# Appendix VI

## Revised Traffic Impact Assessment

# Proposed Rezoning from “Residential (Group B)1” Zone to “Residential (Group B)4” Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

## Traffic Impact Assessment

**Final Report**
November 2024

**Prepared by:** **CKM Asia Limited**

**Prepared for:** **Wing Mau Tea House Limited**

# Proposed Rezoning from "Residential (Group B)1" Zone to "Residential (Group B)4" Zone for Medium-Density Housing Development to Include a Footpath for Public use at Various Lots and Adjacent Government Land in DD130, Lam Tei, Tuen Mun (Application no. Y/TM-LTYY/11)

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# 1.0 INTRODUCTION

## Background

1.1 The subject site is located in D.D.130, Lam Tei, Tuen Mun (the "Subject Site"). At present, the Subject Site is unoccupied, and access to the Subject Site via an existing unnamed road which is connected to Ng Lau Road. The location of the Subject Site is shown in **Figure 1.1**.

1.2 A Section 12A planning application for the minor relaxation of the maximum plot ratio restriction to 2.5 for residential use at the Subject Site was approved by the Town Planning Board (TPB ref: Y/TM-LTYY/9) on 24th September 2021 (the "Approved Scheme"). This Section 12A planning application is for minor relaxation of the maximum plot ratio restriction for residential use at the Subject Site from the approved 2.5 to 5.0 (the "Proposed Development").

1.3 Against this background, 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 Development. This report presents the findings and recommendations of the traffic impact assessment for the Proposed Development.

## 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 | - | Presents the Proposed Development; |
| Chapter Four | - | Describes the traffic impact analysis; and |
| Chapter Five | - | Gives the overall conclusion. |

# 2.0 EXISTING SITUATION

## The Subject Site

2.1 The Subject Site is bounded by the Light Rail Transit ("LRT") and the Tuen Ma Line to the East, and a nullah to the West. Access to the Subject Site is from the south and is via a bridge over the nullah. The Access Road is connected to Ng Lau Road.

## The Road Network

2.2 Ng Lau Road is a single carriageway 2-lane 2-way local distributor which connects with the Lam Tei Interchange to the south and Castle Peak Road - Lam Tei underneath the Kong Sham Western Highway. It provides access to villages, e.g., San Hing Tsuen, Tuen Tsz Wai, and Tsing Chuen Wai.

2.3 Lam Tei Interchange connects Tsing Lun Road, Hong Po Road, Ng Lau Road, Castle Peak Road – Lam Tei, Yuen Long Highway and Tuen Mun Road. It is the main access for traffic accessing the Subject Site and strategic routes.

## Existing Traffic Flows

2.4 To quantify the junction and road link flows in the vicinity of the Subject Site, manual classified counts were conducted at 0700 – 0900 and 1700 – 1900 on Tuesday, 18th April 2023, Wednesday, 19th April 2023 and Wednesday, 26th April 2023, and were re-conducted on Wednesday, 8th May 2024 at the junctions and road links listed in **Table 2.1**.

TABLE 2.1 SURVEYED JUNCTIONS AND ROAD LINKS

| **Reference** | **Junction** |
|---|---|
| J1: | Unnamed Road/ Access Road |
| J2: | Ng Lau Road/ Unnamed Road |
| J3: | Ng Lau Road/ Lam Tei Interchange |
| J4: | Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange |
| J5: | Lam Tei Interchange |
| J6: | Lam Tei Interchange/ Castle Peak Road – Lam Tei |
| J7: | Tsing Lun Road/ Tsz Tin Road |
| J8: | San Hing Road/ Ng Lau Road (Southern) |
| J9: | San Hing Road/ Ng Lau Road (Northern) |
| J10: | T-junction at San Hing Road |
| J11: | Ng Lau Road / Castle Peak Road – Lam Tei |
| J12: | Hong Po Road / Yan Tin Estate Access Road |
| **Reference** | **Road Link** |
| L1: | Castle Peak Road – Lam Tei |
| L2: | Castle Peak Road – Lingnan |
| L3: | Yuen Long Highway |
| L4: | Tuen Mun Road |
| L5: | San Hing Road |
| L6: | Ng Lau Road (north of J9) |
| L7: | Ng Lau Road (south of J2) |
| L8: | Lam Tei Interchange (between J3 and J5) |
| L9: | Tsing Lun Road |

2.5 The locations of these junctions, road links and the area of influence (the "AOI") are shown in **Figure 2.1** and the junction layouts are shown in **Figures 2.2 – 2.13** respectively.

2.6 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 0800 – 0900 hours and 1700 – 1800 hours respectively. The existing AM and PM peak hour junction in pcu/hour and road link flows in veh/hr are presented in **Figures 2.14 – 2.15**.

## Existing Junction Performance

2.7 The existing junction performance of the junctions are calculated based on the traffic flows obtained from the survey, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.2** and the detailed calculations are found in **Appendix A**.

TABLE 2.2 EXISTING JUNCTION PERFORMANCE

| **Ref.** | **Junction** | **Type of Junction (Parameter)** | **AM Peak** | **PM Peak** |
|---|---|---|---|---|
| J1 | Unnamed Road/ Access Road | Priority (DFC) | 0.000 | 0.000 |
| J2 | Ng Lau Road/ Unnamed Road | Priority (DFC) | 0.033 | 0.032 |
| J3 | Ng Lau Road/ Lam Tei Interchange | Signal (RC) | 91% | 84% |
| J4 | Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange | RA (DFC) | 0.545 | 0.591 |
| J5 | Lam Tei Interchange | RA (DFC) | 0.522 | 0.489 |
| J6 | Lam Tei Interchange/ Castle Peak Road – Lam Tei | Signal (RC) | 120% | 215% |
| J7 | Tsing Lun Road/ Tsz Tin Road | Signal (RC) | 58% | 92% |
| J8 | San Hing Road/ Ng Lau Road (Southern) | Priority (DFC) | 0.061 | 0.040 |
| J9 | San Hing Road/ Ng Lau Road (Northern) | Priority (DFC) | 0.227 | 0.498 |
| J10 | T-junction at San Hing Road | Priority (DFC) | 0.008 | 0.002 |
| J11 | Ng Lau Road / Castle Peak Road – Lam Tei | Signal (RC) | 139% | 132% |
| J12 | Hong Po Road / Yan Tin Estate Access Road | Priority (DFC) | 0.066 | 0.011 |

Note: RC – reserve capacity; DFC – design flow/capacity ratio, RA – Roundabout

2.8 The above results indicate that the surveyed junctions currently operate with capacities during the AM and PM peak hours.

## Link Operational Performance

2.9 The link operational performance of the road links are calculated based on the existing traffic flows obtained from the traffic survey, and the analysis was undertaken using the methods outlined in Volume 2 of the Transport Planning and Design Manual ("TPDM"). The results are summarised in **Table 2.3.**

TABLE 2.3 EXISTING LINK CAPACITY ASSESSMENT

| Ref | Link | | Adjusted Design Flow (veh/hr) | | Traffic Demand (veh/hr) | | V/C Ratio | |
|---|---|---|---|---|---|---|---|---|
| | | | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak |
| L1 | Castle Peak Road – Lam Tei | NB | 2,604(1) | 2,604(1) | 766 | 1,317 | 0.29 | 0.51 |
| | | SB | 2,604(1) | 2,604(1) | 1,448 | 766 | 0.56 | 0.29 |
| L2 | Castle Peak Road – Lingnan | NB | 2,800 | 2,800 | 417 | 452 | 0.15 | 0.16 |
| | | SB | 2,800 | 2,800 | 672 | 472 | 0.24 | 0.17 |
| L3 | Yuen Long Highway | NB | 4,700 | 4,700 | 3,759 | 3,181 | 0.80 | 0.68 |
| | | SB | 4,700 | 4,700 | 3,642 | 3,988 | 0.77 | 0.85 |
| L4 | Tuen Mun Road | NB | 4,700 | 4,700 | 4,108 | 4,219 | 0.87 | 0.90 |
| | | SB | 4,700 | 4,700 | 4,404 | 3,961 | 0.94 | 0.84 |
| L5 | San Hing Road | 2-way | 800 | 800 | 46 | 31 | 0.06 | 0.04 |
| L6 | Ng Lau Road (north of J9) | 2-way | 744(1) | 800 | 218 | 345 | 0.29 | 0.43 |
| L7 | Ng Lau Road (south of J2) | 2-way | 800 | 800 | 252 | 373 | 0.32 | 0.47 |
| L8 | Lam Tei Interchange (between J3 and J5) | EB | 2,800 | 2,800 | 1,055 | 713 | 0.38 | 0.25 |
| | | WB | 2,800 | 2,800 | 1,108 | 1,199 | 0.40 | 0.43 |
| L9 | Tsing Lun Road | NB | 1,900 | 1,900 | 519 | 409 | 0.27 | 0.22 |
| | | SB | 1,900 | 1,900 | 825 | 735 | 0.43 | 0.39 |

NB – northbound SB – southbound EB – eastbound WB – westbound

(1) With reference to paragraph 2.4.1.2 and table 2.4.1.2, Chapter 2.4, Volume 2 of TPDM, the design flow is to be reduced when the expected proportion of heavy vehicles exceeds 15%. The table below presents the adjusted design flow based on the proportion of heavy vehicles ("HV%").

| ***Road Type*** | ***Design Flow (veh/hr)*** | ***Adjusted Design Flow (veh/hr)*** | | |
|---|---|---|---|---|
| | | ***0-15 HV%*** | ***15-20 HV%*** | ***20-25 HV%*** |
| | | ***0% reduction*** | ***7% reduction*** | ***10% reduction*** |
| *Expressway / trunk road (Dual 3 lanes – 11m-wide)* | *4,700* | *4,700* | *4,371* | *4,230* |
| *Primary Distributor (Dual 3 lanes – 7.3m-wide)* | *2,800* | *2,800* | *2,604* | *2,520* |
| *District Distributor (Single 4 lanes – 13.5m-wide)* | *1,900* | *1,900* | *1,767* | *1,710* |
| *Local Roads (Single 2 lanes)* | *800* | *800* | *744* | *720* |

2.10 The above results show that the assessed road links operate with sufficient capacity.

## Public Transport Facilities

2.11 The Subject Site is located close to public transport services, including franchised buses and public light buses and these operate within 400 metres or some 8-minutes' walk away. Details of these public transport services are presented in **Table 2.4**. The location and major pedestrian routes of these public transport services are shown in **Figure 2.16**.

TABLE 2.4 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

| Route | Bus Stop | Destination | Routing | Frequency (min) |
|---|---|---|---|---|
| CTB 50 | LTI | YTM | Tuen Mun (Ching Tin and Wo Tin) → Tsim Sha Tsui (Kowloon Station) (E) | 20 - 30 |
| | | | Tsim Sha Tsui (Kowloon Station) → Tuen Mun (Ching Tin and Wo Tin) (F) | 20 - 35 |
| CTB 55(1) | LTI | Kln(E) | Tuen Mun (Ching Tin and Wo Tin) → Kwun Tong Ferry Pier (A) | 6 per day |
| | | | Kwun Tong Ferry Pier → Tuen Mun (Ching Tin and Wo Tin) (B) | 4 per day |
| CTB 56(1) | LTI | N | Tuen Mun (Ching Tin and Wo Tin) → Sheung Shui (Tin Ping Estate) (G) | 20 - 30 |
| | | | Sheung Shui (Tin Ping Estate) → Tuen Mun (Ching Tin and Wo Tin) (G) | 20 - 30 |

### TABLE 2.4 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE (CONT'D)

| Route | Bus Stop | Destination | Routing | Frequency (min) |
|---|---|---|---|---|
| CTB 56A(1) | LTI | N | Tuen Mun (Ching Tin and Wo Tin) → Queen's Hill Fanling (via: Sheung Shui Station)(C) | 10 - 20 |
| | | | Queen's Hill Fanling (via: Sheung Shui Station) → Tuen Mun (Ching Tin and Wo Tin)(C) | 15 - 30 |
| CTB 950(1) | LTI | HKI | Tuen Mun (Ching Tin and Wo Tin) → Exhibition Centre Station (A) | 2 per day |
| | | | Exhibition Centre Station → Tuen Mun (Ching Tin and Wo Tin) (B) | 1 per day |
| CTB 955(1) | LTI | HKI | Tuen Mun (Ching Tin and Wo Tin) → Sai Wan Ho (A) | 1 per day |
| | | | Sai Wan Ho → Tuen Mun (Ching Tin and Wo Tin) (B) | 1 per day |
| CTB B3A | LTI | BCP | Shan King Estate - Shenzhen Bay Port | 30 - 60 |
| CTB N50(D) | LTI | YTM | Tuen Mun (Ching Tin and Wo Tin) - Tsim Sha Tsui (Kowloon Station) | 4 per day |
| CTB N969(D) | CPR | HKI | Tin Shui Wai Town Centre - Causeway Bay (Moreton Terrace) | 20 - 45 |
| KMB 53 | CPR | NTW | Yoho Mall (Yuen Long) - Tsuen Wan (Nina Tower) | 25 - 35 |
| KMB 63X | CPR | YTM | Hung Shui Kiu (Hung Fuk Estate) - Jordan (West Kowloon Station) | 12 - 30 |
| KMB 67M | LTI | NTW | Tuen Mun (Siu Hong Court) - Kwai Fong Station | 5 - 20 |
| KMB 67X | LTI | Kln(W) | Tuen Mun (Siu Hong Court) - Mong Kok East Station | 7 - 25 |
| KMB 68A | CPR | NTW | Long Ping Estate - Tsing Yi Station | 12 - 30 |
| KMB 258A(1) | CPR | Kln(E) | Hung Shui Kiu (Hung Fuk Estate) → Lam Tin Station(A) | 2 per day |
| KMB 258P(2) | CPR | Kln(E) | Hung Shui Kiu (Hung Fuk Estate) - Lam Tin Station(C) | 12 - 30 |
| KMB 261P | CPR | N | Tuen Mun (Siu Hong Court) → Sheung Shui (Tin Ping) (2)(A) | 2-3 per day |
| | | | Sheung Shui (Tin Ping) → Tuen Mun (Siu Hong Court) (1)(B) | 1 per day |
| KMB 267X(1) | LTI | Kln(E) | Tuen Mun (Siu Hong Court) → Lam Tin Station (A) | 2 per day |
| | | | Lam Tin Station → Tuen Mun (Siu Hong Court) (B) | 2 per day |
| KMB 960A(1) | CPR | HKI | Central → Hung Shui Kiu (Hung Fuk Estate) (B) | 1 per day |
| KMB 960C(1) | LTI | HKI | Tuen Mun (Fu Tai Estate) → Causeway Bay (Victoria Park) (A) | 2 per day |
| | | | Causeway Bay (Victoria Park) → Tuen Mun (Fu Tai Estate) (B) | 1 per day |
| KMB 960P | CPR | HKI | Hung Shui Kiu (Hung Yuen Road) → Causeway Bay (Victoria Park)(A) | 10 - 35 |
| | | | Causeway Bay (Victoria Park) → Hung Shui Kiu (Hung Yuen Road) (1)(B) | 3 per day |
| KMB 960X(1) | CPR | HKI | Hung Shui Kiu (Hung Yuen Road) → Quarry Bay (King's Road) (A) | 9 per day |
| | | | Quarry Bay (King's Road) → Hung Shui Kiu (Hung Yuen Road) (B) | 10 per day |
| KMB N260(D) | CPR | NTW | Tuen Mun Pier Head - Mei Foo | 30 |
| LWB A34 | CPR | TCL | Hung Shui Kiu (Hung Yuen Road) - Airport (Ground Transportation Centre) | 15 - 60 |
| LWB E33P | LTI | TCL | Siu Hong Station (South) - Airport (Ground Transportation Centre) | 12 - 45 |
| LWB NA33(D) | LTI | TCL | Tuen Mun (Fu Tai Estate) → Cathay Pacific City | 4 per day |
| | | | Cathay Pacific City → Tuen Mun (Fu Tai Estate) | 6 per day |
| LWB NA37(D) | CPR | TCL | Tin Shui Wai Town Centre → Cathay Pacific City | 5 per day |
| | | | Cathay Pacific City → Tin Shui Wai Town Centre | 6 per day |
| NLB B2 | CPR | BCP | Yuen Long MTR Station - Shenzhen Bay Port | 20 - 30 |
| GMB 42 | LTI | NTW | Tsing Chuen Wai - Tuen Mun Town Centre | 13 – 15 |
| GMB 606S(D) | CPR | YTM | Yuen Long (Fung Cheung Rd) - Tsim Sha Tsui East | 6 - 13 |

KMB – Kowloon Motor Bus
GMB – Green Minibus
CPR – Castle Peak Road – Lam Tei
Kln(E) – Kowloon (East)
HKI – Hong Kong Island
TCL–Tung Chung / Lantau Island
LWB – Long Win Bus
NLB – New Lantao Bus
LTI – Lam Tei Interchange
Kln(W) – Kowloon (West)
BCP – Boundary Control Point
CTB – CityBus
YTM – Yau Ma Tei/ Tsim Sha Tsui / Mong Kok
N – North
NTW – New Territories West

Note: (1) Monday to Friday. (Except public holidays) (2) Monday to Saturday (Except public holidays)
(A) AM peak only (B) PM peak only (C) AM and PM peak only (D) overnight service
(E) AM service only (F) PM service only (G) daytime non-peak service

## Survey on Road-based Public Transport Services Located in the Vicinity

### *Road-based Public Transport*

2.12 Survey on road-based public transport services listed in **Table 2.4** was conducted during the AM and PM peak periods on Thursday, 18th January 2024 at the bus stops near the subject site.

2.13 The AM and PM peak hours identified from the surveys are found to be between 0715 – 0815 hours and 1830 – 1930 hours respectively. The survey locations are shown in **Figure 2.16**. The survey results are summarized in **Table 2.5** and the detailed information are shown in **Appendix B**.

TABLE 2.5 OCCUPANCY OF EXISTING ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING NEAR THE SUBJECT SITE

| **Direction** | **AM Peak** | | | **PM Peak** | | |
|---|---|---|---|---|---|---|
| | **No. of Pass.** | | **Occupancy** | **No. of Pass.** | | **Occupancy** |
| | **Cap. [a]** | **Occ. [b]** | **[c]=[b]/[a]** | **Cap. [d]** | **Occ. [e]** | **[f]=[e]/[d]** |
| Outward bound | 8,520 | 3,178 | 37% | 2,160 | 671 | 31% |
| Inward bound | 2,400 | 832 | 35% | 5,880 | 2,231 | 38% |

Pass. – Passenger Cap. – Capacity Occ. - Occupied

2.14 The above results indicate that the surveyed road-based public transport services currently operate with spare capacities during the AM and PM peak hours.

*Rail-based Public Transport*

2.15 Based on the information obtained from the Legislative Council, the operational performance for MTR Tuen Ma Line in 2023 is summarized in **Table 2.6**.

TABLE 2.6 OPERATIONAL PERFORMANCE OF MTR TUEN MA LINE

| **Item** | **Parameters** |
|---|---|
| Maximum carrying capacity when train frequency is maximized [a] | 70,000 passengers / hour (1) |
| Existing carrying capacity [b] | 58,800 passengers / hour (1)(2) |
| Current Patronage [c] | 35,700 passengers / hour |
| Current Loading [c]/[b] {Critical Link} | 61% {Tsuen Wan West to Mei Foo} |
| Loading compared with maximum carrying capacity [c]/[a] | 51% |

Source: Reply Serial No. TLB162 for Question Serial No. 2402, Controlling Officer's Reply, Examination of Estimates of Expenditure 2024-25. Finance Committee. Legislative Council. 18 April 2024.
<https://www.tlb.gov.hk/eng/legislative/transport/special/land/TLB-2-e1.pdf>
(1) Carrying capacities are calculated under 6 ppsm
(2) According to the reply, existing train frequency has not yet increased to the maximum level as permitted by the signalling system.

2.16 **Table 2.6** shows that the MTR Tuen Ma Line operates at 61% of its current capacity, or 51% of its maximum carrying capacity during the peak hour.

*Light Rail Transit (LRT) Transport*

2.17 Survey on LRT transport services at Lam Tei LRT stops was conducted during the AM and PM peak periods on Thursday, 18th January 2024. The AM and PM peak hours identified from the surveys are found to be between 0715 – 0815 hours and 1830 – 1930 hours respectively. The survey results are summarized in **Table 2.7**.

TABLE 2.7 OPERATIONAL PERFORMANCE OF LRT SERVICES AT LAM TEI STOP

| Direction | No. of. Trips. | | | No. of Passenger | | Occupancy [c]=[b]/[a] |
|---|---|---|---|---|---|---|
| | Single | Coupled-set | Total | Capacity<sup>(1)</sup> [a] | Occupied [b] | |
| **AM Peak Hour** | | | | | | |
| Yuen Long bound | 13 | 10 | 23 | 6,600 | 3,290 | 50% |
| Tuen Mun bound | 12 | 12 | 24 | 7,200 | 5,796 | 81% |
| **PM Peak Hour** | | | | | | |
| Yuen Long bound | 14 | 7 | 21 | 5,600 | 4,236 | 76% |
| Tuen Mun bound | 12 | 10 | 22 | 6,400 | 3,092 | 48% |

(1) Assumed capacity of 200 passengers per trip for single Light Rail Vehicle (LRV) and 400 passengers per trip for coupled-set LRV

2.18 **Table 2.7** shows that the surveyed LRT services at Lam Tei Stop currently operate with spare capacities during the AM and PM peak hours.

### Existing Footpath Level-Of-Service

2.19 To quantify the existing pedestrian flows, pedestrian counts were conducted during the AM and PM peak periods on Thursday, 18th January 2024 at footpaths located in the vicinity of Proposed Development, and the observed peak hour pedestrian flows are shown in **Figure 2.17**.

2.20 The Level-Of-Service ("LOS") of a pedestrian footpath depends on its width and number of pedestrians using the facility. Description of the LOS at walkway is obtained from Volume 6 of the TPDM and is presented in **Table 2.8**.

TABLE 2.8 DESCRIPTION OF PEDESTRIAN FOOTPATH LOS

| LOS | Flow Rate (ped/min/m) | Description |
|---|---|---|
| A | ≤ 16 | Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely. |
| B | 16 – 23 | Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths. |
| C | 23 – 33 | Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower. |
| D | 33 – 49 | Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur. |
| E | 49 – 75 | Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow. |
| F | > 75 | Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams. |

Source: Volume 6 Chapter 10 of TPDM

2.21 The observed peak hour pedestrian flows LOS assessment is presented in **Table 2.9**.

TABLE 2.9 EXISTING LOS ASSESSMENT

| **Location** | **Clear Width[1] [Effective Width] (m)** | **Peak Period** | **Flow (ped/ hour)** | **Flow rate (ped/min/m)** | **LOS** |
|---|---|---|---|---|---|
| P1. Footpath on the footbridge connected to Ng Lau Road | 2.0[1.0] | AM | 150 | 2.5 | A |
| | | PM | 99 | 1.7 | A |
| P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei | 2.5[1.5] | AM | 315 | 3.5 | A |
| | | PM | 210 | 2.3 | A |
| P3. Footbridge over Castle Peak Road – Lam Tei | 2.5[1.5] | AM | 216 | 2.4 | A |
| | | PM | 105 | 1.2 | A |
| P4. Southern Footpath of San Hing Road | 1.5[0.5] | AM | 45 | 1.5 | A |
| | | PM | 30 | 1.0 | A |
| P5. Eastern Footpath of Ng Lau Road | 2.0[1.0] | AM | 189 | 3.2 | A |
| | | PM | 120 | 2.0 | A |

(1) The width excludes railing and obstructions.

2.22 The above results indicate that the surveyed footpaths currently operate with LOS A during the AM and PM peak. As stated in the TPDM, LOS A to C is considered as an acceptable level of service: "In general, LOS C is desirable for most design at streets with dominant 'living' pedestrian activities".

# 3.0 THE PROPOSED DEVELOPMENT

## Key Parameters

3.1 The Proposed Development key parameters are presented in **Table 3.1**.

TABLE 3.1 KEY PARAMETERS

| Item | | Proposed Development |
|---|---|---|
| Development Site Area | | About 8,896 $m^2$ |
| Domestic Plot Ratio | | 5.0 |
| Domestic GFA | | 44,480 $m^2$ |
| Flat Mix (GFA) | Flat Size ≤ 40$m^2$ | 1,110 |
| | 40$m^2$ < Flat Size ≤ 70$m^2$ | 275 |
| **Total number of Flats** | | **1,385** |

## Provision of Internal Transport Facilities

3.2 The internal transport facilities for the Proposed Development are provided in accordance with the recommendations of the Hong Kong Planning Standards and Guidelines ("HKPSG") and are presented in **Table 3.2**.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT

| Facility | HKPSG Recommendation | Provision |
|---|---|---|
| **Car Parking Space** | **For Residents:**<br>Parking Requirement = GPS x R1 x R2 x R3<br>Global Parking Standard (GPS): 1 car parking space per 4 - 7 flats<br>Demand Adjustment Ratio (R1): 0.5 for flat size ≤ 40 $m^2$ GFA<br>1.2 for flat size 40 – 70 $m^2$ GFA<br>Accessibility Adjustment Ratio(R2): 1.0 outside 500m-radius of rail station<br>Development Intensity Adjustment Ratio (R3): 1.0 for Plot Ratio 2.0 – 5.0<br>For 1,100 flats with flat size less than 40 $m^2$ GFA<br>Minimum: (1,110 / 7 x 0.5 x 1.0 x 1.0) = 79.3, say 80 nos.<br>Maximum: (1,110 / 4 x 0.5 x 1.0 x 1.0) = 138.8, say 139 nos.<br>For 275 flats with flat size 40 – 70 $m^2$ GFA<br>Minimum: (275 / 7 x 1.2 x 1.0 x 1.0) = 47.2, say 48 nos.<br>Maximum: (275 / 4 x 1.2 x 1.0 x 1.0) = 82.5, say 83 nos.<br>Total<br>*Minimum = 80 + 48 = 128 nos.*<br>*Maximum = 139 + 83 = 222 nos.* | **222 nos**. @ 5.0m (L) x 2.5m (W) x 2.4m (H)<br>**= HKPSG maximum** |
| | **For Visitors:**<br>Visitor car parking for private residential developments with more than 75 units per block should be provided at 5 visitor spaces per block in addition to the recommendations, or as determined by the Authority.<br>For 5 blocks: 5 x 5 nos. = 25 nos. | **25 nos**. (22 nos. @ 5.0m(L) x 2.5m(W) x 2.4m(H) + 3 nos. @ 5.0m(L) x 3.5m(W) x 2.4m(H) for person with disabilities)<br>**= HKPSG maximum** |
| | ***Total Car Parking Space:***<br>*Minimum = 128 + 25=* ***153 nos.***<br>*Maximum = 222 +25=* ***247 nos.***<br>*Note: For total no. of car parking space in lot = 151 – 250 nos., the Building (planning) regulation 72 require provision of 3 accessible car parking spaces* | ***247 nos. (including 3 accessible car parking spaces)*** |

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR PROPOSED DEVELOPMENT (CONT'D)

| **Facility** | **HKPSG Recommendation** | **Provision** |
|---|---|---|
| **Motorcycle Parking Space** | **For Residential Uses:**<br>TD Comment: 1 motorcycle parking space shall be provided for every 81 flats<br>For 1,385 flats:<br>1,385 / 81 = 17.1, say 18 nos. | **18 nos. @** 2.4m (L) x 1.0m (W) x Min. 2.4m (H)<br>**=fulfil TD comment, OK** |
| **Goods Vehicle Loading/ Unloading Bay** | **For Residential Uses:**<br>Minimum of 1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block or as determined by the Authority.<br>For 5 blocks, each block less than 800 flats: **5 no.** | **5 nos.** @ 11.0m (L) x 3.5m (W) x Min. 4.7m (H)<br>**=HKPSG minimum, OK** |
| **Bicycle Parking Spaces** | **For Residential Uses:**<br>TD Comment: 1 space per 5 flats with flat size $<70m^2$.<br>= 1,385 ÷ 5<br>= 277 nos. | ***277 no.*** *@ 1.8m (L) x 0.8m (W) x Min. 2.4m (H)*<br>**=fulfil TD comment, OK** |

3.3 **Table 3.2** shows that the internal transport facilities provided comply with the recommendations of the HKPSG. The master layout plan of the Proposed Development is shown in **Figure 3.1**.

## Planned Road Works near the Proposed Development

3.4 The existing access road and unnamed road connecting the Proposed Development with Ng Lau Road is planned to be improved, to provide a 7.3m-wide road carriageway, a 2m-wide footpath and a 2m-wide cycle track (the "Planned Road Works"). The Planned Road Works to be implemented by the Owner as part of the Approved Scheme and is found in **Appendix C**.

## Swept Path Analysis

3.5 The CAD-based swept path analysis programme, Autodesk Vehicle Tracking, was used to check the ease of manoeuvring of vehicles within the Proposed Development, and the swept path analysis drawings are found in **Appendix D**. Vehicles are found to have no manoeuvring problems.

# 4.0 TRAFFIC IMPACT

## Design Year

4.1 The Proposed Development is expected to be completed in 2030, and the design year adopted for the traffic assessment is, whichever later of the 2: (i) at least 3 years after the planned completion of the development, i.e., 2033, or (ii) 5 years from the date of this application, i.e., 2028. Therefore, Year 2033 is adopted for junction capacity analysis.

## Traffic Forecasting

4.2 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the 2019-based BDTM NTW1 (the "BDTM"); (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

## Modelling and Validation

4.3 The BDTM provides traffic forecasts for the years 2026 and 2031 and these have taken into account the planned developments, changes to the strategic road network, population growth, etc. Therefore, The BDTM is used as the basis to produce the traffic flow for this TIA.

4.4 The BDTM is validated, and the validation meets criteria found in the "BDTM Study". Nevertheless, the traffic network and zone in the vicinity of the Proposed Development were further reviewed to ensure the traffic model is up-to-date and the modelled flow can be adopted. The modelling and validation methodology include, but not limited to, the following:

- The road links and junctions were checked and updated to ensure that any recent change in the existing road network is considered and missing road links or junction does not exist.
- The schedules of public transport services such as franchised bus and green/ red minibus were also checked to ensure that the updated routings and headway information are adopted.
- The zone and centroid connectors were reviewed to ensure that the traffic zones generate/ attract traffic at appropriate locations.
- The traffic flows produced by BDTM at the surveyed junctions were reviewed with reference to the observed traffic flows.
- The validation methodology is same as that adopted in the BDTM. All count locations were reviewed and checked using the GEH statistic (a modified chi squared test to provide a statistic for both the magnitude of the difference and the percentage difference between modelled and observed flows). The GEH statistic is defined by:

$$\sqrt{\frac{(V_2 - V_1)^2}{\frac{1}{2}(V_2 + V_1)}}$$

where $V_1$ and $V_2$ are the observed and modelled flows.

4.5 The validation criteria adopted are found in **Table 4.1**.

TABLE 4.1 VALIDATION CRITERIA

| **Locations** | **Target** |
|---|---|
| Traffic flows at all count locations | 85% return a GEH statistic of 5 or less<br>100% return a GEH statistic of 10 or less |

## Estimated Traffic Growth Rate from 2031 to 2033

4.6 Reference is made to the: (i) the Annual Average Daily Traffic ("AADT") of core stations located in the vicinity of the Proposed Development, which is found in the Annual Traffic Census, published by Transport Department, (ii) population and employment data for Tuen Mun from the "2019-based Territorial Population and Employment Data Matrix" (the "TPEDM") prepared by Planning Department, and (iii) the Hong Kong Population Projection published by Census and Statistics Department.

4.7 The information for (i) is presented in **Table 4.2**.

TABLE 4.2 AADT OF THE CORE STATIONS IN THE VICINITY OF THE SUBJECT SITE

| **Station** | **6213** | **5647** | **Overall** |
|---|---|---|---|
| **Road** | **Castle Peak Road - Hung Shui Kiu** | **Tsing Lun Road** | **–** |
| From | Tin Ha Road | Tsing Chung Koon Road | – |
| To | Lam Tei Interchange | Lam Tei Interchange | – |
| 2010 | 31,280 | 10,770 | 42,050 |
| 2011 | 30,910 | 10,050 | 40,960 |
| 2012 | 31,210 | 9,990* | 41,200 |
| 2013 | 30,520 | 10,070* | 40,590 |
| 2014 | 33,510 | 9,970* | 43,480 |
| 2015 | 31,720 | 10,390 | 42,110 |
| 2016 | 33,490 | 11,490 | 44,980 |
| 2017 | 34,140 | 11,310* | 45,450 |
| 2018 | 32,740 | 11,590* | 44,330 |
| 2019# | 33,220 | 11,500* | 44,720 |
| 2020# | 34,710 | 12,870 | 47,580 |
| 2021# | 34,800 | 13,870 | 48,670 |
| 2022# | 34,500 | 13450* | 47,950 |
| **Average Annual Growth (2010-2018)** | **0.57%** | **0.92%** | **0.66%** |

Note: * Estimated by Growth Factor
# Excluded due to the impact of the public events in 2019 and COVID-19 pandemic in 2020 – 2022.

4.8 Table 4.2 shows that the annual average traffic growth of 0.66%.

4.9 Item (ii) has no population and employment data beyond year 2031, hence, there is no reference growth rate from 2031 to 2033. In addition, the major population growth near the Proposed Development, i.e., "Development at San Hing Road and Hong Po Road, Tuen Mun", which will be completed in 2030 – 2033, have been included in the planned / committed developments, hence the traffic growth of the road network of concern is conservative.

4.10 The information for (iii) is presented in **Table 4.3**.

TABLE 4.3 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

| Year | Population in Hong Kong (thousands) |
|---|---|
| 2031 | 7,820.2 |
| 2033 | 7,903.6 |
| **Average Annual Growth (2031 – 2033)** | **0.53%** |

4.11 **Table 4.3** shows that the annual population growth between 2031 – 2033 is 0.53%. To be conservative, the annual growth rate of 1% is adopted for 2031 – 2033.

## Additional Planned/ Committed Developments near the Subject Site

4.12 The planned/ committed developments near the Subject Site not included in the BDTM but have been incorporated to produce the future year traffic flows are listed in **Table 4.4** and the locations are presented in **Figure 4.1**.

TABLE 4.4 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

| Ref. No. | Development | Intake Year | Land Use | GFA ($m^2$) | No. of Flat (no.) | Average Flat Size ($m^2$) | No. |
|---|---|---|---|---|---|---|---|
| **Tuen Mun Area 54 (1)** | | | | | | | |
| A | Site 1 &1A<br>Wo Tin Estate | 2022 | PRH | – | 4,232 | – | – |
| | | | Retail | 2,420 | – | – | – |
| | | | SWF | 1,060 | – | – | – |
| | | | Kindergarten | – | – | – | 1 no. |
| B | Site 2<br>Yan Tin Estate | 2017 | PRH | – | 4,688 | – | – |
| | | | Retail | 4,250 | – | – | – |
| | | | SWF | 3,600 | – | – | – |
| C | Site 3 & 4 (East)<br>Ching Tin Estate | 2022 | PRH | – | 5,183 | – | – |
| | | | Retail | 3,130 | – | – | – |
| | | | SWF | 1,810 | – | – | – |
| | | | Kindergarten | – | – | – | 1 no. |
| D | Site 3 & 4 (West)<br>Novo Land | 2025 | Private Housing | – | 4,600 | – | – |
| | | | Retail | 5,000 | – | – | – |
| E | Site 4A (East and West) (2) | 2026 | Light Public Housing | – | 5,620 | – | – |
| G | Site 4A (South) | 2028 | PRH | – | 1,475 | – | – |
| | | | Kindergarten | – | – | – | 1 no. |
| H | Site 5 | 2028 | SSF | – | 1,020 | – | – |
| | | | SWF | 1,300 | – | – | – |
| **Development at San Hing Road and Hong Po Road, Tuen Mun(3)** | | | | | | | |
| I | San Hing Road Site | 2030 - 2033 | PRH / SSF | – | 9,400 | – | – |
| | | | Primary School | – | – | – | 1 nos. |
| | | | Kindergarten | – | – | – | 2 nos. |
| | | | SWF | N/A | – | – | – |
| J | San Hing Road Site Extension | 2030 - 2033 | PRH / SSF | – | 1,500 | – | – |
| | | | Retail | 5,000(4) | – | – | – |
| | | | Sport Centre | – | – | – | 1 no. |
| K | Ho Pong Road Site | 2030 - 2033 | PRH / SSF | – | 9,500 | – | – |
| | | | Retail | 5,000(4) | – | – | – |
| | | | Kindergarten | – | – | – | 2 no. |
| | | | SWF | N/A | – | – | – |

TABLE 4.4 THE ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE (CONT'D)

| Ref. No. | Development | Intake Year | Land Use | GFA ($m^2$) | No. of Flat (no.) | Average Flat Size ($m^2$) | No. |
|---|---|---|---|---|---|---|---|
| **Other Planning Applications Nearby**[(5)] | | | | | | | |
| L | A/TM-LTYY/ 426 | 2026 | Private Housing | -- | 184 | 31 | -- |
| M | Y/TM-LTYY/ 10 | -- | Private Housing | -- | 288 | 40 | -- |
| N | A/TM-LTYY/ 301 | -- | NTEH (3) | -- | 1 | 195 | -- |
| O | A/TM-LTYY/ 335 | -- | NTEH (3) | -- | 1 | 195 | -- |
| P | A/TM-LTYY/ 336 | -- | NTEH (3) | -- | 1 | 195 | -- |
| Q | A/TM-LTYY/ 370 | -- | NTEH (3) | -- | 1 | 195 | -- |
| R | A/TM-LTYY/ 371 | -- | NTEH (3) | -- | 1 | 195 | -- |
| S | A/TM-LTYY/ 372 | -- | NTEH (3) | -- | 1 | 195 | -- |

PRH – Public Rental Housing SSF – Subsidised Sale Flats NTEH – New Territories Exempted House
SWF – Social Welfare Facilities

(1) extracted from TIA of Approved Planning Applications A/TM/500 and A/TM/583
(2) extracted from Legislative Council Panel on Housing discussion paper CB(1)1123/2023(02) on December 2023
(3) extracted from Tuen Mun District Council discussion paper TMDC 19/2023 on September 2023
(4) No information on area for retail uses is found in public domain, assumed 5,000 m² GFA of retail
(5) extracted from Planning Statement of Approved Planning Applications

## Planned Road Improvement Works Nearby

4.13 The planned road improvement works at assessed junctions are presented below.

### *Development at San Hing Road and Hong Po Road*

4.14 Some road improvement works are planned under various contracts by CEDD, and these are summarized in **Table 4.5**. The road improvement works are found in **Appendix E**.

TABLE 4.5 PLANNED ROAD IMPROVEMENT WORKS

| Ref | Brief Description of the Improvement | Contract |
|---|---|---|
| J3 | Provide 2 left-turn lanes at Ng Lau Road southbound | CE 39/2021 (CE) |
| | Provide 1 left-turn lane at Lam Tei Interchange eastbound | CE 39/2021 (CE) |
| J4 | Provide exclusive left-turn lane from Hong Po Road southbound | CE 39/2021 (CE) |
| | Modify the entry lanes from Lam Tei Interchange westbound | CE 39/2021 (CE) |
| J6 | Provide 2 right-turn lanes and 1 shared lane for right turn and straight ahead at Castle Peak Road – Lam Tei southbound | CE 39/2021 (CE) |
| J7 | Provide a channelized island at Tsz Tin Road eastbound () | CV/2019/04 |
| J10 | Widened to provide 2lane 2-way single carriageway at minor road | CE 39/2021 (CE) |
| J12 | Provide signalised cross junction | CE 39/2021 (CE) |

CE 39/2021 (CE) - Site Formation and Infrastructure Works for Public Housing Developments at San Hing Road and Hong Po Road, Tuen Mun and Choi Shun Street, Sheung Shui – Investigation, Design and Construction"
CV/2019/04 - Site Formation and Infrastructure Works near Tsz Tin Road and Hing Fu Street in Area 54, Tuen Mun

4.15 The improvement work described in **Table 4.5** will be completed gradually before 2030 – 2033, i.e., the intake of public housing of San Hing Road site, and San Hing Road site extension and Hong Po Road site (Note: These are items I, J and K in **Table 4.3**). These improvement works are adopted for the Year 2033 junction capacity analysis.

### *Hung Shiu Kiu New Development Area*

4.16 Road improvement work is planned at Ng Lau Road / Castle Peak Road – Lam Tei (J11) under the "Hung Shui Kiu/Ha Tsuen New Development Area Package A Works for Second Phase Development - Design and Construction" (Agreement

No. CE 01/2020 (CE)) by Civil Engineering and Development Department ("CEDD"). The layout of road improvement at J11 is presented in **Appendix E**.

### Net Increase in Traffic Generation between the Approved Scheme and the Proposed Development

4.17 To estimate the traffic generation of the Proposed Development, reference is made to the TPDM. However, the smallest flat size in the TPDM is 60m$^2$ GFA, which is substantially larger than the Proposed Development average flat size of only 32m$^2$ GFA. Hence, the estimated traffic generation is conservative, i.e., on the high-side. The adopted trip generation rates and the estimated AM and PM peak hour traffic generation are presented in **Table 4.6**.

TABLE 4.6 ADOPTED TRIP RATES AND TRAFFIC GENERATION FOR PROPOSED DEVELOPMENT

| **Proposed Development** ***(1,385 flats with average flat about 32m$^2$ GFA)*** | **Parameter** | **AM Peak** | | **PM Peak** | |
|---|---|---|---|---|---|
| | | **Generation** | **Attraction** | **Generation** | **Attraction** |
| *Trip Rates:* Residential Use with average 60m$^2$ GFA | pcu/flat/hr | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| *Traffic Generation* | pcu/hr | *100* | *59* | *40* | *52* |
| | | ***159 (2-way)*** | | ***92 (2-way)*** | |
| | veh/hr[1] | *94* | *56* | *37* | *49* |
| | | ***150 (2-way)*** | | ***86 (2-way)*** | |

[1] Converted from pcu/hr to veh/hr based on 90% private car/ taxi and 10% heavy goods vehicles

4.18 The traffic generation of Approved Scheme found in the approved traffic impact assessment is presented in **Table 4.7**.

TABLE 4.7 ADOPTED TRAFFIC GENERATION FOR APPROVED SCHEME

| **Approved Scheme** | **Parameter** | **AM Peak** | | **PM Peak** | |
|---|---|---|---|---|---|
| | | **Generation** | **Attraction** | **Generation** | **Attraction** |
| *Traffic Generation* | pcu/hr | *37* | *22* | *18* | *23* |
| | | *59 (2-way)* | | *41 (2-way)* | |
| | veh/hr[1] | *35* | *21* | *17* | *22* |
| | | ***56 (2-way)*** | | ***39 (2-way)*** | |

[1] Converted from pcu/hr to veh/hr based on 90% private car/ taxi and 10% heavy goods vehicles

4.19 The peak hour traffic generation of Approved Scheme and Proposed Development are shown in **Figures 4.2 – 4.3** respectively.

4.20 The net increase in traffic generation (in pcu/hr and veh/ hr) between the Approved Scheme and the Proposed Development is presented in **Tables 4.8 and 4.9**.

TABLE 4.8 NET INCREASE IN TRAFFIC GENERATION (PCU PER HOUR)

| **Scheme** | **Traffic Generation (pcu/ hr)** | | | |
|---|---|---|---|---|
| | **AM Peak** | | **PM Peak** | |
| | **Generation** | **Attraction** | **Generation** | **Attraction** |
| Proposed Development (from Table 4.6) [a] | 100 | 59 | 40 | 52 |
| Approved Scheme (from Table 4.7) [b] | 37 | 22 | 18 | 23 |
| **Net Increase [a] – [b]:** | **+63** | **+37** | **+22** | **+29** |
| | **+100 *(2-way)*** | | **+51 *(2-way)*** | |

TABLE 4.9 NET INCREASE IN TRAFFIC GENERATION (VEHICLE PER HOUR)

| **Scheme** | **Traffic Generation (veh/ hr)** | | | |
|---|---|---|---|---|
| | **AM Peak** | | **PM Peak** | |
| | **Generation** | **Attraction** | **Generation** | **Attraction** |
| Proposed Development (from Table 4.6) [a] | 94 | 56 | 37 | 49 |
| Approved Scheme (from Table 4.7) [b] | 35 | 21 | 17 | 22 |
| **Net Increase [a] – [b]:** | **+59** | **+35** | **+20** | **+27** |
| | **+94 *(2-way)*** | | **+47 *(2-way)*** | |

4.21 The Proposed Development is expected to generate 100 and 51 additional pcu / hour (2-way) in AM and PM peak respectively, or equivalent to 94 and 47 vehicles / hour (2-way).

### Year 2033 Proposed Additional Bus Trips

4.22 It is expected that no more than 4 additional bus trips are required to accommodate the road-based public transport demand of the Proposed Development in Year 2033. The year 2033 proposed additional bus trips are shown in **Figure 4.4**, and details of the additional bus trips are presented in **Paragraph 5.24.**

### Year 2033 Traffic Flows

4.23 Year 2033 traffic flows for the following cases are derived:

*Year 2033 Without Proposed Development [A]* = *Traffic flows derived with reference to 2031 NTW1 BDTM + estimated traffic growth between 2031 and 2033 + estimated traffic generation of the planned / committed developments after 2019*

*Year 2033 With Approved Scheme [B]* = *[A]+ estimated traffic generation for Approved Scheme*

*Year 2033 With Proposed Development [C]* = *[A] + estimated traffic generation for Proposed Development + Additional Bus Trips*

4.24 Year 2033 peak hour junction flows and link flows for the above three cases are shown in **Figures 4.5 – 4.8** respectively.

### Year 2033 Junction Capacity Analysis

4.25 Year 2033 junction capacity analysis for the three cases are summarised in **Table 4.10** and detailed calculations are found in the **Appendix A**.

TABLE 4.10 YEAR 2033 JUNCTION PERFORMANCE

| **Ref** | **Junction** | **Type of Junction (Parameter)** | **2033 Without Proposed Development** | | **2033 With Approved Scheme** | | **2033 With Proposed Development** | |
|---|---|---|---|---|---|---|---|---|
| | | | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** |
| J1 | Unnamed Road/ Access Road | Priority (DFC) | 0.055 | 0.049 | 0.057 | 0.050 | 0.059 | 0.051 |
| J2 | Ng Lau Road/ Unnamed Road | Priority (DFC) | 0.052 | 0.046 | 0.125 | 0.081 | 0.250 | 0.124 |
| J3 | Ng Lau Road/ Lam Tei Interchange | Signal (RC) | 35% | 41% | 32% | 39% | 28% | 36% |
| J4 | Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange | RA (DFC) | 0.741 | 0.702 | 0.748 | 0.709 | 0.762 | 0.719 |
| J5 | Lam Tei Interchange | RA (DFC) | 0.812 | 0.706 | 0.824 | 0.716 | 0.847 | 0.777 |
| J6 | Lam Tei Interchange/ Castle Peak Road – Lam Tei | Signal (RC) | 20% | 46% | 20% | 45% | 19% | 44% |
| J7 | Tsing Lun Road/ Tsz Tin Road | Signal (RC) | 22% | 56% | 22% | 56% | 21% | 56% |
| J8 | San Hing Road/ Ng Lau Road (Southern) | Priority (DFC) | 0.092 | 0.055 | 0.097 | 0.060 | 0.107 | 0.068 |
| J9 | San Hing Road/ Ng Lau Road (Northern) | Priority (DFC) | 0.200 | 0.453 | 0.200 | 0.453 | 0.200 | 0.453 |
| J10 | T-junction at San Hing Road | Priority (DFC) | 0.058 | 0.071 | 0.061 | 0.074 | 0.069 | 0.080 |
| J11 | Ng Lau Road / Castle Peak Road – Lam Tei | Signal (RC) | 16% | 15% | 16% | 15% | 16% | 15% |
| J12 | San Hing Road / Hong Po Road | Signal (RC) | 32% | 80% | 32% | 80% | 30% | 76% |

Note: RC – reserve capacity; RA – Roundabout, DFC – design flow/capacity ratio

4.26 **Table 4.10** shows that the Proposed Development has negligible traffic impact to the road junctions analysed.

## Year 2033 Link Performance

4.27 The 2033 link performances are assessed and results are shown in **Table 4.11**.

TABLE 4.11 YEAR 2033 LINK CAPACITY ASSESSMENT

| **Ref** | **Link** | | **Adjusted Design Flow (veh /hr)** | | **Year 2033 Traffic Demand (veh/hr)** | | | | | | **Year 2033 V/C Ratio** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **Without Proposed Development** | | **With Approved Scheme** | | **With Proposed Development** | | **Without Proposed Development** | | **With Approved Scheme** | | **With Proposed Development** | |
| | | | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** |
| L1 | Castle Peak Road – Lam Tei | NB | 2,604(1) | 2,604(1) | 874 | 1,450 | 874 | 1,450 | 874 | 1,450 | 0.34 | 0.56 | 0.34 | 0.56 | 0.34 | 0.56 |
| | | SB | 2,604(1) | 2,604(1) | 1,828 | 1,252 | 1,828 | 1,252 | 1,830 | 1,254 | 0.70 | 0.48 | 0.70 | 0.48 | 0.70 | 0.48 |
| L2 | Castle Peak Road – Lingnan | NB | 2,800 | 2,800 | 538 | 619 | 539 | 620 | 541 | 622 | 0.19 | 0.22 | 0.19 | 0.22 | 0.19 | 0.22 |
| | | SB | 2,800 | 2,800 | 863 | 589 | 865 | 590 | 868 | 591 | 0.31 | 0.21 | 0.31 | 0.21 | 0.31 | 0.21 |
| L3 | Yuen Long Highway | NB | 4,700 | 4,700 | 5,023 | 4,737 | 5,037 | 4,744 | 5,064 | 4,753 | 1.07 | 1.01 | 1.07 | 1.01 | 1.08 | 1.01 |
| | | SB | 4,700 | 4,700 | 5,179 | 5,272 | 5,188 | 5,281 | 5,201 | 5,292 | 1.10 | 1.12 | 1.10 | 1.12 | 1.11 | 1.13 |
| L4 | Tuen Mun Road | NB | 4,700 | 4,700 | 5,439 | 5,831 | 5,447 | 5,839 | 5,459 | 5,847 | 1.16 | 1.24 | 1.16 | 1.24 | 1.16 | 1.24 |
| | | SB | 4,700 | 4,700 | 6,233 | 5,629 | 6,246 | 5,635 | 6,266 | 5,642 | 1.33 | 1.20 | 1.33 | 1.20 | 1.33 | 1.20 |
| L5 | San Hing Road | 2-way | 800 | 800 | 175 | 81 | 183 | 86 | 196 | 92 | 0.22 | 0.10 | 0.23 | 0.11 | 0.25 | 0.12 |
| L6 | Ng Lau Road (north of J9) | 2-way | 744(1) | 800 | 254 | 375 | 254 | 375 | 254 | 375 | 0.34 | 0.47 | 0.34 | 0.47 | 0.34 | 0.47 |
| L7 | Ng Lau Road (south of J2) | 2-way | 800 | 800 | 409 | 442 | 456 | 474 | 535 | 514 | 0.51 | 0.55 | 0.57 | 0.59 | 0.67 | 0.64 |
| L8 | Lam Tei Interchange (between J3&J5) | EB | 2,800 | 2,800 | 1,879 | 1,264 | 1,908 | 1,278 | 1,958 | 1,295 | 0.67 | 0.45 | 0.68 | 0.46 | 0.70 | 0.46 |
| | | WB | 2,800 | 2,800 | 1,894 | 1,815 | 1,912 | 1,833 | 1,941 | 1,856 | 0.68 | 0.65 | 0.68 | 0.65 | 0.69 | 0.66 |
| L9 | Tsing Lun Road | NB | 1,900 | 1,900 | 897 | 669 | 898 | 670 | 900 | 672 | 0.47 | 0.35 | 0.47 | 0.35 | 0.47 | 0.35 |
| | | SB | 1,900 | 1,900 | 1,334 | 984 | 1,336 | 985 | 1,339 | 986 | 0.70 | 0.52 | 0.70 | 0.52 | 0.70 | 0.52 |

NB – northbound SB – southbound EB – eastbound WB – westbound

(2) With reference to paragraph 2.4.1.2 and table 2.4.1.2, Chapter 2.4, Volume 2 of TPDM, the design flow is to be reduced when the expected proportion of heavy vehicles exceeds 15%. The table below presents the adjusted design flow based on the proportion of heavy vehicles ("HV%").

| **Road Type** | **Design Flow (veh/hr)** | **Adjusted Design Flow (veh/hr)** | | |
|---|---|---|---|---|
| | | **0-15 HV%** | **15-20 HV%** | **20-25 HV%** |
| | | **0% reduction** | **7% reduction** | **10% reduction** |
| Expressway / trunk road (Dual 3 lanes – 11m-wide) | 4,700 | 4,700 | 4,371 | 4,230 |
| Primary Distributor (Dual 3 lanes – 7.3m-wide) | 2,800 | 2,800 | 2,604 | 2,520 |
| District Distributor (Single 4 lanes – 13.5m-wide) | 1,900 | 1,900 | 1,767 | 1,710 |
| Local Roads (Single 2 lanes) | 800 | 800 | 744 | 720 |

4.28 The above results show that the assessed road links operate with sufficient capacity, except for Tuen Mun Road (L4), which operate with V/C ratios at 1.2 or above during the AM and PM peak hours in Year 2033. In view that there are negligible changes on the V/C ratios to L4 for cases without Proposed Development, with Approved Scheme and with Proposed Development, it can be concluded that the traffic generated by the Proposed Development is negligible.

4.29 As shown in LC paper no. CB(4)619/20-21(03) of Legislative Council Panel on Transport , the planned Route 11 would reduce v/c in Year 2036 from 1.2 to 1.0 at Tuen Mun Road (Siu Lam Section) in morning peak, which indicates the traffic congestion at Tuen Mun Road will be relieved by planned Route 11.

4.30 In addition to the above, other planned strategic road improvements, including, Tuen Mun Bypass and Yuen Long Highway (between Lam Tei and Tong Yan San Tsuen) are planned to be implemented. The traffic condition at L3 and L4 would be further improved by these planned strategic road improvements.

4.31 With the planned strategic road improvement works, both Yuen Long Highway (L3) and Tuen Mun Road (L4) are expected to operate with sufficient capacity.

# 5.0 IMPACT TO PUBLIC TRANSPORT SERVICES

## Transport Mode of the Subject Site

5.1 The transport mode of the Subject Site is assessed with reference to "Travel Characteristic Survey 2011" ("TCS2011"), but adjusted to reflect the nearby public transport provisions. The public transport provisions near the subject site have the following characteristics:

(1) Direct and comprehensive light rail services at Lam Tei LRT stops operating within 50m from the Subject Site, which serve as feeder services to MTR and within Tuen Mun, instead of GMB route 42 at Ng Lau Road.
(2) Comprehensive bus services is identified within 400m walking distance.
(3) There are no special purpose bus, tram and ferry nearby.

5.2 Based on the above public transport characteristics, special purposed bus, tram, ferry, and public light bus found in TCS2011 are converted to rail and bus mode on pro-rata basis. The modified transport mode adopted for the Proposed Development is compared with TCS2011 and is found in **Table 5.1**.

TABLE 5.1 MODIFIED TRANSPORT MODE FOR THE PROPOSED DEVELOPMENT

| **Transport Mode** | **TCS 2011** | **Modified Transport Mode adopted for the Proposed Development** |
|---|---|---|
| Rail | 30% | **44%** |
| Bus | 27% | **38%** |
| Public Light Bus | 13% | 0% |
| Private Car | 12% | **12%** |
| Special Purpose bus | 9% | 0% |
| Taxi | 6% | **6%** |
| Tram | 2% | 0% |
| Ferry | 1% | 0% |
| **Total** | **100%** | **100%** |

5.3 **Table 5.1** shows that 44% and 38% of mechanised trips from the Proposed Development would use MTR and bus respectively. For residents who use MTR, it is assumed that 100% would use the LRT service.

## Estimated Peak Hour Mechanised Trip Generation of Proposed Development

5.4 The mechanised trip generation of the Approved Scheme and the Proposed Development is estimated with reference to TCS2011 and is presented in **Table 5.2**.

TABLE 5.2 ESTIMATED PEAK HOUR MECHANISED TRIP GENERATION OF THE PROPOSED DEVELOPMENT

| **Parameter** | **Calculation** | **Unit** | **Approved Scheme** | **Proposed Development** |
|---|---|---|---|---|
| No. of Flats | A | flats | 307 | 1,385 |
| Average domestic household size in Tuen Mun(1) | B | persons/ flat | 2.6 | 2.6 |
| Population | C=BxA | persons | 799 | 3,601 |
| Average Daily Mechanised Trips(2) | D | trips/ persons/ day | 1.83 | 1.83 |
| AM Peak hour factor of Daily Mechanised Trips(3) | E | N/A | 12% | 12% |
| Estimated Peak Hour Mechanised Trip Generation | F= CxDxE | persons/ hr | 176 | 791 |

(1) Extracted from Census and Statistic Department website
(2) From Table 3.3, Travel Characteristics Survey 2011 Final Report
(3) From Para. 3.3.7, Travel Characteristics Survey 2011 Final Report

## Estimated AM Peak Hour Transport Demand

5.5 The AM peak hour transport demand of the Proposed Development is estimated based on the modified transport mode in **Table 5.1**, and are presented in **Table 5.3**.

TABLE 5.3 ESTIMATED PEAK HOUR TRANSPORT DEMAND

| **Transport Mode of Proposed Development** | | **Ratio**[(1)] | **Estimated AM Peak Hour Transport Demand of Proposed Development (Passenger/hr)** |
|---|---|---|---|
| Public Transport | Rail-based [a] | 44% | 348 |
| | Road-based [b] | 38% | 301 |
| | *Sub- total [c]=[a]+[b]* | *82%* | *649* |
| Private Car / Taxi [d] | | 18% | 142 |
| | **Total [e]=[c]+[d]** | **100%** | **791** |

(1) From Table 5.1

5.6 **Table 5.3** shows that Proposed Development is expected to generate additional public transport demand of 791 passengers per hour (2-way) during AM peak hour.

Road-Based Public Transport Demand Generated

5.7 The road-based public transport demand generated by the Proposed Development is summarised in **Table 5.4**.

TABLE 5.4 ESTIMATED ROAD-BASED PUBLIC TRANSPORT DEMAND

| **Development** | **Road-based Public Transport Demand (persons / hour)** | | | |
|---|---|---|---|---|
| | **AM Peak** | | **PM Peak** | |
| | **Generation**(1) | **Attraction**(1) | **Generation**(1) | **Attraction**(1) |
| Proposed Development: 1,385 Flats | 214 | 87 | 87 | 148 |
| | 301 (2-way) | | 235 (2-way) | |

(1) Proportional to adopted peak hours pedestrian generation and attraction rates in **Table 6.2**.

5.8 **Tables 5.4** shows that the Proposed Development is expected to generate road-based public transport demand of 301 and 235 passengers per hour (2-way) during AM and PM peak hours respectively.

Rail-Based Public Transport Demand Generated

5.9 The rail-based public transport demand generated by the Proposed Development are summarised in **Table 5.5**.

TABLE 5.5 ESTIMATED RAIL-BASED PUBLIC TRANSPORT DEMAND

| **Development** | **Rail-based Public Transport Demand (persons / hour)** | | | |
|---|---|---|---|---|
| | **AM Peak** | | **PM Peak** | |
| | **Generation**(1) | **Attraction**(1) | **Generation**(1) | **Attraction**(1) |
| Proposed Development: 1,385 Flats | 247 | 101 | 100 | 172 |
| | +348 (2-way) | | +272 (2-way) | |

(1) Proportional to adopted pedestrian generation and attraction rates in AM and PM peak

5.10 **Tables 5.5** shows that the Proposed Development is expected to generate rail-based public transport demand of 348 and 272 passengers per hour (2-way) during AM and PM peak hours respectively.

## Annual Public Transport Demand Growth Rate between 2024 – 2033

5.11 To establish the local public transport demand growth rate from 2024 to 2033, reference is made to several sources of information including:

| | |
|---|---|
| Between 2024 – 2031: | *"2019 - based TPEDM"* |
| Between 2031 – 2033: | *"Hong Kong Population Projections"* from the Census and Statistics Department |

5.12 Relevant information from the 2019-based TPEDM is presented in **Table 5.6**.

TABLE 5.6 TUEN MUN NEW TOWN POPULATION PROJECTIONS

| **Year** | **Population [a]** | **Employment [b]** | **Overall [c] = [a] + [b]** |
|---|---|---|---|
| 2019 | 476,500 | 130,800 | 607,300 |
| 2031 | 606,850 | 150,750 | 757,600 |
| **Average Annual Growth 2019 to 2031** | **2.0%** | **1.2%** | **1.9%** |

5.13 **Table 5.6** shows that the average annual population growth in the Tuen Mun between 2019 and 2031 is 1.9%.

5.14 Relevant information from the *"Hong Kong Population Projections"* is presented in **Table 5.7**.

TABLE 5.7 HONG KONG POPULATION PROJECTIONS FROM CENSUS AND STATISTICS DEPARTMENT

| **Year** | **Hong Kong Resident Population ('000)** |
|---|---|
| 2031 | 7,820.2 |
| 2033 | 7,903.6 |
| **Average Annual Growth 2031 to 2033** | **0.53%** |

5.15 **Table 5.7** shows that the average annual population growth in Hong Kong between 2031 – 2033 is 0.53%.

5.16 Based on the above, the annual growth factors adopted are 1.9% from 2024 to 2031, and 1.0% from 2031 to 2033.

## 2033 Road-Based Public Transport Occupancies

5.17 The destination of bus routes with stops at Castle Peak Road – Lam Tei ("CPR") and the Lam Tei Interchange ("LTI") are presented in **Table 5.8**.

TABLE 5.8 COMPARISON ON DESTINATION OF BUS ROUTES BETWEEN BUS STOP AT CPR AND LTI

| Bus Stop | Walking Distance (Time) | No. of Bus Routes at Destination | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | HKI | NTW | YTM | Kln(E) | Kln(W) | N | TCL | BCP |
| CPR | 100 to 200 (2 - 4 mins) | 4 | 3 | 2 | 2 | 0 | 1 | 2 | 1 |
| LTI | 350 to 400 (7 - 8 mins) | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 |

| | |
|---|---|
| HKI – Hong Kong Island | NTW – New Territories West |
| YTM – Yau Ma Tei/Tsim Sha Tsui/Mong Kok | Kln(E) – Kowloon (East) |
| Kln(W) – Kowloon (West) | N – North |
| BCP – Boundary Control Point | TCL–Tung Chung / Lantau Island |

5.18 **Table 5.8** shows that the bus stop at CPR is located only 2 – 4 minutes' walk away, and has similar routes as the LTI stop, except for the routes to Kowloon West.

5.19 However, it is found that most of the bus routes at CPR are operated by KMB, and residents from the Proposed Development travelling to Kowloon West using these bus routes could change to other bus routes operated by KMB at the Tuen Mun Road interchange, e.g. KMB 59X, 60X and 67X. Therefore, it is concluded that all road-based public transport demand from the Proposed Development would use CPR, and there is negligible usage of LTI, due to its longer walking distance.

5.20 To estimate the Proposed Development passenger demand for each bus route at CPR, reference is made to the existing boarding and alighting demand of buses at CPR bus stops. The passenger demand at CPR and the estimated passenger demand for the Proposed Development of each bus route at CPR are presented in **Table 5.9**.

TABLE 5.9 THE PROPOSED DEVELOPMENT PASSENGER DEMAND AND ESTIMATED PASSENGER DEMAND FOR EACH BUS ROUTE AT CPR BUS STOPS

| Bus Route at CPR Bus stops | Existing Passenger Demand (passenger/hr) | | | | Estimated Passenger Demand for the Proposed Development (passenger/hr) | | | |
|---|---|---|---|---|---|---|---|---|
| | AM Peak | | PM Peak | | AM Peak | | PM Peak | |
| | Outward bound (Boarding) | Inward bound (Alighting) | Outward bound (Boarding) | Inward bound (Alighting) | Outward bound (Boarding) | Inward bound (Alighting) | Outward bound (Boarding) | Inward bound (Alighting) |
| KMB 53 | 2 | 4 | 1 | 0 | 2 | 4 | 2 | 0 |
| KMB 63X | 60 | 18 | 16 | 38 | 53 | 14 | 27 | 23 |
| KMB 68A | 34 | 12 | 18 | 115 | 30 | 10 | 30 | 71 |
| KMB 258A | 31 | - | - | - | 28 | 0 | 0 | 0 |
| KMB 258P | 12 | - | - | 24 | 11 | 0 | 0 | 15 |
| KMB 261P | 4 | - | - | - | 4 | 0 | 0 | 0 |
| KMB 960A | - | - | - | 10 | - | - | - | 7 |
| KMB 960P | 53 | - | - | 24 | 47 | 0 | 0 | 15 |
| KMB 960X | 22 | - | - | 3 | 20 | 0 | 0 | 2 |
| LWB A34 | 11 | - | 1 | 9 | 10 | 0 | 2 | 6 |
| NLB B2 | 9 | 74 | 15 | 14 | 9 | 59 | 26 | 9 |
| **Total** | **238** | **108** | **51** | **237** | **214** | **87** | **87** | **148** |

5.21 Based on the Proposed Development estimated passenger demand for each bus route at CPR bus stop in **Table 5.9**, the year 2033 performance of road-based public transport services is derived as follows:

*2033 without Proposed Development [A]* = *2024 Observed Performance of at CPR Bus Stop + adopted public transport demand growth demand growth from 2024 to 2033*

*2033 with Proposed Development [B]* = *[A] + Estimated Passenger Demand for the Proposed Development of Each Bus Route at CPR Bus Stops (from* ***Table 5.9****)*

5.22 Year 2033 performance of road-based public transport services at CPR bus stop are presented in **Table 5.10**.

TABLE 5.10 YEAR 2033 PERFORMANCE OF ROAD-BASED PUBLIC TRANSPORT SERVICES AT CPR BUS STOPS

| **Bus Route at CPR** | **Outward bound** | | | | | **Inward bound** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Capacity** | **without Proposed Development** | | **with Proposed Development** | | **Capacity** | **without Proposed Development** | | **with Proposed Development** | |
| | | **Occupied** | **Occ.** | **Occupied** | **Occ.** | | **Occupied** | **Occ.** | **Occupied** | **Occ.** |
| **AM Peak** | | | | | | | | | | |
| KMB 53 | 240 | 53 | 22% | 55 | 23% | 240 | 53 | 22% | 57 | 24% |
| KMB 63X | 600 | 394 | 66% | 447 | 75% | 240 | 105 | 44% | 119 | 50% |
| KMB 68A | 360 | 253 | 70% | 283 | **79%** | 240 | 163 | 68% | 173 | 72% |
| KMB 258A | 240 | 140 | 58% | 168 | 70% | - | - | - | - | - |
| KMB 258P | 480 | 140 | 29% | 151 | 31% | - | - | - | - | - |
| KMB 261P | 120 | 42 | 35% | 46 | 38% | - | - | - | - | - |
| KMB 960A | - | - | - | - | - | - | - | - | - | - |
| KMB 960P | 720 | 480 | 67% | 527 | 73% | - | - | - | - | - |
| KMB 960X | 840 | 123 | 15% | 143 | 17% | - | - | - | - | - |
| LWB A34 | 360 | 77 | 21% | 87 | 24% | - | - | - | - | - |
| NLB B2 | 360 | 184 | 51% | 193 | 54% | 480 | 280 | 58% | 339 | 71% |
| **Total** | **4,320** | **1,886** | **44%** | **2,100** | **49%** | **1,200** | **601** | **50%** | **688** | **57%** |
| **PM Peak** | | | | | | | | | | |
| KMB 53 | 120 | 35 | 29% | 37 | 31% | 240 | 105 | 44% | 105 | 44% |
| KMB 63X | 480 | 140 | 29% | 167 | 35% | 240 | 210 | 88% | 233 | **97%** |
| KMB 68A | 360 | 158 | 44% | 188 | 52% | 600 | 408 | 68% | 479 | **80%** |
| KMB 258A | - | - | - | - | - | - | - | - | - | - |
| KMB 258P | - | - | - | - | - | 360 | 105 | 29% | 120 | 33% |
| KMB 261P | - | - | - | - | - | - | - | - | - | - |
| KMB 960A | - | - | - | - | - | 120 | 35 | 29% | 42 | 35% |
| KMB 960P | - | - | - | - | - | 240 | 70 | 29% | 85 | 35% |
| KMB 960X | - | - | - | - | - | 360 | 210 | 58% | 212 | 59% |
| LWB A34 | 120 | 0 | 0% | 2 | 2% | 360 | 42 | 12% | 48 | 13% |
| NLB B2 | 360 | 233 | 65% | 259 | 72% | 360 | 158 | 44% | 167 | 46% |
| **Total** | **1,440** | **566** | **39%** | **653** | **45%** | **2,880** | **1,343** | **47%** | **1,491** | **52%** |

Note: (1) Occ. – Occupancy
(2) Capacity and occupied are in passenger/hr

5.23 **Table 5.10** shows that the year 2033 road-based public transport services at CPR stop would operate with sufficient capacities during the AM and PM peak hours for the cases without and with Proposed Development, except for (i) KMB 68A outward bound in AM peak and inward bound in PM peak, and (ii) KMB 63X inward bound in PM peak.

## Proposed Additional Bus Trips

5.24 Based on the findings from **Table 5.10**, additional bus trips are proposed for the bus routes shown in **Figure 5.1**:

- KMB 68A outward bound in AM peak;
- KMB 68A inward bound in PM peak; and
- KMB 63X inward bound in PM peak.

5.25 With the proposed additional bus trips, the capacity of KMB 68A outward bound in AM peak would increase from 360 to 480, hence, the occupancy would decrease from 79% to 59% (calculation: 283 ÷ 480 = 59%), which is acceptable.

5.26 With the proposed additional bus trips, the capacity of KMB 68A inward bound in PM peak would increase from 600 to 720, hence, the occupancy would decrease from 80% to 67% (calculation: 479 ÷ 720 = 67%), which is acceptable.

5.27 With the proposed additional bus trips, the capacity of KMB 63X inward bound in PM peak would increase from 240 to 360, hence, the occupancy would decrease from 97% to 65% (calculation: 233 ÷ 360 = 65%), which is acceptable.

## 2033 Rail-Based Public Transport Occupancies

5.28 As presented in **Table 5.5**, the demand on rail-based public transport services, i.e. MTR Tuen Ma Line, associated with the Proposed Development is no more than 247 passengers during the peak hours. As presented in **Table 2.5**, the MTR Tuen Ma Line has a maximum carrying capacity of 70,000 passenger / hour. Hence, the additional passenger demand is only 0.4% of the maximum carrying capacity [Calculation: 247 ÷ 70,000 = 0.4%], which is negligible on the MTR Tuen Ma Line.

## 2033 LRT Service Occupancies

5.29 Based on survey result shown in **Table 2.7**, the year 2033 performance of LRT services at Lam Tei Stop were derived as follows:

*2033 without Proposed Development [A]* = *2024 observed* performance of LRT services at Lam Tei Stop + *adopted public transport demand growth demand growth from 2024 to 2033*

*2033 with Proposed Development [B]* = *[A] + rail-based public transport demand due to Proposed Development (from* ***Table 5.5****)*

5.30 Year 2033 performances of LRT services at Lam Tei Stop are presented in **Table 5.11**.

TABLE 5.11 YEAR 2033 PERFORMANCE OF LRT SERVICES AT LAM TEI STOP

| Direction | No. of Passenger | | | Occupancy [c]=[b]/[a] | |
|---|---|---|---|---|---|
| | Capacity[1] [a] | Year 2033 Occupied [b] | | | |
| | | Without Proposed Development | With Proposed Development | Without Proposed Development | With Proposed Development |
| **AM Peak** | | | | | |
| Yuen Long bound | 6,600 | 3,829 | 3,866 | 58% | 59% |
| Tuen Mun bound | 7,200 | 6,746 | 6,956 | 94% | 97% |
| **PM Peak** | | | | | |
| Yuen Long bound | 5,600 | 4,930 | 5,050 | 88% | 90% |
| Tuen Mun bound | 6,400 | 3,599 | 3,651 | 56% | 57% |

5.31 **Table 5.11** shows that the year 2033 LRT services at Lam Tei Stop would operate with limited capacities during the AM and PM peak hours. Although the estimated occupancy of the light rail services Tuen Mun bound would reach 97% in AM peak and Yuen Long bound would reach 90% in PM peak at Lam Tei LRT Stop in Year 2033, some measures could be adopted relieve the occupancy, including:

1. (1) The planned Hung Shui Kiu MTR Station of Tuen Ma Line will be completed in Year 2030; and (2) Hung Shui Kiu New Development Area ("HSKNDA") will provide (i) Smart and Green Transit System", and (ii) pedestrian network connecting to Hung Shui Kui and Tin Shui Wai MTR Stations.

   With the above planned public transport facilities, feeder service passenger demand to Siu Hong MTR Station in HSKNDA (including Nai Wai, Chung Uk Tsuen and Hung Shui Kiu LRT stops, is expected to be diverted. Hence, the occupancies of the LR services (both Tuen Mun and Yuen Long bound) are expected to reduce.

   Based on the on-site observation at Siu Hong LRT stop, over 50% of the existing LRT (Tuen Mun bound) passengers would interchange at the Siu Hong Station, to switch to the Tuen Ma Line, and vice versa to Yuen Long bound. In view that the planned Hung Shui Kiu Station is located to the north of the LRT service, it is assumed that 25% of total occupancy will be diverted to the planned Hung Shui Kiu MTR Station. As a result, the year 2033 LRT (Tuen Mun bound) occupancy at Lam Tei LRT Stop is expected to reduce from 97% to 74% (calculation: 97% x (100%-25%)). For Yuen Long bound, the year 2033 LRT occupancy at Lam Tei LRT Stop is expected to reduce from 90% to 68% (calculation: 90% x (100%-25%)).

2. Year 2024 of LRT occupancy survey at the Lam Tei LRT stop found that 10 out of 24 Tuen Mun bound LRT trips have occupancies which are less than 80% (Appendix B in revised TIA refers). In addition, it is observed that the busiest period occurred between 0730 and 0800 hours, additional trips could be considered in conjunction with the actual passenger demand.

   It is noted that at present two scheduled 751P (from Tin Yat to Siu Hong) trips are operated during the AM peak. To further enhance the capacity at the LRT

Lam Tei LRT Stop (Tuen Mun bound) in the AM peak, additional special departure of LRT route 751P, i.e., from Tin Yat to Siu Hong, could be considered. Hence, the LRT (Tuen Mun bound) passenger demand of the Proposed Development could be accommodated.

5.32 In view that the Proposed Development is a small-scale development, the passenger demand generated would have negligible impact to the occupancy of the LRT service, hence, the Proposed Development is considered acceptable.

## Review on Public Transport Facilities

5.33 Public Transport Facilities are reviewed and presented in below paragraphs.

### Additional Queuing/Waiting Demand due to the Proposed Development

5.34 The estimated additional queuing/waiting related to the Proposed Development at each bus stop / LRT station is presented in **Table 5.12**.

TABLE 5.12 ADDITIONAL QUEUING / WAITING DEMAND RELATED TO THE PROPOSED DEVELOPMENT

| Bus Stop / LRT Stop | | Boarding Demand (No. of Passenger) [a] | No. of Trips[(1)] [b] | Average Queuing / Waiting Passenger (No. of Passenger) [c] = [a] / [b] |
|---|---|---|---|---|
| CPR – Southbound (from **Table 5.9**) | KMB 53 | 2 | 2 | 1 |
| | KMB 63X | 53 | 5 | 11 |
| | KMB 68A | 30 | 4 | 8 |
| | KMB 258A | 28 | 2 | 14 |
| | KMB 258P | 11 | 4 | 3 |
| | KMB 960P | 47 | 6 | 8 |
| | KMB 960X | 20 | 7 | 3 |
| | LWB A34 | 10 | 3 | 4 |
| | NLB B2 | 9 | 3 | 3 |
| | **Sub-total** | **210** | **36** | **55** |
| CPR – Northbound (from **Table 5.9**) | KMB 261P | 4 | 1 | 4 |
| LTI – Westbound | | 0 | 0 | 0 |
| LTI – Eastbound | | 0 | 0 | 0 |
| Lam Tei LRT Stop – Yuen Long bound | | 38 | 23 | 2 |
| Lam Tei LRT Stop – Tuen Mun bound | | 210 | 24 | 9 |

(1) included additional bus trips in **paragraph 5.24**

5.35 **Table 5.12** shows that the estimated additional average queuing /waiting passenger at CPR southbound and CPR northbound bus stops are 55 and 4 passengers respectively and no additional average queuing /waiting passenger at LTI bus stops.

### Utilisation of Passenger Waiting/Queuing Areas at Bus Stops / LRT Platforms

5.36 Survey on passenger waiting/queuing areas at bus stops / LRT platforms was conducted during the AM and PM peak periods on Thursday, 8th May 2024, and the peak hours identified from the surveys is found to be between 0715 – 0815 hours. Based on this survey, the year 2033 maximum number of passenger waiting/queuing at the Bus Stops / LRT platforms were derived as follows:

*2033 without Proposed Development [A]* = *2024 observed maximum queue + adopted passenger demand growth from 2024 to 2033*

*2033 with Proposed Development [B]* = *[A] + average queuing / waiting passenger due to Proposed Development (from* ***Table 5.12****)*

5.37 Utilisations of passenger waiting/queuing area at the bus stops / LRT platforms for existing, 2033 cases without and with Proposed Development are presented in **Table 5.13**.

TABLE 5.13 UTILISATIONS OF PASSENGER WAITING / QUEUING AREA AT BUS STOPS AND LRT PLATFORMS

| **Bus Stop / LRT Platform** | **Queuing/ Waiting Capacity** | | **Existing** | | **Year 2033 Without Proposed Development** | | **Year 2033 With Proposed Development** | |
|---|---|---|---|---|---|---|---|---|
| | **Area ($m^2$)** | **Pass(1) [a]** | **Max Queue [b]** | **Util [c] = [b] / [a]** | **Max Queue [d]** | **Util [e] = [d] / [a]** | **Max Queue [f]** | **Util [g] = [f] / [a]** |
| CPR – Southbound | 38 | 132 | 38 | 29% | 45 | 34% | 100 | 76% |
| CPR – Northbound | 20 | 69 | 10 | 14% | 12 | 17% | 16 | 23% |
| LTI – Westbound | 8 | 28 | 8 | 29% | 10 | 36% | 10 | 36% |
| LTI – Eastbound | 8 | 28 | 0 | 0% | 0 | 0% | 0 | 0% |
| Lam Tei LRT Stop – Yuen Long bound | 30(2) | 104 | 16 | 15% | 19 | 18% | 21 | 20% |
| Lam Tei LRT Stop – Tuen Mun bound | 96(2)(3) | 333 | 84 | 25% | 98 | 29% | 107 | 32% |

Pass – Passenger Max – Maximum Util - Utilisation

(1) Refer to Volume 9, Chapter 2.7, TPDM, standing capacity of 5 passengers per 1.44$m^2$ is adopted.

(2) Deducted minimum of 1.1m walkways from doors of light rail vehicles to the exit of the platforms and utilities on the platforms, e.g. shelter, seats, ticket vending machines and Octopus card readers.

(3) Included the expansion of Lam Tei LRT Tuen Mun bound platform

5.38 **Table 5.13** shows that the assessed bus stops /LRT platforms would have sufficient passenger waiting/queuing areas for the case of year 2033 with the Proposed Development.

Length of the Laybys for Bus Stops

5.39 The assessment on length of the laybys at the Castle Peak Road – Lam Tei bus stops and Lam Tei Interchange bus stops for the year 2033 without and with Proposed Development are presented in **Table 5.14.**

TABLE 5.14 ASSESSMENT ON LENGTH OF THE LAYBYS FOR BUS STOPS

| **Bus Stop** | **Number of Bus Could Stop (Length) [c]** | **Average Dwell Time (minute) [a]** | | **Number of Bus Arrival for Boarding /Alighting [b]** | | | | **Utilisation of Bus Stop Layby [d]=[a]x[b] / ([c]x60 minutes)** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | **2033 Without Proposed Development(1)** | | **2033 With Proposed Development** | | **2033 Without Proposed Development** | | **2033 With Proposed Development** | |
| | | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** | **AM Peak** | **PM Peak** |
| CPR – Southbound | 2 (26m) | 1.6 | 0.9 | 35 | 10 | 36(2) | 10 | 47% | 8% | 48% | 8% |
| CPR – Northbound | 1 (13m) | 1.2 | 1.3 | 10 | 21 | 10 | 23(2) | 20% | 47% | 20% | 50% |
| LTI – Westbound | 1 (13m) | 0.5 | 0.5 | 3 | 4 | 3 | 4 | 3% | 3% | 3% | 3% |
| LTI – Eastbound | 1 (13m) | 0.7 | 0.5 | 7 | 2 | 7 | 2 | 8% | 2% | 8% | 2% |

(1) Refer to Paragraph 5.11, all bus services provided in Year 2033 remain the same as observed from surveys conducted in 2024

(2) Additional bus trips related to the Proposed Development are included in Year 2033 with Proposed Development scenario.

5.40 **Table 5.14** shows that:

- CPR Southbound bus stop layby: The utilisation increases from 47 to 48% in AM peak, taking into consideration the Proposed Development. Hence, the Proposed Development has negligible impact.
- CPR northbound bus stop layby: The utilisation increases from 47 to 50% in PM peak, taking into consideration the Proposed Development. The Proposed Development has minimal impact.
- LTI bus stop westbound and eastbound laybys: The utilisation remains the same for the case with the Proposed Development. Hence, there is no impact from the Proposed Development.

### Justification on Not Providing Shuttle Bus Service for the Proposed Development

5.41 The assessment on the impact of public transport concluded that the public transport provisions in the vicinity of the Proposed Development are sufficient to accommodate the passenger demand due to the Proposed Development by providing 4 additional bus services. Hence, provision of shuttle bus services for the Proposed Development is not required.

# 6.0 PEDESTRIAN IMPACT

## 2033 Pedestrian Flow Forecasting

6.1 2033 peak hour pedestrian flows are produced by estimating (i) the pedestrian growth from 2024 to 2033; and (ii) expected pedestrian generated by the Proposed Development and planned / committed developments in the vicinity.

## Annual Pedestrian Growth Rate between 2024 – 2033

6.2 Growth rates of 1.9% per annum from 2024 to 2031, and 1% per annum for the period from 2031 to 2033, are adopted, and references to these are found in **Paragraphs 5.20 – 5.26.**

## Peak Hour Pedestrian Generated by Planned / Committed Developments in the Vicinity

6.3 Peak hour pedestrian generated by planned / committed developments in the vicinity as presented in **Table 4.3** is included in the Year 2033 pedestrian flow.

## Adopted Pedestrian Generation Rate

6.4 Pedestrian generation survey was conducted at 0700 – 0900 and 1800 – 2000 hours on Thursday, 12th September 2024 at developments found near the Proposed Development. The AM and PM peak hours identified from the surveys are found to be between 0715 – 0815 hours and 1830 – 1930 hours respectively. The pedestrian generation and pedestrian generation rates is shown in **Table 6.1**.

TABLE 6.1 PEDESTRIAN GENERATION AND PEDESTRIAN GENERATION RATES

| **Surveyed Developments (Number of Flat)** | **AM Peak** | | **PM Peak** | |
|---|---|---|---|---|
| | **Generation** | **Attraction** | **Generation** | **Attraction** |
| **Pedestrian Generation (Ped / hr)** | | | | |
| Novoland (3,282)[1] | 1,491 | 568 | 542 | 1,346 |
| Ching Tin Estate (5,183) | 3,214 | 1,436 | 1,270 | 2,379 |
| Yan Tin Estate (4,688) | 3,085 | 1,262 | 1,248 | 2,143 |
| **Pedestrian Generation Rate (Ped / hr / flat)** | | | | |
| Novoland (3,282)[1] | 0.4543 | 0.1731 | 0.1651 | 0.4101 |
| Ching Tin Estate (5,183) | 0.6201 | 0.2771 | 0.2450 | 0.459 |
| Yan Tin Estate (4,688) | 0.6581 | 0.2692 | 0.2662 | 0.4571 |
| **Adopted Pedestrian Generation Rate (% 2-way)** | **0.6581 (71%)** | **0.2692 (29%)** | **0.2662 (37%)** | **0.4571 (63%)** |
| | **0.9273 (2-way)** | | **0.7233 (2-way)** | |

GEN – Generation ATT – Attraction

[1] As of the time of survey, only phases 1 and 2 of the development are occupied.

6.5 **Table 6.1** shows that the adopted AM and PM peak hour pedestrian generation rate are 0.9273 and 0.7233 ped/flat/hour (2-way).

## Peak hour Pedestrian Generation of the Proposed Development

6.6 Based on the adopted pedestrian generation rates shown in **Table 6.1**, the peak hour pedestrian generation of the Proposed Development are calculated and are presented in **Table 6.2**.

TABLE 6.2 PEDESTRIAN GENERATION OF PROPOSED DEVELOPMENT

| **Item** | **Pedestrian Generation (Ped/ hour)** | | | |
|---|---|---|---|---|
| | **AM Peak** | | **PM Peak** | |
| | Generation | Attraction | Generation | Attraction |
| The Proposed Development (1,385 Flats) | 911 | 373 | 369 | 633 |
| | **1,284 (2-way)** | | **1,002 (2-way)** | |

6.7 **Tables 6.2** shows that Proposed Development would generate 1,284 and 1,002 persons (2-way) during AM and PM peak hour respectively.

### Year 2033 Pedestrian Flows

6.8 Year 2033 pedestrian flows are produced with reference to (i) the observed 2024 pedestrian flows, (ii) annual pedestrian growth rate between 2024 – 2033, (iii) expected pedestrian generation due to the planned / committed developments between 2024 – 2033 and the Subject Site.

6.9 Year 2033 pedestrian flows for the footpath analysis were derived as follows:

*2033 without Proposed Development [A]* = *2024 observed pedestrian flows + Adopted pedestrian growth from 2024 to 2033 + estimated pedestrian due to the planned / committed developments*

*2033 with Proposed Development [B]* = *[A] + pedestrian generation due to Proposed Development*

### Year 2033 LOS Analysis

6.10 Year 2033 peak hour pedestrian flows for the two cases are estimated and presented in **Figure 6.1** and the corresponding LOS assessment is presented in **Table 6.3.**

TABLE 6.3 YEAR 2033 LOS ASSESSMENT

| **Location** | **Clear Width[1] [Effective Width] (m)** | **Peak Period** | **2033 without Proposed Development** | | | **2033 with Proposed Development** | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Flow (ped/ hour)** | **Flow rate (ped/ min/m)** | **LOS** | **Flow (ped/ hour)** | **Flow rate (ped/ min/m)** | **LOS** |
| P1. Footpath on the footbridge accessing to Ng Lau Road | 2.0[1.0] | AM | 327 | 5.5 | A | 456 | 7.6 | A |
| | | PM | 235 | 3.9 | A | 336 | 5.6 | A |
| P2. Footpath between Lam Tei LRT stop and bus stop at Castle Peak Road – Lam Tei | 2.5[1.5] | AM | 443 | 4.9 | A | 700 | 7.8 | A |
| | | PM | 305 | 3.4 | A | 1,007 | 11.2 | A |
| P3. Footbridge over Castle Peak Road – Lam Tei | 2.5[1.5] | AM | 328 | 3.6 | A | 1,227 | 13.6 | A |
| | | PM | 183 | 2.0 | A | 384 | 4.3 | A |
| P4. Southern Footpath of San Hing Road | 2.5[1.5] | AM | 129 | 1.4 | A | 194 | 2.2 | A |
| | | PM | 95 | 1.1 | A | 146 | 1.6 | A |
| P5. Eastern Footpath of Ng Lau Road | 2.0[1.0] | AM | 296 | 4.9 | A | 361 | 6.0 | A |
| | | PM | 200 | 3.3 | A | 251 | 4.2 | A |

Note: (1) The width excludes railing and obstructions.

6.11 **Table 6.3** shows that the assessed footpaths operate with LOS A, i.e., have sufficient capacity to accommodate the expected pedestrian growth and pedestrian generated due to Proposed Development.

# 7.0 SUMMARY

7.1 The Subject Site is located in D.D.130, Lam Tei, Tuen Mun. At present, the Subject Site is unoccupied, and access to the Subject Site is via an existing unnamed road which is connected to Ng Lau Road.

7.2 Manual classified counts were conducted at junctions and road links which are located in the vicinity in order to establish the existing traffic flows during AM Peak and PM peak hours.

7.3 The internal transport facilities provided comply with recommendations of the HKPSG and comments from Transport Department.

7.4 Year 2033 peak hour traffic flows for the junction capacity analysis is produced (i) with reference to the BDTM; (ii) estimated growth from 2031 to 2033; (iii) expected traffic generation by the planned / committed developments in the vicinity; and (iv) expected traffic generation by the 2 cases, i.e., Approved Scheme and Proposed Development.

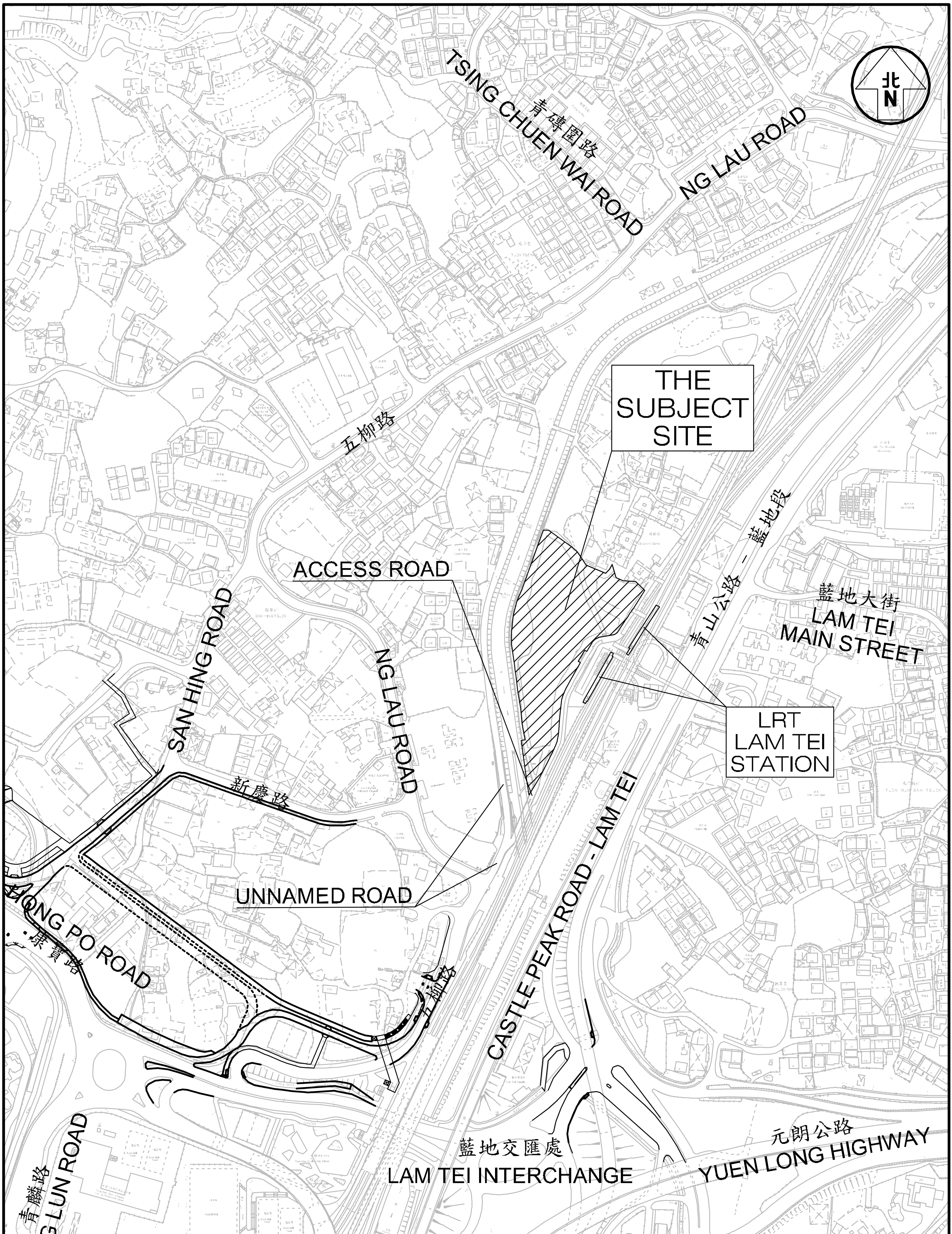
7.5 Compared to the Approved Scheme, the Proposed Development will generate only 100 and 51 additional pcu (2-way) in AM peak and PM peak respectively. In addition, 4 nos. of bus trips are proposed to accommodate the road-based public transport demand of the Proposed Development.

7.6 The assessment of the nearby public transport services found that the Proposed Development has negligible impact. The assessment of footpaths found that the Proposed Development has negligible impact.

7.7 The existing access road and unnamed road connecting the Proposed Development with Ng Lau Road is planned to be improved, to provide a 7.3m-wide road carriageway, a 2m-wide footpath and a 2m-wide cycle track.

7.8 This TIA concluded that the Proposed Development has no adverse traffic impact and the Proposed Development is acceptable from traffic engineering terms.

# Figures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NG LAU ROAD
五柳路
THE SUBJECT SITE
ACCESS ROAD
SAN HING ROAD
NG LAU ROAD
LRT LAM TEI STATION
青山公路 — 藍地段
藍地大街
LAM TEI MAIN STREET
新慶路
UNNAMED ROAD
HONG PO ROAD
康寶路
五柳路
CASTLE PEAK ROAD - LAM TEI
藍地交匯處
LAM TEI INTERCHANGE
元朗公路
YUEN LONG HIGHWAY
青麟路
TSING LUN ROAD

Project Title: PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title: LOCATION OF THE SUBJECT SITE

| Job No. | Figure No. | | | Scale in A4 |
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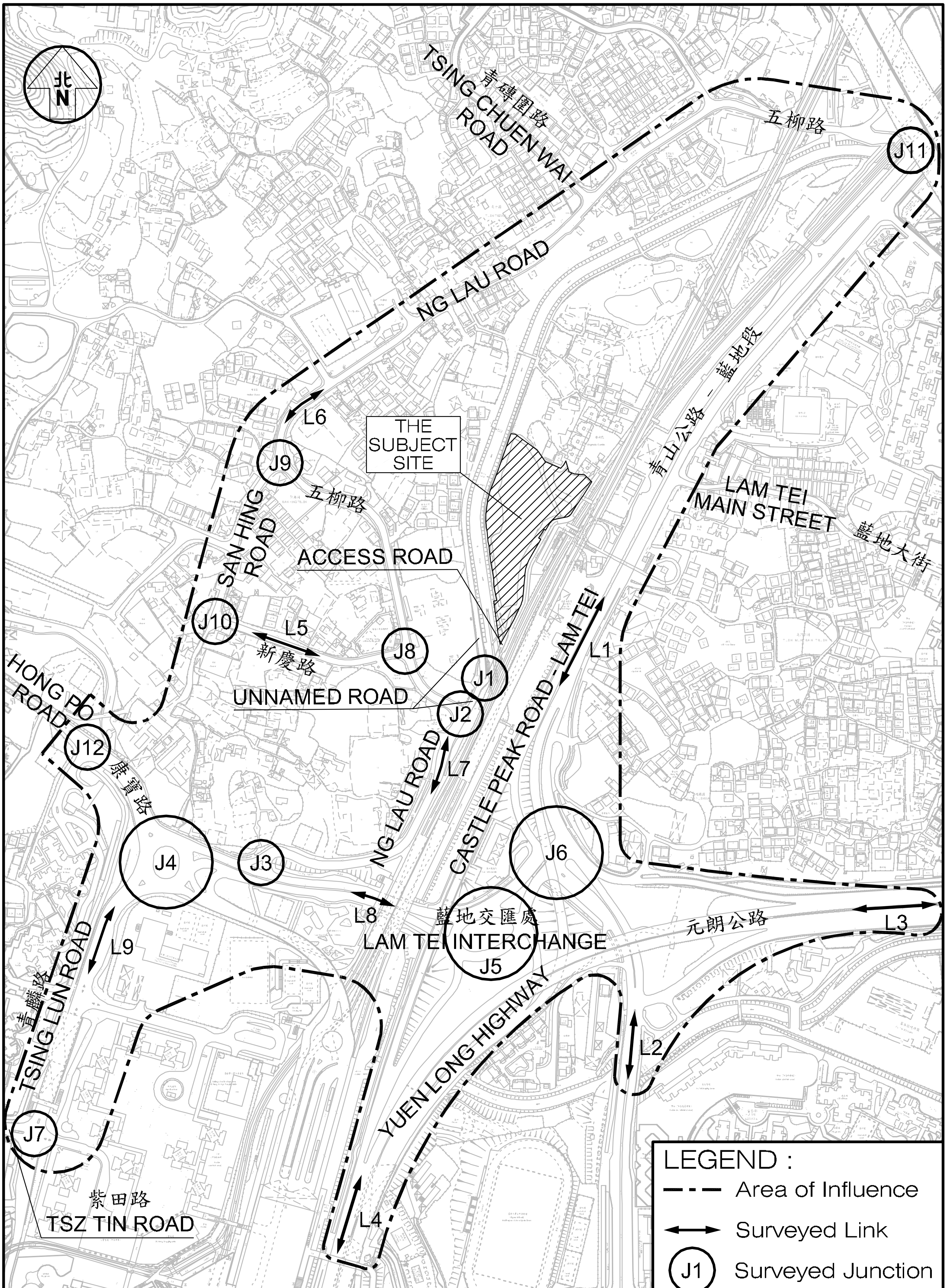
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青山公路 – 藍地段
L6
THE SUBJECT SITE
J9
五柳路
LAM TEI MAIN STREET
藍地大街
SAN HING ROAD
ACCESS ROAD
CASTLE PEAK ROAD - LAM TEI
J10
L5
新慶路
J8
L1
HONG PO ROAD
J1
UNNAMED ROAD
J2
J12
康寶路
L7
NG LAU ROAD
J4
J3
J6
L8
藍地交匯處
LAM TEI INTERCHANGE
元朗公路
L3
L9
J5
青麟路
TSING LUN ROAD
YUEN LONG HIGHWAY
L2
J7
紫田路
TSZ TIN ROAD
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LEGEND :
Area of Influence
Surveyed Link
J1
Surveyed Junction

| Project Title | | Job No. | Figure No. | | | Scale in A4 |
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| PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | | J7265 | 2.1 | | | 1 : 5,000 |
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Figure Title

LOCATION OF SURVEYED JUNCTIONS

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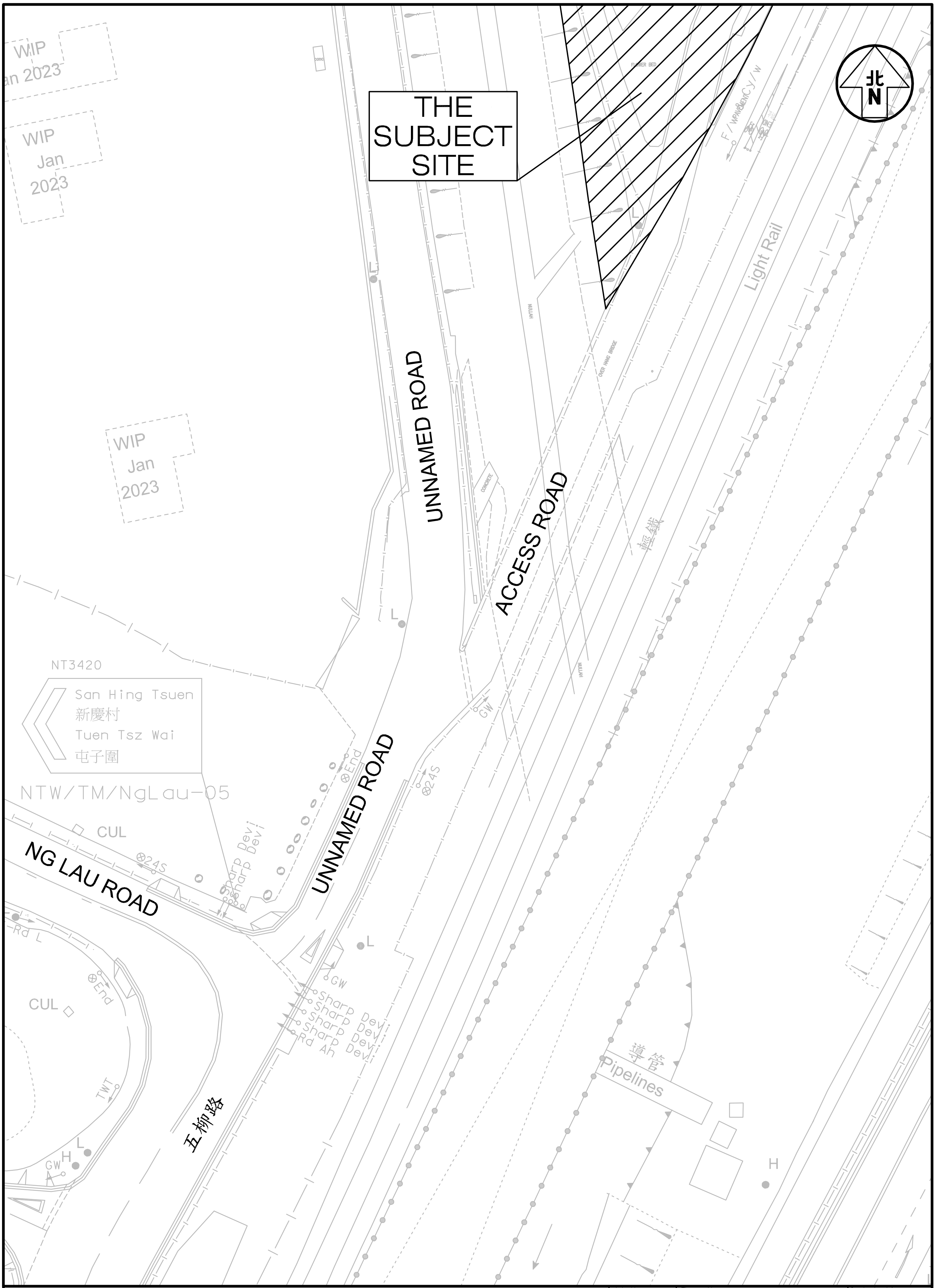
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| Project Title<br>PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | Job No.<br>J7265 | Figure No.<br>2.2 | | Scale in A4<br>1 : 500 |
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Figure Title

**LAYOUT OF JUNCTION OF UNNAMED ROAD / ACCESS ROAD**

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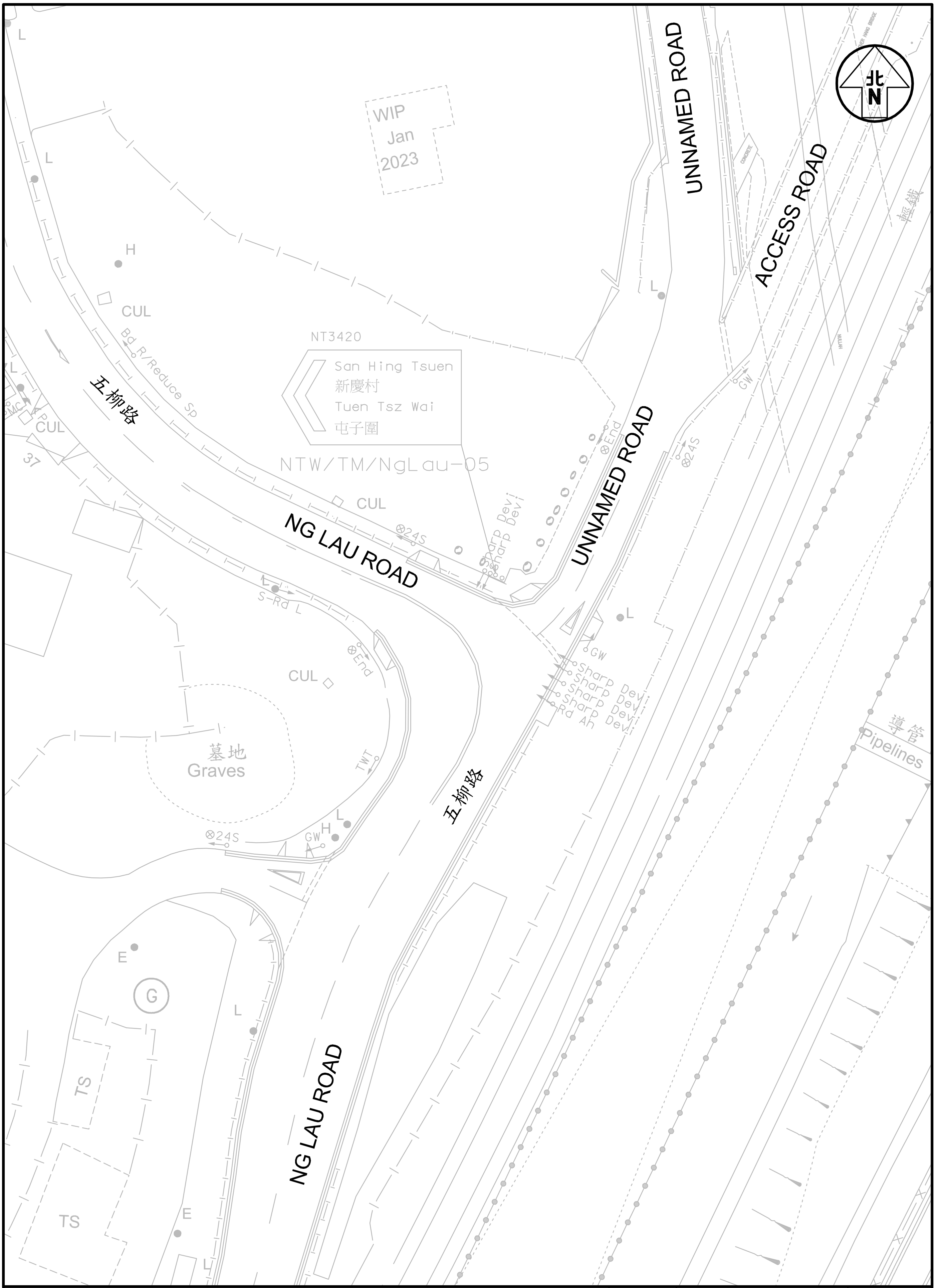
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| Project Title<br>PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | Job No.<br>J7265 | Figure No.<br>2.3 | | | Scale in A4<br>1 : 500 |
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Figure Title

**LAYOUT OF JUNCTION OF NG LAU ROAD / UNNAMED ROAD**

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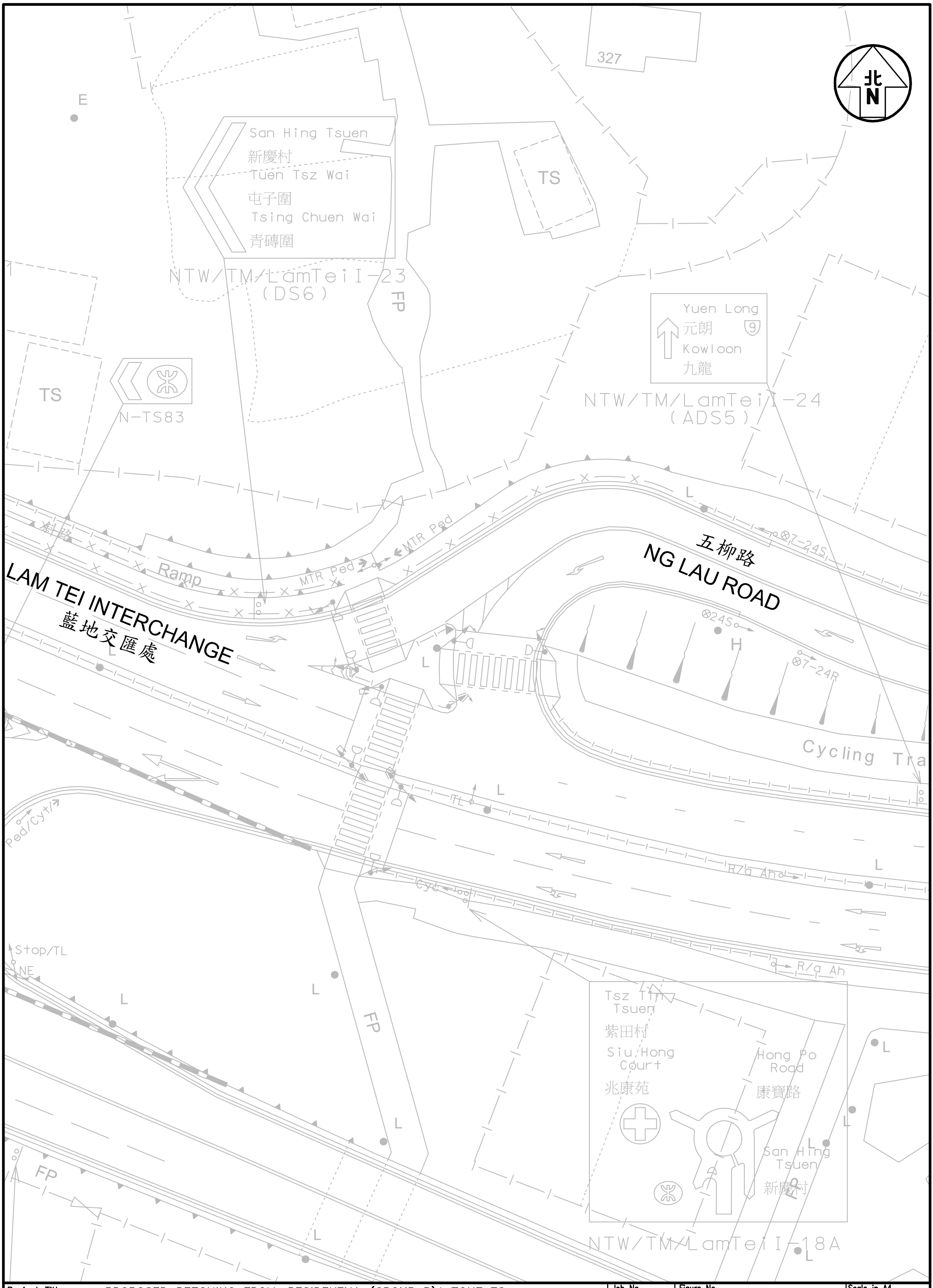
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Yuen Long
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九龍
NTW/TM/LamTeiI-24
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MTR Ped
MTR Ped
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五柳路
NG LAU ROAD
LAM TEI INTERCHANGE
藍地交匯處
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7-24R
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Cycling Tra
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R/a Ah
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Ped/Cyt
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FP
Tsz Tin Tsuen
紫田村
Siu Hong Court
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Hong Po Road
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San Hing Tsuen
新慶村
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| PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | | J7265 | 2.4 | 1 : 500 |

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Figure Title

**LAYOUT OF JUNCTION OF**
**NG LAU ROAD / LAM TEI INTERCHANGE**

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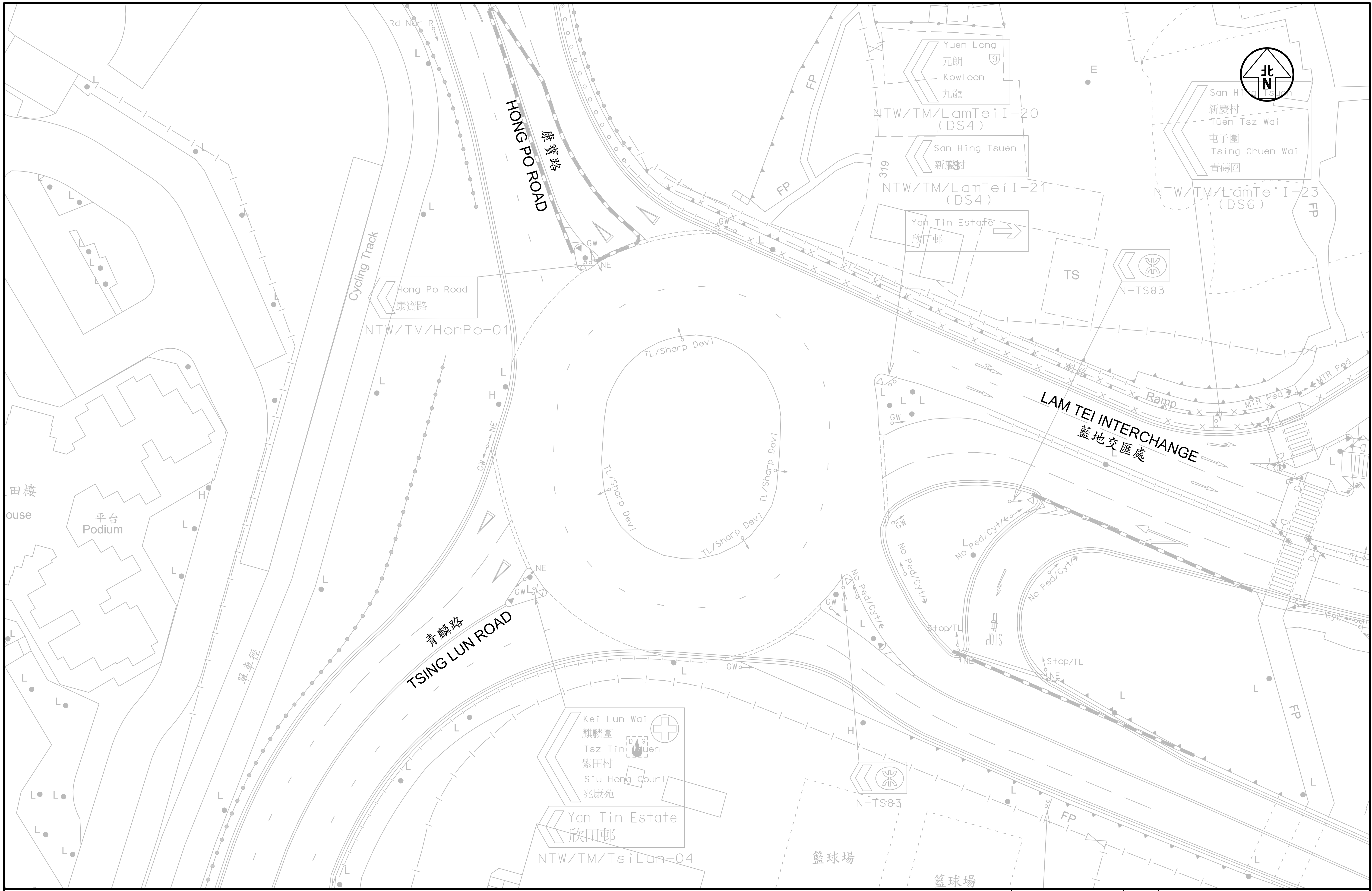
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LAM TEI INTERCHANGE
藍地交匯處
TSING LUN ROAD
青麟路
Cycling Track
單車徑
Podium
平台
Yuen Long
元朗
Kowloon
九龍
NTW/TM/LamTeiI-20 (DS4)
San Hing Tsuen
新慶村
NTW/TM/LamTeiI-21 (DS4)
Tuen Tsz Wai
屯子圍
Tsing Chuen Wai
青磚圍
NTW/TM/LamTeiI-23 (DS6)
Yan Tin Estate
欣田邨
Hong Po Road
康寶路
NTW/TM/HonPo-01
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N-TS83
TL/Sharp Devi
Ramp
MTR Ped
No Ped/Cyt
Stop/TL
STOP
Kei Lun Wai
麒麟圍
Tsz Tin Tsuen
紫田村
Siu Hong Court
兆康苑
NTW/TM/TsiLun-04
籃球場
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Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

# LAYOUT OF JUNCTION OF TSING LUN ROAD / HONG PO ROAD / LAM TEI INTERCHANGE

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Wan Chai, Hong Kong
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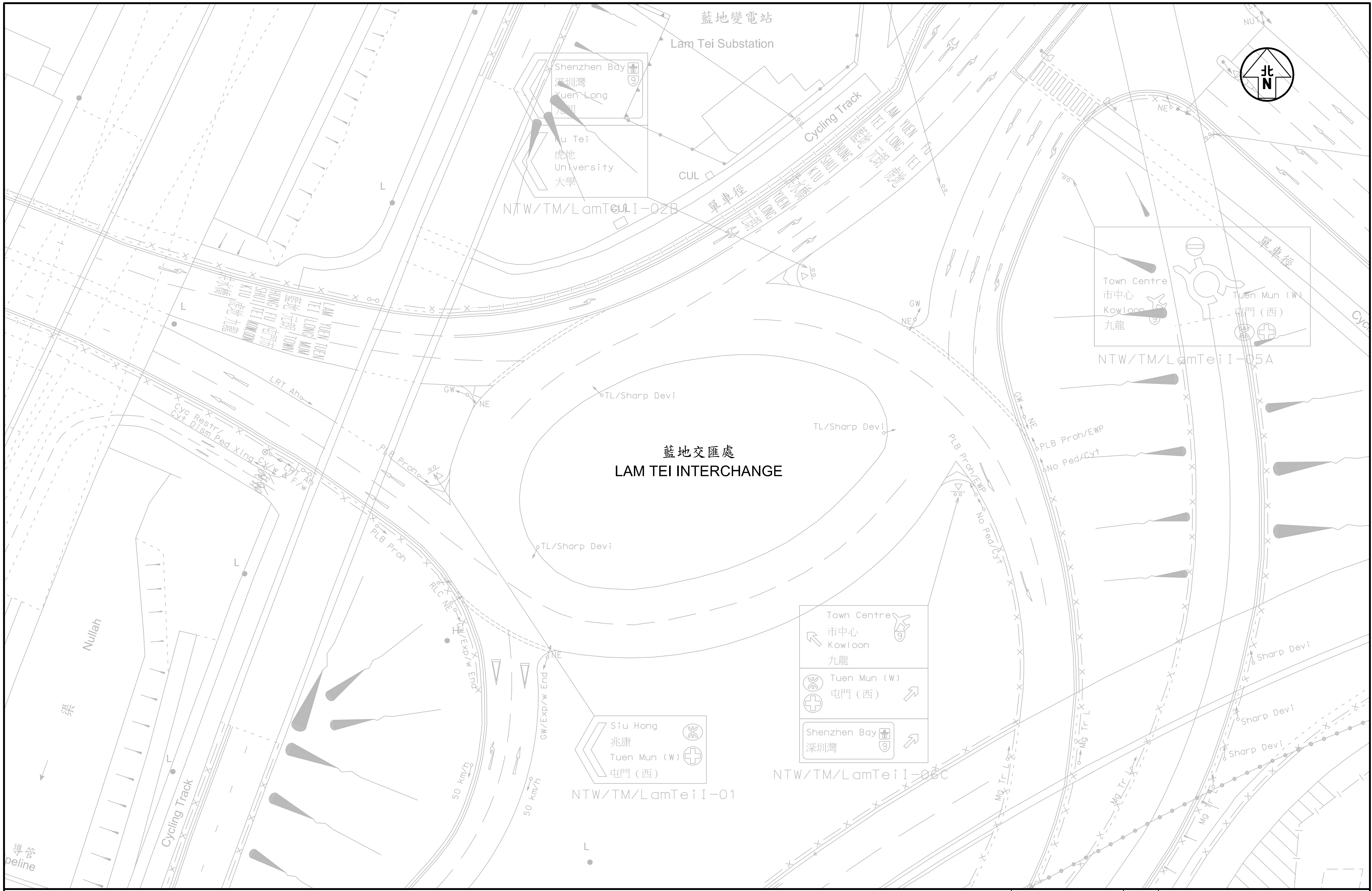
藍地變電站
Lam Tei Substation
Shenzhen Bay
深圳灣
Yuen Long
元朗
Fu Tei
虎地
University
大學
NTW/TM/LamTeiI-02B
CUL
Cycling Track
單車徑
LAM YUEN TEI LONG HUNG SHUI
藍地交匯處
LAM TEI INTERCHANGE
TL/Sharp Devi
PLB Proh
GW
NE
LRT Ahead
Cyc Restr/
Cyt Dism Ped Xing Cy/w Lt Ah F/w
Nullah
渠
導管
Pipeline
Town Centre
市中心
Kowloon
九龍
Tuen Mun (W)
屯門（西）
NTW/TM/LamTeiI-05A
PLB Proh/EWP
No Ped/Cyt
Siu Hong
兆康
NTW/TM/LamTeiI-01
NTW/TM/LamTeiI-06C
50 km/h
GW/Exp/w End
RLC NE
Mg Tr L
Sharp Devi
NUT
L
H
北
N

Project Title

PROPOSED REZONING FROM “RESIDENTIAL (GROUP B)1” ZONE TO “RESIDENTIAL (GROUP B)4” ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

# LAYOUT OF JUNCTION OF LAM TEI INTERCHANGE

Figure No. 2.6
Revision G

| Designed by | Drawn by | Checked by |
|---|---|---|
| L K W | W S W | K C |

Scale in A3: 1 : 500
Date: 20 FEB 2024

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

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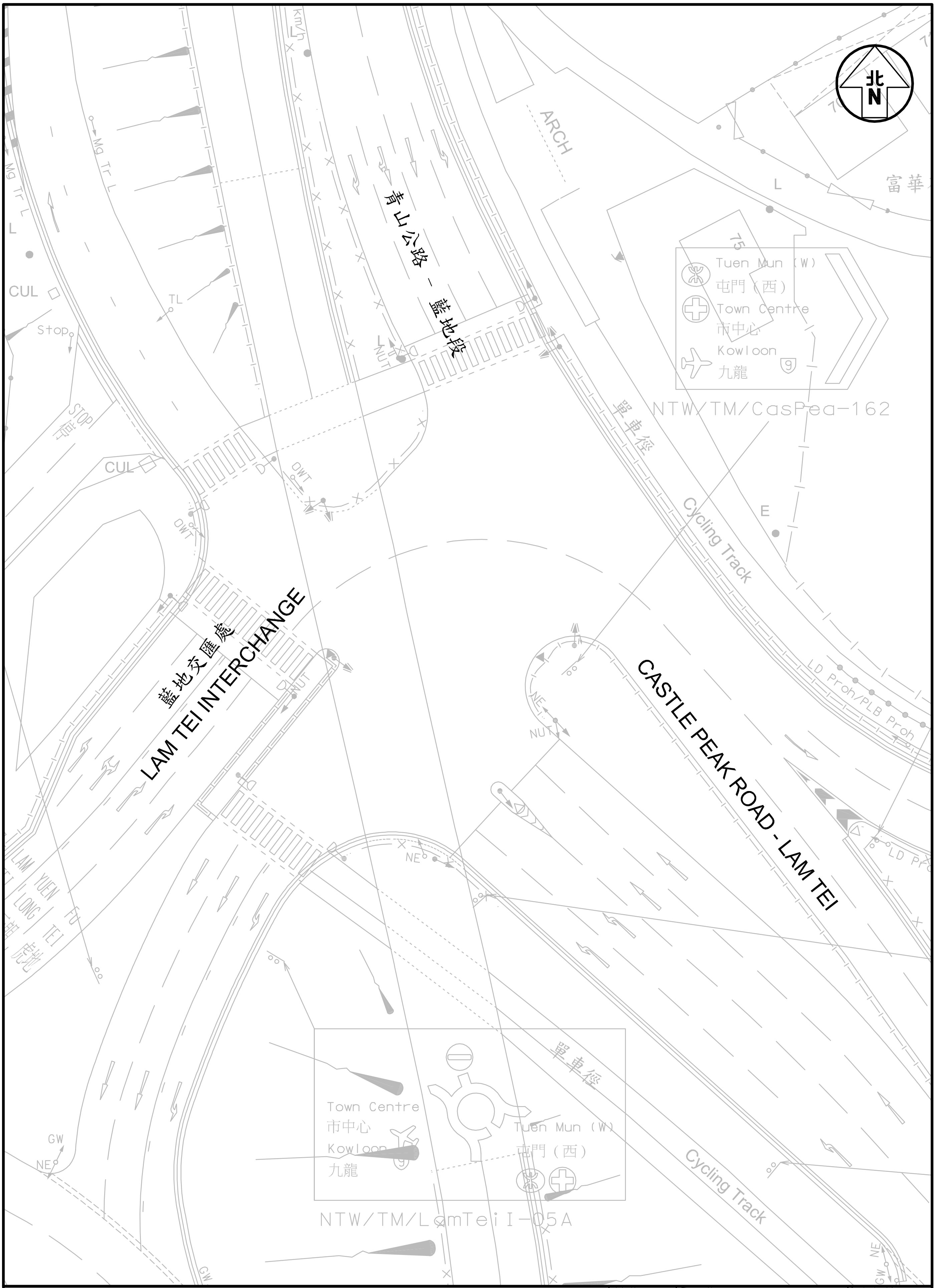
北
N
青山公路 – 藍地段
ARCH
Tuen Mun (W)
屯門(西)
Town Centre
市中心
Kowloon
九龍
9
NTW/TM/CasPea-162
富華
75
單車徑
Cycling Track
CASTLE PEAK ROAD - LAM TEI
LD Proh/PLB Proh
LD Proh
LAM TEI INTERCHANGE
藍地交匯處
CUL
Stop
STOP
停
DWT
NUT
NE
E
L
TL
Mg Tr L
GW
LAM YUEN
LONG TEI
FU
Town Centre
市中心
Kowloon
九龍
Tuen Mun (W)
屯門(西)
NTW/TM/LamTeiI-05A
單車徑
Cycling Track

| Project Title | Job No. | Figure No. | Scale in A4 |
|---|---|---|---|
| PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | J7265 | 2.7 | 1 : 500 |

| Designed by | Drawn by | Checked by | Revision | Date |
|---|---|---|---|---|
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

**LAYOUT OF JUNCTION OF**
**LAM TEI INTERCHANGE / CASTLE PEAK ROAD – LAM TEI**

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

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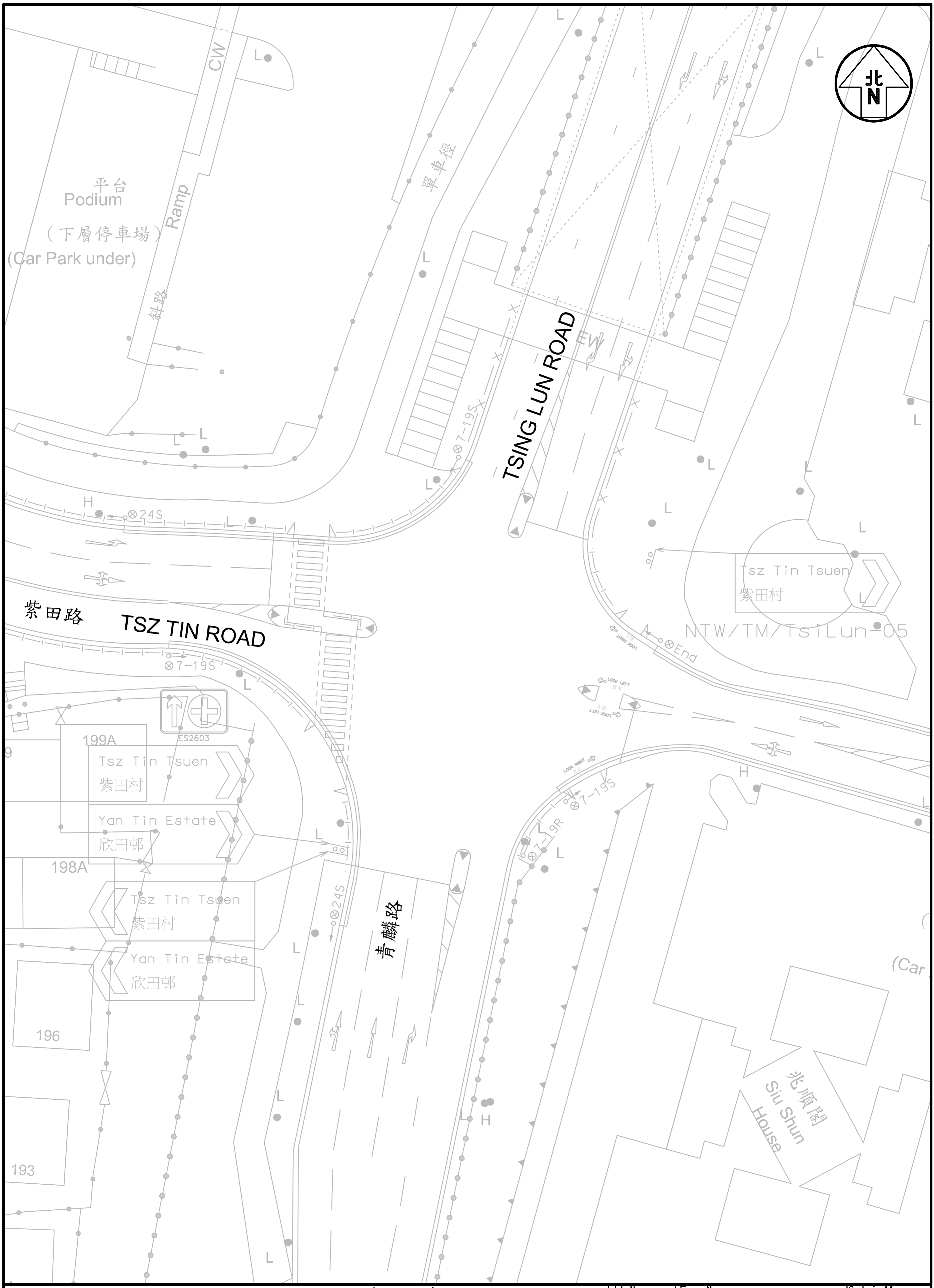

北
N
CW
平台
Podium
（下層停車場）
(Car Park under)
Ramp
斜路
單車徑
TSING LUN ROAD
EW
H
⊗24S
⊗7-19S
紫田路
TSZ TIN ROAD
ES2603
199A
Tsz Tin Tsuen
紫田村
Yan Tin Estate
欣田邨
198A
196
193
⊗24S
青麟路
⊗End
NTW/TM/TsiLun-05
LOOK LEFT
LOOK RIGHT
⊗7-19S
⊗7-19R
兆順閣
Siu Shun
House
(Car
L

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg

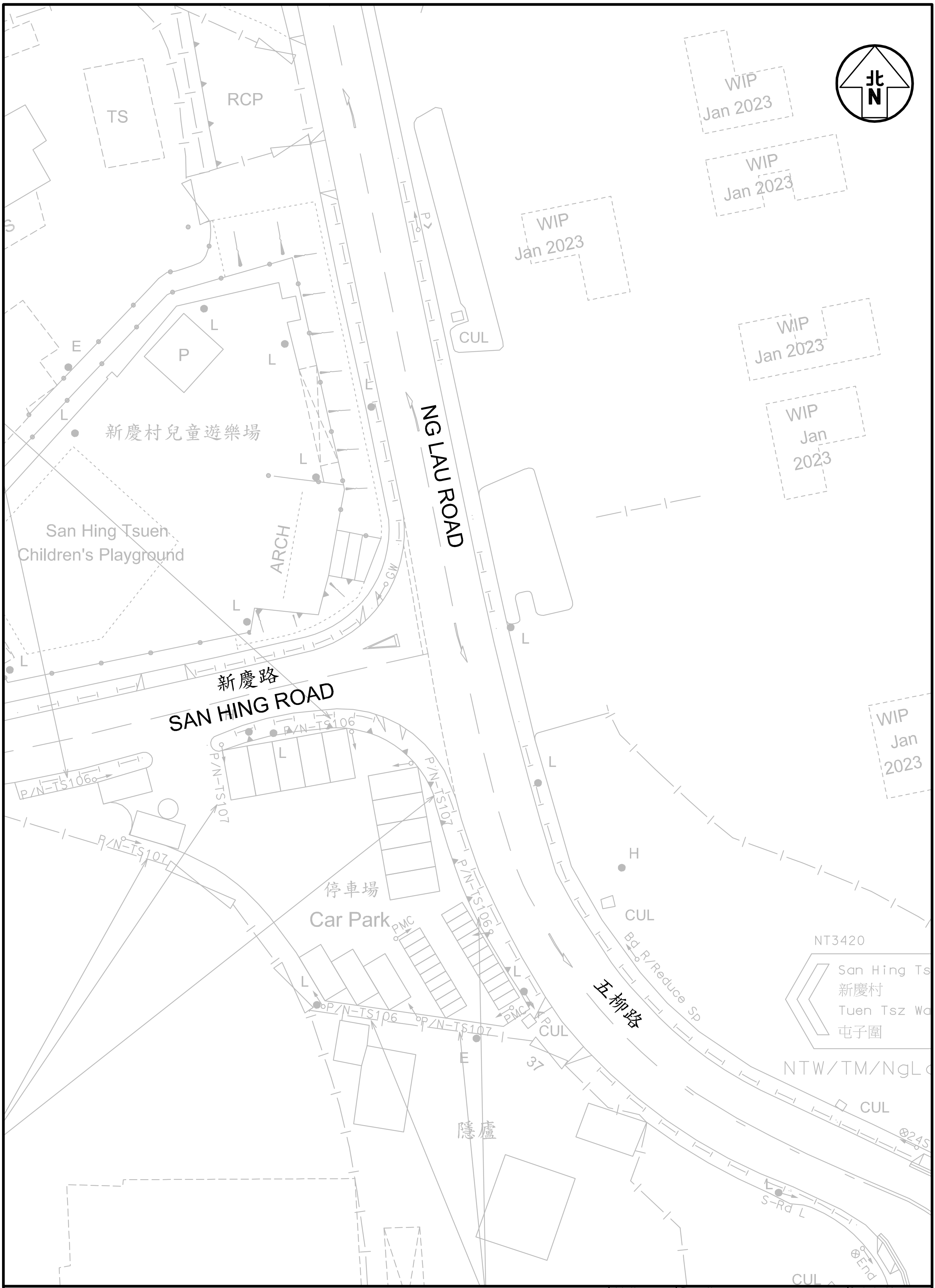
| Project Title | Job No. | Figure No. | Scale in A4 |
|---|---|---|---|
| PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | J7265 | 2.8 | 1 : 500 |

| Designed by | Drawn by | Checked by | Revision | Date |
|---|---|---|---|---|
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

**LAYOUT OF JUNCTION OF**
**TSING LUN ROAD / TSZ TIN ROAD**

**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


TS
RCP
WIP
Jan 2023
WIP
Jan 2023
WIP
Jan 2023
WIP
Jan 2023
WIP
Jan
2023
WIP
Jan
2023
北
N
CUL
P
L
E
新慶村兒童遊樂場
San Hing Tsuen
Children's Playground
ARCH
GW
NG LAU ROAD
新慶路
SAN HING ROAD
P/N-TS106
P/N-TS107
停車場
Car Park
PMC
H
CUL
Bd R/Reduce Sp
五柳路
37
隱廬
NT3420
San Hing Ts
新慶村
Tuen Tsz Wa
屯子圍
NTW/TM/NgL
CUL
24S
S-Rd L
End
CUL

Project Title PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | 2.9 | | | 1 : 500 |
| Designed by | Drawn by | Checked by | Revision | Date |
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

**LAYOUT OF JUNCTION OF**
**SAN HING ROAD / NG LAU ROAD (SOUTHERN)**

**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

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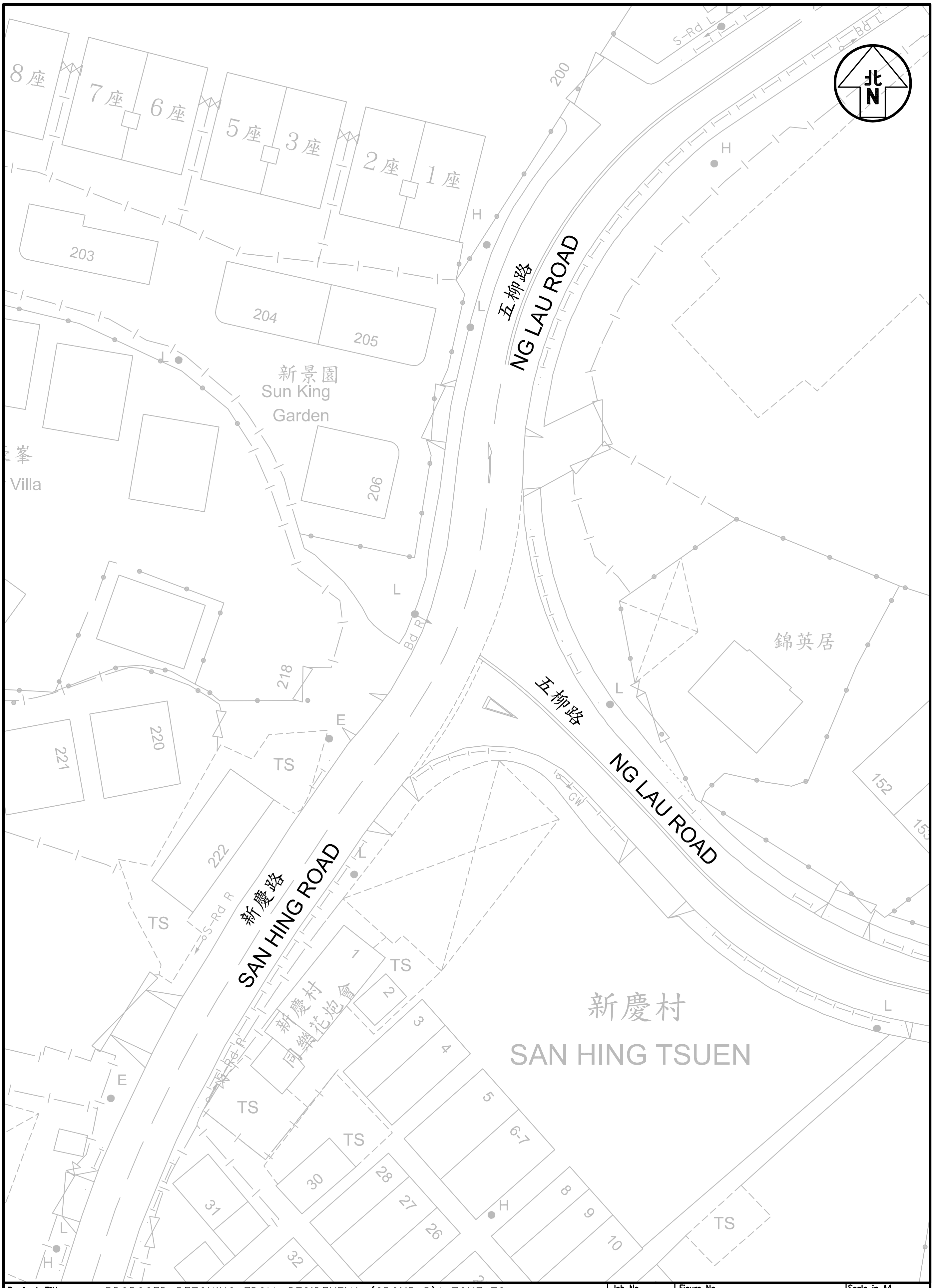
北
N
五柳路
NG LAU ROAD
新慶路
SAN HING ROAD
新景園
Sun King
Garden
錦英居
新慶村
SAN HING TSUEN
新慶村同鑼花炮會
8座
7座
6座
5座
3座
2座
1座
203
204
205
206
218
220
221
222
200
152
TS
H
L
E
GW
Bd R
S-Rd R
Villa

| | | | | | | |
|---|---|---|---|---|---|---|
| Project Title<br>PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | Job No.<br>J7265 | Figure No.<br>2.10 | | | Scale in A4<br>1 : 500 | |
| | Designed by<br>L K W | Drawn by<br>W S W | Checked by<br>K C | Revision<br>G | Date<br>20 FEB 2024 | |
| Figure Title<br>LAYOUT OF JUNCTION OF<br>SAN HING ROAD / NG LAU ROAD (NORTHERN) | CKM Asia Limited<br>Traffic and Transportation Planning Consultants<br>21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong<br>Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk | | | | | |

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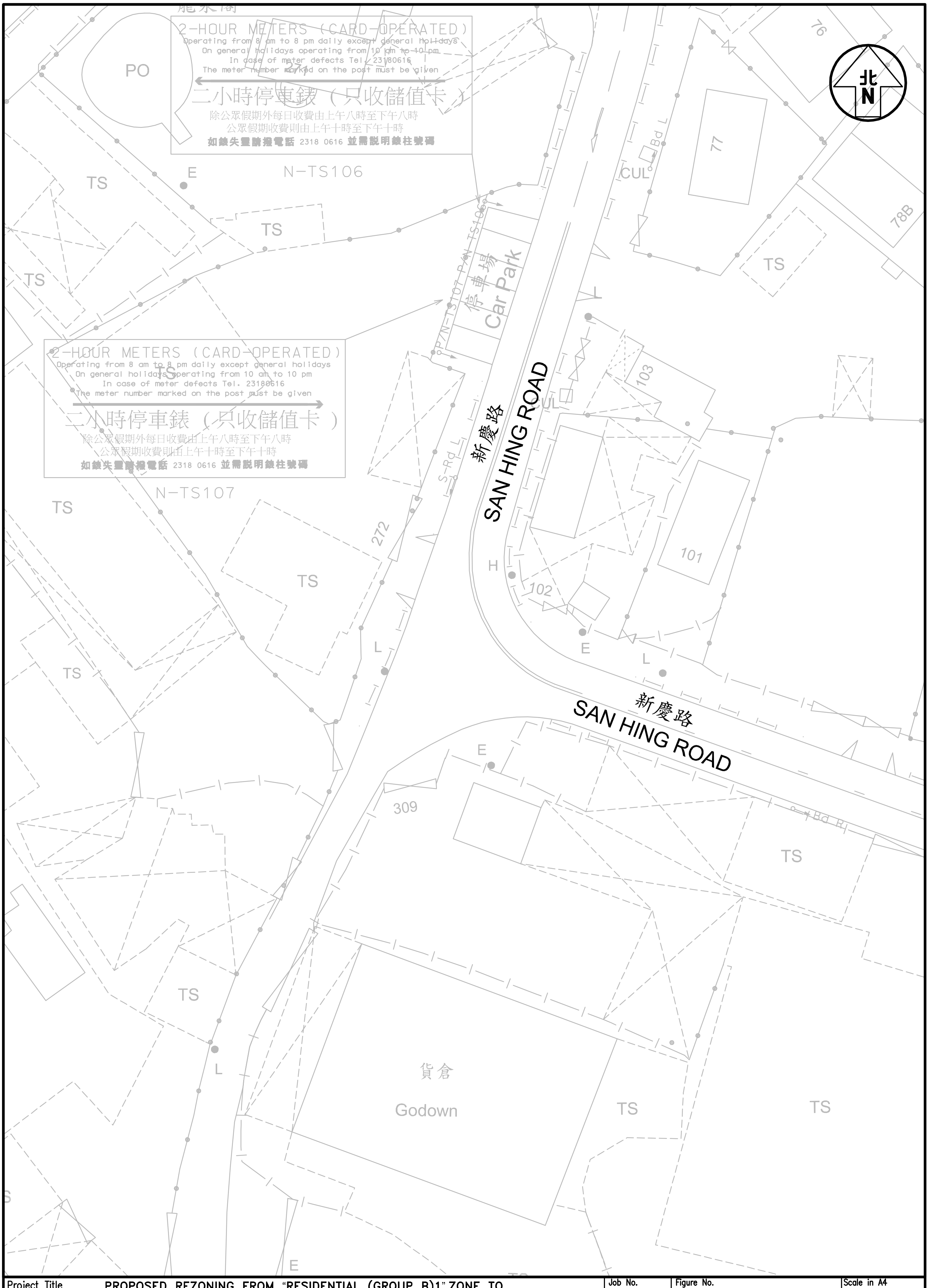
2-HOUR METERS (CARD-OPERATED)
Operating from 8 am to 8 pm daily except general holidays
On general holidays operating from 10 am to 10 pm
In case of meter defects Tel. 23180616
The meter number marked on the post must be given
二小時停車錶（只收儲值卡）
除公眾假期外每日收費由上午八時至下午八時
公眾假期收費則由上午十時至下午十時
如錶失靈請撥電話 2318 0616 並需說明錶柱號碼
PO
TS
E
N-TS106
N-TS107
停車場
Car Park
新慶路
SAN HING ROAD
CUL
Bd L
76
77
78B
103
101
102
272
309
H
L
S-Rd L
Bd R
貨倉
Godown
北
N

| Project Title | Job No. | Figure No. | Scale in A4 |
|---|---|---|---|
| PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | J7265 | 2.11 | 1 : 500 |

| Designed by | Drawn by | Checked by | Revision | Date |
|---|---|---|---|---|
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

## LAYOUT OF JUNCTION OF T-JUNCTION AT SAN HING ROAD

**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

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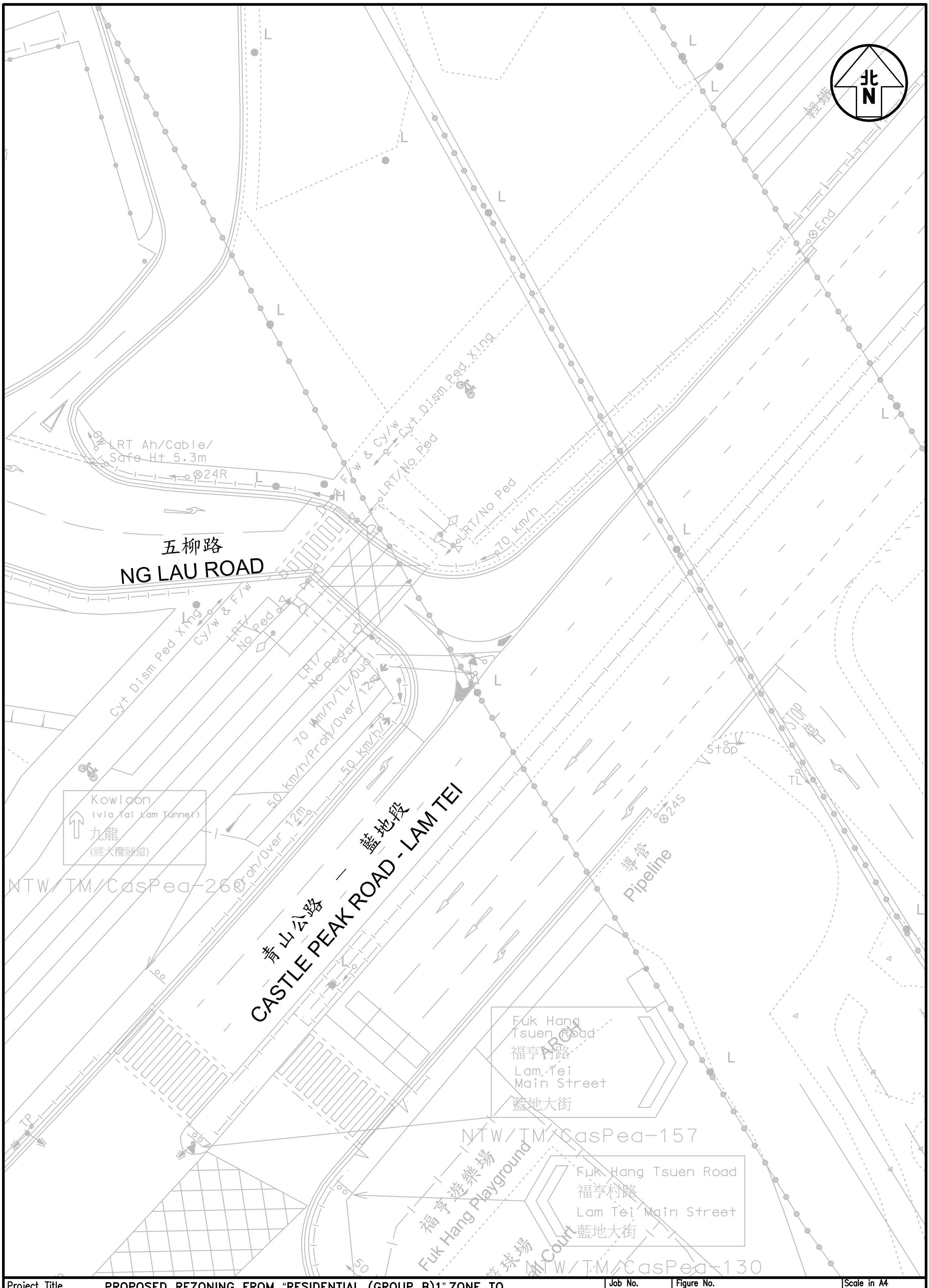

北
N
五柳路
NG LAU ROAD
青山公路 — 藍地段
CASTLE PEAK ROAD - LAM TEI
LRT Ah/Cable/
Safe Ht 5.3m
24R
Cyt Dism Ped Xing
F/w & Cy/w
LRT/No Ped
70 km/h
Cy/w & F/w
LRT/
No Ped
70 km/h/TL/Dual
50 km/h/Proh/Over 12m
50 km/h
Proh/Over 12m
Kowloon
(via Tai Lam Tunnel)
九龍
(經大欖隧道)
NTW/TM/CasPea-260
STOP
Stop
TL
24S
導管
Pipeline
Fuk Hang
Tsuen Road
福亨村路
Lam Tei
Main Street
藍地大街
NTW/TM/CasPea-157
福亨遊樂場
Fuk Hang Playground
Fuk Hang Tsuen Road
福亨村路
Lam Tei Main Street
藍地大街
NTW/TM/CasPea-130
End
TP
L

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

| Job No. | Figure No. | Scale in A4 |
|---|---|---|
| J7265 | 2.12 | 1 : 500 |

| Designed by | Drawn by | Checked by | Revision | Date |
|---|---|---|---|---|
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

## LAYOUT OF JUNCTION OF NG LAU ROAD / CASTLE PEAK ROAD - LAM TEI

**CKM Asia Limited**
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21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

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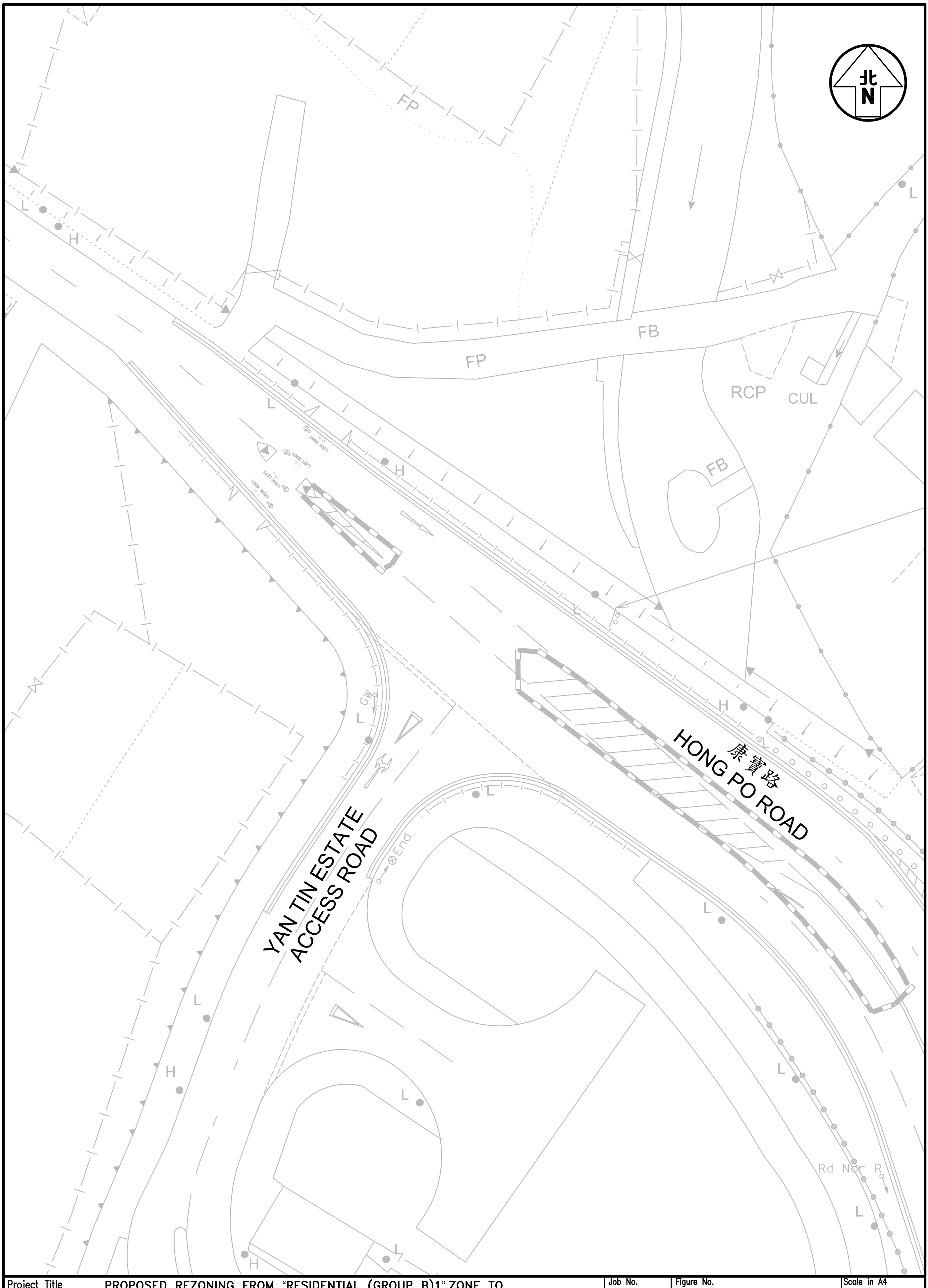

北
N
FP
FB
FP
RCP
CUL
FB
L
H
LOOK LEFT
LOOK RIGHT
GW
End
康寶路
HONG PO ROAD
YAN TIN ESTATE ACCESS ROAD
Rd Nor R

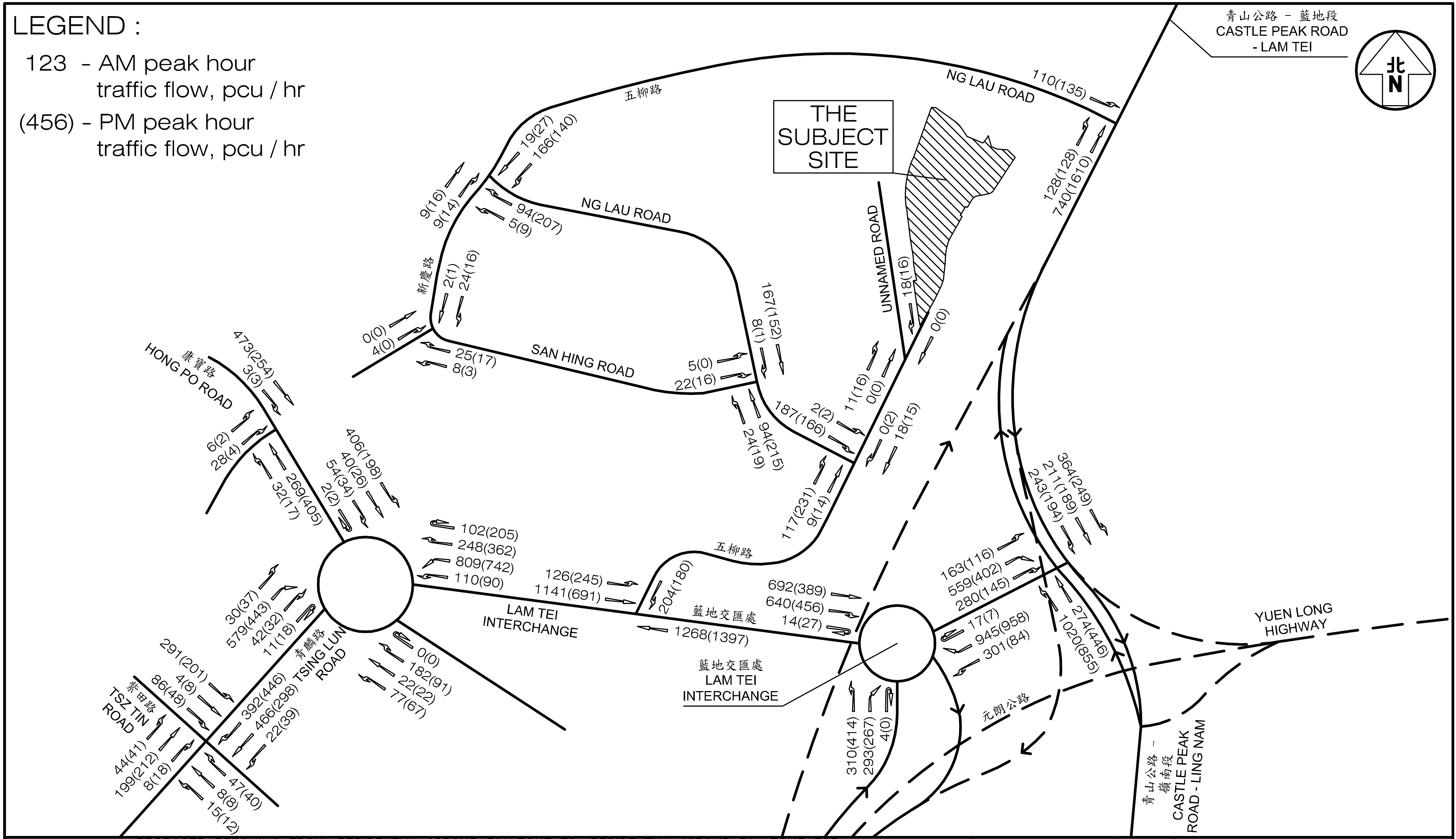
Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO
"RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO
INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT
LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title
LAYOUT OF JUNCTION OF
HONG PO ROAD / YAN TIN ESTATE ACCESS ROAD

| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | 2.13 | | | 1 : 500 |
| Designed by | Drawn by | Checked by | Revision | Date |
| L K W | W S W | K C | G | 20 FEB 2024 |

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\J7250-J7299\J7265\2024 02_R6\Fig 2.2 - 2.13 RevG.dwg


LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
青山公路 - 藍地段
CASTLE PEAK ROAD - LAM TEI
北 N
THE SUBJECT SITE
五柳路
NG LAU ROAD
110(135)
128(128)
740(1610)
19(27)
166(140)
9(16)
9(14)
94(207)
5(9)
NG LAU ROAD
UNNAMED ROAD
18(16)
0(0)
新慶路
2(1)
24(16)
167(152)
8(1)
0(0)
4(0)
25(17)
8(3)
SAN HING ROAD
5(0)
22(16)
康寶路
HONG PO ROAD
473(254)
3(3)
11(16)
0(0)
2(2)
187(166)
0(2)
18(15)
94(215)
24(19)
6(2)
28(4)
269(405)
32(17)
406(198)
40(26)
54(34)
2(2)
117(231)
9(14)
五柳路
102(205)
248(362)
809(742)
110(90)
126(245)
1141(691)
204(180)
LAM TEI INTERCHANGE
藍地交匯處
692(389)
640(456)
14(27)
1268(1397)
163(116)
559(402)
280(145)
364(249)
211(189)
243(194)
17(7)
945(958)
301(84)
274(446)
1020(855)
YUEN LONG HIGHWAY
元朗公路
30(37)
579(443)
42(32)
11(18)
青麟路
TSING LUN ROAD
0(0)
182(91)
22(22)
77(67)
藍地交匯處
LAM TEI INTERCHANGE
291(201)
4(8)
86(48)
禾田路
TSZ TIN ROAD
392(446)
466(298)
22(39)
44(41)
199(212)
8(18)
47(40)
8(8)
15(12)
310(414)
293(267)
4(0)
青山公路 - 嶺南段
CASTLE PEAK ROAD - LING NAM

| Project Title | |
|---|---|
| | PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265 |
| Figure Title | EXISTING PEAK HOUR JUNCTION FLOWS |

| Figure No. | Revision |
|---|---|
| 2.14 | I |

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| L K W | S C Y | K C |

| Scale in A4 | Date |
|---|---|
| N.T.S. | 04 OCT 2024 |

**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

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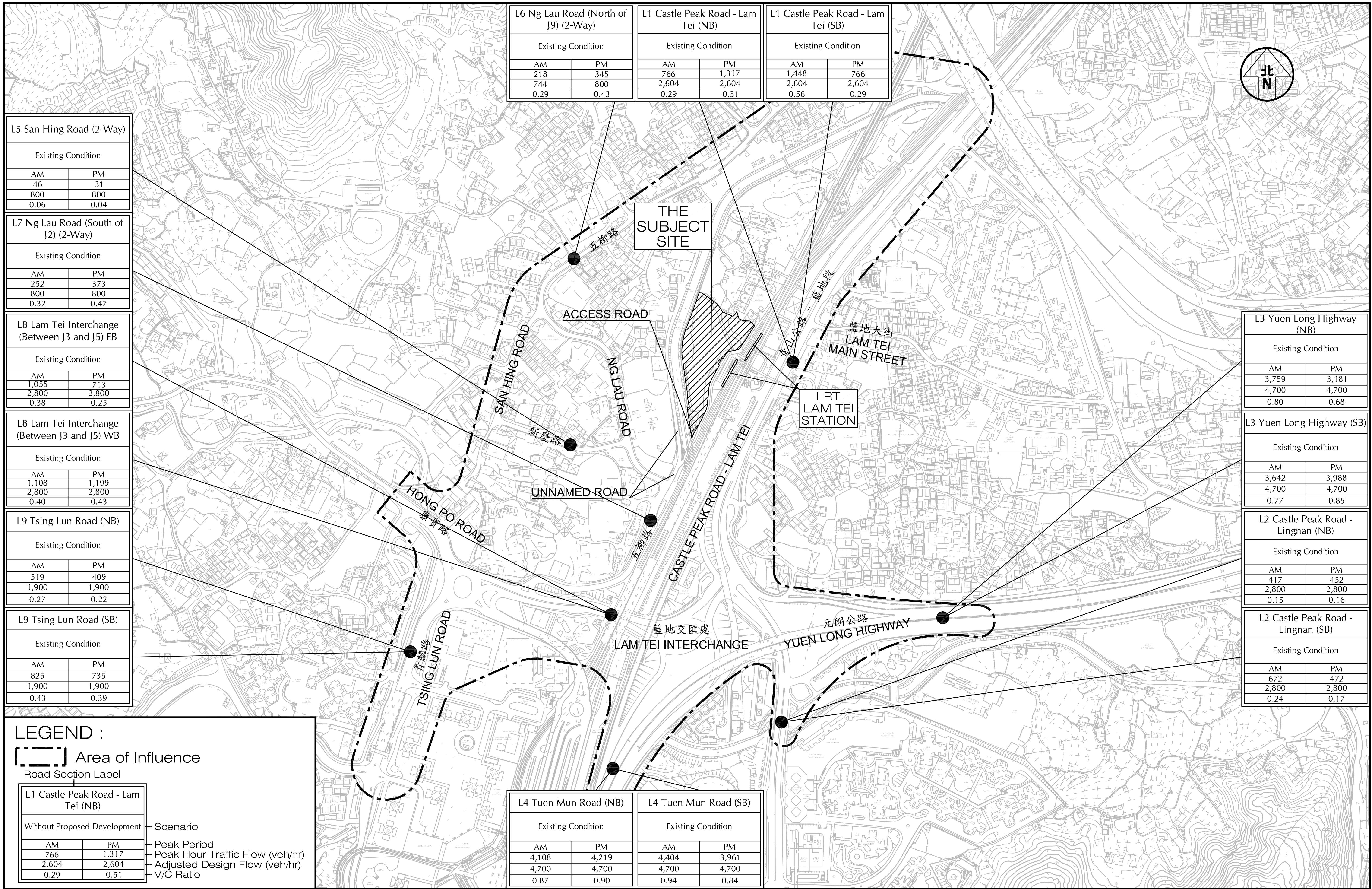


北 N
THE SUBJECT SITE
ACCESS ROAD
UNNAMED ROAD
五柳路
SAN HING ROAD
新慶路
NG LAU ROAD
HONG PO ROAD
康寶路
五柳路
CASTLE PEAK ROAD - LAM TEI
青山公路 - 藍地段
藍地大街
LAM TEI MAIN STREET
LRT LAM TEI STATION
藍地交匯處
LAM TEI INTERCHANGE
元朗公路
YUEN LONG HIGHWAY
青麟路
TSING LUN ROAD
LEGEND :
Area of Influence
Road Section Label
Scenario
Peak Period
Peak Hour Traffic Flow (veh/hr)
Adjusted Design Flow (veh/hr)
V/C Ratio

L1 Castle Peak Road - Lam Tei (NB)

Without Proposed Development

| AM | PM |
|---|---|
| 766 | 1,317 |
| 2,604 | 2,604 |
| 0.29 | 0.51 |

L6 Ng Lau Road (North of J9) (2-Way)

Existing Condition

| AM | PM |
|---|---|
| 218 | 345 |
| 744 | 800 |
| 0.29 | 0.43 |

L1 Castle Peak Road - Lam Tei (NB)

Existing Condition

| AM | PM |
|---|---|
| 766 | 1,317 |
| 2,604 | 2,604 |
| 0.29 | 0.51 |

L1 Castle Peak Road - Lam Tei (SB)

Existing Condition

| AM | PM |
|---|---|
| 1,448 | 766 |
| 2,604 | 2,604 |
| 0.56 | 0.29 |

L5 San Hing Road (2-Way)

Existing Condition

| AM | PM |
|---|---|
| 46 | 31 |
| 800 | 800 |
| 0.06 | 0.04 |

L7 Ng Lau Road (South of J2) (2-Way)

Existing Condition

| AM | PM |
|---|---|
| 252 | 373 |
| 800 | 800 |
| 0.32 | 0.47 |

L8 Lam Tei Interchange (Between J3 and J5) EB

Existing Condition

| AM | PM |
|---|---|
| 1,055 | 713 |
| 2,800 | 2,800 |
| 0.38 | 0.25 |

L8 Lam Tei Interchange (Between J3 and J5) WB

Existing Condition

| AM | PM |
|---|---|
| 1,108 | 1,199 |
| 2,800 | 2,800 |
| 0.40 | 0.43 |

L9 Tsing Lun Road (NB)

Existing Condition

| AM | PM |
|---|---|
| 519 | 409 |
| 1,900 | 1,900 |
| 0.27 | 0.22 |

L9 Tsing Lun Road (SB)

Existing Condition

| AM | PM |
|---|---|
| 825 | 735 |
| 1,900 | 1,900 |
| 0.43 | 0.39 |

L3 Yuen Long Highway (NB)

Existing Condition

| AM | PM |
|---|---|
| 3,759 | 3,181 |
| 4,700 | 4,700 |
| 0.80 | 0.68 |

L3 Yuen Long Highway (SB)

Existing Condition

| AM | PM |
|---|---|
| 3,642 | 3,988 |
| 4,700 | 4,700 |
| 0.77 | 0.85 |

L2 Castle Peak Road - Lingnan (NB)

Existing Condition

| AM | PM |
|---|---|
| 417 | 452 |
| 2,800 | 2,800 |
| 0.15 | 0.16 |

L2 Castle Peak Road - Lingnan (SB)

Existing Condition

| AM | PM |
|---|---|
| 672 | 472 |
| 2,800 | 2,800 |
| 0.24 | 0.17 |

L4 Tuen Mun Road (NB)

Existing Condition

| AM | PM |
|---|---|
| 4,108 | 4,219 |
| 4,700 | 4,700 |
| 0.87 | 0.90 |

L4 Tuen Mun Road (SB)

Existing Condition

| AM | PM |
|---|---|
| 4,404 | 3,961 |
| 4,700 | 4,700 |
| 0.94 | 0.84 |

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

EXISTING PEAK HOUR LINK FLOWS

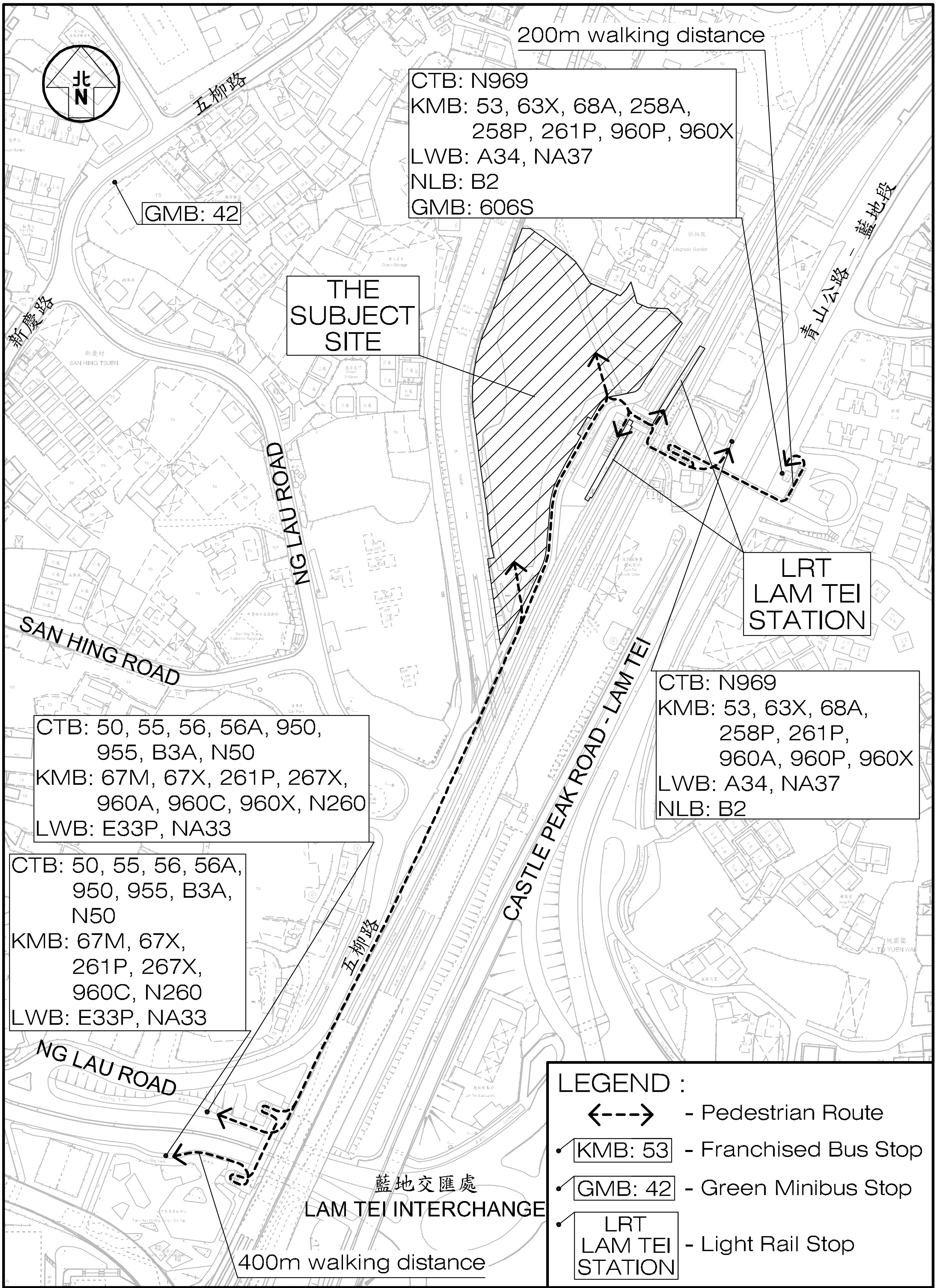
| Figure No. | Revision |
|---|---|
| 2.15 | I |

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

| Scale in A3 | Date |
|---|---|
| 1 : 5,000 | 04 OCT 2024 |

**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\J7250-J7299\J7265\2024 10\Fig 2.15 RevI.dwg


北
N
五柳路
200m walking distance
CTB: N969
KMB: 53, 63X, 68A, 258A, 258P, 261P, 960P, 960X
LWB: A34, NA37
NLB: B2
GMB: 606S
GMB: 42
新慶路
新慶村
SAN HING TSUEN
THE SUBJECT SITE
青山公路 – 藍地段
NG LAU ROAD
SAN HING ROAD
LRT LAM TEI STATION
CTB: N969
KMB: 53, 63X, 68A, 258P, 261P, 960A, 960P, 960X
LWB: A34, NA37
NLB: B2
CTB: 50, 55, 56, 56A, 950, 955, B3A, N50
KMB: 67M, 67X, 261P, 267X, 960A, 960C, 960X, N260
LWB: E33P, NA33
CTB: 50, 55, 56, 56A, 950, 955, B3A, N50
KMB: 67M, 67X, 261P, 267X, 960C, N260
LWB: E33P, NA33
CASTLE PEAK ROAD - LAM TEI
五柳路
NG LAU ROAD
藍地交匯處
LAM TEI INTERCHANGE
400m walking distance
TO YUEN WAI
LEGEND :
- Pedestrian Route
KMB: 53
- Franchised Bus Stop
GMB: 42
- Green Minibus Stop
LRT LAM TEI STATION
- Light Rail Stop

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

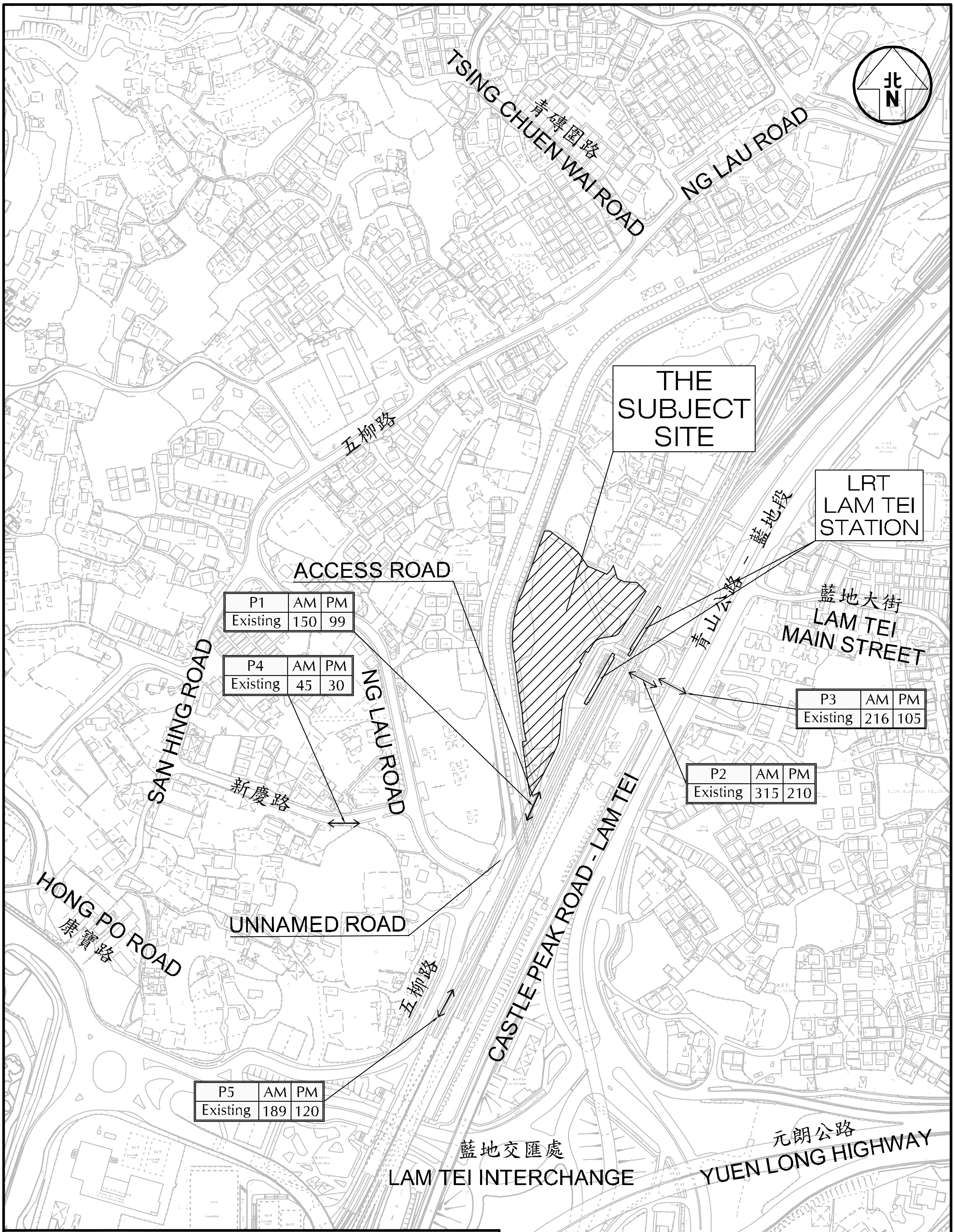
Figure Title

ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | 2.16 | | | 1 : 2,500 |
| Designed by | Drawn by | Checked by | Revision | Date |
| L K W | S C Y | K C | I | 04 OCT 2024 |

**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\J7250-J7299\J7265\2024 10\Fig 2.16 RevI.dwg


TSING CHUEN WAI ROAD
青磚圍路
NG LAU ROAD
五柳路
THE SUBJECT SITE
LRT LAM TEI STATION
青山公路 － 藍地段
藍地大街
LAM TEI MAIN STREET
ACCESS ROAD
P1 AM PM
Existing 150 99
P4 AM PM
Existing 45 30
NG LAU ROAD
SAN HING ROAD
新慶路
P3 AM PM
Existing 216 105
P2 AM PM
Existing 315 210
CASTLE PEAK ROAD - LAM TEI
HONG PO ROAD
康寶路
UNNAMED ROAD
五柳路
P5 AM PM
Existing 189 120
藍地交匯處
LAM TEI INTERCHANGE
元朗公路
YUEN LONG HIGHWAY
北
N

LEGEND :

123 - Peak hour pedestrian two-way flow

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title
EXISTING PEAK HOUR PEDESTRIAN FLOWS

| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | 2.17 | | | 1 : 4,000 |
| Designed by | Drawn by | Checked by | Revision | Date |
| K K Y | S C Y | K C | I | 04 OCT 2024 |

**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

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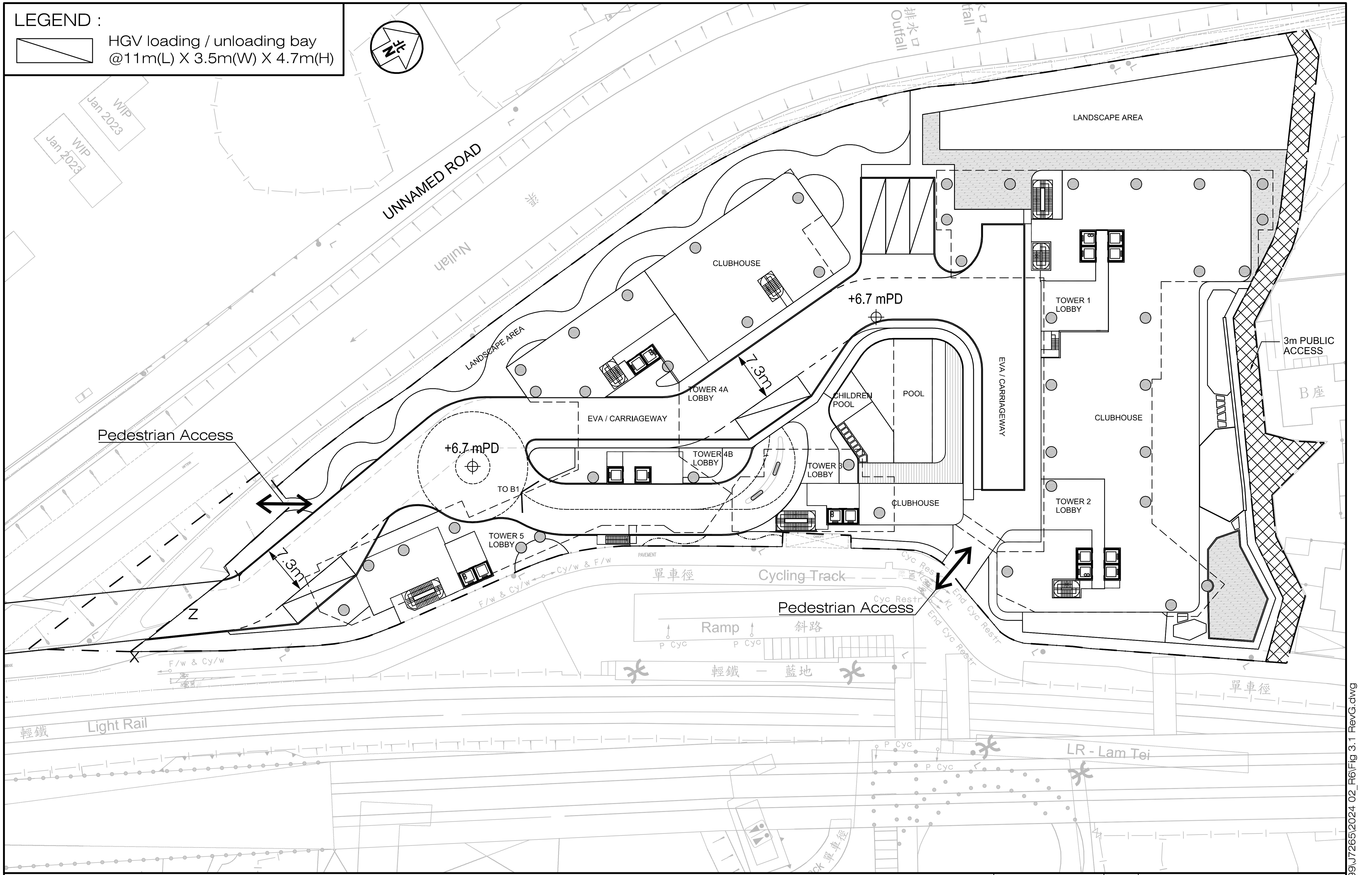
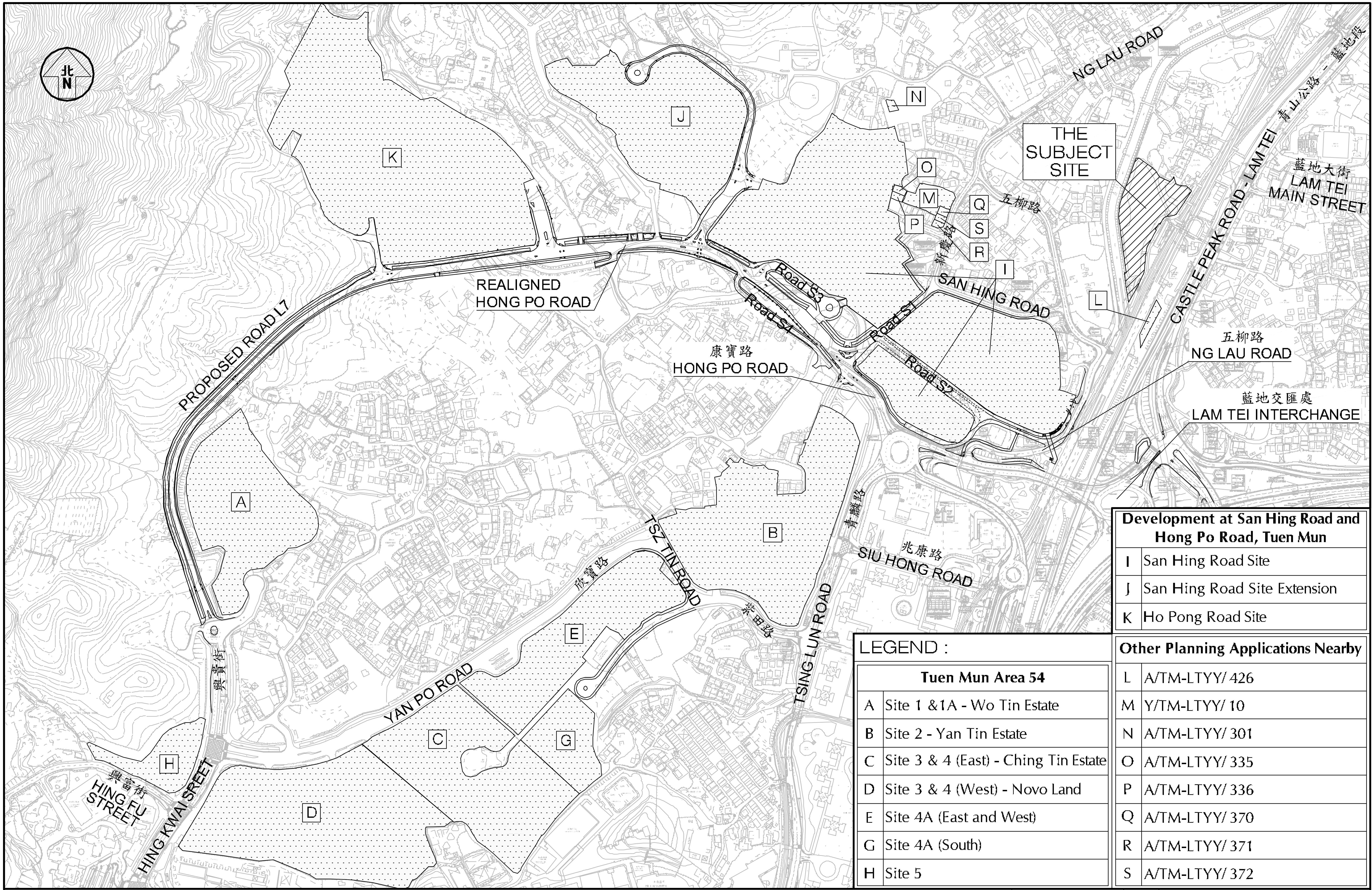

LEGEND :
HGV loading / unloading bay @11m(L) X 3.5m(W) X 4.7m(H)
北 N
UNNAMED ROAD
Nullah
排水口 Outfall
WIP Jan 2023
WIP Jan 2023
LANDSCAPE AREA
LANDSCAPE AREA
CLUBHOUSE
+6.7 mPD
+6.7 mPD
7.3m
7.3m
TOWER 4A LOBBY
EVA / CARRIAGEWAY
EVA / CARRIAGEWAY
CHILDREN POOL
POOL
TOWER 4B LOBBY
TOWER 3 LOBBY
CLUBHOUSE
CLUBHOUSE
TOWER 1 LOBBY
TOWER 2 LOBBY
TO B1
TOWER 5 LOBBY
3m PUBLIC ACCESS
B座
Pedestrian Access
Pedestrian Access
PAVEMENT
單車徑 Cycling Track
F/w & Cy/w
Cy/w & F/w
Cyc Restr
End Cyc Restr
Ramp 斜路
P Cyc
輕鐵 — 藍地
單車徑
輕鐵 Light Rail
LR - Lam Tei
X
Y
Z

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig 3.1 RevG.dwg

| | | | |
|---|---|---|---|
| Project Title | PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265 | Figure No. 3.1 | Revision G |
| Figure Title | MASTER LAYOUT PLAN | Designed by L K W | Drawn by W S W |
| | | Checked by K C | Scale in A3 1 : 500 |
| | | Date 20 FEB 2024 | |

**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


北
N
THE SUBJECT SITE
NG LAU ROAD
青山公路 – 藍地段
CASTLE PEAK ROAD - LAM TEI
藍地大街
LAM TEI
MAIN STREET
五柳路
NG LAU ROAD
藍地交匯處
LAM TEI INTERCHANGE
五柳路
新慶路
J
K
N
O
M
Q
P
S
R
I
L
A
B
C
D
E
G
H
REALIGNED
HONG PO ROAD
PROPOSED ROAD L7
Road S3
Road S4
Road S1
Road S2
SAN HING ROAD
康寶路
HONG PO ROAD
TSZ TIN ROAD
欣寶路
紫田路
YAN PO ROAD
青麟路
TSING LUN ROAD
兆康路
SIU HONG ROAD
興貴街
HING KWAI SREET
興富街
HING FU
STREET

**Development at San Hing Road and Hong Po Road, Tuen Mun**

| | |
|---|---|
| I | San Hing Road Site |
| J | San Hing Road Site Extension |
| K | Ho Pong Road Site |

**Other Planning Applications Nearby**

| | |
|---|---|
| L | A/TM-LTYY/ 426 |
| M | Y/TM-LTYY/ 10 |
| N | A/TM-LTYY/ 301 |
| O | A/TM-LTYY/ 335 |
| P | A/TM-LTYY/ 336 |
| Q | A/TM-LTYY/ 370 |
| R | A/TM-LTYY/ 371 |
| S | A/TM-LTYY/ 372 |

LEGEND :

**Tuen Mun Area 54**

| | |
|---|---|
| A | Site 1 &1A - Wo Tin Estate |
| B | Site 2 - Yan Tin Estate |
| C | Site 3 & 4 (East) - Ching Tin Estate |
| D | Site 3 & 4 (West) - Novo Land |
| E | Site 4A (East and West) |
| G | Site 4A (South) |
| H | Site 5 |

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

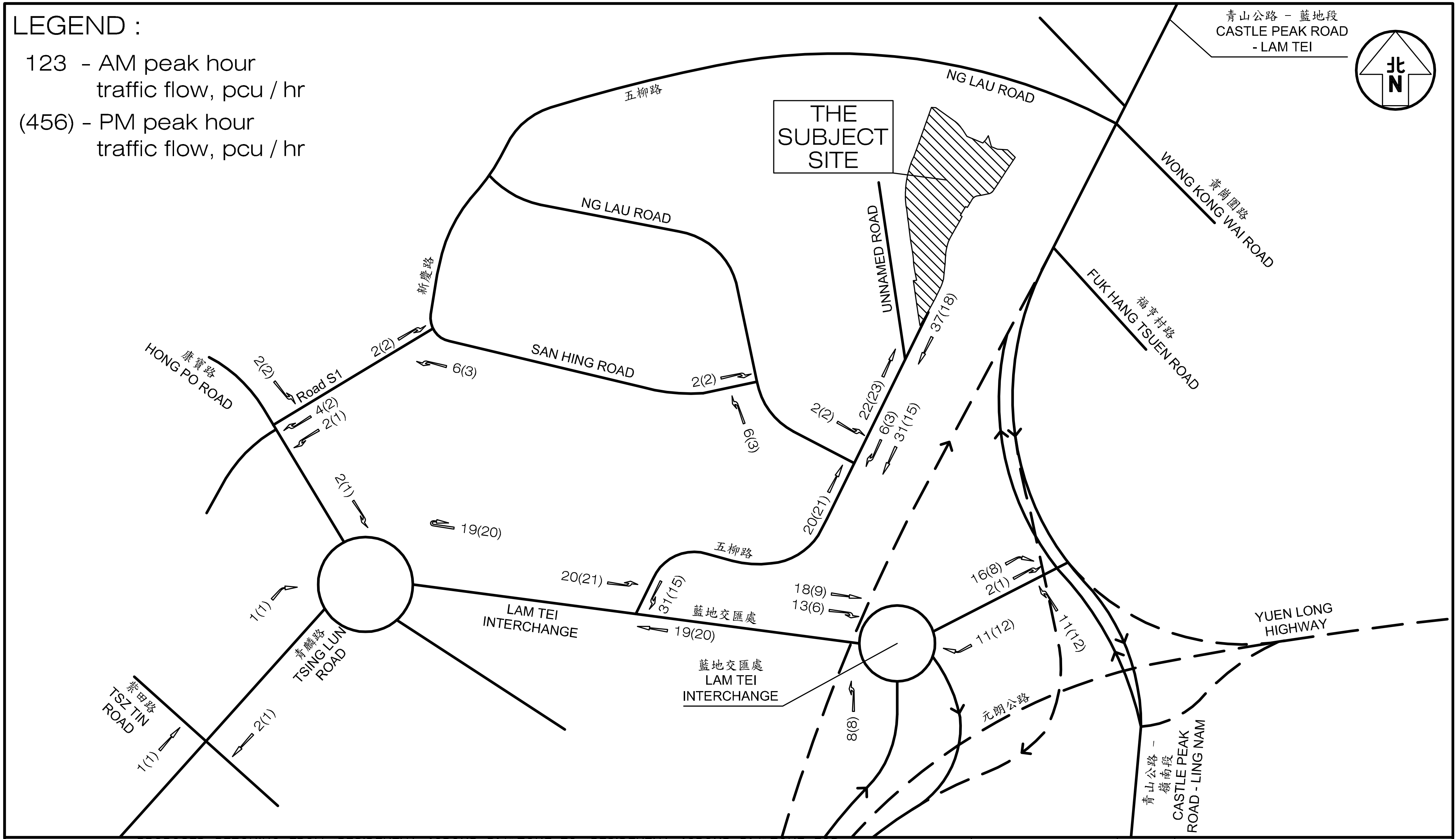
J7265

Figure Title
THE MAJOR ADDITIONAL PLANNED / COMMITTED DEVELOPMENTS NEAR THE SUBJECT SITE

| Figure No. | | Revision |
|---|---|---|
| 4.1 | | G |
| Designed by | Drawn by | Checked by |
| L K W | W S W | K C |
| Scale in A3 | Date | |
| 1 : 5,000 | 20 FEB 2024 | |

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\J7250-J7299\J7265\2024 01_R6\Fig 4.1 RevG.dwg


LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
青山公路 – 藍地段
CASTLE PEAK ROAD - LAM TEI
北
N
NG LAU ROAD
五柳路
THE SUBJECT SITE
WONG KONG WAI ROAD
黃崗圍路
NG LAU ROAD
UNNAMED ROAD
新慶路
FUK HANG TSUEN ROAD
福亨村路
HONG PO ROAD
康寶路
Road S1
SAN HING ROAD
2(2)
2(2)
6(3)
2(2)
37(18)
22(23)
2(2)
6(3)
31(15)
4(2)
2(1)
6(3)
2(1)
19(20)
20(21)
五柳路
20(21)
31(15)
18(9)
13(6)
16(8)
2(1)
11(12)
11(12)
LAM TEI INTERCHANGE
藍地交匯處
19(20)
藍地交匯處
LAM TEI INTERCHANGE
1(1)
青麟路
TSING LUN ROAD
屯田路
TSZ TIN ROAD
2(1)
1(1)
8(8)
元朗公路
YUEN LONG HIGHWAY
青山公路 – 嶺南段
CASTLE PEAK ROAD - LING NAM

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

# TRAFFIC GENERATION OF APPROVED SCHEME

| Figure No. | Revision |
|---|---|
| 4.2 | I |

| Designed by | Drawn by | Checked by |
|---|---|---|
| L K W | S C Y | K C |

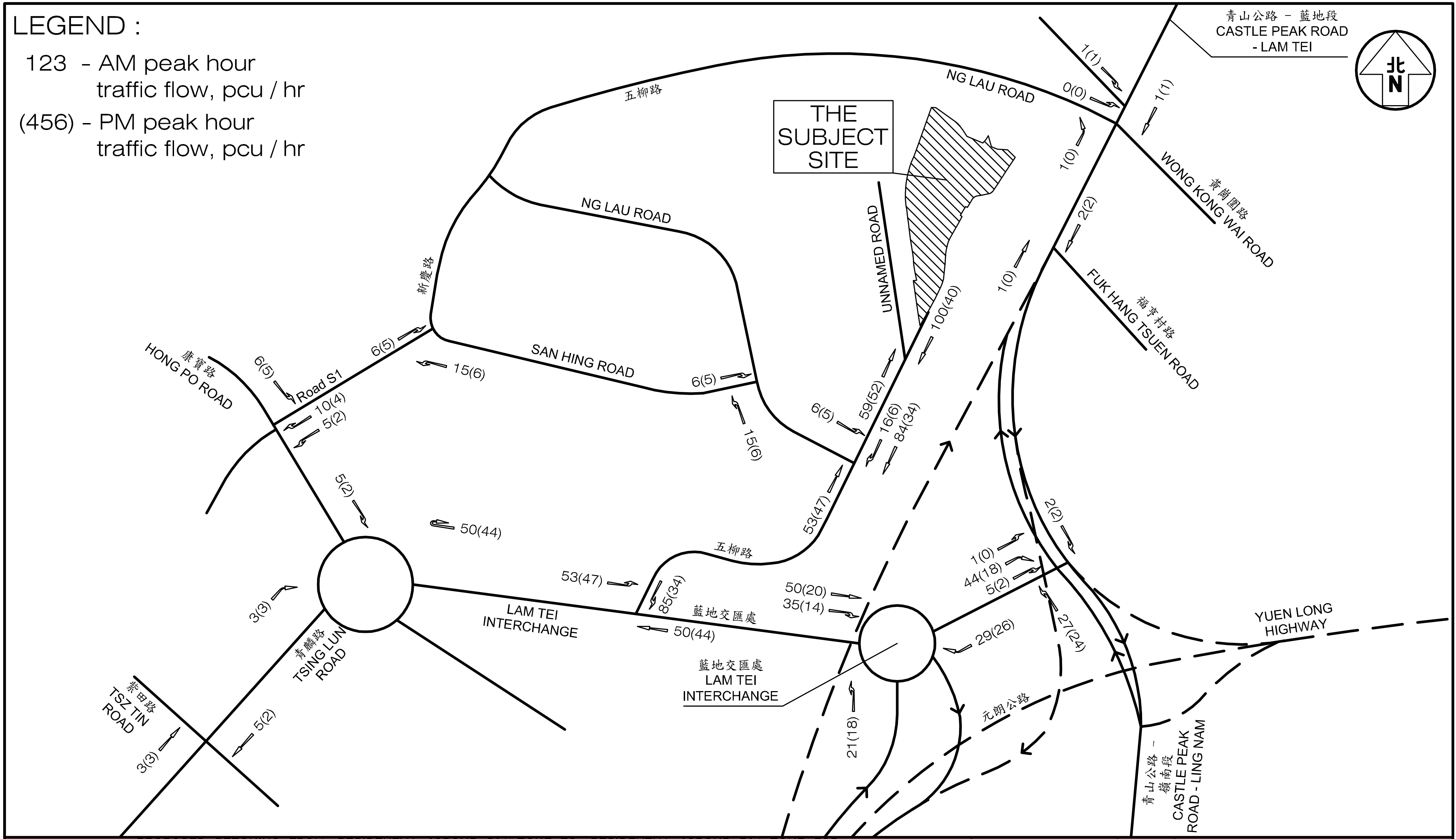
| Scale in A4 | Date |
|---|---|
| N.T.S. | 04 OCT 2024 |

**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\J7250-J7299\J7265\2024 10\Fig 4.2 Revl.dwg


LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
THE SUBJECT SITE
北 N
青山公路 - 藍地段
CASTLE PEAK ROAD - LAM TEI
NG LAU ROAD
五柳路
NG LAU ROAD
SAN HING ROAD
新慶路
UNNAMED ROAD
WONG KONG WAI ROAD
黃崗圍路
FUK HANG TSUEN ROAD
福亨村路
HONG PO ROAD
康寶路
Road S1
TSING LUN ROAD
青麟路
TSZ TIN ROAD
紫田路
LAM TEI INTERCHANGE
藍地交匯處
藍地交匯處
LAM TEI INTERCHANGE
五柳路
YUEN LONG HIGHWAY
元朗公路
青山公路 - 嶺南段
CASTLE PEAK ROAD - LING NAM
1(1)
0(0)
1(1)
1(0)
2(2)
1(0)
100(40)
6(5)
15(6)
6(5)
6(5)
10(4)
5(2)
6(5)
15(6)
6(5)
59(52)
16(6)
84(34)
53(47)
5(2)
50(44)
53(47)
85(34)
50(44)
50(20)
35(14)
1(0)
44(18)
5(2)
2(2)
27(24)
29(26)
21(18)
3(3)
5(2)
3(3)

| Project Title | PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) J7265 |
|---|---|
| Figure Title | TRAFFIC GENERATION OF PROPOSED DEVELOPMENT |

| Figure No. | Revision |
|---|---|
| 4.3 | l |

| Designed by | Drawn by | Checked by |
|---|---|---|
| L K W | S C Y | K C |

| Scale in A4 | Date |
|---|---|
| N.T.S. | 04 OCT 2024 |

**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

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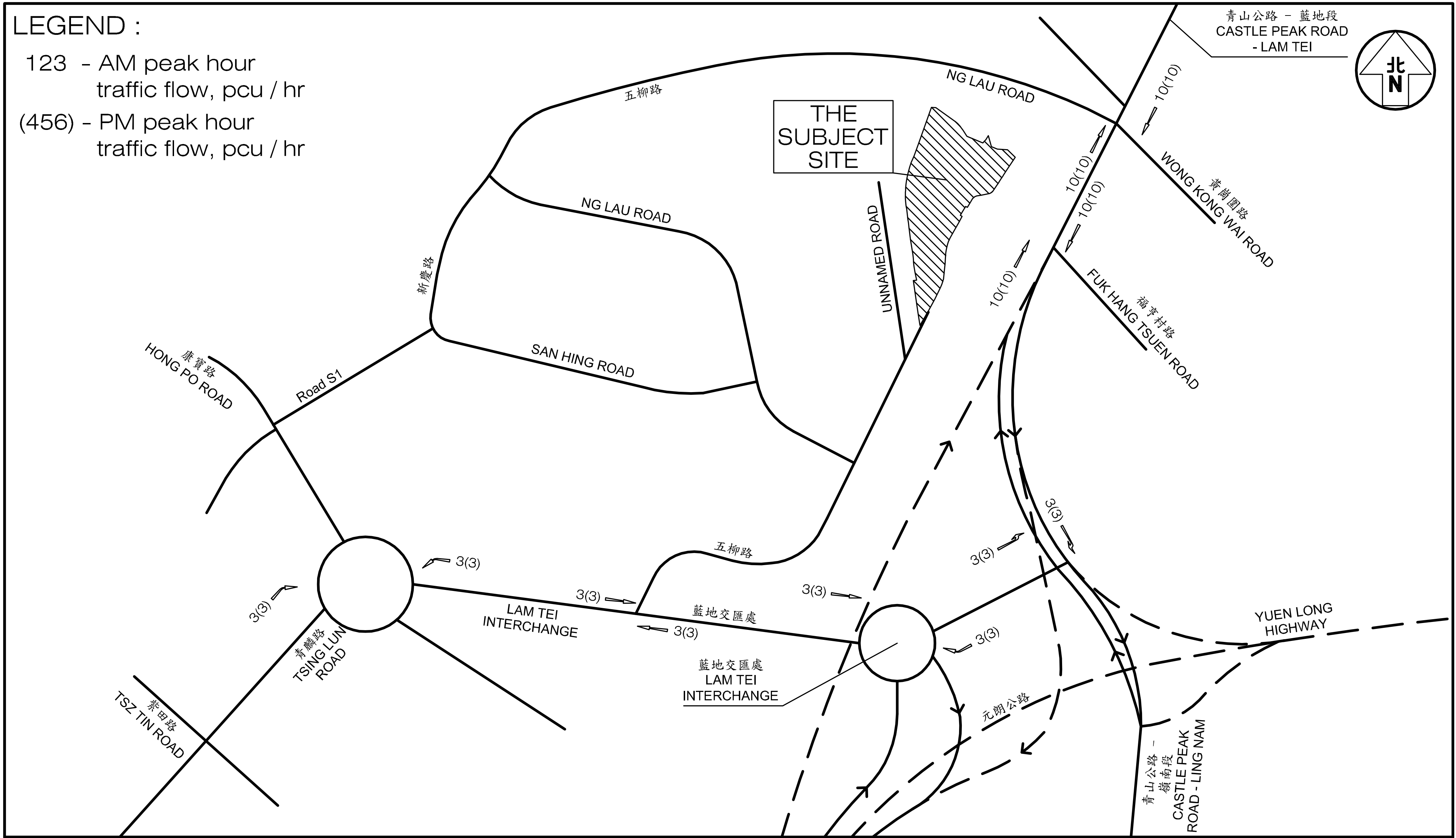
LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
青山公路 – 藍地段
CASTLE PEAK ROAD - LAM TEI
北
N
THE SUBJECT SITE
NG LAU ROAD
五柳路
NG LAU ROAD
UNNAMED ROAD
新慶路
SAN HING ROAD
Road S1
康寶路
HONG PO ROAD
黃崗圍路
WONG KONG WAI ROAD
福亨村路
FUK HANG TSUEN ROAD
10(10)
10(10)
10(10)
10(10)
3(3)
3(3)
3(3)
3(3)
3(3)
3(3)
3(3)
3(3)
3(3)
五柳路
LAM TEI INTERCHANGE
藍地交匯處
藍地交匯處
LAM TEI INTERCHANGE
青麟路
TSING LUN ROAD
紫田路
TSZ TIN ROAD
元朗公路
YUEN LONG HIGHWAY
青山公路 – 嶺南段
CASTLE PEAK ROAD - LING NAM

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

YEAR 2033 PROPOSED ADDITIONAL BUS TRIPS

| | | | |
|---|---|---|---|
| Figure No. 4.4 | | Revision I | |
| Designed by L K W | Drawn by S C Y | Checked by K C | |
| Scale in A4 N.T.S. | Date 04 OCT 2024 | | |

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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

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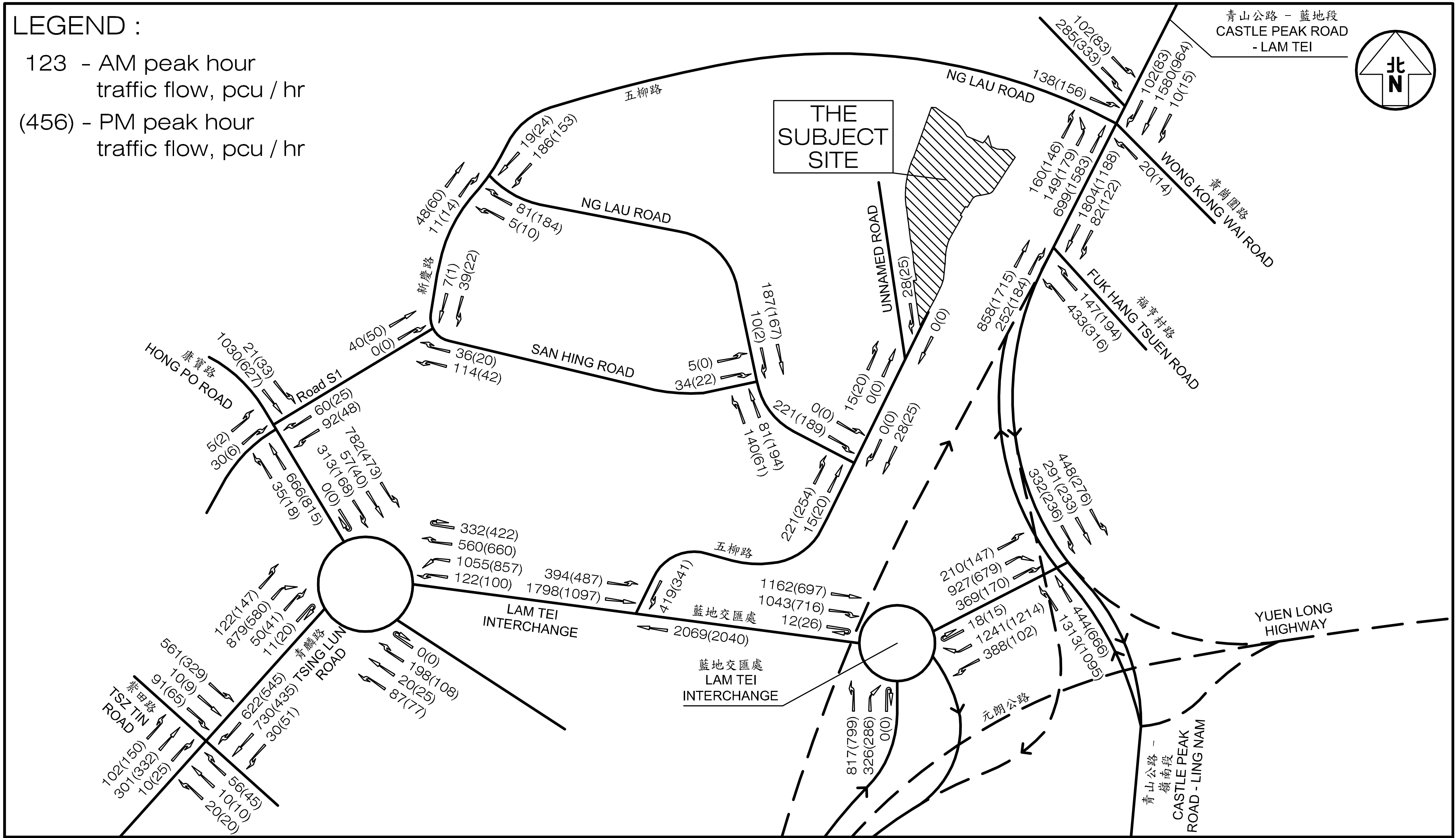
LEGEND :
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(456) - PM peak hour traffic flow, pcu / hr
青山公路 - 藍地段
CASTLE PEAK ROAD - LAM TEI
北
N
THE SUBJECT SITE
NG LAU ROAD
五柳路
102(83)
285(333)
138(156)
102(83)
1580(964)
10(15)
20(14)
WONG KONG WAI ROAD
黃崗圍路
160(146)
149(179)
699(1583)
1804(1188)
82(122)
UNNAMED ROAD
28(25)
0(0)
858(1715)
252(184)
147(194)
433(316)
FUK HANG TSUEN ROAD
福亨村路
19(24)
186(153)
48(60)
11(14)
81(184)
5(10)
NG LAU ROAD
新慶路
7(1)
39(22)
40(50)
0(0)
36(20)
114(42)
SAN HING ROAD
187(167)
10(2)
5(0)
34(22)
81(194)
140(61)
221(189)
0(0)
15(20)
0(0)
0(0)
28(25)
221(254)
15(20)
21(33)
1030(627)
康寶路
HONG PO ROAD
Road S1
60(25)
92(48)
5(2)
30(6)
782(473)
57(40)
313(168)
0(0)
666(815)
35(18)
332(422)
560(660)
1055(857)
122(100)
394(487)
1798(1097)
419(341)
五柳路
LAM TEI INTERCHANGE
1162(697)
1043(716)
12(26)
藍地交匯處
2069(2040)
藍地交匯處
LAM TEI INTERCHANGE
448(276)
291(233)
332(236)
210(147)
927(679)
369(170)
18(15)
1241(1214)
388(102)
444(666)
1313(1095)
YUEN LONG HIGHWAY
元朗公路
青山公路 - 嶺南段
CASTLE PEAK ROAD - LING NAM
817(799)
326(286)
0(0)
122(147)
879(580)
50(41)
11(20)
青麟路
TSING LUN ROAD
0(0)
198(108)
20(25)
87(77)
561(329)
10(9)
91(65)
紫田路
TSZ TIN ROAD
622(545)
730(435)
30(51)
102(150)
301(332)
10(25)
56(45)
10(10)
20(20)

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

YEAR 2033 PEAK HOUR JUNCTION FLOWS
WITHOUT PROPOSED DEVELOPMENT

| | | |
|---|---|---|
| Figure No.<br>4.5 | | Revision<br>1 |
| Designed by<br>L K W | Drawn by<br>S C Y | Checked by<br>K C |
| Scale in A4<br>N.T.S. | Date<br>04 OCT 2024 | |

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

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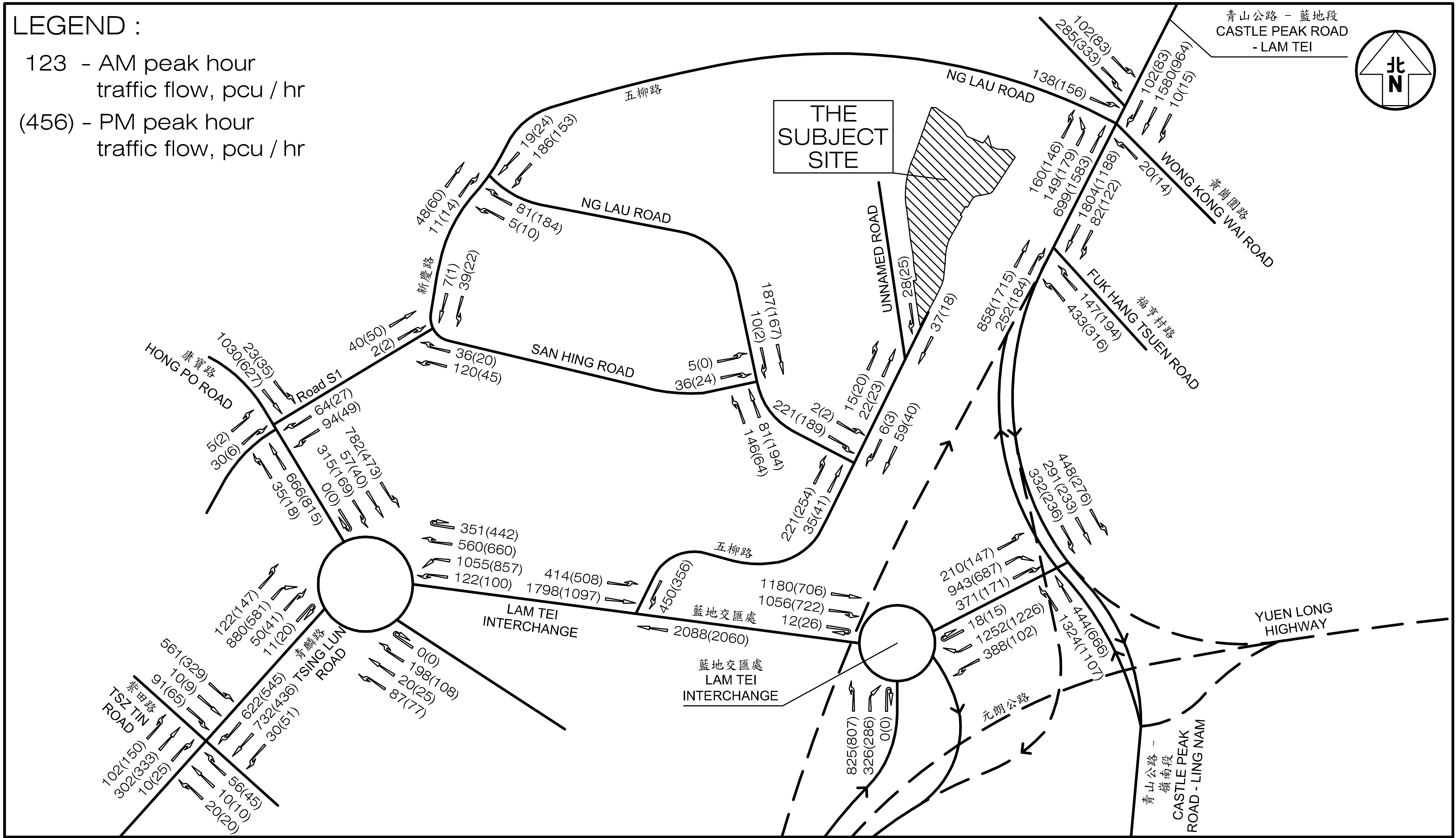
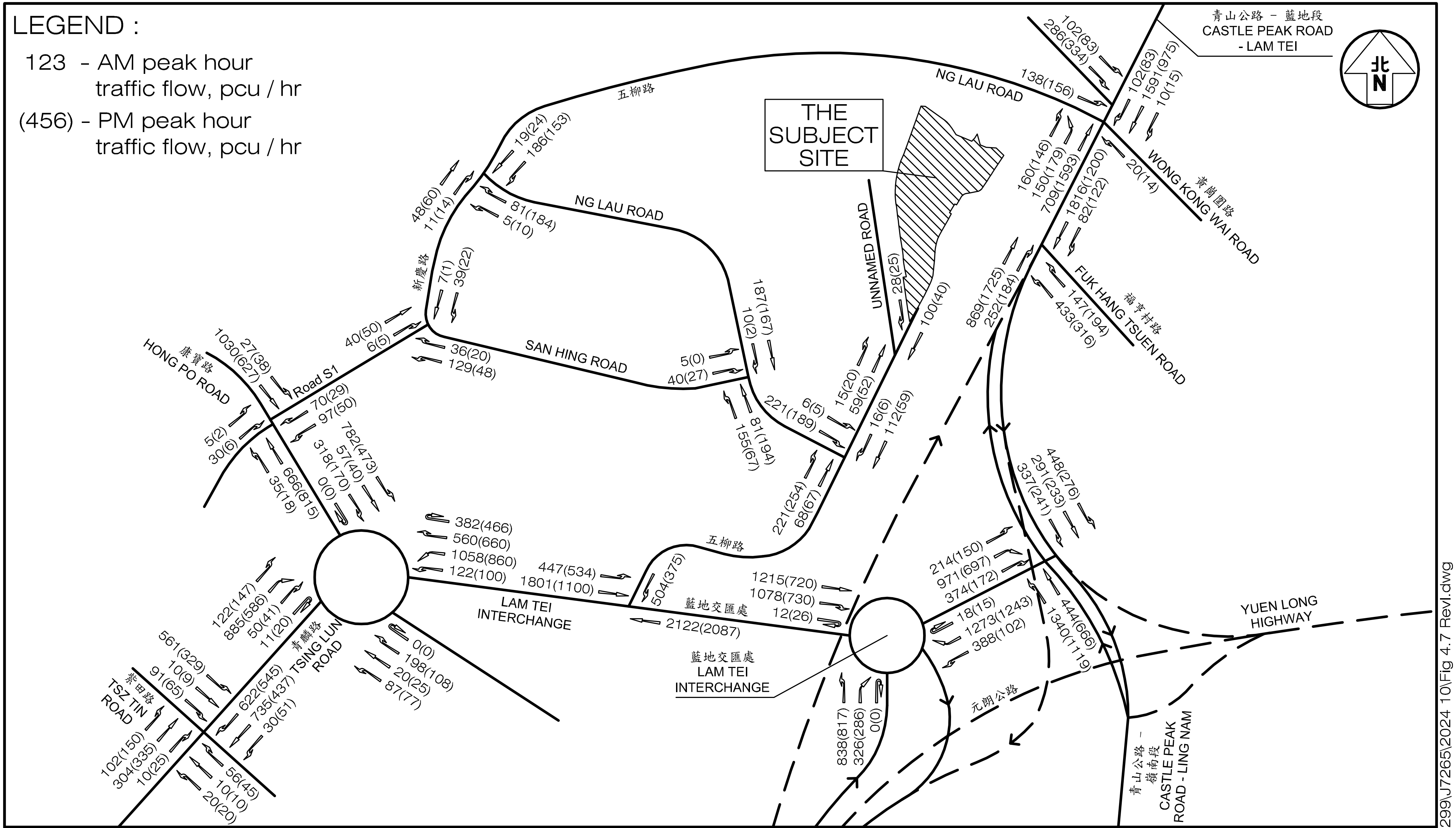

LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
THE SUBJECT SITE
北 N
青山公路 - 藍地段
CASTLE PEAK ROAD - LAM TEI
NG LAU ROAD
五柳路
NG LAU ROAD
SAN HING ROAD
UNNAMED ROAD
WONG KONG WAI ROAD
黃崗圍路
FUK HANG TSUEN ROAD
福亨村路
HONG PO ROAD
康寶路
Road S1
新慶路
TSING LUN ROAD
青麟路
TSZ TIN ROAD
紫田路
LAM TEI INTERCHANGE
藍地交匯處
LAM TEI INTERCHANGE
YUEN LONG HIGHWAY
元朗公路
青山公路 - 嶺南段
CASTLE PEAK ROAD - LING NAM
102(83)
285(333)
138(156)
102(83)
1580(964)
10(15)
20(14)
160(146)
149(179)
699(1583)
1804(1188)
82(122)
858(1715)
252(184)
147(194)
433(316)
19(24)
186(153)
48(60)
11(14)
81(184)
5(10)
7(1)
39(22)
40(50)
2(2)
36(20)
120(45)
187(167)
10(2)
5(0)
36(24)
28(25)
37(18)
15(20)
22(23)
2(2)
221(189)
6(3)
59(40)
81(194)
146(64)
23(35)
1030(627)
64(27)
94(49)
5(2)
30(6)
782(473)
57(40)
315(169)
0(0)
666(815)
35(18)
221(254)
35(41)
351(442)
560(660)
1055(857)
122(100)
414(508)
1798(1097)
450(356)
1180(706)
1056(722)
12(26)
2088(2060)
448(276)
291(233)
332(236)
210(147)
943(687)
371(171)
18(15)
1252(1226)
388(102)
444(666)
1324(1107)
122(147)
880(581)
50(41)
11(20)
0(0)
198(108)
20(25)
87(77)
561(329)
10(9)
91(65)
622(545)
732(436)
30(51)
102(150)
302(333)
10(25)
56(45)
10(10)
20(20)
825(807)
326(286)
0(0)

| | | | |
|---|---|---|---|
| Project Title<br>PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)<br>J7265 | Figure No.<br>4.6 | Revision<br>I | **CKM Asia Limited**<br>Traffic and Transportation Planning Consultants |
| Figure Title<br>YEAR 2033 PEAK HOUR JUNCTION FLOWS<br>WITH APPROVED SCHEME | Designed by<br>L K W | Drawn by<br>S C Y | Checked by<br>K C |
| | Scale in A4<br>N.T.S. | Date<br>04 OCT 2024 | 21st Floor, Methodist House, 36 Hennessy Road,<br>Wan Chai, Hong Kong<br>Tel : (852) 2520 5990 Fax : (852) 2528 6343<br>Email : mail@ckmasia.com.hk |

T:\JOB\J7250-J7299\J7265\2024 10\Fig 4.6 Rev I.dwg


LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
青山公路 - 藍地段
CASTLE PEAK ROAD - LAM TEI
北
N
102(83)
286(334)
138(156)
NG LAU ROAD
五柳路
102(83)
1591(975)
10(15)
THE SUBJECT SITE
20(14)
WONG KONG WAI ROAD
黃崗圍路
160(146)
150(179)
709(1593)
1816(1200)
82(122)
19(24)
186(153)
48(60)
11(14)
81(184)
5(10)
NG LAU ROAD
UNNAMED ROAD
28(25)
100(40)
869(1725)
252(184)
147(194)
433(316)
FUK HANG TSUEN ROAD
福亨村路
新慶路
7(1)
39(22)
187(167)
10(2)
40(50)
6(5)
36(20)
129(48)
SAN HING ROAD
5(0)
40(27)
康寶路
HONG PO ROAD
27(38)
1030(627)
Road S1
70(29)
97(50)
5(2)
30(6)
81(194)
155(67)
6(5)
221(189)
15(20)
59(52)
16(6)
112(59)
782(473)
57(40)
318(170)
0(0)
666(815)
35(18)
221(254)
68(67)
448(276)
291(233)
337(241)
382(466)
560(660)
1058(860)
122(100)
447(534)
1801(1100)
504(375)
五柳路
LAM TEI INTERCHANGE
藍地交匯處
1215(720)
1078(730)
12(26)
2122(2087)
214(150)
971(697)
374(172)
18(15)
1273(1243)
388(102)
444(666)
1340(1119)
YUEN LONG HIGHWAY
元朗公路
藍地交匯處
LAM TEI INTERCHANGE
838(817)
326(286)
0(0)
青山公路 - 嶺南段
CASTLE PEAK ROAD - LING NAM
122(147)
885(586)
50(41)
11(20)
青麟路
TSING LUN ROAD
0(0)
198(108)
20(25)
87(77)
561(329)
10(9)
91(65)
紫田路
TSZ TIN ROAD
622(545)
735(437)
30(51)
102(150)
304(335)
10(25)
56(45)
10(10)
20(20)

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

YEAR 2033 PEAK HOUR JUNCTION FLOWS WITH PROPOSED DEVELOPMENT

| Figure No. | Revision |
|---|---|
| 4.7 | 1 |

| Designed by | Drawn by | Checked by |
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| L K W | S C Y | K C |

| Scale in A4 | Date |
|---|---|
| N.T.S. | 04 OCT 2024 |

**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

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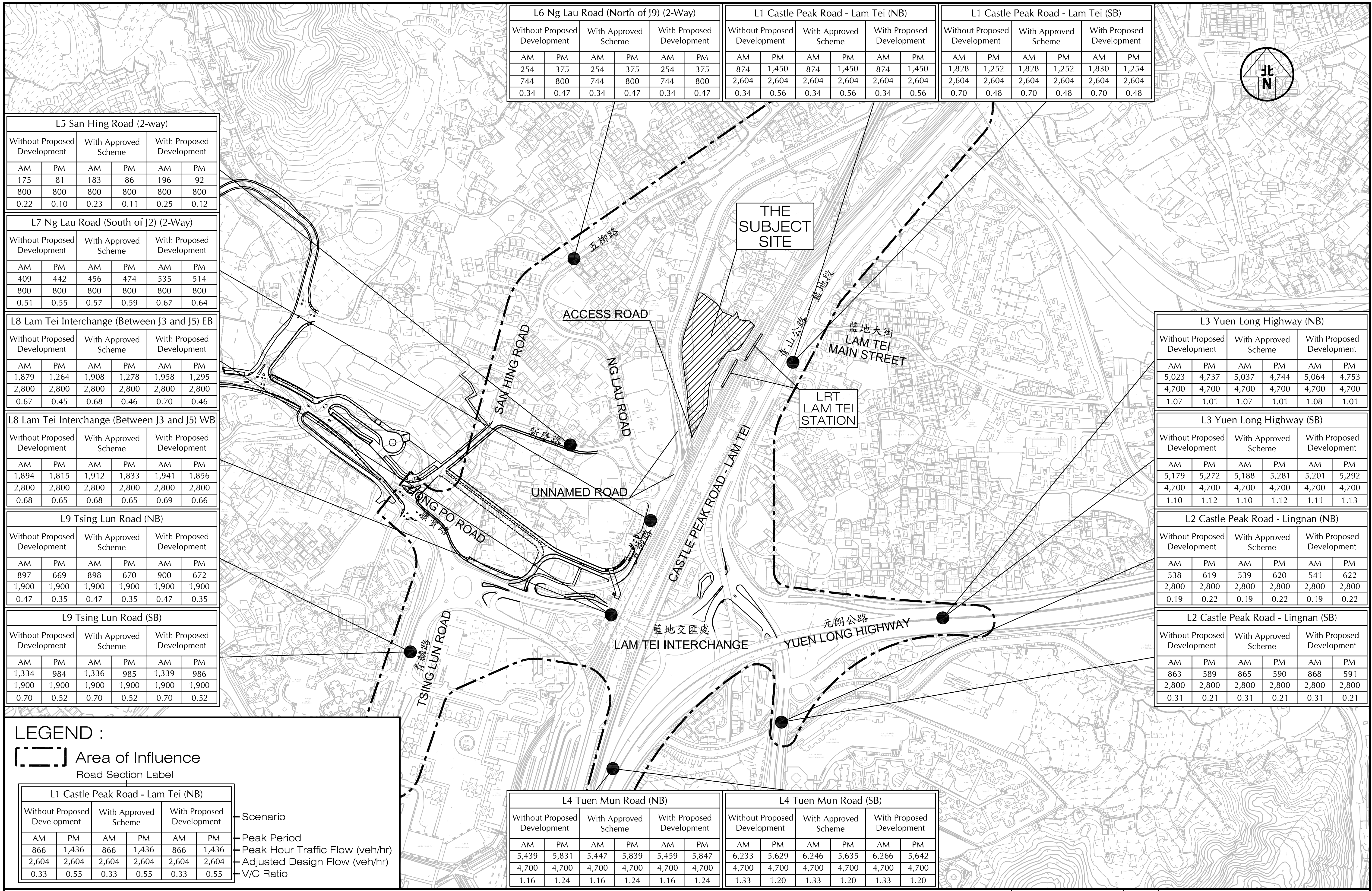

L6 Ng Lau Road (North of J9) (2-Way)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 254 | 375 | 254 | 375 | 254 | 375 |
| 744 | 800 | 744 | 800 | 744 | 800 |
| 0.34 | 0.47 | 0.34 | 0.47 | 0.34 | 0.47 |

L1 Castle Peak Road - Lam Tei (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 874 | 1,450 | 874 | 1,450 | 874 | 1,450 |
| 2,604 | 2,604 | 2,604 | 2,604 | 2,604 | 2,604 |
| 0.34 | 0.56 | 0.34 | 0.56 | 0.34 | 0.56 |

L1 Castle Peak Road - Lam Tei (SB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 1,828 | 1,252 | 1,828 | 1,252 | 1,830 | 1,254 |
| 2,604 | 2,604 | 2,604 | 2,604 | 2,604 | 2,604 |
| 0.70 | 0.48 | 0.70 | 0.48 | 0.70 | 0.48 |

L5 San Hing Road (2-way)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 175 | 81 | 183 | 86 | 196 | 92 |
| 800 | 800 | 800 | 800 | 800 | 800 |
| 0.22 | 0.10 | 0.23 | 0.11 | 0.25 | 0.12 |

L7 Ng Lau Road (South of J2) (2-Way)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 409 | 442 | 456 | 474 | 535 | 514 |
| 800 | 800 | 800 | 800 | 800 | 800 |
| 0.51 | 0.55 | 0.57 | 0.59 | 0.67 | 0.64 |

L8 Lam Tei Interchange (Between J3 and J5) EB

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 1,879 | 1,264 | 1,908 | 1,278 | 1,958 | 1,295 |
| 2,800 | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 |
| 0.67 | 0.45 | 0.68 | 0.46 | 0.70 | 0.46 |

L8 Lam Tei Interchange (Between J3 and J5) WB

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 1,894 | 1,815 | 1,912 | 1,833 | 1,941 | 1,856 |
| 2,800 | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 |
| 0.68 | 0.65 | 0.68 | 0.65 | 0.69 | 0.66 |

L9 Tsing Lun Road (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 897 | 669 | 898 | 670 | 900 | 672 |
| 1,900 | 1,900 | 1,900 | 1,900 | 1,900 | 1,900 |
| 0.47 | 0.35 | 0.47 | 0.35 | 0.47 | 0.35 |

L9 Tsing Lun Road (SB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 1,334 | 984 | 1,336 | 985 | 1,339 | 986 |
| 1,900 | 1,900 | 1,900 | 1,900 | 1,900 | 1,900 |
| 0.70 | 0.52 | 0.70 | 0.52 | 0.70 | 0.52 |

L3 Yuen Long Highway (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 5,023 | 4,737 | 5,037 | 4,744 | 5,064 | 4,753 |
| 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| 1.07 | 1.01 | 1.07 | 1.01 | 1.08 | 1.01 |

L3 Yuen Long Highway (SB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 5,179 | 5,272 | 5,188 | 5,281 | 5,201 | 5,292 |
| 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| 1.10 | 1.12 | 1.10 | 1.12 | 1.11 | 1.13 |

L2 Castle Peak Road - Lingnan (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 538 | 619 | 539 | 620 | 541 | 622 |
| 2,800 | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 |
| 0.19 | 0.22 | 0.19 | 0.22 | 0.19 | 0.22 |

L2 Castle Peak Road - Lingnan (SB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 863 | 589 | 865 | 590 | 868 | 591 |
| 2,800 | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 |
| 0.31 | 0.21 | 0.31 | 0.21 | 0.31 | 0.21 |

L4 Tuen Mun Road (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 5,439 | 5,831 | 5,447 | 5,839 | 5,459 | 5,847 |
| 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| 1.16 | 1.24 | 1.16 | 1.24 | 1.16 | 1.24 |

L4 Tuen Mun Road (SB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | |
|---|---|---|---|---|---|
| AM | PM | AM | PM | AM | PM |
| 6,233 | 5,629 | 6,246 | 5,635 | 6,266 | 5,642 |
| 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| 1.33 | 1.20 | 1.33 | 1.20 | 1.33 | 1.20 |

LEGEND :

[ - · - ] Area of Influence

Road Section Label

L1 Castle Peak Road - Lam Tei (NB)

| Without Proposed Development | | With Approved Scheme | | With Proposed Development | | |
|---|---|---|---|---|---|---|
| | | | | | | Scenario |
| AM | PM | AM | PM | AM | PM | Peak Period |
| 866 | 1,436 | 866 | 1,436 | 866 | 1,436 | Peak Hour Traffic Flow (veh/hr) |
| 2,604 | 2,604 | 2,604 | 2,604 | 2,604 | 2,604 | Adjusted Design Flow (veh/hr) |
| 0.33 | 0.55 | 0.33 | 0.55 | 0.33 | 0.55 | V/C Ratio |

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

J7265

Figure Title

# YEAR 2033 PEAK HOUR LINK FLOWS

| Figure No. | Revision | | |
|---|---|---|---|
| 4.8 | I | | |
| Designed by | Drawn by | Checked by | |
| K K Y | S C Y | K C | |
| Scale in A3 | Date | | |
| 1 : 5,000 | 04 OCT 2024 | | |

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

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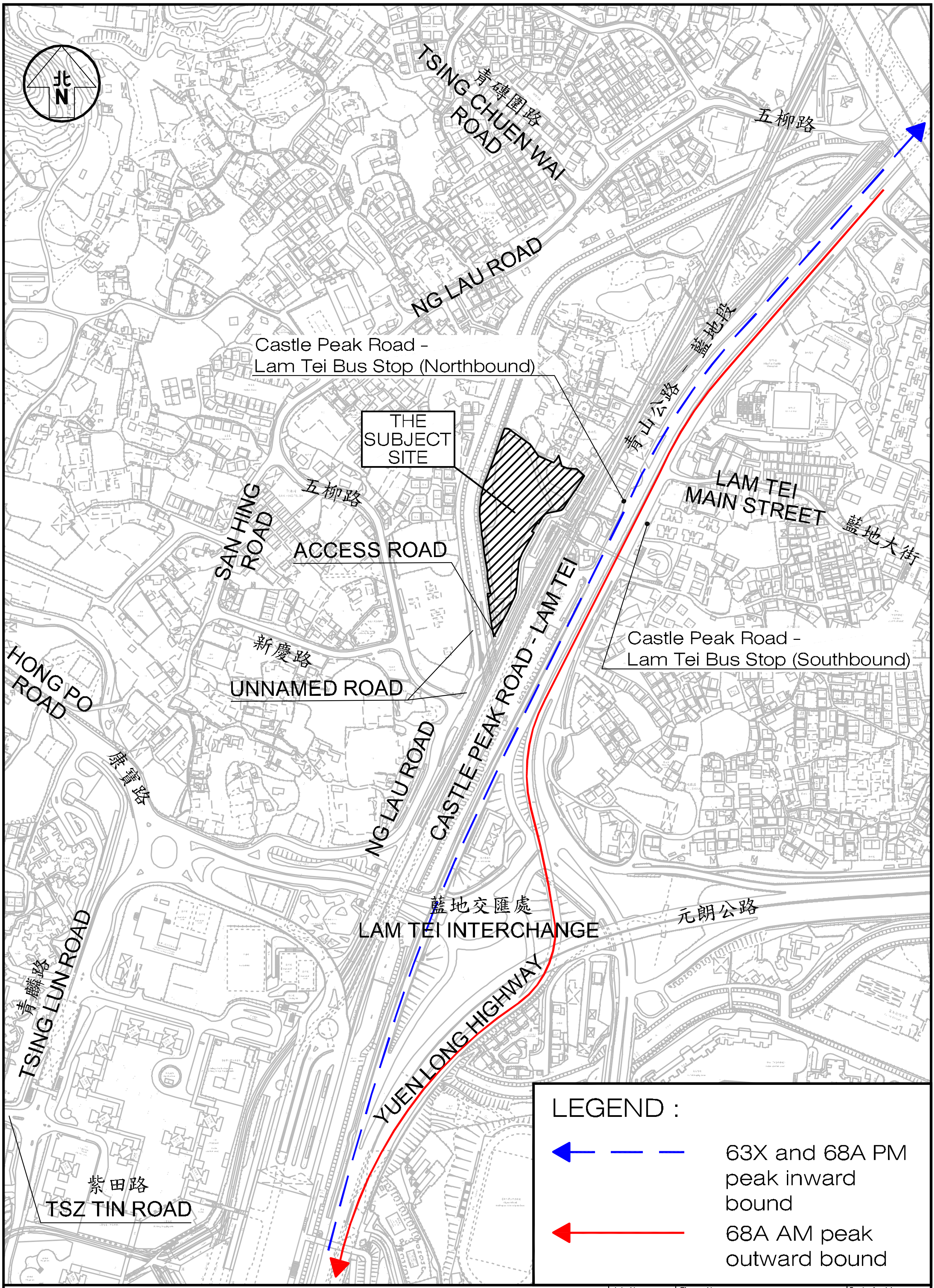
北
N
TSING CHUEN WAI ROAD
青磚圍路
五柳路
NG LAU ROAD
Castle Peak Road -
Lam Tei Bus Stop (Northbound)
THE SUBJECT SITE
五柳路
青山公路 – 藍地段
LAM TEI MAIN STREET
藍地大街
SAN HING ROAD
ACCESS ROAD
新慶路
UNNAMED ROAD
Castle Peak Road -
Lam Tei Bus Stop (Southbound)
HONG PO ROAD
康寶路
NG LAU ROAD
CASTLE PEAK ROAD - LAM TEI
藍地交匯處
LAM TEI INTERCHANGE
元朗公路
TSING LUN ROAD
青麟路
YUEN LONG HIGHWAY
紫田路
TSZ TIN ROAD
LEGEND :
63X and 68A PM peak inward bound
68A AM peak outward bound

| | | | |
|---|---|---|---|
| Project Title<br>PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11) | Job No.<br>J7265 | Figure No.<br>5.1 | Scale in A4<br>1 : 5,000 |
| | Designed by<br>K K Y | Drawn by<br>S C Y | Checked by<br>K C |
| | Revision<br>J | Date<br>18 NOV 2024 | |

Figure Title

ADDITIONAL BUS TRIP IN YEAR 2033

**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

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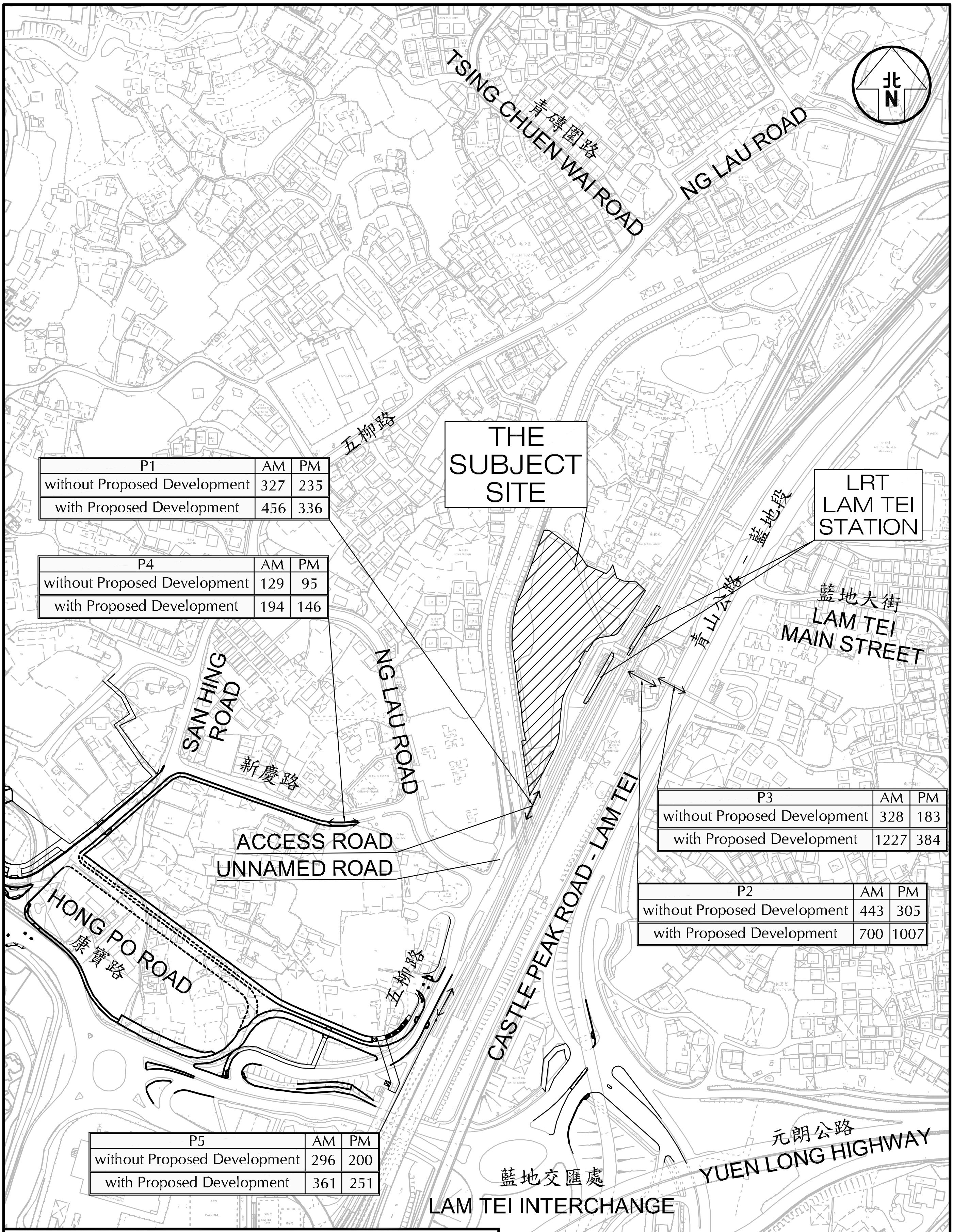
北
N
TSING CHUEN WAI ROAD
青磚圍路
NG LAU ROAD
五柳路
THE SUBJECT SITE
LRT LAM TEI STATION
青山公路 – 藍地段
藍地大街
LAM TEI MAIN STREET
SAN HING ROAD
新慶路
NG LAU ROAD
ACCESS ROAD
UNNAMED ROAD
HONG PO ROAD
康寶路
五柳路
CASTLE PEAK ROAD - LAM TEI
元朗公路
YUEN LONG HIGHWAY
藍地交匯處
LAM TEI INTERCHANGE

| P1 | AM | PM |
|---|---|---|
| without Proposed Development | 327 | 235 |
| with Proposed Development | 456 | 336 |

| P4 | AM | PM |
|---|---|---|
| without Proposed Development | 129 | 95 |
| with Proposed Development | 194 | 146 |

| P3 | AM | PM |
|---|---|---|
| without Proposed Development | 328 | 183 |
| with Proposed Development | 1227 | 384 |

| P2 | AM | PM |
|---|---|---|
| without Proposed Development | 443 | 305 |
| with Proposed Development | 700 | 1007 |

| P5 | AM | PM |
|---|---|---|
| without Proposed Development | 296 | 200 |
| with Proposed Development | 361 | 251 |

LEGEND :

123 - Peak hour pedestrian two-way flow

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title
YEAR 2033 PEAK HOUR PEDESTRIAN FLOWS

| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | 6.1 | | | 1 : 4,000 |
| Designed by | Drawn by | Checked by | Revision | Date |
| K K Y | S C Y | K C | I | 04 OCT 2024 |

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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

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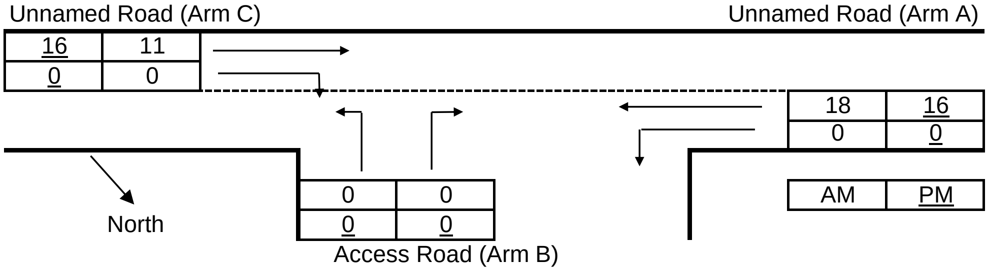
# Appendix A – Junction Capacity Analysis

## Priority Junction Analysis

Junction: Unnamed Road / Access Road
Design Year: 2023 Job Number: J7265 Date: 15 Nov 2024
Scenario: Existing Condition P. 1



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 | 5.70 | V-rBA | 100 | w-BA | 2.05 | D | 0.8093 |
| W-CR | 0.00 | V-lBA | 100 | w-BC | 2.05 | E | 0.8343 |
| | | V-rBC | 100 | w-CB | 2.70 | F | 0.8943 |
| | | V-rCB | 100 | | | Y | 0.8034 |

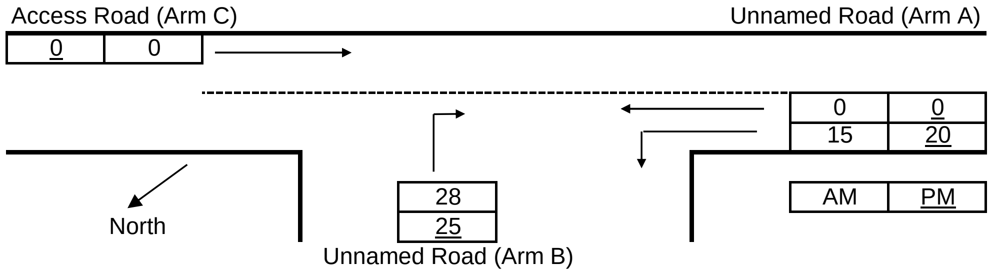
Analysis : c

| Traffic Flows, pcu/hr | AM | PM | Capacity, pc | AM | PM |
|---|---|---|---|---|---|
| q-CA | 11 | 16 | Q-BA | 502 | 501 |
| q-CB | 0 | 0 | Q-BC | 617 | 618 |
| q-AB | 0 | 0 | Q-CB | 662 | 662 |
| q-AC | 18 | 16 | Q-BAC | 502 | 501 |
| q-BA | 0 | 0 | | | |
| q-BC | 0 | 0 | | | |
| f | 0.000 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.000 | 0.000 |
| B-C | 0.000 | 0.000 |
| C-B | 0.000 | 0.000 |
| B-AC | 0.000 | 0.000 |

## Priority Junction Analysis

Junction: Unnamed Road / Access Road
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: Without Development P. 2



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 | 6.90 | V-rBA | 60 | w-BA | 4.70 | D | 0.8093 |
| W-CR | 0.00 | V-lBA | 90 | w-BC | 0.00 | E | 0.8343 |
| | | V-rBC | 0.00 | w-CB | 0.00 | F | 0.8943 |
| | | V-rCB | 55 | | | Y | 0.8034 |

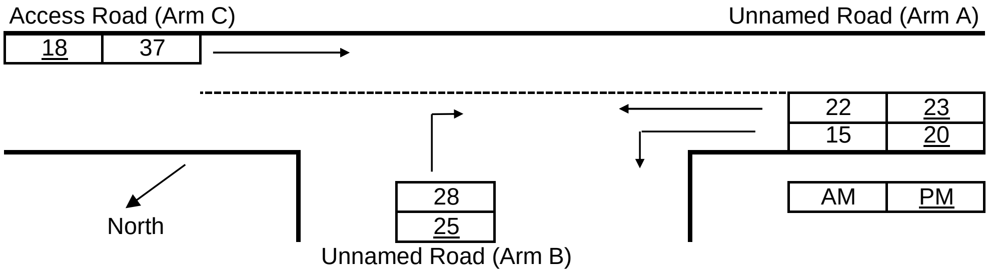
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 0 | 0 | Q-BA | 506 | 506 |
| q-CB | 0 | 0 | Q-BC | 620 | 620 |
| q-AB | 15 | 20 | Q-CB | 662 | 661 |
| q-AC | 0 | 0 | Q-BAC | 506 | 506 |
| q-BA | 28 | 25 | | | |
| q-BC | 0 | 0 | | | |
| f | 0.000 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.055 | 0.049 |
| B-C | 0.000 | 0.000 |
| C-B | 0.000 | 0.000 |
| B-AC | 0.055 | 0.049 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | Unnamed Road / Access Road | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Approved Scheme | | | | P. 3 |



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 | 6.90 | V-rBA | 60 | w-BA | 4.70 | D | 0.8093 |
| W-CR | 0.00 | V-lBA | 90 | w-BC | 0.00 | E | 0.8343 |
| | | V-rBC | 0.00 | w-CB | 0.00 | F | 0.8943 |
| | | V-rCB | 55 | | | Y | 0.8034 |

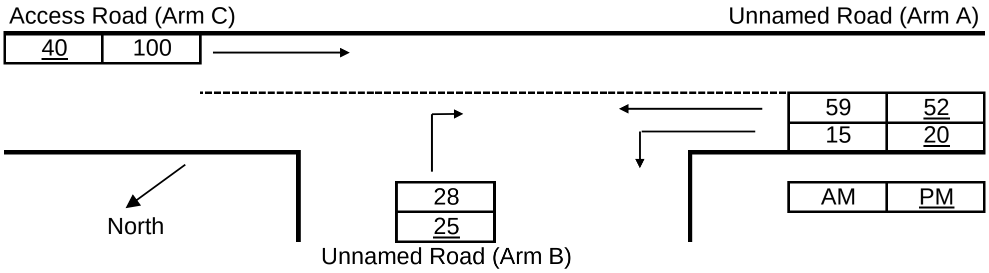
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 37 | 18 | Q-BA | 495 | 497 |
| q-CB | 0 | 0 | Q-BC | 615 | 614 |
| q-AB | 15 | 20 | Q-CB | 657 | 655 |
| q-AC | 22 | 23 | Q-BAC | 495 | 497 |
| q-BA | 28 | 25 | | | |
| q-BC | 0 | 0 | | | |
| f | 0.000 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.057 | 0.050 |
| B-C | 0.000 | 0.000 |
| C-B | 0.000 | 0.000 |
| B-AC | 0.057 | 0.050 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | Unnamed Road / Access Road | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Proposed Scheme | | | | 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 | 6.90 | V-rBA | 60 | w-BA | 4.70 | D | 0.8093 |
| | W-CR | 0.00 | V-lBA | 90 | w-BC | 0.00 | E | 0.8343 |
| | | | V-rBC | 0.00 | w-CB | 0.00 | F | 0.8943 |
| | | | V-rCB | 55 | | | Y | 0.8034 |

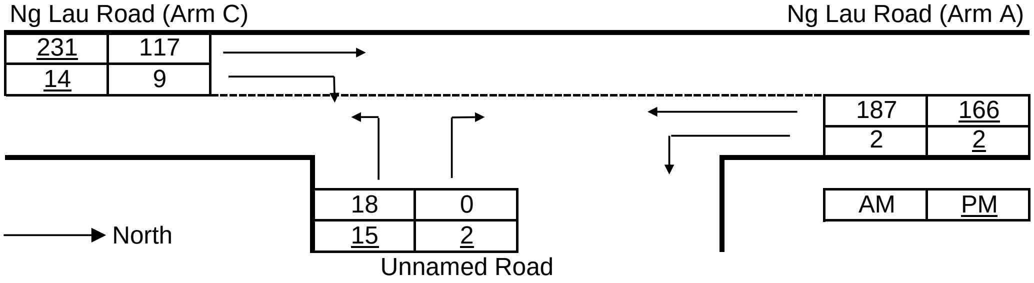
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 100 | 40 | Q-BA | 477 | 487 |
| q-CB | 0 | 0 | Q-BC | 606 | 607 |
| q-AB | 15 | 20 | Q-CB | 647 | 647 |
| q-AC | 59 | 52 | Q-BAC | 477 | 487 |
| q-BA | 28 | 25 | | | |
| q-BC | 0 | 0 | | | |
| f | 0.000 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.059 | 0.051 |
| B-C | 0.000 | 0.000 |
| C-B | 0.000 | 0.000 |
| B-AC | 0.059 | 0.051 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | Ng Lau Road / Unnamed Road | | | | |
| Design Year: | 2023 | Job Number: | J7265 | Date: | 15 Nov 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 | 8.65 | V-rBA | 30 | w-BA | 2.05 | D | 0.7574 |
| W-CR | 0.00 | V-lBA | 100 | w-BC | 2.05 | E | 0.7808 |
| | | V-rBC | 30 | w-CB | 4.70 | F | 1.0394 |
| | | V-rCB | 60 | | | Y | 0.7016 |

Analysis :

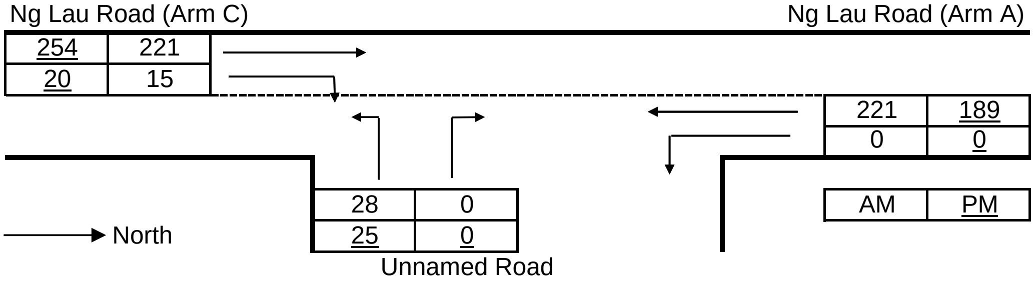
| Traffic Flows, pcu/hr | AM | PM |
|---|---|---|
| q-CA | 117 | 231 |
| q-CB | 9 | 14 |
| q-AB | 2 | 2 |
| q-AC | 187 | 166 |
| q-BA | 0 | 2 |
| q-BC | 18 | 15 |
| f | 1.000 | 0.882 |

| Capacity, pcu/hr | AM | PM |
|---|---|---|
| Q-BA | 422 | 411 |
| Q-BC | 544 | 548 |
| Q-CB | 724 | 730 |
| Q-BAC | 544 | 528 |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.000 | 0.005 |
| B-C | 0.033 | 0.027 |
| C-B | 0.012 | 0.019 |
| B-AC | 0.033 | 0.032 |

## Priority Junction Analysis

Junction: Ng Lau Road / Unnamed Road
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: Without Development P. 6



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 | 7.50 | V-rBA | 20 | w-BA | 2.05 | D | 0.7574 |
| W-CR | 0.00 | V-lBA | 90 | w-BC | 2.05 | E | 0.7808 |
| | | V-rBC | 20 | w-CB | 4.70 | F | 1.0394 |
| | | V-rCB | 25 | | | Y | 0.7016 |

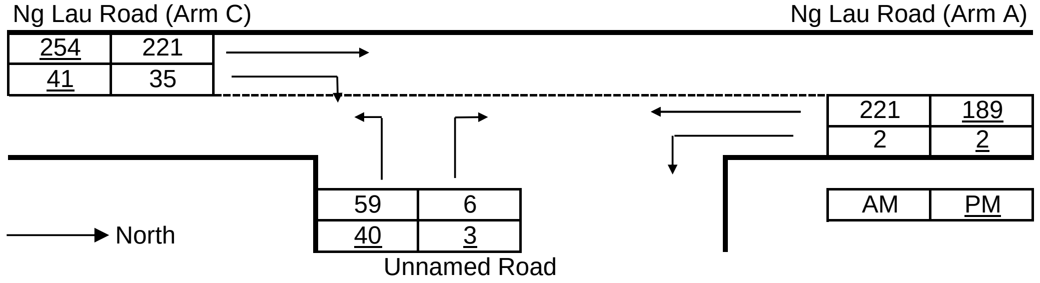
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 221 | 254 | Q-BA | 401 | 402 |
| q-CB | 15 | 20 | Q-BC | 538 | 544 |
| q-AB | 0 | 0 | Q-CB | 716 | 724 |
| q-AC | 221 | 189 | Q-BAC | 538 | 544 |
| q-BA | 0 | 0 | | | |
| q-BC | 28 | 25 | | | |
| f | 1.000 | 1.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.000 | 0.000 |
| B-C | 0.052 | 0.046 |
| C-B | 0.021 | 0.028 |
| B-AC | 0.052 | 0.046 |

## Priority Junction Analysis

Junction: Ng Lau Road / Unnamed Road
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: With Approved Scheme P. 7



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 | 7.50 | V-rBA | 20 | w-BA | 2.05 | D | 0.7574 |
| W-CR | 0.00 | V-lBA | 90 | w-BC | 2.05 | E | 0.7808 |
| | | V-rBC | 20 | w-CB | 4.70 | F | 1.0394 |
| | | V-rCB | 25 | | | Y | 0.7016 |

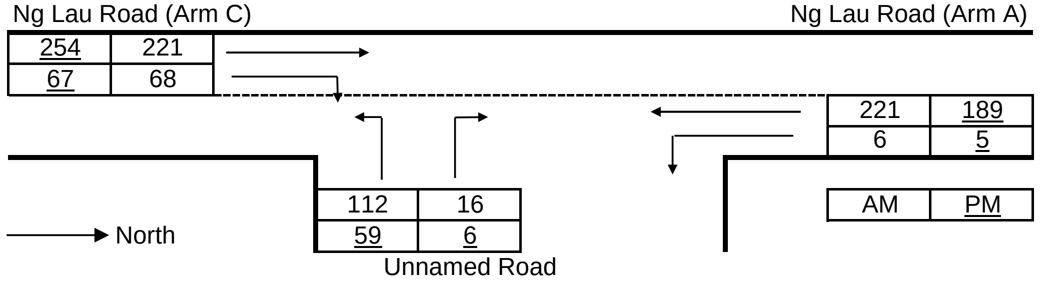
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 221 | 254 | Q-BA | 395 | 396 |
| q-CB | 35 | 41 | Q-BC | 537 | 544 |
| q-AB | 2 | 2 | Q-CB | 715 | 724 |
| q-AC | 221 | 189 | Q-BAC | 520 | 530 |
| q-BA | 6 | 3 | | | |
| q-BC | 59 | 40 | | | |
| f | 0.908 | 0.930 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.015 | 0.008 |
| B-C | 0.110 | 0.074 |
| C-B | 0.049 | 0.057 |
| B-AC | 0.125 | 0.081 |

## Priority Junction Analysis

Junction: Ng Lau Road / Unnamed Road
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: With Proposed Scheme P. 8



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 | 7.50 | V-rBA | 20 | w-BA | 2.05 | D | 0.7574 |
| W-CR | 0.00 | V-lBA | 90 | w-BC | 2.05 | E | 0.7808 |
| | | V-rBC | 20 | w-CB | 4.70 | F | 1.0394 |
| | | V-rCB | 25 | | | Y | 0.7016 |

Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 221 | 254 | Q-BA | 386 | 389 |
| q-CB | 68 | 67 | Q-BC | 537 | 544 |
| q-AB | 6 | 5 | Q-CB | 714 | 723 |
| q-AC | 221 | 189 | Q-BAC | 512 | 524 |
| q-BA | 16 | 6 | | | |
| q-BC | 112 | 59 | | | |
| f | 0.875 | 0.908 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.041 | 0.015 |
| B-C | 0.209 | 0.109 |
| C-B | 0.095 | 0.093 |
| B-AC | 0.250 | 0.124 |

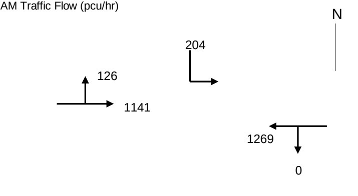
Signal Junction Analysis

Junction: Ng Lau Road / Lam Tei Interchange
Job Number: J7265
Scenario: Existing Condition
P. 9
Design Year: 2023
Designed By:
Checked By:
Date: 15 Nov 2024

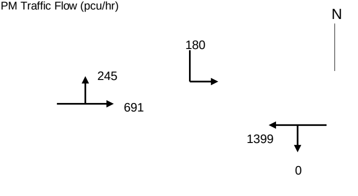
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lam Tei Interchange EB | SA+LT | A1 | 1 | 3.65 | 30.0 | | 21 | 1959 | 609 | 0.311 | 0.311 | 55 | 1927 | 446 | 0.231 | |
| | SA | A2 | 1 | 3.65 | | | | 2120 | 658 | 0.310 | | | 2120 | 490 | 0.231 | |
| | | | | | | | | | | | | | | | | |
| Lam Tei Interchange WB | SA+LT | A3 | 1 | 3.65 | 15.0 | | 0 | 1980 | 613 | 0.310 | | 0 | 1980 | 676 | 0.341 | 0.341 |
| | SA | A4 | 1 | 3.65 | | | | 2120 | 656 | 0.309 | | | 2120 | 723 | 0.341 | |
| | | | | | | | | | | | | | | | | |
| Ng Lau Road SB | LT | B1 | 2 | 4.00 | 12.0 | | 100 | 1791 | 204 | 0.114 | 0.114 | 100 | 1791 | 180 | 0.100 | 0.100 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $C_{(P)}$ | 1 | | min crossing time = | 8 | sec GM + | 8 | sec FGM = | 16 | sec |
| | $D_{(P)}$ | 2 | | min crossing time = | 8 | sec GM + | 9 | sec FGM = | 17 | sec |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

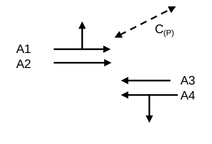


S = 1940 + 100 (W-3.25)
S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)
SM = (S - 230) / (1 + 1.5 f/r)

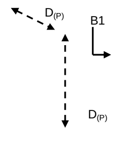
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1 + 2 | | 1 + 2 | |
| Sum y | 0.425 | | 0.442 | |
| L (s) | 8 | | 8 | |
| C (s) | 82 | | 82 | |
| practical y | 0.812 | | 0.812 | |
| R.C. (%) | 91% | | 84% | |

Note:

1



2



3

4

5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = | 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 = 5 | G = | I/G = | G = | I/G = | G = | |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | |

# Signal Junction Analysis

| | | | |
|---|---|---|---|
| Junction: | Ng Lau Road / Lam Tei Interchange | Job Number: | J7265 |
| Scenario: | Without Development | | P. 10 |

Design Year: 2033 Designed By: ____ Checked By: ____ Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lam Tei Interchange EB | SA | A2 | 1 | 4.00 | | | | 2155 | 899 | 0.417 | | | 2155 | 549 | 0.255 | |
| | SA | A3 | 1 | 4.00 | | | | 2155 | 899 | 0.417 | | | 2155 | 548 | 0.254 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Lam Tei Interchange WB | SA+LT | B1 | 1 | 4.00 | 15.0 | | 0 | 2015 | 1000 | 0.496 | 0.496 | 0 | 2015 | 986 | 0.489 | 0.489 |
| | SA | B2 | 1 | 4.00 | | | | 2155 | 1069 | 0.496 | | | 2155 | 1054 | 0.489 | |
| | | | | | | | | | | | | | | | | |
| Ng Lau Road SB | LT | C1 | 2 | 5.50 | 10.0 | | 100 | 1883 | 201 | 0.107 | 0.107 | 100 | 1883 | 163 | 0.087 | 0.087 |
| | LT | C2 | 2 | 5.00 | 15.0 | | 100 | 2050 | 218 | 0.106 | | 100 | 2050 | 178 | 0.087 | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $D_{(P)}$ | 1 | | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec | |
| | $E_{(P)}$ | 2 | | min crossing time = | 10 | sec GM + | 12 | sec FGM = | 22 | sec | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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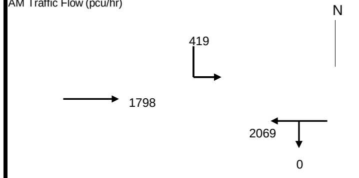
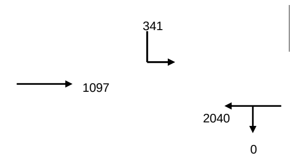
AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



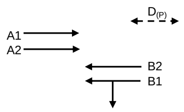
S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1 + 2 | | 1 + 2 | |
| Sum y | 0.603 | | 0.576 | |
| L (s) | 8 | | 8 | |
| C (s) | 82 | | 82 | |
| practical y | 0.812 | | 0.812 | |
| R.C. (%) | 35% | | 41% | |

Note:

1



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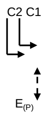

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = | G = | I/G = | G = | |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | |
| PM | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = | G = | I/G = | G = | |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | |

Signal Junction Analysis

Junction: Ng Lau Road / Lam Tei Interchange
Job Number: J7265
Scenario: With Approved Scheme
P. 11
Design Year: 2033
Designed By:
Checked By:
Date: 15 Nov 2024

| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak | | | | | PM Peak | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y |
| Lam Tei Interchange EB | SA | A2 | 1 | 4.00 | | | | 2155 | 899 | 0.417 | | | 2155 | 549 | 0.255 | |
| | SA | A3 | 1 | 4.00 | | | | 2155 | 899 | 0.417 | | | 2155 | 548 | 0.254 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Lam Tei Interchange WB | SA+LT | B1 | 1 | 4.00 | 15.0 | | 0 | 2015 | 1009 | 0.501 | 0.501 | 0 | 2015 | 995 | 0.494 | |
| | SA | B2 | 1 | 4.00 | | | | 2155 | 1079 | 0.501 | | | 2155 | 1065 | 0.494 | 0.494 |
| | | | | | | | | | | | | | | | | |
| Ng Lau Road SB | LT | C1 | 2 | 5.50 | 10.0 | | 100 | 1883 | 215 | 0.114 | 0.114 | 100 | 1883 | 170 | 0.090 | 0.090 |
| | LT | C2 | 2 | 5.00 | 15.0 | | 100 | 2050 | 235 | 0.115 | | 100 | 2050 | 186 | 0.091 | |
| | | | | | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $D_{(P)}$ | 1 | | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec | |
| | $E_{(P)}$ | 2 | | min crossing time = | 10 | sec GM + | 12 | sec FGM = | 22 | sec | |
| | | | | | | | | | | | |
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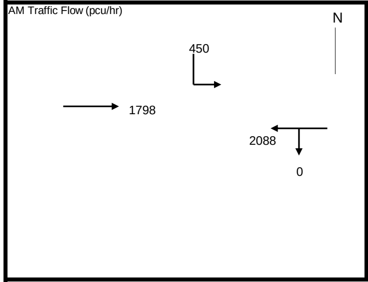
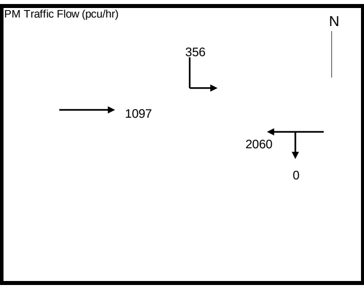
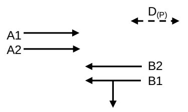
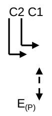




S = 1940 + 100 (W-3.25)
S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)
SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1 + 2 | | 1 + 2 | |
| Sum y | 0.615 | | 0.584 | |
| L (s) | 8 | | 8 | |
| C (s) | 82 | | 82 | |
| practical y | 0.812 | | 0.812 | |
| R.C. (%) | 32% | | 39% | |

Note:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
|  |  | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = | 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 = 5 | G = | I/G = | G = | I/G = | G = | |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | |

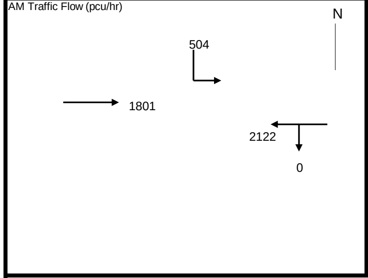
Signal Junction Analysis

| | |
|---|---|
| Junction: | Ng Lau Road / Lam Tei Interchange |
| Job Number: | J7265 |
| Scenario: | With Proposed Scheme |
| | P. 12 |
| Design Year: | 2033 |
| Designed By: | |
| Checked By: | |
| Date: | 15 Nov 2024 |

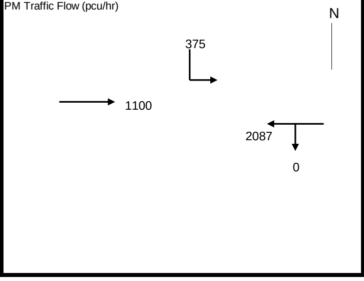
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lam Tei Interchange EB | SA | A2 | 1 | 4.00 | | | | 2155 | 901 | 0.418 | | | 2155 | 550 | 0.255 | |
| | SA | A3 | 1 | 4.00 | | | | 2155 | 900 | 0.418 | | | 2155 | 550 | 0.255 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Lam Tei Interchange WB | SA+LT | B1 | 1 | 4.00 | 15.0 | | 0 | 2015 | 1025 | 0.509 | 0.509 | 0 | 2015 | 1008 | 0.500 | 0.500 |
| | SA | B2 | 1 | 4.00 | | | | 2155 | 1097 | 0.509 | | | 2155 | 1079 | 0.501 | |
| | | | | | | | | | | | | | | | | |
| Ng Lau Road SB | LT | C1 | 2 | 5.50 | 10.0 | | 100 | 1883 | 241 | 0.128 | 0.128 | 100 | 1883 | 180 | 0.096 | 0.096 |
| | LT | C2 | 2 | 5.00 | 15.0 | | 100 | 2050 | 263 | 0.128 | | 100 | 2050 | 195 | 0.095 | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $D_{(P)}$ | 1 | | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec | |
| | $E_{(P)}$ | 2 | | min crossing time = | 10 | sec GM + | 12 | sec FGM = | 22 | sec | |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



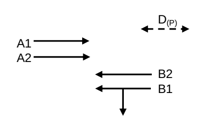
S = 1940 + 100 (W-3.25)  S = 2080 + 100 (W-3.25)

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

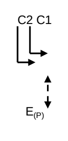
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1 + 2 | | 1 + 2 | |
| Sum y | 0.637 | | 0.596 | |
| L (s) | 8 | | 8 | |
| C (s) | 82 | | 82 | |
| practical y | 0.812 | | 0.812 | |
| R.C. (%) | 28% | | 36% | |

Note:

1



2



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = | 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 = 5 | G = | I/G = | G = | I/G = | G = | |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | |

# Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario Existing Condition Page 13
Design Year 2023 Job Number J7265 Date 15 November 2024

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ * |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 102 | 110 | 809 | 248 | | | | | 1269 | 259 |
| From B | 182 | 0 | 77 | 22 | | | | | 281 | 1336 |
| From C | 579 | 42 | 11 | 30 | | | | | 662 | 666 |
| From D | 406 | 40 | 54 | 2 | | | | | 502 | 1026 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1269 | 192 | 951 | 302 | | | | | 2714 | |

* $q_c$ in existing condition is adjusted due to Temporary Traffic Arrangement

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ * |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 205 | 90 | 742 | 362 | | | | | 1399 | 202 |
| From B | 91 | 0 | 67 | 22 | | | | | 180 | 1453 |
| From C | 443 | 32 | 18 | 37 | | | | | 530 | 772 |
| From D | 198 | 26 | 34 | 2 | | | | | 260 | 879 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 937 | 148 | 861 | 423 | | | | | 2369 | |

* $q_c$ in existing condition is adjusted for TTA

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road from Lam Tei Interchange |
| B | Access Road from Siu Hong Station |
| C | Tsing Lun Road |
| D | Hong Po Road |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 10.0 | 7.3 | 20.0 | 10.0 | 55 | 45 | 0.4 |
| From B | 9.0 | 6.8 | 28.0 | 4.0 | 55 | 19 | 0.9 |
| From C | 11.5 | 7.8 | 100.0 | 9.0 | 55 | 23 | 0.7 |
| From D* | 6.0 | 4.5 | 27.0 | 6.0 | 55 | 10 | 0.4 |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

* Parameter in existing condition is adjusted for TTA

**Predictive Equation $Q_E = K(F - f_c q_c)$**

$Q_E$ Entry Capacity
$q_c$ Circulating Flow across the Entry
$K = 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$
$F = 303x_2$
$f_c = 0.210t_D(1+0.2x_2)$
$t_D = 1+0.5/(1+M)$
$M = \exp[(D-60)/10]$
$x_2 = v+(e-v)/(1+2S)$
$S = 1.6(e-v)/L$

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 8.748 | 0.607 | 1.311 | 0.948 | 2651 | 0.757 | 2327 | 2368 | 1269 | 1399 | 0.545 | 0.591 |
| From B | 7.597 | 0.607 | 1.311 | 1.051 | 2302 | 0.694 | 1445 | 1360 | 281 | 180 | 0.194 | 0.132 |
| From C | 9.398 | 0.607 | 1.311 | 1.063 | 2848 | 0.793 | 2467 | 2377 | 662 | 530 | 0.268 | 0.223 |
| From D | 5.333 | 0.607 | 1.311 | 1.082 | 1616 | 0.569 | 1117 | 1207 | 502 | 260 | 0.449 | 0.215 |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

| | | | | | |
|---|---|---|---|---|---|
| Location | Tsing Lun Road / Hong Po Road / Lam Tei Interchange | | | | |
| Scenario | Without Development | | | Page | 14 |
| Design Year | 2033 | Job Number | J7265 | Date | 15 November 2024 |

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 332 | 0 | 1055 | 560 | | | | | 1947 | 431 |
| From B | 198 | 0 | 87 | 20 | | | | | 305 | 2271 |
| From C | 879 | 50 | 11 | 122 | | | | | 1062 | 1110 |
| From D | 782 | 57 | 313 | 0 | | | | | 1152 | 1470 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 2191 | 107 | 1466 | 702 | | | | | 4466 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 422 | 0 | 857 | 660 | | | | | 1939 | 269 |
| From B | 108 | 0 | 77 | 25 | | | | | 210 | 2127 |
| From C | 580 | 41 | 20 | 147 | | | | | 788 | 1215 |
| From D | 473 | 40 | 168 | 0 | | | | | 681 | 1171 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1583 | 81 | 1122 | 832 | | | | | 3618 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Lam Tei Interchange |
| B | Access Road to Siu Hong Station |
| C | Tsing Lun Road |
| D | Hong Po Road |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 11.0 | 7.8 | 30.0 | 10.0 | 55 | 20 | 0.5 |
| From B | 9.0 | 6.8 | 28.0 | 6.0 | 55 | 19 | 0.6 |
| From C | 11.5 | 7.8 | 100.0 | 9.0 | 55 | 23 | 0.7 |
| From D | 14.0 | 8.5 | 40.0 | 10.0 | 55 | 10 | 0.9 |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_c q_c)$**

$Q_E$ Entry Capacity

$q_c$ Circulating Flow across the Entry

$K = 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$

$F = 303x_2$

$f_c = 0.210t_D(1+0.2x_2)$

$t_D = 1+0.5/(1+M)$

$M = \exp[(D-60)/10]$

$x_2 = v+(e-v)/(1+2S)$

$S = 1.6(e-v)/L$

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 9.381 | 0.607 | 1.311 | 1.051 | 2842 | 0.792 | 2629 | 2764 | 1947 | 1939 | 0.741 | 0.702 |
| From B | 7.812 | 0.607 | 1.311 | 1.051 | 2367 | 0.706 | 804 | 911 | 305 | 210 | 0.379 | 0.231 |
| From C | 9.398 | 0.607 | 1.311 | 1.063 | 2848 | 0.793 | 2092 | 2004 | 1062 | 788 | 0.508 | 0.393 |
| From D | 10.493 | 0.607 | 1.311 | 1.094 | 3179 | 0.853 | 2106 | 2385 | 1152 | 681 | 0.547 | 0.286 |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

Location Tsing Lun Road / Hong Po Road / Lam Tei Interchange
Scenario With Approved Scheme Page 15
Design Year 2033 Job Number J7265 Date 15 November 2024

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 351 | 0 | 1055 | 560 | | | | | 1966 | 433 |
| From B | 198 | 0 | 87 | 20 | | | | | 305 | 2292 |
| From C | 880 | 50 | 11 | 122 | | | | | 1063 | 1129 |
| From D | 782 | 57 | 315 | 0 | | | | | 1154 | 1490 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 2211 | 107 | 1468 | 702 | | | | | 4488 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 442 | 0 | 857 | 660 | | | | | 1959 | 270 |
| From B | 108 | 0 | 77 | 25 | | | | | 210 | 2148 |
| From C | 581 | 41 | 20 | 147 | | | | | 789 | 1235 |
| From D | 473 | 40 | 169 | 0 | | | | | 682 | 1192 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1604 | 81 | 1123 | 832 | | | | | 3640 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Lam Tei Interchange |
| B | Access Road to Siu Hong Station |
| C | Tsing Lun Road |
| D | Hong Po Road |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 11.0 | 7.8 | 30.0 | 10.0 | 55 | 20 | 0.5 |
| From B | 9.0 | 6.8 | 28.0 | 4.0 | 55 | 19 | 0.9 |
| From C | 11.5 | 7.8 | 100.0 | 9.0 | 55 | 23 | 0.7 |
| From D | 14.0 | 8.5 | 40.0 | 10.0 | 55 | 10 | 0.9 |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

c

**Predictive Equation $Q_E = K(F - f_c q_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 9.381 | 0.607 | 1.311 | 1.051 | 2842 | 0.792 | 2627 | 2763 | 1966 | 1959 | 0.748 | 0.709 |
| From B | 7.597 | 0.607 | 1.311 | 1.051 | 2302 | 0.694 | 748 | 853 | 305 | 210 | 0.408 | 0.246 |
| From C | 9.398 | 0.607 | 1.311 | 1.063 | 2848 | 0.793 | 2076 | 1987 | 1063 | 789 | 0.512 | 0.397 |
| From D | 10.493 | 0.607 | 1.311 | 1.094 | 3179 | 0.853 | 2087 | 2365 | 1154 | 682 | 0.553 | 0.288 |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

| | | | | | |
|---|---|---|---|---|---|
| Location | Tsing Lun Road / Hong Po Road / Lam Tei Interchange | | | | |
| Scenario | With Proposed Scheme | | | Page | 16 |
| Design Year | 2033 | Job Number | J7265 | Date | 15 November 2024 |

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 382 | 0 | 1058 | 560 | | | | | 2000 | 436 |
| From B | 198 | 0 | 87 | 20 | | | | | 305 | 2329 |
| From C | 885 | 50 | 11 | 122 | | | | | 1068 | 1160 |
| From D | 782 | 57 | 318 | 0 | | | | | 1157 | 1526 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 2247 | 107 | 1474 | 702 | | | | | 4530 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 466 | 0 | 860 | 660 | | | | | 1986 | 271 |
| From B | 108 | 0 | 77 | 25 | | | | | 210 | 2176 |
| From C | 586 | 41 | 20 | 147 | | | | | 794 | 1259 |
| From D | 473 | 40 | 170 | 0 | | | | | 683 | 1221 |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1633 | 81 | 1127 | 832 | | | | | 3673 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Lam Tei Interchange |
| B | Access Road to Siu Hong Station |
| C | Tsing Lun Road |
| D | Hong Po Road |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 11.0 | 7.8 | 30.0 | 10.0 | 55 | 20 | 0.5 |
| From B | 9.0 | 6.8 | 28.0 | 4.0 | 55 | 19 | 0.9 |
| From C | 11.5 | 7.8 | 100.0 | 9.0 | 55 | 23 | 0.7 |
| From D | 14.0 | 8.5 | 40.0 | 10.0 | 55 | 10 | 0.9 |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_c q_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

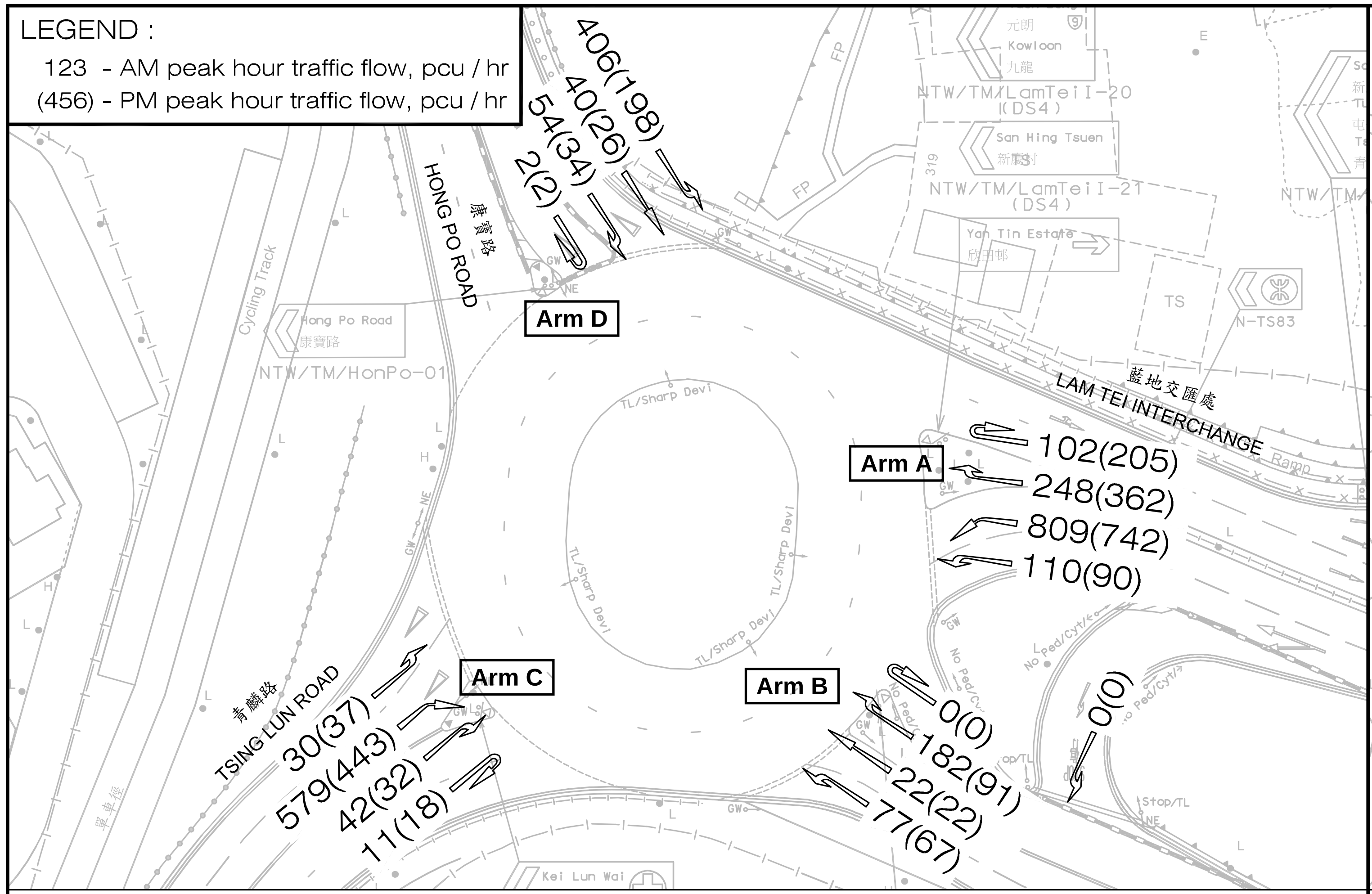
| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

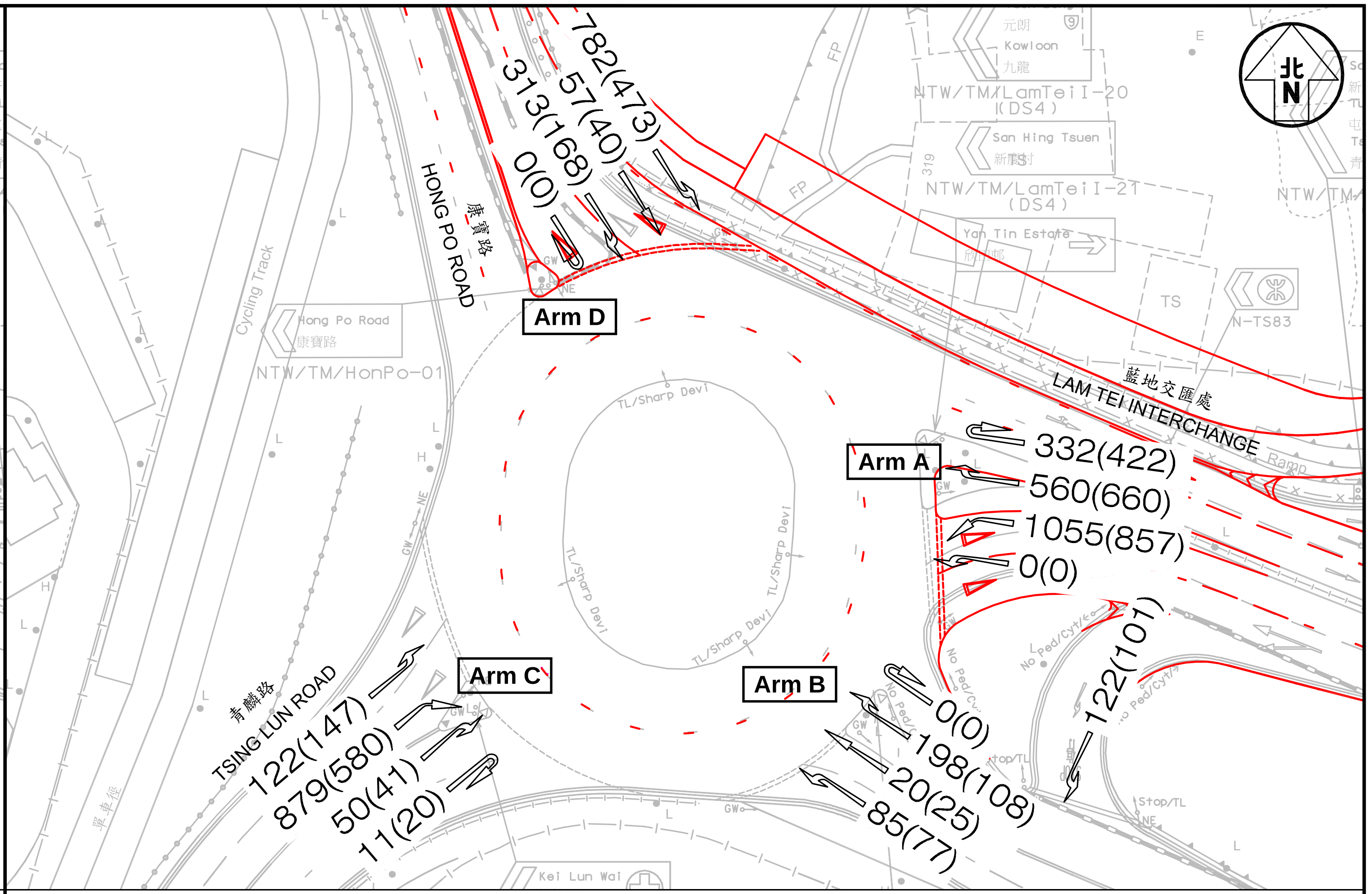
| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 9.381 | 0.607 | 1.311 | 1.051 | 2842 | 0.792 | 2624 | 2762 | 2000 | 1986 | 0.762 | 0.719 |
| From B | 7.597 | 0.607 | 1.311 | 1.051 | 2302 | 0.694 | 721 | 833 | 305 | 210 | 0.423 | 0.252 |
| From C | 9.398 | 0.607 | 1.311 | 1.063 | 2848 | 0.793 | 2050 | 1967 | 1068 | 794 | 0.521 | 0.404 |
| From D | 10.493 | 0.607 | 1.311 | 1.094 | 3179 | 0.853 | 2053 | 2338 | 1157 | 683 | 0.563 | 0.292 |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# J4 - Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange

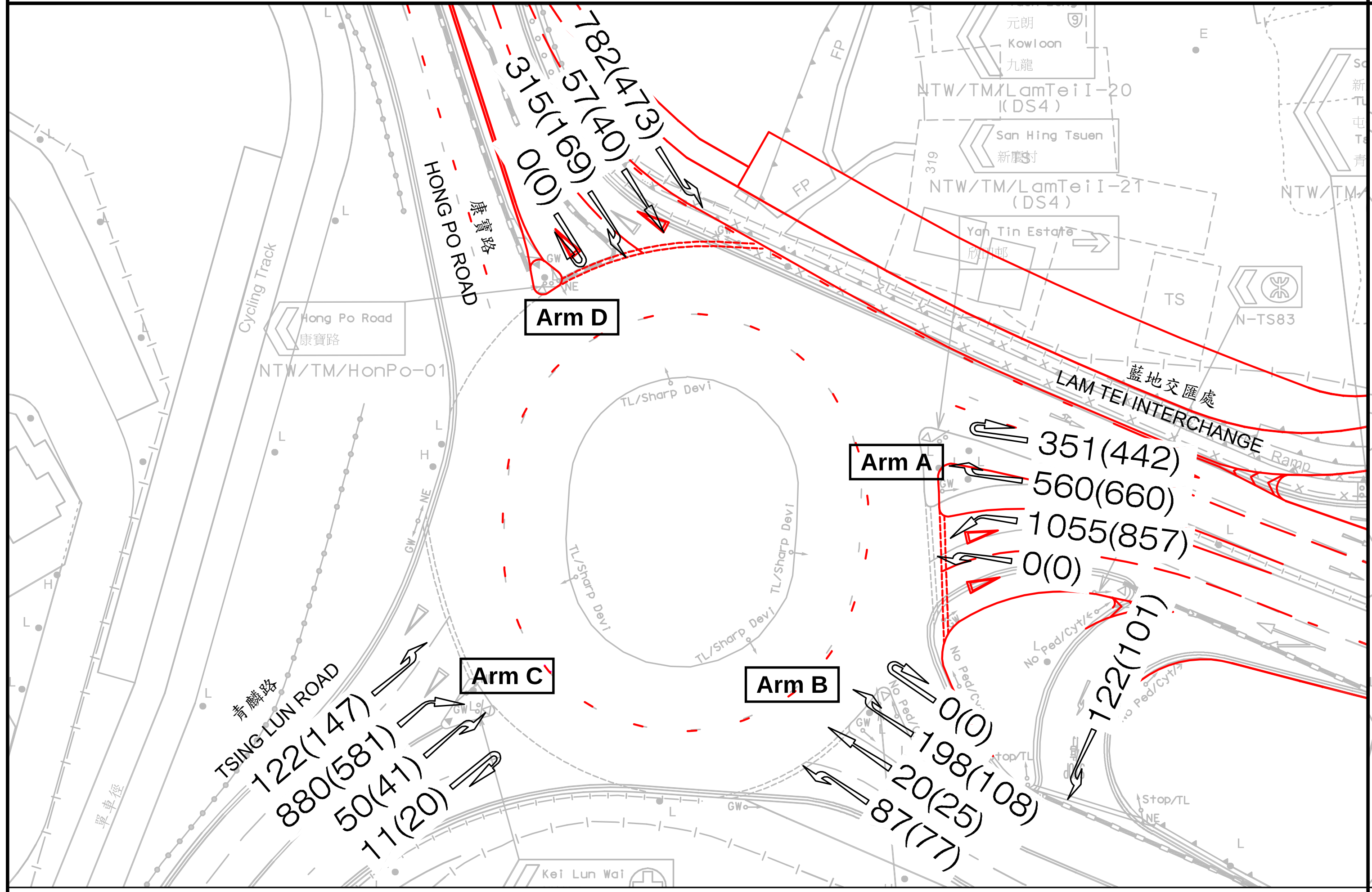
LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr


HONG PO ROAD
康寶路
LAM TEI INTERCHANGE
藍地交匯處
TSING LUN ROAD
青麟路
Arm D
406(198)
40(26)
54(34)
2(2)
Arm A
102(205)
248(362)
809(742)
110(90)
Arm B
0(0)
182(91)
22(22)
77(67)
0(0)
Arm C
30(37)
579(443)
42(32)
11(18)

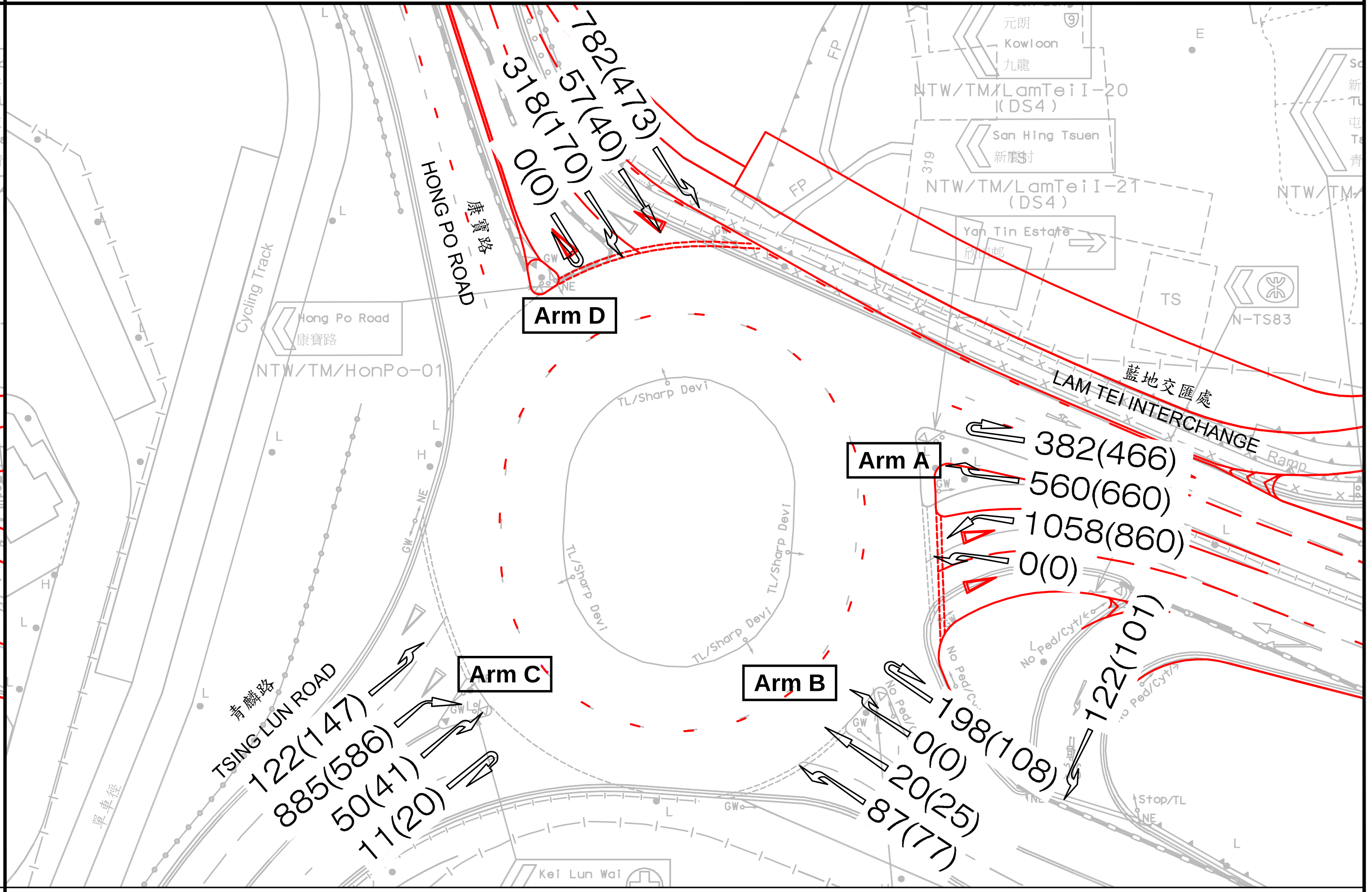
Existing Condition


北
N
HONG PO ROAD
康寶路
LAM TEI INTERCHANGE
藍地交匯處
TSING LUN ROAD
青麟路
Arm D
782(473)
57(40)
313(168)
0(0)
Arm A
332(422)
560(660)
1055(857)
0(0)
122(101)
Arm B
0(0)
198(108)
20(25)
85(77)
Arm C
122(147)
879(580)
50(41)
11(20)

Without Development


HONG PO ROAD
康寶路
LAM TEI INTERCHANGE
藍地交匯處
TSING LUN ROAD
青麟路
Arm D
782(473)
57(40)
315(169)
0(0)
Arm A
351(442)
560(660)
1055(857)
0(0)
122(101)
Arm B
0(0)
198(108)
20(25)
87(77)
Arm C
122(147)
880(581)
50(41)
11(20)

With Approved Scheme


HONG PO ROAD
康寶路
LAM TEI INTERCHANGE
藍地交匯處
TSING LUN ROAD
青麟路
Arm D
782(473)
57(40)
318(170)
0(0)
Arm A
382(466)
560(660)
1058(860)
0(0)
122(101)
Arm B
198(108)
0(0)
20(25)
87(77)
Arm C
122(147)
885(586)
50(41)
11(20)

With Proposed Scheme

scale 1:750 (A3)

# Roundabout Analysis

Location Lam Tei Interchange
Scenario Existing Condition Page 17
Design Year 2023 Job Number J7265 Date 15 November 2024

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 17 | 0 | 945 | | | | | | 962 | 658 |
| From B | 293 | 4 | 310 | | | | | | 607 | 976 |
| From C | 385 | 640 | 14 | | | | | | 1039 | 314 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| | | | | | | | | | | |
| Total | 695 | 644 | 1269 | | | | | | 2608 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 7 | 0 | 958 | | | | | | 965 | 483 |
| From B | 267 | 0 | 414 | | | | | | 681 | 992 |
| From C | 202 | 456 | 27 | | | | | | 685 | 274 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 476 | 456 | 1399 | | | | | | 2331 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Castle Peak Road |
| B | Slip Road to Tuen Mun Road |
| C | Slip Road to Tsing Lun Road |
| D | |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 7.3 | 7.3 | 40.0 | 1.0 | 51 | 22 | 0.0 |
| From B | 8.8 | 7.3 | 65.0 | 3.0 | 51 | 26 | 0.8 |
| From C | 7.7 | 6.8 | 100.0 | 8.0 | 51 | 17 | 0.2 |
| From D | | | | | | | |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_cq_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 7.300 | 0.407 | 1.355 | 1.052 | 2212 | 0.700 | 1843 | 1972 | 962 | 965 | 0.522 | 0.489 |
| From B | 7.877 | 0.407 | 1.355 | 1.048 | 2387 | 0.733 | 1751 | 1739 | 607 | 681 | 0.347 | 0.392 |
| From C | 7.438 | 0.407 | 1.355 | 1.084 | 2254 | 0.708 | 2203 | 2233 | 1039 | 685 | 0.472 | 0.307 |
| From D | | | | | | | | | | | | |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

Location Lam Tei Interchange
Scenario Without Development Page 18
Design Year 2033 Job Number J7265 Date 15 November 2024

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 18 | 0 | 1241 | | | | | | 1259 | 1055 |
| From B | 326 | 0 | 817 | | | | | | 1143 | 1271 |
| From C | 711 | 1043 | 12 | | | | | | 1766 | 344 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1055 | 1043 | 2070 | | | | | | 4168 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 15 | 0 | 1214 | | | | | | 1229 | 742 |
| From B | 286 | 0 | 799 | | | | | | 1085 | 1255 |
| From C | 414 | 716 | 26 | | | | | | 1156 | 301 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 715 | 716 | 2039 | | | | | | 3470 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Castle Peak Road |
| B | Slip Road to Tuen Mun Road |
| C | Slip Road to Tsing Lun Road |
| D | |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 7.3 | 7.3 | 40.0 | 1.0 | 51 | 22 | 0.0 |
| From B | 8.8 | 7.3 | 65.0 | 3.0 | 51 | 26 | 0.8 |
| From C | 7.7 | 6.8 | 100.0 | 8.0 | 51 | 17 | 0.2 |
| From D | | | | | | | |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_c q_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 7.300 | 0.407 | 1.355 | 1.052 | 2212 | 0.700 | 1550 | 1781 | 1259 | 1229 | 0.812 | 0.690 |
| From B | 7.877 | 0.407 | 1.355 | 1.048 | 2387 | 0.733 | 1524 | 1537 | 1143 | 1085 | 0.750 | 0.706 |
| From C | 7.438 | 0.407 | 1.355 | 1.084 | 2254 | 0.708 | 2180 | 2213 | 1766 | 1156 | 0.810 | 0.522 |
| From D | | | | | | | | | | | | |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

| | | | |
|---|---|---|---|
| Location | Lam Tei Interchange | | |
| Scenario | With Approved Scheme | Page | 19 |
| Design Year | 2033 | Job Number | J7265 |
| | | Date | 15 November 2024 |

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 18 | 0 | 1252 | | | | | | 1270 | 1068 |
| From B | 326 | 0 | 825 | | | | | | 1151 | 1282 |
| From C | 721 | 1056 | 12 | | | | | | 1789 | 344 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1065 | 1056 | 2089 | | | | | | 4210 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 15 | 0 | 1226 | | | | | | 1241 | 748 |
| From B | 286 | 0 | 807 | | | | | | 1093 | 1267 |
| From C | 412 | 722 | 26 | | | | | | 1159.658 | 301 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 713 | 722 | 2059 | | | | | | 3493.658 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Castle Peak Road |
| B | Slip Road to Tuen Mun Road |
| C | Slip Road to Tsing Lun Road |
| D | |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 7.3 | 7.3 | 40.0 | 1.0 | 51 | 22 | 0.0 |
| From B | 8.8 | 7.3 | 65.0 | 3.0 | 51 | 26 | 0.8 |
| From C | 7.7 | 6.8 | 100.0 | 8.0 | 51 | 17 | 0.2 |
| From D | | | | | | | |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_c q_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 7.300 | 0.407 | 1.355 | 1.052 | 2212 | 0.700 | 1540 | 1776 | 1270 | 1241 | 0.824 | 0.699 |
| From B | 7.877 | 0.407 | 1.355 | 1.048 | 2387 | 0.733 | 1516 | 1527 | 1151 | 1093 | 0.759 | 0.716 |
| From C | 7.438 | 0.407 | 1.355 | 1.084 | 2254 | 0.708 | 2180 | 2213 | 1789 | 1160 | 0.821 | 0.524 |
| From D | | | | | | | | | | | | |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# Roundabout Analysis

Location Lam Tei Interchange
Scenario With Proposed Scheme Page 20
Design Year 2033 Job Number J7265 Date 15 November 2024

**AM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 18 | 0 | 1273 | | | | | | 1291 | 1090 |
| From B | 326 | 0 | 838 | | | | | | 1164 | 1303 |
| From C | 740 | 1078 | 12 | | | | | | 1830 | 344 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 1083.599 | 1078 | 2123 | | | | | | 4285 | |

**PM Peak**

| Arm | To A | To B | To C | To D | To E | To F | To G | To H | Total | $q_c$ |
|---|---|---|---|---|---|---|---|---|---|---|
| From A | 15 | 0 | 1309 | | | | | | 1324 | 790 |
| From B | 286 | 0 | 851 | | | | | | 1137 | 1350 |
| From C | 419 | 764 | 26 | | | | | | 1209 | 301 |
| From D | | | | | | | | | | |
| From E | | | | | | | | | | |
| From F | | | | | | | | | | |
| From G | | | | | | | | | | |
| From H | | | | | | | | | | |
| Total | 720 | 764 | 2186 | | | | | | 3670 | |

**Legend**

| Arm | Road (in clockwise order) |
|---|---|
| A | Slip Road to Castle Peak Road |
| B | Slip Road to Tuen Mun Road |
| C | Slip Road to Tsing Lun Road |
| D | |
| E | |
| F | |
| G | |
| H | |

**Geometric Parameters**

| Arm | e (m) | v (m) | r (m) | L (m) | D (m) | ∅ (°) | S |
|---|---|---|---|---|---|---|---|
| From A | 7.3 | 7.3 | 40.0 | 1.0 | 51 | 22 | 0.0 |
| From B | 8.8 | 7.3 | 65.0 | 3.0 | 51 | 26 | 0.8 |
| From C | 7.7 | 6.8 | 100.0 | 8.0 | 51 | 17 | 0.2 |
| From D | | | | | | | |
| From E | | | | | | | |
| From F | | | | | | | |
| From G | | | | | | | |
| From H | | | | | | | |

**Predictive Equation $Q_E = K(F - f_c q_c)$**

| | |
|---|---|
| $Q_E$ | Entry Capacity |
| $q_c$ | Circulating Flow across the Entry |
| K | $= 1-0.00347(\varnothing-30)-0.978[(1/r)-0.05]$ |
| F | $= 303x_2$ |
| $f_c$ | $= 0.210t_D(1+0.2x_2)$ |
| $t_D$ | $= 1+0.5/(1+M)$ |
| M | $= \exp[(D-60)/10]$ |
| $x_2$ | $= v+(e-v)/(1+2S)$ |
| S | $= 1.6(e-v)/L$ |

**Limitation**

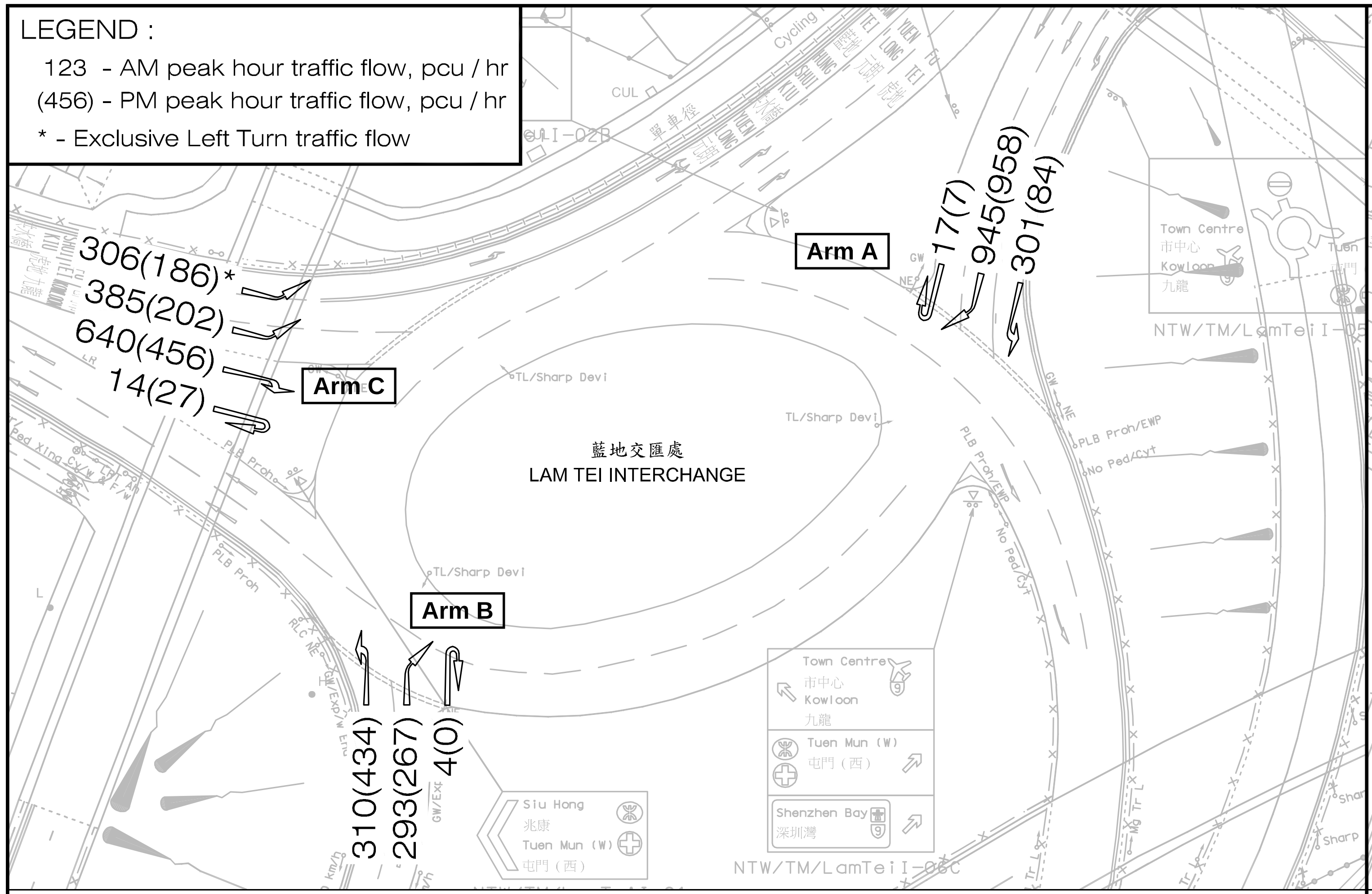
| | | |
|---|---|---|
| e | Entry Width | 4.0 - 15.0 m |
| v | Approach Half Width | 2.0 - 7.3 m |
| r | Entry Radius | 6.0 - 100.0 m |
| L | Effective Length of Flare | 1.0 - 100.0 m |
| D | Inscribed Circle Diameter | 15 - 100 m |
| ∅ | Entry Angle | 10° - 60° |
| S | Sharpness of Flare | 0.0 - 3.0 |

**Ratio-of-Flow to Capacity (RFC)**

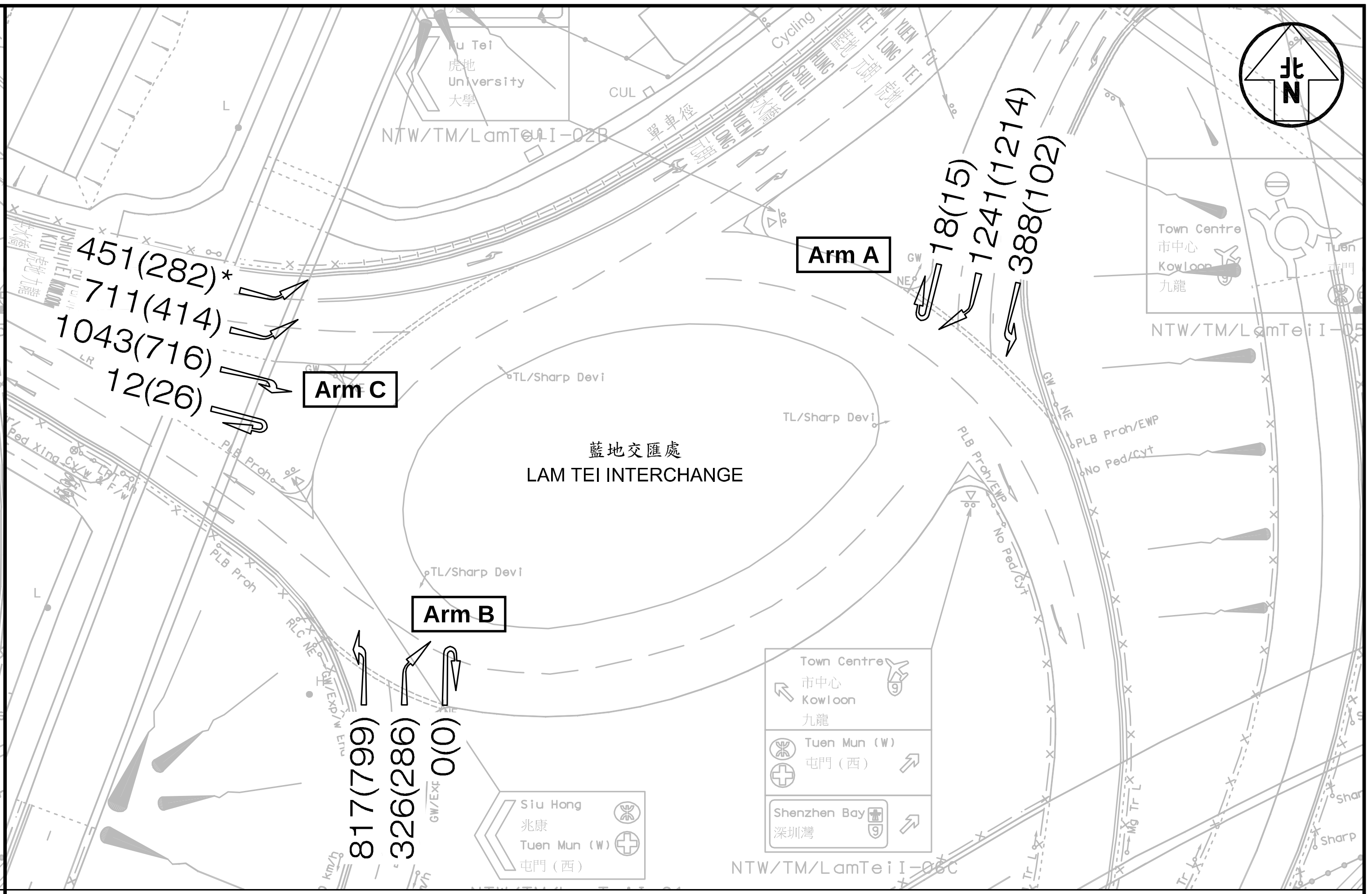
| | | | | | | | $Q_E$ | | Entry Flow | | RFC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arm | $x_2$ | M | $t_D$ | K | F | $f_c$ | AM | PM | AM | PM | AM | PM |
| From A | 7.300 | 0.407 | 1.355 | 1.052 | 2212 | 0.700 | 1524 | 1745 | 1291 | 1324 | 0.847 | 0.759 |
| From B | 7.877 | 0.407 | 1.355 | 1.048 | 2387 | 0.733 | 1500 | 1464 | 1164 | 1137 | 0.776 | 0.777 |
| From C | 7.438 | 0.407 | 1.355 | 1.084 | 2254 | 0.708 | 2180 | 2213 | 1830 | 1209 | 0.839 | 0.546 |
| From D | | | | | | | | | | | | |
| From E | | | | | | | | | | | | |
| From F | | | | | | | | | | | | |
| From G | | | | | | | | | | | | |
| From H | | | | | | | | | | | | |

# J5 - Lam Tei Interchange

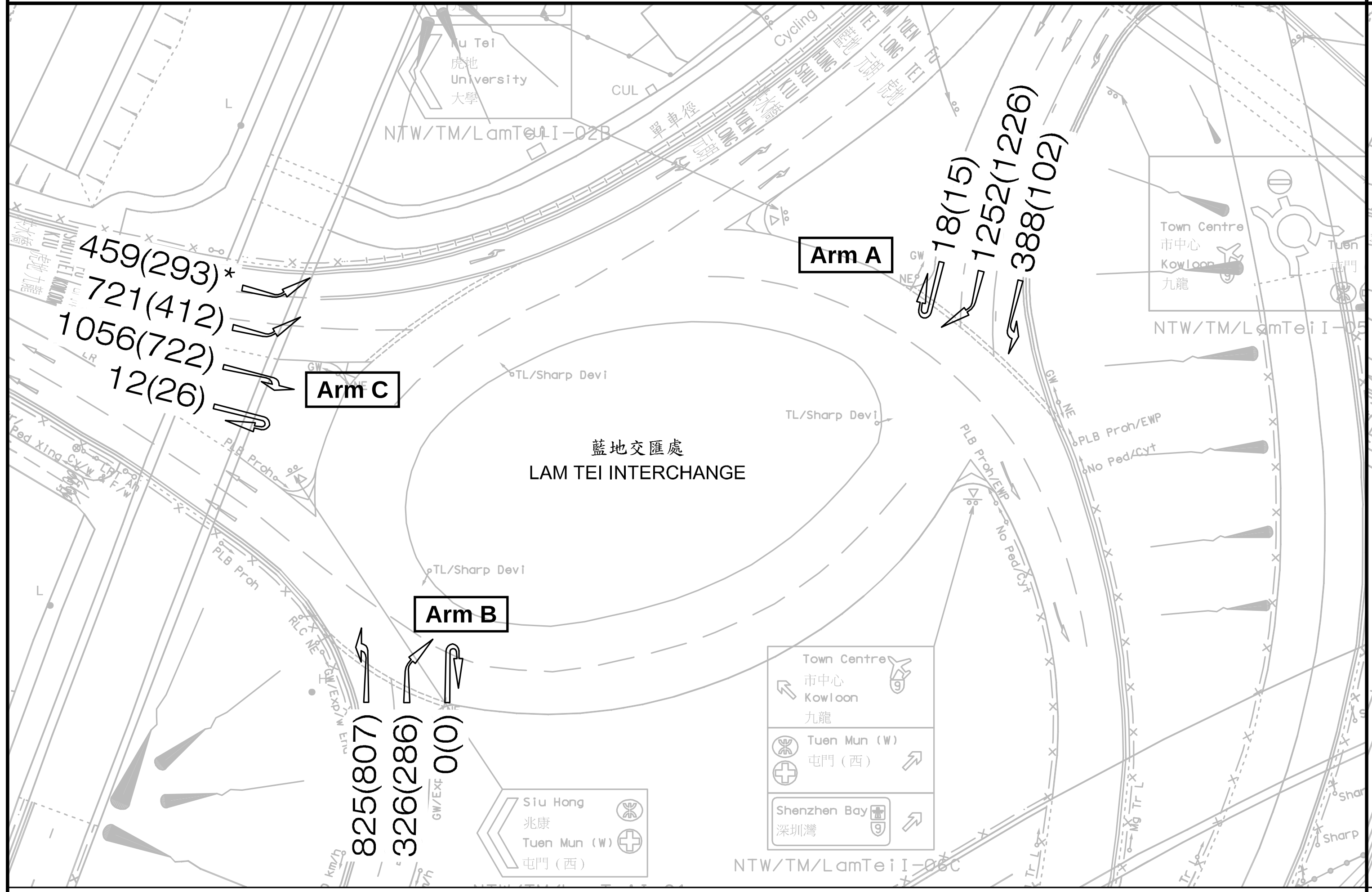
LEGEND :
123 - AM peak hour traffic flow, pcu / hr
(456) - PM peak hour traffic flow, pcu / hr
* - Exclusive Left Turn traffic flow


Arm A
17(7)
945(958)
301(84)
Arm C
306(186)*
385(202)
640(456)
14(27)
Arm B
310(434)
293(267)
4(0)
藍地交匯處
LAM TEI INTERCHANGE

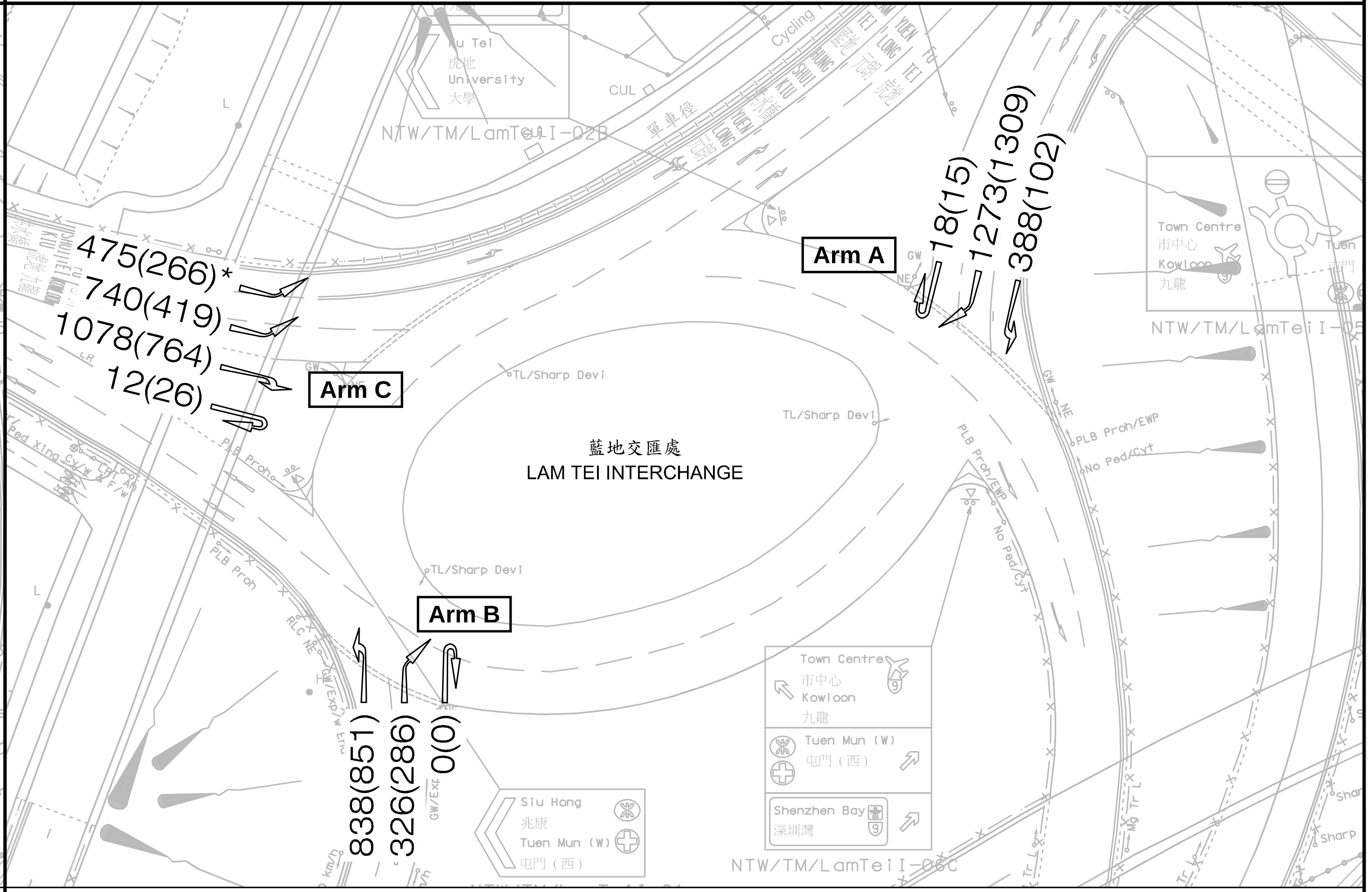
Existing Condition


北
N
Arm A
18(15)
1241(1214)
388(102)
Arm C
451(282)*
711(414)
1043(716)
12(26)
Arm B
817(799)
326(286)
0(0)
藍地交匯處
LAM TEI INTERCHANGE

Year 2033 without Proposed Development


Arm A
18(15)
1252(1226)
388(102)
Arm C
459(293)*
721(412)
1056(722)
12(26)
Arm B
825(807)
326(286)
0(0)
藍地交匯處
LAM TEI INTERCHANGE

Year 2033 with Approved Scheme


Arm A
18(15)
1273(1309)
388(102)
Arm C
475(266)*
740(419)
1078(764)
12(26)
Arm B
838(851)
326(286)
0(0)
藍地交匯處
LAM TEI INTERCHANGE

Year 2033 with Proposed Development

scale 1:750 (A3)

# Signal Junction Analysis

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei
Job Number: J7265
Scenario: Existing Condition
P. 21
Design Year: 2023
Designed By: 
Checked By: 
Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Castle Peak Road -Lam Tei SB | LT | A1 | 1,4 | 3.25 | 80.0 | | 100 | 1904 | 364 | 0.191 | 0.191 | 100 | 1904 | 249 | 0.131 | 0.131 |
| | SA | A2 | 1,4 | 3.25 | | | | 2080 | 157 | 0.075 | | | 2080 | 132 | 0.063 | |
| | SA+RT | A3 | 1 | 3.25 | 22.5 | | 64 | 1995 | 151 | 0.076 | | 55 | 2006 | 128 | 0.064 | |
| | RT | A4 | 1 | 3.25 | 20.0 | | 100 | 1935 | 146 | 0.075 | | 100 | 1935 | 123 | 0.064 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Slip Road from Lam Tei Interchange | LT | B1 | 2,3 | 3.50 | 8.0 | | 100 | 1655 | 163 | 0.099 | | 100 | 1655 | 116 | 0.070 | |
| | LT+RT | B2 | 2,3 | 3.50 | 30.0 | | 100 | 2005 | 281 | 0.140 | | 100 | 2005 | 202 | 0.101 | |
| | RT | B3 | 2,3 | 3.50 | 26.0 | | 100 | 1990 | 278 | 0.140 | 0.140 | 100 | 1990 | 200 | 0.100 | 0.100 |
| | RT | B4 | 2,3 | 3.50 | 23.0 | | 100 | 1976 | 280 | 0.142 | | 100 | 1976 | 145 | 0.073 | |
| | | | | | | | | | | | | | | | | |
| Castle Peak Road NB | LT | C1 | 3,4 | 3.50 | 14.0 | | 100 | 1775 | 486 | 0.274 | | 100 | 1775 | 407 | 0.229 | |
| | LT | C2 | 3,4 | 3.50 | 19.0 | | 100 | 1951 | 534 | 0.274 | | 100 | 1951 | 448 | 0.230 | |
| | SA | D1 | 4 | 3.50 | | | | 2105 | 137 | 0.065 | | | 2105 | 223 | 0.106 | |
| | SA | D2 | 4 | 3.50 | | | | 2105 | 137 | 0.065 | | | 2105 | 223 | 0.106 | |
| | | | | | | | | | | | | | | | | |
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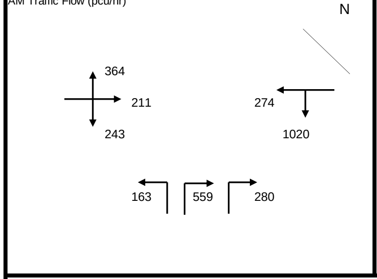
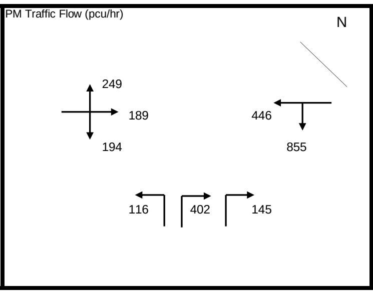
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 1,3 | | min crossing time = | 6 | sec GM + | 12 | sec FGM = | 18 | sec | |
| | $F_{(P)}$ | 1 | | min crossing time = | 5 | sec GM + | 7 | sec FGM = | 12 | sec | |
| | $G_{(P)}$ | 2 | | min crossing time = | 6 | sec GM + | 11 | sec FGM = | 17 | sec | |
| | $H_{(P)}$ | 2 | | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

AM Traffic Flow (pcu/hr)



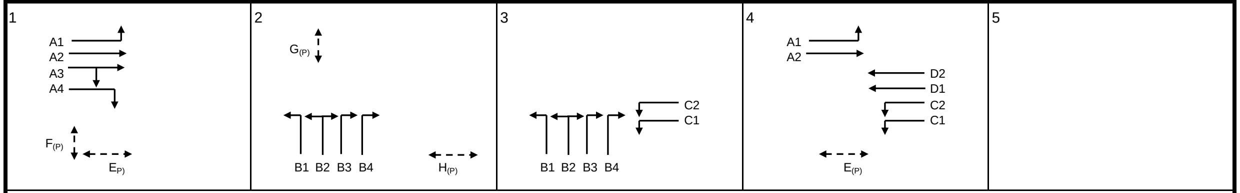
PM Traffic Flow (pcu/hr)



S = 1940 + 100 (W-3.25)
S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)
SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1,4+2,3 | | 1,4+2,3 | |
| Sum y | 0.331 | | 0.231 | |
| L (s) | 21 | | 21 | |
| C (s) | 110 | | 110 | |
| practical y | 0.728 | | 0.728 | |
| R.C. (%) | 120% | | 215% | |

Note:



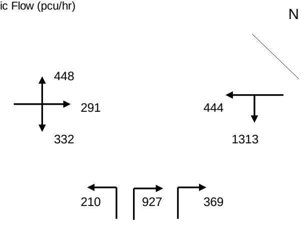
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 15 | G = | I/G = | G = | I/G = 8 | G = | I/G = | G = |
| | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = |
| PM | G = | I/G = 15 | G = | I/G = | G = | I/G = 8 | G = | I/G = | G = |
| | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = |

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei — Job Number: J7265
Scenario: Without Development — P. 22
Design Year: 2033 — Designed By: ____ — Checked By: ____ — Date: 15 Nov 2024

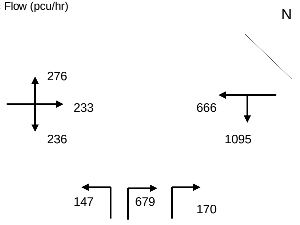
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Castle Peak Road SB | LT | A1 | 1,4 | 3.50 | 80.0 | | 100 | 1929 | 448 | 0.232 | | 100 | 1929 | 276 | 0.143 | |
| | SA+RT | A2 | 1 | 3.50 | 30.0 | | 0 | 2105 | 291 | 0.138 | 0.138 | 0 | 2105 | 233 | 0.111 | 0.111 |
| | RT | A3 | 1 | 3.50 | 25.0 | | 100 | 1986 | 167 | 0.084 | | 100 | 1986 | 119 | 0.060 | |
| | RT | A4 | 1 | 3.50 | 20.0 | | 100 | 1958 | 165 | 0.084 | | 100 | 1958 | 117 | 0.060 | |
| Slip Road from | LT+(To YL Hwy)RT | B2 | 2,3 | 3.50 | 30.0 | | 100 | 2105 | 585 | 0.278 | | 100 | 2005 | 405 | 0.202 | 0.202 |
| Lam Tei Interchange | (To YL Hwy) RT | B3 | 2,3 | 3.50 | 25.0 | | 100 | 1986 | 552 | 0.278 | | 100 | 2086 | 421 | 0.202 | |
| | (To CPR) RT | B4 | 2,3 | 3.50 | 20.0 | | 100 | 1958 | 369 | 0.188 | | 100 | 1958 | 170 | 0.087 | |
| Castle Peak Road NB | LT | C1 | 3,4 | 3.50 | 14.0 | | 100 | 1775 | 625 | 0.352 | 0.352 | 100 | 1775 | 522 | 0.294 | |
| | LT | C2 | 3,4 | 3.50 | 19.0 | | 100 | 1951 | 688 | 0.353 | | 100 | 1951 | 573 | 0.294 | |
| | SA | D1 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | 0.158 |
| | SA | D2 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $D_{(P)}$ | 1 | min crossing time = | 6 | sec GM + | 12 | sec FGM = | 18 | sec |
| | $E_{(P)}$ | 1,4 | min crossing time = | 5 | sec GM + | 7 | sec FGM = | 12 | sec |
| | $F_{(P)}$ | 2 | min crossing time = | 6 | sec GM + | 11 | sec FGM = | 17 | sec |
| | $G_{(P)}$ | 2,3 | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

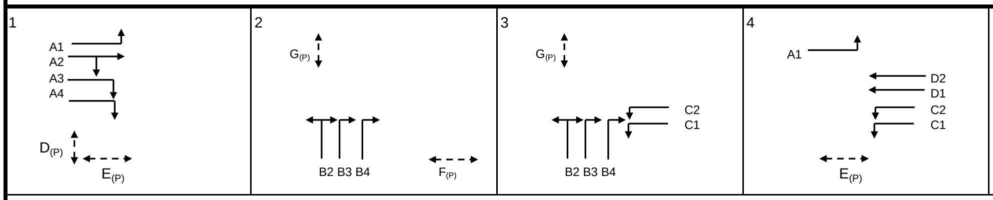


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+3,4 | | 1 + 2,3 + 4 | |
| Sum y | 0.490 | | 0.471 | |
| L (s) | 38 | | 26 | |
| C (s) | 110 | | 110 | |
| practical y | 0.589 | | 0.687 | |
| R.C. (%) | 20% | | 46% | |

Note:



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 15 | G = 7 | I/G = 11 | G = | I/G = | G = | I/G = 7 | G = | |
| | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = | |
| AM | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = | |
| | G = | I/G = 15 | G = 7 | I/G = 11 | G = | I/G = | G = | I/G = 7 | G = | |

# Signal Junction Analysis

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei  Job Number: J7265
Scenario: With Approved Scheme  P. 23
Design Year: 2033  Designed By:  Checked By:  Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Castle Peak Road SB | LT | A1 | 1,4 | 3.50 | 80.0 | | 100 | 1929 | 448 | 0.232 | | 100 | 1929 | 276 | 0.143 | |
| | SA+RT | A2 | 1 | 4.00 | 85.0 | | 0 | 2155 | 291 | 0.135 | 0.135 | 0 | 2155 | 233 | 0.108 | 0.108 |
| | RT | A3 | 1 | 3.50 | 25.0 | | 100 | 1986 | 167 | 0.084 | | 100 | 1986 | 119 | 0.060 | |
| | RT | A4 | 1 | 3.50 | 20.0 | | 100 | 1958 | 165 | 0.084 | | 100 | 1958 | 117 | 0.060 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Slip Road from | LT+(To YL Hwy)RT | B2 | 2,3 | 3.50 | 30.0 | | 100 | 2105 | 593 | 0.282 | | 100 | 2005 | 419 | 0.209 | 0.209 |
| Lam Tei Interchange | (To YL Hwy) RT | B3 | 2,3 | 3.50 | 25.0 | | 100 | 1986 | 560 | 0.282 | | 100 | 1986 | 415 | 0.209 | |
| | (To CPR) RT | B4 | 2,3 | 3.50 | 20.0 | | 100 | 1958 | 371 | 0.189 | | 100 | 1958 | 171 | 0.087 | |
| | | | | | | | | | | | | | | | | |
| Castle Peak Road NB | LT | C1 | 3,4 | 3.50 | 14.0 | | 100 | 1775 | 631 | 0.356 | 0.356 | 100 | 1775 | 527 | 0.297 | |
| | LT | C2 | 3,4 | 3.50 | 19.0 | | 100 | 1951 | 693 | 0.355 | | 100 | 1951 | 580 | 0.297 | |
| | SA | D1 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | 0.158 |
| | SA | D2 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | |
| | | | | | | | | | | | | | | | | |
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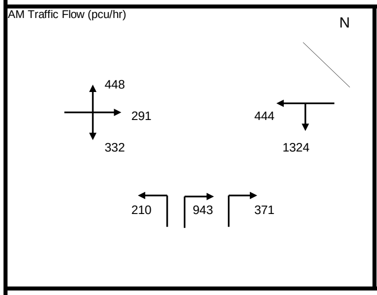
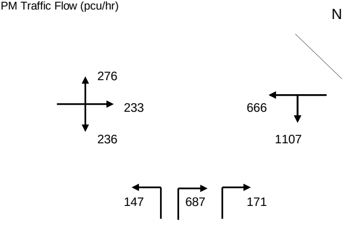
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 1 | | min crossing time = | 6 | sec GM + | 12 | sec FGM = | 18 | sec |
| | $F_{(P)}$ | 1,4 | | min crossing time = | 5 | sec GM + | 7 | sec FGM = | 12 | sec |
| | $G_{(P)}$ | 2 | | min crossing time = | 6 | sec GM + | 11 | sec FGM = | 17 | sec |
| | $H_{(P)}$ | 2,3 | | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

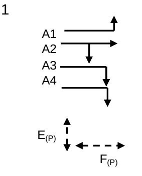


S = 1940 + 100 (W-3.25)  S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)  SM = (S - 230) / (1 + 1.5 f/r)

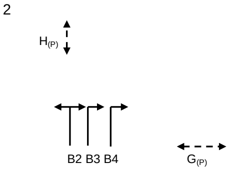
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+3,4 | | 1 + 2,3 + 4 | |
| Sum y | 0.491 | | 0.475 | |
| L (s) | 38 | | 26 | |
| C (s) | 110 | | 110 | |
| practical y | 0.589 | | 0.687 | |
| R.C. (%) | 20% | | 45% | |

Note:

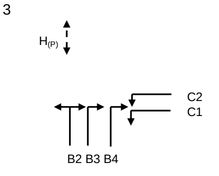
1



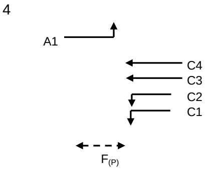
2



3



4



5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 15 | G = 7 | I/G = 11 | G = | I/G = | G = | I/G = 7 | G = | |
| | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = | |
| AM | G = | I/G = 15 | G = | I/G = | G = | I/G = 7 | G = | I/G = 7 | G = | |
| | G = | I/G = 15 | G = 7 | I/G = 11 | G = | I/G = | G = | I/G = 7 | G = | |

Junction: Lam Tei Interchange / Castle Peak Road – Lam Tei　　Job Number: J7265
Scenario: With Proposed Scheme　　P. 24
Design Year: 2033　　Designed By: ______　　Checked By: ______　　Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Castle Peak Road SB | LT | A1 | 1,4 | 3.50 | 80.0 | | 100 | 1929 | 448 | 0.232 | | 100 | 1929 | 276 | 0.143 | |
| | SA+RT | A2 | 1 | 4.00 | 85.0 | | 0 | 2155 | 291 | 0.135 | 0.135 | 0 | 2155 | 233 | 0.108 | 0.108 |
| | RT | A3 | 1 | 3.50 | 25.0 | | 100 | 1986 | 170 | 0.086 | | 100 | 1986 | 121 | 0.061 | |
| | RT | A4 | 1 | 3.50 | 20.0 | | 100 | 1958 | 167 | 0.085 | | 100 | 1958 | 120 | 0.061 | |
| | | | | | | | | | | | | | | | | |
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| Slip Road from | LT+(To YL Hwy)RT | B2 | 2,3 | 3.50 | 30.0 | | 100 | 2105 | 610 | 0.290 | | 100 | 2005 | 426 | 0.212 | |
| Lam Tei Interchange | (To YL Hwy) RT | B3 | 2,3 | 3.50 | 25.0 | | 100 | 1986 | 575 | 0.290 | | 100 | 1986 | 421 | 0.212 | 0.212 |
| | (To CPR) RT | B4 | 2,3 | 3.50 | 20.0 | | 100 | 1958 | 374 | 0.191 | | 100 | 1958 | 172 | 0.088 | |
| | | | | | | | | | | | | | | | | |
| Castle Peak Road NB | LT | C1 | 3,4 | 3.50 | 14.0 | | 100 | 1775 | 638 | 0.359 | 0.359 | 100 | 1775 | 533 | 0.300 | |
| | LT | C2 | 3,4 | 3.50 | 19.0 | | 100 | 1951 | 702 | 0.360 | | 100 | 1951 | 586 | 0.300 | |
| | SA | D1 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | 0.158 |
| | SA | D2 | 4 | 3.50 | | | | 2105 | 222 | 0.105 | | | 2105 | 333 | 0.158 | |
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|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 1 | | min crossing time = | 6 | sec GM + | 12 | sec FGM = | 18 | sec |
| | $F_{(P)}$ | 1,4 | | min crossing time = | 5 | sec GM + | 7 | sec FGM = | 12 | sec |
| | $G_{(P)}$ | 2 | | min crossing time = | 6 | sec GM + | 11 | sec FGM = | 17 | sec |
| | $H_{(P)}$ | 2,3 | | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec |
| | | | | | | | | | | |
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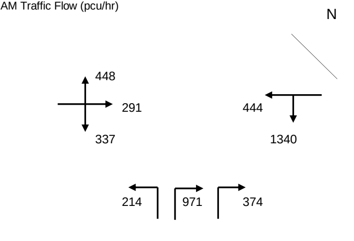
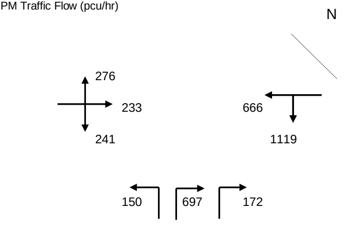
AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

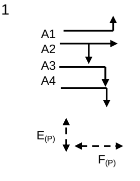


S = 1940 + 100 (W-3.25)　　S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)　　SM = (S - 230) / (1 + 1.5 f/r)

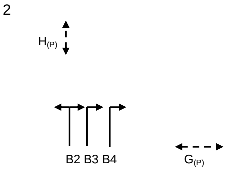
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+3,4 | | 1 + 2,3 + 4 | |
| Sum y | 0.495 | | 0.478 | |
| L (s) | 38 | | 26 | |
| C (s) | 110 | | 110 | |
| practical y | 0.589 | | 0.687 | |
| R.C. (%) | 19% | | 44% | |

Note:

1



2



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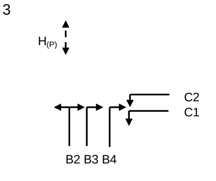
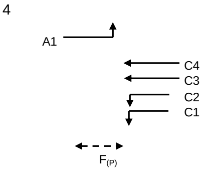


4



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | | I/G = | 15 | G = | 7 | I/G = | 11 | G = | | I/G = | | G = | | I/G = | 7 | G = | | | |
| | G = | | I/G = | 15 | G = | | I/G = | | G = | | I/G = | 7 | G = | | I/G = | 7 | G = | | | |
| AM | G = | | I/G = | 15 | G = | | I/G = | | G = | | I/G = | 7 | G = | | I/G = | 7 | G = | | | |
| | G = | | I/G = | 15 | G = | 7 | I/G = | 11 | G = | | I/G = | | G = | | I/G = | 7 | G = | | | |

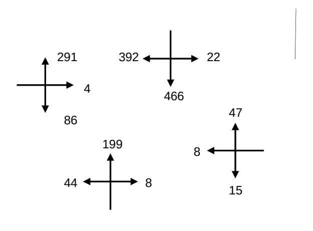
# Signal Junction Analysis

Junction: Tsing Lun Road/ Tsz Tin Road
Job Number: J7265
Scenario: Existing Condition
P. 25
Design Year: 2023
Designed By:
Checked By:
Date: 15 Nov 2024

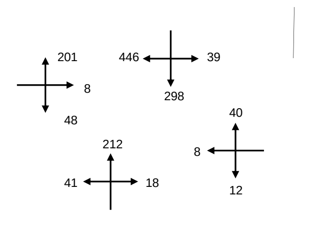
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak | | | | | PM Peak | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y |
| Tsing Lun Road SB | LT+SA | A1 | 1 | 3.65 | 13.0 | | 5 | 1969 | 488 | 0.248 | 0.248 | 12 | 1953 | 337 | 0.173 | |
| | RT | A2 | 1 | 3.65 | 15.0 | | 100 | 1927 | 392 | 0.203 | | 100 | 2120 | 446 | 0.210 | 0.210 |
| Tsing Lun Road NB | LT+SA | C1 | 2 | 3.30 | 23.0 | | 38 | 1898 | 116 | 0.061 | 0.061 | 34 | 1903 | 120 | 0.063 | 0.063 |
| | SA | C2 | 2 | 3.40 | | | | 2095 | 127 | 0.061 | | | 2095 | 133 | 0.063 | |
| | RT | C3 | 2 | 3.40 | 15.0 | | 100 | 1905 | 8 | 0.004 | | 100 | 1905 | 18 | 0.009 | |
| Access Road to | LT+SA+RT | D1 | 3 | 3.50 | 15.0 | | 89 | 1804 | 70 | 0.039 | 0.039 | 87 | 1808 | 60 | 0.033 | 0.033 |
| Siu Hong Court WB | | | | | | | | | | | | | | | | |
| Tsz Tin Road EB | LT | B1 | 4 | 3.38 | 10.0 | | 100 | 1698 | 180 | 0.106 | 0.106 | 100 | 1698 | 115 | 0.068 | 0.068 |
| | LT+SA+RT | B2 | 4 | 3.37 | 15.0 | | 98 | 1905 | 201 | 0.105 | | 94 | 2092 | 142 | 0.068 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 2 | | min crossing time = | 5 | sec GM + | 10 | sec FGM = | 15 | sec |
| | $F_{(P)}$ | 3 | | min crossing time = | 5 | sec GM + | 6 | sec FGM = | 11 | sec |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

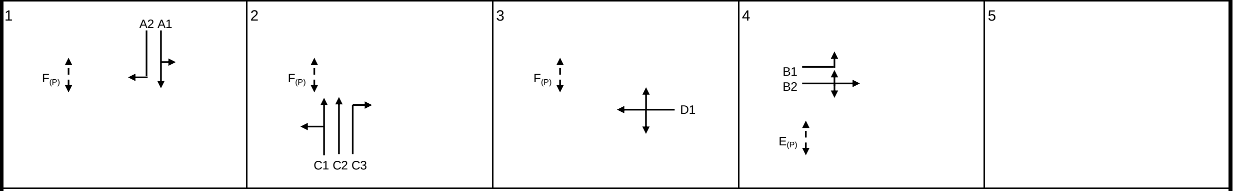


S = 1940 + 100 (W-3.25)    S = 2080 + 100 (W-3.25)

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2+3+4 | | 1+2+3+4 | |
| Sum y | 0.454 | | 0.374 | |
| L (s) | 24 | | 24 | |
| C (s) | 118 | | 118 | |
| practical y | 0.717 | | 0.717 | |
| R.C. (%) | 58% | | 92% | |

Note:



| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | | I/G = | 6 | G = | | I/G = | 6 | G = | | I/G = | 9 | G = | | I/G = | 7 | G = | |
| | G = | | I/G = | 6 | G = | | I/G = | 6 | G = | | I/G = | 9 | G = | 14 | I/G = | 7 | G = | |
| PM | G = | | I/G = | 6 | G = | | I/G = | 6 | G = | | I/G = | 9 | G = | | I/G = | 7 | G = | |
| | G = | | I/G = | 6 | G = | | I/G = | 6 | G = | | I/G = | 9 | G = | 14 | I/G = | 7 | G = | |

# Signal Junction Analysis

Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: Without Development — P. 26

Design Year: 2033 — Designed By: ____ — Checked By: ____ — Date: 15 Nov 2024

| Approach | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak | | | | | PM Peak | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y | Turning % | Sat. Flow (pcu/hr) | Flow (pcu/hr) | y value | Critical y |
| Tsing Lun Road SB LT+SA | A1 | 1 | 3.65 | 13.0 | | 4 | 1971 | 760 | 0.386 | 0.386 | 10 | 1957 | 486 | 0.248 | |
| RT | A2 | 1 | 3.65 | 15.0 | | 100 | 1927 | 622 | 0.323 | | 100 | 2120 | 545 | 0.257 | 0.257 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Tsing Lun Road NB LT+SA | C1 | 2 | 3.30 | 23.0 | | 53 | 1880 | 191 | 0.102 | 0.102 | 66 | 1865 | 227 | 0.122 | 0.122 |
| SA | C2 | 2 | 3.40 | | | | 2095 | 212 | 0.101 | | | 2095 | 255 | 0.122 | |
| RT | C3 | 2 | 3.40 | 15.0 | | 100 | 1905 | 10 | 0.005 | | 100 | 1905 | 25 | 0.013 | |
| | | | | | | | | | | | | | | | |
| Access Road to LT+SA+RT | D1 | 3 | 3.50 | 15.0 | | 88 | 1806 | 86 | 0.048 | 0.048 | 87 | 1808 | 75 | 0.041 | 0.041 |
| Siu Hong Court WB | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Tsz Tin Road EB LT | B1 | 4,1 | 3.38 | 10.0 | | 100 | 1698 | 561 | 0.330 | | 100 | 1698 | 329 | 0.194 | |
| SA+RT | B2 | 4 | 3.37 | 15.0 | | 90 | 1919 | 101 | 0.053 | 0.053 | 88 | 1923 | 74 | 0.038 | 0.038 |
| | | | | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 2 | | min crossing time = | 5 | sec GM + | 10 | sec FGM = | 15 | sec | |
| | $F_{(P)}$ | 3 | | min crossing time = | 5 | sec GM + | 6 | sec FGM = | 11 | sec | |
| | | | | | | | | | | | |
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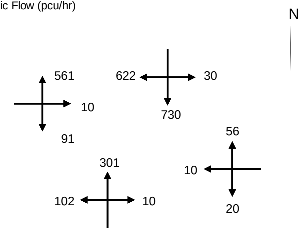
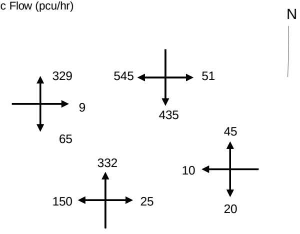
AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

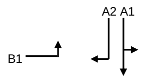
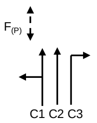
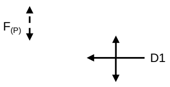
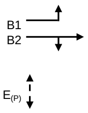


S = 1940 + 100 (W-3.25) S = 2080 + 100 (W-3.25)

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2+3+4 | | 1+2+3+4 | |
| Sum y | 0.587 | | 0.459 | |
| L (s) | 24 | | 24 | |
| C (s) | 118 | | 118 | |
| practical y | 0.717 | | 0.717 | |
| R.C. (%) | 22% | | 56% | |

Note:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
|  |  |  |  | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |
| PM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |

Junction: Tsing Lun Road/ Tsz Tin Road　Job Number: J7265
Scenario: With Approved Scheme　P. 27
Design Year: 2033　Designed By: ____　Checked By: ____　Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tsing Lun Road SB | LT+SA | A1 | 1 | 3.65 | 13.0 | | 4 | 1971 | 762 | 0.387 | 0.387 | 10 | 1957 | 487 | 0.249 | |
| | RT | A2 | 1 | 3.65 | 15.0 | | 100 | 1927 | 622 | 0.323 | | 100 | 2120 | 545 | 0.257 | 0.257 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Tsing Lun Road NB | LT+SA | C1 | 2 | 3.30 | 23.0 | | 53 | 1880 | 191 | 0.102 | 0.102 | 66 | 1865 | 227 | 0.122 | 0.122 |
| | SA | C2 | 2 | 3.40 | | | | 2095 | 213 | 0.102 | | | 2095 | 256 | 0.122 | |
| | RT | C3 | 2 | 3.40 | 15.0 | | 100 | 1905 | 10 | 0.005 | | 100 | 1905 | 25 | 0.013 | |
| | | | | | | | | | | | | | | | | |
| Access Road to | LT+SA+RT | D1 | 3 | 3.50 | 15.0 | | 88 | 1806 | 86 | 0.048 | 0.048 | 87 | 1808 | 75 | 0.041 | 0.041 |
| Siu Hong Court WB | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Tsz Tin Road EB | LT | B1 | 4,1 | 3.38 | 10.0 | | 100 | 1698 | 561 | 0.330 | | 100 | 1698 | 329 | 0.194 | |
| | SA+RT | B2 | 4 | 3.37 | 15.0 | | 90 | 1919 | 101 | 0.053 | 0.053 | 88 | 1923 | 74 | 0.038 | 0.038 |
| | | | | | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 2 | | min crossing time = | 5 | sec GM + | 10 | sec FGM = | 15 | sec | |
| | $F_{(P)}$ | 3 | | min crossing time = | 5 | sec GM + | 6 | sec FGM = | 11 | sec | |
| | | | | | | | | | | | |
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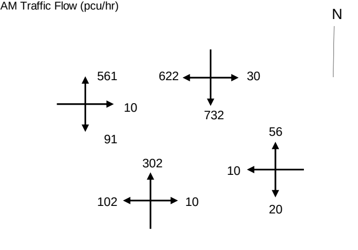
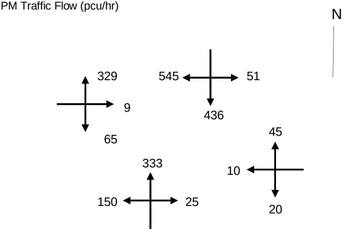
AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

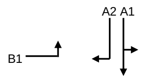


S = 1940 + 100 (W-3.25)　S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)　SM = (S - 230) / (1 + 1.5 f/r)

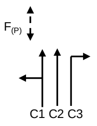
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2+3+4 | | 1+2+3+4 | |
| Sum y | 0.588 | | 0.459 | |
| L (s) | 24 | | 24 | |
| C (s) | 118 | | 118 | |
| practical y | 0.717 | | 0.717 | |
| R.C. (%) | 22% | | 56% | |

Note:

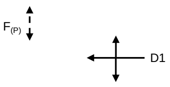
1



2



3



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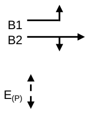

5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |
| PM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |

# Signal Junction Analysis

Junction: Tsing Lun Road/ Tsz Tin Road — Job Number: J7265

Scenario: With Proposed Scheme — P. 28

Design Year: 2033 — Designed By: ______ — Checked By: ______ — Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tsing Lun Road SB | LT+SA | A1 | 1 | 3.65 | 13.0 | | 4 | 1971 | 765 | 0.388 | 0.388 | 10 | 1957 | 488 | 0.249 | |
| | RT | A2 | 1 | 3.65 | 15.0 | | 100 | 1927 | 622 | 0.323 | | 100 | 2120 | 545 | 0.257 | 0.257 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Tsing Lun Road NB | LT+SA | C1 | 2 | 3.30 | 23.0 | | 53 | 1880 | 192 | 0.102 | 0.102 | 66 | 1865 | 228 | 0.122 | 0.122 |
| | SA | C2 | 2 | 3.40 | | | | 2095 | 214 | 0.102 | | | 2095 | 257 | 0.123 | |
| | RT | C3 | 2 | 3.40 | 15.0 | | 100 | 1905 | 10 | 0.005 | | 100 | 1905 | 25 | 0.013 | |
| | | | | | | | | | | | | | | | | |
| Access Road to | LT+SA+RT | D1 | 3 | 3.50 | 15.0 | | 88 | 1806 | 86 | 0.048 | 0.048 | 87 | 1808 | 75 | 0.041 | 0.041 |
| Siu Hong Court WB | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Tsz Tin Road EB | LT | B1 | 4,1 | 3.38 | 10.0 | | 100 | 1698 | 561 | 0.330 | | 100 | 1698 | 329 | 0.194 | |
| | SA+RT | B2 | 4 | 3.37 | 15.0 | | 90 | 1919 | 101 | 0.053 | 0.053 | 88 | 1923 | 74 | 0.038 | 0.038 |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 2 | | min crossing time = | 5 | sec GM + | 10 | sec FGM = | 15 | sec | |
| | $F_{(P)}$ | 3 | | min crossing time = | 5 | sec GM + | 6 | sec FGM = | 11 | sec | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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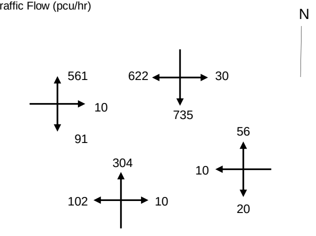
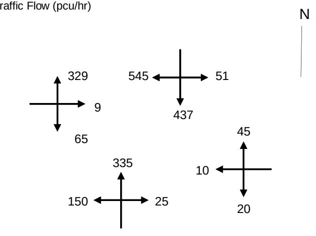
AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



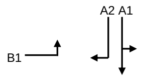
S = 1940 + 100 (W-3.25)  S = 2080 + 100 (W-3.25)

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

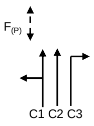
| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2+3+4 | | 1+2+3+4 | |
| Sum y | 0.591 | | 0.459 | |
| L (s) | 24 | | 24 | |
| C (s) | 118 | | 118 | |
| practical y | 0.717 | | 0.717 | |
| R.C. (%) | 21% | | 56% | |

Note:

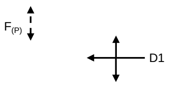
1



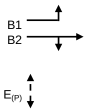
2



3



4

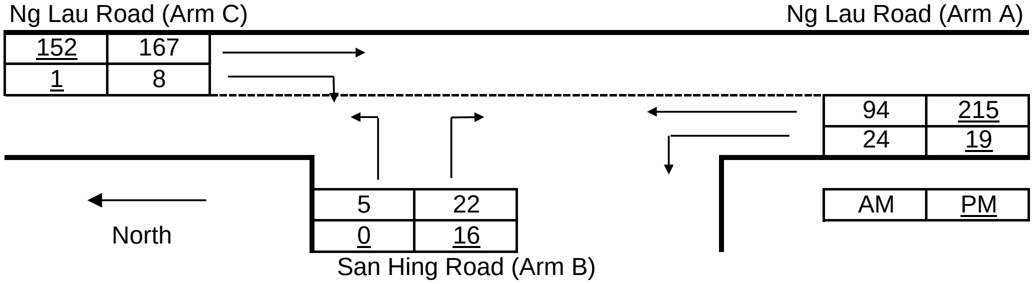


5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |
| PM | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = 7 | G = | |
| | G = | I/G = 6 | G = | I/G = 6 | G = | I/G = 9 | G = | I/G = | G = | |

# Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | San Hing Road / Ng Lau Road (Southern) | | | | |
| Design Year: | 2023 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | Existing Condition | | | | P. 29 |



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 | 6.65 | V-rBA | 23 | w-BA | 2.40 | D | 0.7441 |
| W-CR | 0.00 | V-lBA | 23 | w-BC | 2.40 | E | 0.8078 |
| | | V-rBC | 26 | w-CB | 3.00 | F | 0.8857 |
| | | V-rCB | 57 | | | Y | 0.7706 |

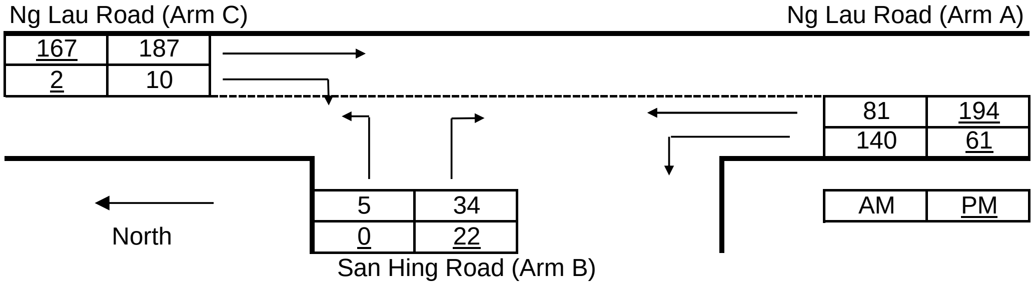
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 167 | 152 | Q-BA | 421 | 400 |
| q-CB | 8 | 1 | Q-BC | 578 | 551 |
| q-AB | 24 | 19 | Q-CB | 631 | 602 |
| q-AC | 94 | 215 | Q-BAC | 443 | 400 |
| q-BA | 22 | 16 | | | |
| q-BC | 5 | 0 | | | |
| f | 0.185 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.052 | 0.040 |
| B-C | 0.009 | 0.000 |
| C-B | 0.013 | 0.002 |
| B-AC | 0.061 | 0.040 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | San Hing Road / Ng Lau Road (Southern) | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | Without Development | | | | P. 30 |



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 | 6.65 | V-rBA | 23 | w-BA | 2.40 | D | 0.7441 |
| W-CR | 0.00 | V-lBA | 23 | w-BC | 2.40 | E | 0.8078 |
| | | V-rBC | 26 | w-CB | 3.00 | F | 0.8857 |
| | | V-rCB | 57 | | | Y | 0.7706 |

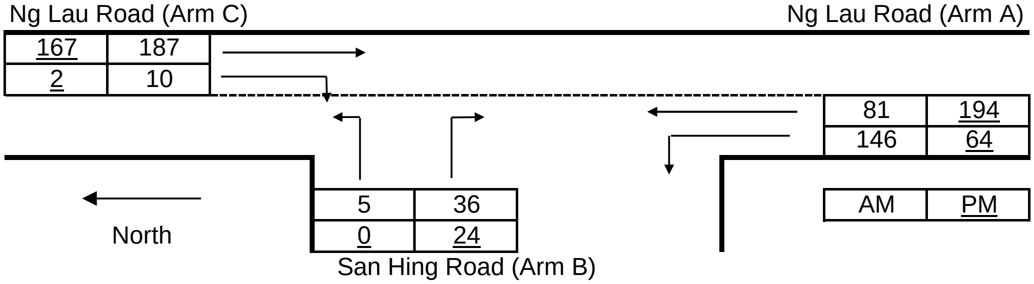
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 187 | 167 | Q-BA | 411 | 398 |
| q-CB | 10 | 2 | Q-BC | 571 | 552 |
| q-AB | 140 | 61 | Q-CB | 605 | 596 |
| q-AC | 81 | 194 | Q-BAC | 426 | 398 |
| q-BA | 34 | 22 | | | |
| q-BC | 5 | 0 | | | |
| f | 0.128 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.083 | 0.055 |
| B-C | 0.009 | 0.000 |
| C-B | 0.017 | 0.003 |
| B-AC | 0.092 | 0.055 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | San Hing Road / Ng Lau Road (Southern) | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Approved Scheme | | | | P. 31 |



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 | 6.65 | V-rBA | 23 | w-BA | 2.40 | D | 0.7441 |
| W-CR | 0.00 | V-lBA | 23 | w-BC | 2.40 | E | 0.8078 |
| | | V-rBC | 26 | w-CB | 3.00 | F | 0.8857 |
| | | V-rCB | 57 | | | Y | 0.7706 |

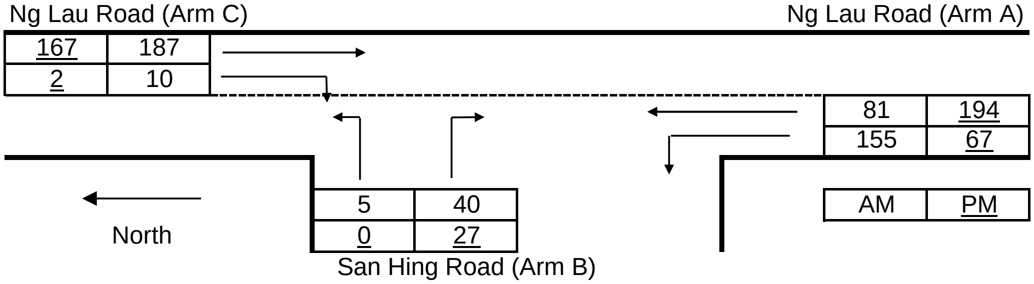
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 187 | 167 | Q-BA | 410 | 398 |
| q-CB | 10 | 2 | Q-BC | 570 | 552 |
| q-AB | 146 | 64 | Q-CB | 603 | 596 |
| q-AC | 81 | 194 | Q-BAC | 425 | 398 |
| q-BA | 36 | 24 | | | |
| q-BC | 5 | 0 | | | |
| f | 0.122 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.088 | 0.060 |
| B-C | 0.009 | 0.000 |
| C-B | 0.017 | 0.003 |
| B-AC | 0.097 | 0.060 |

# Priority Junction Analysis

Junction: San Hing Road / Ng Lau Road (Southern)
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: With Proposed Scheme P. 32



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 | 6.65 | V-rBA | 23 | w-BA | 2.40 | D | 0.7441 |
| W-CR | 0.00 | V-lBA | 23 | w-BC | 2.40 | E | 0.8078 |
| | | V-rBC | 26 | w-CB | 3.00 | F | 0.8857 |
| | | V-rCB | 57 | | | Y | 0.7706 |

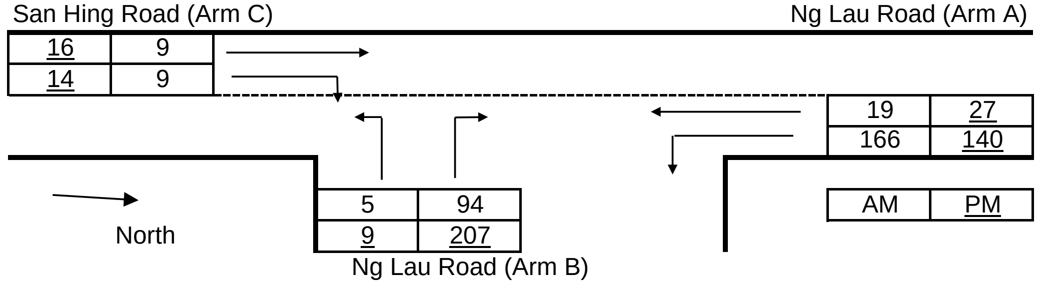
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 187 | 167 | Q-BA | 409 | 398 |
| q-CB | 10 | 2 | Q-BC | 570 | 552 |
| q-AB | 155 | 67 | Q-CB | 601 | 595 |
| q-AC | 81 | 194 | Q-BAC | 423 | 398 |
| q-BA | 40 | 27 | | | |
| q-BC | 5 | 0 | | | |
| f | 0.111 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.098 | 0.068 |
| B-C | 0.009 | 0.000 |
| C-B | 0.017 | 0.003 |
| B-AC | 0.107 | 0.068 |

# Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | San Hing Road / Ng Lau Road (Northern) | | | | |
| Design Year: | 2023 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | Existing Condition | | | | P. 33 |



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 | 6.63 | V-rBA | 45 | w-BA | 1.90 | D | 0.7207 |
| W-CR | 0.00 | V-lBA | 25 | w-BC | 1.90 | E | 0.7768 |
| | | V-rBC | 42 | w-CB | 3.50 | F | 0.9344 |
| | | V-rCB | 62 | | | Y | 0.7714 |

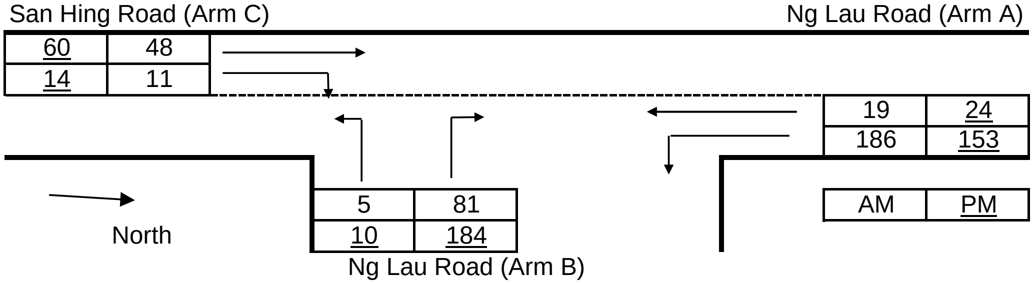
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 9 | 16 | Q-BA | 431 | 429 |
| q-CB | 9 | 14 | Q-BC | 560 | 561 |
| q-AB | 166 | 140 | Q-CB | 648 | 652 |
| q-AC | 19 | 27 | Q-BAC | 436 | 433 |
| q-BA | 94 | 207 | | | |
| q-BC | 5 | 9 | | | |
| f | 0.051 | 0.042 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.218 | 0.482 |
| B-C | 0.009 | 0.016 |
| C-B | 0.014 | 0.021 |
| B-AC | 0.227 | 0.498 |

# Priority Junction Analysis

Junction: San Hing Road / Ng Lau Road (Northern)
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: Without Development P. 34



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 | 6.63 | V-rBA | 45 | w-BA | 1.90 | D | 0.7207 |
| W-CR | 0.00 | V-lBA | 25 | w-BC | 1.90 | E | 0.7768 |
| | | V-rBC | 42 | w-CB | 3.50 | F | 0.9344 |
| | | V-rCB | 62 | | | Y | 0.7714 |

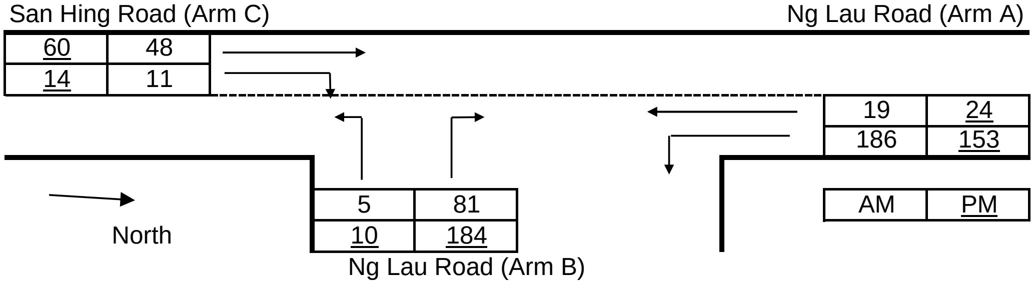
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 48 | 60 | Q-BA | 424 | 423 |
| q-CB | 11 | 14 | Q-BC | 559 | 560 |
| q-AB | 186 | 153 | Q-CB | 642 | 650 |
| q-AC | 19 | 24 | Q-BAC | 430 | 428 |
| q-BA | 81 | 184 | | | |
| q-BC | 5 | 10 | | | |
| f | 0.058 | 0.052 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.191 | 0.435 |
| B-C | 0.009 | 0.018 |
| C-B | 0.017 | 0.022 |
| B-AC | 0.200 | 0.453 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | San Hing Road / Ng Lau Road (Northern) | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Approved Scheme | | | | P. 35 |



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 | 6.63 | V-rBA | 45 | w-BA | 1.90 | D | 0.7207 |
| W-CR | 0.00 | V-lBA | 25 | w-BC | 1.90 | E | 0.7768 |
| | | V-rBC | 42 | w-CB | 3.50 | F | 0.9344 |
| | | V-rCB | 62 | | | Y | 0.7714 |

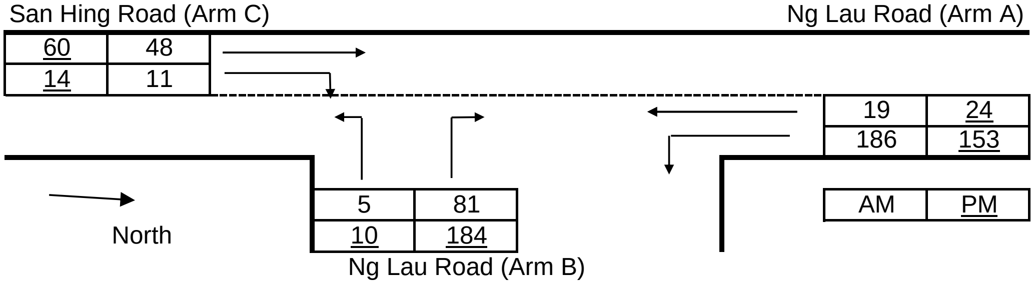
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 48 | 60 | Q-BA | 424 | 423 |
| q-CB | 11 | 14 | Q-BC | 559 | 560 |
| q-AB | 186 | 153 | Q-CB | 642 | 650 |
| q-AC | 19 | 24 | Q-BAC | 430 | 428 |
| q-BA | 81 | 184 | | | |
| q-BC | 5 | 10 | | | |
| f | 0.058 | 0.052 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.191 | 0.435 |
| B-C | 0.009 | 0.018 |
| C-B | 0.017 | 0.022 |
| B-AC | 0.200 | 0.453 |

## Priority Junction Analysis

Junction: San Hing Road / Ng Lau Road (Northern)
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: With Proposed Scheme P. 36



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 | 6.63 | V-rBA | 45 | w-BA | 1.90 | D | 0.7207 |
| W-CR | 0.00 | V-lBA | 25 | w-BC | 1.90 | E | 0.7768 |
| | | V-rBC | 42 | w-CB | 3.50 | F | 0.9344 |
| | | V-rCB | 62 | | | Y | 0.7714 |

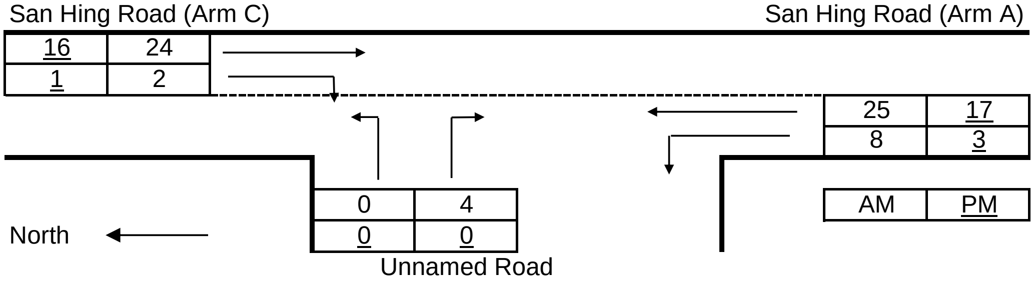
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 48 | 60 | Q-BA | 424 | 423 |
| q-CB | 11 | 14 | Q-BC | 559 | 560 |
| q-AB | 186 | 153 | Q-CB | 642 | 650 |
| q-AC | 19 | 24 | Q-BAC | 430 | 428 |
| q-BA | 81 | 184 | | | |
| q-BC | 5 | 10 | | | |
| f | 0.058 | 0.052 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.191 | 0.435 |
| B-C | 0.009 | 0.018 |
| C-B | 0.017 | 0.022 |
| B-AC | 0.200 | 0.453 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | T-junction of San Hing Road | | | | |
| Design Year: | 2023 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | Existing Condition | | | | P. 37 |



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 | 6.00 | V-rBA | 25 | w-BA | 2.50 | D | 0.7912 |
| W-CR | 0.00 | V-lBA | 100 | w-BC | 2.50 | E | 0.8156 |
| | | V-rBC | 25 | w-CB | 3.00 | F | 0.8586 |
| | | V-rCB | 25 | | | Y | 0.7930 |

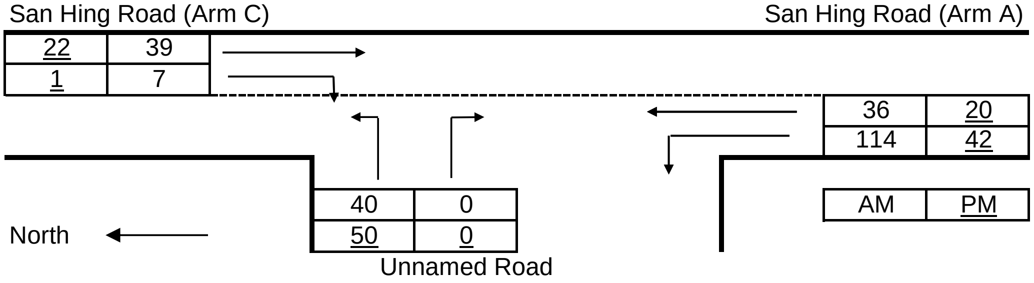
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 24 | 16 | Q-BA | 486 | 489 |
| q-CB | 2 | 1 | Q-BC | 601 | 603 |
| q-AB | 8 | 3 | Q-CB | 631 | 635 |
| q-AC | 25 | 17 | Q-BAC | 486 | 489 |
| q-BA | 4 | 0 | | | |
| q-BC | 0 | 0 | | | |
| f | 0.000 | 0.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.008 | 0.000 |
| B-C | 0.000 | 0.000 |
| C-B | 0.003 | 0.002 |
| B-AC | 0.008 | 0.000 |

## Priority Junction Analysis

Junction: T-junction of San Hing Road
Design Year: 2033 Job Number: J7265 Date: 15 Nov 2024
Scenario: Without Development P. 38



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 | 6.00 | V-rBA | 45 | w-BA | 4.00 | D | 0.9343 |
| | W-CR | 0.00 | V-lBA | 100 | w-BC | 4.00 | E | 0.9632 |
| | | | V-rBC | 45 | w-CB | 3.00 | F | 0.8586 |
| | | | V-rCB | 25 | | | Y | 0.7930 |

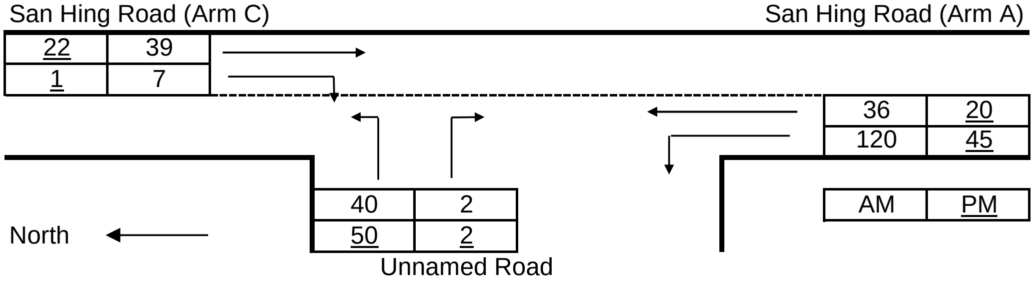
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 39 | 22 | Q-BA | 555 | 572 |
| q-CB | 7 | 1 | Q-BC | 695 | 707 |
| q-AB | 114 | 42 | Q-CB | 602 | 624 |
| q-AC | 36 | 20 | Q-BAC | 695 | 707 |
| q-BA | 0 | 0 | | | |
| q-BC | 40 | 50 | | | |
| f | 1.000 | 1.000 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.000 | 0.000 |
| B-C | 0.058 | 0.071 |
| C-B | 0.012 | 0.002 |
| B-AC | 0.058 | 0.071 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | T-junction of San Hing Road | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Approved Scheme | | | | P. 39 |



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 | 6.00 | V-rBA | 45 | w-BA | 4.00 | D | 0.9343 |
| W-CR | 0.00 | V-lBA | 100 | w-BC | 4.00 | E | 0.9632 |
| | | V-rBC | 45 | w-CB | 3.00 | F | 0.8586 |
| | | V-rCB | 25 | | | Y | 0.7930 |

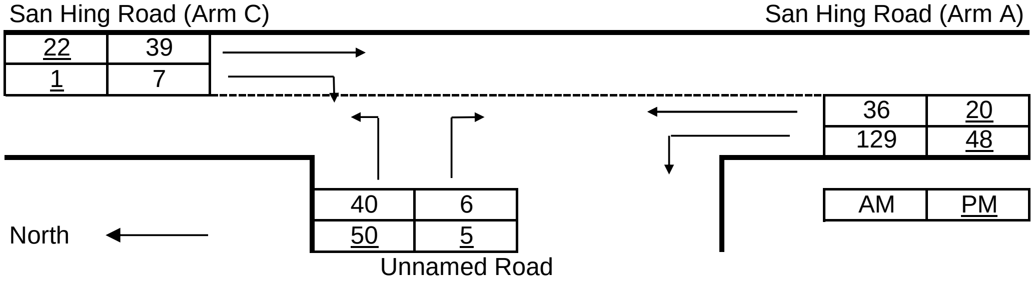
Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 39 | 22 | Q-BA | 554 | 571 |
| q-CB | 7 | 1 | Q-BC | 694 | 707 |
| q-AB | 120 | 45 | Q-CB | 601 | 624 |
| q-AC | 36 | 20 | Q-BAC | 686 | 701 |
| q-BA | 2 | 2 | | | |
| q-BC | 40 | 50 | | | |
| f | 0.952 | 0.962 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.004 | 0.003 |
| B-C | 0.058 | 0.071 |
| C-B | 0.012 | 0.002 |
| B-AC | 0.061 | 0.074 |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | T-junction of San Hing Road | | | | |
| Design Year: | 2033 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | With Proposed Scheme | | | | P. 40 |



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 | 6.00 | V-rBA | 45 | w-BA | 4.00 | D | 0.9343 |
| W-CR | 0.00 | V-lBA | 100 | w-BC | 4.00 | E | 0.9632 |
| | | V-rBC | 45 | w-CB | 3.00 | F | 0.8586 |
| | | V-rCB | 25 | | | Y | 0.7930 |

Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 39 | 22 | Q-BA | 553 | 571 |
| q-CB | 7 | 1 | Q-BC | 693 | 707 |
| q-AB | 129 | 48 | Q-CB | 599 | 623 |
| q-AC | 36 | 20 | Q-BAC | 671 | 692 |
| q-BA | 6 | 5 | | | |
| q-BC | 40 | 50 | | | |
| f | 0.870 | 0.909 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.011 | 0.009 |
| B-C | 0.058 | 0.071 |
| C-B | 0.012 | 0.002 |
| B-AC | 0.069 | 0.080 |

## Signal Junction Analysis

Junction: Ng Lau Road / Castle Peak Road - Lam Tei  Job Number: J7265
Scenario: Existing Condition  P. 41
Design Year: 2023  Designed By: ____________  Checked By: ____________  Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ng Lau Road EB | LT | A1 | 2 | 4.00 | 20.0 | | 100 | 1874 | 110 | 0.059 | 0.059 | 100 | 1874 | 135 | 0.072 | 0.072 |
| | | | | | | | | | | | | | | | | |
| Castle Peak Road - Lam Tei NB | LT | B1 | 1 | 3.50 | 15.0 | | 100 | 1786 | 128 | 0.072 | 0.072 | 100 | 1786 | 128 | 0.072 | 0.072 |
| | | | | | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $C_{(P)}$ | 1,2 | | min crossing time = | 8 | sec GM + | 8 | sec FGM = | 16 | sec | |
| | $D_{(P)}$ | 3 | | min crossing time = | 7 | sec GM + | 7 | sec FGM = | 14 | sec | |
| | | | | | | | | | | | |
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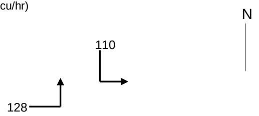
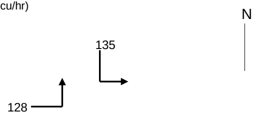
AM Traffic Flow (pcu/hr)



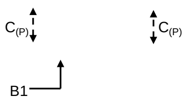
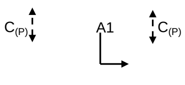
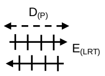
PM Traffic Flow (pcu/hr)



S = 1940 + 100 (W-3.25)  S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)  SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1 + 2 | | 1 + 2 | |
| Sum y | 0.130 | | 0.144 | |
| L (s) | 2358 | | 2284 | |
| C (s) | 3609 | | 3627 | |
| practical y | 0.312 | | 0.333 | |
| R.C. (%) | 139% | | 132% | |

Note:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
|  |  |  | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = |
| PM | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = |

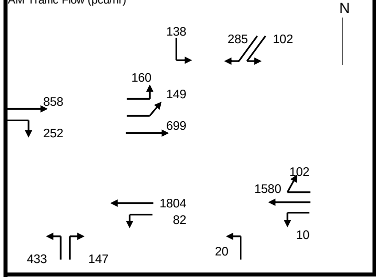
# Signal Junction Analysis

Junction: Ng Lau Road / Castle Peak Road - Lam Tei
Job Number: J7265
Scenario: Without Development
P. 42
Design Year: 2033
Designed By:
Checked By:
Date: 15 Nov 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ng Lau Road EB | LT | A1 | 1 | 4.00 | 15.0 | | 100 | 1832 | 138 | 0.075 | | 100 | 1832 | 156 | 0.085 | |
| Castle Peak Road - Lam Tei NB | SA | B1 | 2,3 | 3.30 | | | | 1945 | 273 | 0.140 | | | 1945 | 545 | 0.280 | |
| | SA | B2 | 2,3 | 3.30 | | | | 2085 | 293 | 0.141 | | | 2085 | 585 | 0.281 | |
| | SA | B3 | 2,3 | 3.30 | | | | 2085 | 292 | 0.140 | | | 2085 | 585 | 0.281 | |
| | RT | C1 | 1 | 3.70 | 15.0 | | 100 | 1932 | 252 | 0.130 | 0.130 | 100 | 1932 | 184 | 0.095 | 0.095 |
| Castle Peak Road - Lam Tei NB | LT | D1 | 2 | 3.70 | 13.0 | | 100 | 1780 | 160 | 0.090 | | 100 | 1780 | 146 | 0.082 | |
| | LT | D2 | 2 | 3.70 | 15.0 | | 100 | 1932 | 149 | 0.077 | | 100 | 1932 | 179 | 0.093 | |
| | SA | E1 | 2,3 | 3.70 | | | | 2125 | 350 | 0.165 | | | 2125 | 792 | 0.373 | 0.373 |
| | SA | E2 | 2,3 | 3.65 | | | | 2120 | 349 | 0.165 | | | 2125 | 791 | 0.372 | |
| Castle Peak Road - Lam Tei SB | LT+SA | F1 | 2,3 | 3.70 | 15.0 | | 2 | 1981 | 600 | 0.303 | 0.303 | 4 | 1977 | 416 | 0.210 | |
| | SA | F2 | 2,3 | 3.70 | | | | 2125 | 643 | 0.303 | | | 2125 | 447 | 0.210 | |
| | SA | F3 | 2,3 | 3.70 | | | | 2125 | 643 | 0.303 | | | 2125 | 447 | 0.210 | |
| Castle Peak Road - Lam Tei SB | LT+SA | G1 | 1,2,3 | 3.70 | 10.0 | | 11 | 1953 | 761 | 0.390 | | 26 | 1910 | 463 | 0.242 | |
| | SA | G2 | 1,2,3 | 3.70 | | | | 2125 | 829 | 0.390 | | | 2125 | 516 | 0.243 | |
| | RT | H1 | 4 | 3.50 | 20.0 | | 100 | 1958 | 102 | 0.052 | 0.052 | 100 | 1958 | 83 | 0.042 | 0.042 |
| Wong Kong Wai Road WB | LT | I1 | 4 | 4.00 | 10.0 | | 100 | 1752 | 20 | 0.011 | | 100 | 1752 | 14 | 0.008 | |
| Fuk Hang Tsuen Road WB | LT | J1 | 5 | 3.70 | 15.0 | | 100 | 1805 | 280 | 0.155 | 0.155 | 100 | 1805 | 246 | 0.136 | 0.136 |
| | LT+RT | J2 | 5 | 3.70 | 15.0 | | 100 | 1932 | 300 | 0.155 | | 100 | 1932 | 264 | 0.137 | |
| Road P1 | LT+RT | K1 | 5 | 3.80 | 12.0 | | 100 | 1773 | 185 | 0.104 | | 100 | 1773 | 199 | 0.112 | |
| | RT | K2 | 5 | 3.80 | 15.0 | | 100 | 1941 | 202 | 0.104 | | 100 | 1941 | 217 | 0.112 | |

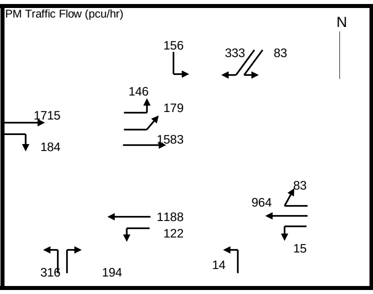
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $L_{(P)}$ | 3,4,5 | min crossing time = | 5 | sec GM + | 11 | sec FGM = | 16 | sec |
| | $M_{(P)}$ | 3 | min crossing time = | 5 | sec GM + | 15 | sec FGM = | 20 | sec |
| | $N_{(P)}$ | 3,4 | min crossing time = | 5 | sec GM + | 16 | sec FGM = | 21 | sec |
| | $O_{(P)}$ | 5 | min crossing time = | 5 | sec GM + | 14 | sec FGM = | 19 | sec |
| | $P_{(P)}$ | 4 | min crossing time = | 5 | sec GM + | 18 | sec FGM = | 23 | sec |
| | $Q_{(P)}$ | 3 | min crossing time = | 11 | sec GM + | 11 | sec FGM = | 22 | sec |
| | $R_{(P)}$ | 1,2,4,5 | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec |

AM Traffic Flow (pcu/hr)



N
138
285
102
160
149
858
252
699
102
1580
1804
82
10
433
147
20

PM Traffic Flow (pcu/hr)

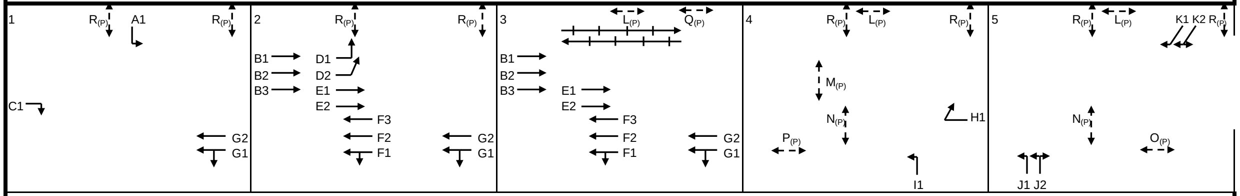


N
156
333
83
146
179
1715
184
1583
83
964
1188
122
15
316
194
14

S = 1940 + 100 (W-3.25)
S = 2080 + 100 (W-3.25)
SM = S / (1 + 1.5 f/r)
SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2,3+4+5 | | 1+2,3+4+5 | |
| Sum y | 0.641 | | 0.646 | |
| L (s) | 21 | | 21 | |
| C (s) | 120 | | 120 | |
| practical y | 0.743 | | 0.743 | |
| R.C. (%) | 16% | | 15% | |

Note:



1
R(P)
A1
R(P)
C1
G2
G1
2
R(P)
R(P)
B1
B2
B3
D1
D2
E1
E2
F3
F2
F1
G2
G1
3
L(P)
Q(P)
B1
B2
B3
E1
E2
F3
F2
F1
G2
G1
4
R(P)
L(P)
R(P)
M(P)
N(P)
P(P)
H1
I1
5
R(P)
L(P)
K1 K2 R(P)
N(P)
O(P)
J1 J2

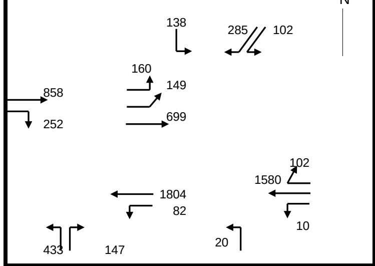
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |
| PM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |

Junction: Ng Lau Road / Castle Peak Road - Lam Tei　　Job Number: J7265
Scenario: With Approved Scheme　　P. 43
Design Year: 2033　　Designed By: ____　　Checked By: ____　　Date: 15 Nov 2024

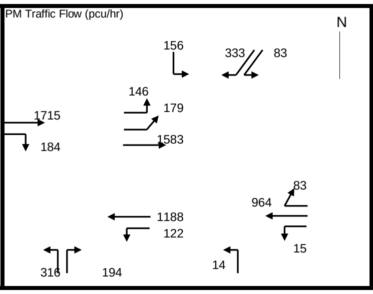
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ng Lau Road EB | LT | A1 | 1 | 4.00 | 15.0 | | 100 | 1832 | 138 | 0.075 | | 100 | 1832 | 156 | 0.085 | |
| Castle Peak Road - Lam Tei NB | SA | B1 | 2,3 | 3.30 | | | | 1945 | 273 | 0.140 | | | 1945 | 545 | 0.280 | |
| | SA | B2 | 2,3 | 3.30 | | | | 2085 | 293 | 0.141 | | | 2085 | 585 | 0.281 | |
| | SA | B3 | 2,3 | 3.30 | | | | 2085 | 292 | 0.140 | | | 2085 | 585 | 0.281 | |
| | RT | C1 | 1 | 3.70 | 15.0 | | 100 | 1932 | 252 | 0.130 | 0.130 | 100 | 1932 | 184 | 0.095 | 0.095 |
| Castle Peak Road - Lam Tei NB | LT | D1 | 2 | 3.70 | 13.0 | | 100 | 1780 | 160 | 0.090 | | 100 | 1780 | 146 | 0.082 | |
| | LT | D2 | 2 | 3.70 | 15.0 | | 100 | 1932 | 149 | 0.077 | | 100 | 1932 | 179 | 0.093 | |
| | SA | E1 | 2,3 | 3.70 | | | | 2125 | 350 | 0.165 | | | 2125 | 792 | 0.373 | |
| | SA | E2 | 2,3 | 3.65 | | | | 2120 | 349 | 0.165 | | | 2125 | 791 | 0.372 | 0.372 |
| Castle Peak Road - Lam Tei SB | LT+SA | F1 | 2,3 | 3.70 | 15.0 | | 2 | 1981 | 600 | 0.303 | | 4 | 1977 | 416 | 0.210 | |
| | SA | F2 | 2,3 | 3.70 | | | | 2125 | 643 | 0.303 | | | 2125 | 447 | 0.210 | |
| | SA | F3 | 2,3 | 3.70 | | | | 2125 | 643 | 0.303 | 0.303 | | 2125 | 447 | 0.210 | |
| Castle Peak Road - Lam Tei SB | LT+SA | G1 | 1,2,3 | 3.70 | 10.0 | | 11 | 1953 | 761 | 0.390 | | 26 | 1910 | 463 | 0.242 | |
| | SA | G2 | 1,2,3 | 3.70 | | | | 2125 | 829 | 0.390 | | | 2125 | 516 | 0.243 | |
| | RT | H1 | 4 | 3.50 | 20.0 | | 100 | 1958 | 102 | 0.052 | 0.052 | 100 | 1958 | 83 | 0.042 | 0.042 |
| Wong Kong Wai Road WB | LT | I1 | 4 | 4.00 | 10.0 | | 100 | 1752 | 20 | 0.011 | | 100 | 1752 | 14 | 0.008 | |
| Fuk Hang Tsuen Road WB | LT | J1 | 5 | 3.70 | 15.0 | | 100 | 1805 | 280 | 0.155 | 0.155 | 100 | 1805 | 246 | 0.136 | 0.136 |
| | LT+RT | J2 | 5 | 3.70 | 15.0 | | 100 | 1932 | 300 | 0.155 | | 100 | 1932 | 264 | 0.137 | |
| Road P1 | LT+RT | K1 | 5 | 3.80 | 12.0 | | 100 | 1773 | 185 | 0.104 | | 100 | 1773 | 199 | 0.112 | |
| | RT | K2 | 5 | 3.80 | 15.0 | | 100 | 1941 | 202 | 0.104 | | 100 | 1941 | 217 | 0.112 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $L_{(P)}$ | 3,4,5 | min crossing time = | 5 | sec GM + | 11 | sec FGM = | 16 | sec |
| | $M_{(P)}$ | 3 | min crossing time = | 5 | sec GM + | 15 | sec FGM = | 20 | sec |
| | $N_{(P)}$ | 3,4 | min crossing time = | 5 | sec GM + | 16 | sec FGM = | 21 | sec |
| | $O_{(P)}$ | 5 | min crossing time = | 5 | sec GM + | 14 | sec FGM = | 19 | sec |
| | $P_{(P)}$ | 4 | min crossing time = | 5 | sec GM + | 18 | sec FGM = | 23 | sec |
| | $Q_{(P)}$ | 3 | min crossing time = | 11 | sec GM + | 11 | sec FGM = | 22 | sec |
| | $R_{(P)}$ | 1,2,4,5 | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec |

AM Traffic Flow (pcu/hr)


N
138
285
102
160
149
858
252
699
102
1580
1804
82
10
433
147
20

PM Traffic Flow (pcu/hr)

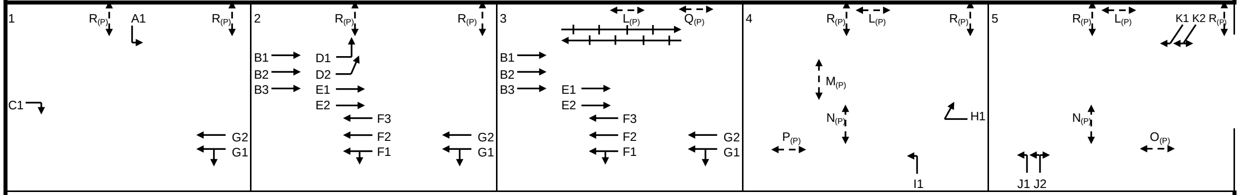

N
156
333
83
146
179
1715
184
1583
83
964
1188
122
15
316
194
14

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

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2,3+4+5 | | 1+2,3+4+5 | |
| Sum y | 0.640 | | 0.646 | |
| L (s) | 21 | | 21 | |
| C (s) | 120 | | 120 | |
| practical y | 0.743 | | 0.743 | |
| R.C. (%) | 16% | | 15% | |

Note:


1
R(P)
A1
R(P)
C1
G2
G1
2
R(P)
R(P)
B1
B2
B3
D1
D2
E1
E2
F3
F2
F1
G2
G1
3
L(P)
Q(P)
B1
B2
B3
E1
E2
F3
F2
F1
G2
G1
4
R(P)
L(P)
R(P)
M(P)
N(P)
H1
P(P)
I1
5
R(P)
L(P)
K1 K2 R(P)
N(P)
O(P)
J1 J2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |
| PM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |

# Signal Junction Analysis

Junction: Ng Lau Road / Castle Peak Road - Lam Tei — Job Number: J7265

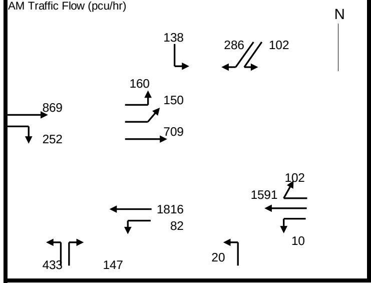
Scenario: With Proposed Scheme — P. 44

Design Year: 2033 — Designed By: ____ — Checked By: ____ — Date: 15 Nov 2024

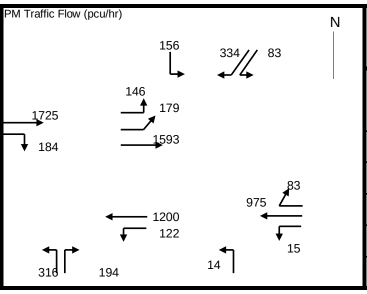
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ng Lau Road EB | LT | A1 | 1 | 4.00 | 15.0 | | 100 | 1832 | 138 | 0.075 | | 100 | 1832 | 156 | 0.085 | |
| Castle Peak Road - Lam Tei NB | SA | B1 | 2,3 | 3.30 | | | | 1945 | 276 | 0.142 | | | 1945 | 549 | 0.282 | |
| | SA | B2 | 2,3 | 3.30 | | | | 2085 | 296 | 0.142 | | | 2085 | 588 | 0.282 | |
| | SA | B3 | 2,3 | 3.30 | | | | 2085 | 297 | 0.142 | | | 2085 | 588 | 0.282 | |
| | RT | C1 | 1 | 3.70 | 15.0 | | 100 | 1932 | 252 | 0.130 | 0.130 | 100 | 1932 | 184 | 0.095 | 0.095 |
| Castle Peak Road - Lam Tei NB | LT | D1 | 2 | 3.70 | 13.0 | | 100 | 1780 | 160 | 0.090 | | 100 | 1780 | 146 | 0.082 | |
| | LT | D2 | 2 | 3.70 | 15.0 | | 100 | 1932 | 150 | 0.078 | | 100 | 1932 | 179 | 0.093 | |
| | SA | E1 | 2,3 | 3.70 | | | | 2125 | 355 | 0.167 | | | 2125 | 797 | 0.375 | |
| | SA | E2 | 2,3 | 3.65 | | | | 2120 | 354 | 0.167 | | | 2125 | 796 | 0.375 | 0.375 |
| Castle Peak Road - Lam Tei SB | LT+SA | F1 | 2,3 | 3.70 | 15.0 | | 2 | 1981 | 603 | 0.304 | | 4 | 1977 | 420 | 0.212 | |
| | SA | F2 | 2,3 | 3.70 | | | | 2125 | 647 | 0.304 | | | 2125 | 451 | 0.212 | |
| | SA | F3 | 2,3 | 3.70 | | | | 2125 | 648 | 0.305 | 0.305 | | 2125 | 451 | 0.212 | |
| Castle Peak Road - Lam Tei SB | LT+SA | G1 | 1,2,3 | 3.70 | 10.0 | | 11 | 1953 | 767 | 0.393 | | 26 | 1910 | 469 | 0.245 | |
| | SA | G2 | 1,2,3 | 3.70 | | | | 2125 | 834 | 0.392 | | | 2125 | 521 | 0.245 | |
| | RT | H1 | 4 | 3.50 | 20.0 | | 100 | 1958 | 102 | 0.052 | 0.052 | 100 | 1958 | 83 | 0.042 | 0.042 |
| Wong Kong Wai Road WB | LT | I1 | 4 | 4.00 | 10.0 | | 100 | 1752 | 20 | 0.011 | | 100 | 1752 | 14 | 0.008 | |
| Fuk Hang Tsuen Road WB | LT | J1 | 5 | 3.70 | 15.0 | | 100 | 1805 | 280 | 0.155 | 0.155 | 100 | 1805 | 246 | 0.136 | 0.136 |
| | LT+RT | J2 | 5 | 3.70 | 15.0 | | 100 | 1932 | 300 | 0.155 | | 100 | 1932 | 264 | 0.137 | |
| Road P1 | LT+RT | K1 | 5 | 3.80 | 12.0 | | 100 | 1773 | 185 | 0.104 | | 100 | 1773 | 199 | 0.112 | |
| | RT | K2 | 5 | 3.80 | 15.0 | | 100 | 1941 | 203 | 0.105 | | 100 | 1941 | 218 | 0.112 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $L_{(P)}$ | 3,4,5 | | min crossing time = | 5 | sec GM + | 11 | sec FGM = | 16 | sec |
| | $M_{(P)}$ | 3 | | min crossing time = | 5 | sec GM + | 15 | sec FGM = | 20 | sec |
| | $N_{(P)}$ | 3,4 | | min crossing time = | 5 | sec GM + | 16 | sec FGM = | 21 | sec |
| | $O_{(P)}$ | 5 | | min crossing time = | 5 | sec GM + | 14 | sec FGM = | 19 | sec |
| | $P_{(P)}$ | 4 | | min crossing time = | 5 | sec GM + | 18 | sec FGM = | 23 | sec |
| | $Q_{(P)}$ | 3 | | min crossing time = | 11 | sec GM + | 11 | sec FGM = | 22 | sec |
| | $R_{(P)}$ | 1,2,4,5 | | min crossing time = | 5 | sec GM + | 13 | sec FGM = | 18 | sec |

AM Traffic Flow (pcu/hr)


N
138
286
102
160
150
869
252
709
102
1591
1816
82
10
433
147
20

PM Traffic Flow (pcu/hr)

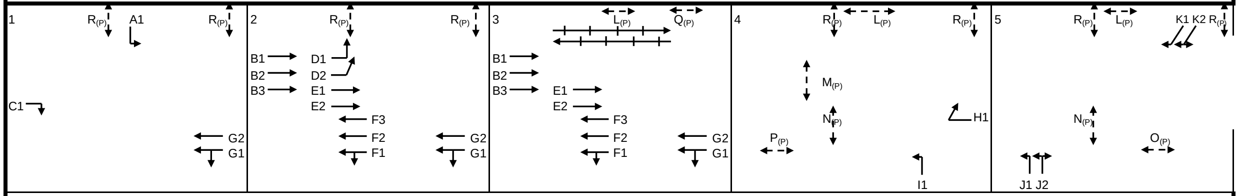

N
156
334
83
146
179
1725
184
1593
83
975
1200
122
15
316
194
14

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

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

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+2,3+4+5 | | 1+2,3+4+5 | |
| Sum y | 0.643 | | 0.648 | |
| L (s) | 21 | | 21 | |
| C (s) | 120 | | 120 | |
| practical y | 0.743 | | 0.743 | |
| R.C. (%) | 16% | | 15% | |

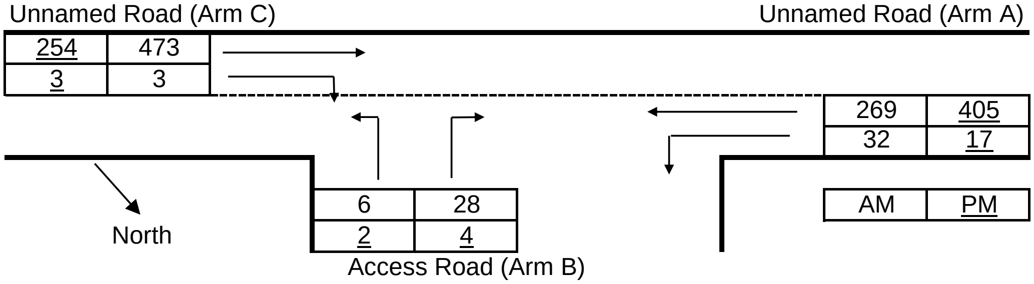
Note:


1
R(P)
A1
R(P)
C1
G2
G1
2
R(P)
R(P)
B1
B2
B3
D1
D2
E1
E2
F3
F2
F1
G2
G1
3
L(P)
Q(P)
B1
B2
B3
E1
E2
F3
F2
F1
G2
G1
4
R(P)
L(P)
R(P)
M(P)
N(P)
P(P)
H1
I1
5
R(P)
L(P)
K1 K2 R(P)
N(P)
O(P)
J1 J2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |
| PM | G = | I/G = 8 | G = | I/G = 7 | G = | I/G = | G = | I/G = 5 | G = | I/G = 5 |
| | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = | G = | I/G = |

## Priority Junction Analysis

| | | | | | |
|---|---|---|---|---|---|
| Junction: | Hong Po Road / Yan Tin Estate Access Road | | | | |
| Design Year: | 2023 | Job Number: | J7265 | Date: | 15 Nov 2024 |
| Scenario: | Existing Condition | | | | P. 45 |



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 | 9.50 | V-rBA | 55 | w-BA | 4.40 | D | 0.9323 |
| W-CR | 3.00 | V-lBA | 25 | w-BC | 4.40 | E | 1.0079 |
| | | V-rBC | 55 | w-CB | 3.18 | F | 0.9042 |
| | | V-rCB | 60 | | | Y | 0.6723 |

Analysis :

| Traffic Flows, pcu/hr | AM | PM | Capacity, pcu/hr | AM | PM |
|---|---|---|---|---|---|
| q-CA | 473 | 254 | Q-BA | 491 | 492 |
| q-CB | 3 | 3 | Q-BC | 681 | 649 |
| q-AB | 32 | 17 | Q-CB | 607 | 580 |
| q-AC | 269 | 405 | Q-BAC | 516 | 535 |
| q-BA | 28 | 4 | | | |
| q-BC | 6 | 2 | | | |
| f | 0.176 | 0.333 | | | |

| Ratio-of-flow to Capacity | AM | PM |
|---|---|---|
| B-A | 0.057 | 0.008 |
| B-C | 0.009 | 0.003 |
| C-B | 0.005 | 0.005 |
| B-AC | 0.066 | 0.011 |

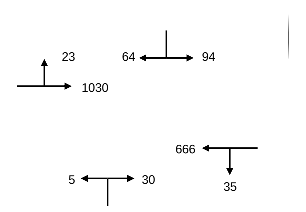
## Signal Junction Analysis

Junction: Hong Po Road / San Hing Road　Job Number: J7265
Scenario: Without Development　P. 46
Design Year: 2033　Designed By: ______　Checked By: ______　Date: 15 Nov 2024

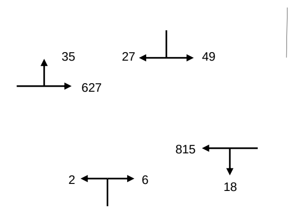
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hong Po Road WB | SA+LT | A1 | 1 | 3.75 | 10.0 | | 10 | 1961 | 336 | 0.171 | | 4 | 1978 | 401 | 0.203 | |
| | SA | A2 | 1 | 3.75 | | | | 2130 | 365 | 0.171 | | | 2130 | 432 | 0.203 | 0.203 |
| | | | | | | | | | | | | | | | | |
| Access Road NB | LT+RT | B1 | 2 | 3.50 | 15.0 | | 100 | 1786 | 35 | 0.020 | | 100 | 1786 | 8 | 0.004 | |
| | | | | | | | | | | | | | | | | |
| Hong Po Road EB | LT | C1 | 1 | 3.65 | 25.0 | | 100 | 1868 | 23 | 0.012 | | 100 | 1868 | 35 | 0.019 | |
| | SA | C2 | 1 | 3.37 | | | | 2092 | 515 | 0.246 | 0.246 | | 2092 | 313 | 0.150 | |
| | SA | C3 | 1 | 3.38 | | | | 2093 | 515 | 0.246 | | | 2093 | 314 | 0.150 | |
| | | | | | | | | | | | | | | | | |
| San Hing Road SB | LT+RT* | D1 | 3 | 3.37 | 10.0 | | 100 | 1817 | 158 | 0.087 | 0.087 | 100 | 1817 | 76 | 0.042 | 0.042 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 4 | | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec |
| | $F_{(P)}$ | 4 | | min crossing time = | 7 | sec GM + | 6 | sec FGM = | 13 | sec |
| | $G_{(P)}$ | 4 | | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec |
| | $H_{(P)}$ | 4 | | min crossing time = | 11 | sec GM + | 9 | sec FGM = | 20 | sec |
| | $I_{(P)}$ | 2,3,4 | | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



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

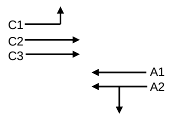
SM = S / (1 + 1.5 f/r)　SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+3 | 1+2+3 | 1+3 | 1+2+3 |
| Sum y | 0.333 | 0.353 | 0.245 | 0.249 |
| L (s) | 46 | 40 | 46 | 40 |
| C (s) | 90 | 90 | 90 | 90 |
| practical y | 0.440 | 0.500 | 0.440 | 0.500 |
| R.C. (%) | 32% | 42% | 80% | 101% |

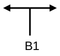
Note:

*Single lane with flare

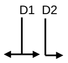
1



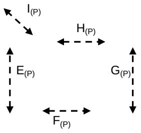
2



3



4



5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| PM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |

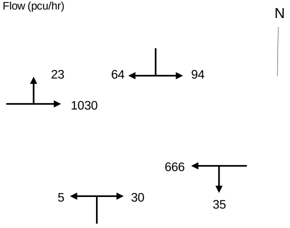
Signal Junction Analysis

| | | | |
|---|---|---|---|
| Junction: | Hong Po Road / San Hing Road | Job Number: | J7265 |
| Scenario: | With Approved Scheme | | P. 47 |
| Design Year: 2033 | Designed By: | Checked By: | Date: 15 Nov 2024 |

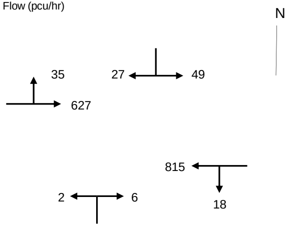
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak<br>Turning % | AM Peak<br>Sat. Flow (pcu/hr) | AM Peak<br>Flow (pcu/hr) | AM Peak<br>y value | AM Peak<br>Critical y | PM Peak<br>Turning % | PM Peak<br>Sat. Flow (pcu/hr) | PM Peak<br>Flow (pcu/hr) | PM Peak<br>y value | PM Peak<br>Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hong Po Road WB | SA+LT | A1 | 1 | 3.75 | 10.0 | | 10 | 1961 | 336 | 0.171 | | 4 | 1978 | 401 | 0.203 | |
| | SA | A2 | 1 | 3.75 | | | | 2130 | 365 | 0.171 | | | 2130 | 432 | 0.203 | 0.203 |
| | | | | | | | | | | | | | | | | |
| Access Road NB | LT+RT | B1 | 2 | 3.50 | 15.0 | | 100 | 1786 | 35 | 0.020 | | 100 | 1786 | 8 | 0.004 | |
| | | | | | | | | | | | | | | | | |
| Hong Po Road EB | LT | C1 | 1 | 3.65 | 25.0 | | 100 | 1868 | 23 | 0.012 | | 100 | 1868 | 35 | 0.019 | |
| | SA | C2 | 1 | 3.37 | | | | 2092 | 515 | 0.246 | 0.246 | | 2092 | 313 | 0.150 | |
| | SA | C3 | 1 | 3.38 | | | | 2093 | 515 | 0.246 | | | 2093 | 314 | 0.150 | |
| | | | | | | | | | | | | | | | | |
| San Hing Road SB | LT+RT* | D1 | 3 | 3.37 | 10.0 | | 100 | 1817 | 158 | 0.087 | 0.087 | 100 | 1817 | 76 | 0.042 | 0.042 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 4 | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec |
| | $F_{(P)}$ | 4 | min crossing time = | 7 | sec GM + | 6 | sec FGM = | 13 | sec |
| | $G_{(P)}$ | 4 | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec |
| | $H_{(P)}$ | 4 | min crossing time = | 11 | sec GM + | 9 | sec FGM = | 20 | sec |
| | $I_{(P)}$ | 2,3,4 | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



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

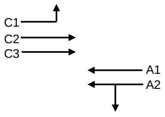
SM = S / (1 + 1.5 f/r)   SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | 1+3 | 1+2+3 | 1+3 | 1+2+3 |
| Sum y | 0.333 | 0.353 | 0.245 | 0.249 |
| L (s) | 46 | 40 | 46 | 40 |
| C (s) | 90 | 90 | 90 | 90 |
| practical y | 0.440 | 0.500 | 0.440 | 0.500 |
| R.C. (%) | 32% | 42% | 80% | 101% |

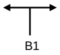
Note:

*Single lane with flare

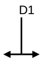
1



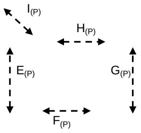
2



3



4



5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| PM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |

Signal Junction Analysis

Junction: Hong Po Road / San Hing Road  Job Number: J7265

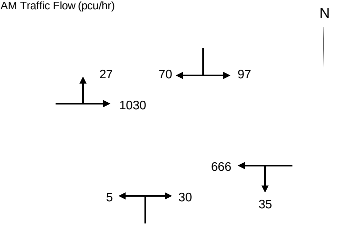
Scenario: With Proposed Scheme  P. 48

Design Year: 2033  Designed By:  Checked By:  Date: 15 Nov 2024

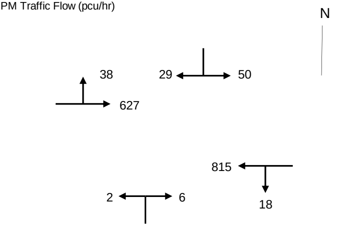
| Approach | | Phase | Stage | Width (m) | Radius (m) | % Up-hill Gradient | AM Peak Turning % | AM Peak Sat. Flow (pcu/hr) | AM Peak Flow (pcu/hr) | AM Peak y value | AM Peak Critical y | PM Peak Turning % | PM Peak Sat. Flow (pcu/hr) | PM Peak Flow (pcu/hr) | PM Peak y value | PM Peak Critical y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hong Po Road WB | SA+LT | A1 | 1 | 3.75 | 10.0 | | 10 | 1961 | 336 | 0.171 | | 4 | 1936 | 401 | 0.207 | |
| | SA | A2 | 1 | 3.75 | | | | 2130 | 365 | 0.171 | | | 2088 | 432 | 0.207 | 0.207 |
| | | | | | | | | | | | | | | | | |
| Access Road NB | LT+RT | B1 | 2 | 3.5 | 15.0 | | 100 | 1786 | 35 | 0.020 | | 100 | 1786 | 8 | 0.004 | |
| | | | | | | | | | | | | | | | | |
| Hong Po Road EB | LT | C1 | 1 | 3.65 | 25.0 | | 100 | 1868 | 27 | 0.014 | | 100 | 1868 | 38 | 0.020 | |
| | SA | C2 | 1 | 3.37 | | | | 2092 | 515 | 0.246 | 0.246 | | 2092 | 313 | 0.150 | |
| | SA | C3 | 1 | 3.38 | | | | 2093 | 515 | 0.246 | | | 2093 | 314 | 0.150 | |
| | | | | | | | | | | | | | | | | |
| San Hing Road SB | LT+RT* | D1 | 3 | 3.37 | 10.0 | | 100 | 1817 | 167 | 0.092 | 0.092 | 100 | 1817 | 79 | 0.043 | 0.043 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| pedestrian phase | $E_{(P)}$ | 4 | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec | |
| | $F_{(P)}$ | 4 | min crossing time = | 7 | sec GM + | 6 | sec FGM = | 13 | sec | |
| | $G_{(P)}$ | 4 | min crossing time = | 8 | sec GM + | 7 | sec FGM = | 15 | sec | |
| | $H_{(P)}$ | 4 | min crossing time = | 11 | sec GM + | 9 | sec FGM = | 20 | sec | |
| | $I_{(P)}$ | 2,3,4 | min crossing time = | 5 | sec GM + | 9 | sec FGM = | 14 | sec | |

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)



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

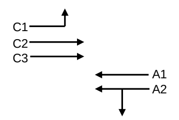
SM = S / (1 + 1.5 f/r)  SM = (S - 230) / (1 + 1.5 f/r)

| | AM Peak 1+3 | AM Peak 1+2+3 | PM Peak 1+3 | PM Peak 1+2+3 |
|---|---|---|---|---|
| Sum y | 0.338 | 0.358 | 0.250 | 0.255 |
| L (s) | 46 | 40 | 46 | 40 |
| C (s) | 90 | 90 | 90 | 90 |
| practical y | 0.440 | 0.500 | 0.440 | 0.500 |
| R.C. (%) | 30% | 40% | 76% | 96% |

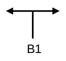
Note:

*Single lane with flare

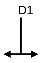
1



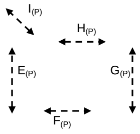
2



3



4



5

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| PM | G = | I/G = 5 | G = 5 | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |
| | G = | I/G = 5 | G = | I/G = 5 | G = | I/G = 10 | G = 20 | I/G = 3 | G = | |

# Appendix B –
# Public Transport Survey Result

## TABLE B1 DETAILED PEAK 1 HOUR OCCUPANCY SURVEY RESULT ON THE PUBLIC TRANSPORT NEAR THE PROPOSED DEVELOPMENT

| Direction | Routes | Survey Location | AM Peak 1 Hour | | | | PM Peak 1 Hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. of Trips | No. of Passenger | | Occupancy | No. of Trips | No. of Passenger | | Occupancy |
| | | | | Capacity [a] | Occupied [b] | [c]=[b]/[a] | | Capacity [a] | Occupied [b] | [c]=[b]/[a] |
| Outward bound | CTB 50 | LTI - EB | 3 | 360 | 180 | 50% | 0 | - | - | - |
| | CTB 55 | LTI - EB | 4 | 480 | 320 | 67% | 0 | - | - | - |
| | CTB 56 | LTI - EB | 0 | - | - | - | 0 | - | - | - |
| | CTB 56A | LTI - EB | 3 | 360 | 252 | 70% | 0 | - | - | - |
| | CTB 950 | LTI - EB | 2 | 240 | 150 | 63% | 0 | - | - | - |
| | CTB 955 | LTI - EB | 1 | 120 | 60 | 50% | 0 | - | - | - |
| | CTB B3A | LTI - EB | 1 | 120 | 108 | 90% | 2 | 240 | 120 | 50% |
| | KMB 53 | CPR - SB | 2 | 240 | 45 | 19% | 1 | 120 | 30 | 25% |
| | KMB 63X | CPR - SB | 5 | 600 | 338 | 56% | 4 | 480 | 120 | 25% |
| | KMB 67M | LTI - EB | 8 | 960 | 210 | 22% | 3 | 360 | 36 | 10% |
| | KMB 67X | LTI - EB | 7 | 840 | 174 | 21% | 1 | 120 | 30 | 25% |
| | KMB 68A | CPR - SB | 3 | 360 | 217 | 60% | 3 | 360 | 135 | 38% |
| | KMB 258A | CPR - SB | 2 | 240 | 120 | 50% | 0 | - | - | - |
| | KMB 258P | CPR - SB | 4 | 480 | 120 | 25% | 0 | - | - | - |
| | KMB 261P | CPR - NB | 1 | 120 | 36 | 30% | 0 | - | - | - |
| | KMB 267X | LTI - EB | 2 | 240 | 24 | 10% | 0 | - | - | - |
| | KMB 960A | N/A | 0 | - | - | - | 0 | - | - | - |
| | KMB 960C | LTI - WB | 1 | 120 | 6 | 5% | 0 | - | - | - |
| | KMB 960P | CPR - SB | 6 | 720 | 412 | 57% | 0 | - | - | - |
| | KMB 960X | CPR - SB | 7 | 840 | 105 | 13% | 0 | - | - | |
| | LWB A34 | CPR - SB | 3 | 360 | 66 | 18% | 1 | 120 | 0 | 0% |
| | LWB E33P | LTI - WB | 3 | 360 | 77 | 21% | 0 | - | - | - |
| | NLB B2 | CPR - SB | 3 | 360 | 158 | 44% | 3 | 360 | 225 | 63% |
| | | **Total** | **71** | **8,520** | **3,178** | **37%** | **18** | **2,160** | **671** | **31%** |
| Inward bound | CTB 50 | LTI - WB | 0 | - | - | - | 3 | 360 | 90 | 25% |
| | CTB 55 | LTI - WB | 0 | - | - | - | 2 | 240 | 60 | 25% |
| | CTB 56 | LTI - WB | 0 | - | - | - | 0 | - | - | - |
| | CTB 56A | LTI - WB | 3 | 360 | 180 | 50% | 3 | 360 | 270 | 75% |
| | CTB 950 | LTI - WB | 0 | - | - | - | 1 | 120 | 54 | 45% |
| | CTB 955 | LTI - WB | 0 | - | - | - | 1 | 120 | 72 | 60% |
| | CTB B3A | LTI - WB | 1 | 120 | 60 | 50% | 2 | 240 | 180 | 75% |
| | KMB 53 | CPR - NB | 2 | 240 | 45 | 19% | 2 | 240 | 90 | 38% |
| | KMB 63X | CPR - NB | 2 | 240 | 90 | 38% | 2 | 240 | 180 | 75% |
| | KMB 67M | LTI - WB | 3 | 360 | 27 | 8% | 4 | 480 | 150 | 31% |
| | KMB 67X | LTI - WB | 3 | 360 | 50 | 14% | 3 | 360 | 90 | 25% |
| | KMB 68A | CPR - NB | 2 | 240 | 140 | 58% | 5 | 600 | 350 | 58% |
| | KMB 258A | N/A | 0 | - | - | - | 0 | - | - | - |
| | KMB 258P | CPR - NB | 0 | - | - | - | 3 | 360 | 90 | 25% |
| | KMB 261P | CPR - SB | 0 | - | - | - | 0 | - | - | - |
| | KMB 267X | LTI - WB | 0 | - | - | - | 2 | 240 | 60 | 25% |
| | KMB 960A | LTI - EB | 0 | - | - | - | 1 | 120 | 36 | 30% |
| | | CPR - NB | 0 | 0 | - | - | 1 | 120 | 30 | 25% |
| | KMB 960C | LTI - EB | 0 | - | - | - | 1 | 120 | 12 | 10% |
| | KMB 960P | CPR - NB | 0 | - | - | - | 2 | 240 | 60 | 25% |
| | KMB 960X | CPR - NB | 0 | - | - | - | 3 | 360 | 180 | 50% |
| | LWB A34 | CPR - NB | 0 | - | - | - | 3 | 360 | 36 | 10% |
| | LWB E33P | LTI - EB | 0 | - | - | - | 3 | 360 | 36 | 10% |
| | NLB B2 | CPR - NB | 4 | 480 | 240 | 50% | 3 | 360 | 135 | 38% |
| | | **Total** | **20** | **2,400** | **832** | **35%** | **49** | **5,880** | **2,231** | **38%** |
| Intra-district Services | GMB 42 | LTI - EB | 4 | 76 | 46 | 60% | 4 | 76 | 31 | 40% |
| | | LTI - WB | 4 | 76 | 20 | 26% | 4 | 76 | 10 | 13% |
| | | **Total** | **8** | **152** | **66** | **43%** | **8** | **152** | **41** | **27%** |

CPR – Castle Peak Road –Lam Tei LTI – Lam Tei Interchange
NB – northbound SB – southbound EB – eastbound WB – westbound
Capacity and occupied are in passenger/hr

## TABLE B2 DETAILED PEAK HALF-HOUR OCCUPANCY SURVEY RESULT ON THE PUBLIC TRANSPORT NEAR THE PROPOSED DEVELOPMENT

| Direction | Routes | Survey Location | AM Peak Half-hour | | | | PM Peak Half-hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. of Trips | No. of Passenger | | Occu-pancy [c]=[b]/[a] | No. of Trips | No. of Passenger | | Occu-pancy [c]=[b]/[a] |
| | | | | Capacity [a] | Occupied [b] | | | Capacity [a] | Occupied [b] | |
| Outward bound | CTB 50 | LTI - EB | 2 | 240 | 152 | 63% | 0 | 0 | - | - |
| | CTB 55 | LTI - EB | 2 | 240 | 180 | 75% | 0 | 0 | - | - |
| | CTB 56 | LTI - EB | 0 | 0 | - | - | 0 | 0 | - | - |
| | CTB 56A | LTI - EB | 2 | 240 | 192 | 80% | 0 | 0 | - | - |
| | CTB 950 | LTI - EB | 2 | 240 | 152 | 63% | 0 | 0 | - | - |
| | CTB 955 | LTI - EB | 1 | 120 | 60 | 50% | 0 | 0 | - | - |
| | CTB B3A | LTI - EB | 1 | 120 | 108 | 90% | 1 | 120 | 66 | 55% |
| | KMB 53 | CPR - SB | 1 | 120 | 24 | 20% | 1 | 120 | 30 | 25% |
| | KMB 63X | CPR - SB | 3 | 360 | 203 | 56% | 2 | 240 | 72 | 30% |
| | KMB 67M | LTI - EB | 4 | 480 | 144 | 30% | 2 | 240 | 29 | 12% |
| | KMB 67X | LTI - EB | 4 | 480 | 135 | 28% | 1 | 120 | 30 | 25% |
| | KMB 68A | CPR - SB | 2 | 240 | 169 | 70% | 2 | 240 | 101 | 42% |
| | KMB 258A | CPR - SB | 1 | 120 | 60 | 50% | 0 | 0 | - | - |
| | KMB 258P | CPR - SB | 2 | 240 | 60 | 25% | 0 | 0 | - | - |
| | KMB 261P | CPR - NB | 1 | 120 | 36 | 30% | 0 | 0 | - | - |
| | KMB 267X | LTI - EB | 2 | 240 | 24 | 10% | 0 | 0 | - | - |
| | KMB 960A | N/A | 0 | 0 | - | - | 0 | 0 | - | - |
| | KMB 960C | LTI - WB | 1 | 120 | 6 | 5% | 0 | 0 | - | - |
| | KMB 960P | CPR - SB | 3 | 360 | 206 | 57% | 0 | 0 | - | - |
| | KMB 960X | CPR - SB | 4 | 480 | 60 | 13% | 0 | 0 | - | - |
| | LWB A34 | CPR - SB | 2 | 240 | 44 | 18% | 1 | 120 | 0 | 0% |
| | LWB E33P | LTI - WB | 2 | 240 | 63 | 26% | 0 | 0 | - | - |
| | NLB B2 | CPR - SB | 2 | 240 | 105 | 44% | 2 | 240 | 156 | 65% |
| | | **Total** | **44** | **5,280** | **2,183** | **41%** | **12** | **1,440** | **484** | **34%** |
| Inward bound | CTB 50 | LTI - WB | 0 | 0 | - | - | 2 | 240 | 68 | 28% |
| | CTB 55 | LTI - WB | 0 | 0 | - | - | 1 | 120 | 36 | 30% |
| | CTB 56 | LTI - WB | 0 | 0 | - | - | 0 | 0 | - | - |
| | CTB 56A | LTI - WB | 2 | 240 | 140 | 58% | 2 | 240 | 200 | 83% |
| | CTB 950 | LTI - WB | 0 | 0 | - | - | 1 | 120 | 54 | 45% |
| | CTB 955 | LTI - WB | 0 | 0 | - | - | 1 | 120 | 72 | 60% |
| | CTB B3A | LTI - WB | 1 | 120 | 60 | 50% | 1 | 120 | 108 | 90% |
| | KMB 53 | CPR - NB | 1 | 120 | 60 | 50% | 1 | 120 | 48 | 40% |
| | KMB 63X | CPR - NB | 1 | 120 | 54 | 45% | 1 | 120 | 96 | 80% |
| | KMB 67M | LTI - WB | 2 | 240 | 24 | 10% | 2 | 240 | 87 | 36% |
| | KMB 67X | LTI - WB | 2 | 240 | 33 | 14% | 2 | 240 | 68 | 28% |
| | KMB 68A | CPR - NB | 1 | 120 | 78 | 65% | 3 | 360 | 234 | 65% |
| | KMB 258A | N/A | 0 | 0 | - | - | 0 | 0 | - | - |
| | KMB 258P | CPR - NB | 0 | 0 | - | - | 2 | 240 | 72 | 30% |
| | KMB 261P | CPR – SB | 0 | 0 | - | - | 0 | 0 | - | - |
| | KMB 267X | LTI – WB | 0 | 0 | - | - | 2 | 240 | 60 | 25% |
| | KMB 960A | LTI – EB | 0 | 0 | - | - | 1 | 120 | 36 | 30% |
| | | CPR - NB | 0 | 0 | - | - | 1 | 120 | 30 | 25% |
| | KMB 960C | LTI – EB | 0 | 0 | - | - | 1 | 120 | 12 | 10% |
| | KMB 960P | CPR – NB | 0 | 0 | - | - | 1 | 120 | 30 | 25% |
| | KMB 960X | CPR - NB | 0 | 0 | - | - | 2 | 240 | 144 | 60% |
| | LWB A34 | CPR - NB | 0 | 0 | - | - | 2 | 240 | 29 | 12% |
| | LWB E33P | LTI - EB | 0 | 0 | - | - | 2 | 240 | 24 | 10% |
| | NLB B2 | CPR - NB | 2 | 240 | 144 | 60% | 2 | 240 | 96 | 40% |
| | | **Total** | **12** | **1,440** | **559** | **39%** | **32** | **3,840** | **1,574** | **41%** |
| Intra-district Services | GMB 42 | LTI - EB | 2 | 38 | 29 | 76% | 2 | 38 | 16 | 42% |
| | | LTI - WB | 2 | 38 | 15 | 39% | 2 | 38 | 7 | 18% |
| | | **Total** | **4** | **76** | **44** | **58%** | **4** | **76** | **23** | **30%** |

CPR – Castle Peak Road –Lam Tei LTI – Lam Tei Interchange
NB – northbound SB – southbound EB – eastbound WB – westbound
Capacity and occupied are in passenger/hr

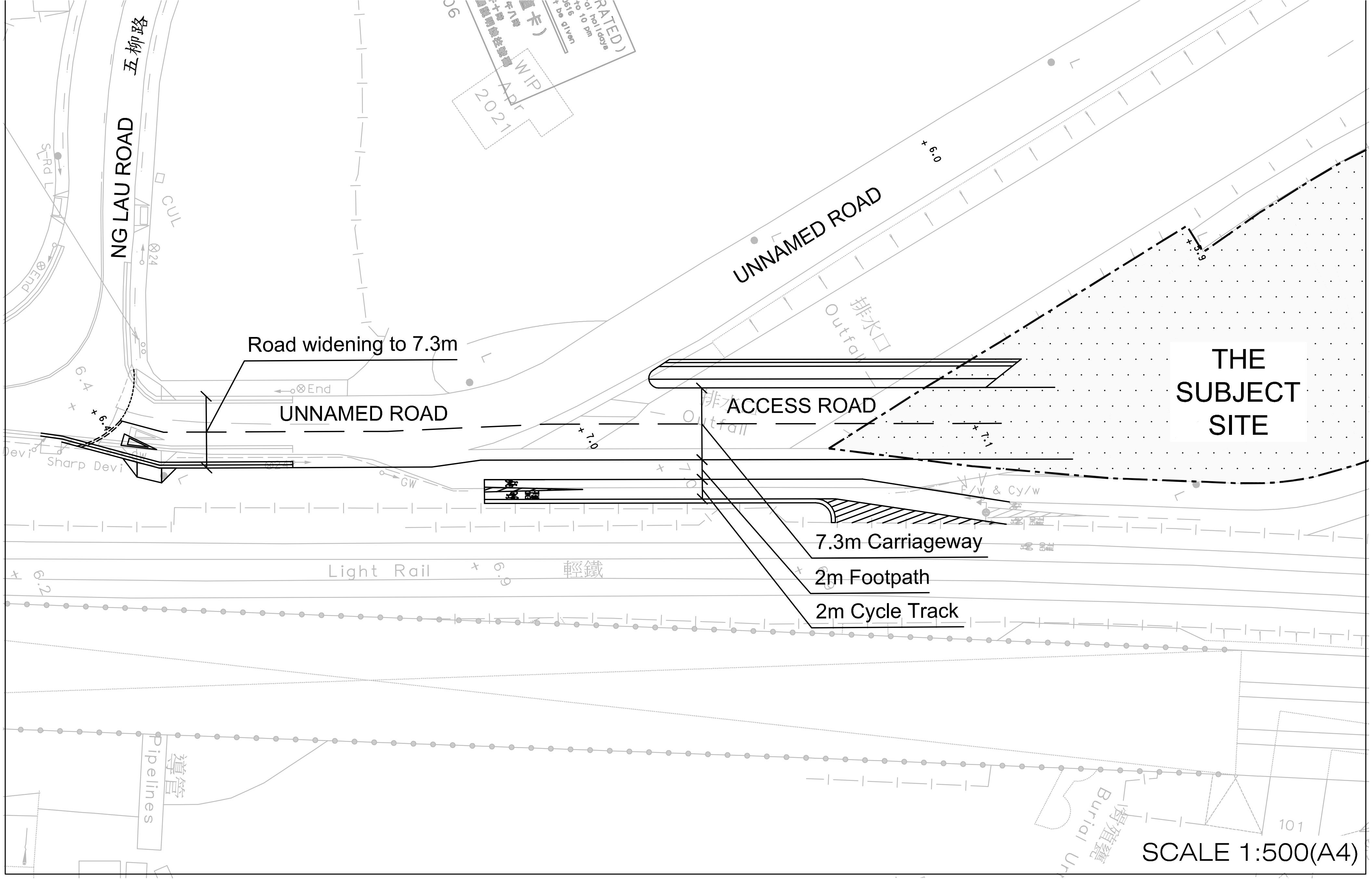
TABLE B3 DETAILED PEAK 1 HOUR OCCUPANCY SURVEY RESULT AT LRT LAM TEI STOP (TUEN MUN BOUND)

| Time | Route | Single-set / Coupled-set | Occupancy [c] = [a]/[b] | Capacity (Number of Passenger) [b] | Occupied (Number of Passenger) [a] |
|---|---|---|---|---|---|
| | | **AM Peak** | | | |
| 7:15 | 615 | Single-set | 60% | 200 | 120 |
| 7:17 | 615 | Single-set | 95% | 200 | 190 |
| 7:20 | 610 | Coupled-set | 75% | 400 | 300 |
| 7:22 | 751 | Coupled-set | 60% | 400 | 240 |
| 7:27 | 614 | Coupled-set | 90% | 400 | 360 |
| 7:30 | 610 | Coupled-set | 95% | 400 | 380 |
| 7:33 | 751 | Coupled-set | 70% | 400 | 280 |
| 7:35 | 751 | Coupled-set | 90% | 400 | 360 |
| 7:37 | 615 | Single-set | 100% | 200 | 200 |
| 7:42 | 610 | Coupled-set | 100% | 400 | 400 |
| 7:44 | 751P | Single-set | 90% | 200 | 180 |
| 7:45 | 614 | Single-set | 95% | 200 | 190 |
| 7:46 | 751 | Single-set | 78% | 200 | 156 |
| 7:49 | 615 | Single-set | 100% | 200 | 200 |
| 7:50 | 751 | Coupled-set | 90% | 400 | 360 |
| 7:51 | 610 | Coupled-set | 70% | 400 | 280 |
| 7:59 | 610 | Single-set | 100% | 200 | 200 |
| 8:00 | 751 | Coupled-set | 90% | 400 | 360 |
| 8:04 | 614 | Coupled-set | 60% | 400 | 240 |
| 8:05 | 615 | Single-set | 80% | 200 | 160 |
| 8:08 | 751 | Coupled-set | 70% | 400 | 280 |
| 8:09 | 610 | Single-set | 50% | 200 | 100 |
| 8:11 | 614 | Single-set | 80% | 200 | 160 |
| 8:13 | 610 | Single-set | 50% | 200 | 100 |
| | | **AM Peak Total** | **81%** | **7,200** | **5,796** |
| | | **PM Peak** | | | |
| 18:36 | 751 | Coupled-set | 40% | 400 | 160 |
| 18:39 | 614 | Single-set | 60% | 200 | 120 |
| 18:41 | 751 | Coupled-set | 40% | 400 | 160 |
| 18:43 | 615 | Single-set | 40% | 200 | 80 |
| 18:47 | 610 | Single-set | 80% | 200 | 160 |
| 18:49 | 751 | Coupled-set | 40% | 400 | 160 |
| 18:54 | 614 | Coupled-set | 53% | 400 | 212 |
| 18:56 | 610 | Coupled-set | 20% | 400 | 80 |
| 18:59 | 751 | Coupled-set | 40% | 400 | 160 |
| 19:00 | 615 | Single-set | 40% | 200 | 80 |
| 19:03 | 610 | Single-set | 80% | 200 | 160 |
| 19:10 | 614 | Single-set | 100% | 200 | 200 |
| 19:11 | 751 | Coupled-set | 40% | 400 | 160 |
| 19:15 | 615 | Coupled-set | 40% | 400 | 160 |
| 19:16 | 610 | Single-set | 60% | 200 | 120 |
| 19:18 | 751 | Coupled-set | 20% | 400 | 80 |
| 19:20 | 751 | Coupled-set | 20% | 400 | 80 |
| 19:25 | 610 | Single-set | 100% | 200 | 200 |
| 19:27 | 614 | Single-set | 60% | 200 | 120 |
| 19:28 | 615 | Single-set | 60% | 200 | 120 |
| 19:29 | 610 | Single-set | 100% | 200 | 200 |
| 19:31 | 614 | Single-set | 60% | 200 | 120 |
| | | **PM Peak Total** | **48%** | **6,400** | **3,092** |

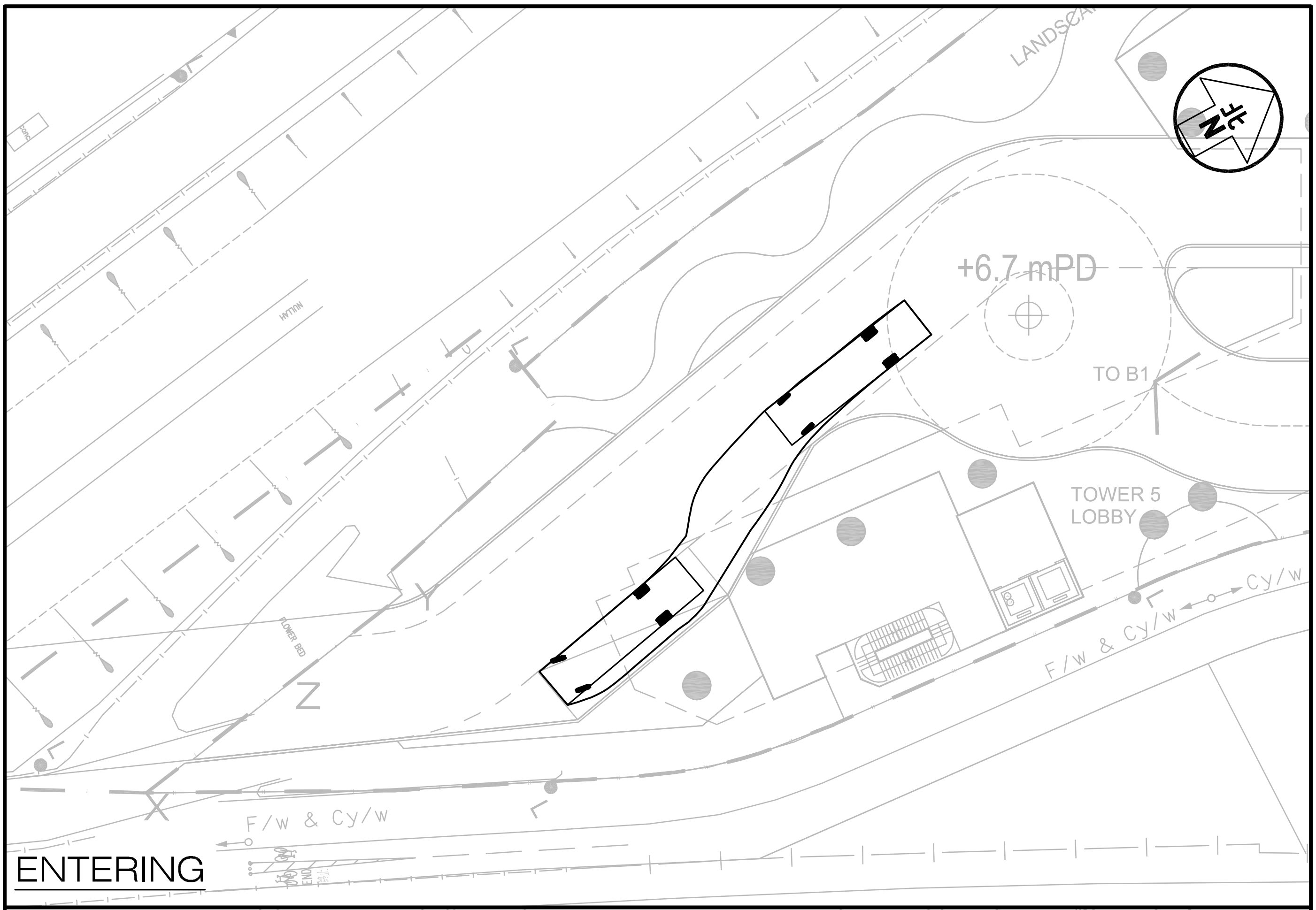
## TABLE B4 DETAILED PEAK 1 HOUR OCCUPANCY SURVEY RESULT AT LRT LAM TEI STOP (YUEN LONG BOUND)

| Time | Route | Single-set / Coupled-set | Occupancy [c] = [a]/[b] | Capacity (Number of Passenger) [b] | Occupied (Number of Passenger) [a] |
|---|---|---|---|---|---|
| | | | **AM Peak** | | |
| 7:15 | 614 | Coupled-set | 70% | 400 | 280 |
| 7:16 | 751 | Coupled-set | 30% | 400 | 120 |
| 7:17 | 615 | Single-set | 70% | 200 | 140 |
| 7:25 | 610 | Single-set | 70% | 200 | 140 |
| 7:28 | 751 | Coupled-set | 40% | 400 | 160 |
| 7:32 | 614 | Coupled-set | 70% | 400 | 280 |
| 7:33 | 610 | Coupled-set | 40% | 400 | 160 |
| 7:38 | 751 | Coupled-set | 60% | 400 | 240 |
| 7:39 | 615 | Single-set | 80% | 200 | 160 |
| 7:41 | 610 | Single-set | 50% | 200 | 100 |
| 7:47 | 751 | Coupled-set | 40% | 400 | 160 |
| 7:48 | 614 | Single-set | 50% | 200 | 100 |
| 7:51 | 610 | Coupled-set | 50% | 400 | 200 |
| 7:55 | 751 | Coupled-set | 35% | 400 | 140 |
| 8:00 | 615 | Single-set | 76% | 200 | 152 |
| 8:01 | 610 | Single-set | 50% | 200 | 100 |
| 8:03 | 751 | Single-set | 30% | 200 | 60 |
| 8:07 | 751 | Coupled-set | 30% | 400 | 120 |
| 8:08 | 614 | Single-set | 80% | 200 | 160 |
| 8:09 | 610 | Single-set | 40% | 200 | 80 |
| 8:10 | 615 | Single-set | 40% | 200 | 80 |
| 8:09 | 610 | Single-set | 40% | 200 | 80 |
| 8:10 | 615 | Single-set | 40% | 200 | 80 |
| | | **AM Peak Total** | **50%** | **6,600** | **3,290** |
| | | | **PM Peak** | | |
| 18:37 | 751 | Single-set | 100 | 200 | 200 |
| 18:38 | 614 | Single-set | 60 | 200 | 120 |
| 18:39 | 610 | Single-set | 80 | 200 | 160 |
| 18:42 | 615 | Single-set | 40 | 200 | 80 |
| 18:48 | 610 | Coupled-set | 80 | 400 | 320 |
| 18:51 | 751 | Single-set | 80 | 200 | 160 |
| 18:54 | 614 | Single-set | 98 | 200 | 196 |
| 18:55 | 610 | Single-set | 100 | 200 | 200 |
| 18:58 | 751 | Coupled-set | 80 | 400 | 320 |
| 19:05 | 610 | Coupled-set | 100 | 400 | 400 |
| 19:09 | 751 | Coupled-set | 80 | 400 | 320 |
| 19:10 | 615 | Single-set | 60 | 200 | 120 |
| 19:11 | 614 | Single-set | 60 | 200 | 120 |
| 19:13 | 751 | Coupled-set | 40 | 400 | 160 |
| 19:14 | 610 | Single-set | 100 | 200 | 200 |
| 19:23 | 610 | Single-set | 80 | 200 | 160 |
| 19:24 | 751 | Coupled-set | 100 | 400 | 400 |
| 19:25 | 615 | Single-set | 60 | 200 | 120 |
| 19:26 | 614 | Single-set | 60 | 200 | 120 |
| 19:30 | 614 | Single-set | 60 | 200 | 120 |
| 19:32 | 751 | Coupled-set | 60 | 400 | 240 |
| | | **PM Peak Total** | **76%** | **5,600** | **4,236** |

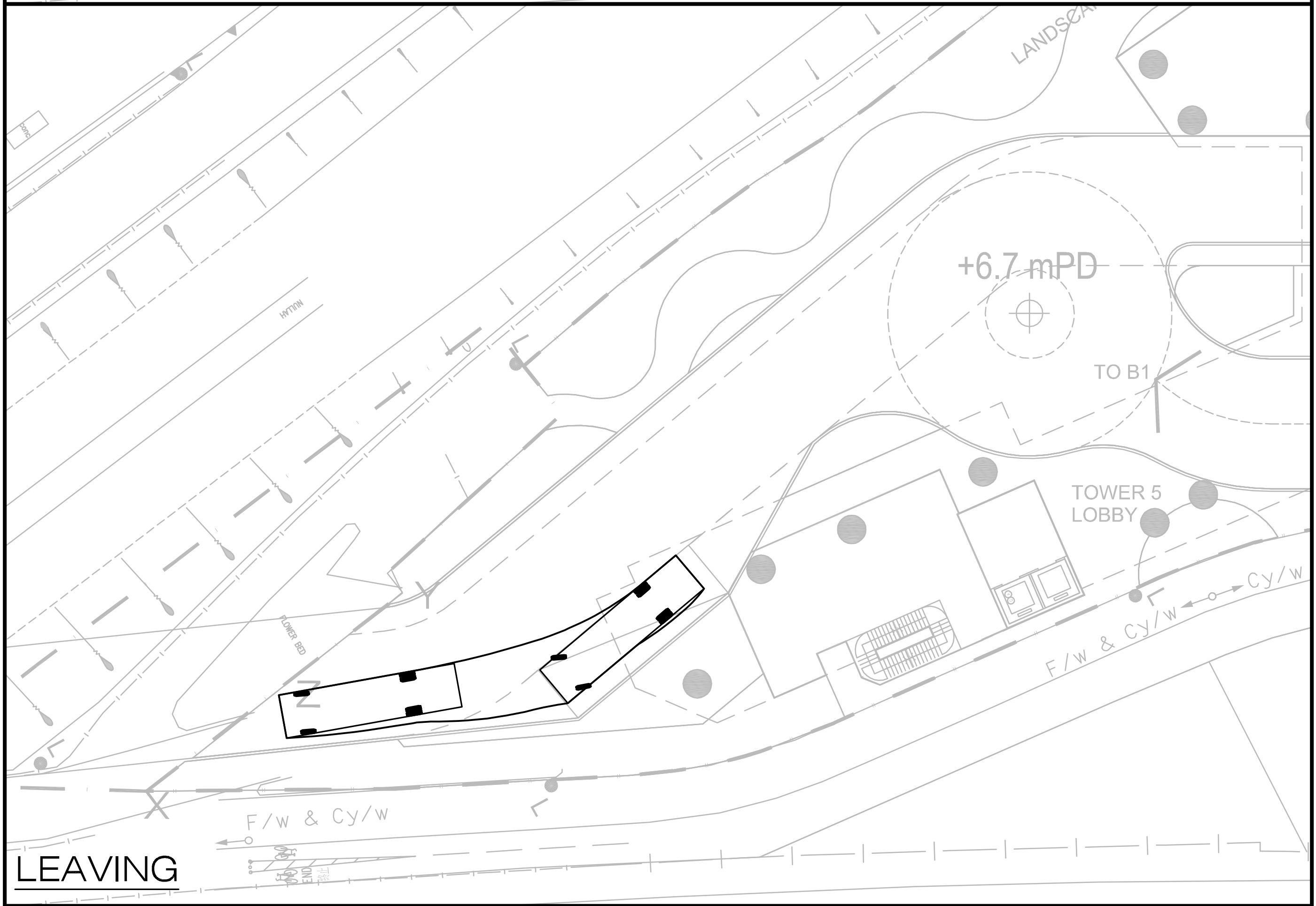
# Appendix C – Planned Road Works to be implemented by the Owner


NG LAU ROAD
五柳路
UNNAMED ROAD
UNNAMED ROAD
ACCESS ROAD
THE SUBJECT SITE
Road widening to 7.3m
7.3m Carriageway
2m Footpath
2m Cycle Track
Light Rail
輕鐵
Pipelines
導管
Outfall
排水口
Burial Urn
SCALE 1:500(A4)

# Appendix D – Swept Path Analysis


LANDSCAP
+6.7 mPD
TO B1
TOWER 5
LOBBY
NULLAH
FLOWER BED
F/w & Cy/w
Cy/w
F/w & Cy/w
END

ENTERING


LANDSCAP
+6.7 mPD
TO B1
TOWER 5
LOBBY
NULLAH
FLOWER BED
F/w & Cy/w
Cy/w
F/w & Cy/w
END

LEAVING

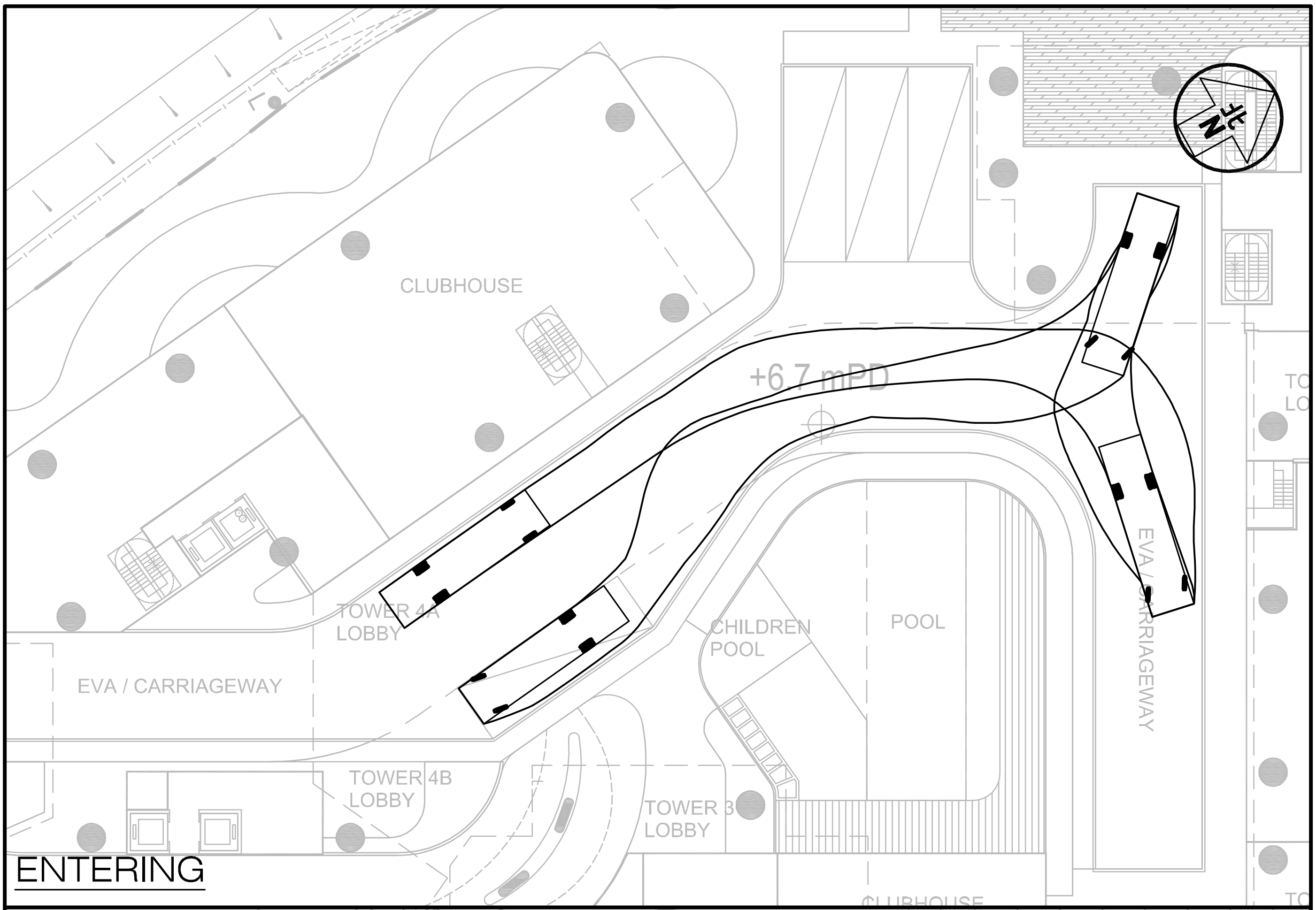
Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title
**SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**

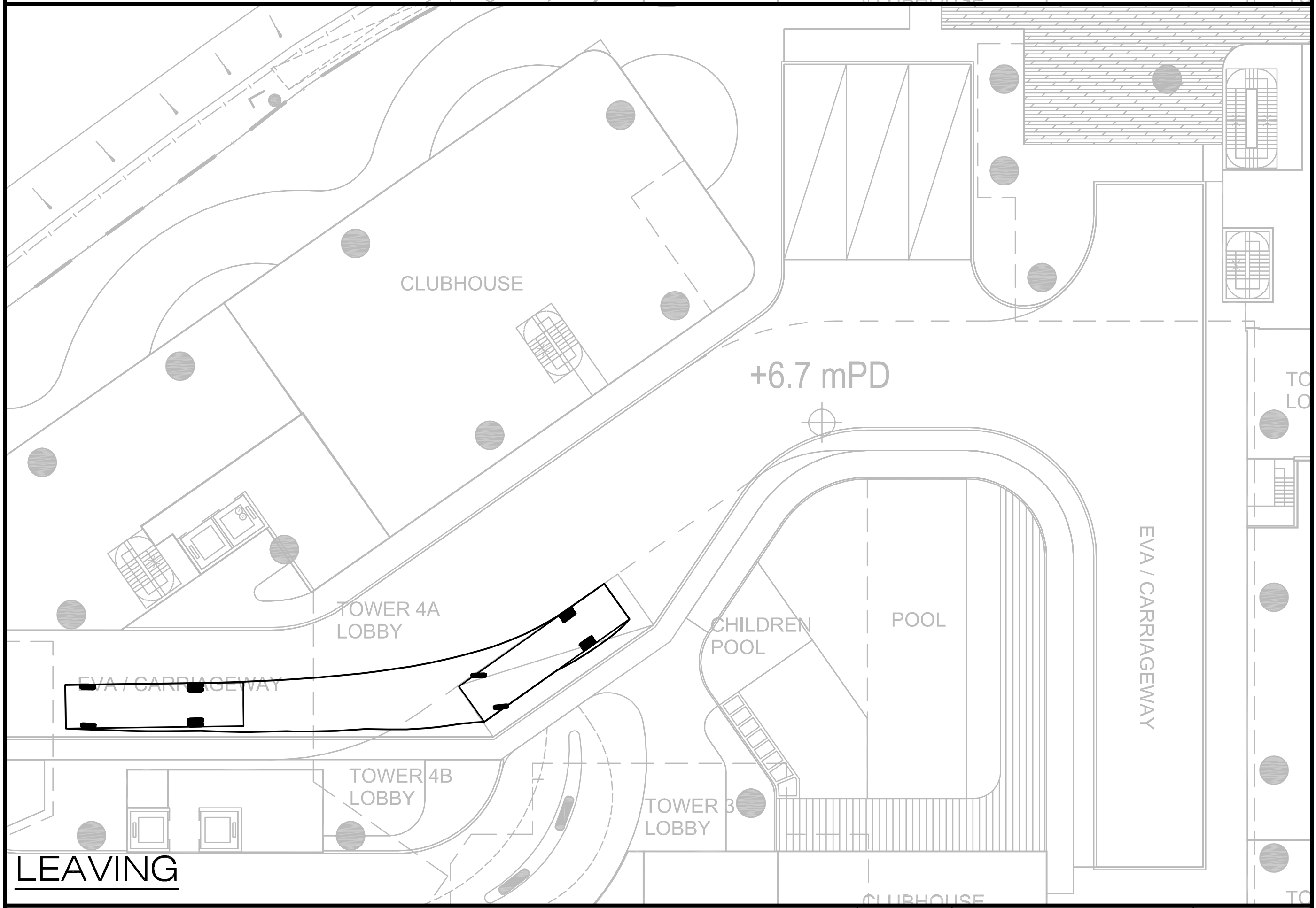
| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | SP1 | | | 1 : 400 |
| Designed by | Drawn by | Checked by | Revision | Date |
| L K W | W S W | K C | G | 20 FEB 2024 |

**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\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg


CLUBHOUSE
+6.7 mPD
TOWER 4A LOBBY
EVA / CARRIAGEWAY
TOWER 4B LOBBY
CHILDREN POOL
POOL
TOWER 3 LOBBY
EVA / CARRIAGEWAY
CLUBHOUSE
N

ENTERING


CLUBHOUSE
+6.7 mPD
TOWER 4A LOBBY
EVA / CARRIAGEWAY
TOWER 4B LOBBY
CHILDREN POOL
POOL
TOWER 3 LOBBY
EVA / CARRIAGEWAY
CLUBHOUSE

LEAVING

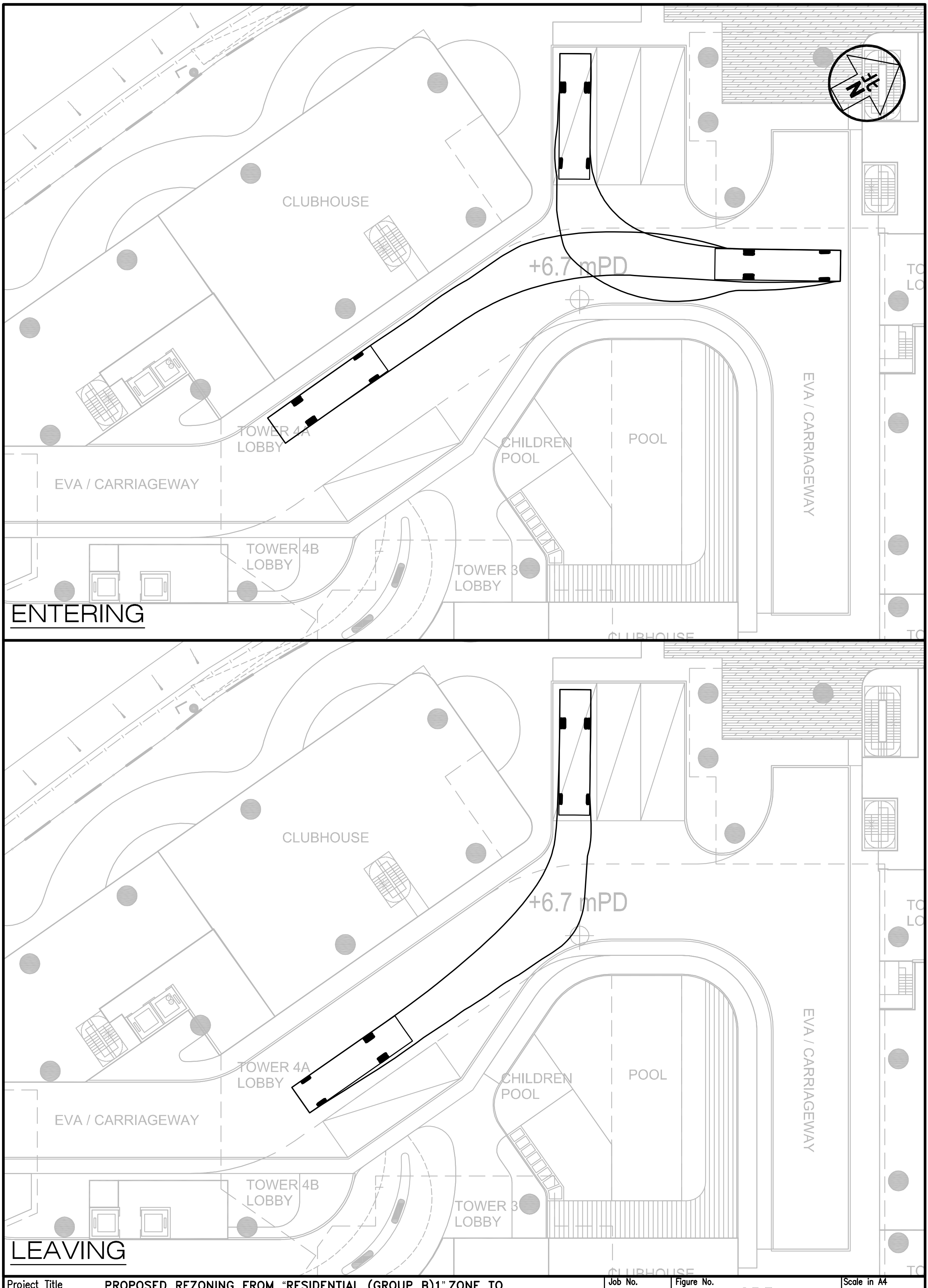
| | | | | |
|---|---|---|---|---|
| Job No.<br>J7265 | Figure No.<br>SP2 | | | Scale in A4<br>1 : 400 |
| Designed by<br>L K W | Drawn by<br>W S W | Checked by<br>K C | Revision<br>G | Date<br>20 FEB 2024 |

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

Figure Title
**SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**

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\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg


CLUBHOUSE
+6.7 mPD
TOWER 4A LOBBY
EVA / CARRIAGEWAY
CHILDREN POOL
POOL
EVA / CARRIAGEWAY
TOWER 4B LOBBY
TOWER 3 LOBBY
CLUBHOUSE
ENTERING
CLUBHOUSE
+6.7 mPD
TOWER 4A LOBBY
EVA / CARRIAGEWAY
CHILDREN POOL
POOL
EVA / CARRIAGEWAY
TOWER 4B LOBBY
TOWER 3 LOBBY
CLUBHOUSE
LEAVING

Project Title

PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

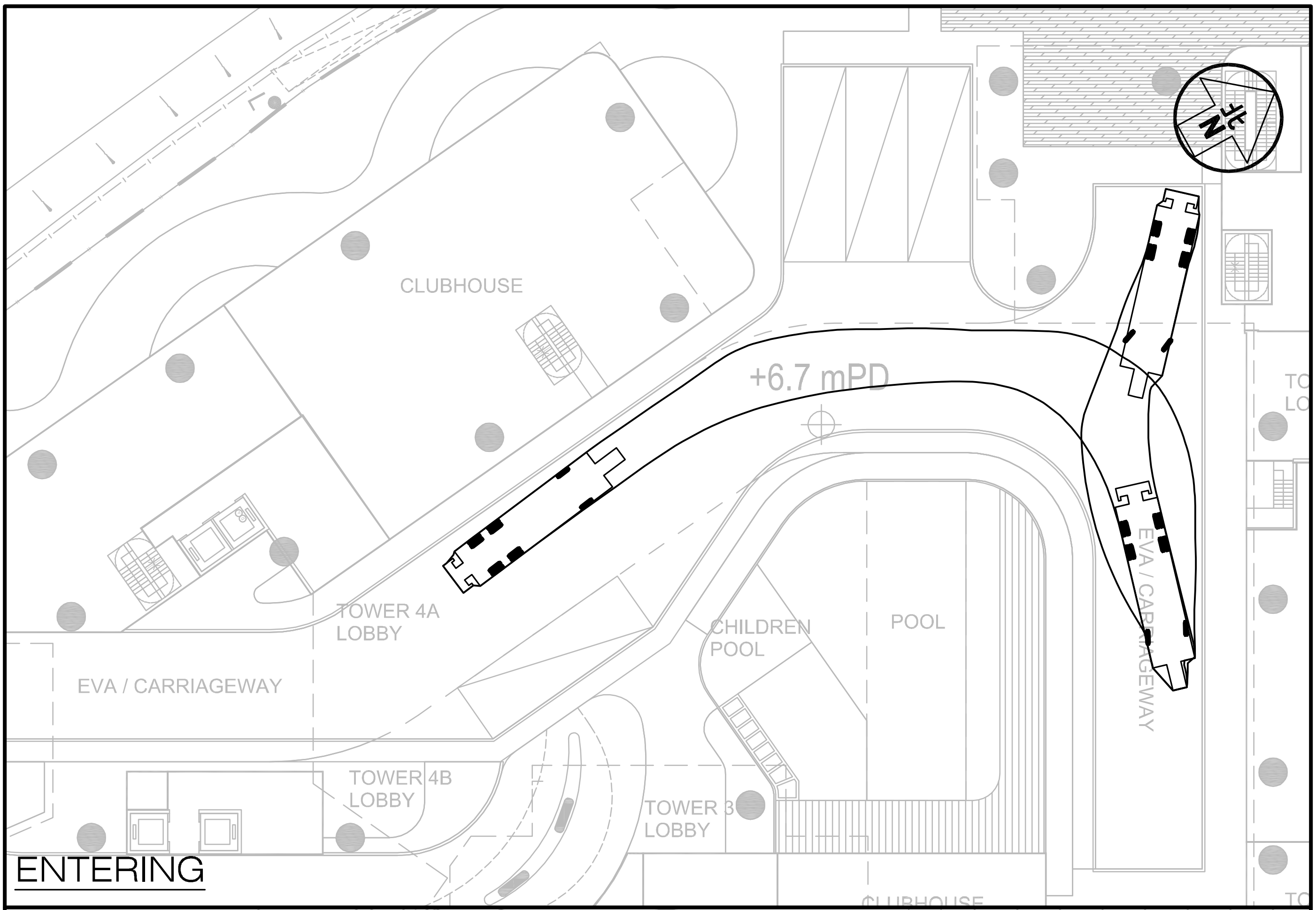
| Job No. | Figure No. | | | Scale in A4 |
|---|---|---|---|---|
| J7265 | SP3 | | | 1 : 400 |
| Designed by | Drawn by | Checked by | Revision | Date |
| L K W | W S W | K C | G | 20 FEB 2024 |

Figure Title

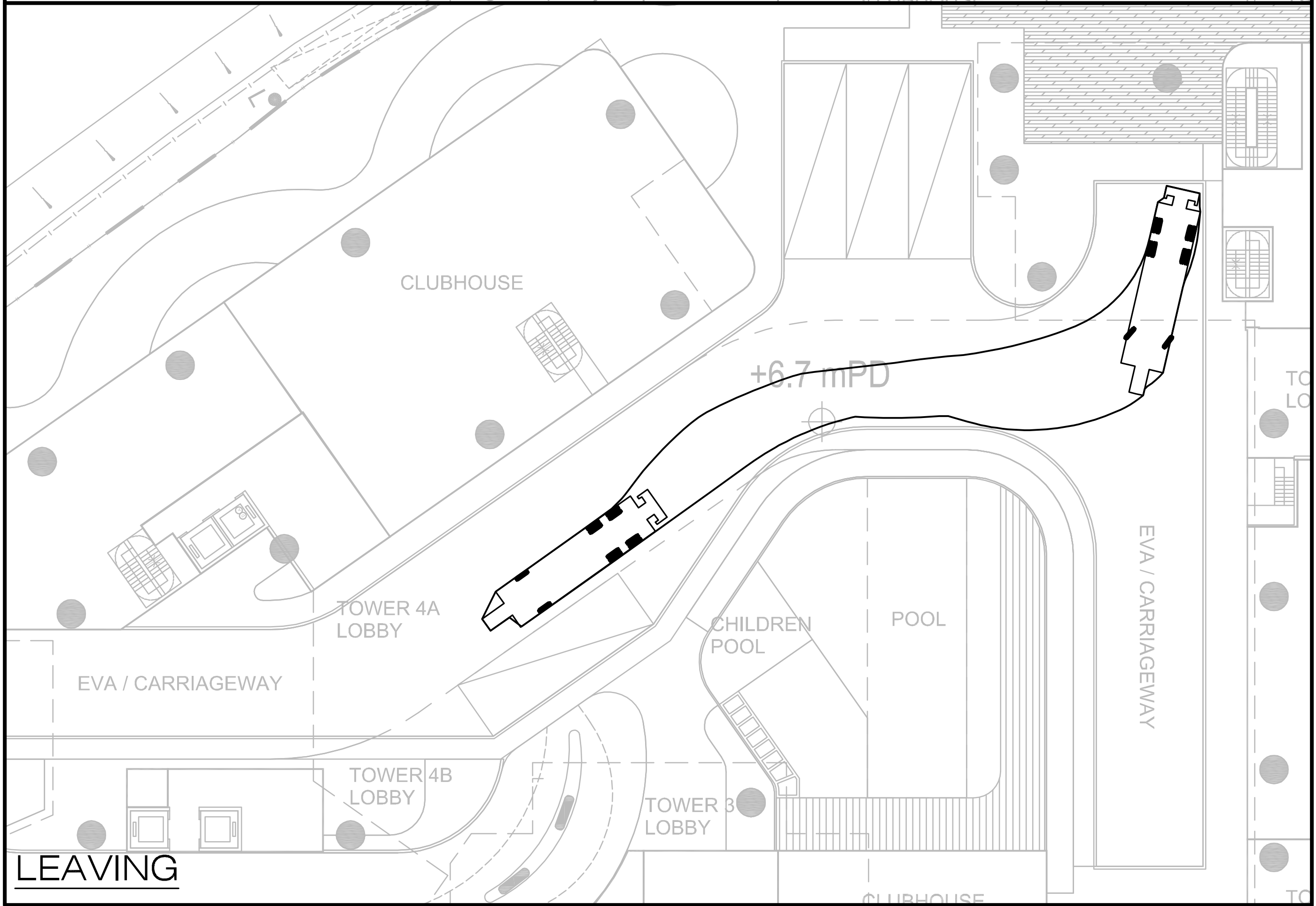
**SWEPT PATH OF HGV ENTERING AND LEAVING THE LOADING / UNLOADING BAY**

**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\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg


北
N
CLUBHOUSE
+6.7 mPD
TOWER 4A
LOBBY
EVA / CARRIAGEWAY
CHILDREN
POOL
POOL
EVA / CARRIAGEWAY
TOWER 4B
LOBBY
TOWER 3
LOBBY
CLUBHOUSE

ENTERING


CLUBHOUSE
+6.7 mPD
TOWER 4A
LOBBY
EVA / CARRIAGEWAY
CHILDREN
POOL
POOL
EVA / CARRIAGEWAY
TOWER 4B
LOBBY
TOWER 3
LOBBY
CLUBHOUSE

LEAVING

Project Title
PROPOSED REZONING FROM "RESIDENTIAL (GROUP B)1" ZONE TO "RESIDENTIAL (GROUP B)4" ZONE FOR MEDIUM-DENSITY HOUSING DEVELOPMENT TO INCLUDE A FOOTPATH FOR PUBLIC USE AT VARIOUS LOTS AND ADJACENT GOVERNMENT LAND IN DD130, LAM TEI, TUEN MUN (APPLICATION NO. Y/TM-LTYY/11)

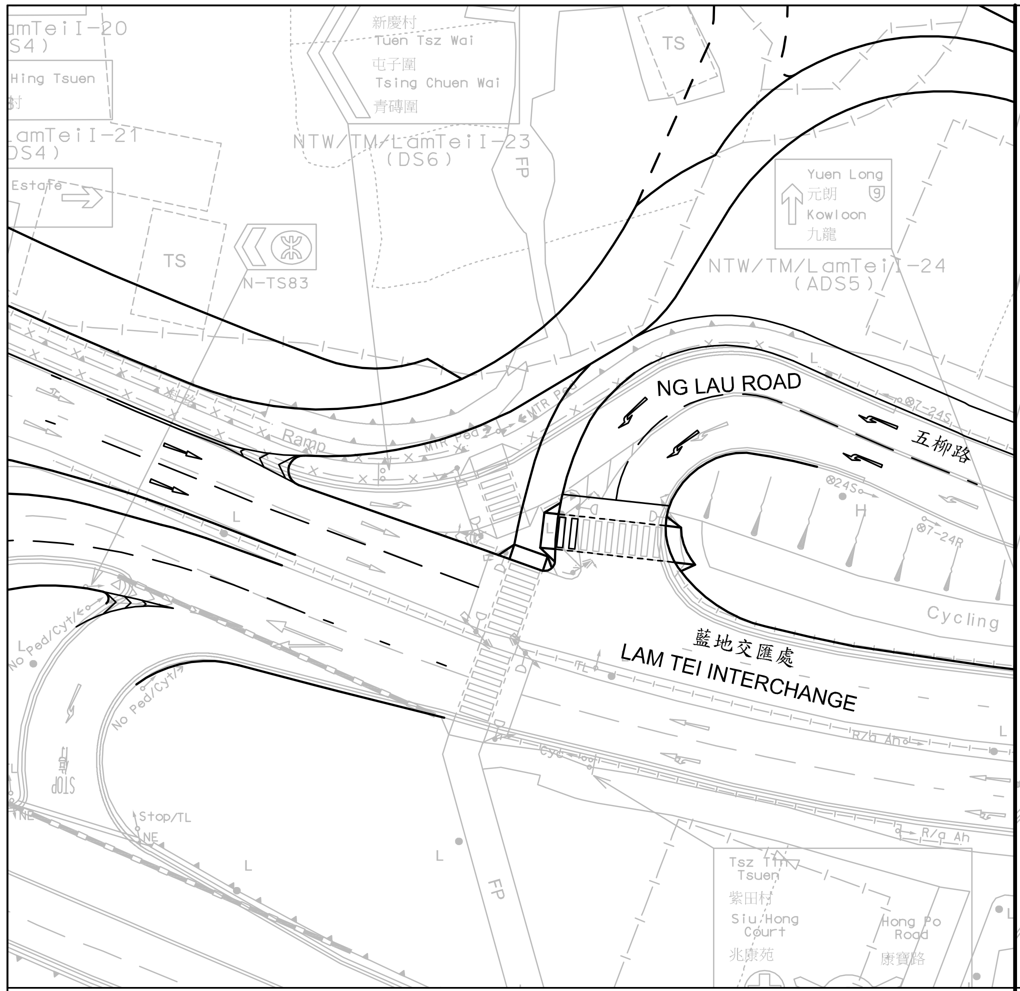
Figure Title
**SWEPT PATH OF FIRE APPLIANCE ENTERING AND LEAVING THE SUBJECT SITE**

Job No. J7265
Figure No. SP4
Scale in A4 1 : 400
Designed by L K W
Drawn by W S W
Checked by K C
Revision G
Date 20 FEB 2024

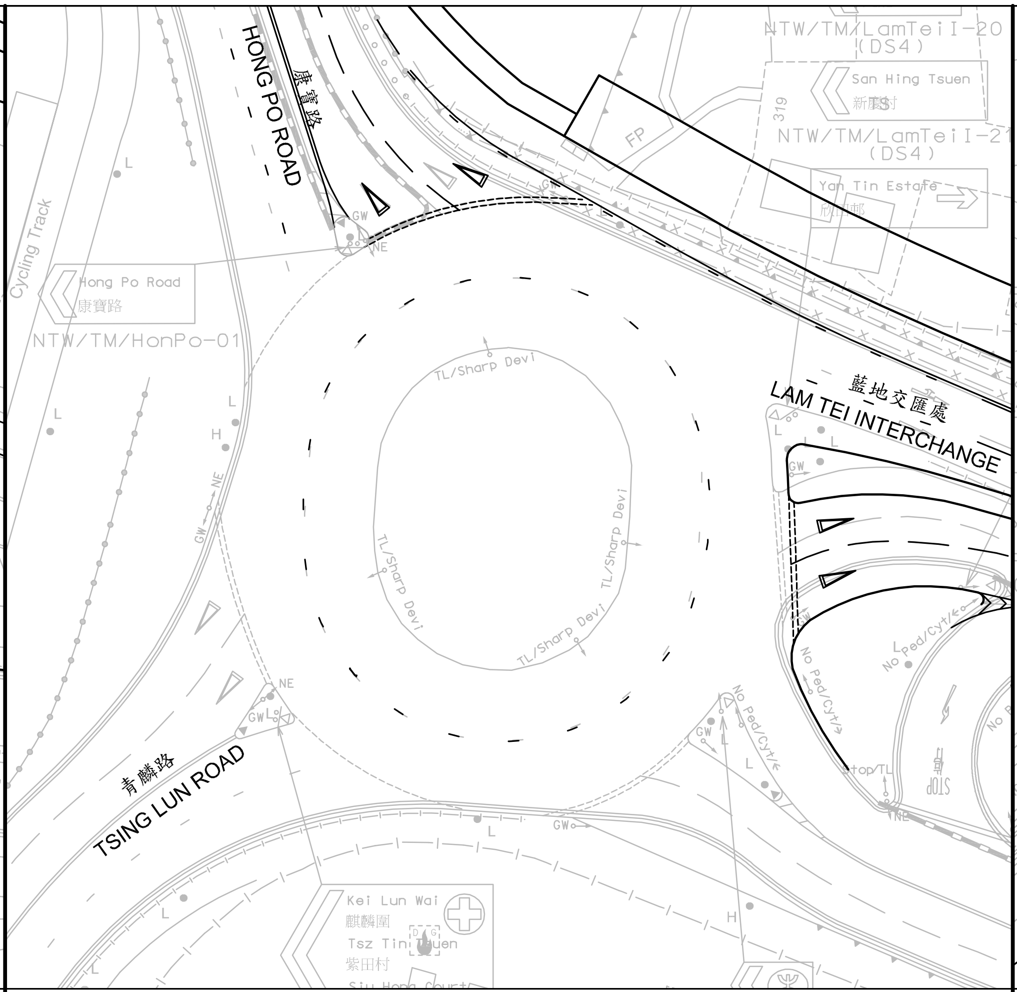
**CKM Asia Limited**
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

T:\JOB\J7250-J7299\J7265\2024 02_R6\Fig SP1 - SP4 RevG.dwg

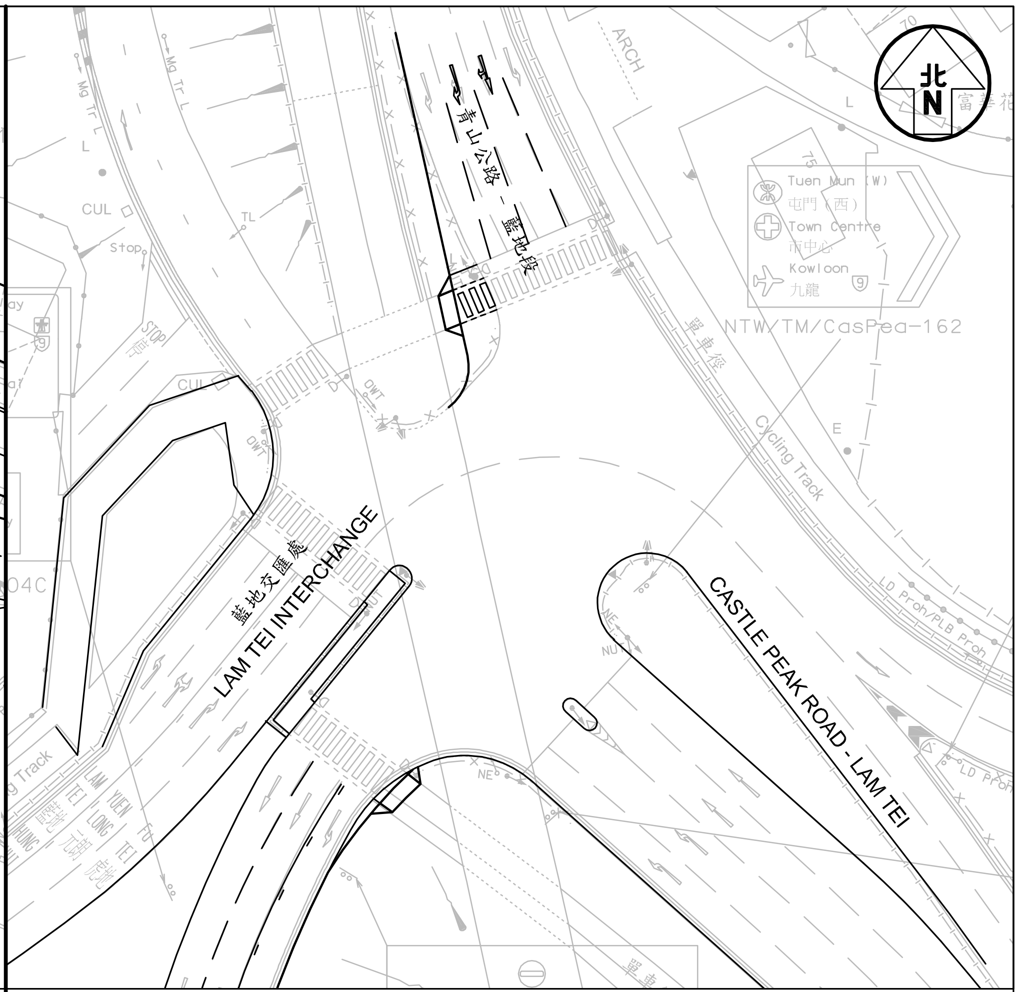
# Appendix E –
# Extract of Planned Road Works under Agreement No. CE 39/2021 (CE) and CV/2019/04 by CEDD


NG LAU ROAD
五柳路
藍地交匯處
LAM TEI INTERCHANGE
NTW/TM/LamTeiI-23 (DS6)
NTW/TM/LamTeiI-24 (ADS5)
Yuen Long 元朗
Kowloon 九龍
Cycling

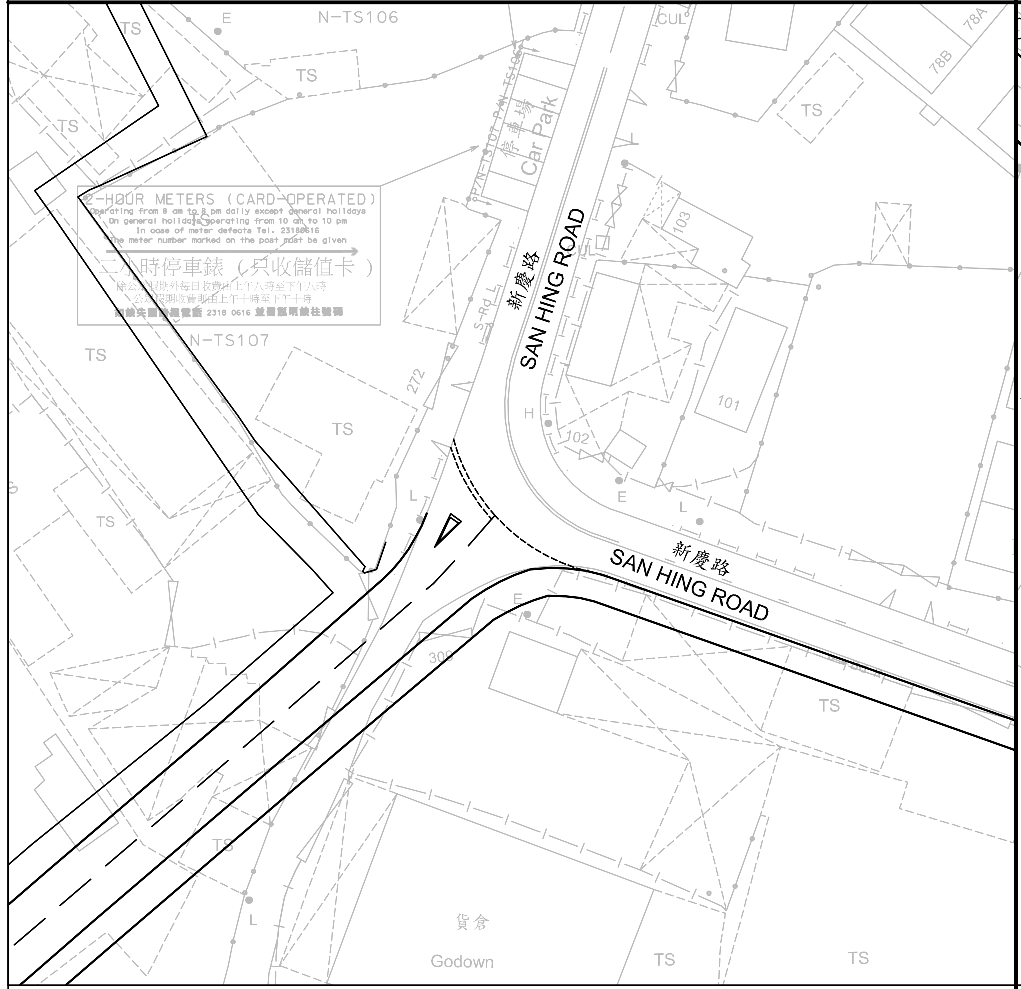
J3 - Ng Lau Road/ Lam Tei Interchange


HONG PO ROAD
康寶路
藍地交匯處
LAM TEI INTERCHANGE
青麟路
TSING LUN ROAD
NTW/TM/HonPo-01
NTW/TM/LamTeiI-20
Cycling Track

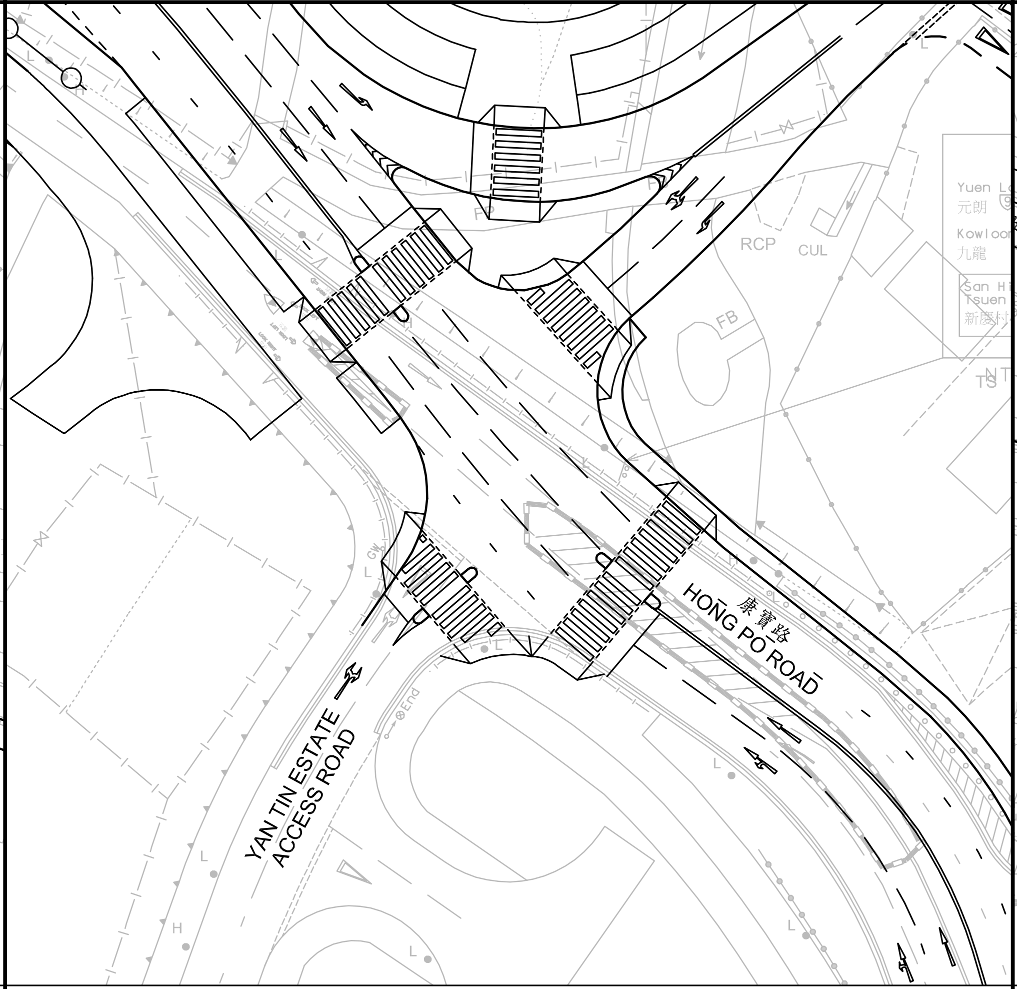
J4 - Tsing Lun Road/ Hong Po Road/ Lam Tei Interchange


北 N
青山公路
藍地段
藍地交匯處
LAM TEI INTERCHANGE
CASTLE PEAK ROAD - LAM TEI
NTW/TM/CasPea-162
Tuen Mun (W)
Town Centre
Kowloon
Cycling Track

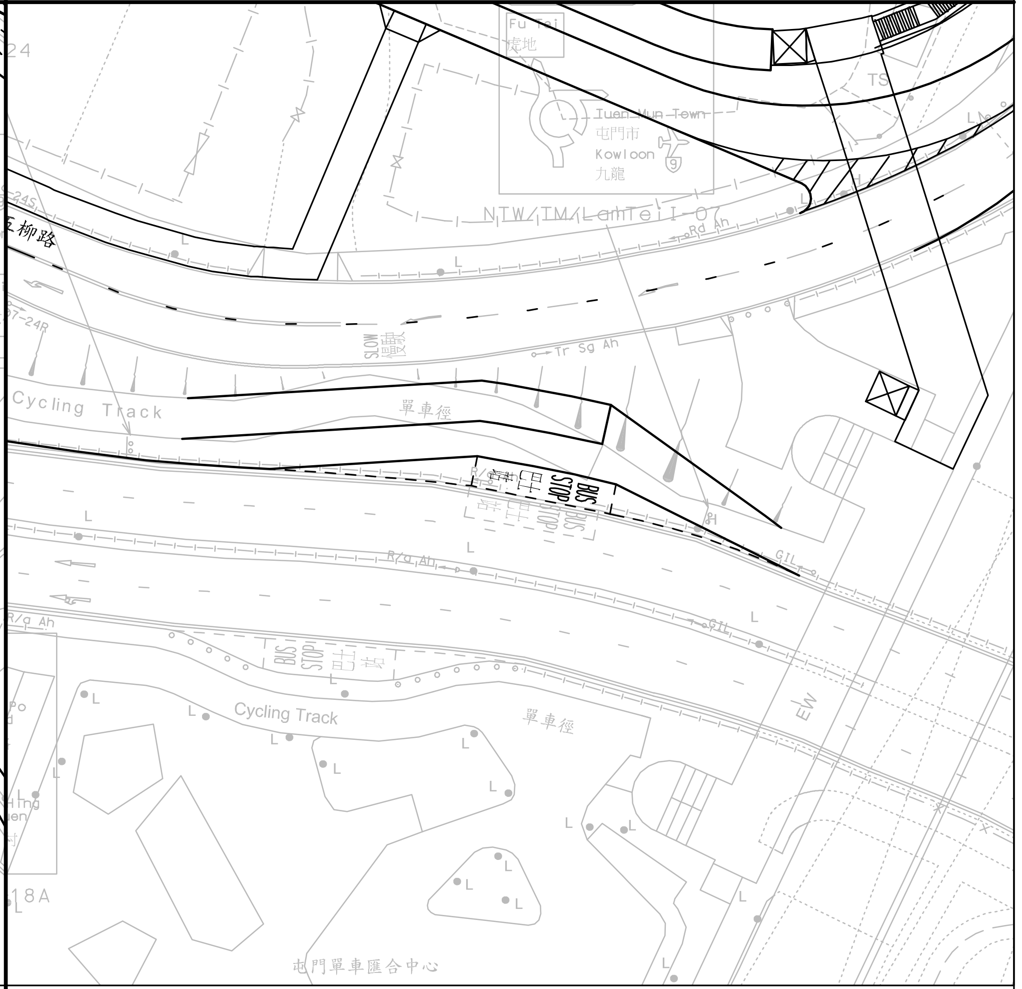
J6 - Lam Tei Interchange/ Castle Peak Road – Lam Tei


新慶路
SAN HING ROAD
Car Park
N-TS106
N-TS107
Godown
貨倉

J10 - T-junction at San Hing Road


康寶路
HONG PO ROAD
YAN TIN ESTATE ACCESS ROAD

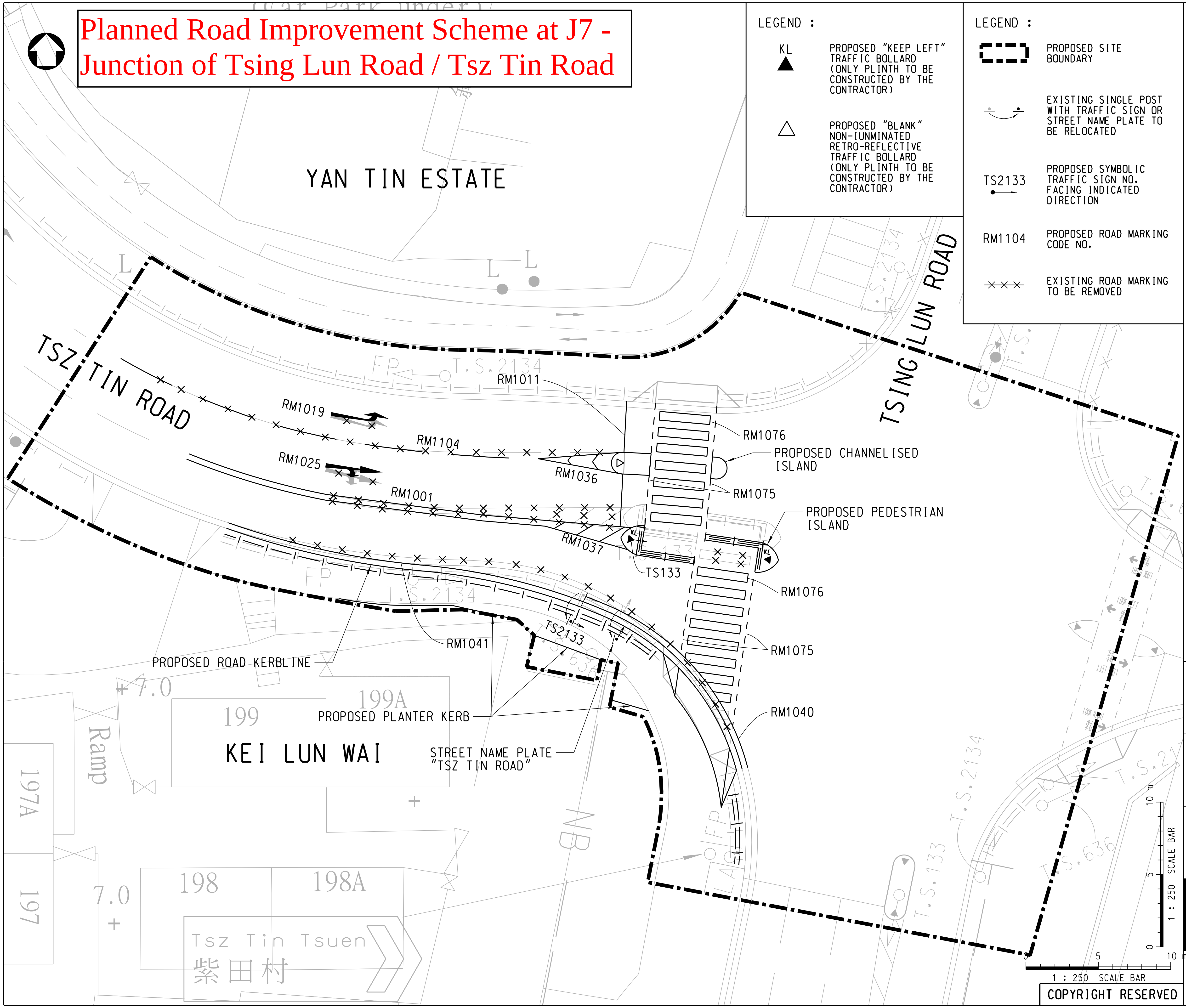
J12 - Hong Po Road/ Yan Tin Estate Access Road


五柳路
NTW/TM/LamTeiI-07
Tuen Mun Town
Kowloon
BUS STOP
Cycling Track
單車徑

Lam Tei Interchange Bus Stops

scale 1:750 (A3)

# Planned Road Improvement Scheme at J7 - Junction of Tsing Lun Road / Tsz Tin Road


YAN TIN ESTATE
TSZ TIN ROAD
TSING LUN ROAD
KEI LUN WAI
199
199A
198
198A
197A
197
Ramp
Tsz Tin Tsuen
紫田村
7.0
L
FP
T.S.2134
T.S.133
T.S.636
NB
RM1011
RM1019
RM1104
RM1025
RM1036
RM1001
RM1037
RM1076
RM1075
RM1041
RM1040
TS133
TS2133
KL
PROPOSED CHANNELISED ISLAND
PROPOSED PEDESTRIAN ISLAND
PROPOSED ROAD KERBLINE
PROPOSED PLANTER KERB
STREET NAME PLATE "TSZ TIN ROAD"
0
5
10 m
1 : 250 SCALE BAR

LEGEND :

| | |
|---|---|
| KL ▲ | PROPOSED "KEEP LEFT" TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR) |
| △ | PROPOSED "BLANK" NON-IUNMINATED RETRO-REFLECTIVE TRAFFIC BOLLARD (ONLY PLINTH TO BE CONSTRUCTED BY THE CONTRACTOR) |

LEGEND :

| | |
|---|---|
| ▭ | PROPOSED SITE BOUNDARY |
| | EXISTING SINGLE POST WITH TRAFFIC SIGN OR STREET NAME PLATE TO BE RELOCATED |
| TS2133 | PROPOSED SYMBOLIC TRAFFIC SIGN NO. FACING INDICATED DIRECTION |
| RM1104 | PROPOSED ROAD MARKING CODE NO. |
| ××× | EXISTING ROAD MARKING TO BE REMOVED |

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. GRID LINES ARE IN HONG KONG METRIC GRID 1980.
3. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD).
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. LWSK-J5-0010.
5. DETAILS OF CONCRETE PLINTH FOR TRAFFIC BOLLARD SHALL REFER TO HyD STANDARD DRAWING NOS. H2140 TO H2141.
6. FOR DETAILS OF TRAFFIC SIGNS AND ROAD MARKING, REFER TO VOLUME 3 OF TRANSPORT PLANNING AND DESIGN MANUAL (TPDM) PUBLISHED BY TRANSPORT DEPARTMENT.
7. FOR SUPPORT DETAILS OF SINGLE POST TRAFFIC SIGNS INCLUDING COLOR OF POST, REFER TO HyD STANDARD DRAWING NOS. H2147 TO H2148.
8. BACK OF ALL SIGNS SHALL BE PAINTED IN GREY TO BS5252F CODE 18B19.
9. EXISTING ROAD MARKING TO BE AFFECTED SHALL BE REMOVED AND REPLACED BY PROPOSED ROAD MARKING.
10. NEW SUPPORTS, INCLUDING SINGLE/MULTIPLE POSTS AND FRAME SUPPORTS, SHALL BE CONSTRUCTED FOR ALL PROPOSED AND RELOCATED TRAFFIC OR DIRECTIONAL SIGNS.

works order title
IMPROVEMENT WORKS AT JUNCTION OF TSING LUN ROAD AND TSZ TIN ROAD, TUEN MUN

drawing title
TRAFFIC AIDS AND ROAD MARKING LAYOUT

| drawing no. | scale |
|---|---|
| LWSK-J5-0009 | 1 : 250 |

office
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

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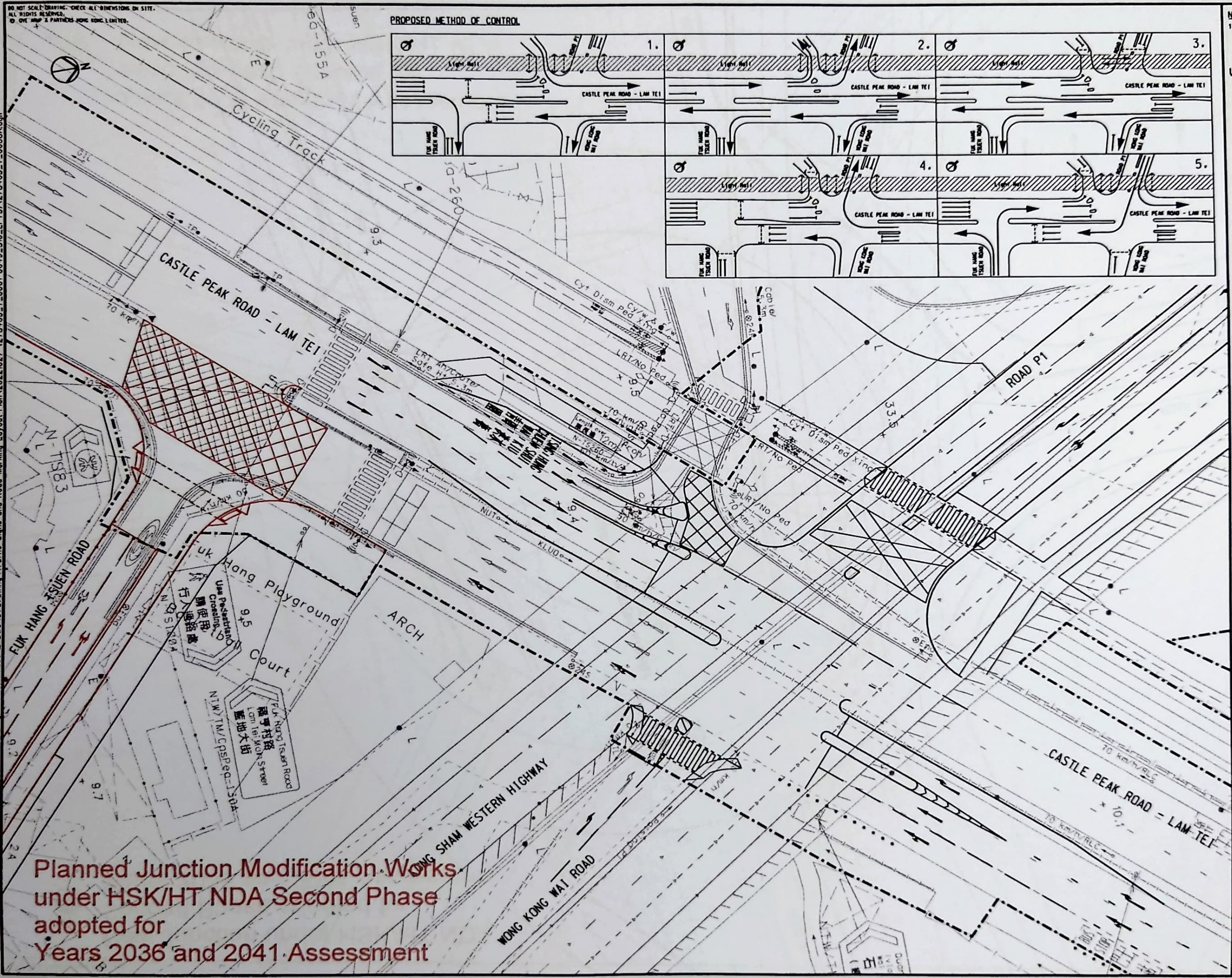
A3 420 x 297

S:*CV201101*Tsing Lun Road and Tsz Tin Road Junction*Sketches*LWSK-J5-0009.dgn
19/09/2022 **10.9.25.31*CAD_General*CAD_Common*PEN_TABLE*filename&date.tbl

# Appendix F –
# Extract of Planned Road Works under Agreement No. CE 01/2020 (CE) by CEDD


PROPOSED METHOD OF CONTROL
1.
2.
3.
4.
5.
Light Rail
CASTLE PEAK ROAD - LAM TEI
ROAD P1
FUK HANG TSUEN ROAD
WONG KONG WAI ROAD
Cycling Track
CASTLE PEAK ROAD - LAM TEI
ROAD P1
FUK HANG TSUEN ROAD
KONG SHAM WESTERN HIGHWAY
WONG KONG WAI ROAD
Fuk Hang Playground
Ball Court
ARCH
Use Pedestrian Crossing
請使用行人過路處
Fuk Hang Tsuen Road
福亨村路
Lam Tei Main Street
藍地大街
Cyt Dism Ped Xing
LRT/No Ped
70 km/h
N

Planned Junction Modification Works under HSK/HT NDA Second Phase adopted for Years 2036 and 2041 Assessment

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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Printed by : 8/11/2022
Filename : M:\Drawing\278000\278463 CE1_2020_CE Hung Shui Kiu Phase 2 D&C\01 Drawing\Traffic Signs and Road Marking Layout Plan\20221027 (278463_T_0001-0049_S16_EFTS)\278463_T_0038A.dgn

**NOTES:**

1. FOR NOTES AND LEGEND, REFER TO DWG.NO. 278463/T/0001.

**LEGEND:**

| | |
|---|---|
| 🟥 | COMMITTED JUNCTION IMPROVEMENT SCHEME BY OTHERS |
| ← | PLANNED JUNCTION IMPROVEMENT SCHEME UNDER HSK/HT NDA SECOND PHASE |

| Rev | Description | By | Date |
|---|---|---|---|

Consultant
ARUP

Project Title
Agreement No. CE 1/2020 (CE)
Hung Shui Kiu / Ha Tsuen
New Development Area Package A
Works for Second Phase Development
– Design and Construction

Drawing title
JUNCTION LAYOUT PLAN - J38
CASTLE PEAK ROAD / ROAD P1/
FUK HANG TSUEN ROAD

| Drawing no. | | Rev. | |
|---|---|---|---|
| 278463/T/0038A | | - | |
| Drawn | Date | Checked | Approved |
| WKL | 04/21 | CFEI | DL |
| Scale | 1:250 @ A1 | Status | PRELIMINARY |

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