	Waste truck		0	0	2	
Cement / PFA	Cement /	Articulated Vehicle:	2	6	6	
	PFA tanker	15.4m(L) x 2.5m(W)				
		<u> Total [a] + [b]</u>	58	<u>51</u>	17	

Note: ⁽¹⁾ Maximum concrete production capacity = $100m^3 \times 4$ production lines \div typical capacity of $10m^3$ for a concrete mixer truck = 40 nos.

⁽²⁾ The maximum hourly peak traffic generation only occurs during the concrete peak production at around 7am and 3pm.

- 3.5 Table 3.1 shows the following:
 - During the peak concrete production, a total of 40 concrete mixer trucks and 18 raw material delivery trucks per hour are generated. It should be noted that the peak concrete production does not occur throughout the day. Normally, concrete production peaks at: (i) around 7am, which would allow for the concrete mixer trucks to reach their construction sites at the start of the work day, and (ii) around 3pm, which would allow for concrete mixer trucks to reach their respective construction sites for the final concreting prior to the end of the work day. However, to be conservative, peak concrete production is adopted for both the AM and PM junction assessment.

- During the peak raw material delivery, 4 concrete mixers trucks and 47 raw material delivery trucks are generated. The number of raw material delivery trucks arriving at the Proposed Concrete Batching Plant, depends on the demand for concrete, and is not the same throughout the day.
- In the evening, at most only 1 production line will be operated and this is for special case, eg maintenance of public roads. In addition, only limited number of raw material delivery trucks are generated.

Internal Transport Facilities

3.6 The internal transport facilities provided for the Proposed Concrete Batching Plant are presented in Table 3.2 and the master layout plan is shown in Figure 3.1.

	Ŧ		
Ref.	Туре	Dimension	Quantity
LP01-LP02	Waiting space	11.0m(L) x 3.5m(W) x 4.7m(H)	2
LP03	Raw material unloading bay for container	16.0m(L) x 3.5m(W) x 4.7m(H)	1
LP04-LP07	Concrete mixer truck loading point	11.0m(L) x 3.5m(W) x 4.7m(H)	4
LP08-LP10	Raw material unloading bay for 10m long truck	11.0m(L) x 3.0m(W) x 4.7m(H)	3
LP11-LP12	Motorcycle parking space	2.4m(L) x 1.0m(W) x 2.4m(H)	2
		Total	<u>12</u>

TABLE 3.2INTERNAL TRANSPORT FACILITIES

Swept Path Analysis

3.7 The CAD-based swept path analysis programme, AUTODESK VEHICLE TRACKING, was used to ensure that all vehicles could enter and leave their respective space / bays, with ease. The swept path analysis drawings are found in Appendix B.

Traffic Management Plan

- 3.8 The Applicant proposed the following traffic management measures: (i) the control room will monitor the traffic situation within the Proposed Concrete Batching Plant using CCTVs, (ii) GPS tracking units will be installed in the concrete mixer trucks, (iii) the control room will closely monitor the delivery of all raw materials, and (iv) worker will be deployed at the run-in/out to ensure safe entry and exit of vehicles.
- 3.9 Where necessary, the Applicant would consider to arrange for concrete mixer trucks to wait in Ngong Shuen Chau, which is some 15 minutes' journey time from the Proposed Concrete Plant.

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed Concrete Batching Plant is expected to be completed in 2026, and the assessment year adopted is 2029, i.e. 3 years after the completion. The 2 scenarios for year 2029 assessed are:
 - (i) Year 2029 AM and PM peak hours without the Concrete Batching Plant;
 - (ii) Year 2029 AM and PM peak hours with the Concrete Batching Plant

Traffic Forecasting Methodology

- 4.2 Since the completion year of the Proposed Concrete Batching Plant is same as the Approved Warehouse, which is 2026, the same traffic forecasting methodology adopted for the Approved Warehouse is applied for the Proposed Concrete Batching Plant.
- 4.3 The 2029 traffic flows used for the junction analysis are produced with reference to the following:
 - (i) 2026 traffic flows derived based on the NTW2 Base District Traffic Model ("BDTM");
 - (ii) estimated traffic growth from 2026 to 2029 based on the higher of: (a) 2019

 based Territorial Population and Employment Data Matrix ("TPEDM") data produced by Planning Department ("PlanD") for Kwai Chung District, (b) Projections of Population Distribution 2023-2031 by PlanD, or (c) historic Annual Average Daily Traffic ("AADT") produced by Transport Department ("TD");
 - (iii) the other developments in the vicinity of the Proposed Concrete Batching Plant; and
 - (iv) Traffic generated by the Proposed Concrete Batching Plant.
- 4.4 The (ii) estimated traffic growth from 2026 to 2029, (iii) the other development in the vicinity of the Proposed Concrete Batching Plant and (iv) traffic generated by the Proposed Concrete Batching Plant are presented in the paragraphs below.

Estimated Growth Rate from 2026 to 2029

4.5 The (a) 2019 – based TPEDM data for Kwai Chung District, and the (b) Projections of Population Distribution 2023-2031, and (c) historic AADT are summarised in Tables 4.1 – 4.3 respectively.

Item	Item TPEDM Estimation / Projection				Annual Growth Rate			
	2019	2026	2031	2019 to	2026 to	2019 to		
				2026	2031	2031		
Population	319,150	315,800	319,700	-0.15%	0.25%	0.01%		
Employment	195,950	192,350	183,600	-0.26%	-0.93%	-0.54%		

TABLE 4.2PROJECTIONS OF POPULATION DISTRIBUTION 2023-2031

District	Year 2026	Year 2029	Annual Growth Rate from 2026 to 2029
Kwai Tsing	488,700	483,900	-0.33%

Year \ Station	5426	5430	5608	5629	5809	5828	6005	Overall
2011	15,660	13,720	29,110	14,960	51,600	10,260	70,640	205,950
2012	15,560	13,620	28,620	14,860	49,900	8,740	57,400	188,700
2013	16,220	14,210	28,500	15,490	49,700	9,120	54,130	187,370
2014	15,720	13,100	30,440	15,620	53,080	9,190	57,810	194,960
2015	16,500	10,540	30,090	14,710	54,590	9,370	59,460	195,260
2016	16,960	10,830	30,350	16,400	53,410	10,220	59,380	197,550
2017	17,270	11,030	30,480	16,700	52,580	10,700	60,970	199,730
2018	17,520	11,200	31,330	16,950	54,030	10,860	45,480	187,370
Average Annual Growth								
Note Due to the social events in 2019 and the COVID-19 nandemic thereafter, the 2019 to 2023 AADT								

TABLE 4.3 AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE	TABLE 4.3	AADT OF THE STATION IN THE VICINITY OF THE SUBJECT SITE
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Note: Due to the social events in 2019 and the COVID-19 pandemic thereafter, the 2019 to 2023 AADT are not used

5426 – Kwai On Road (From Tai Lin Pai Road to Kwai Chung Road)

5430 – Tai Lin Pai Road (From Kwai Chung Road Southern Junction to Kwai On Road)

5608 – Kwai Chung Road (From Kwai On Road to Kwai Foo Road)

5629 – Tai Lin Pai Road (From Kwai Cheong Road to Kwai On Road)

5809 – Kwai Chung Road (GL) (From Tai Lin Pai Road to Kwai On Road)

5828 – Tai Lin Pai Road (From Kwai Chung Road Southern Junction to Kwai Cheong Road)

6005 – Kwai Chung Road (From Tai Lin Pai Road to Castle Peak Road - Kwai Chung Interchange)

4.6 Table 4.1 shows that the highest annual growth rate for population is +0.25% and for employment is -0.26%. Table 4.2 shows that the annual growth rate from 2026 to 2029 is -0.33%. Table 4.3 shows that in the historic AADT of the stations between 2011 and 2018 in the vicinity has average annual growth rate of -1.34% per annum. To be conservative, the growth rate of +0.5% per annum is adopted for the traffic growth between 2026 and 2029.

Other Developments in the Vicinity of the Proposed Concrete Batching Plant

4.7 The major planned developments in the vicinity of the Proposed Concrete Batching Plant are summarized in Table 4.4.

Site	Address	Use	Development Parameters (Approx.)
А	132 – 134 Tai Lin Pai Road (TPB ref: A/KC/467)	Industrial	around 7,035m ² GFA
В	45 – 51 Tai Lin Pai Road (TPB ref: A/KC/480)	Data Centre	around 24,955m ² GFA
С	10 – 16 Kwai Ting Road (TPB ref: A/KC/483)	Office and Retail	around 19,480m ² GFA
D	11-19 Wing Yip Street (TPB ref: A/KC/488)	Data Centre	around 32,735m ² GFA
E	2 San Kwai Street (TPB ref: A/KC/499)	Public Housing, Retail and Office	Around 800 flats, 360 m ² Retail GFA and 2300 m ² Office GFA

TABLE 4.4DETAILS OF MAJOR PLANNED DEVELOPMENTS

4.8 The major planned developments listed in Table 4.4 have been included in the traffic forecast.

Traffic Generation of the Proposed Concrete Batching Plant

4.9 With reference to Table 3.1, the estimated traffic generation of the Proposed Concrete Batching Plant is given in Table 4.5. To be conservative, the peak concrete production is assumed to occur during both the AM and PM peak hours.

TABLE 4.5TRAFFIC GENERATION OF THE PROPOSED CONCRETE
BATCHING PLANT

Item	AM Pea	k Hour	PM Peak Hour				
nem	Generation	Attraction	Generation	Attraction			
Total in veh/hr [From Table 3.1]	58	58	58	58			
PCU Factor	2.5	2.5	2.5 2.5				
Total in PCU/Hour	145	145	145	145			
	290 (2	-way)	290 (2-way)				

4.10 Table 4.5 shows that the Proposed Concrete Batching Plant is expected to generate a total of 116 vehicles (2-way), or equivalent to 290 pcu (2-way) during the AM and PM peak hours.

2029 Traffic Flows

4.11 Year 2029 traffic flows for the following cases are derived:

2029 without the Proposed Concrete Batching Plant [A]	 (i) 2026 traffic flows derived with reference to Base District Traffic Model + (ii) estimated total growth from 2026 to 2029, i.e. +0.5% per annum + (iii) traffic generated by other development in the vicinity of the Proposed Concrete Batching Plant
2029 with the Proposed	 [A] + Traffic generated by the Proposed Concrete
Concrete Batching Plant [B]	Batching Plant (Table 4.5)

4.12 The 2029 peak hour traffic flows for the cases without and with the Proposed Concrete Batching Plant, are shown in Figures 4.1 - 4.2, respectively. The ingress / egress routes for the Proposed Concrete Batching Plant are shown in Figure 4.3.

2029 Junction Capacity Analysis

4.13 The 2029 junction capacity analyses for the cases without and with the Proposed Concrete Batching Plant are summarised in Table 4.6 and the detailed calculations are found in Appendix A.

	L 4.0 2027 JUNCTIO							
Ref.	Junction	Type of Junction	Parameter	Concrete	out the Batching	With the Concrete Batchin Plant		
				AM Peak	PM Peak	AM Peak	PM Peak	
				Hour	Hour	Hour	Hour	
J01 ⁽¹⁾	Kwai Chung Road / Kwai On Road / Kwai Yik Road	Signal	RC	39%	53%	34%	43%	
J02 ⁽¹⁾	Tai Lin Pai Road / Kwai On Road	Signal	RC	11%	52%	0%	33%	
J03	Tai Lin Pai Road / Kung Yip Street	Signal	RC	77%	81%	52%	81%	
J04	Kung Yip Street / Wah Sing Street	Priority	RFC	0.378	0.334	0.677	0.625	
J05	Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road	Signal	RC	22%	37%	16%	29%	
J06	Tai Lin Pai Road / San Kwai Street	Priority	RFC	0.341	0.225	0.346	0.228	

TABLE 4.62029 JUNCTION PERFORMANCE

Note: RC – Reserve Capacity

RFC – Ratio of Flow to Capacity

⁽¹⁾ – Junction layout and control is prior to the implementation of the improvement proposed by Kwai On Factory Estate Redevelopment

4.14 Table 4.6 shows that the junctions analysed have capacity to accommodate the expected traffic growth to 2029 and the traffic generated by the Proposed Concrete Batching Plant, except for J02 Tai Lin Pai Road / Kwai On Road.

Junction Improvement Scheme at J02

- 4.15 The junction improvement found in Appendix C is proposed by the Kwai On Factory Estate Redevelopment, and includes conversion of the existing priority junction Tai Li Pai Road / Kwai On Road ("J02") into a signalised junction. It is found that with this junction improvement, the RC in 2029 for the case without the Proposed Concrete Batching Plant will be less than 15%. Hence, further improvement ("Further Improvement") is proposed. The Further Improvement is presented in Figure 4.4.
- 4.16 The capacity analysis is re-conducted with the Further Improvement and the results are presented in Table 4.7, and detailed calculations are found in Pages 20-21 of Appendix A.

TABLE 4.7	2029	JUNCTION	PERFORMANCE	WITH	FURTHER
	IMPRO	VEMENT			

Junction	Type of	Parameter	Without th	ne Proposed	With the			
	Junction				Proposed Concre			
			PI	ant	Batching Plant			
					AM Peak	PM Peak		
			Hour	Hour	Hour	Hour		
Tai Lin Pai Road /	Signal	RC	22%	62%	15%	50%		
Kwai On Road								
		Tai Lin Pai Road / Signal	Tai Lin Pai Road / Signal RC	Junction Junction Concrete Pl AM Peak Hour Tai Lin Pai Road / Signal RC 22%	JunctionConcrete Batching PlantAM PeakPM Peak HourTai Lin Pai Road /SignalRC22%62%	JunctionConcrete Batching PlantPropose Batching BatchingAM PeakPM PeakAM PeakAM PeakPM PeakAM PeakHourHourHourTai Lin Pai Road /SignalRC22%62%15%		

Note: RC – Reserve Capacity

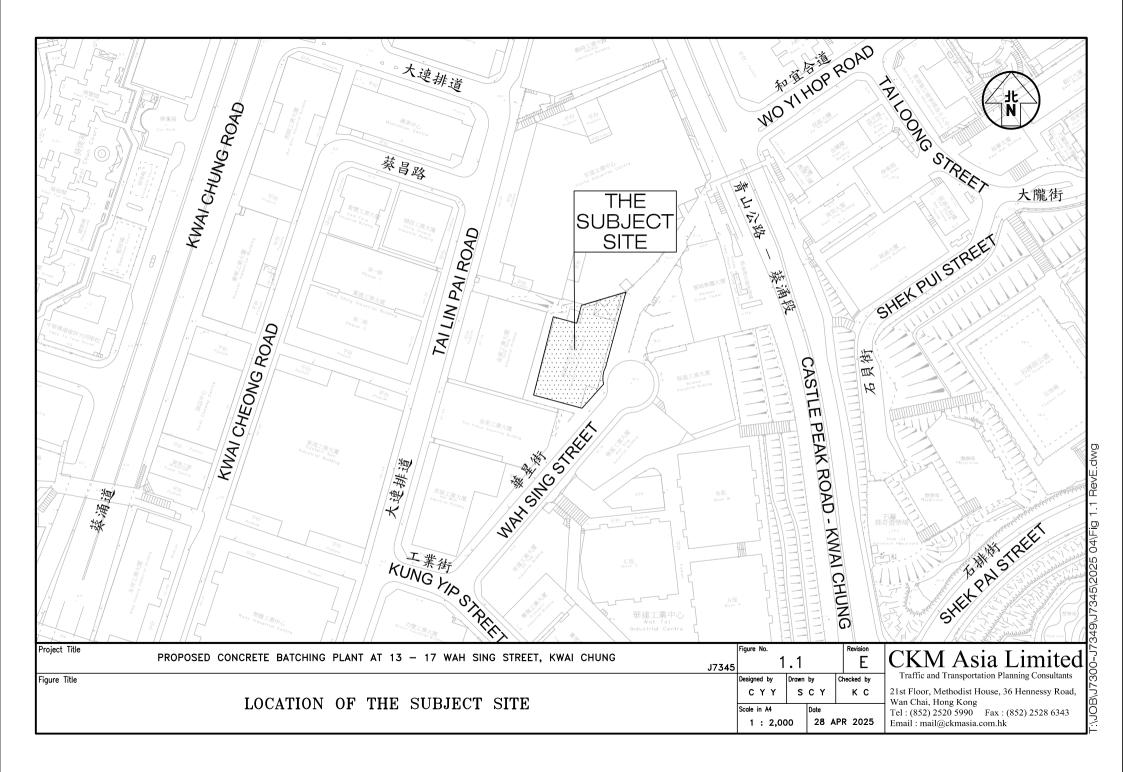
RFC – Ratio of Flow to Capacity

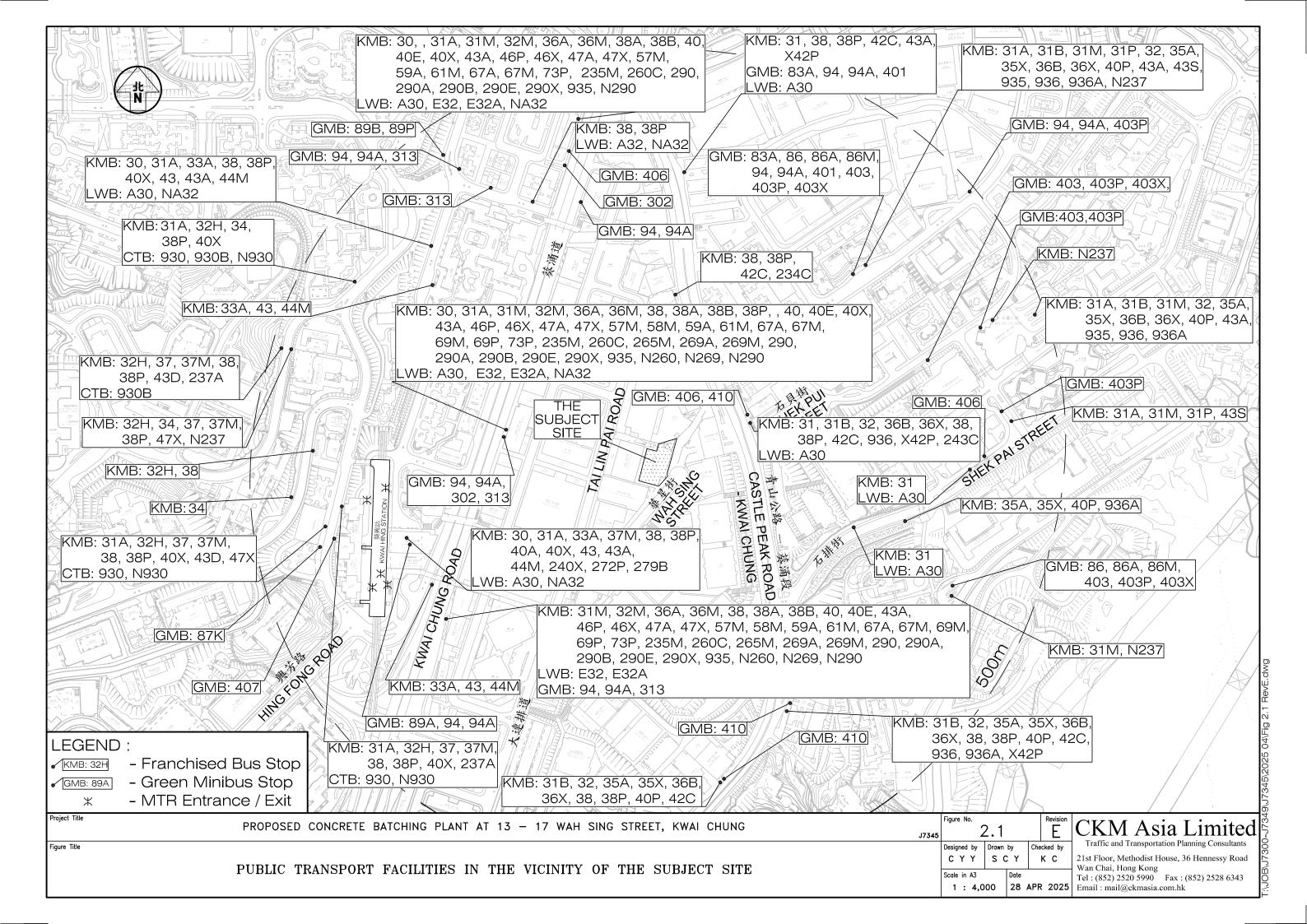
4.17 Table 4.7 shows that J02 with the Further Improvement implemented, could accommodate the expected traffic growth to 2029 and the traffic generated by the Proposed Concrete Batching Plant.

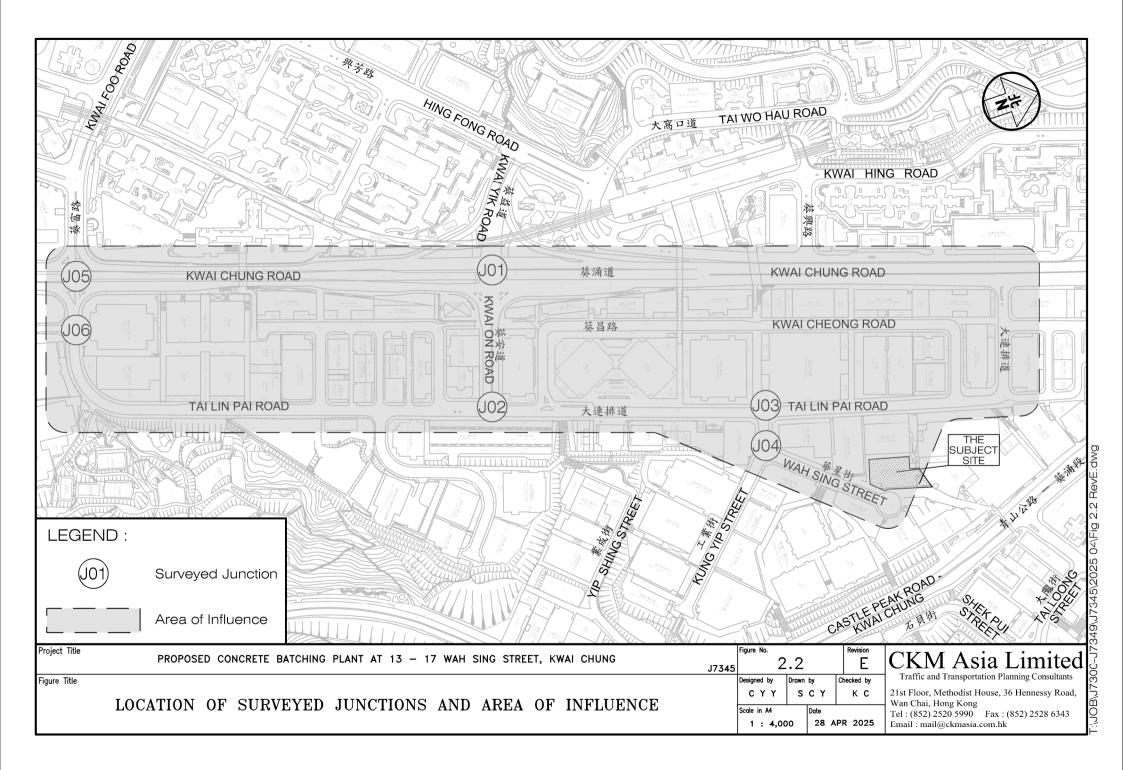
5.0 SUMMARY

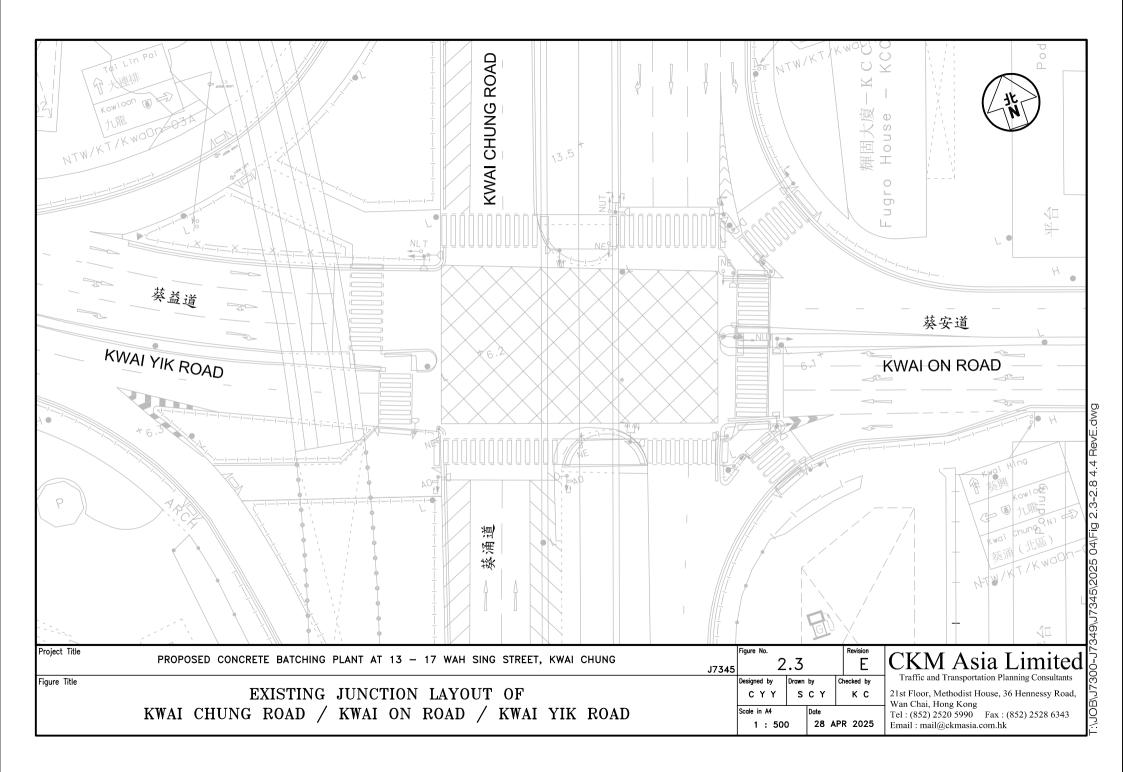
- 5.1 On 24th May 2024, the TPB approved the S16 Planning Application of Proposed minor relaxation of plot ratio restriction for Permitted Warehouse Use (excluding Dangerous Goods Godown) in "Industrial" Zone at 13 17 Wah Sing Street in Kwai Chung the Subject Site (TPB ref: A/KC/505). The Owner now intends to redevelop the Subject Site into a Proposed Concrete Batching Plant.
- 5.2 The Proposed Concrete Batching Plant provides sufficient internal transport facilities meet the operational requirements. The vehicular access to the Proposed Concrete Batching Plant is provided at Wah Sing Street.
- 5.3 Manual classified counts were conducted at junctions located in the vicinity of the Proposed Concrete Batching Plant in order to establish the peak hour traffic flows. Currently, the junctions operate with capacities during the AM and PM peak hours.
- 5.4 The Proposed Concrete Batching Plant is expected to be completed by 2026, and the junction capacity analysis is undertaken for year 2029. With the Further Improvement implemented, in addition to the improvement proposed by the Hong Kong Housing Authority, at the junction of Tai Lin Pai Road / Kwai On Road, all junctions analysed are found to have sufficient capacity to accommodate the expected traffic flow in 2029 and the traffic generated by the Proposed Concrete Batching Plant.
- 5.5 It is concluded that the Proposed Concrete Batching Plant will result in <u>no</u> adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed Concrete Batching Plant is acceptable.

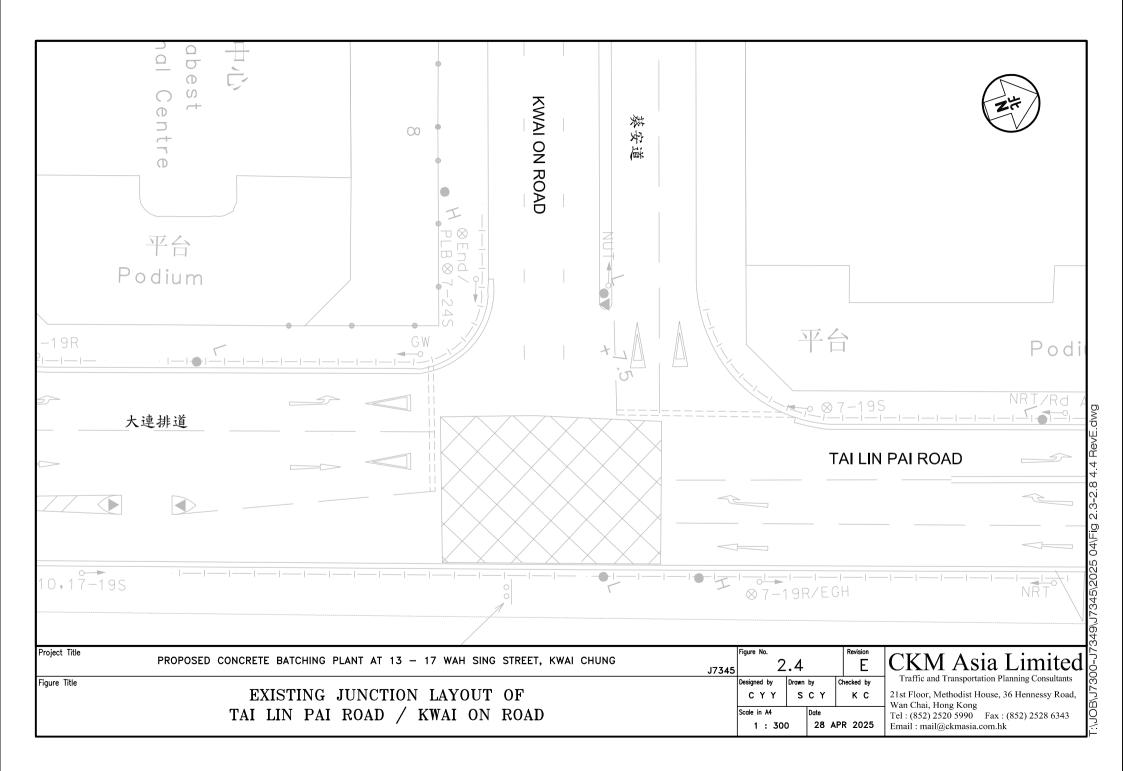
Figures

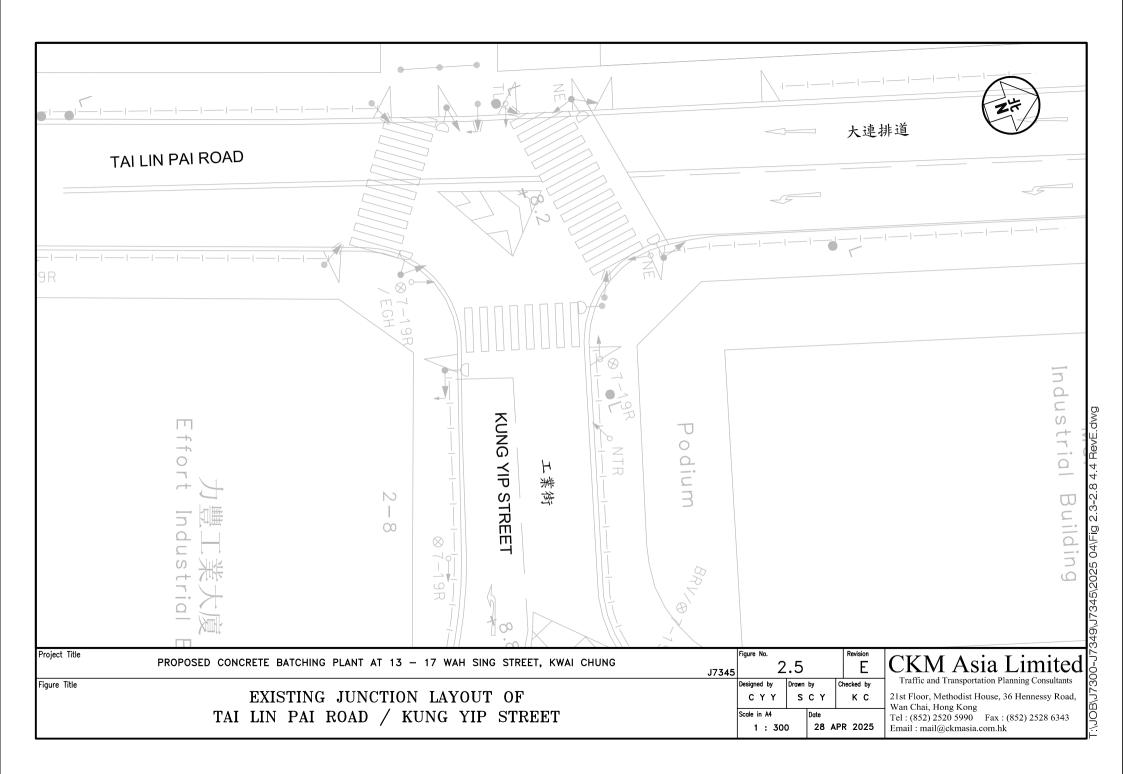


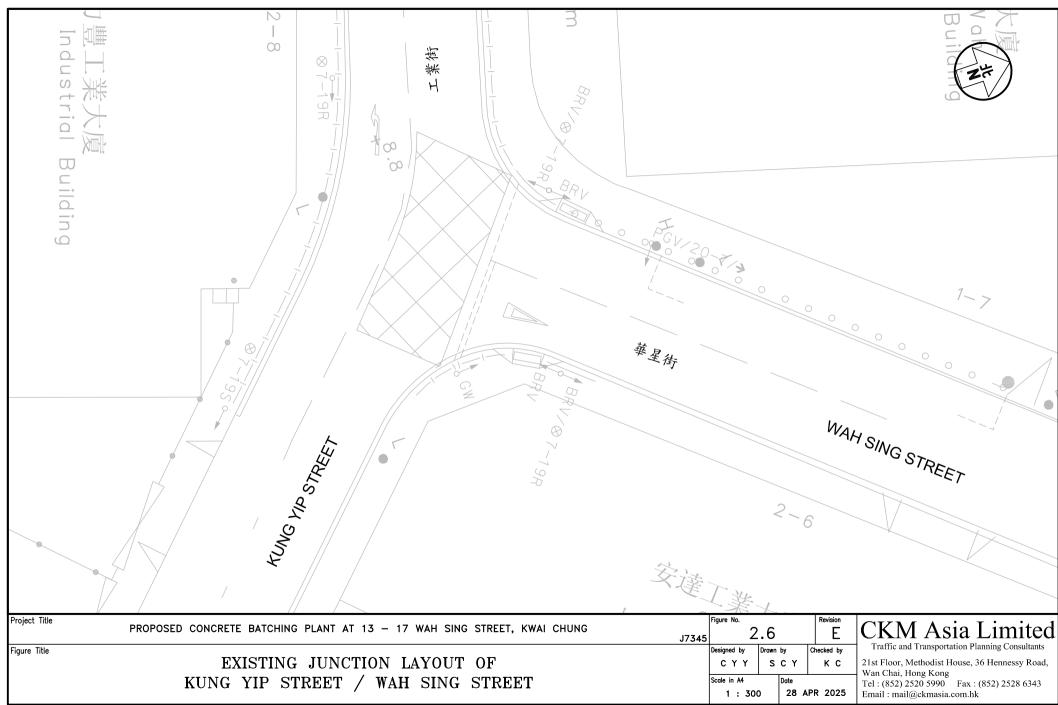




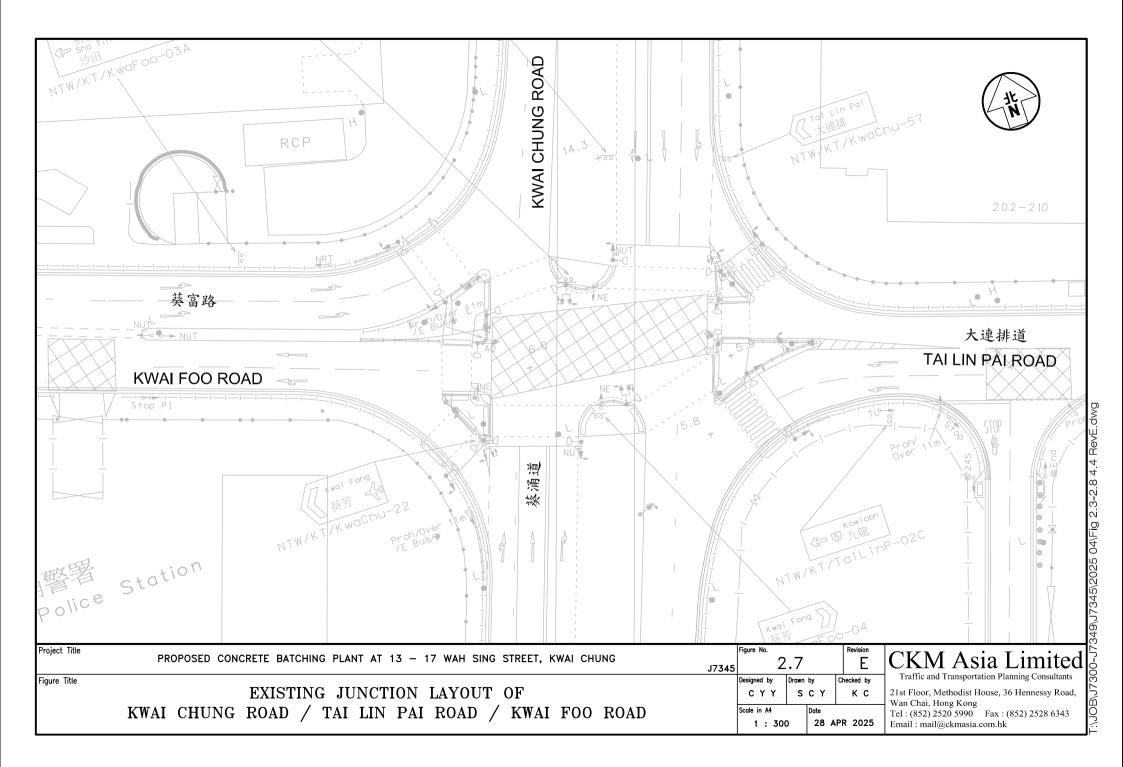


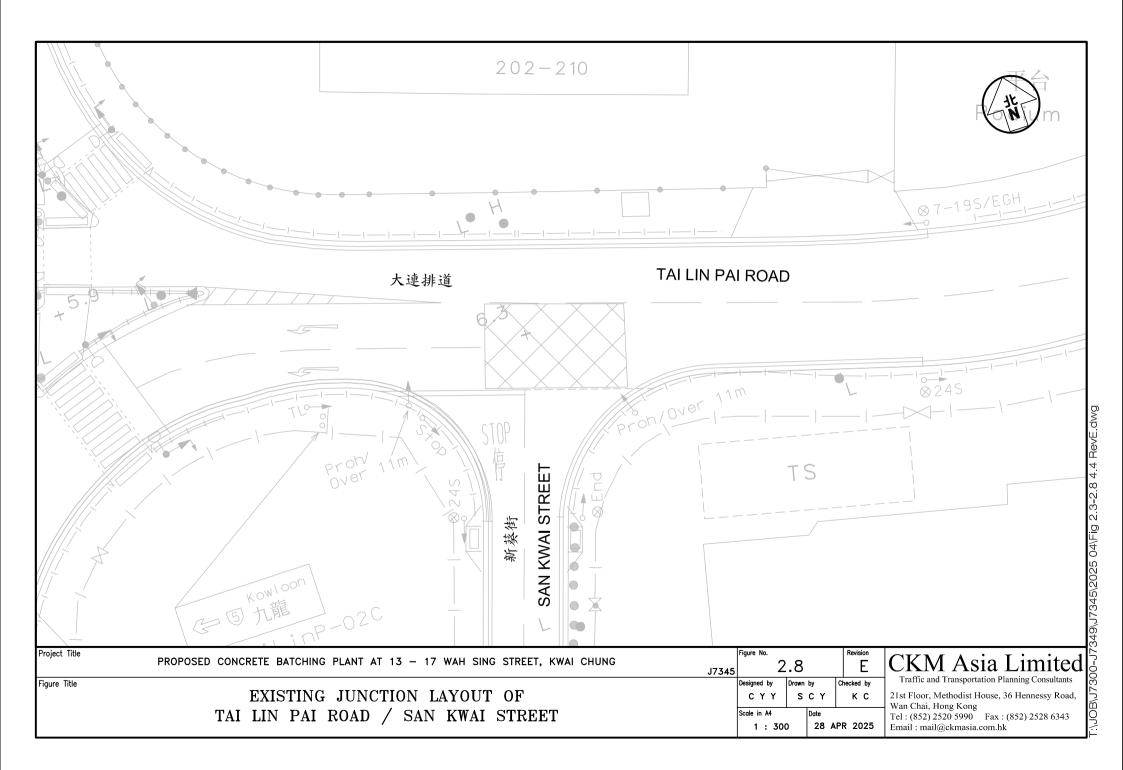


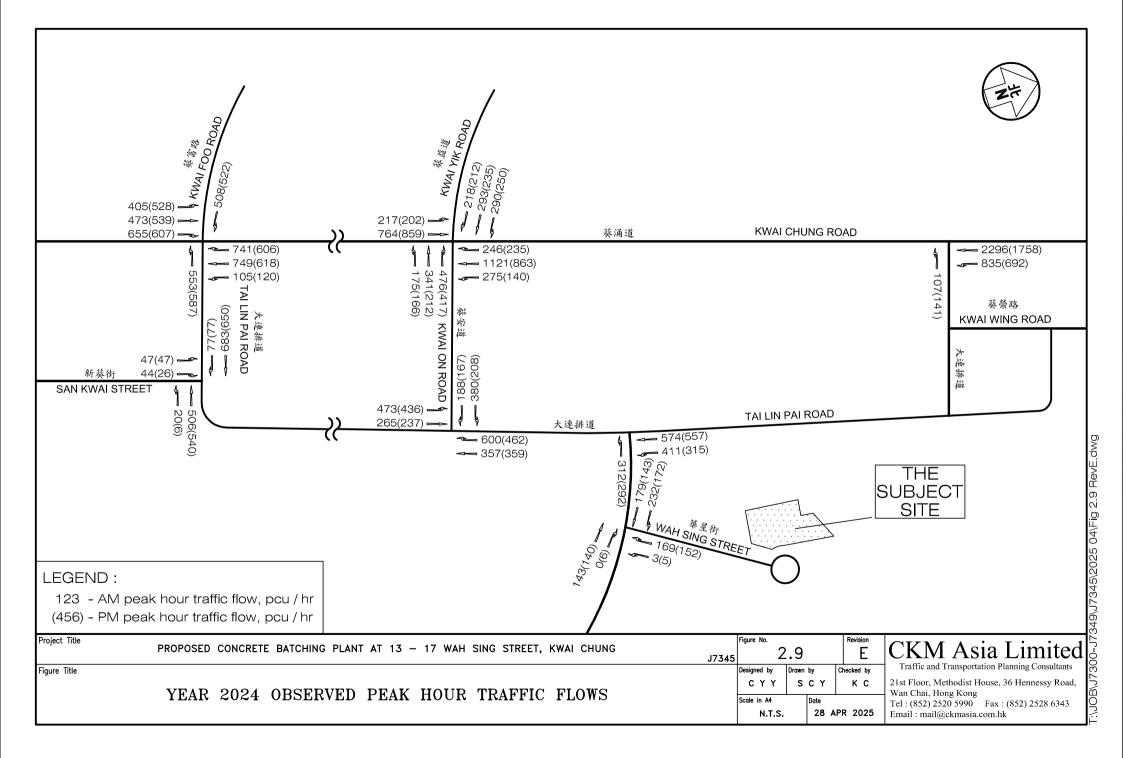


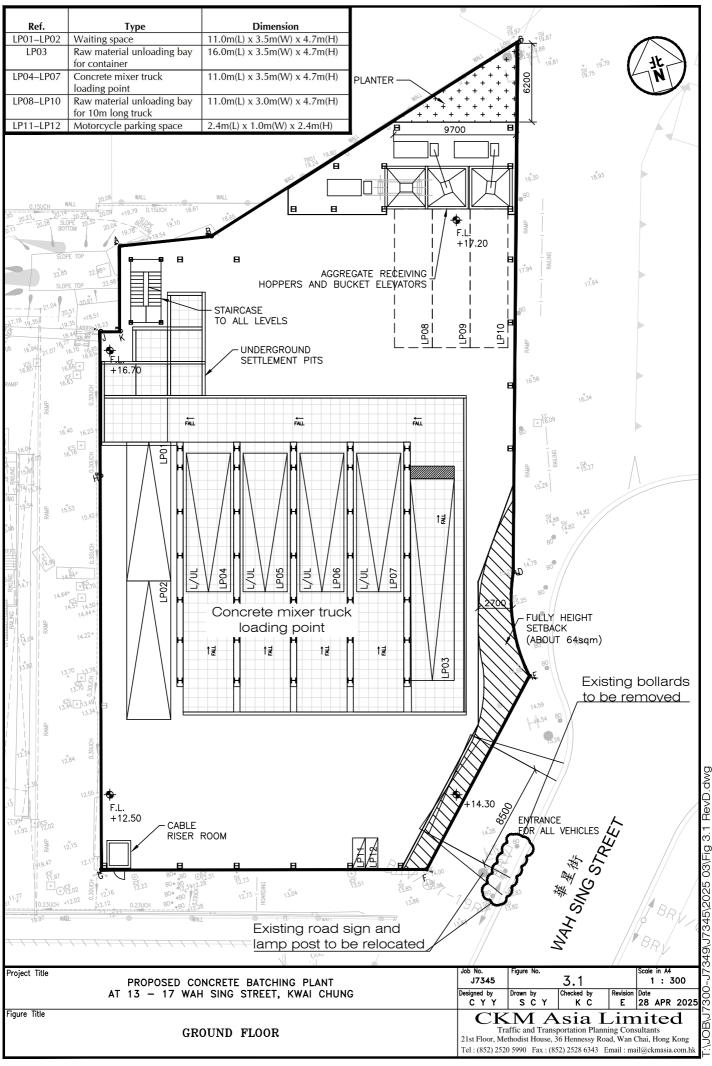


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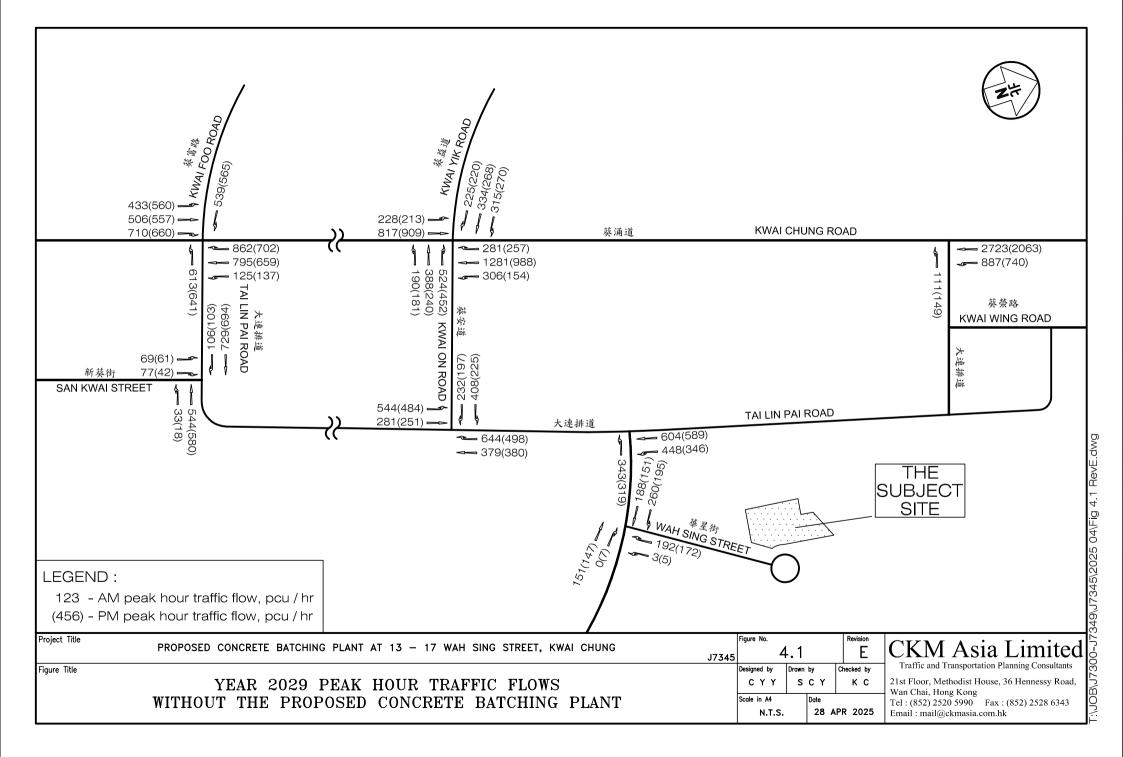


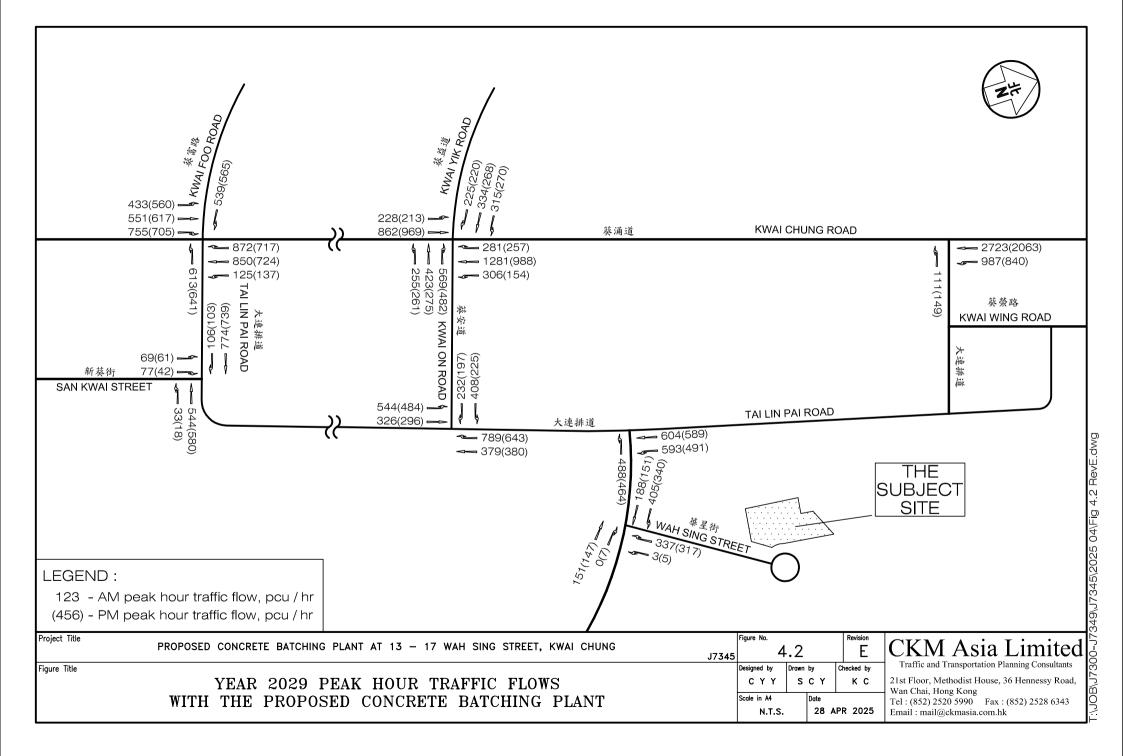


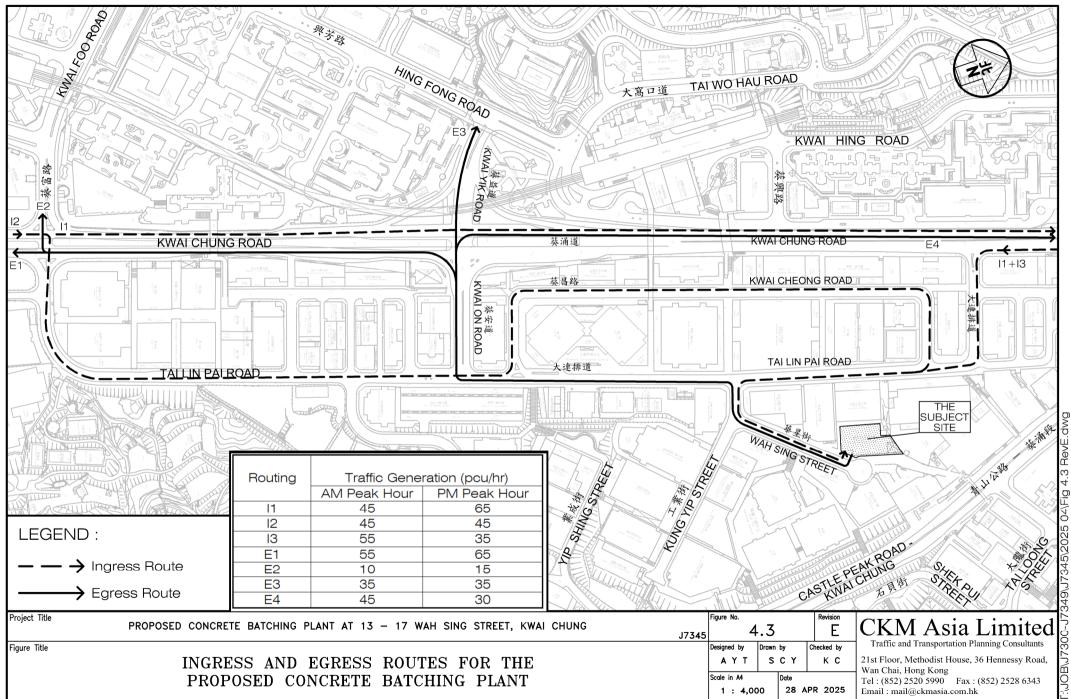




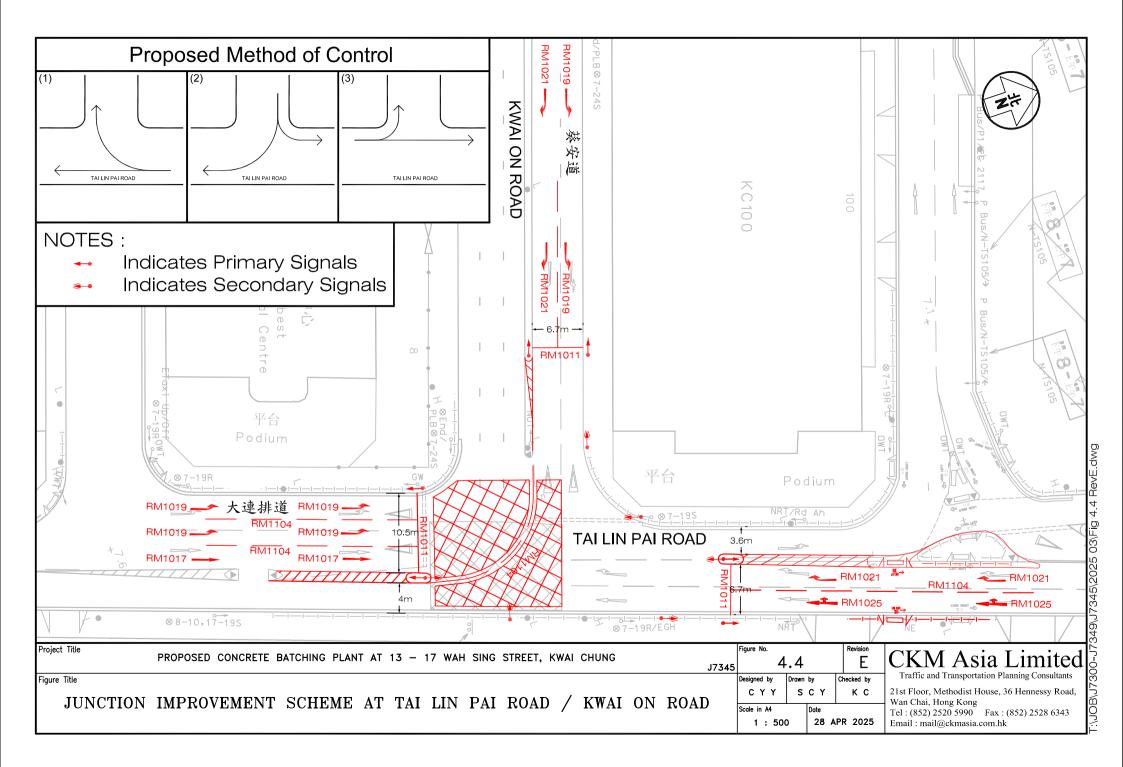
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Appendix A – Detailed Calculation

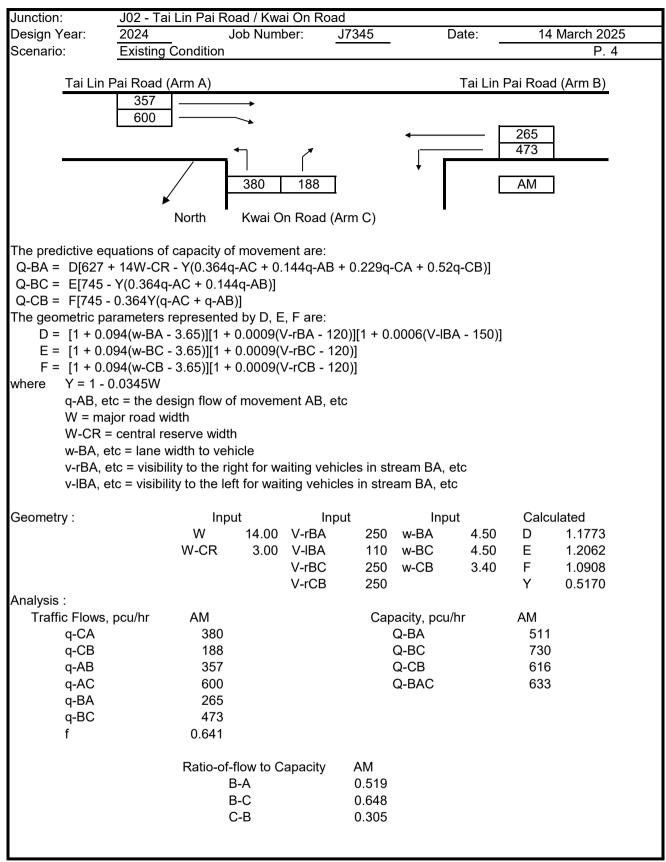
Signal Junction Analysis

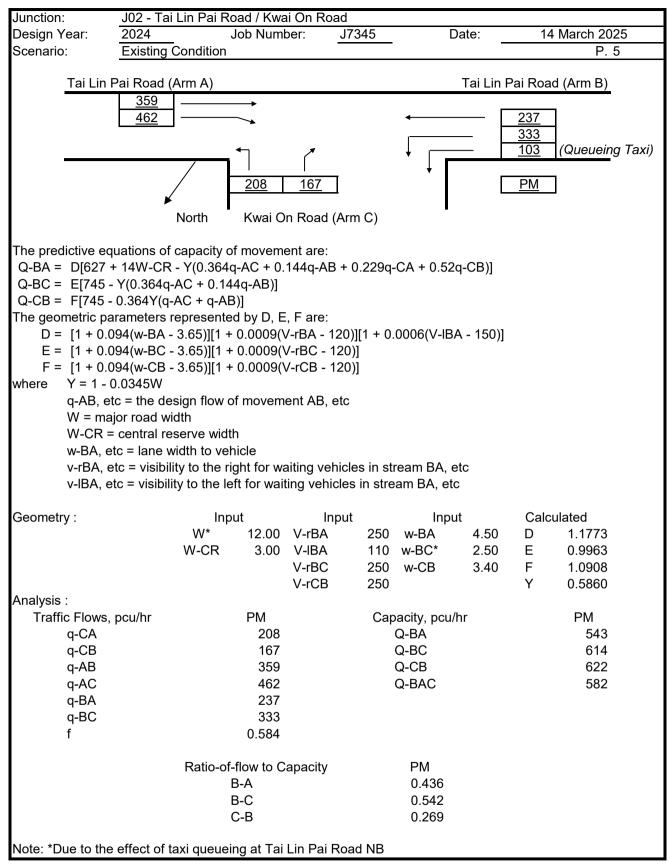
Junction:	J01 - Kwa	ai Chung Road	l / Kwai	On Roa		Yik Roa								-	Job Nu	mber:	J7345
Scenario: Design Year:	Existing C	Condition Designe	ed By:					Checke	ed By:					Date:	14	Page March 2	1 025
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
Kwai Chung R		LT	A1	1, 2	4.00	25.0	Gradient	100	(pcu/hr)	(pcu/hr) 275	0.145	Onucar y	100	(pcu/hr)	(pcu/hr) 140	0.074	Ontiour y
Kwai Chung R		SA	A2	1, 2	4.40	20.0		100	2195	561	0.145		100	2195	432	0.197	
Kwai Chung R		SA	A2	1, 2	4.40				2195	560	0.255			2195	431	0.197	
Kwai Chung R		RT	A3 A4	2	4.40	20.0		100	2042	246	0.233	0.120	100	2042	235	0.130	0.115
			74	2	4.40	20.0		100	2042	240	0.120	0.120	100	2042	200	0.110	0.110
Kwai Yik Road	EB	SA	B1	3	3.80				2135	175	0.082			2135	153	0.072	
Kwai Yik Road	EB	SA+RT	B2	3	3.80	30.0		31	2102	172	0.082	0.082	45	2088	150	0.072	0.072
Kwai Yik Road	EB	RT	B3	3	3.80	25.0		100	2014	164	0.081		100	2014	144	0.071	
Kwai Chung R	oad NB	SA	C1	1	3.50				2105	382	0.181	0.181		2105	430	0.204	0.204
Kwai Chung R		SA	C2	1	3.50				2105	382	0.181	0.101		2105	429	0.204	0.204
Rwai Ondrig R		04	02	-	0.00				2100	502	0.101			2100	423	0.204	
Kwai On Road	WB	LT	D1	4	3.40	25.0		100	1844	175	0.095		100	1844	166	0.090	
Kwai On Road	WB	SA	D2	4	2.90				2045	283	0.138			2045	212	0.104	
Kwai On Road	WB	SA+RT	D3	4	2.90	25.0		79	1952	270	0.138		100	1929	210	0.109	
Kwai On Road	WB	RT	D4	4	2.90	20.0		100	1902	264	0.139	0.139	100	1902	207	0.109	0.109
pedestrian pha	ase		P1	1, 3		min c	rossing	time =	5	sec	GM +	7	sec F	GM =	12	sec	
			P2	1, 2, 4		min c	rossing	time =	5	sec	GM +	10	sec F	GM =	15	sec	
			P3	1, 2		min c	rossing	time =	5	sec	GM +	9	sec F	GM =	14	sec	
			P4	1, 2, 3		min c	rossing	time =	5	sec	GM +	10	sec F	GM =	15	sec	
			P5	2, 3			rossing		6		GM +	13		GM =	19	sec	
			P6	2, 3, 4			rossing		7		GM +	14		GM =	21	sec	
			P7 P8	4 3, 4			rossing t		5 6		<u>GM +</u> GM +	10 12	sec F	GM =	15 18	sec sec	
AM Traffic Flow (pcu/h	<i></i>)		10		Flow (pcu/hr		lossing		0	300		12	3001		Note:	300	
290		275	N K	i w namo	250			140	N		+100(W-3	,		. ,	Note.		
(Free Flow)		↓ → 275 1121	\backslash	(Free F	▲	200	863	140	\backslash	S _M = S / (1 + 1.5 f/r)	S _M = (S	5 - 230) / (*	1 + 1.5 f/r)			
`	►293			(11001	- <u>́</u>	235	000					Peak		Peak			
218		476			↓ 212			417			1+2+3+4	1,2+3+4	1+2+3+4	1,2+3+4			
210	, 764	341			212	859	212	↓		Sum y	0.523 25	0.476	0.500	0.378			
217		175			202	_ †		↓ 166		L (s) C (s)	120	18 120	25 120	18 120			
		110			•			100		practical y	0.713	0.765	0.713				
(Free F	I I Flow)				(Free F	low)				R.C. (%)	36%	61%	42%	103%			
1	Á3 A2 A1	2		A4 A3 A2		3				4							
₽2 ▼	↓ ↓ ↓ P3	► P2	P5 ▶		P3	B1 B2 B3		+ }	**	₽2 ↓		+ ^{P8} → ▲	▲C4 ▲C4				
↓P1 ↓ ↓ C1 C2	P3 ♥	3 ▼	<u>P6</u> ▶	ł	P3	P1 ▼ ◆	<u>P6</u>		▼ ₽4	4	<u>-P6</u> ▶ ◀	+ ₽7•↓	C2 C1				
AM G =		I/G = 5	G =		I/G =	5	G =		I/G =	11	G =		I/G =	8	G =		
G =		I/G =	G =		I/G =	5	G =		I/G =	11	G =		I/G =	5	G =		
PM G =		I/G = 5	G =		I/G =		G =		I/G =		G =		I/G =		G =		
G =		I/G =	G =		I/G =	5	G =		I/G =	11	G =		I/G =	5	G =		

Signal Junction Analysis

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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Scenario:	Without P	Proposed Conc	crete Ba	tching F	Plant											Page	2
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Design Year: 2029 Designed By:						Checked By:							Date:		14 March 20		
Kwaii Chung Read SB LT Ai 1, 2 400 100 101 105 011 100 101 105 011 105 011 105 011 105 011 105 011 105 011 105 011 105 011 105 011 105 011 105 011 105 011<		Approach		Phase	Stage	Width (m)	Radius (m)		Turning %		Flow	y value	Critical y	Turning %		Flow	y value	Critical y
Kinai Chung Road SB SA A3 1,2 4,40 2 140 2195 640 0.232 1 2195 494 0.225 0.13 100 2442 210 0.13 100 2442 210 0.13 100 2442 210 0.13 100 2442 210 0.13 100 2442 210 0.13 100 2442 210 100 2402 210 110 280 0.039 138 2063 0.14 0.13 100 2414 150 0.076 0.07 Kmail Chung Road NB SA C1 1 3.50 - - 2105 272 0.129 0.130 2105 303 0.144 0.14 Kwail Chung Road NB SA C2 1 3.50 - - 2105 272 0.129 0.130 100 144 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.11 0.15 0.165 0.155 0.06 0.117 0.114 0.11 0.11 0.11 0.11 0.	Kwai Chung R	oad SB	LT	A1	1, 2	4.00	25.0		100			0.161		100			0.081	
Kinai Chung Road SB RT A4 2 4.40 200 100 2042 281 0.138 0.138 100 2042 257 0.126 0.178 Kwai Yk Road EB SA B1 3 3.80 250 100 2014 190 0.089 38 2005 164 0.075 0.076 Kwai Yk Road EB RT B3 3 3.80 250 100 2014 180 0.089 38 2005 164 0.076 0.076 Kwai Yk Road EB RT B3 3 3.80 250 100 2014 190 0.089 100 2014 157 0.076 0.076 Kwai Chung Road NB SA C2 1 3.50 100 1246 200 2.013 100 1044 104 0.41 0.00 1034 101 104 101 102 2246 2016 0.03 100 1044 101 102 224 2016 0.03 101 102 224 0.118 101 100 102	Kwai Chung R	oad SB	SA	A2	1, 2	4.40				2195	641	0.292			2195	494	0.225	
Kwai Yk Road EB SA B1 3 3.60 P 2135 191 0.08 0.08 2.15 167 0.07 0.07 Kwai Yk Road EB SA+R B1 3 3.80 25.0 100 2014 180 0.089 100 2014 157 0.078 Kwai Yk Road EB SA+ C1 1 3.50 P 2.105 272 0.129 0.130 2.246 303 0.144 0.44 Kwai Chung Road NB SA+ C1 1 3.50 P 2.105 272 0.129 2.246 303 0.144 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.44 0.40 2.00 100 1844 101 184 101 184 101 1820 224 0.117 116 4 2.00 2.01 105 100 1302 224 0.117 116 101 1022 224 0.118 117 116 116 101 102 224 117 101 101<	Kwai Chung R	oad SB	SA	A3	1, 2	4.40				2195	640	0.292			2195	494	0.225	
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Kwai Vik Read EB SA+RT B2 3 3.80 20.0 24 210 188 0.089 38 2095 164 0.078 Kwai Vik Read EB RT B3 3.80 25.0 100 2014 180 0.089 100 2014 157 0.78 Kwai Chung Read NB SA C1 1 3.50 2105 272 0.120 1205 270 2105 270 2105 270 0.120 2105 200 0.104 0.144 0.144 Kwai Chung Read NB SA C2 1 3.50 2105 272 0.128 12105 0.30 0.144 0.144 Kwai Chung Read WB SA C2 1 3.50 200 100 1844 190 0.105 100 1844 181 0.096 Kwai Chung Read WB SA C2 4 200 200 100 1862 294 0.155 100 192 224 0.118 0.11 10 1862 0.11 10 100 1862 0.116	Kwai Vik Road	IEB	SA	B1	3	3.80				2135	101	0 080	0 080		2135	167	0.078	0.078
Kwai Chung Road KB RT B3 3 3.80 25.0 100 2014 180 0.089 400 2014 157 0.078 Kwai Chung Road NB SA C1 1 3.50 2105 272 0.120 0.120 2105 303 0.144 0.14 Kwai Chung Road NB SA C2 1 3.50 2105 272 0.120 1.205 303 0.144 0.14 Kwai Chung Road NB SA C2 1 3.50 2105 272 0.130 2105 303 0.144 0.14 Kwai On Road WB LT D1 4 3.40 25.0 76 196 100 1902 224 0.118 110 102 224 0.118 101 192 224 0.116 100 1902 224 0.118 111 Kwai On Road WB RT D4 4 2.80 2.00 100 1902 224 0.118 101 192 224 0.118 101 102 101 101 101 101 1							30.0		24				0.000	38				0.070
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Kwai Chung Road NB SA C3 1 3.50 2105 273 0.130 2105 303 0.144 Kwai On Road WB LT D1 4 3.40 25.0 100 1844 181 0.098 Kwai On Road WB SA HT D3 4 2.90 25.0 76 1956 302 0.155 2045 240 0.117 Kwai On Road WB SA+RT D3 4 2.90 25.0 76 1956 302 0.155 100 1902 224 0.155 100 1902 224 0.155 100 1902 224 0.155 100 1902 224 0.155 100 1902 224 0.155 100 1902 224 0.16 11 0.11 0.11 0.10 1902 224 0.155 100 1902 224 0.16 11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11													0.150					0.144
Kwai On Road WB Li Di 4 3.40 2.50 100 1844 190 0.103 100 1844 181 0.096 Kwai On Road WB SA RC 0.2 4 2.90 20.6 76 1956 0.165 0.155 0.100 1924 2246 2.40 0.117 Kwai On Road WB SA RC 0.3 4 2.90 2.00 100 1902 294 0.155 100 1902 224 0.117 Kwai On Road WB RT D4 4 2.90 2.00 100 1902 294 0.155 100 1902 224 0.118 0.117 Kwai On Road WB RT D4 4 2.90 2.00 100 1902 294 0.155 100 1902 224 0.118 0.118 0.117 Kwai On Road WB RT D4 4 2.90 2.00 100 1902 294 0.155 1.00 100 1902 224 0.118 1.18 0.02 241 18 260 18 260 18 260 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td> </td></td<>																		
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Kwai On Road WB SA+RT D3 4 2.90 25.0 76 1956 302 0.154 100 1922 228 0.118 0.11 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 224 0.155 100 1922 224 0.118 0.11 pedestrian phase P1 1.3 min crossing time = 5 sec GM + 7 sec FGM = 12 sec n pedestrian phase P1 1.3 min crossing time = 5 sec GM + 7 sec FGM = 12 sec n P2 1.2.4 min crossing time = 5 sec GM + 9 sec FGM = 13 sec FGM = 14 sec n P3 1.2.3 min crossing time = 5 sec GM + 10 sec FGM = 115 sec P4 1.2.3 min crossing time = 5 sec GM + 10 sec FGM = 13 sec FGM = 13 sec FGM = 14 sec FGM = 15 sec P5 2	Kwai On Road	WB	LT	D1	4	3.40	25.0		100	1844	190	0.103		100	1844	181	0.098	
Kwai On Road WB RT D4 4 2.90 20.0 100 1902 224 0.118 100 1902 224 0.118 pedestrian phase P1 1.3 min crossing time = 5 sec GM + 7 sec FGM = 12 sec pedestrian phase P2 1.2 min crossing time = 5 sec GM + 10 sec FGM = 12 sec P2 1.2 min crossing time = 5 sec GM + 10 sec FGM = 15 sec P4 1.2.3 min crossing time = 5 sec GM + 10 sec FGM = 15 sec P5 2.3 min crossing time = 5 sec GM + 10 sec FGM = 15 sec P6 2.3.4 min crossing time = 5 sec GM + 13 sec FGM = 15 sec P7 4 min crossing time = 5 sec GM + 14 sec FGM = 18 sec P8 3.4 min crossing time = 6 sec GM + 12 sec FGM = 18	Kwai On Road	WB	SA	D2	4	2.90					316	0.155	0.155			240	0.117	
$\frac{1}{122} = \frac{1}{122} + \frac{1}$	Kwai On Road	WB	SA+RT	D3	4	2.90	25.0		76	1956	302	0.154				228	0.118	0.118
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Kwai On Road	WB	RT	D4	4	2.90	20.0		100	1902	294	0.155		100	1902	224	0.118	
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	nodostrian pha			D1	1 2		mino	roccina	timo -	Б		CM +	7	000 F	CM -	10		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	pedestnan pha	ase																
$\begin{array}{c c c c c c c c c c c c c c c c c c c $								-										
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $				P6						7	sec	GM +	14	sec F	GM =	21	sec	
All Traffic Flow (pouhr) (Free Flow) 315 281 \rightarrow 306 1281 281 281 334 225 334 225 334 225 334 225 334 225 334 225 334 225 334 226 317 $388490213190190190190190213190181(Free Flow)181(Free Flow)181(Free Flow)181(Free Flow)181(Free Flow)181(Free Flow)181(Free Flow)181(Free Flow)10.5360.4660.42210012010$				P7			min c	rossing	time =	5	sec	GM +	10	sec F	GM =	15	sec	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				P8	3, 4		min c	rossing	time =	6	sec	GM +	12	sec F	GM =	18	sec	
$(Free Flow) = 1281 \qquad (Free F$	AM Traffic Flow (pcu/h				PM Traffic	Flow (pcu/hr				N	S = 1940	+100(W-3	.25) S =	2080+10	D(W-3.25)			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	4		*	'\	(F	▲	257	*	154	·\\	S _™ = S / (1 + 1.5 f/r)	S™ = (S	5 - 230) / (⁻	1 + 1.5 f/r)			
$\begin{array}{c} 1 \\ 225 \\ 817 \\ 228 \\ 190 \\ (Free Flow) \\ \hline \\ (Free Flow) \\$		r -	1281		(Free F	-	260	988				AM	Peak	PM	Peak			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			524			ŧ	200		452									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	220		Ť			220		240			Sum y							
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(Free Flow) $(Free Flow)$		7	190]		181			1						
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$\begin{array}{c cccccc} & & & & & & & & & & & & & & & & $	(Fiee r						10w)				R.C. (%)	3970	43%	55%	0170			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	P2	₊∟	► P2	P5 ▶		P3	B1	P5	₽8 ◆▶	**	4 ↓P2 ↓		+►	▲▼				
AM G = I/G = 5 G = I/G = 5 G = I/G = 11 G = I/G = 8 G = G = I/G = G = I/G = 5 G = I/G = 11 G = I/G = 5 G = PM G = I/G = 5 G = I/G = 5 G = I/G = 11 G = I/G = 8 G =		*	×. +	P6	+	*.`*	₽1 ▼	. <u>P6</u>		▼. ₽4	•	_ <u>P6</u> → ◀	₽7►	tC3 C2 C1				
PM G= I/G=5 G= I/G=5 G= I/G=11 G= I/G=8 G=			I/G = 5	G =		I/G =	5	G =		I/G =	11	G =		I/G =	8	G =		
	G =	:	I/G =	G =		I/G =	5	G =		I/G =	11	G =		I/G =	5	G =		
G = 1/G = G = 1/G = 5 G = 1/G = 11 G = 1/G = 5 G =	PM G =		I/G = 5	G =		I/G =	5	G =		I/G =	11	G =		I/G =	8	G =		
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Junction:	J01 - Kwai	i Chung Road	l / Kwai	On Roa		•			···· , ·					_	Job Nu	mber:	J7345
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Scenario:	With Propo	osed Concret	e Batch	ing Plar	nt											Page	3
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Design Year:	2029	Designe	ed By:					Checke	d By:					Date:	14	March 2	025
Kwai Chung Road SB LT A1 1,2 4.00 250 100 1901 306 0.41 102 101 101 101 101 101 101 101 101 101 101 101 101 101 101 101 2015 64 0.222 1 2105 64 0.225 101 0.280 0.081 0.181 101 0.242 275 0.126 0.078 102 2105 101 0.282 1 2105 140 0.027 103 0.126 101 0.141 157 0.078 0.078 0.078 0.078 0.078 0.078 0.078 0.078 0.088 100 2014 157 0.078		Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow		y value	Critical y	Turning %	Sat. Flow		y value	Critical y
Kinai Chung Road SB SA A3 1,2 4.40 200 2195 640 0.292 1 2195 400 2022 1 2195 400 2022 1 2195 400 2022 1 2195 400 2022 1 2195 400 2022 1 2195 400 2022 1 2195 400 2022 1 2001 2002 215 107 0.78 <t< td=""><td>Kwai Chung Ro</td><td>oad SB</td><td>LT</td><td>A1</td><td>1, 2</td><td>4.00</td><td>25.0</td><td>Gradient</td><td>100</td><td></td><td></td><td>0.161</td><td></td><td>100</td><td></td><td></td><td>0.081</td><td></td></t<>	Kwai Chung Ro	oad SB	LT	A1	1, 2	4.00	25.0	Gradient	100			0.161		100			0.081	
Knail Chung Road SB RT A4 2 4.40 200 100 2042 281 0.138 0.138 0.138 0.00 242 271 0.126 0.126 0.078 Kwai Yik Road EB SA HET 82 3 3.80 0.00 244 210 188 0.089 100 2014 157 0.078 0.078 Kwai Yik Road EB SA ^A C1 1 3.50 100 2014 180 0.089 100 2014 157 0.078 0.089 0.089 0.00 100<	Kwai Chung Ro	oad SB	SA	A2	1, 2	4.40				2195	641	0.292			2195	494	0.225	
Kmai Yik Read EB SA B1 3 3.80 200 241 191 0.089 2135 107 0.078 0.078 Kmai Yik Read EB SA+RT B2 3 3.80 200 24 2101 186 0.089 100 2014 157 0.078 0.078 Kmai Yik Read EB RT B3 3.30 250 100 2014 180 0.089 100 2014 157 0.078 Kmai Chung Read NB SA C1 1 3.50 2105 287 0.138 0.137 2105 323 0.153 Kmai Chung Read NB SA C2 1 3.50 2105 287 0.138 100 184 2105 323 0.153 Kmai Chung Read NB SA C2 1 3.50 2005 266 138 0.10 100 184 205 133 100 182 205 123 120 120 120 120 120 120 120 120 120 120 120 120 120 <td>Kwai Chung Ro</td> <td>oad SB</td> <td>SA</td> <td>A3</td> <td>1, 2</td> <td>4.40</td> <td></td> <td></td> <td></td> <td>2195</td> <td>640</td> <td>0.292</td> <td></td> <td></td> <td>2195</td> <td>494</td> <td>0.225</td> <td></td>	Kwai Chung Ro	oad SB	SA	A3	1, 2	4.40				2195	640	0.292			2195	494	0.225	
Kinai Yik Road EB SA+RT B2 3 3.80 3.00 2.4 2110 188 0.089 138 2005 164 0.078 Kwai Yik Road EB RT B2 3 3.80 25.0 100 2014 180 0.089 100 2014 167 0.078 Kwai Chung Road NB SA C1 1 3.50 2.105 287 0.136 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 287 0.136 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 286 0.137 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.60 2.00 100 184 285 0.188 100 184 286 0.182 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0	Kwai Chung Ro	oad SB	RT	A4	2	4.40	20.0		100	2042	281	0.138	0.138	100	2042	257	0.126	0.126
Kinai Yik Road EB SA+RT B2 3 3.80 3.00 2.4 2110 188 0.089 138 2005 164 0.078 Kwai Yik Road EB RT B2 3 3.80 25.0 100 2014 180 0.089 100 2014 167 0.078 Kwai Chung Road NB SA C1 1 3.50 2.105 287 0.136 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 287 0.136 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 286 0.137 2.105 323 0.153 Kwai Chung Road NB SA C2 1 3.60 2.00 100 184 285 0.188 100 184 286 0.182 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0.142 0	Kwai Yik Road	EB	SA	B1	3	3.80				2135	191	0.089	0.089		2135	167	0.078	0.078
Kwai Chung Road NB SA C1 1 3.0 2.0 100 2014 180 0.089 100 2014 157 0.078 Kwai Chung Road NB SA C1 1 3.50 2.105 287 0.136 0.137 2.105 323 0.153 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 287 0.136 2.105 323 0.153 0.153 Kwai Chung Road NB SA C2 1 3.50 2.105 287 0.136 0.137 2.106 323 0.153 0.153 Kwai Chung Road NB SA D2 4 2.50 100 1844 225 0.138 100 1844 221 0.124 245 0.138 0.168 0.168 0.168 0.168 0.168 0.128 0.128 0.129 0.128 0.129 0.128 0.120 0.120 0.128 0.128 0.128 0.128 0.129 0.128 0.128 0.128 0.128 0.128 0.128 0.129 0.128 0.128							30.0		24					38				
Kwai Chung Read NB SA C2 1 3.50 2105 287 0.138 2105 323 0.153 Kwai Chung Read NB SA C2 1 3.50 205 287 0.138 2105 323 0.163 Kwai Chung Read NB LT D1 4 3.40 25.0 100 1844 256 0.138 100 1844 261 0.142 0.142 0.142 Kwai Oh Road WB LT D1 4 3.40 2.50 100 1844 256 0.138 100 1844 261 0.142 0.14 0.14 0.14																		
Kwai Chung Read NB SA C2 1 3.50 2105 287 0.138 2105 323 0.153 Kwai Chung Read NB SA C2 1 3.50 205 287 0.138 2105 323 0.163 Kwai Chung Read NB LT D1 4 3.40 25.0 100 1844 256 0.138 100 1844 261 0.142 0.142 0.142 Kwai Oh Road WB LT D1 4 3.40 2.50 100 1844 256 0.138 100 1844 261 0.142 0.14 0.14 0.14																		
Kwai Chung Road NB SA C3 1 3.50 2105 288 0.137 2105 323 0.153 Kwai On Road WB LT D1 4 2.40 2.50 100 1844 255 0.138 100 1844 261 0.42 0.142	Kwai Chung Ro	oad NB	SA*	C1	1	3.50				2105	287	0.136	0.137		2105	323	0.153	0.153
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Kwai Chung Ro	oad NB	SA	C2	1	3.50				2105	287	0.136			2105	323	0.153	
Kwai On Road WB SA D2 4 2.80 76 1956 324 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 25.0 76 1956 329 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 95 1935 249 0.129 pedestrian phase P1 1,3 min crossing time = 5 sec GM + 7 sec FGM = 12 sec P3 1,2 min crossing time = 5 sec GM + 10 sec FGM = 15 sec P4 1,2,3 min crossing time = 6 sec GM + 13 sec FGM = 15 sec P5 2,3 min crossing time = 7 sec GM + 14 sec FGM = 15	Kwai Chung Ro	oad NB	SA	C3	1	3.50				2105	288	0.137			2105	323	0.153	
Kwai On Road WB SA D2 4 2.80 76 1956 324 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 25.0 76 1956 329 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 95 1935 249 0.129 pedestrian phase P1 1,3 min crossing time = 5 sec GM + 7 sec FGM = 12 sec P3 1,2 min crossing time = 5 sec GM + 10 sec FGM = 15 sec P4 1,2,3 min crossing time = 6 sec GM + 13 sec FGM = 15 sec P5 2,3 min crossing time = 7 sec GM + 14 sec FGM = 15																		
Kwai On Road WB SA+RT D3 4 2.90 25.0 76 1956 329 0.168 95 1935 249 0.129 Kwai On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 100 1902 245 0.129 Meal On Road WB RT D4 4 2.90 20.0 100 1902 319 0.168 100 1902 245 0.129 pedestrian phase P1 1.3 min crossing line = 5 sec GM + 7 sec FGM = 12 sec P3 1.2 min crossing line = 5 sec GM + 10 sec FGM = 15 sec P3 1.2 min crossing line = 5 sec GM + 10 sec FGM = 15 sec P4 1.2.3 min crossing line = 5 sec GM + 10 sec FGM = 15 sec P5 2.3 min crossing line = 5 sec GM + 10 sec FGM = 15 sec (Free Flow)	Kwai On Road	WB	LT	D1	4	3.40	25.0		100	1844	255	0.138		100	1844	261	0.142	0.142
Kwai On Road WB RT D4 4 2.80 20.0 100 1902 319 0.166 100 1902 245 0.129 min	Kwai On Road	WB	SA	D2	4	2.90				2045	344	0.168	0.168		2045	263	0.129	
$\frac{1}{1225} = \frac{1}{1225} + 1$	Kwai On Road	WB		D3					76		329					249	0.129	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Kwai On Road	WB	RT	D4	4	2.90	20.0		100	1902	319	0.168		100	1902	245	0.129	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $																		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $																		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $																		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	u o do otnio u u b o			D4	1.0		main a		ine e –				7		<u> </u>	40		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	pedestrian pha	ise																
$\begin{array}{c c c c c c c c c c c c c c c c c c c $																		
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $																		
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$				P6						7						21		
AN Traffic Flow (pouhr) 315 281 \rightarrow 306 (Free Flow) 1281 281 281 281 281 281 1122 120 12				P7			min c	rossing	time =	5	sec	GM +	10	sec F	GM =	15	sec	
(Free Flow) = 1 + 336 $(Free Flow) = 1281$ $(Fre$				P8	3, 4		min c	rossing	time =	6	sec	GM +	12	sec F	GM =	18	sec	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	AM Traffic Flow (pcu/h	r)			PM Traffic	Flow (pcu/hr)			N						Note:		
$(Free Flow) = 1281 \qquad (Free Flow) = 988 \qquad (Free Flow) = 998 \qquad (Fr$	315	281 🕶				270	257	⊶		-			,		. ,			
$\begin{array}{c} \overrightarrow{1} 334 \\ 225 \\ 862 \\ 423 \\ \overrightarrow{2} 862 \\ 423 \\ \overrightarrow{2} 862 \\ \overrightarrow{2} 255 \\ (Free Flow) \\ \end{array}$	(Free Flow)	1:	2 81	Υ.	(Free F	low)		988		``				, ,	,	Scheme	by Other	Project
$\begin{array}{c cccccc} & & & & & & & & & & & & & & & & $		▶ 334				}	268											
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	225	5	569			220			482		Sum y	0.532	0.550	0.499	0.445			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		862	423				969	275				25	18	25	18			
(Free Flow) $(Free Flow)$	228	3- . †	¢ 255			213	- 1		↓ 261			120	120	120	120			
A = A = A = A = A = A = A = A = A = A =											practical y	0.713	0.765	0.713	0.765			
$\begin{array}{c cccccc} & & & & & & & & & & & & & & & & $	(Free F	=low)				(Free F	low)				R.C. (%)	34%	39%	43%	72%			
$\begin{array}{c cccccc} & & & & & & & & & & & & & & & & $	1	A3 A2 A1	2	25	A4 A3 A2	A1	3		5.0	×	4		5.0	×				
$\begin{array}{c} & & & & & & & & & & & & & & & & & & &$	▲ ₽2		1			Ļ	B1	→ · · · ·	∢>	* -'	▲		∢>	¥.'				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	↓ ^{11 2}	↓↓	↓		┛ <u>┤</u>	P3	B3				¥		t	C4				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		▲ ₽3			1	P3	P1	•					↓	▲C3 C2				
C1 C2 C3 C1 C2 C3 AM G = I/G = 5 G = I/G = 11 G = I/G = 8 G = G = I/G = G = I/G = 5 G = I/G = 11 G = I/G = 5 G = PM G = I/G = 5 G = I/G = 5 G = I/G = 11 G = I/G = 8 G =		+	k,	P6	÷	*.	•	P6		*	4	<u>P6</u> ► ←	₽7▶	C1				
G= I/G= G= I/G= G= I/G= G= PM G= I/G= G= I/G= I/G= G=	 C1 C2 C3		P4			P4				P4								
PM G = 1/G = 5 G = 1/G = 5 G = 1/G = 11 G = 1/G = 8 G =	AM G =	:	I/G = 5	G =		I/G =	5	G =		I/G =	11	G =		I/G =	8	G =		
	G =		I/G =	G =		I/G =	5	G =		I/G =	11	G =		I/G =	5	G =		
G = I/G = G = I/G = 5 G = I/G = 11 G = I/G = 5 G =	PM G =		I/G = 5	G =		I/G =	5	G =		I/G =	11	G =		I/G =	8	G =		
	G =		I/G =	G =		I/G =	5	G =		I/G =	11	G =		I/G =	5	G =		





Junction:		Lin Pai Road												-	Job Nu	mber:	
Scenario: Design Year:	2029	roposed Cond Designe						Checke	d By:					Date:	14	Page March 2	6 025
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	Turning %	Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	y value	Critical y
Tai Lin Pai Ro	ad SB	SA	A1	1	3.35		Gladient		1950	379	0.194			1950	380	0.195	
Tai Lin Pai Ro	ad SB	RT	A2	1	3.35	18.0		100	1929	644	0.334	0.334	100	1929	498	0.258	0.258
Kwai On Road	I EB	LT	B1	2	3.35	13.0		100	1748	408	0.233	0.233	100	1748	225	0.129	0.129
Kwai On Road	IEB	RT	B2	2	3.35	17.0		100	1921	232	0.121		100	1921	197	0.103	
Tai Lin Pai Ro	ad NB	LT	C1	3	3.50	7.0		100	1618	255	0.158		100	1618	227	0.140	0.140
Tai Lin Pai Ro		LT	C2	3	3.50	10.0		100	1830	289		0.158	100	1830	257	0.140	
Tai Lin Pai Ro	ad NB	SA	C3	3	3.50				2105	281	0.133			2105	251	0.119	
pedestrian pha	ase																
AM Traffic Flow (pcu/t 408	644 ←	ļ	N	PM Traffic	Flow (pcu/hr 225) 498 -	↓ I		N		+100(W-3 1 + 1.5 f/r) AM		- 230) / ([,]	1 + 1.5 f/r)	Schem Kwai O	n Impro e propos n Factor	sed by ry
		379			-		380				1+2+3		1+2+3		Redeve	elopmen	τ
* 232	281				↓ 197	251				Sum y L (s)	0.725 14		0.527 14				
544	4←				484	1				C (s)	130		130				
										practical y R.C. (%)	0.803 11%		0.803 52%				
1	A2 A1	2 B1 B2				3	†										
			•				C1 C2 C3										
AM G=		I/G = 5	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		
G = PM G =		I/G = I/G = 5	G = G =		I/G =	6	G =		I/G = I/G =	6	G =		I/G =		G = G =		
G =	=	I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

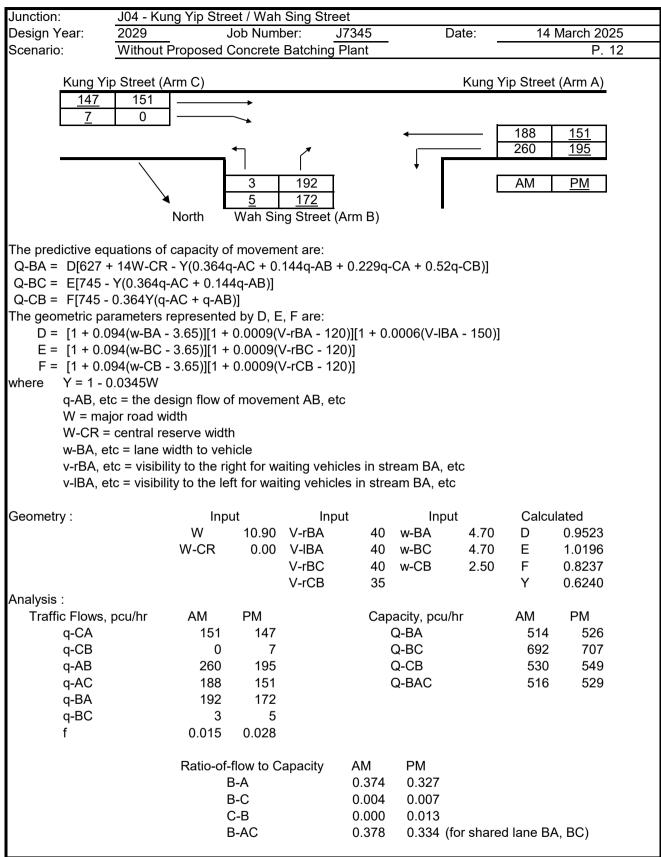
Junction:	J02 - Tai Lin	Pai Road /	/ Kwai C	n Road											Job Nu	mber:	J7345
Scenario:	With Propos	ed Concret	e Batch	ing Plar	nt											Page	7
Design Year:	2029	Designe	ed By:				-	Checke	ed By:					Date:	14	March 2	025
					<u> </u>					AM Peak					PM Peak		
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Tai Lin Pai Ro	ad SB	SA	A1	1	3.35				1950	379	0.194			1950	380	0.195	
Tai Lin Pai Ro	ad SB	RT	A2	1	3.35	18.0		100	1929	789	0.409	0.409	100	1929	643	0.333	0.333
Kwai On Road	EB	LT	B1	2	3.35	13.0		100	1748	408	0.233	0.233	100	1748	225	0.129	0.129
Kwai On Road	EB	RT	B2	2	3.35	17.0		100	1921	232	0.121		100	1921	197	0.103	
Tai Lin Pai Roa	ad NB	LT		3	3.50	7.0		100	1618	255	0.158		100	1618	227		0.141
Tai Lin Pai Ro		LT	C2	3	3.50	10.0		100	1830	289	0.158	0.158	100	1830	257	0.140	
Tai Lin Pai Ro	ad NB	SA	C3	3	3.50				2105	326	0.155			2105	296	0.141	
pedestrian pha	ise																
AM Traffic Flow (pcu/h	r)		N	PM Traffic	Flow (pcu/hr)			N	S = 1940	+100(W-3	.25) S =	2080+100)(W-3.25)	Note:		
			7						1		1 + 1.5 f/r)					n Improv	
408	789 🔶		\setminus		225	643 <	-				AM	Peak	PM	Peak		e propos n Factor	
1 1	379	9			1		380				1+2+3		1+2+3			elopmen	
					Ţ					Sum y	0.800		0.603				
232	326				197	296				L (s)	14		14				
544	⊷ 1				484	↓				C (s)	130		130				
										practical y	0.803		0.803				
										R.C. (%)	0%		33%				
1	A2 A1	2				3											
			t														
	↓	B1 B2															
			ţ			•	<u>+</u> 11										
							C1 C2 C3										
AM G =	1/0	G = 5	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		
G =	1/0	G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		
PM G =	1/0	G = 5	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		
G =	G = 1/G = G				I/G =		G =		I/G =		G =		I/G =		G =		

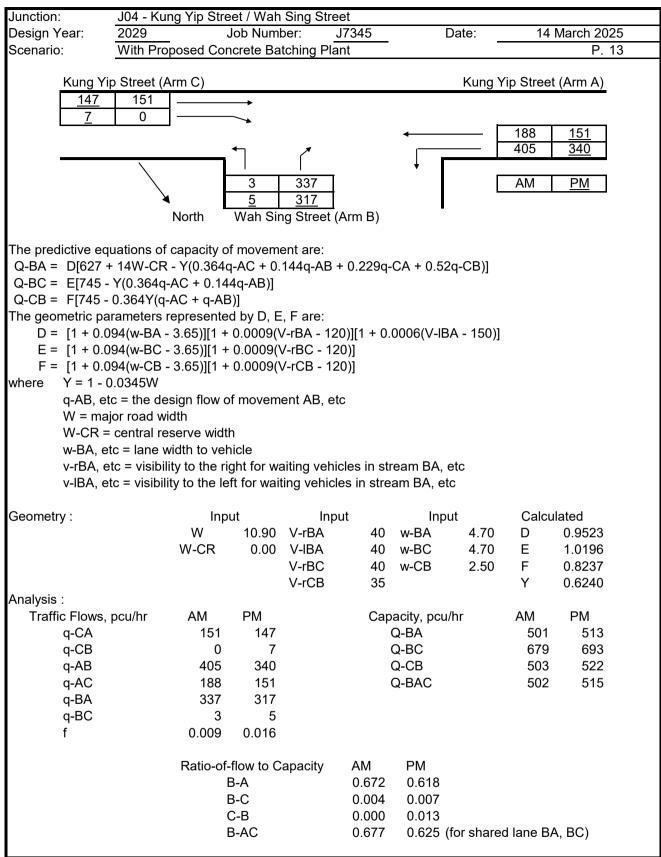
Junction:	J03 - Tai	Lin Pai Road	/ Kung \	/ip Stree	et									-	Job Nu	mber:	J7345
Scenario:	Existing	Condition														Page	8
Design Year:	2024	Design	ed By:				_	Checke	ed By:					Date:	14	March 2	025
_		-	-														
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
							Gradient		(pcu/hr)	(pcu/hr)				(pcu/hr)	(pcu/hr)		
Tai Lin Pai Ro		LT		1	5.20	8.0		100	1798	411	0.229		100	1798	315	0.175	
Tai Lin Pai Ro	ad SB	SA	A2	1	5.20				2135	574	0.269	0.269		2135	557	0.261	0.261
Kung Yip Stree	et WB	LT	B1	1	4.30	8.0		100	1722	312	0.181		100	1722	292	0.170	
nedestrian phy	260		P1	2		min.c	rossing	timo -	6	600	GM +	13	sec F	GM =	19	600	
pedestrian pha	450		FI	2			rossing	ume –	0	Sec		13	SEC F		19	sec	
						-											
AM Traffic Flow (pcu/h	nr)		N	PM Traffic	Flow (pcu/hr)			N	S = 1940	+ 100 (W	-3.25\$ = 2	080 + 100	(W-3.25)	Note:		
			\uparrow						1		1 + 1.5 f/r)						
		→ 411					⊢	• 315				Peak		Peak			
		↓ 574	۱.				+ 557		1		1	FCak	1	reak			
		574					557				0.269		0.261				
										Sum y	40		40				
		↓ 312						* 292		L (s)							
		0.12						202		C (s)	90		90 0.500				
										practical y	0.500						
										R.C. (%)	86%		92%				
1	A2 A1	2															
	Ŧ	▲ **	P1														
		— B1															
	*			*													
AM G =		I/G = 7	G =	32	I/G =	2	G =		I/G =	•	G =		I/G =		G =		
G =		I/G = 7	G =		I/G =		G =		I/G =		G =		I/G =		G =		
PM G=		I/G = 7	G =	32	I/G =		G =		I/G =		G =		I/G =		G =		
				52													
G =	-	I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

Junction:	J03 - Tai	Lin Pai Road	/ Kung \	/ip Stree	ət									_	Job Nu	mber:	J7345
Scenario:	Without F	Proposed Con	crete Ba	tching F	Plant											Page	9
Design Year:	2029	Design	ed By:				_	Checke	ed By:					Date:	14	March 2	025
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
							Gradient		(pcu/hr)	(pcu/hr)		-		(pcu/hr)	(pcu/hr)		-
Tai Lin Pai Ro		LT		1	5.20	8.0		100	1798	448	0.249		100	1798	346	0.192	
Tai Lin Pai Roa	ad SB	SA	A2	1	5.20				2135	604	0.283	0.283		2135	589	0.276	0.276
Kung Yip Stree	et WB	LT	B1	1	4.30	8.0		100	1722	343	0.199		100	1722	319	0.185	
u o do otvio u ulo a			D4	0		unite a			6			40	F	СМ –	10		
pedestrian pha	ise		P1	2		min c	rossing	time =	6	sec	GM +	13	Sec F	GM =	19	sec	
AM Traffic Flow (pcu/h	r)		N	PM Traffic	Flow (pcu/hr)			N	S = 1940	+ 100 (W	-3.25\$ = 2	080 + 100	(W-3 25)	Note:		
		1	\uparrow				1		*			S _M = (S		. ,			
		→ 448						• 346				Peak		Peak			
		↓ 604	N				↓ 589		1		1	reak	1	reak			
		004					505				0.283		0.276				
										Sum y	40		40				
		↓ 343						↓ 319		L (s)							
		0.10						0.0		C (s)	90		90				
										practical y	0.500		0.500				
										R.C. (%)	77%		81%				
1	A2 A1	2															
	Ŧ	**	P1														
		— _{B1}															
	+			*													
AM G =		I/G = 7	G =	30	I/G =	2	G =		I/G =	1	G =		I/G =	1	G =		
				JZ													
G =		I/G =	G =	20	I/G =		G =		I/G =		G =		I/G =		G =		
PM G =		I/G = 7	G =	32	I/G =		G =		I/G =		G =		I/G =		G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

Junction:	J03 - Tai L	Lin Pai Road /	/ Kung \	rip Stree	et									_	Job Nu	mber:	J7345
Scenario:	With Prop	osed Concret	te Batch	ing Plar	nt											Page	10
Design Year:	2029	 Design	ed By:					Checke	ed By:					Date:	14	March 2	
	Approach		Phase	Stage	Width (m)) Radius (m)) % Up-hill	Turning %	Sat. Flow		y value	Critical y	Turning %	Sat. Flow		y value	Critical y
Tai Lin Dai Da	- 1 00	LT		+	E 20		Gradient	100	(pcu/hr)	(pcu/hr)	0.220	0.320	100	(pcu/hr)	(pcu/hr)	0 272	
Tai Lin Pai Roi				1	5.20	8.0		100	1798	593	1	0.330	100	1798	491	0.273	
Tai Lin Pai Ro	ad SB	SA	A2	1	5.20				2135	604	0.283		'	2135	589	0.270	0.276
Man Nin Stro				+	4 20		├ ───′	100	4700	400	0.000		100	4700	404	0.060	
Kung Yip Stree	et WB	LT	B1	1	4.30	8.0		100	1722	488	0.283		100	1722	464	0.269	
			├──	├───									'			├──	
			├	├	 		├ ───┘	 	<u> </u>				'			├	
			├	├	 	 	├ ───′	 	<u> </u>				'			├	
			├	├───	+	 	├ ───′	 					'		┝───┦	├───	
			├	├───	+	 	├ ───′	 					'		┝───┦	├───	
													'			├───	
													'			├───	
													'			├───	
													'			├───	
			<u> </u>	<u> </u>	+			 	<u> </u>				'			<u> </u>	
			<u> </u>	<u> </u>	+			 	<u> </u>				'			<u> </u>	
													'			├───	
			<u> </u>	<u> </u>	+			 	<u> </u>				'			<u> </u>	
			<u> </u>	<u> </u>	+			 	<u> </u>				'			<u> </u>	
			<u> </u>	<u> </u>	+	+	<u>├</u> ──-'	 	<u> </u>	1		+ +		<u> </u>		<u> </u>	
			<u> </u>	<u> </u>	+	+	<u>├</u> ──-'	 	<u> </u>	1		+ +		<u> </u>		<u> </u>	<u> </u>
pedestrian pha	256		P1	2	<u> </u>	min c	rossing	time =	6	sec	GM +	13	sec F	=GM =	19	sec	
	100						100011.3	unie	Ť		0			0			<u> </u>
										1							
					1	1				T							l
AM Traffic Flow (pcu/h	ır)			PM Traffic	Flow (pcu/hr	r)									Note:		
		I	N M				T		N 个				2080 + 100 6 - 230) / (1				
		>593						▶491		<u> </u>		Peak		Peak			
	f	↓ 604	۱.				↓ 589		١		1	Fean	1	Ptan			
										Sum y	0.330	<u> </u>	0.276				
		,	—					Ļ	_	L (s)	40		40				
		488						464		C (s)	90		90				
										practical y			0.500				
										R.C. (%)	52%		81%				
1	A2 A1	2								 T							
				.*									I				
	ļ	* -*	 D1										I				
			P1										I				
		— в1											I				
	+			· · · ·													
AM G =		I/G = 7	G =	32	I/G =	2	G =		I/G =	1	G =		I/G =	L	G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		
PM G =		I/G = 7	G =		I/G =		G =		I/G =		G =		I/G =		G =		
G =	-	I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

Junction: J04 -	Kung Yip Stre	et / Wah	Sina Stre	et				
Design Year: 2024		Job Num	-	J7345	D	ate:	14	March 2025
	ng Condition		-					P. 11
Kung Yip Stree	t (Arm C)					Kung Y	'ip Street	(Arm A)
<u>140</u> 143	3	→						
<u>6</u> 0						-		
					•		179	<u>143</u>
		▲	~				232	<u>172</u>
	、		100		*	Г	A.N.4	
	∖_ F	3 5	169 152				AM	<u>PM</u>
	North	_	ng Street (Δrm B)				
	North	wan Si	ig Slieel (Ann D)				
The predictive equations	of capacity of	fmoveme	ent are:					
Q-BA = D[627 + 14W-0	• •			+ 0.229q-	CA + 0.52c	I-CB)]		
Q-BC = E[745 - Y(0.36	•	•	•	•		. /-		
Q-CB = F[745 - 0.364Y	′(q-AC + q-AB)]						
The geometric paramete	•							
D = [1 + 0.094(w-B					0006(V-IBA	<u> </u>		
E = [1 + 0.094(w-B)]	/	•		/-				
F = [1 + 0.094(w-C)]	/	0.0009(\	/-rCB - 12	20)]				
where $Y = 1 - 0.0345V$		fmovom	ont AP of	~				
q-AB, etc = the W = major road		movern	eni AD, ei	C				
W-CR = central		n						
w-BA, etc = lan								
v-rBA, etc = vis			aiting vehi	cles in str	eam BA, e	tc		
v-IBA, etc = visi	•	-	-					
Geometry :	Inpu	ut	Inp	ut	Input	t	Calcu	lated
	W		V-rBA	40	•	4.70	D	0.9523
	W-CR	0.00	V-IBA	40	w-BC	4.70	Е	1.0196
			V-rBC	40	w-CB	2.50	F	0.8237
			V-rCB	35			Y	0.6240
Analysis :		_						
Traffic Flows, pcu/hr	AM	PM		•	acity, pcu/ł	nr	AM	PM
q-CA	143	140			Q-BA		519	531
q-CB	0	6 172			Q-BC		697 527	711 555
q-AB	232 179	172 143			Q-CB		537 521	555 535
q-AC q-BA	179	143		,	Q-BAC		521	000
q-BC	3	5						
f	0.017	0.032						
	Ratio-of-	flow to C	apacity	AM	PM			
		3-A		0.326	0.286			
		3-C		0.004	0.007			
		С-В		0.000	0.011			
	E	3-AC		0.330		or share	d Iane BA	A, BC)
	L			0.000	0.204 (N			.,,



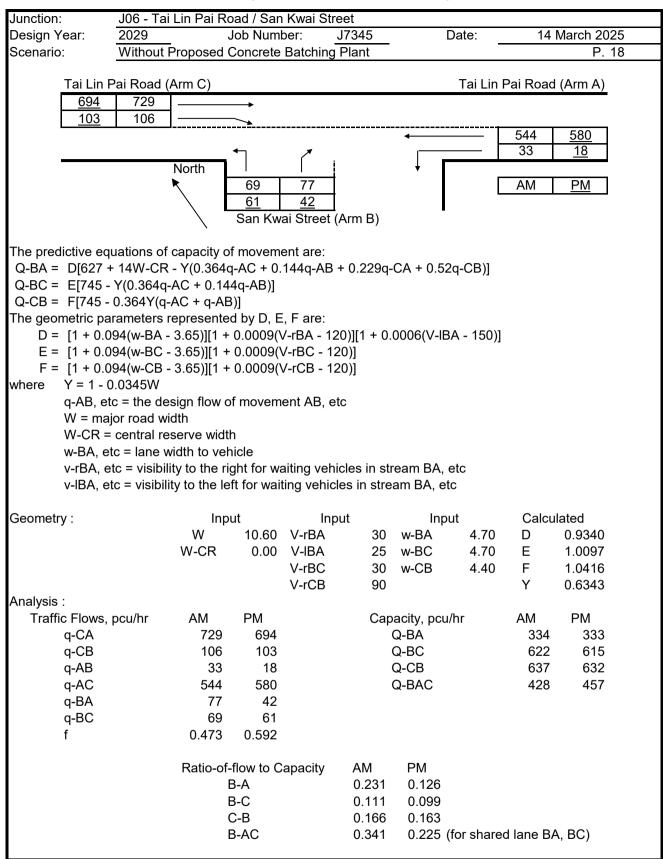


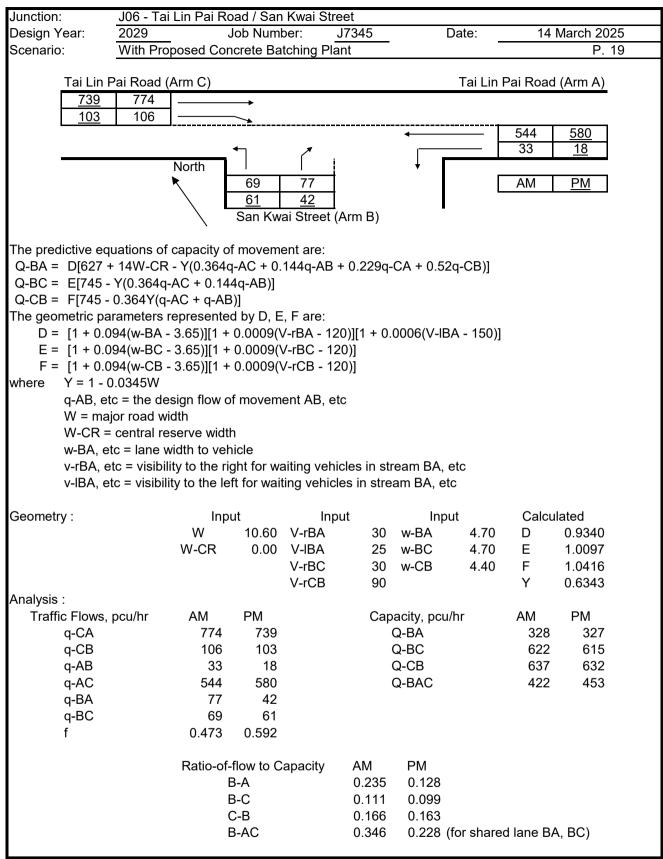
Junction:	<u>J05</u> - Kwa	ai Chung Road	<u>l / T</u> ai L	in Pai R		-	Road		_					_	Job Nu	mber:	J7345
Scenario:	Existing C													-		Page	14
Design Year:	2024	Designe	ed By:				-	Checke	d By:				-	Date:	14	March 2	025
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
Kwai Foo Road	1 EB	LT	A1	1	4.10	25.0	Gradient	100	(pcu/hr) 2042	(pcu/hr) 253	0.124		100	(pcu/hr) 2042	(pcu/hr) 260	0.127	
Kwai Foo Road		LT	A2	1	4.10	29.0		100	2059	255	0.124		100	2059	262	0.127	
Kwai Chung Ro		LT+SA*	B1	2	4.00	22.0		98	1919	414	0.216		100	1916	528	0.276	
Kwai Chung Ro		SA	B2	2	4.00	20.0		100	2155	464	0.215	0.007	100	2155	539	0.250	0.000
Kwai Chung Ro	Dad INB	RT	B3	2	4.00	20.0		100	2005	655	0.327	0.327	100	2005	607	0.303	0.303
Tai Lin Pai Roa	ad WB	LT	C1	2	3.80	22.0		100	1868	266	0.142		100	1868	282	0.151	
Tai Lin Pai Roa	ad WB	LT	C2	2	3.80	26.0		100	2019	287	0.142		100	2019	305	0.151	
Kwai Chung Ro		LT+SA*	D1	1	4.30	27.0		20	2053	524	0.255	0.255	27	2045	441	0.216	0.216
Kwai Chung Ro		SA+RT	D2	1	4.30 4.20	19.0		100	2185 2008	558 513	0.255		100	2185 2008	471 432	0.216	
Kwai Chung Ro		RT	D3	1	4.20	18.0		100	2006	515	0.255		100	2006	432	0.215	
pedestrian pha	se		P1	1		min c	rossing	time =	6	sec	GM +	12	sec F	GM =	18	sec	
			P2	1		min c	rossing	time =	5	sec	GM +	5	sec F	GM =	10	sec	
			P3	1		min c	rossing	time =	5	sec	GM +	5	sec F	GM =	10	sec	
			P4	1			rossing		5		GM +	7		GM =	12	sec	
			P5 P6	2			rossing rossing		5 5		GM +	7 7		GM =	12 12	sec	
			P7	2			rossing		7		<u>GM +</u> GM +	13	sec F	GM =	20	sec sec	
			P8	2			rossing		5		GM +	6		GM =	11	sec	
AM Traffic Flow (pcu/h	r)	1	N	PM Traffic	Flow (pcu/hr)	1		N	6 - 1010	. 400 (1)/	2.05F - 2	080 + 100	(14/ 2.25)	Note:		
	741 🗲	+→ 105 K				606	\leftrightarrow	120 🗖					6 - 230) / ('		*A flared	approact	n
508		↓ 749	\backslash		522		↓ 618		\mathbf{X}		AM	Peak	PM	Peak			
											1+2		1+2				
		[_						-	Sum y	0.582		0.518				
	473 ∱	553				539 ∱		587		L (s)	16		16				
405	← 65	55			528	+	607			C (s)	120		120				
						I				practical y R.C. (%)	0.780 34%		0.780 50%				
1	D3 D2 D1	2															
		→ × P6		∢ P7	P8,.▼												
P1	ŧ	P3 ↓P5	t ┌→	P7 *	,												
P2 P1	- >	× P4		A Start	C2 C1												
AM G =		I/G = 9	B2 B3 G =		I/G =	9	G =		I/G =	1	G =		I/G =	1	G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		
PM G =		I/G = 9	G =		I/G =	9	G =		I/G =		G =		I/G =		G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

						-	Junci		narys	013							
Junction:	-	Chung Road				vai Foo I	Road							-	Job Nu		J7345
Scenario:		oposed Cond		tching F	Plant			Chaoko	d Dur					Data	14	Page	15
Design Year:	2029	Designe	ea By:				-	Checke	а ву:				-	Date:	14	March 2	025
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
				-			Gradient	_	(pcu/hr)	(pcu/hr)			-	(pcu/hr)	(pcu/hr)		- ,
Kwai Foo Road		LT	A1	1	4.10	25.0		100	2042	268	0.131		100	2042	281	0.138	
Kwai Foo Road	IEB	LT	A2	1	4.10	29.0		100	2059	271	0.132		100	2059	284	0.138	
Kwai Chung Ro	oad NB	LT+SA*	B1	2	4.00	22.0		98	1919	442	0.230		100	1916	560	0.292	
Kwai Chung Ro		SA	B2	2	4.00				2155	497	0.231			2155	557	0.258	
Kwai Chung Ro	oad NB	RT	B3	2	4.00	20.0		100	2005	710	0.354	0.354	100	2005	660	0.329	0.329
Tai Lin Pai Roa	ad WB	LT	C1	2	3.80	22.0		100	1868	295	0.158		100	1868	308	0.165	
Tai Lin Pai Roa	ad WB	LT	C2	2	3.80	26.0		100	2019	318	0.158		100	2019	333	0.165	
		17.04	D1	4	4.20	27.0		04	2054	FOF	0.005	0.000	20	2044	404	0.240	0.240
Kwai Chung Ro Kwai Chung Ro		LT+SA* SA+RT	D1 D2	1	4.30 4.30	27.0		21	2051 2185	585 624	0.285 0.286	0.286	28	2044 2185	491 525	0.240	0.240
Kwai Chung Ro		RT	D2 D3	1	4.30	18.0		100	2008	573	0.285		100	2008	482	0.240	
r thai onang r t			20						2000	0.0	0.200			2000	.02	0.2.10	
nadaatrian nha			D1	4		min o	receipe	time -	6			10		CM -	10		
pedestrian pha	se		P1 P2	1			rossing t		6 5		<u>GM +</u> GM +	12 5		GM = GM =	<u>18</u> 10	sec sec	
			P3	1			rossing		5		GM +	5		GM =	10	sec	
			P4	1			rossing		5		GM +	7		GM =	12	sec	
			P5	2			rossing		5	sec	GM +	7		GM =	12	sec	
			P6	2		min c	rossing	time =	5	sec	GM +	7	sec F	GM =	12	sec	
			P7	2		min c	rossing	time =	7	sec	GM +	13	sec F	GM =	20	sec	
			P8	2		min c	rossing	time =	5	sec	GM +	6	sec F	GM =	11	sec	
AM Traffic Flow (pcu/hr	r)		N	PM Traffic	Flow (pcu/hr)			N	S = 1940	+ 100 (W-	-3.25\$ = 2	080 + 100) (W-3.25)	Note:		
	862 ←	125 🕅	\backslash			702	+++	137 🖪		S _M = S / (1 + 1.5 f/r)	S™ = (S	6 - 230) / ([,]	1 + 1.5 f/r)	*A flarec	approact	٦
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]						1+2		1+2				
		\mathbf{L}	-					\mathbf{I}	-	Sum y	0.640		0.569				
	506 4 710	613				557 ↓ ↓	000	641		L (s)	16		16				
433	↑ 710	U			560	+	660			C (s)	120		120				
										practical y R.C. (%)	0.780 22%		0.780 37%				
1	D3 D2 D1	2								11.0. (70)	2270		0170				
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Junction:	105 Kwa	i Chung Road	1/ Tai Li	n Dai D		-			,						Job Nu	mber	17215
Scenario:		osed Concret				/al F00 l	Roau							-	JOD INU	Page	J7345 16
Design Year:	2029	Designe						Checke	d By:				-	Date:	14	March 2	
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %	Sat. Flow	PM Peak Flow	y value	Critical y
				-			Gradient		(pcu/hr)	(pcu/hr)			_	(pcu/hr)	(pcu/hr)		
Kwai Foo Road Kwai Foo Road		LT LT	A1 A2	1	4.10 4.10	25.0 29.0		100 100	2042 2059	268 271	0.131		100 100	2042 2059	281 284	0.138	
Rwai Foo Road	ED	LI	R2		4.10	29.0		100	2009	271	0.132		100	2009	204	0.130	
Kwai Chung Ro	ad NB	LT+SA*	B1	2	4.00	22.0		93	1925	464	0.241		100	1916	560	0.292	
Kwai Chung Ro	ad NB	SA	B2	2	4.00				2155	520	0.241			2155	617	0.286	
Kwai Chung Ro	ad NB	RT	B3	2	4.00	20.0		100	2005	755	0.377	0.377	100	2005	705	0.352	0.352
Tai Lin Pai Roa	id WB	LT	C1	2	3.80	22.0		100	1868	295	0.158		100	1868	308	0.165	
Tai Lin Pai Roa		LT	C2	2	3.80	26.0		100	2019	318	0.158		100	2019	333	0.165	
Kwai Chung Ro		LT+SA*	D1	1	4.30	27.0		21	2051	607	0.296		26	2046	517	0.253	0.253
Kwai Chung Ro		SA+RT	D2	1	4.30 4.20	18.0		100	2185 2008	646 594	0.296	0.296	100	2185 2008	553 508	0.253	
Kwai Chung Ro	ad SB	RT	D3	1	4.20	18.0		100	2008	594	0.296	0.296	100	2008	508	0.253	
			D4	4		unin a			0			40		<u> </u>	40		
pedestrian pha	se		P1 P2	1			rossing		6 5		<u>GM +</u> GM +	12 5		GM = GM =	18 10	sec	
			P2 P3	1			rossing t		5		GM +	5		GM =	10	sec sec	
			P4	1			rossing		5		GM +	7		GM =	12	sec	
			P5	2			rossing		5		GM +	7		GM =	12	sec	
			P6	2			rossing		5	sec	GM +	7	sec F	GM =	12	sec	
			P7	2		min c	rossing	time =	7	sec	GM +	13	sec F	GM =	20	sec	
			P8	2		min c	rossing	time =	5	sec	GM +	6	sec F	GM =	11	sec	
AM Traffic Flow (pcu/hr)	1	N	PM Traffic	Flow (pcu/hr)	1		N	S = 1940	+ 100 (W-	-3.25\$ = 2	2080 + 100) (W-3.25)	Note:		
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											1+2		1+2				
			_						-	Sum y	0.673		0.605				
	551	• 613				617		* 641		L (s)	16		16				
433		55			560	← →	705			C (s)	120		120				
										practical y	0.780		0.780				
										R.C. (%)	16%		29%				
1 A1 A2 P1		2 P3 P5		∢ P7	₽8*												
P2 P1	* *	P4 B1	B2 B3	P7*	C2 C1												
AM G =		I/G = 9	G =		I/G =	9	G =		I/G =		G =		I/G =		G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		
PM G =		I/G = 9	G =		I/G =	9	G =		I/G =		G =		I/G =		G =		
G =		I/G =	G =		I/G =		G =		I/G =		G =		I/G =		G =		

Junction:	106 Toi	Lin Doi D	and / San	Kwai Stree	. +				
Design Year:	2024		Job Num		7345	Da	to:	14 1	March 2025
Scenario:	Existing C				1345	Da		141	P. 17
Scenano.		Jonulion							F. 17
Tai Lin E	Pai Road (A	(rm C)				г	ai Lin E	ai Road	$(\Lambda rm \Lambda)$
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	77		>						
<u>77</u>	11							506	E40
			_	_		•		506 20	<u>540</u> 6
		North		, i				20	<u>0</u>
	,	North	47	4.4		•		A N 4	
			47	44				AM	<u>PM</u>
			<u>47</u>	<u>26</u>		l			
		\backslash	San Kwa	ai Street (A	rm B)				
- 1 1. 1.		.,							
The predictive eq					0.000	0.0.0.50			
Q-BA = D[627 + 0.05]		•	•	144q-AB +	0.229q-	CA + 0.52q-	CB)]		
Q-BC = E[745 -	· ·		• /-						
Q-CB = F[745 -	• •	•	/-	-					
The geometric pa		•	•				4 - 0 - 1		
D = [1 + 0.0]						0006(V-IBA	- 150)]		
E = [1 + 0.0	•	/	,		/-				
F = [1 + 0.0]	•	3.65)][1 +	0.0009(\	/-rCB - 120)]				
where $Y = 1 - 0$									
			of movem	ent AB, etc					
	or road wid								
	central res								
	tc = lane w								
		•	-	-		ream BA, etc	;		
v-IBA, et	tc = visibilit	y to the le	eft for wait	ing vehicle	s in stre	am BA, etc			
Geometry :		Inp		Inpu		Input		Calcul	
		W		V-rBA		w-BA	4.70	D	0.9340
		W-CR	0.00	V-IBA	25	w-BC	4.70	E	1.0097
				V-rBC	30	w-CB	4.40	F	1.0416
				V-rCB	90			Y	0.6343
Analysis :									
Traffic Flows,	pcu/hr	AM	PM		Cap	acity, pcu/hr		AM	PM
q-CA		683	650			Q-BA		358	357
q-CB		77	77			Q-BC		632	626
q-AB		20	6			Q-CB		649	645
q-AC		506	540			Q-BAC		462	493
q-BA		44	26						
q-BC		47	47						
f		0.516	0.644						
		Ratio-of	-flow to C	apacity	AM	PM			
			B-A	. ,	0.123	0.073			
			B-C		0.074	0.075			
			C-B		0.119	0.119			
			B-AC		0.197	0.148 (for	shared	l lane BA	(BC)
			·		-	- (. ,

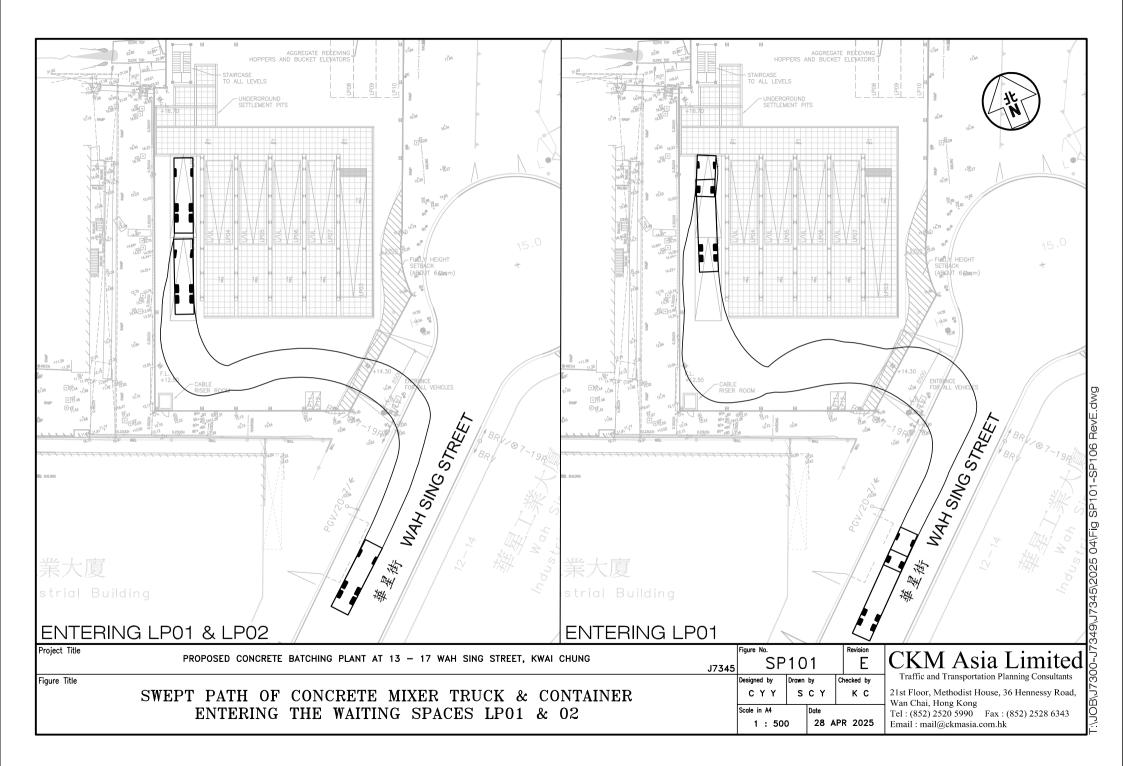


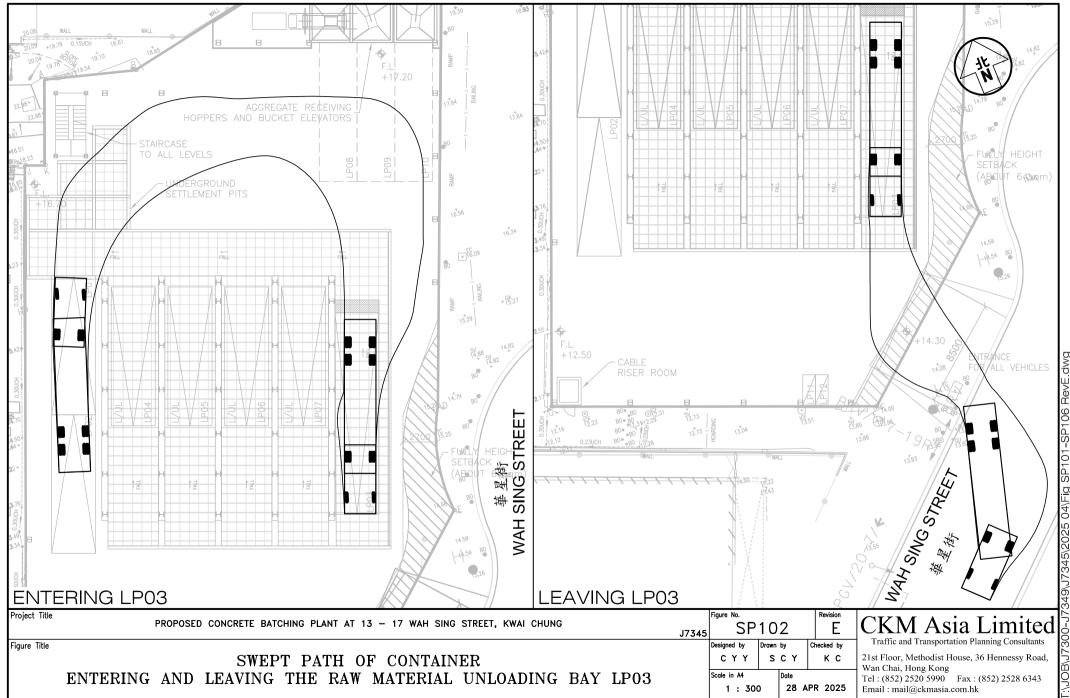


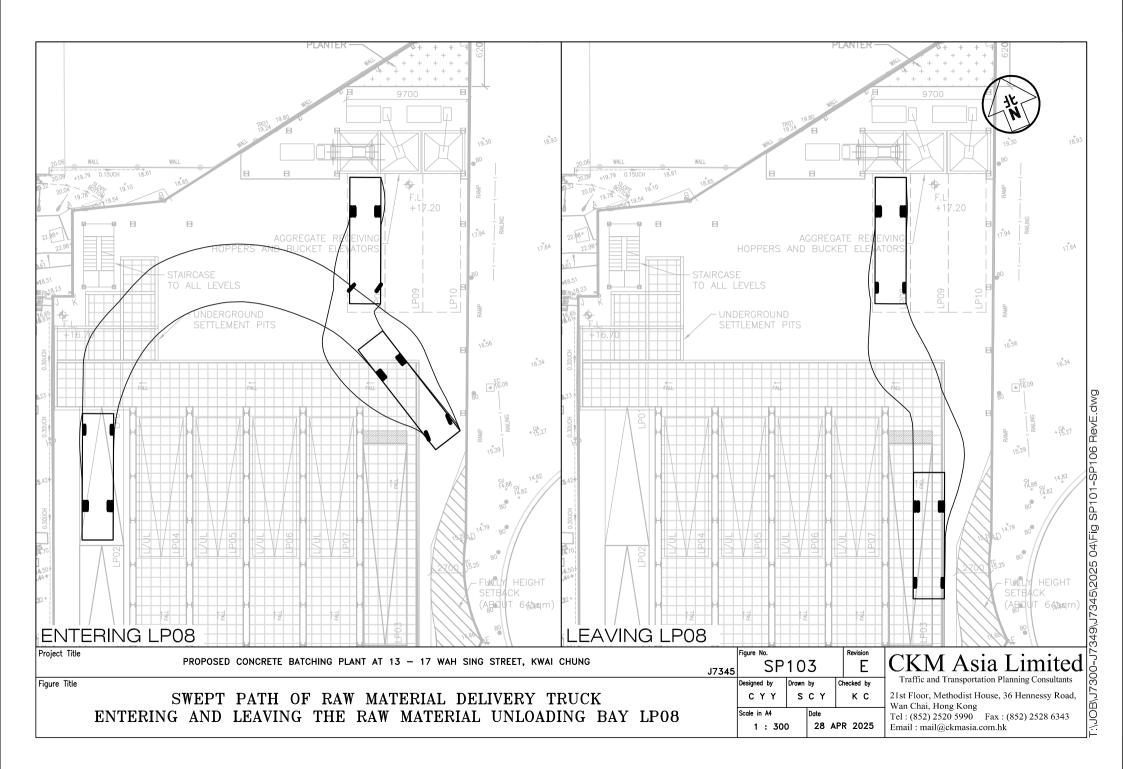
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Junction:		in Pai Road												-	Job Nu		J7345
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$\begin{split} Ta \ Lin Par Rend SB & SA +RT & Al & 1 & 235 & 160 & 426 & 191 & 162 & 426 & 171 & 162 & 436 & 0.227 & 0.22 \\ Ta \ Lin Par Rend SB & RT & Al & 1 & 355 & 160 & 100 & 100 & 100 & 255 & 0.266 & 10 & 100 & 1002 & 0.23 \\ Keil On Rend EB & LT & BI & 2 & 3.25 & 17.0 & 100 & 101 & 121 & 107 & 0.108 & 0.25 \\ Keil On Rend EB & RT & B2 & 2 & 3.25 & 17.0 & 100 & 101 & 256 & 0.168 & 0.5$		Approach		Phase	Stage	Width (m)	Radius (m)		Turning %		Flow	y value	Critical y	Turning %		Flow	y value	Critical y
Kanal Chi Li Bit 2 3.36 13.0 100 17.46 400 17.46 400 17.46 100	Tai Lin Pai Roa	ad SB	SA+RT	A1	1	3.35	21.0	Gladient	26			0.266	0.266	13			0.227	0.228
Kowai On Raad EB RT B2 2 3.35 17.0 400 1921 23.2 0.101 400 1921 1921 197 0.103 Tai Lin Pai Road NB LT Cl 3 3.50 7.0 100 168 255 0.158 0.00 158 0.00 158 227 0.103 Tai Lin Pai Road NB LT Cl 3 3.50 100 100 168 228 0.158 0.00 180 277 0.103 Tai Lin Pai Road NB LT Cl 3 3.50 100 100 168 228 0.158 0.00 180 277 0.103 Tai Lin Pai Road NB LT Cl A	Tai Lin Pai Roa	ad SB	RT	A2	1	3.35	18.0		100	1929	513	0.266		100	1929	439	0.228	
Kone (On Road EB FT Q2 2 3.35 17.0 100 1921 232 0.121 100 1921 197 0.103 Tai Lin Pai Road NB LT C1 3 3.50 7.0 100 100 168 256 0.168 0.168 0.00 168 227 0.100 0.110 Tai Lin Pai Road NB LT C2 3 3.50 7.0 100 160 168 256 0.168 0.168 0.00 168 227 0.100 Tai Lin Pai Road NB LT C2 3 3.50 7.0 100 100 168 256 0.168 0.168 0.168 0.16 100 100 Tai Lin Pai Road NB LT C3 3 3.50 7.0 100 100 103 1.6 <td>Kwai On Road</td> <td>EB</td> <td>LT</td> <td>B1</td> <td>2</td> <td>3.35</td> <td>13.0</td> <td></td> <td>100</td> <td>1748</td> <td>408</td> <td>0.233</td> <td>0.233</td> <td>100</td> <td>1748</td> <td>225</td> <td>0.129</td> <td>0.129</td>	Kwai On Road	EB	LT	B1	2	3.35	13.0		100	1748	408	0.233	0.233	100	1748	225	0.129	0.129
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Kwai On Road	EB	RT	B2	2	3.35			100	1921	232			100	1921	197		
Tai Lin Pai Road NB LT C2 3 3.50 100 1800 280 0.158 0.158 100 1830 267 0.140 Tai Lin Pai Road MB SA C2 3 3.50 10 1830 281 0.13 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100 123 100	Tai Lin Pai Roa	ad NB	LT	C1	3	3.50	7.0		100	1618	255	0.158		100	1618	227	0.140	0.140
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			LT		3				100				0.158					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Tai Lin Pai Roa	ad NB	SA	C3	3	3.50				2105	281	0.133			2105	251	0.119	
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AP = PM G = VG = 5 G = VG = 6 G = VG = 6 G = VG = 6 G = 0	408 	644 ←3 281 ↑		х Х	PM Traffic	225 197	498 ◄ 251 ♠	↓ I		z	$S_{M} = S / ($ Sum y L (s) C (s) practical y	AM 1+1.5 f/r) AM 1+2+3 0.658 14 130 0.803	S _M = (S	5 - 230) / (7 PM 1+2+3 0.497 14 130 0.803	1 + 1.5 f/r)	Further on Sch by Kwa	eme pro i On Fac	posed ctory
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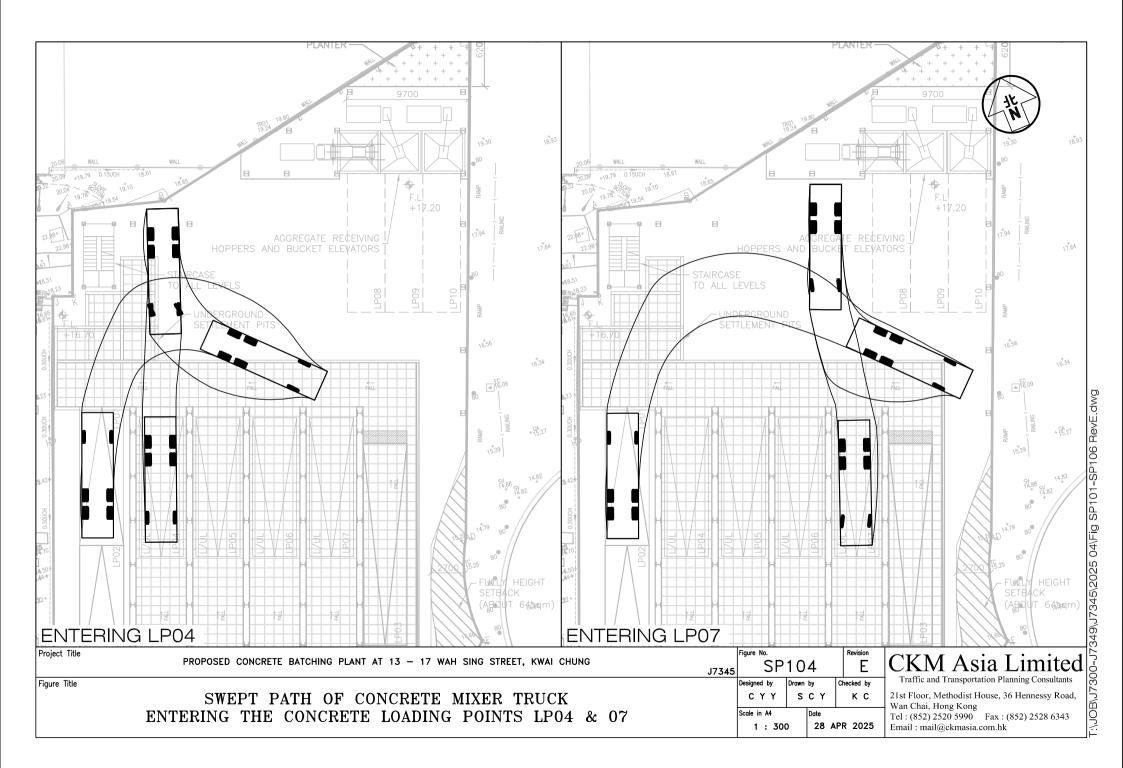
Junction:		in Pai Road												-	Job Nu	mber:	
Scenario: Design Year:	2029		d Concrete Batch Designed By:		ing Plant Checked By:									Date:		Page 21 14 March 2025	
	Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	Turning %	Sat. Flow	AM Peak Flow	y value	Critical y	Turning %		PM Peak Flow	y value	Critical y
Tai Lin Pai Ro	ad SB	SA+RT	A1	1	3.35	21.0	Gradient	35	(pcu/hr) 1902	(pcu/hr) 580	0.305	0.305	25	(pcu/hr) 1916	(pcu/hr) 510	0.266	
Tai Lin Pai Ro	ad SB	RT	A2	1	3.35	18.0		100	1929	588	0.305		100	1929	513	0.266	0.266
Kwai On Road	EB	LT	B1	2	3.35	13.0		100	1748	408	0.233	0.233	100	1748	225	0.129	0.129
Kwai On Road	I EB	RT	B2	2	3.35	17.0		100	1921	232	0.121		100	1921	197	0.103	
Tai Lin Pai Road NB L1		LT	C1	3	3.50	7.0		100	1618	255	0.158		100	1618	227	0.140	0.141
		LT	C2	3	3.50	10.0		100	1830	289	0.158	0.158	100	1830	257	0.140	
Tai Lin Pai Ro	ad NB	SA	C3	3	3.50				2105	326	0.155			2105	296	0.141	
nadaatrian nha																	
pedestrian phase																	
AM Traffic Flow (pcu/r	nr)			PM Traffic	Flow (pcu/hr)									Note:		
		N M						N	$\begin{split} &S = 1940 + 100(W-3.25) \qquad S = 2080 + 100(W-3.25) \\ &S_{M} = S \ / \ (1 + 1.5 \ f/r) \qquad S_{M} = (S - 230) \ / \ (1 + 1.5 \ f/r) \end{split}$. ,	Further improvement on Scheme proposed by Kwai On Factory			
408	408 789 ← _		\setminus	225		643 🛶			AM Peak		PM Peak						
	3	79			_1		380				1+2+3		1+2+3		Redeve	elopmen	it
↓ 232	326				↓ 197	296				Sum y	0.696		0.536				
544	+				484	+				L (s) C (s)	14 130		14 130				
					-0-					practical y	0.803		0.803				
										R.C. (%)	15%		50%				
1	A2 A1	2 B1 B2				3	← ↑										
			-				C1 C2 C3										
AM G =		I/G = 5	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		
G =		I/G = 1/G = 5	G = G =		I/G =	6	G = G =		I/G =	6	G = G =		I/G =		G = G =		
PM G=																	

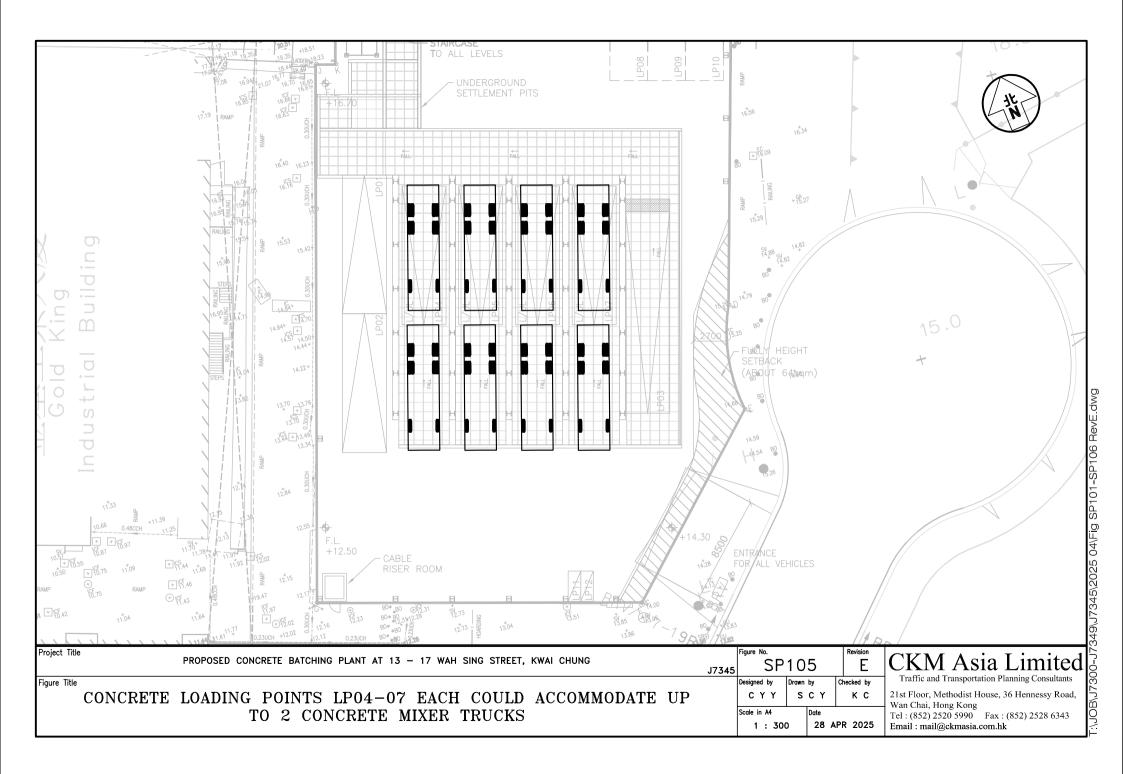
Appendix B – Swept Path Analysis

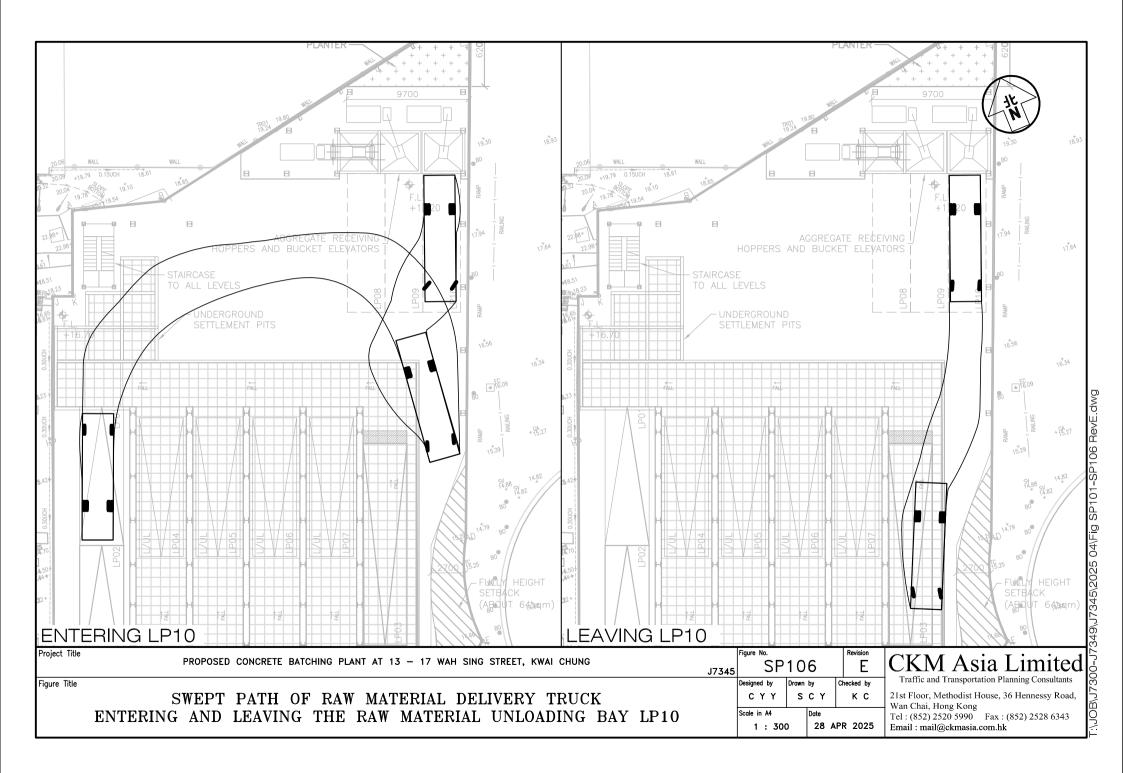




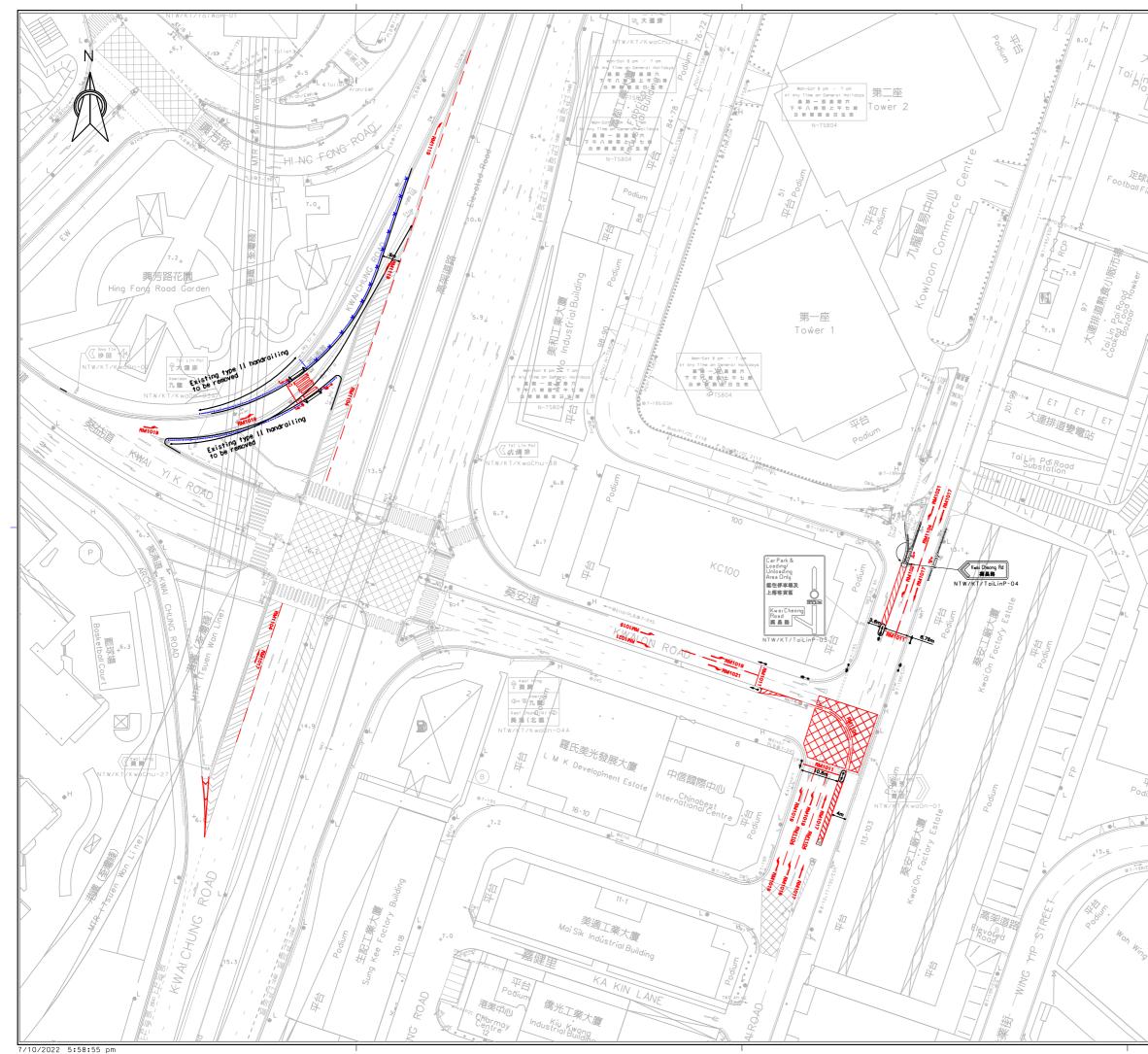








– Appendix C Junction Improvement Scheme proposed by Kwai On Factory Redevelopment



	Legend		
籃球場 Bost			
Bosketholl Court 大連排道法		Proposed site	
大連排道遊樂提			
Sin Pai Road			
Plaip *惕	ı—ı—ı—ı—ı—ı	Proposed type handrailing	
groundd /		handrailing	
		Proposed corrupts	
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H= 14-1/1/ 11			
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¹¹ -10	Designed Dro		d
	Designed Dra Design Team Leader	Date	d
11-19 H	Designed Dra Design Team Leader	Date	d
11-19 H	Designed Dra Design Team Leader Approved	Date	d
11-19 H	Designed Dra Design Team Leader Approved Project	Date Date	d
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9Gium 11-19 @7-19р/ЕСН 	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
9Gium 11-19 @7-19р/ЕСН 	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
0Gium 11-19 €7-198/ЕСН н	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
0Gium 11-19 €7-198/ЕСН н	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
SG/шт 11-19 07-198//ЕСИ 	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
Salum 11-19 ⊕7-198/2604 	Designed Dra Design Team Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES	2020
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Salum 11-19 ⊕7-198/2604 	Designed Dro Design Teom Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON G AND ISLANDS RI Title	Date Date	2020
Salum 11-19 ⊕7-198/2604 	Designed Dro Design Teom Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON G AND ISLANDS RI Title JUNCTION IMP	Date Date Date Date Date Date Date Date	2020
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Занит 11-19 @7-199//ЕСИ 	Designed Dro Design Teom Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON G AND ISLANDS RI Title JUNCTION IMP LAYOUT PLAN	Date Date Date SINEERING SERVICES 2018-3 CENTRAL & WES EGION	2020 T
Salum 11-19 ⊕7-198/2604 	Designed Dro Design Teom Leader Approved Project HKHA TERM ENG CONSULTANCY FOR KOWLOON G AND ISLANDS RI Title JUNCTION IMP	Date Date Date Date Date Date Date Date	2020

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