Appendix II

Traffic Impact Assessment

Proposed Concrete Batching Plant at 13 - 17 Wah Sing Street, Kwai Chung

Traffic Impact Assessment
Final Report
October 2024

Prepared by: CKM Asia Limited

Proposed Concrete Batching Plant at 13 - 17
Wah Sing Street, Kwai Chung

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Proposed Concrete Batching Plant at 13 - 17 Wah Sing Street, Kwai Chung

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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 a Right-of-Way (i.e. Kwai Chung Town Lot 111 RP in DD445) ("ROW") to the west and south. In-between the ROW to the west and Tai Lin Pai Road, is the Gold King Industrial Building. The existing run-in/out of the Subject Site is provided at the ROW, which connects with Tai Lin Pai Road.

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 2.1 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR 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 → 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

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 2.1 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE (CONT'D)

Route	Routing	Frequency (minutes)
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
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) → 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 → 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

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 2.1 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE (CONT'D)

Route	Routing	Frequency (minutes)
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
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

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 Monday, 20th May 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 0845 – 0945 hours and 1715 – 1815 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. Observation on the queueing was made on Monday, 20th May 2024.

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**.

TABLE 2.2 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction (Parameter)	AM Peak Hour	PM Peak Hour
J01	Kwai Chung Road / Kwai On Road / Kwai Yik Road	Signal (RC)	40%	46%
J02	Tai Lin Pai Road / Kwai On Road	Priority (RFC)	0.671	0.506(1)
J03	Tai Lin Pai Road / Kung Yip Street	Signal (RC)	109%	90%
J04	Kung Yip Street / Wah Sing Street	Priority (RFC)	0.322	0.315
J05	Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road	Signal (RC)	31%	49%
J06	Tai Lin Pai Road / San Kwai Street	Priority (RFC)	0.218	0.144

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 100m^3/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 3.1 DETAILS OF DELIVERY TO / FROM THE PROPOSED CONCRETE BATCHING PLANT

Type of Delivery	Type of Vehicle	Typical Vehicle Dimension (Approx.)	Traffic Generation (veh/hour)		
			Peak Concrete Production (0600 – 1800 hrs)	Peak Raw Material Delivery (1800 – 2300 hrs)	Evening (2300 – 0600 hrs)
Concrete mixer truck [a]					
Concrete	Concrete mixer truck	10m(L) x 2.5m(W)	Max. 40[(1)]	6	2
Raw material delivery truck [b]					
Aggregate/ sand	Aggregate/ sand truck	Heavy Goods Vehicle: 10m(L) x 2.5m(W)	18	45	7
Admixture	Admixture truck		0	1	0
Waste	Waste truck		2	0	0
Cement / PFA	Cement / PFA tanker	Articulated Vehicles: 15.4m(L) x 2.5m(W)	2	10	7
		Total [a] + [b]	**62**	**62**	**16**

Note: [(1)] Maximum concrete production capacity = 100m^3 x 4 production lines ÷ typical capacity of 10m^3 for a concrete mixer truck = 40 nos.

3.5 **Table 3.1** shows the following:

- During the **peak concrete production**, i.e. 0600 to 1800 hours, the Proposed Concrete Batching Plant is expected to operate at its production capacity. A total of 40 concrete mixer trucks and 22 raw material delivery trucks per hour are generated.
- The **peak raw material delivery period** is from 1800 to 2300 hours. Each hour 6 concrete mixers trucks and 56 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.

TABLE 3.2 INTERNAL TRANSPORT FACILITIES

Ref.	Type	Dimension	Quantity
Ground Floor			
LP01–LP02	Waiting space	11m(L) x 3.5m(W) x 4.7m(H)	2
LP03	Raw material unloading bay for container	16m(L) x 3.5m(W) x 4.7m(H)	1
LP04–LP07	Concrete mixer truck loading point	11m(L) x 3.5m(W) x 4.7m(H)	4
N/A	Raw material unloading area	N/A	3
		Total	10

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.

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.

Traffic Generation of the Proposed Concrete Batching Plant

4.3 With reference to **Table 3.1**, the estimated traffic generation of the Proposed Concrete Batching Plant is given in **Table 4.1**. To be conservative, the peak concrete production is assumed to occur during both the AM and PM peak hours.

TABLE 4.1 TRAFFIC GENERATION OF THE PROPOSED CONCRETE BATCHING PLANT

Item	AM Peak Hour		PM Peak Hour	
	Generation	Attraction	Generation	Attraction
Total in veh/hr [From **Table 3.1**]	62	62	62	62
PCU Factor	2.5	2.5	2.5	2.5
Total in PCU/Hour	**155**	**155**	**155**	**155**
	310 (2-way)		**310 (2-way)**	

4.4 **Table 4.1** shows that the Proposed Concrete Batching Plant is assumed to generate a total of 124 vehicles (2-way), or equivalent to 310 pcu (2-way) during the AM and PM peak hours.

2029 Traffic Flows

4.5 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 Concrete Batching Plant [B] = *[A] + Traffic generated by the Proposed Concrete Batching Plant (**Table 4.1**)*

4.6 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 and egress routes of the Proposed Concrete Batching Plant are shown in **Figure 4.3**.

2029 Junction Capacity Analysis

4.7 The 2029 junction capacity analyses for the cases without and with the Proposed Concrete Batching Plant are summarised in **Table 4.2** and the detailed calculations are found in **Appendix A**.

TABLE 4.2 2029 JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction	Parameter	Without the Concrete Batching Plant		With the Concrete Batching Plant	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
J01[(1)]	Kwai Chung Road / Kwai On Road / Kwai Yik Road	Signal	RC	33%	48%	27%	40%
J02[(1)]	Tai Lin Pai Road / Kwai On Road	Signal	RC	-3%	32%	-10%	20%
J03	Tai Lin Pai Road / Kung Yip Street	Signal	RC	61%	75%	45%	69%
J04	Kung Yip Street / Wah Sing Street	Priority	RFC	0.389	0.340	0.716	0.651
J05	Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road	Signal	RC	18%	37%	18%	37%
J06	Tai Lin Pai Road / San Kwai Street	Priority	RFC	0.387	0.224	0.396	0.228

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

4.8 **Table 4.2** 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

4.9 The junction improvement found in **Appendix C** is proposed by the Kwai On Factory Estate Redevelopment. The improvement includes conversion of the existing priority junction Tai Li Pai Road / Kwai On Road ("J02") into a signalised junction.

4.10 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 and this involves modification of the road markings and staging plans. The Further Improvement is presented in **Figure 4.3.**

4.11 The capacity analysis is re-conducted with the Further Improvement and the results are presented in **Table 4.3**, and detailed calculations are found in Pages 20-21 of **Appendix A**.

TABLE 4.3 2029 JUNCTION PERFORMANCE WITH FURTHER IMPROVEMENT

Ref.	Junction	Type of Junction	Parameter	Without the Proposed Concrete Batching Plant		With the Proposed Concrete Batching Plant	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
J02	Tai Lin Pai Road / Kwai On Road	Signal	RC	25%	51%	18%	40%

Note: RC – Reserve Capacity RFC – Ratio of Flow to Capacity

4.12 **Table 4.3** 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.

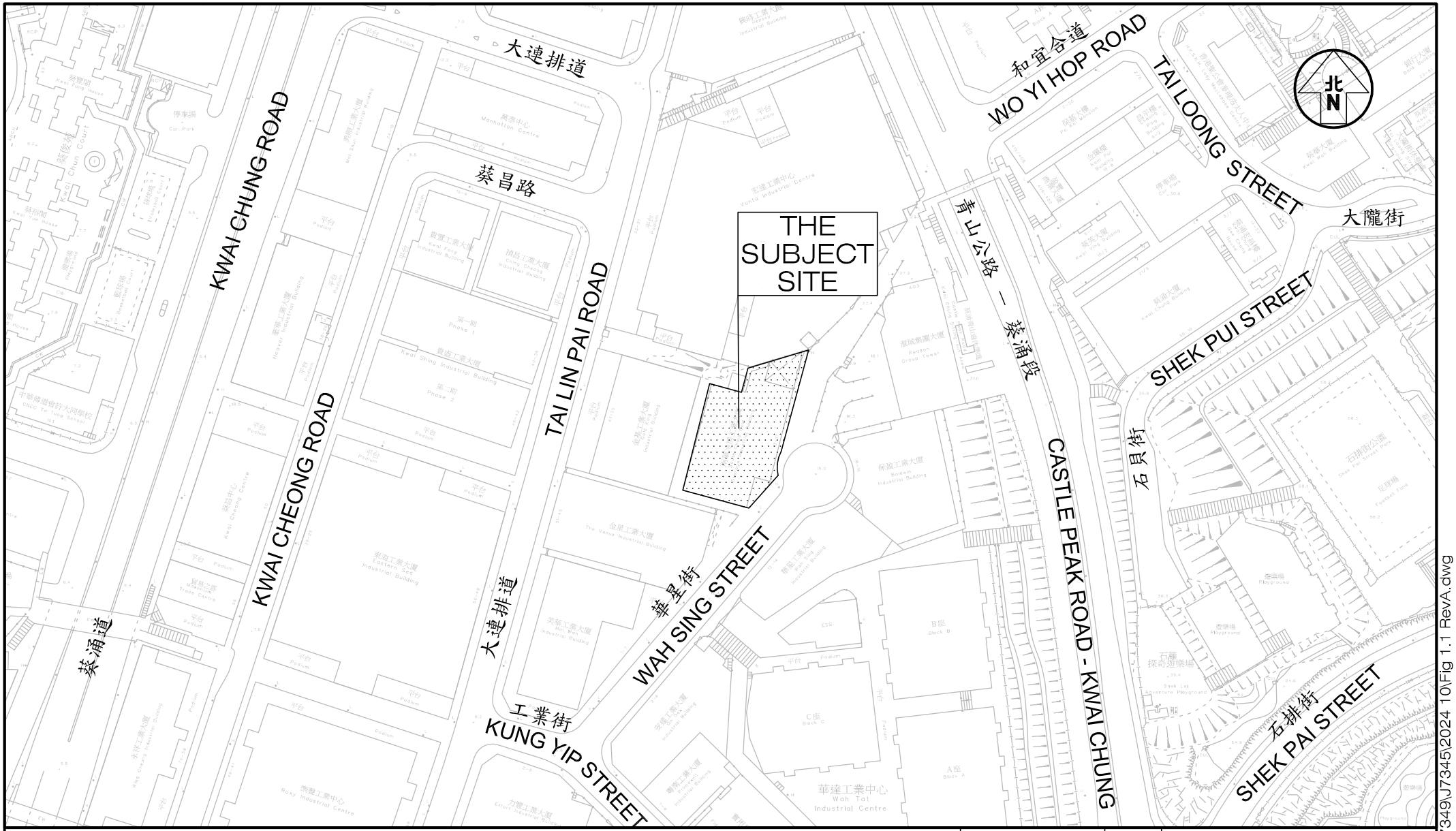
5.2 The Proposed Concrete Batching Plant provides sufficient internal transport facilities meet the operational requirements. The vehicular access to the Proposed Concrete Batching Plant is provided at Wah Sing Street.

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 **no** adverse traffic impact to the surrounding road network. From traffic engineering grounds, the Proposed Concrete Batching Plant is acceptable.

Figures



Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 1.1	Revision A
Figure Title: LOCATION OF THE SUBJECT SITE		Designed by C Y Y / Drawn by S C Y / Checked by K C	
		Scale in A4: 1 : 2,000	Date: 30 OCT 2024

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LWB: A30, E32, E32A, NA32

KMB: 31, 38, 38P, 42C, 43A, X42P
GMB: 83A, 94, 94A, 401
LWB: A30

KMB: 31A, 31B, 31M, 31P, 32, 35A, 35X, 36B, 36X, 40P, 43A, 43S, 935, 936, 936A, N237

GMB: 89B, 89P

KMB: 38, 38P
LWB: A32, NA32

GMB: 94, 94A, 403P

GMB: 94, 94A, 313

KMB: 30, 31A, 33A, 38, 38P, 40X, 43, 43A, 44M
LWB: A30, NA32

GMB: 83A, 86, 86A, 86M, 94, 94A, 401, 403, 403P, 403X

GMB: 406

GMB: 313

GMB: 302

GMB: 403, 403P, 403X,

GMB:403,403P

KMB: 31A, 32H, 34, 38P, 40X
CTB: 930, 930B, N930

GMB: 94, 94A

KMB: N237

KMB: 38, 38P, 42C, 234C

葵涌道

KMB: 33A, 43, 44M

KMB: 30, 31A, 31M, 32M, 36A, 36M, 38, 38A, 38B, 38P, , 40, 40E, 40X, 43A, 46P, 46X, 47A, 47X, 57M, 58M, 59A, 61M, 67A, 67M, 69M, 69P, 73P, 235M, 260C, 265M, 269A, 269M, 290, 290A, 290B, 290E, 290X, 935, N260, N269, N290
LWB: A30, E32, E32A, NA32

KMB: 31A, 31B, 31M, 32, 35A, 35X, 36B, 36X, 40P, 43A, 935, 936, 936A

KMB: 32H, 37, 37M, 38, 38P, 43D, 237A
CTB: 930B

THE SUBJECT SITE

GMB: 406, 410

石貝街
SHEK PUI STREET

GMB: 406

GMB: 403P

KMB: 31A, 31M, 31P, 43S

KMB: 32H, 34, 37, 37M, 38P, 47X, N237

TAI LIN PAI ROAD

SHEK PAI STREET

KMB: 31, 31B, 32, 36B, 36X, 38, 38P, 42C, 936, X42P, 243C
LWB: A30

KMB: 32H, 38

GMB: 94, 94A, 302, 313

華星街
WAH SING STREET

CASTLE PEAK ROAD - KWAI CHUNG

青山公路 — 葵涌段

KMB: 31
LWB: A30

KMB: 34

KMB: 35A, 35X, 40P, 936A

KMB: 31A, 32H, 37, 37M, 38, 38P, 40X, 43D, 47X
CTB: 930, N930

KWAI HING STATION
葵興站

KWAI CHUNG ROAD

KMB: 30, 31A, 33A, 37M, 38, 38P, 40A, 40X, 43, 43A, 44M, 240X, 272P, 279B
LWB: A30, NA32

石排街

KMB: 31
LWB: A30

GMB: 86, 86A, 86M, 403, 403P, 403X

KMB: 31M, 32M, 36A, 36M, 38, 38A, 38B, 40, 40E, 43A, 46P, 46X, 47A, 47X, 57M, 58M, 59A, 61M, 67A, 67M, 69M, 69P, 73P, 235M, 260C, 265M, 269A, 269M, 290, 290A, 290B, 290E, 290X, 935, N260, N269, N290
LWB: E32, E32A
GMB: 94, 94A, 313

500m

KMB: 31M, N237

GMB: 87K

興芳路
HING FONG ROAD

KMB: 33A, 43, 44M

GMB: 89A, 94, 94A

大連排道

GMB: 410

GMB: 410

KMB: 31B, 32, 35A, 35X, 36B, 36X, 38, 38P, 40P, 42C, 936, 936A, X42P

KMB: 31A, 32H, 37, 37M, 38, 38P, 40X, 237A
CTB: 930, N930

KMB: 31B, 32, 35A, 35X, 36B, 36X, 38, 38P, 40P, 42C

LEGEND :

KMB: 32H - Franchised Bus Stop

GMB: 89A - Green Minibus Stop

MTR Entrance / Exit

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 2.1	Revision A
Figure Title: PUBLIC TRANSPORT FACILITIES IN THE VICINITY OF THE SUBJECT SITE		Designed by C Y Y / Drawn by S C Y / Checked by K C	
		Scale in A3: 1 : 4,000	Date: 30 OCT 2024

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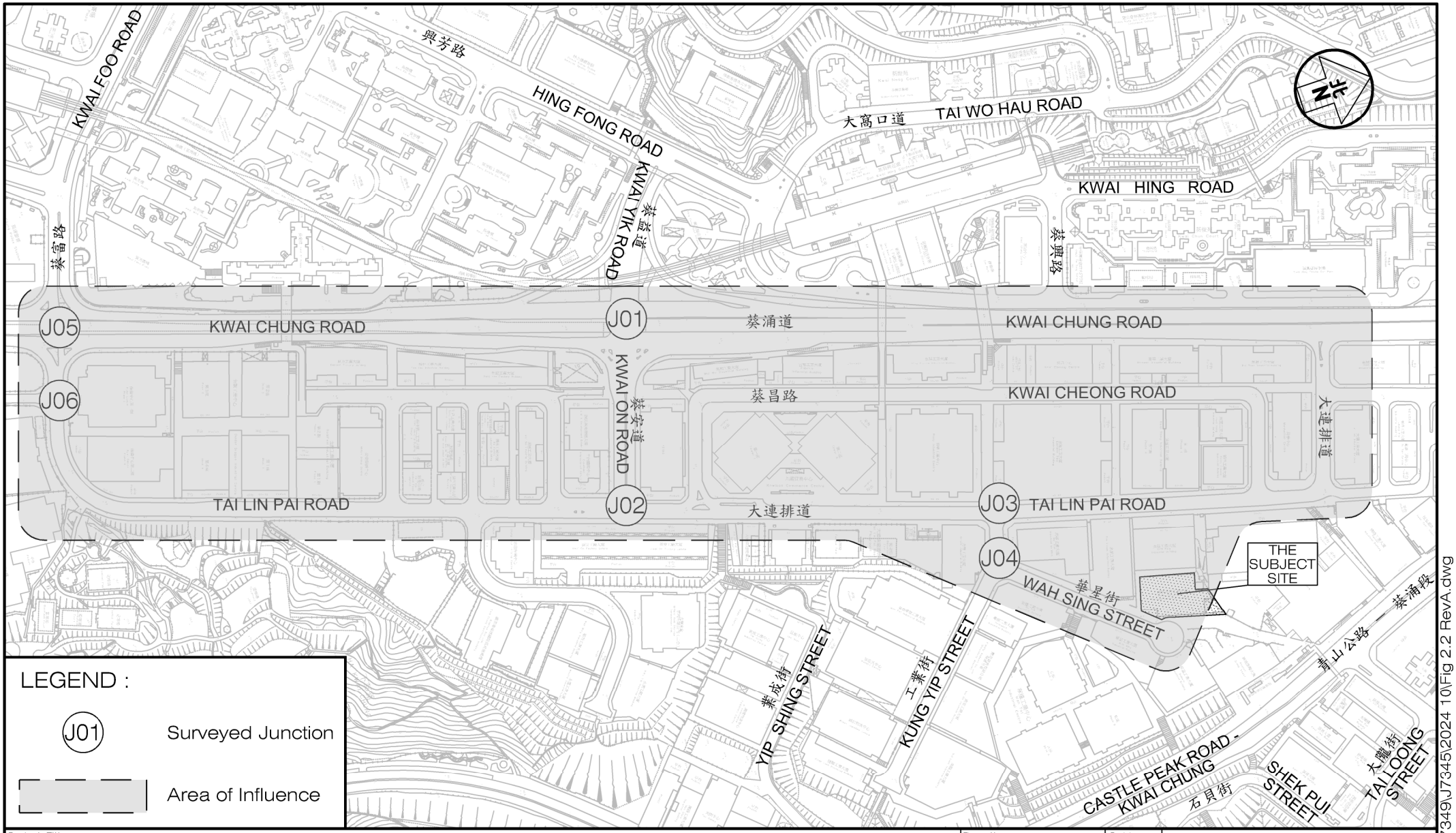
T:\JOB\J7300-J7349\J7345\2024 10\Fig 2.1 RevA.dwg



Project Title

PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG

J7345

Figure Title

LOCATION OF SURVEYED JUNCTIONS AND AREA OF INFLUENCE

Figure No.	Revision
2.2	A

Designed by	Drawn by	Checked by
C Y Y	S C Y	K C

Scale in A4	Date
1 : 4,000	30 OCT 2024

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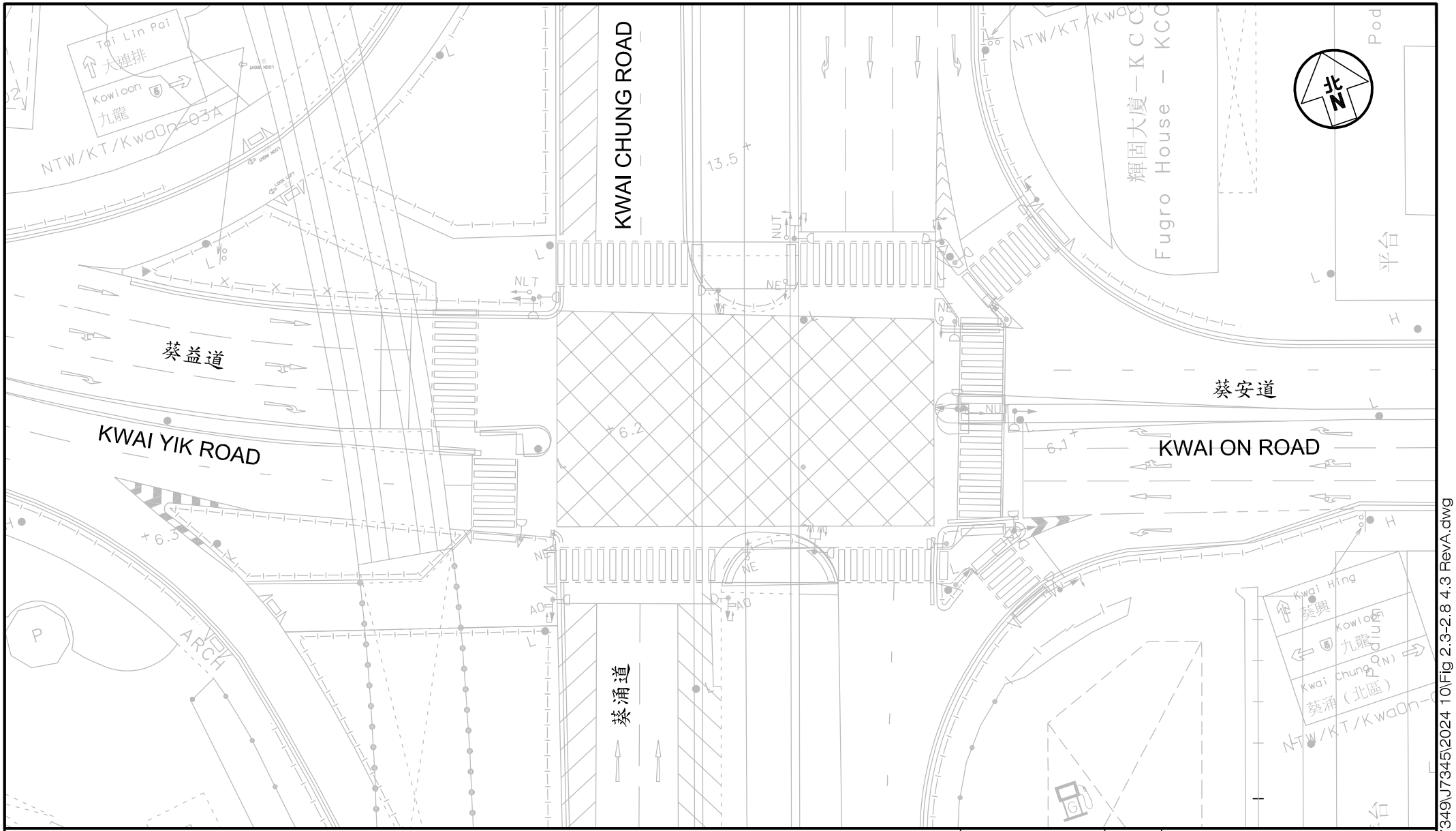
T:\JOBs\J730C-J7349\J7345\2024 10\Fig 2.2 RevA.dwg



Project Title	PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	
Figure Title	EXISTING JUNCTION LAYOUT OF KWAI CHUNG ROAD / KWAI ON ROAD / KWAI YIK ROAD		

Figure No.	2.3	Revision	A
Designed by	C Y Y	Drawn by	S C Y
Checked by	K C		
Scale in A4	1 : 500	Date	30 OCT 2024

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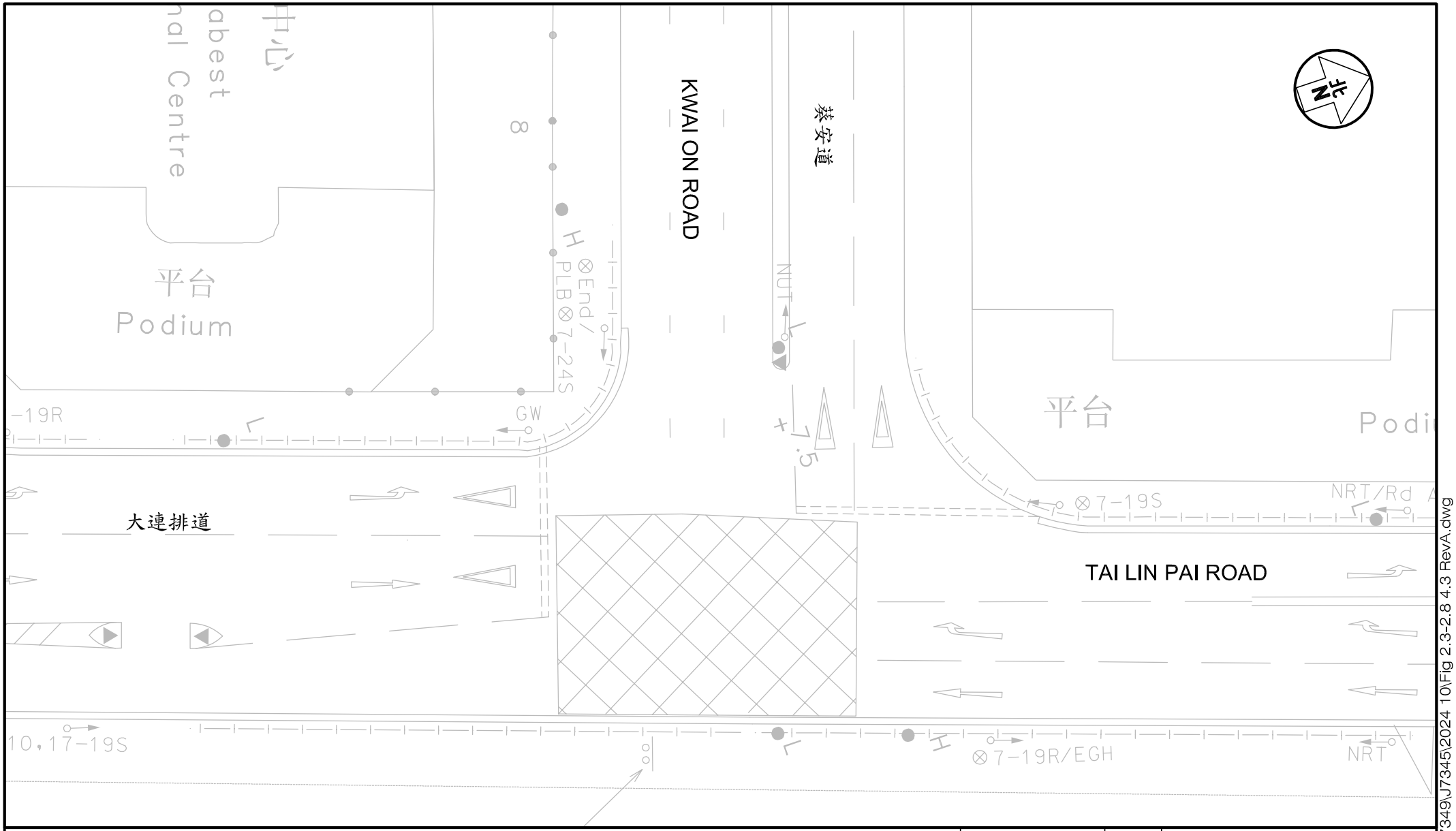

Project Title	PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 2.4 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT OF TAI LIN PAI ROAD / KWAI ON ROAD		Designed by C Y Y / Drawn by S C Y / Checked by K C
			Scale in A4 1 : 300 / Date 30 OCT 2024

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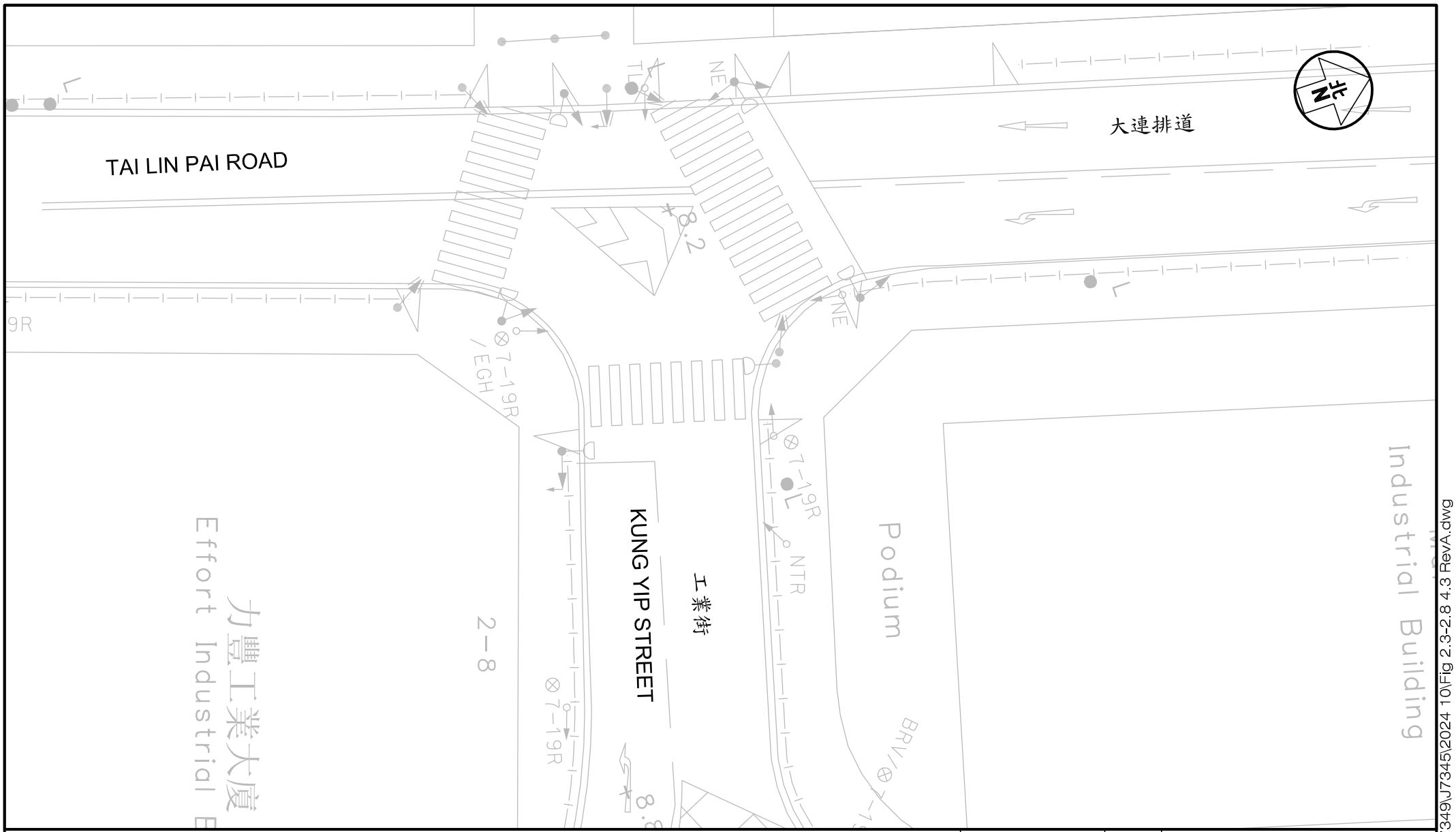

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG J7345	Figure No. 2.5	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title: EXISTING JUNCTION LAYOUT OF TAI LIN PAI ROAD / KUNG YIP STREET	Designed by C Y Y / Drawn by S C Y / Checked by K C		
	Scale in A4 1 : 300	Date 30 OCT 2024	

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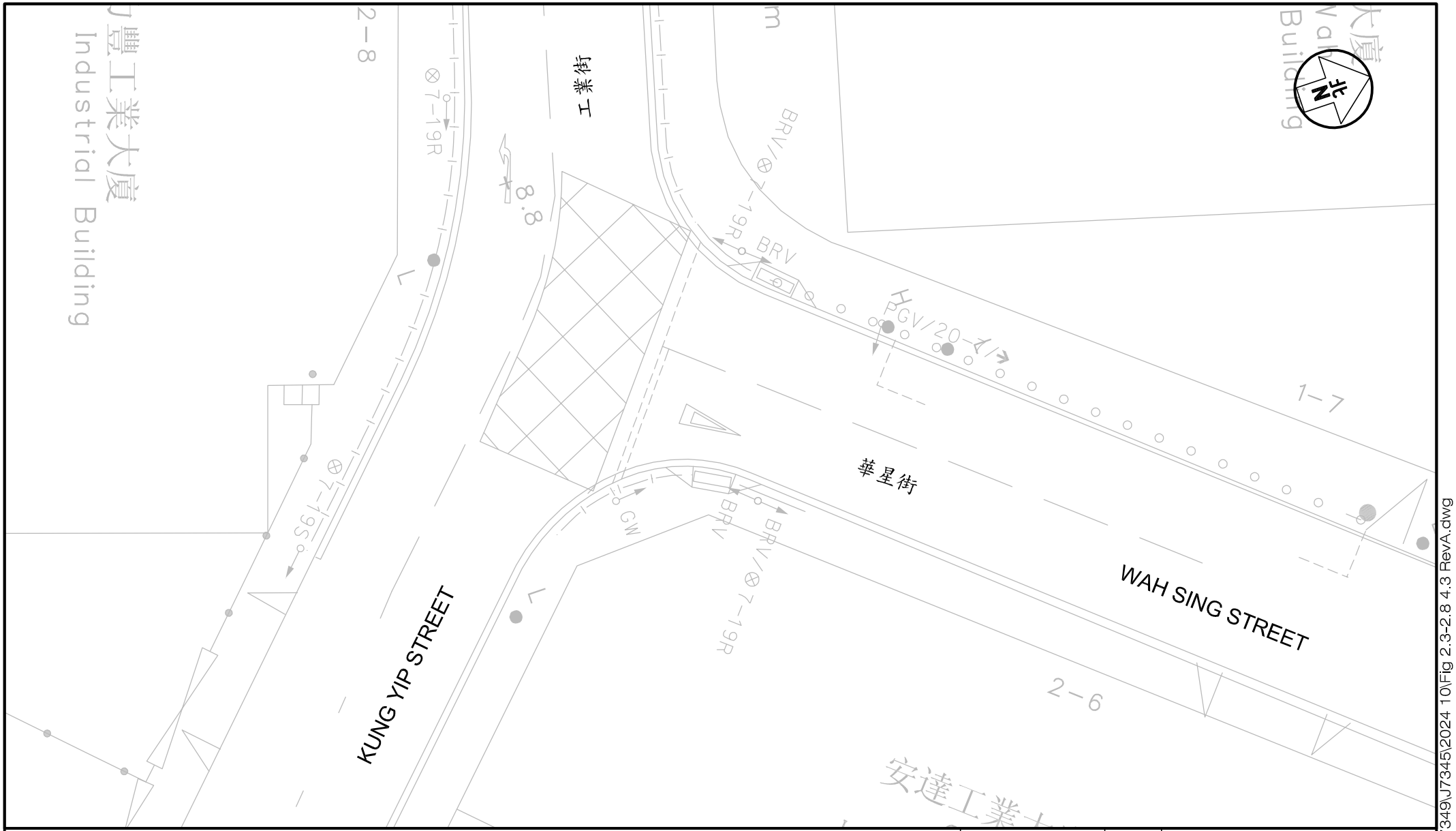

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG J7345	Figure No. 2.6	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title: EXISTING JUNCTION LAYOUT OF KUNG YIP STREET / WAH SING STREET	Designed by C Y Y / Drawn by S C Y / Checked by K C		
	Scale in A4 1 : 300	Date 30 OCT 2024	

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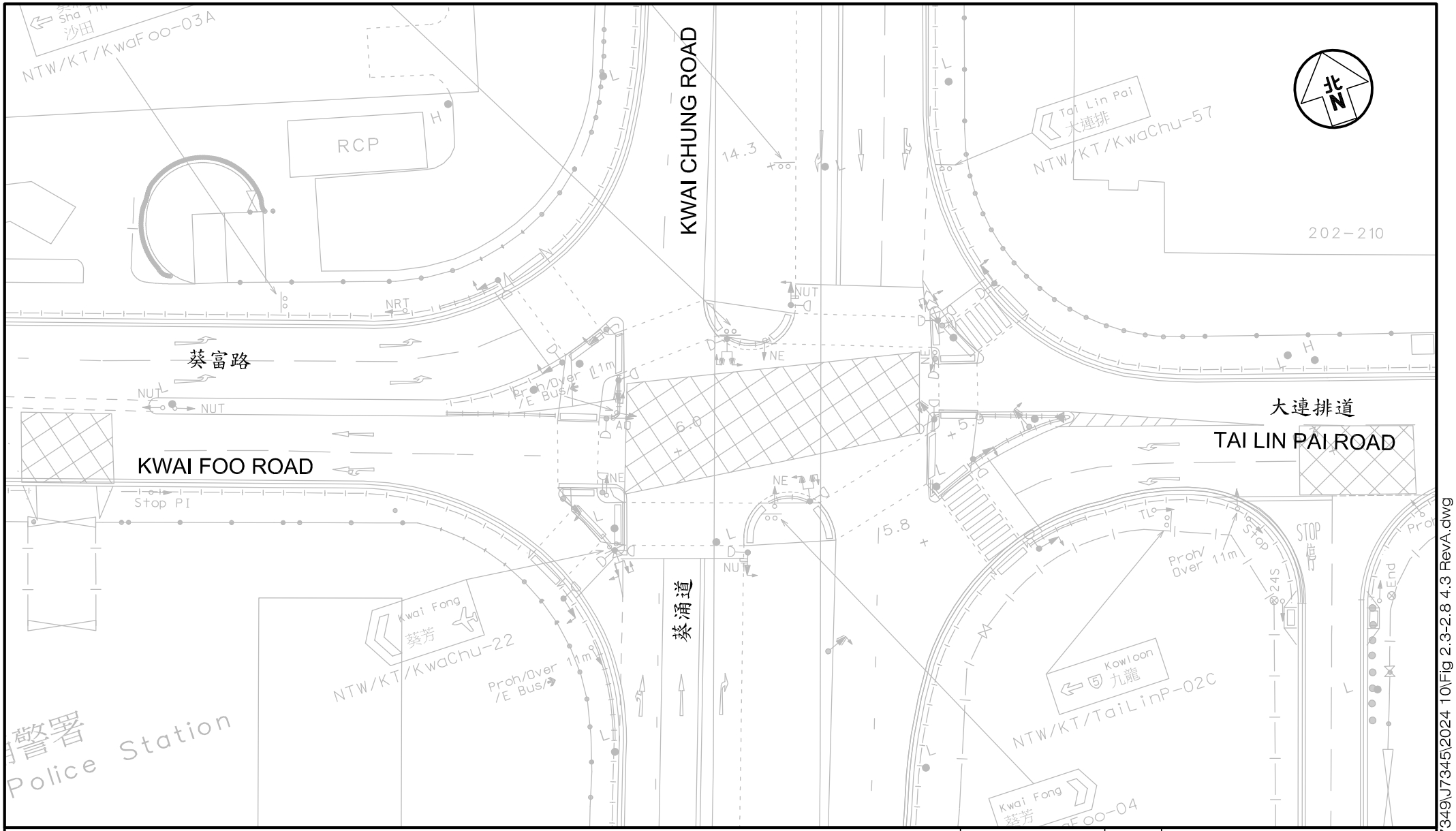

Project Title	PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 2.7 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT OF KWAI CHUNG ROAD / TAI LIN PAI ROAD / KWAI FOO ROAD		Designed by C Y Y / Drawn by S C Y / Checked by K C / Scale in A4 1 : 300 / Date 30 OCT 2024

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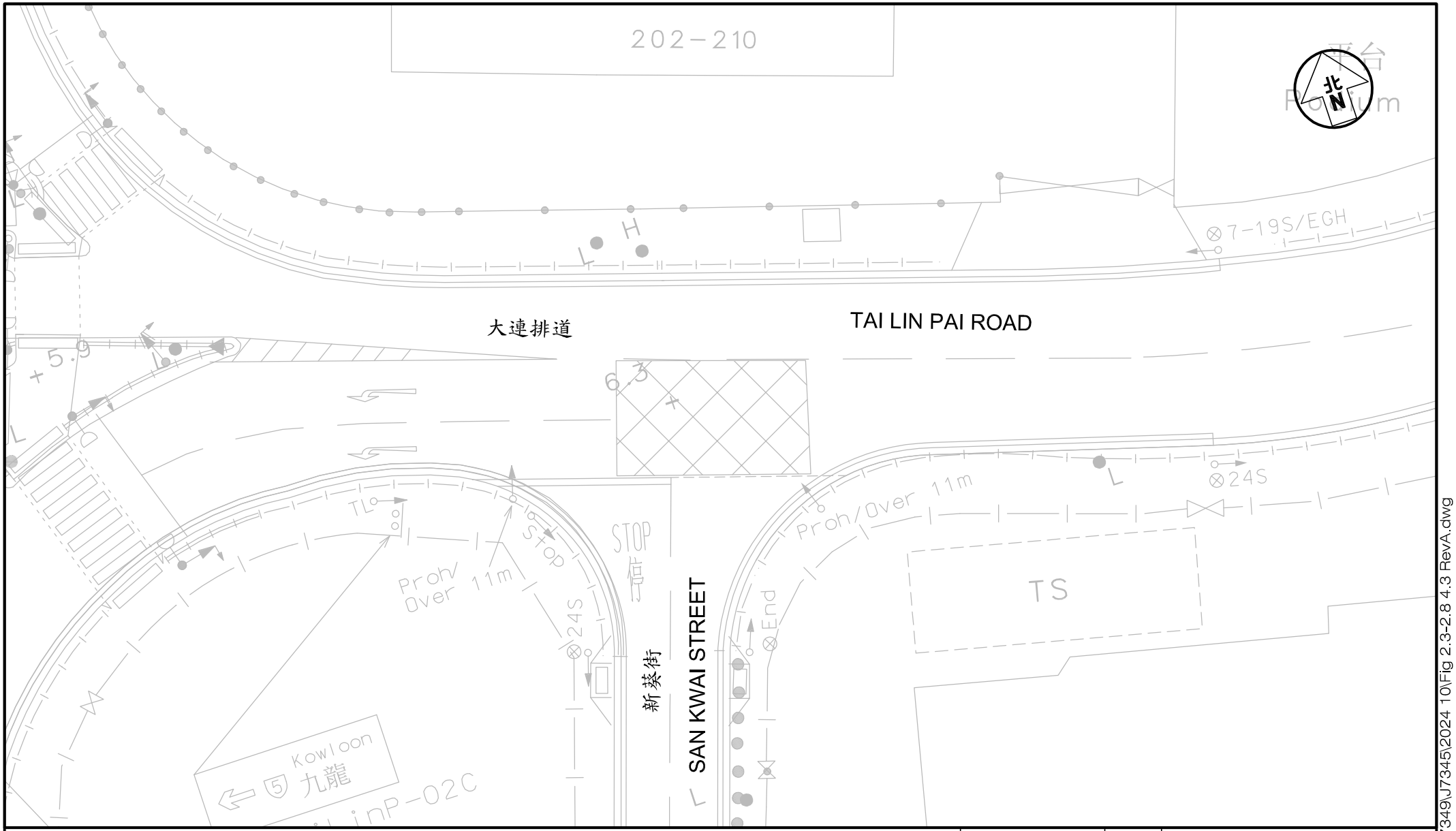

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG J7345	Figure No. 2.8	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title: EXISTING JUNCTION LAYOUT OF TAI LIN PAI ROAD / SAN KWAI STREET	Designed by C Y Y / Drawn by S C Y / Checked by K C		
	Scale in A4 1 : 300	Date 30 OCT 2024	

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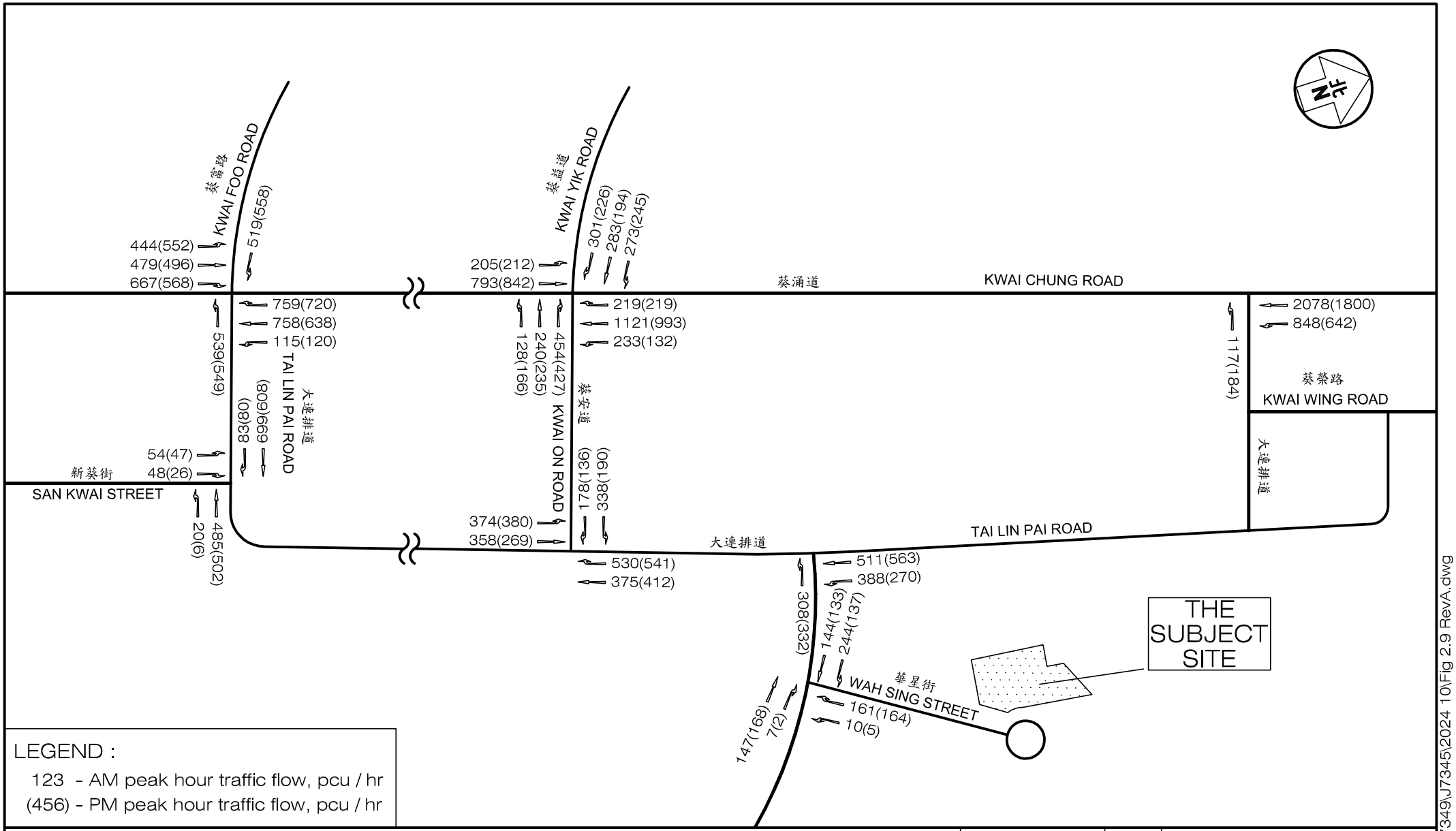

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 2.9	Revision A
Figure Title: YEAR 2024 OBSERVED PEAK HOUR TRAFFIC FLOWS		Designed by H C F / Drawn by S C Y / Checked by K C	
		Scale in A4: N.T.S.	Date: 30 OCT 2024

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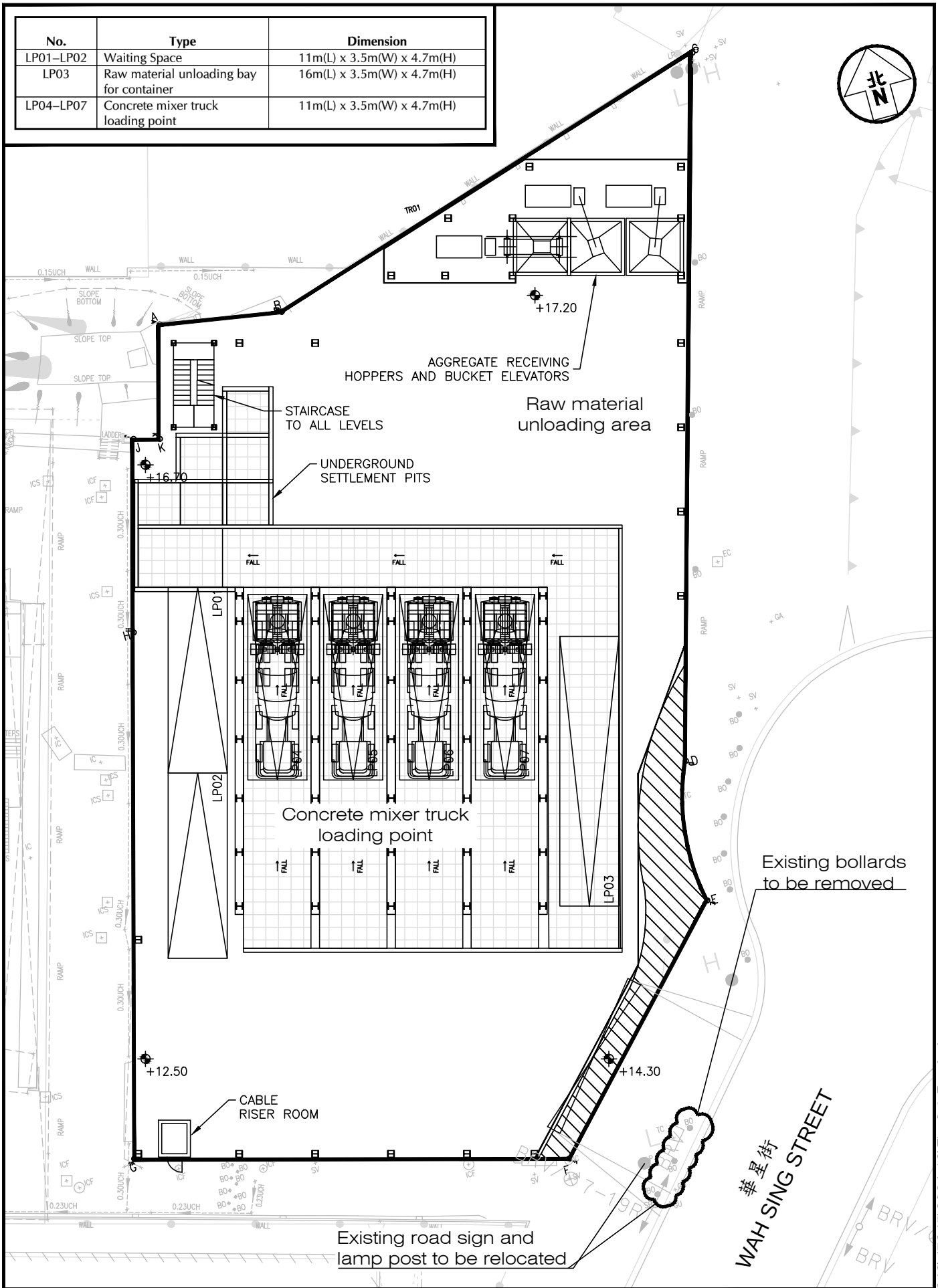
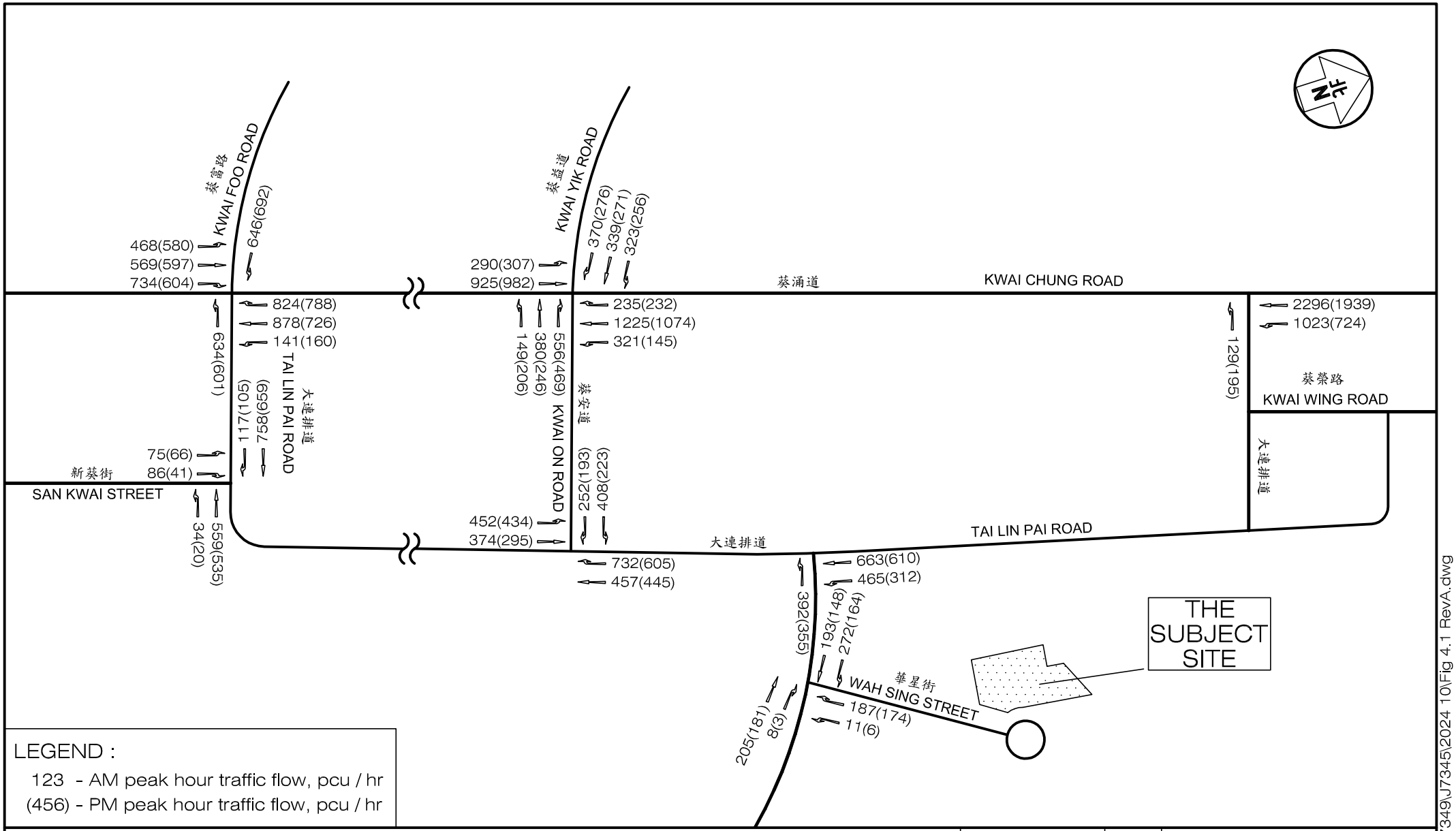
No.	Type	Dimension
LP01–LP02	Waiting Space	11m(L) x 3.5m(W) x 4.7m(H)
LP03	Raw material unloading bay for container	16m(L) x 3.5m(W) x 4.7m(H)
LP04–LP07	Concrete mixer truck loading point	11m(L) x 3.5m(W) x 4.7m(H)



Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	Job No. J7345	Figure No. 3.1			Scale in A4 1 : 300
	Designed by C Y Y	Drawn by S C Y	Checked by K C	Revision A	Date 30 OCT 2024
Figure Title: GROUND FLOOR	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

T:\JOB\J7300-J7349\J7345\2024 10\Fig 3.1 RevA.dwg



LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 4.1	Revision A
Figure Title: YEAR 2029 PEAK HOUR TRAFFIC FLOWS WITHOUT THE PROPOSED CONCRETE BATCHING PLANT		Designed by C Y Y / Drawn by S C Y / Checked by K C	
		Scale in A4: N.T.S.	Date: 30 OCT 2024

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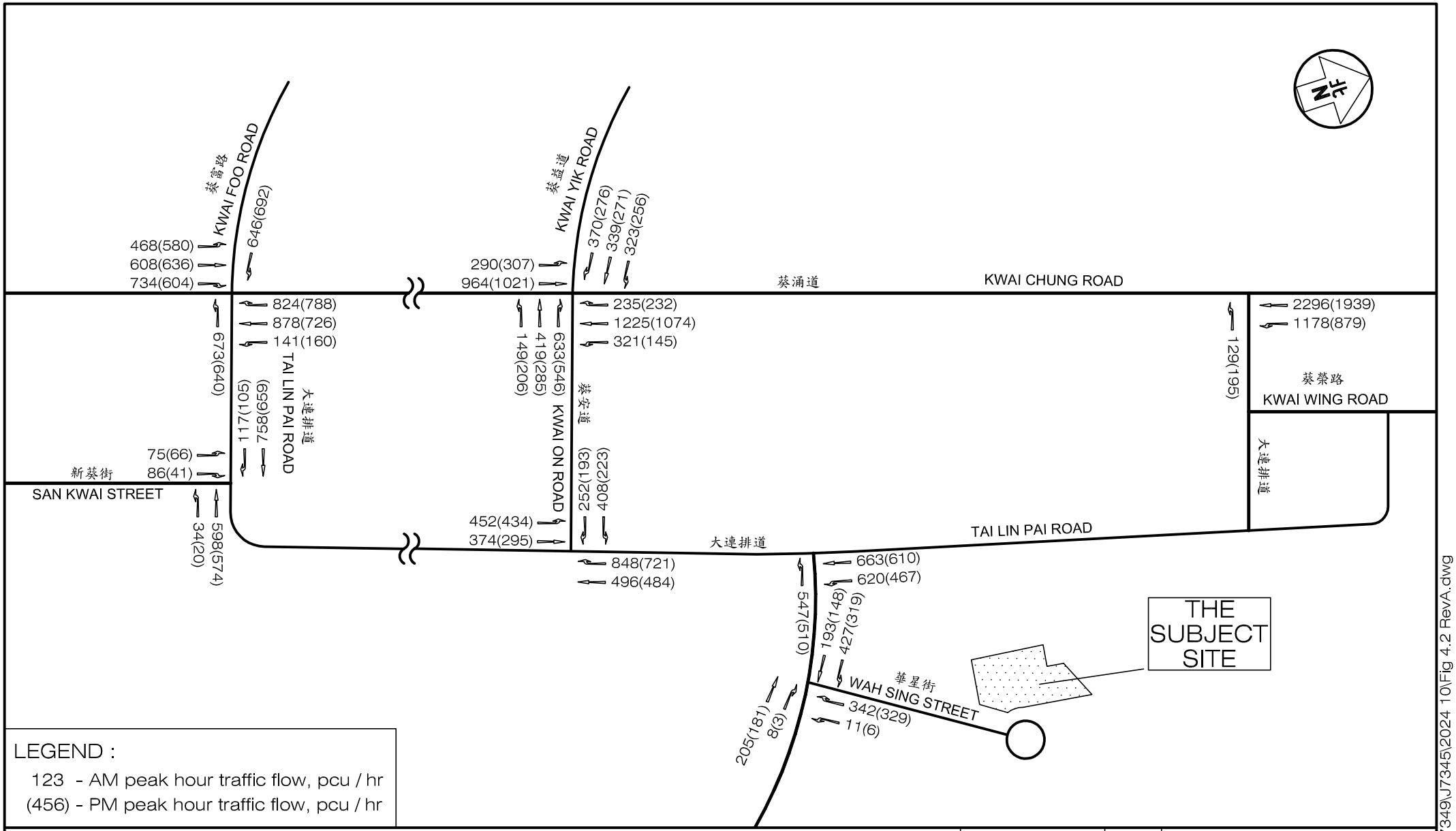

LEGEND :

123 - AM peak hour traffic flow, pcu / hr

(456) - PM peak hour traffic flow, pcu / hr

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG J7345	Figure No. 4.2	Revision A	
Figure Title: YEAR 2029 PEAK HOUR TRAFFIC FLOWS WITH THE PROPOSED CONCRETE BATCHING PLANT	Designed by C Y Y	Drawn by S C Y	Checked by K C
	Scale in A4 N.T.S.	Date 30 OCT 2024	

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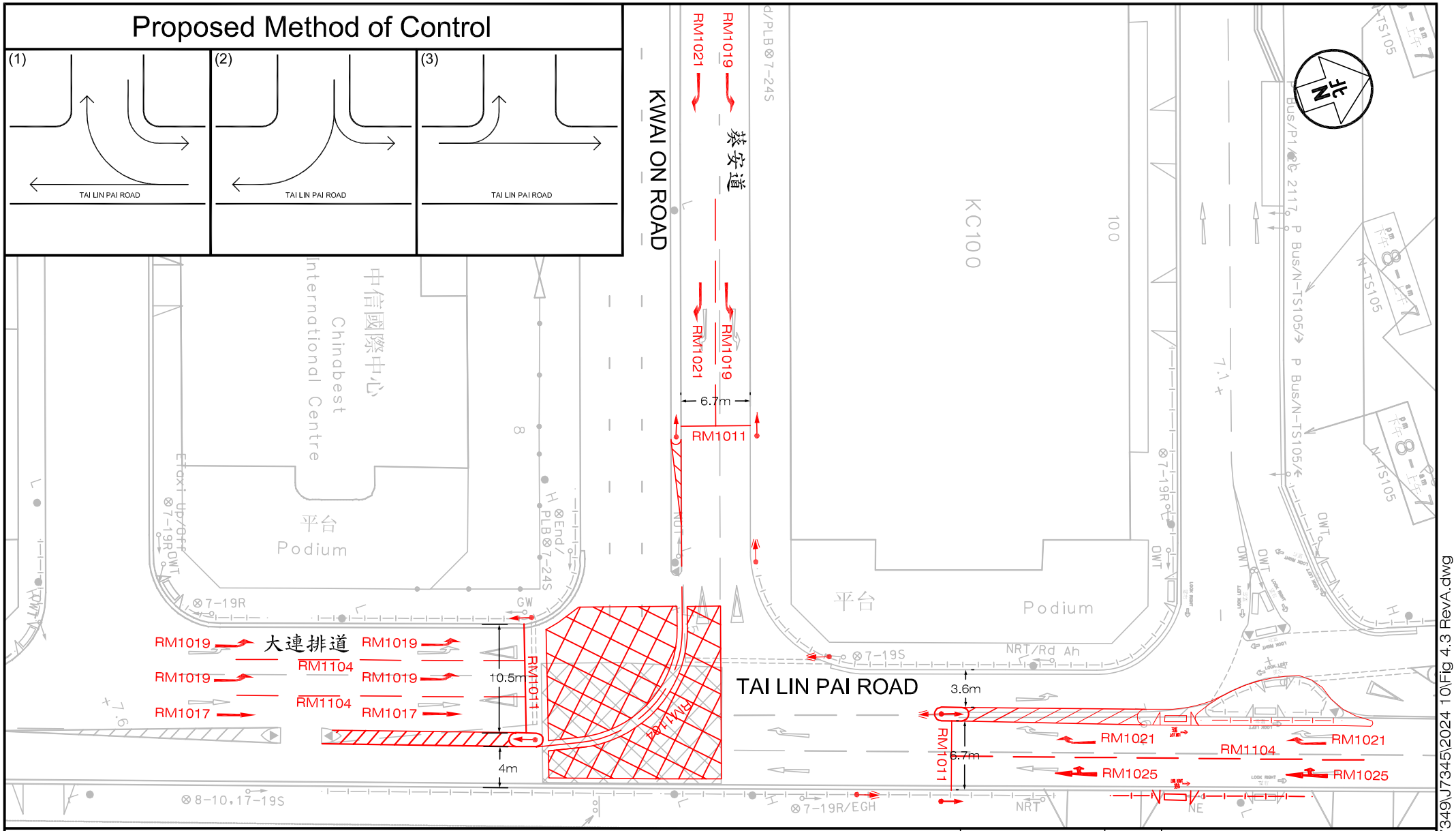
Proposed Method of Control



Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No. 4.3	Revision A
Figure Title: JUNCTION IMPROVEMENT SCHEME AT TAI LIN PAI ROAD / KWAI ON ROAD		Designed by C Y Y / Drawn by S C Y / Checked by K C	
		Scale in A4: 1 : 500	Date: 30 OCT 2024

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Appendix A –
Detailed Calculation

Signal Junction Analysis

Junction: J01 - Kwai Chung Road / Kwai On Road / Kwai Yik Road Job Number: J7345

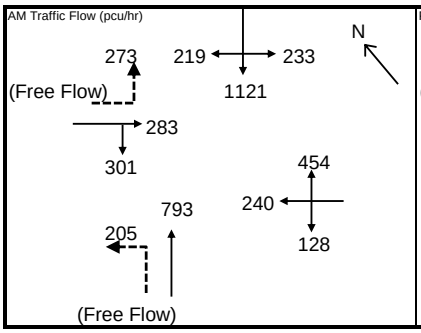
Scenario: Existing Condition Page 1

Design Year: 2024 Designed By: Checked By: Date: 30 October 2024

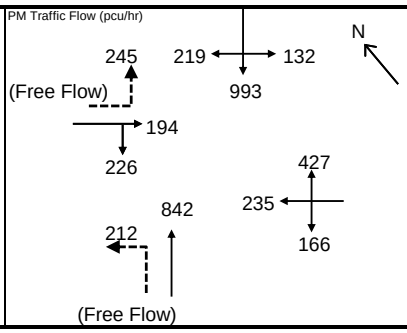
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Chung Road SB	LT	A1	1, 2	4.00	25.0		100	1901	233	0.123		100	1901	132	0.069	
Kwai Chung Road SB	SA	A2	1, 2	4.40				2195	561	0.256			2195	497	0.226	
Kwai Chung Road SB	SA	A3	1, 2	4.40				2195	560	0.255			2195	496	0.226	
Kwai Chung Road SB	RT	A4	2	4.40	20.0		100	2042	219	0.107	0.107	100	2042	219	0.107	0.107
Kwai Yik Road EB	SA	B1	3	3.80				2135	200	0.094			2135	144	0.067	
Kwai Yik Road EB	SA+RT	B2	3	3.80	30.0		57	2076	195	0.094		64	2069	140	0.068	0.068
Kwai Yik Road EB	RT	B3	3	3.80	25.0		100	2014	189	0.094	0.094	100	2014	136	0.068	
Kwai Chung Road NB	SA	C1	1	3.50				2105	397	0.189	0.189		2105	421	0.200	0.200
Kwai Chung Road NB	SA	C2	1	3.50				2105	396	0.188			2105	421	0.200	
Kwai On Road WB	LT	D1	4	3.40	25.0		100	1844	128	0.069		100	1844	166	0.090	
Kwai On Road WB	SA	D2	4	2.90				2045	240	0.117			2045	230	0.112	
Kwai On Road WB	SA+RT	D3	4	2.90	25.0		100	1929	229	0.119	0.119	98	1931	217	0.112	
Kwai On Road WB	RT	D4	4	2.90	20.0		100	1902	225	0.118		100	1902	215	0.113	0.113

pedestrian phase	P1	1, 3		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	P2	1, 2, 4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P3	1, 2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	P4	1, 2, 3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P5	2, 3		min crossing time =	6	sec GM +	13	sec FGM =	19	sec	
	P6	2, 3, 4		min crossing time =	7	sec GM +	14	sec FGM =	21	sec	
	P7	4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P8	3, 4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

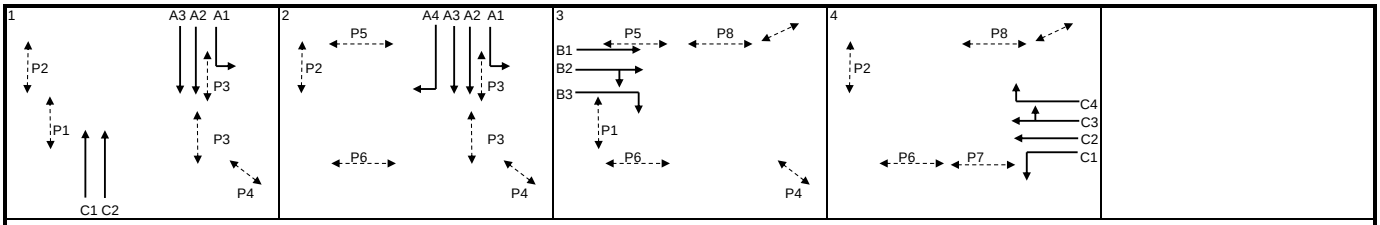


S = 1940+100(W-3.25) S = 2080+100(W-3.25)

S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2+3+4	AM Peak 1,2+3+4	PM Peak 1+2+3+4	PM Peak 1,2+3+4
Sum y	0.508	0.468	0.488	0.407
L (s)	25	18	25	18
C (s)	120	120	120	120
practical y	0.713	0.765	0.713	0.765
R.C. (%)	40%	63%	46%	88%

Note:



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 =	
	G =	I/G =	G =	I/G = 5	G =	I/G = 11	G =	I/G = 5	G =	

Signal Junction Analysis

Junction: J01 - Kwai Chung Road / Kwai On Road / Kwai Yik Road Job Number: J7345

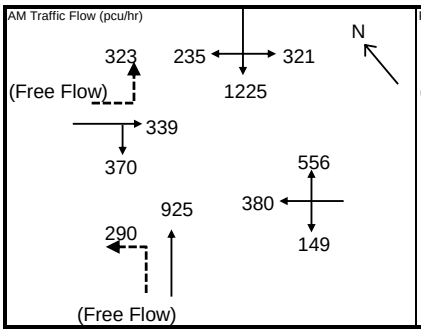
Scenario: Without Proposed Concrete Batching Plant Page 2

Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

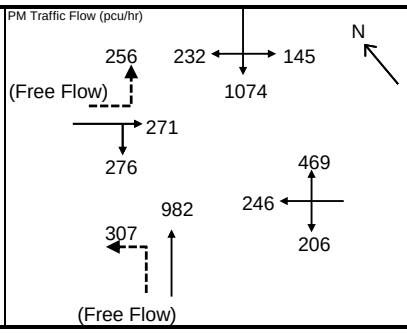
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Chung Road SB	LT	A1	1, 2	4.00	25.0		100	1901	321	0.169		100	1901	145	0.076	
Kwai Chung Road SB	SA	A2	1, 2	4.40				2195	613	0.279			2195	537	0.245	
Kwai Chung Road SB	SA	A3	1, 2	4.40				2195	612	0.279			2195	537	0.245	
Kwai Chung Road SB	RT	A4	2	4.40	20.0		100	2042	235	0.115	0.115	100	2042	232	0.114	0.114
Kwai Yik Road EB	SA	B1	3	3.80				2135	243	0.114	0.114		2135	188	0.088	0.088
Kwai Yik Road EB	SA+RT	B2	3	3.80	30.0		59	2074	236	0.114		55	2078	183	0.088	
Kwai Yik Road EB	RT	B3	3	3.80	25.0		100	2014	230	0.114		100	2014	176	0.087	
Kwai Chung Road NB	SA*	C1	1	3.50				2105	308	0.146	0.147		2105	327	0.155	0.156
Kwai Chung Road NB	SA	C2	1	3.50				2105	308	0.146			2105	327	0.155	
Kwai Chung Road NB	SA	C3	1	3.50				2105	309	0.147			2105	328	0.156	
Kwai On Road WB	LT	D1	4	3.40	25.0		100	1844	149	0.081		100	1844	206	0.112	
Kwai On Road WB	SA	D2	4	2.90				2045	325	0.159			2045	246	0.120	
Kwai On Road WB	SA+RT	D3	4	2.90	25.0		82	1949	309	0.159	0.159	100	1929	235	0.122	
Kwai On Road WB	RT	D4	4	2.90	20.0		100	1902	302	0.159		100	1902	234	0.123	0.123

pedestrian phase	P1	1, 3		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	P2	1, 2, 4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P3	1, 2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	P4	1, 2, 3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P5	2, 3		min crossing time =	6	sec GM +	13	sec FGM =	19	sec	
	P6	2, 3, 4		min crossing time =	7	sec GM +	14	sec FGM =	21	sec	
	P7	4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P8	3, 4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



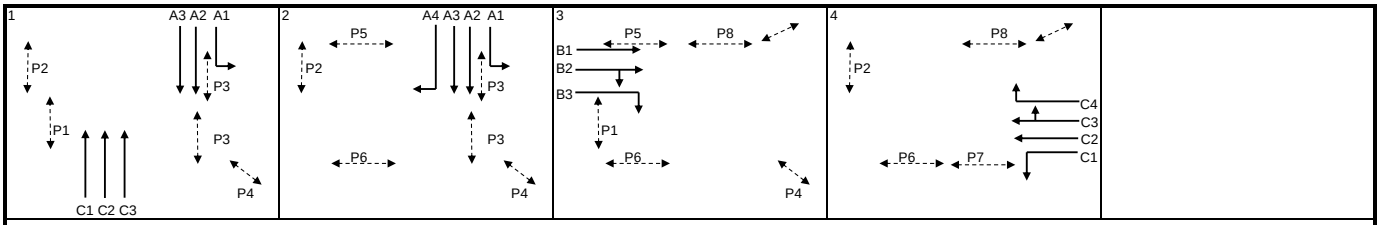
$S = 1940+100(W-3.25)$ $S = 2080+100(W-3.25)$

$S_M = S / (1 + 1.5\ f/r)$ $S_M = (S - 230) / (1 + 1.5\ f/r)$

	AM Peak 1+2+3+4	AM Peak 1,2+3+4	PM Peak 1+2+3+4	PM Peak 1,2+3+4
Sum y	0.535	0.552	0.481	0.456
L (s)	25	18	25	18
C (s)	120	120	120	120
practical y	0.713	0.765	0.713	0.765
R.C. (%)	33%	38%	48%	68%

Note:

*Junction Improvement Scheme by Other Project



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 =	
	G =	I/G =	G =	I/G = 5	G =	I/G = 11	G =	I/G = 5	G =	

Signal Junction Analysis

Junction: J01 - Kwai Chung Road / Kwai On Road / Kwai Yik Road Job Number: J7345

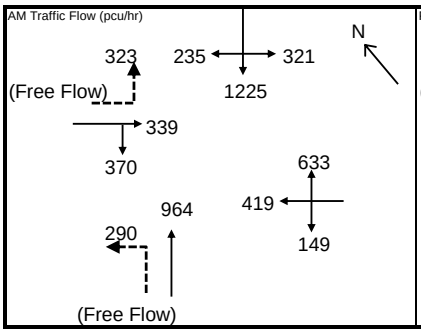
Scenario: With Proposed Concrete Batching Plant Page 3

Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

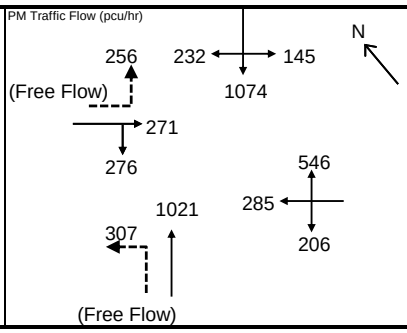
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Chung Road SB	LT	A1	1, 2	4.00	25.0		100	1901	321	0.169		100	1901	145	0.076	
Kwai Chung Road SB	SA	A2	1, 2	4.40				2195	613	0.279			2195	537	0.245	
Kwai Chung Road SB	SA	A3	1, 2	4.40				2195	612	0.279			2195	537	0.245	
Kwai Chung Road SB	RT	A4	2	4.40	20.0		100	2042	235	0.115	0.115	100	2042	232	0.114	0.114
Kwai Yik Road EB	SA	B1	3	3.80				2135	243	0.114	0.114		2135	188	0.088	0.088
Kwai Yik Road EB	SA+RT	B2	3	3.80	30.0		59	2074	236	0.114		55	2078	183	0.088	
Kwai Yik Road EB	RT	B3	3	3.80	25.0		100	2014	230	0.114		100	2014	176	0.087	
Kwai Chung Road NB	SA*	C1	1	3.50				2105	321	0.152	0.153		2105	340	0.162	0.162
Kwai Chung Road NB	SA	C2	1	3.50				2105	321	0.152			2105	340	0.162	
Kwai Chung Road NB	SA	C3	1	3.50				2105	322	0.153			2105	341	0.162	
Kwai On Road WB	LT	D1	4	3.40	25.0		100	1844	149	0.081		100	1844	206	0.112	
Kwai On Road WB	SA	D2	4	2.90				2045	365	0.178			2045	285	0.139	
Kwai On Road WB	SA+RT	D3	4	2.90	25.0		84	1947	348	0.179	0.179	100	1929	273	0.142	
Kwai On Road WB	RT	D4	4	2.90	20.0		100	1902	339	0.178		100	1902	273	0.144	0.144

pedestrian phase	P1	1, 3		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	P2	1, 2, 4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P3	1, 2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	P4	1, 2, 3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P5	2, 3		min crossing time =	6	sec GM +	13	sec FGM =	19	sec	
	P6	2, 3, 4		min crossing time =	7	sec GM +	14	sec FGM =	21	sec	
	P7	4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P8	3, 4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



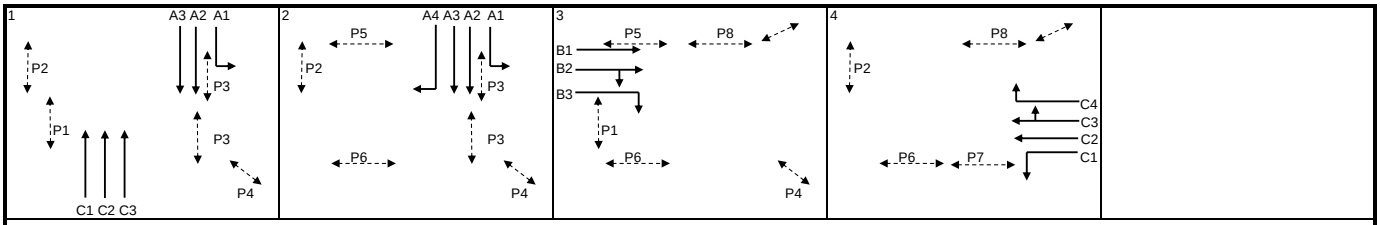
$S = 1940+100(W-3.25)$ $S = 2080+100(W-3.25)$

$S_M = S / (1 + 1.5\ f/r)$ $S_M = (S - 230) / (1 + 1.5\ f/r)$

	AM Peak 1+2+3+4	AM Peak 1,2+3+4	PM Peak 1+2+3+4	PM Peak 1,2+3+4
Sum y	0.561	0.572	0.507	0.476
L (s)	25	18	25	18
C (s)	120	120	120	120
practical y	0.713	0.765	0.713	0.765
R.C. (%)	27%	34%	40%	61%

Note:

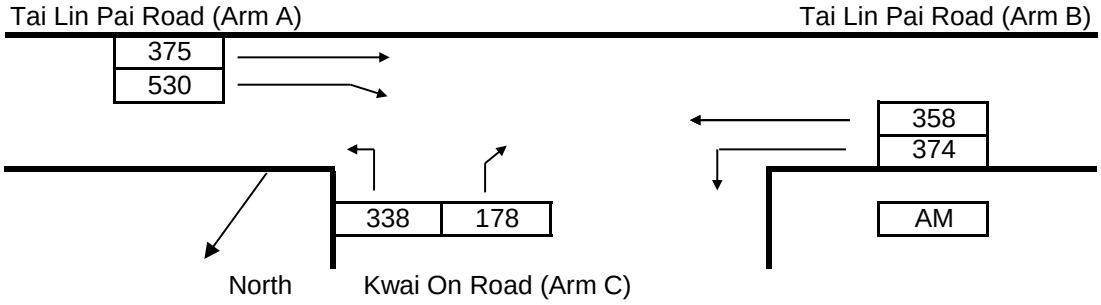
*Junction Improvement Scheme by Other Project



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 =	
	G =	I/G =	G =	I/G = 5	G =	I/G = 11	G =	I/G = 5	G =	

Priority Junction Analysis

Junction:	J02 - Tai Lin Pai Road / Kwai On Road				
Design Year:	2024	Job Number:	J7345	Date:	30 October 2024
Scenario:	Existing Condition				P. 4



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	14.00	V-rBA	250	w-BA	4.50	D	1.1773
	W-CR	3.00	V-lBA	110	w-BC	4.50	E	1.2062
			V-rBC	250	w-CB	3.40	F	1.0908
			V-rCB	250			Y	0.5170

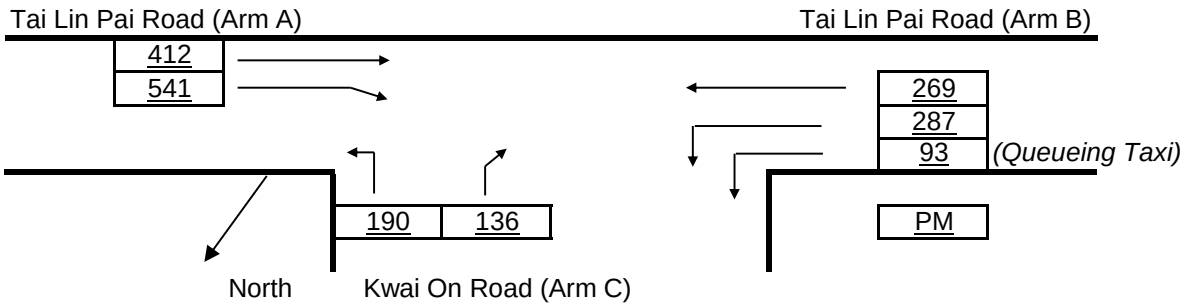
Analysis :

Traffic Flows, pcu/hr	AM	Capacity, pcu/hr	AM
q-CA	338	Q-BA	534
q-CB	178	Q-BC	745
q-AB	375	Q-CB	627
q-AC	530	Q-BAC	624
q-BA	358		
q-BC	374		
f	0.511		

Ratio-of-flow to Capacity	AM
B-A	0.671
B-C	0.502
C-B	0.284

Priority Junction Analysis

Junction:	J02 - Tai Lin Pai Road / Kwai On Road				
Design Year:	2024	Job Number:	J7345	Date:	30 October 2024
Scenario:	Existing Condition				P. 5



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W*	12.00	V-rBA	250	w-BA	4.50	D	1.1773
	W-CR	3.00	V-lBA	110	w-BC*	2.50	E	0.9963
			V-rBC	250	w-CB	3.40	F	1.0908
			V-rCB	250			Y	0.5860

Analysis :

Traffic Flows, pcu/hr	PM	Capacity, pcu/hr	PM
q-CA	190	Q-BA	532
q-CB	136	Q-BC	593
q-AB	412	Q-CB	591
q-AC	541	Q-BAC	562
q-BA	269		
q-BC	287		
f	0.516		

Ratio-of-flow to Capacity	PM
B-A	0.506
B-C	0.484
C-B	0.230

Note: *Due to the effect of taxi queueing at Tai Lin Pai Road NB

Signal Junction Analysis

Junction: J02 - Tai Lin Pai Road / Kwai On Road Job Number: J7345

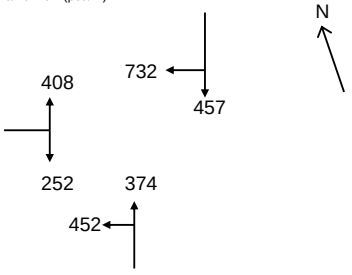
Scenario: Without Proposed Concrete Batching Plant Page 6

Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

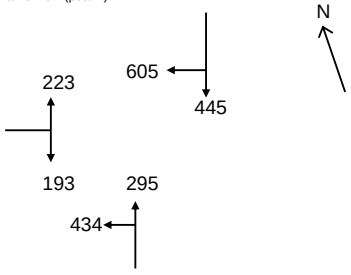
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	SA	A1	1	3.35				1950	457	0.234			1950	445	0.228	
Tai Lin Pai Road SB	RT	A2	1	3.35	18.0		100	1929	732	0.379	0.379	100	1929	605	0.314	0.314
Tai Lin Pai Road NB	LT*	B1	2	3.50	7.0		100	1618	212	0.131		100	1618	204	0.126	
Tai Lin Pai Road NB	LT	B2	2	3.50	10.0		100	1830	240	0.131		100	1830	230	0.126	
Tai Lin Pai Road NB	SA	B3	2	3.50				2105	374	0.178	0.178		2105	295	0.140	0.140
Kwai On Road EB	LT	C1	3	3.35	13.0		100	1748	408	0.233	0.233	100	1748	223	0.128	0.128
Kwai On Road EB	RT	C2	3	3.35	17.0		100	1921	252	0.131		100	1921	193	0.100	

pedestrian phase	P1	1, 3		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	P2	1, 2, 4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P3	1, 2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	P4	1, 2, 3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P5	2, 3		min crossing time =	6	sec GM +	13	sec FGM =	19	sec	
	P6	2, 3, 4		min crossing time =	7	sec GM +	14	sec FGM =	21	sec	
	P7	4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P8	3, 4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



$S = 1940+100(W-3.25)$ $S = 2080+100(W-3.25)$

$S_M = S / (1 + 1.5\ f/r)$ $S_M = (S - 230) / (1 + 1.5\ f/r)$

	AM Peak 1+2+3	AM Peak	PM Peak 1+2+3	PM Peak
Sum y	0.791		0.581	
L (s)	19		19	
C (s)	130		130	
practical y	0.768		0.768	
R.C. (%)	-3%		32%	

Note:

Junction Improvement Scheme proposed by Kwai On Factory Redevelopment

1

2

3

AM	G =	I/G = 5	G =	I/G = 7	G =	I/G = 10	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 7	G =	I/G = 10	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

Signal Junction Analysis

Junction: J02 - Tai Lin Pai Road / Kwai On Road Job Number: J7345

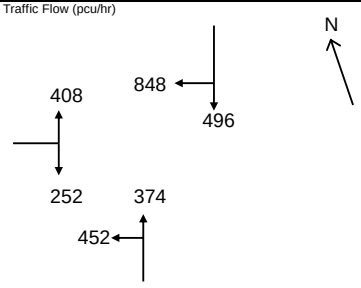
Scenario: With Proposed Concrete Batching Plant Page 7

Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

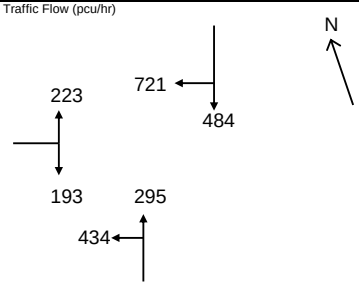
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	SA	A1	1	3.35				1950	496	0.254			1950	484	0.248	
Tai Lin Pai Road SB	RT	A2	1	3.35	18.0		100	1929	848	0.440	0.440	100	1929	721	0.374	0.374
Tai Lin Pai Road NB	LT*	B1	2	3.50	7.0		100	1618	212	0.131		100	1618	204	0.126	
Tai Lin Pai Road NB	LT	B2	2	3.50	10.0		100	1830	240	0.131		100	1830	230	0.126	
Tai Lin Pai Road NB	SA	B3	2	3.50				2105	374	0.178	0.178		2105	295	0.140	0.140
Kwai On Road EB	LT	C1	3	3.35	13.0		100	1748	408	0.233	0.233	100	1748	223	0.128	0.128
Kwai On Road EB	RT	C2	3	3.35	17.0		100	1921	252	0.131		100	1921	193	0.100	

pedestrian phase	P1	1, 3		min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
	P2	1, 2, 4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P3	1, 2		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	P4	1, 2, 3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P5	2, 3		min crossing time =	6	sec GM +	13	sec FGM =	19	sec	
	P6	2, 3, 4		min crossing time =	7	sec GM +	14	sec FGM =	21	sec	
	P7	4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	P8	3, 4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



$S = 1940+100(W-3.25)$ $S = 2080+100(W-3.25)$

$S_M = S / (1 + 1.5\ f/r)$ $S_M = (S - 230) / (1 + 1.5\ f/r)$

	AM Peak 1+2+3	AM Peak	PM Peak 1+2+3	PM Peak
Sum y	0.851		0.641	
L (s)	19		19	
C (s)	130		130	
practical y	0.768		0.768	
R.C. (%)	-10%		20%	

Note:

Junction Improvement Scheme proposed by Kwai On Factory Redevelopment

1

2

3

AM	G =	I/G = 5	G =	I/G = 7	G =	I/G = 10	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	
PM	G =	I/G = 5	G =	I/G = 7	G =	I/G = 10	G =	I/G =	G =	
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =	

Signal Junction Analysis

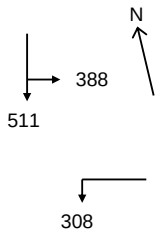
Junction: J03 - Tai Lin Pai Road / Kung Yip Street Job Number: J7345

Scenario: Existing Condition Page 8

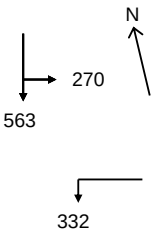
Design Year: 2024 Designed By: Checked By: Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	LT	A1	1	5.20	8.0		100	1798	388	0.216		100	1798	270	0.150	
Tai Lin Pai Road SB	SA	A2	1	5.20				2135	511	0.239	0.239		2135	563	0.264	0.264
Kung Yip Street WB	LT	B1	1	4.30	8.0		100	1722	308	0.179		100	1722	332	0.193	
pedestrian phase		P1	2		min crossing time =		6	sec GM +			13	sec FGM =		19	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



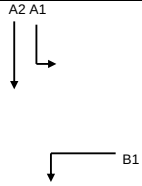
S = 1940 + 100 (W-3.25) Sₘ = 2080 + 100 (W-3.25)

Sₘ = S / (1 + 1.5 f/r) Sₘ = (S - 230) / (1 + 1.5 f/r)

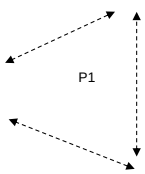
	AM Peak 1		PM Peak 1	
Sum y	0.239		0.264	
L (s)	40		40	
C (s)	90		90	
practical y	0.500		0.500	
R.C. (%)	109%		90%	

Note:

1



2



AM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =
PM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =

Signal Junction Analysis

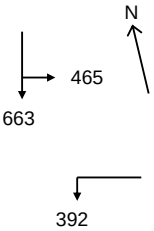
Junction: J03 - Tai Lin Pai Road / Kung Yip Street Job Number: J7345

Scenario: Without Proposed Concrete Batching Plant Page 9

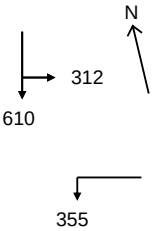
Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	LT	A1	1	5.20	8.0		100	1798	465	0.259		100	1798	312	0.174	
Tai Lin Pai Road SB	SA	A2	1	5.20				2135	663	0.311	0.311		2135	610	0.286	0.286
Kung Yip Street WB	LT	B1	1	4.30	8.0		100	1722	392	0.228		100	1722	355	0.206	
pedestrian phase		P1	2		min crossing time =		6	sec GM +		13	sec FGM =		19	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

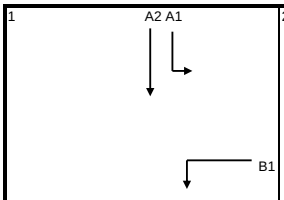


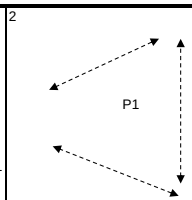
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak		PM Peak	
	1		1	
Sum y	0.311		0.286	
L (s)	40		40	
C (s)	90		90	
practical y	0.500		0.500	
R.C. (%)	61%		75%	

Note:





AM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =
PM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =

Signal Junction Analysis

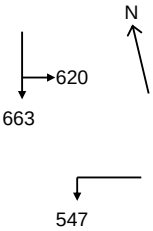
Junction: J03 - Tai Lin Pai Road / Kung Yip Street Job Number: J7345

Scenario: With Proposed Concrete Batching Plant Page 10

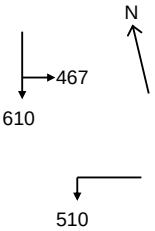
Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	LT	A1	1	5.20	8.0		100	1798	620	0.345	0.345	100	1798	467	0.260	
Tai Lin Pai Road SB	SA	A2	1	5.20				2135	663	0.311			2135	610	0.286	
Kung Yip Street WB	LT	B1	1	4.30	8.0		100	1722	547	0.318		100	1722	510	0.296	0.296
pedestrian phase		P1	2		min crossing time =		6	sec GM +		13	sec FGM =		19	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

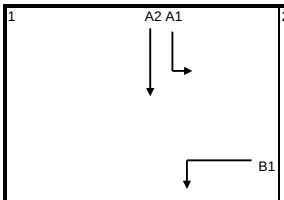


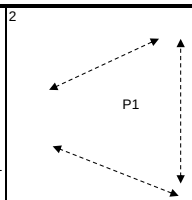
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1		PM Peak 1	
Sum y	0.345		0.296	
L (s)	40		40	
C (s)	90		90	
practical y	0.500		0.500	
R.C. (%)	45%		69%	

Note:





AM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =
PM	G =	I/G = 7	G = 32	I/G = 2	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =

Priority Junction Analysis

Junction:	J04 - Kung Yip Street / Wah Sing Street				
Design Year:	2024	Job Number:	J7345	Date:	30 October 2024
Scenario:	Existing Condition				P. 11

The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.90	V-rBA	40	w-BA	4.70	D	0.9523
	W-CR	0.00	V-lBA	40	w-BC	4.70	E	1.0196
			V-rBC	40	w-CB	2.50	F	0.8237
			V-rCB	35			Y	0.6240

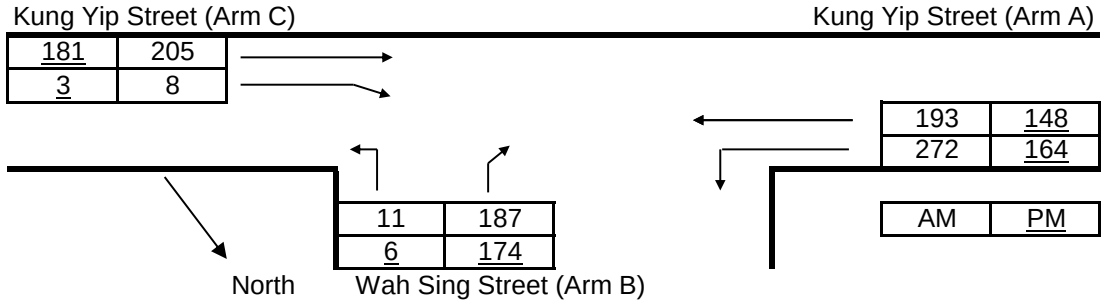
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	147	168	Q-BA	523	533
q-CB	7	2	Q-BC	704	716
q-AB	244	137	Q-CB	541	563
q-AC	144	133	Q-BAC	531	537
q-BA	161	164			
q-BC	10	5			
f	0.058	0.030			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.308	0.308	
B-C	0.014	0.007	
C-B	0.013	0.004	
B-AC	0.322	0.315	(for shared lane BA, BC)

Priority Junction Analysis

Junction:	J04 - Kung Yip Street / Wah Sing Street				
Design Year:	2029	Job Number:	J7345	Date:	30 October 2024
Scenario:	Without Proposed Concrete Batching Plant				P. 12



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.90	V-rBA	40	w-BA	4.70	D	0.9523
	W-CR	0.00	V-lBA	40	w-BC	4.70	E	1.0196
			V-rBC	40	w-CB	2.50	F	0.8237
			V-rCB	35			Y	0.6240

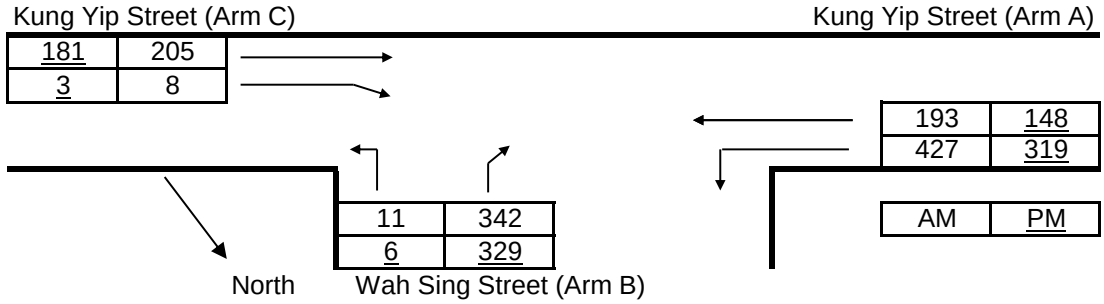
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	205	181	Q-BA	502	525
q-CB	8	3	Q-BC	690	710
q-AB	272	164	Q-CB	527	555
q-AC	193	148	Q-BAC	509	530
q-BA	187	174			
q-BC	11	6			
f	0.056	0.033			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.373	0.331	
B-C	0.016	0.008	
C-B	0.015	0.005	
B-AC	0.389	0.340	(for shared lane BA, BC)

Priority Junction Analysis

Junction:	J04 - Kung Yip Street / Wah Sing Street				
Design Year:	2029	Job Number:	J7345	Date:	30 October 2024
Scenario:	With Proposed Concrete Batching Plant				P. 13



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.90	V-rBA	40	w-BA	4.70	D	0.9523
	W-CR	0.00	V-lBA	40	w-BC	4.70	E	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	Capacity, pcu/hr	AM	PM
q-CA	205	181	Q-BA	488	512
q-CB	8	3	Q-BC	676	696
q-AB	427	319	Q-CB	498	526
q-AC	193	148	Q-BAC	493	515
q-BA	342	329			
q-BC	11	6			
f	0.031	0.018			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.700	0.642	
B-C	0.016	0.009	
C-B	0.016	0.006	
B-AC	0.716	0.651	(for shared lane BA, BC)

Signal Junction Analysis

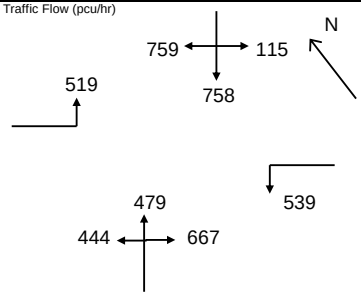
Junction: J05 - Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road — Job Number: J7345

Scenario: Existing Condition — Page 14

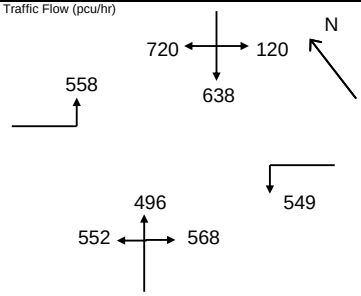
Design Year: 2024 — Designed By: — Checked By: — Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Foo Road EB	LT	A1	1	4.10	25.0		100	2042	258	0.126		100	2042	278	0.136	
Kwai Foo Road EB	LT	A2	1	4.10	29.0		100	2059	261	0.127		100	2059	280	0.136	
Kwai Chung Road NB	LT+SA*	B1	2	4.00	22.0		100	1916	444	0.232		100	1916	552	0.288	0.288
Kwai Chung Road NB	SA	B2	2	4.00				2155	479	0.222			2155	496	0.230	
Kwai Chung Road NB	RT	B3	2	4.00	20.0		100	2005	667	0.333	0.333	100	2005	568	0.283	
Tai Lin Pai Road WB	LT	C1	2	3.80	22.0		100	1868	259	0.139		100	1868	264	0.141	
Tai Lin Pai Road WB	LT	C2	2	3.80	26.0		100	2019	280	0.139		100	2019	285	0.141	
Kwai Chung Road SB	LT+SA*	D1	1	4.30	27.0		21	2051	536	0.261	0.261	25	2047	485	0.237	0.237
Kwai Chung Road SB	SA+RT	D2	1	4.30				2185	571	0.261			2185	518	0.237	
Kwai Chung Road SB	RT	D3	1	4.20	18.0		100	2008	525	0.261		100	2008	475	0.237	
pedestrian phase		P1	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		P2	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P3	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P4	1		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P5	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P6	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P7	2		min crossing time =		7	sec GM +		13	sec FGM =		20	sec		
		P8	2		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



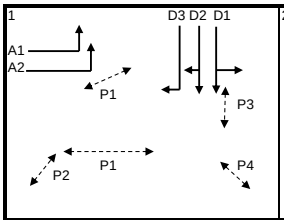
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

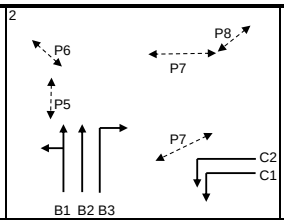
S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2		PM Peak 1+2	
Sum y	0.594		0.525	
L (s)	16		16	
C (s)	120		120	
practical y	0.780		0.780	
R.C. (%)	31%		49%	

Note:

*A flared approach





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 =

Signal Junction Analysis

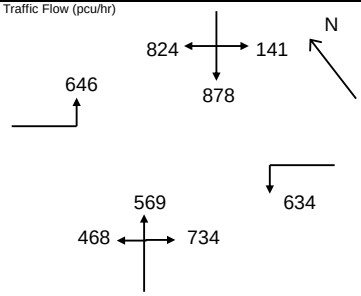
Junction: J05 - Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road — Job Number: J7345

Scenario: Without Proposed Concrete Batching Plant — Page 15

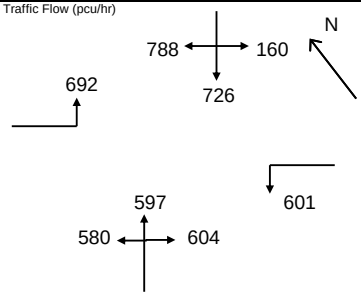
Design Year: 2029 — Designed By: — Checked By: — Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Foo Road EB	LT	A1	1	4.10	25.0		100	2042	322	0.158		100	2042	345	0.169	
Kwai Foo Road EB	LT	A2	1	4.10	29.0		100	2059	324	0.157		100	2059	347	0.169	
Kwai Chung Road NB	LT+SA*	B1	2	4.00	22.0		96	1921	489	0.255		100	1916	580	0.303	0.303
Kwai Chung Road NB	SA	B2	2	4.00				2155	548	0.254			2155	597	0.277	
Kwai Chung Road NB	RT	B3	2	4.00	20.0		100	2005	734	0.366	0.366	100	2005	604	0.301	
Tai Lin Pai Road WB	LT	C1	2	3.80	22.0		100	1868	305	0.163		100	1868	289	0.155	
Tai Lin Pai Road WB	LT	C2	2	3.80	26.0		100	2019	329	0.163		100	2019	312	0.155	
Kwai Chung Road SB	LT+SA*	D1	1	4.30	27.0		23	2049	605	0.295	0.295	29	2043	548	0.268	
Kwai Chung Road SB	SA+RT	D2	1	4.30				2185	645	0.295			2185	587	0.269	0.269
Kwai Chung Road SB	RT	D3	1	4.20	18.0		100	2008	593	0.295		100	2008	539	0.268	
pedestrian phase		P1	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		P2	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P3	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P4	1		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P5	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P6	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P7	2		min crossing time =		7	sec GM +		13	sec FGM =		20	sec		
		P8	2		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



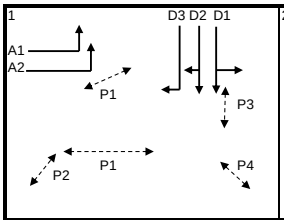
$S = 1940 + 100\ (W-3.25)$ $S = 2080 + 100\ (W-3.25)$

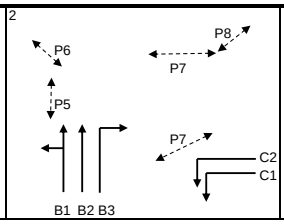
$S_M = S / (1 + 1.5\ f/r)$ $S_M = (S - 230) / (1 + 1.5\ f/r)$

	AM Peak 1+2		PM Peak 1+2	
Sum y	0.661		0.571	
L (s)	16		16	
C (s)	120		120	
practical y	0.780		0.780	
R.C. (%)	18%		37%	

Note:

*A flared approach





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 =

Signal Junction Analysis

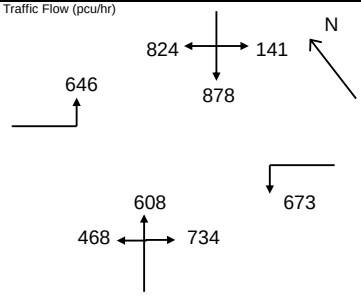
Junction: J05 - Kwai Chung Road / Tai Lin Pai Road / Kwai Foo Road — Job Number: J7345

Scenario: With Proposed Concrete Batching Plant — Page 16

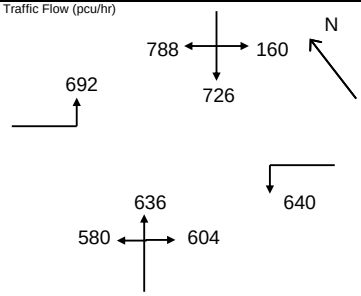
Design Year: 2029 — Designed By: — Checked By: — Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Kwai Foo Road EB	LT	A1	1	4.10	25.0		100	2042	322	0.158		100	2042	345	0.169	
Kwai Foo Road EB	LT	A2	1	4.10	29.0		100	2059	324	0.157		100	2059	347	0.169	
Kwai Chung Road NB	LT+SA*	B1	2	4.00	22.0		91	1927	508	0.264		100	1916	580	0.303	0.303
Kwai Chung Road NB	SA	B2	2	4.00				2155	568	0.264			2155	636	0.295	
Kwai Chung Road NB	RT	B3	2	4.00	20.0		100	2005	734	0.366	0.366	100	2005	604	0.301	
Tai Lin Pai Road WB	LT	C1	2	3.80	22.0		100	1868	323	0.173		100	1868	308	0.165	
Tai Lin Pai Road WB	LT	C2	2	3.80	26.0		100	2019	350	0.173		100	2019	332	0.164	
Kwai Chung Road SB	LT+SA*	D1	1	4.30	27.0		23	2049	605	0.295	0.295	29	2043	548	0.268	
Kwai Chung Road SB	SA+RT	D2	1	4.30				2185	645	0.295			2185	587	0.269	0.269
Kwai Chung Road SB	RT	D3	1	4.20	18.0		100	2008	593	0.295		100	2008	539	0.268	
pedestrian phase		P1	1		min crossing time =		6	sec GM +		12	sec FGM =		18	sec		
		P2	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P3	1		min crossing time =		5	sec GM +		5	sec FGM =		10	sec		
		P4	1		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P5	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P6	2		min crossing time =		5	sec GM +		7	sec FGM =		12	sec		
		P7	2		min crossing time =		7	sec GM +		13	sec FGM =		20	sec		
		P8	2		min crossing time =		5	sec GM +		6	sec FGM =		11	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



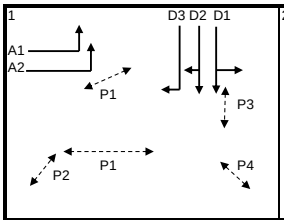
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

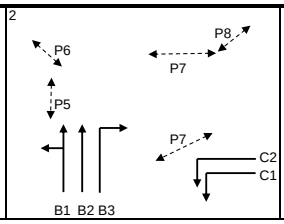
S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2		PM Peak 1+2	
Sum y	0.661		0.571	
L (s)	16		16	
C (s)	120		120	
practical y	0.780		0.780	
R.C. (%)	18%		37%	

Note:

*A flared approach

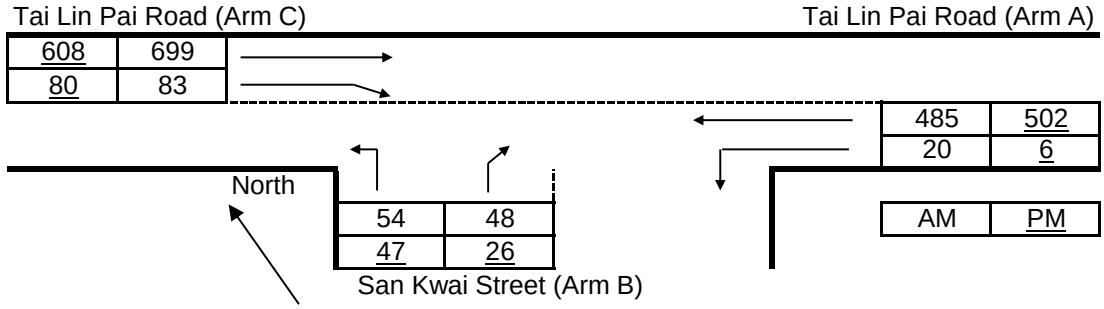




AM	G =	I/G = 9	G =	I/G = 9	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =
PM	G =	I/G = 9	G =	I/G = 9	G =	I/G =	G =	I/G =	G =
	G =	I/G =	G =	I/G =	G =	I/G =	G =	I/G =	G =

Priority Junction Analysis

Junction:	J06 - Tai Lin Pai Road / San Kwai Street				
Design Year:	2024	Job Number:	J7345	Date:	30 October 2024
Scenario:	Existing Condition				P. 17



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.60	V-rBA	30	w-BA	4.70	D	0.9340
	W-CR	0.00	V-lBA	25	w-BC	4.70	E	1.0097
			V-rBC	30	w-CB	4.40	F	1.0416
			V-rCB	90			Y	0.6343

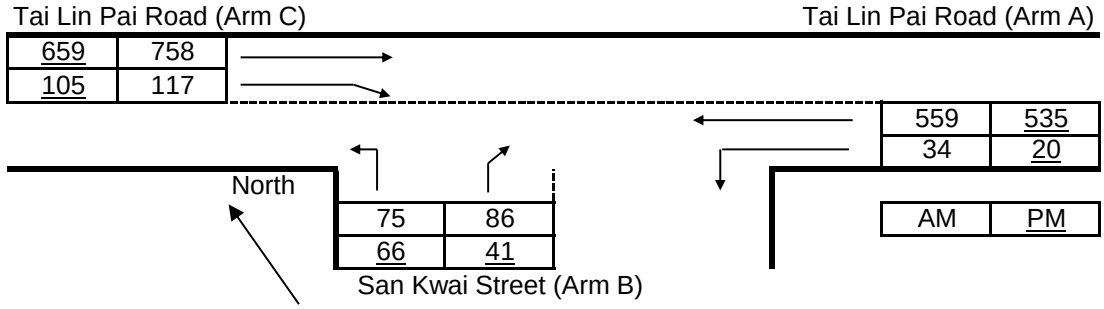
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	699	608	Q-BA	359	370
q-CB	83	80	Q-BC	637	635
q-AB	20	6	Q-CB	655	654
q-AC	485	502	Q-BAC	467	506
q-BA	48	26			
q-BC	54	47			
f	0.529	0.644			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.134	0.070	
B-C	0.085	0.074	
C-B	0.127	0.122	
B-AC	0.218	0.144	(for shared lane BA, BC)

Priority Junction Analysis

Junction:	J06 - Tai Lin Pai Road / San Kwai Street				
Design Year:	2029	Job Number:	J7345	Date:	30 October 2024
Scenario:	Without Proposed Concrete Batching Plant				P. 18



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.60	V-rBA	30	w-BA	4.70	D	0.9340
	W-CR	0.00	V-lBA	25	w-BC	4.70	E	1.0097
			V-rBC	30	w-CB	4.40	F	1.0416
			V-rCB	90			Y	0.6343

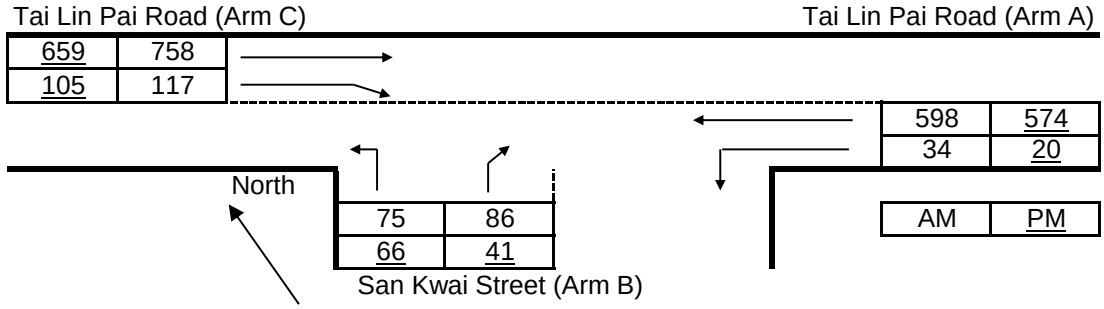
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	758	659	Q-BA	323	347
q-CB	117	105	Q-BC	619	626
q-AB	34	20	Q-CB	633	643
q-AC	559	535	Q-BAC	416	478
q-BA	86	41			
q-BC	75	66			
f	0.466	0.617			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.266	0.118	
B-C	0.121	0.105	
C-B	0.185	0.163	
B-AC	0.387	0.224	(for shared lane BA, BC)

Priority Junction Analysis

Junction:	J06 - Tai Lin Pai Road / San Kwai Street				
Design Year:	2029	Job Number:	J7345	Date:	30 October 2024
Scenario:	With Proposed Concrete Batching Plant				P. 19



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

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

Geometry :	Input		Input		Input		Calculated	
	W	10.60	V-rBA	30	w-BA	4.70	D	0.9340
	W-CR	0.00	V-lBA	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	Capacity, pcu/hr	AM	PM
q-CA	758	659	Q-BA	315	338
q-CB	117	105	Q-BC	610	617
q-AB	34	20	Q-CB	624	633
q-AC	598	574	Q-BAC	406	469
q-BA	86	41			
q-BC	75	66			
f	0.466	0.617			

Ratio-of-flow to Capacity	AM	PM	
B-A	0.273	0.121	
B-C	0.123	0.107	
C-B	0.187	0.166	
B-AC	0.396	0.228	(for shared lane BA, BC)

Signal Junction Analysis

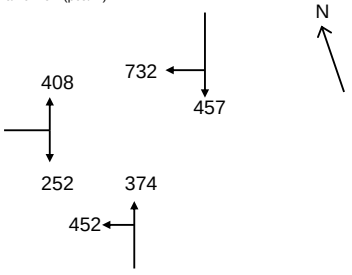
Junction: J02 - Tai Lin Pai Road / Kwai On Road Job Number: J7345

Scenario: Without Proposed Concrete Batching Plant Page 20

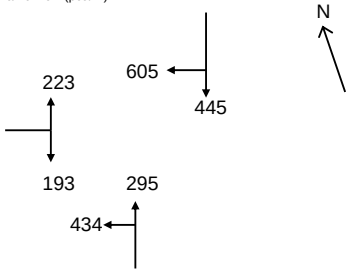
Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	SA+RT	A1	1	3.35	21.0		23	1918	593	0.309	0.309	15	1929	525	0.272	0.272
Tai Lin Pai Road SB	RT	A2	1	3.35	18.0		100	1929	596	0.309		100	1929	525	0.272	
Tai Lin Pai Road NB	LT*	B1	3	3.50	7.0		100	1618	212	0.131		100	1618	204	0.126	
Tai Lin Pai Road NB	LT	B2	3	3.50	10.0		100	1830	240	0.131		100	1830	230	0.126	
Tai Lin Pai Road NB	SA	B3	3	3.50				2105	374	0.178	0.178		2105	295	0.140	0.140
Kwai On Road EB	LT	C1	1, 2	3.35	13.0		100	1748	408	0.233		100	1748	223	0.128	
Kwai On Road EB	RT	C2	2	3.35	17.0		100	1921	252	0.131	0.131	100	1921	193	0.100	0.100
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



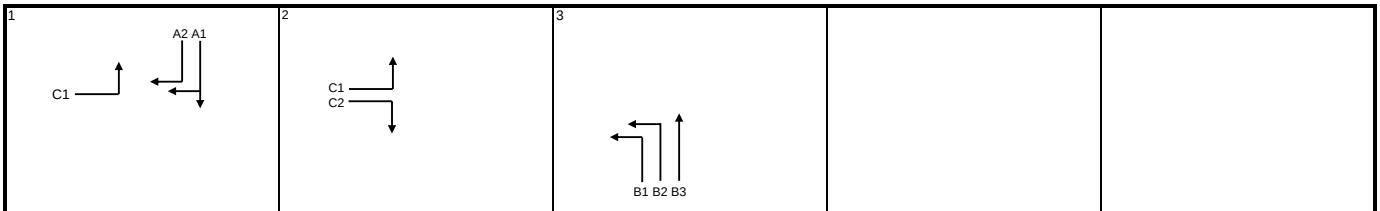
$S = 1940+100(W-3.25)$ $S = 2080+100(W-3.25)$

$S_M = S / (1 + 1.5 f/r)$ $S_M = (S - 230) / (1 + 1.5 f/r)$

	AM Peak 1+2+3	AM Peak 1,2, + 3	PM Peak 1+2+3	PM Peak 1,2 + 3
Sum y	0.618	0.411	0.513	0.128
L (s)	18	12	18	12
C (s)	130	130	130	130
practical y	0.775	0.817	0.775	0.817
R.C. (%)	25%	99%	51%	540%

Note:

Further improvement on Scheme proposed by Kwai On Factory Redevelopment



AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =
	G =	I/G =	G =	I/G = 5	G =	I/G = 9	G =	I/G =	G =
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =
	G =	I/G =	G =	I/G = 5	G =	I/G = 9	G =	I/G =	G =

Signal Junction Analysis

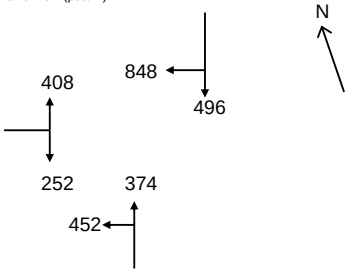
Junction: J02 - Tai Lin Pai Road / Kwai On Road Job Number: J7345

Scenario: With Proposed Concrete Batching Plant Page 21

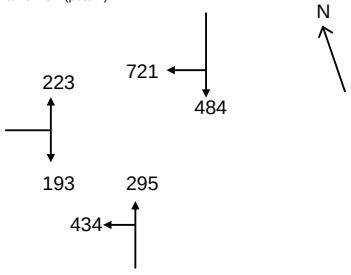
Design Year: 2029 Designed By: Checked By: Date: 30 October 2024

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Tai Lin Pai Road SB	SA+RT	A1	1	3.35	21.0		26	1914	669	0.350	0.350	20	1923	602	0.313	0.313
Tai Lin Pai Road SB	RT	A2	1	3.35	18.0		100	1929	675	0.350		100	1929	603	0.313	
Tai Lin Pai Road NB	LT*	B1	3	3.50	7.0		100	1618	212	0.131		100	1618	204	0.126	
Tai Lin Pai Road NB	LT	B2	3	3.50	10.0		100	1830	240	0.131		100	1830	230	0.126	
Tai Lin Pai Road NB	SA	B3	3	3.50				2105	374	0.178	0.178		2105	295	0.140	0.140
Kwai On Road EB	LT	C1	1, 2	3.35	13.0		100	1748	408	0.233		100	1748	223	0.128	
Kwai On Road EB	RT	C2	2	3.35	17.0		100	1921	252	0.131	0.131	100	1921	193	0.100	0.100
pedestrian phase																

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



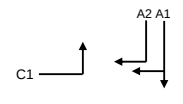
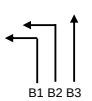
S = 1940+100(W-3.25) S = 2080+100(W-3.25)

S_M = S / (1 + 1.5 f/r) S_M = (S - 230) / (1 + 1.5 f/r)

	AM Peak 1+2+3	AM Peak 1,2, + 3	PM Peak 1+2+3	PM Peak 1,2 + 3
Sum y	0.659	0.411	0.554	0.268
L (s)	18	12	18	12
C (s)	130	130	130	130
practical y	0.775	0.817	0.775	0.817
R.C. (%)	18%	99%	40%	205%

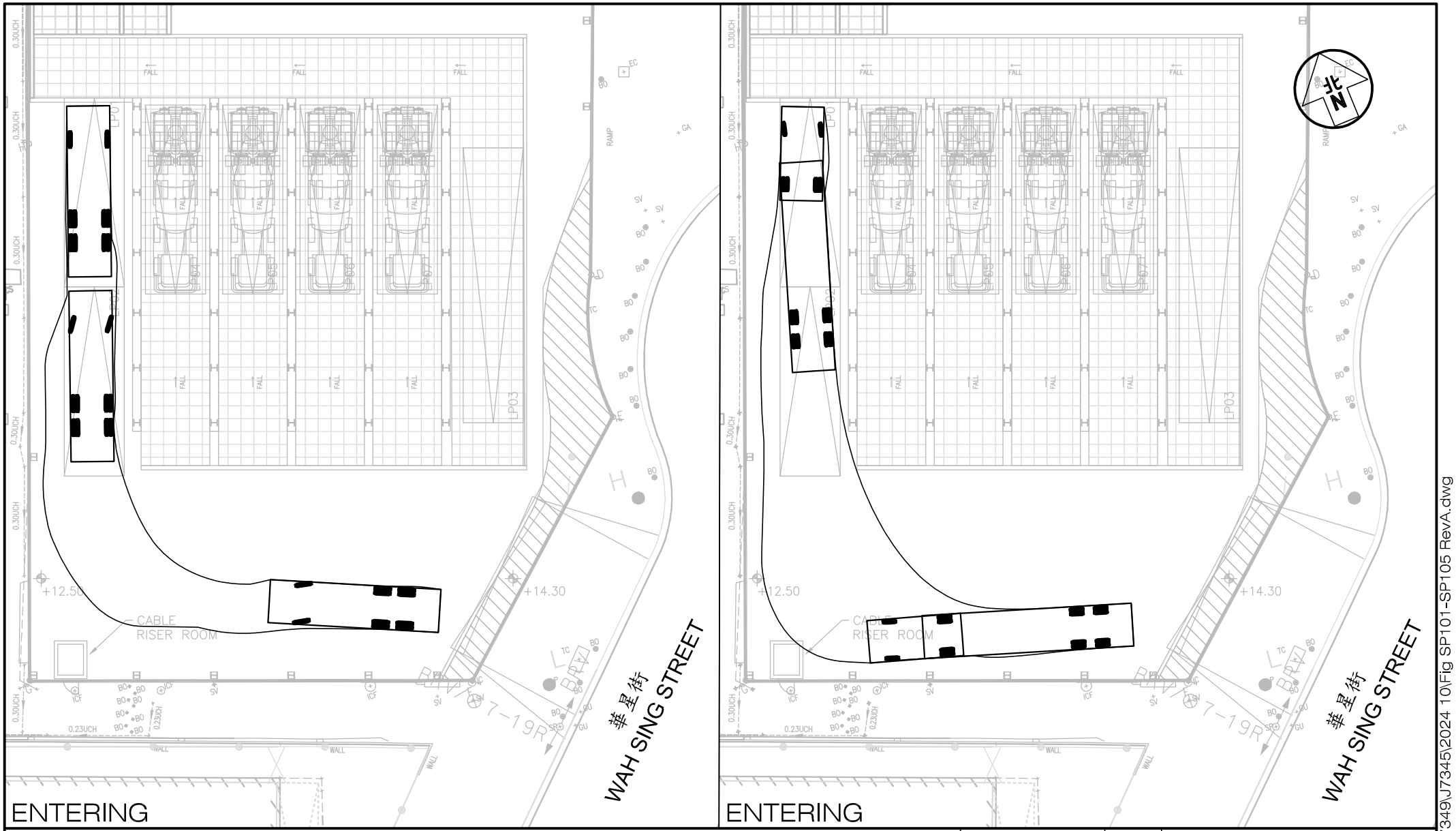
Note:

Further improvement on Scheme proposed by Kwai On Factory Redevelopment

1	2	3		
				

AM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	
	G =	I/G =	G =	I/G = 5	G =	I/G = 9	G =	I/G =	G =	
PM	G =	I/G = 6	G =	I/G = 6	G =	I/G = 9	G =	I/G =	G =	
	G =	I/G =	G =	I/G = 5	G =	I/G = 9	G =	I/G =	G =	

Appendix B –
Swept Path Analysis



Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No.: SP101	Revision: A
Figure Title: SWEPT PATH OF CONCRETE MIXER TRUCK & CONTAINER ENTERING THE WAITING SAPCES LP01 & 02		Designed by: C Y Y / Drawn by: S C Y / Checked by: K C	
		Scale in A4: 1 : 300	Date: 30 OCT 2024

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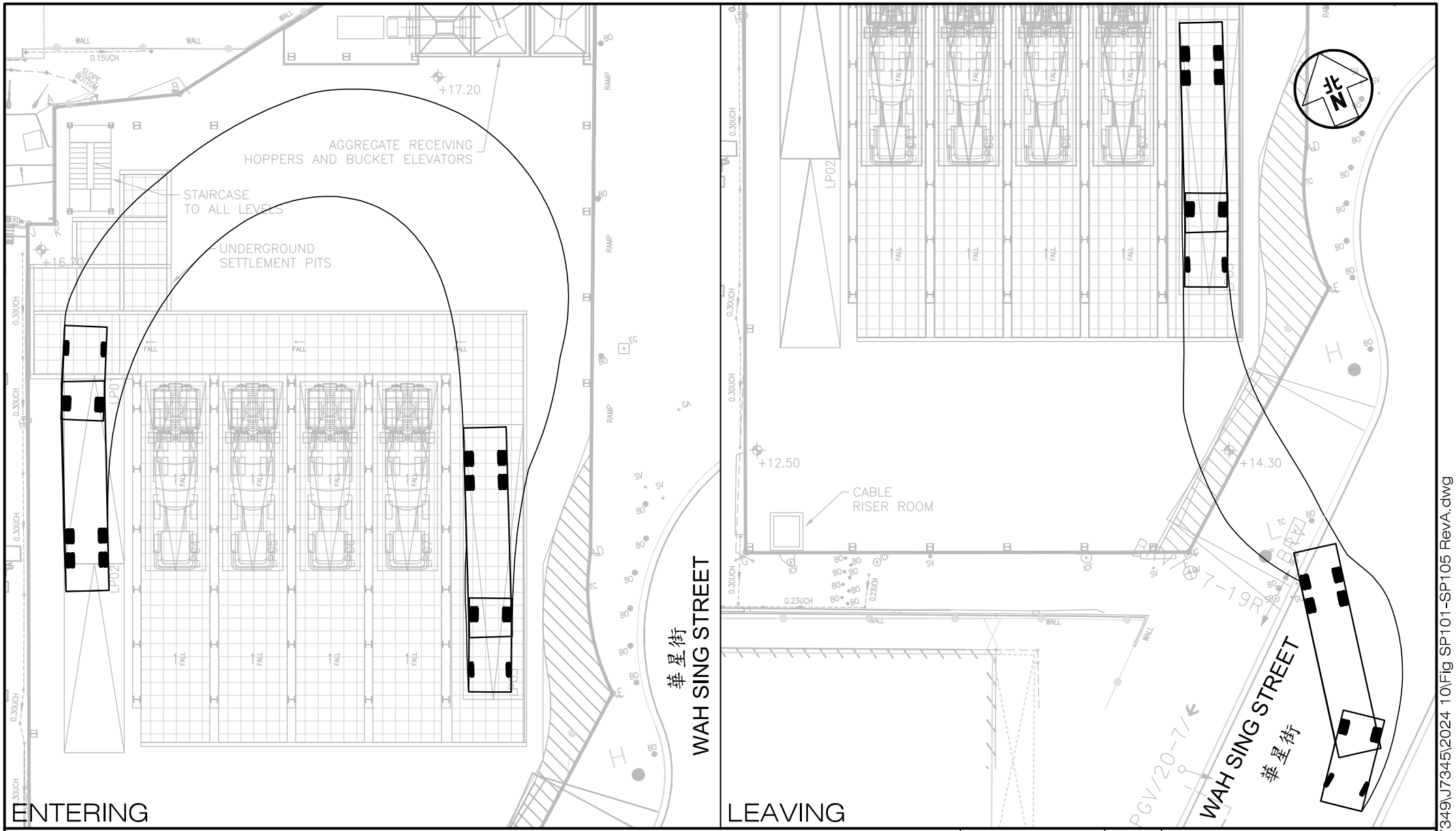
T:\JOB\J7300-J7349\J7345\2024 10\Fig SP101-SP105 RevA.dwg



Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No.: SP102	Revision: A
Figure Title: SWEPT PATH OF CONTAINER ENTERING AND LEAVING THE RAW MATERIAL UNLOADING BAY LP03		Designed by: C Y Y / Drawn by: S C Y / Checked by: K C	
		Scale in A4: 1 : 300 / Date: 30 OCT 2024	

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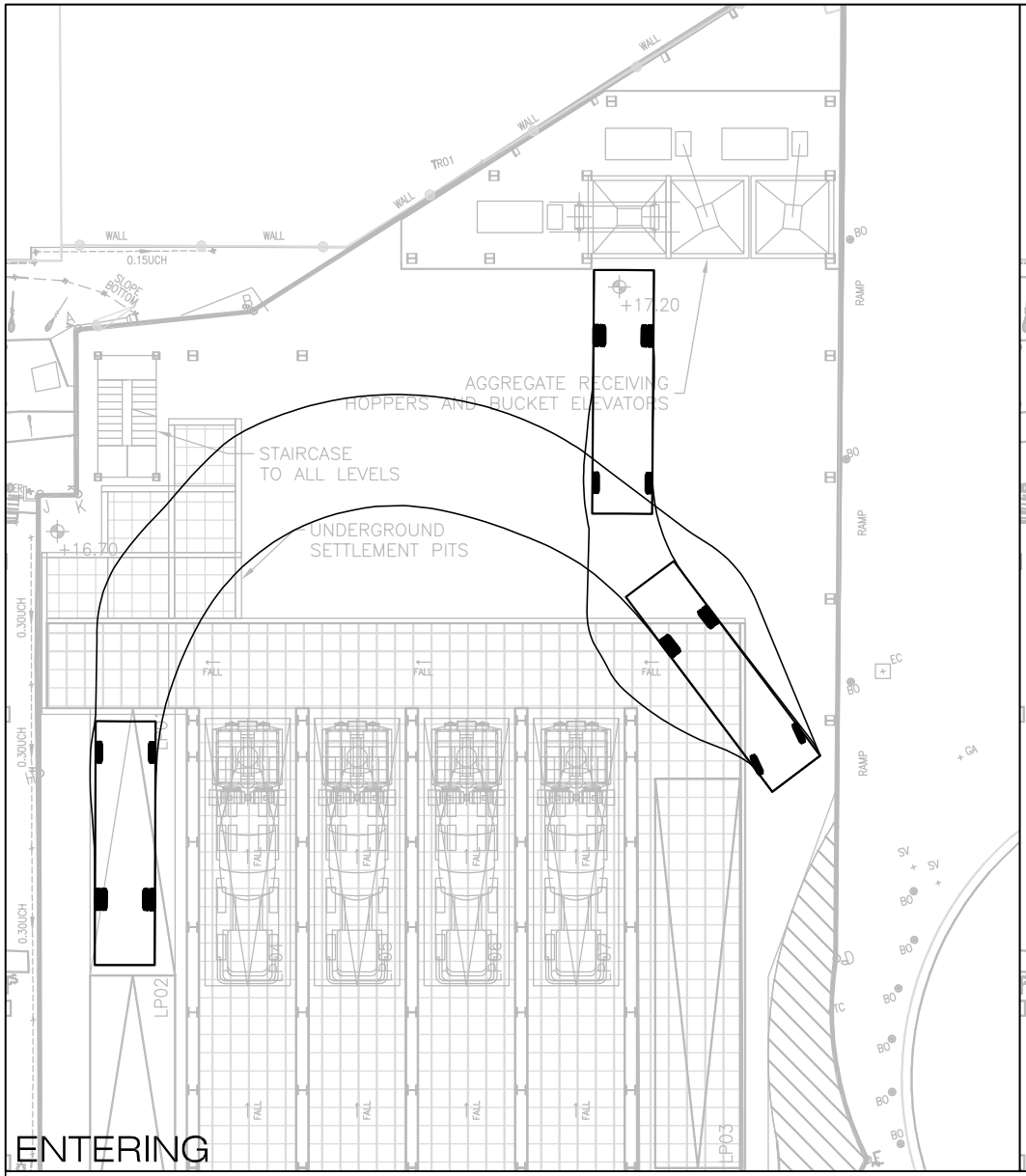

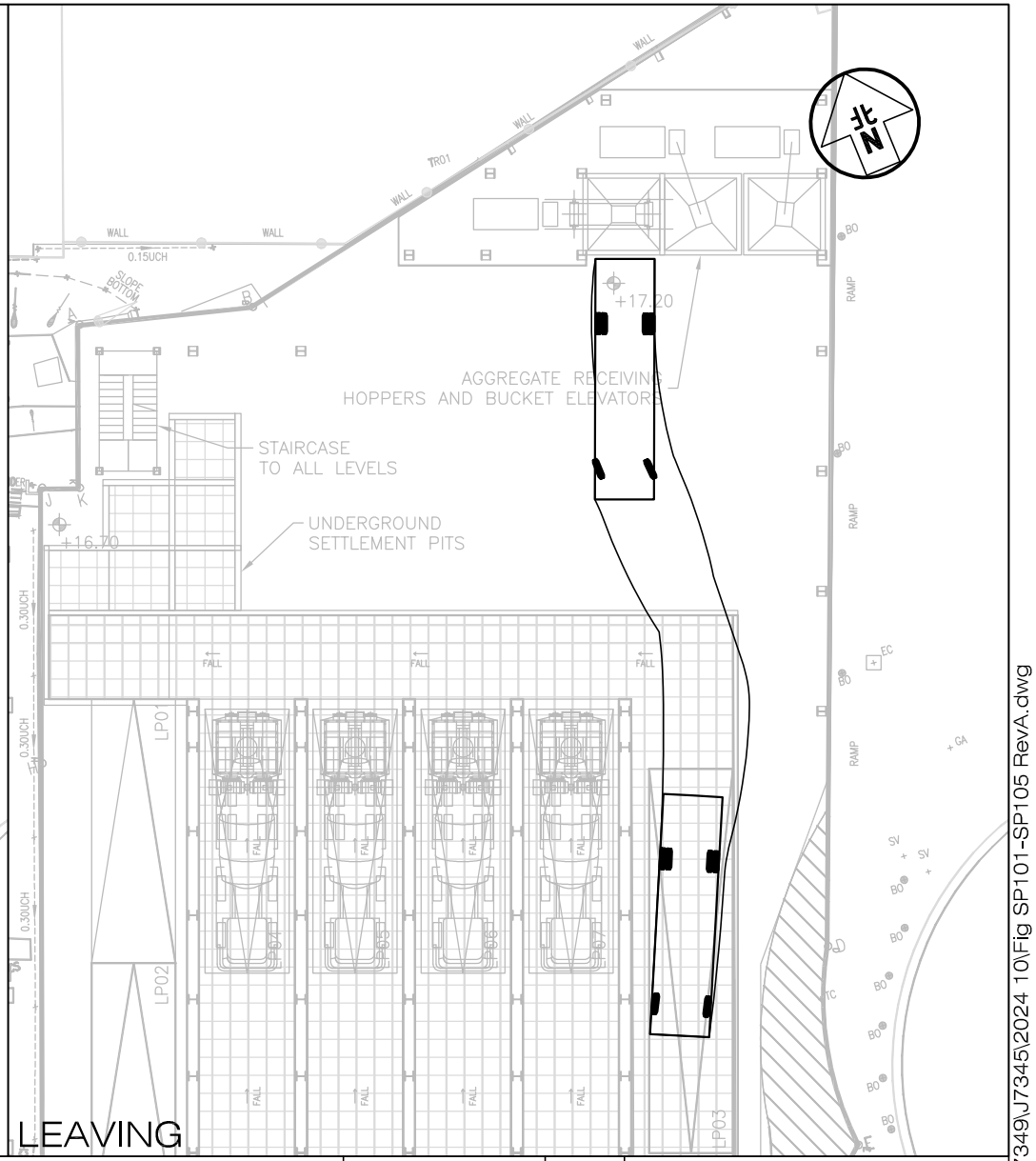

Project Title

PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG

J7345

Figure Title

SWEPT PATH OF RAW MATERIAL DELIVERY TRUCK ENTERING AND LEAVING THE RAW MATERIAL UNLOADING AREA

Figure No.	Revision
SP103	A

Designed by	Drawn by	Checked by
C Y Y	S C Y	K C

Scale in A4	Date
1 : 300	30 OCT 2024

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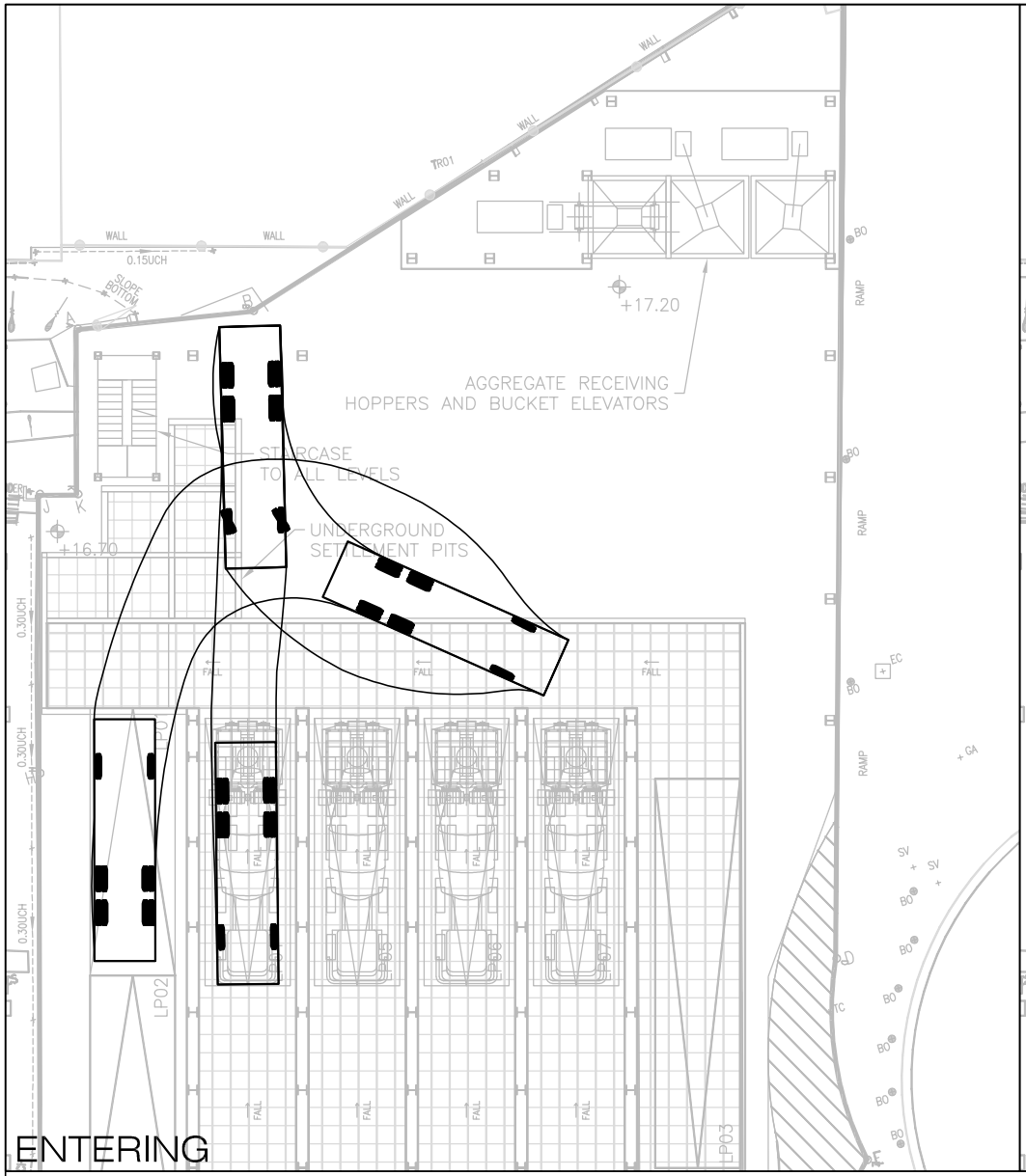

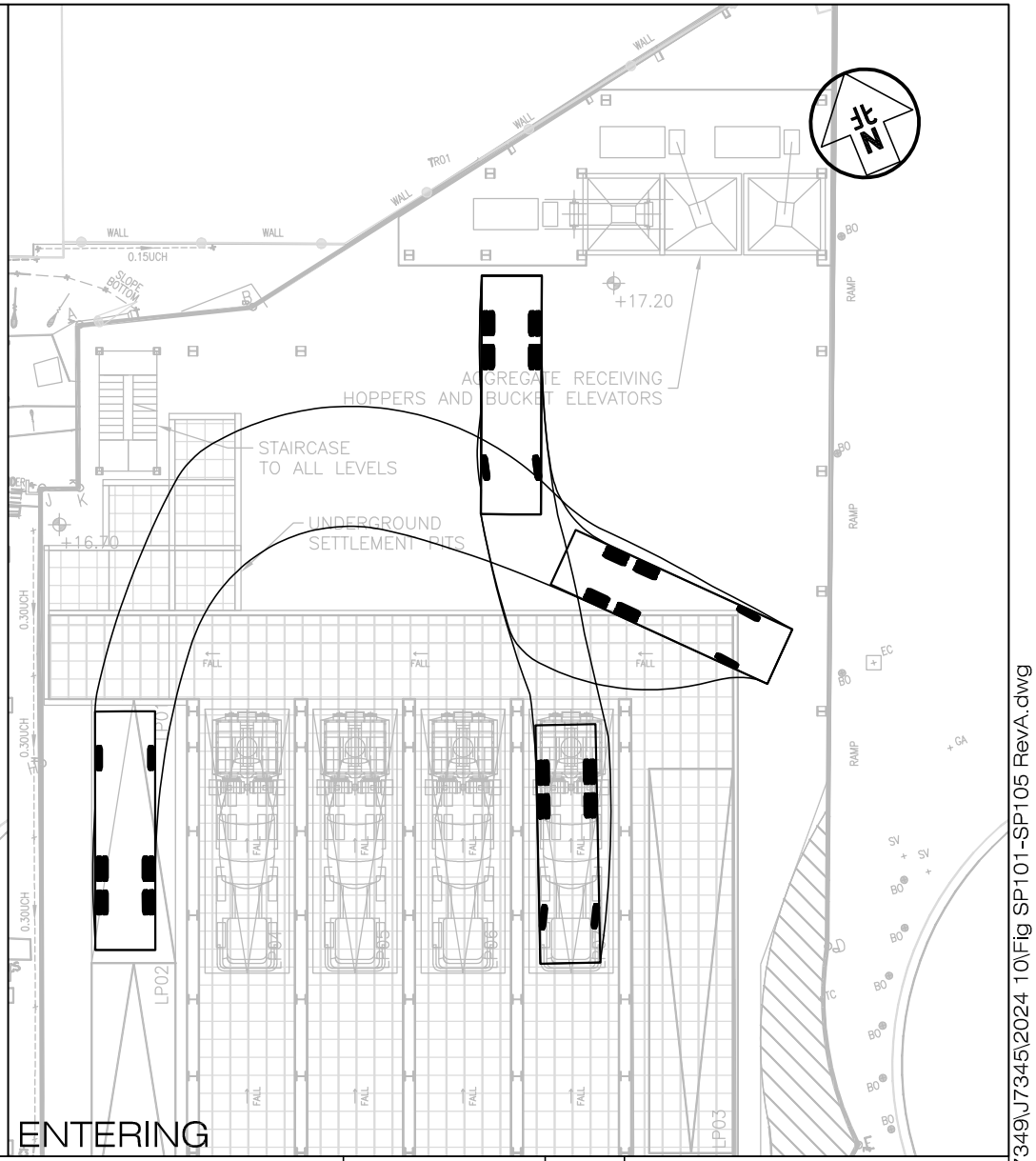

Project Title

PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG

J7345

Figure Title

SWEPT PATH OF CONCRETE MIXER TRUCK ENTERING THE CONCRETE LOADING POINTS LP04 & 07

Figure No.	Revision
SP104	A

Designed by	Drawn by	Checked by
C Y Y	S C Y	K C

Scale in A4	Date
1 : 300	30 OCT 2024

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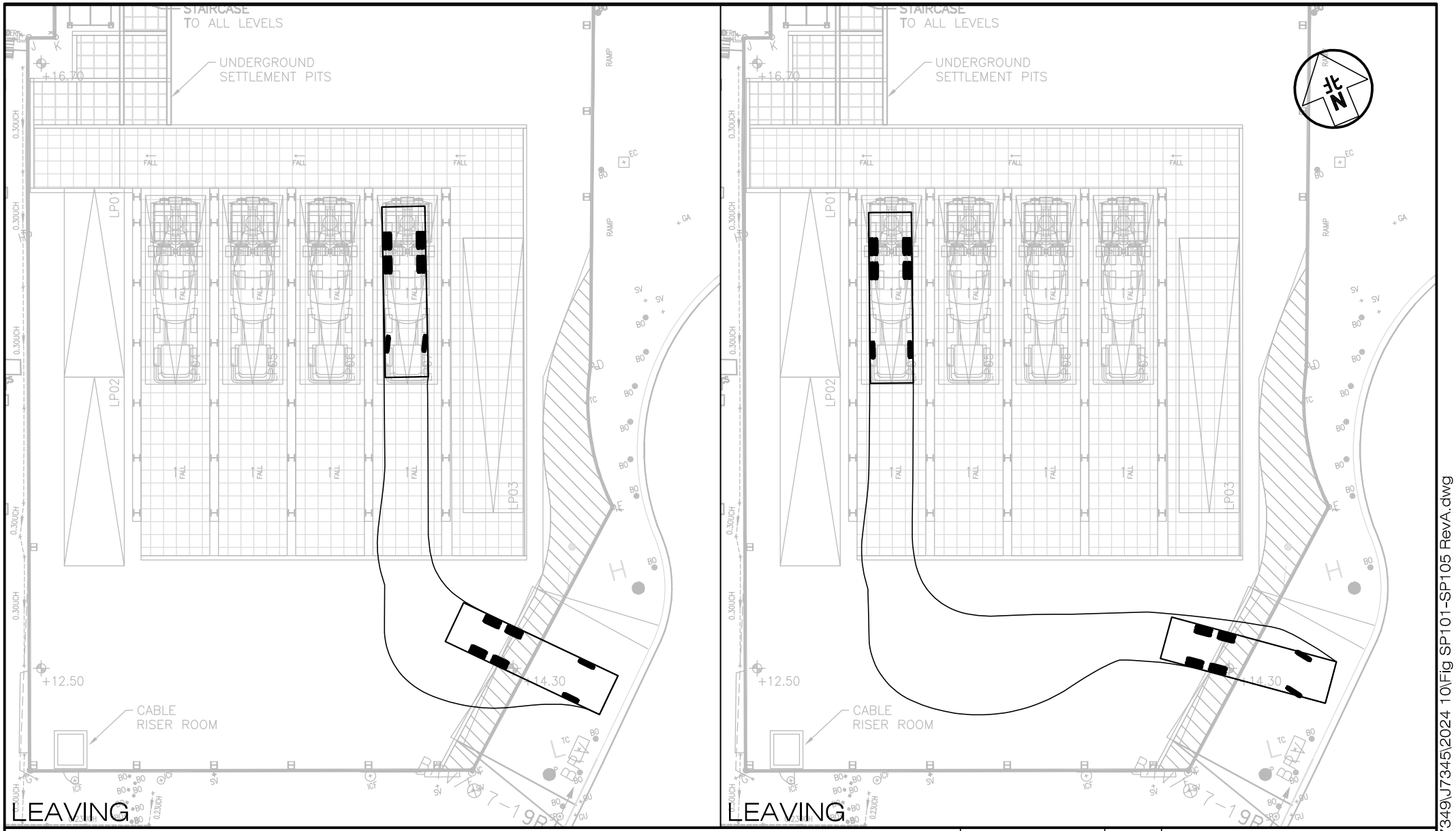

Project Title: PROPOSED CONCRETE BATCHING PLANT AT 13 – 17 WAH SING STREET, KWAI CHUNG	J7345	Figure No.: SP105	Revision: A
Figure Title: SWEPT PATH OF CONCRETE MIXER TRUCK LEAVING THE CONCRETE LOADING POINTS LP04 & 07		Designed by: C Y Y / Drawn by: S C Y / Checked by: K C	
		Scale in A4: 1 : 300	Date: 30 OCT 2024

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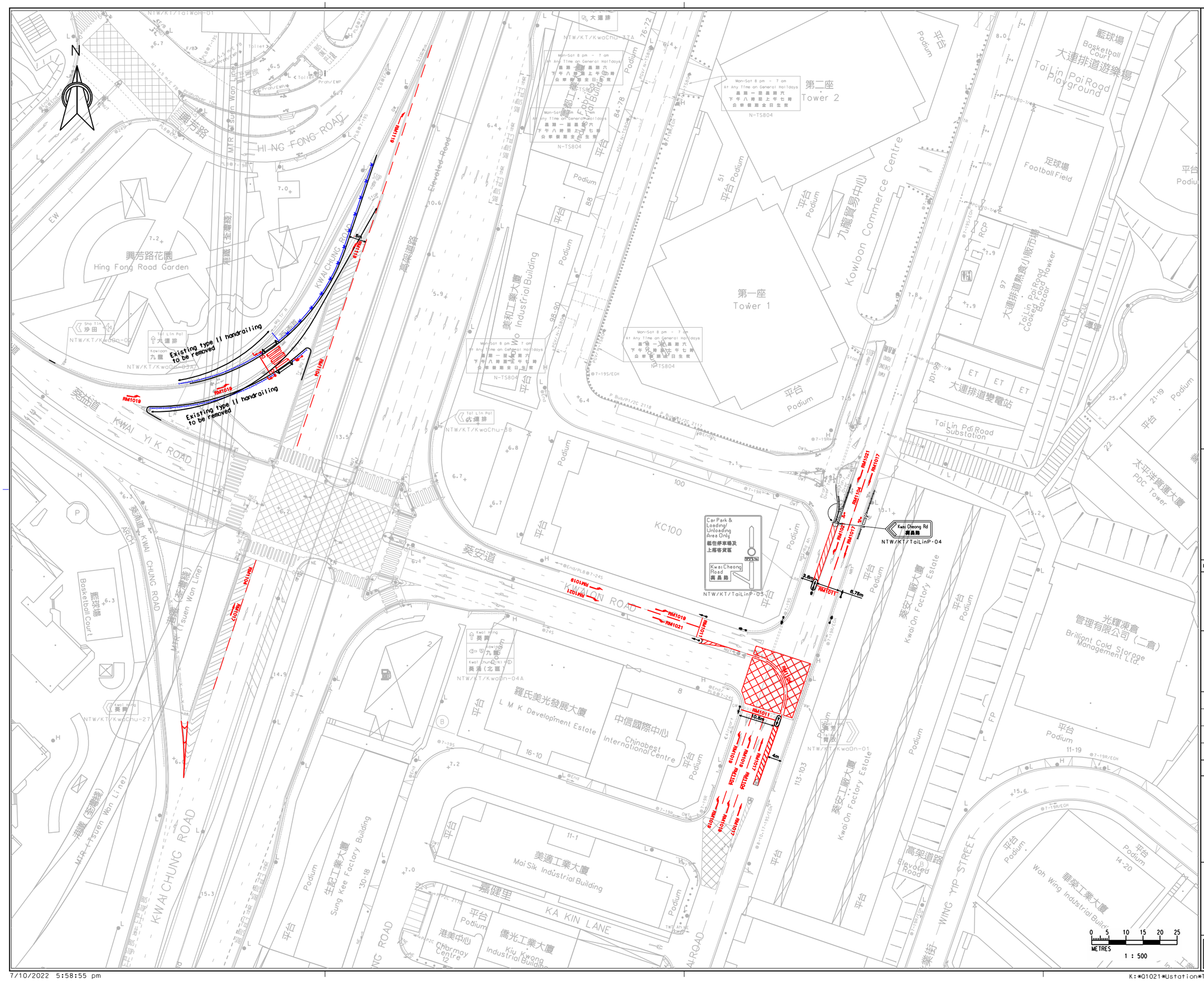
Appendix C –
Junction Improvement Scheme proposed by Kwai On Factory Redevelopment



Legend

- Proposed site
- Proposed type II handrailing
- Proposed corrugated beam barrier

Rev.	Description of Revision	Date	Ckd.

Client: HONG KONG HOUSING AUTHORITY

Consultants: MANNINGS (Asia) Consultants Limited

Scale in A3 1:1000	Date	
Designed	Drawn	Checked
Design Team Leader		Date
Approved		Date

Project: HKHA TERM ENGINEERING CONSULTANCY SERVICES 2018-2020 FOR KOWLOON CENTRAL & WEST AND ISLANDS REGION

Title: JUNCTION IMPROVEMENT LAYOUT PLAN

Drawing No.	Stage	Rev.
FIGURE 10	P	

7/10/2022 5:58:55 pm

K:*Q1021*Ustation*T002-Kwai On TIA*FIGURE 10n(no set back).dgn