Appendix C

Traffic Impact Assessment

Reference number CHK50791710/PTC/L2500339/sys

03/03/2025

SECTION 16 PLANNING APPLICATION FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 221 AND ADJOINING GOVERNMENT LAND, SHA HA, SAI KUNG

TRAFFIC IMPACT ASSESSMENT







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1. INTRODUCTION

1.1 Background

- 1.1.1 The application site is at various lots in DD221 and adjoining Government land, Sai Kung, as shown in **Drawing 1.1**. It is currently in an area shown as "Road" in the approved Sai Kung Town Outline Zoning Plan (OZP) S/SK-SKT/6.
- 1.1.2 The applicant intends to develop the site into a residential development with a view to better utilizing the "leftover" land resources between the CDA(1) zone and Tai Mong Tsai Road taking into account the ongoing Hiram's Highway Improvement Stage 2. This Traffic Impact Assessment (TIA) study is to review the potential traffic impact on the adjacent local road network by the proposed residential development to support the Section 16 Application.

1.2 Study Objective

- 1.2.1 The objectives of this study are summarised as follows:
 - review the current traffic condition and circulation pattern in the adjacent local road network;
 - review the proposed development schedule;
 - produce future traffic forecasts on the adjacent local road network with considerations of the planned developments in the vicinity;
 - investigate the traffic impact on the adjacent local road network with operation of the proposed development at Design Year.

1.3 Report Structure

- 1.3.1 Following this introductory chapter, there are six further chapters:
 - Chapter 2 Proposed Development, presents the development parameters and the transport provisions of the proposed scheme;
 - Chapter 3 Traffic Context, describes the current traffic condition and future traffic planning in the vicinity;
 - Chapter 4 Traffic Forecasts, describes the methodology of traffic forecasting exercise and presents the results;
 - Chapter 5 Traffic Impact Assessment, presents the assessment findings of the anticipated traffic condition upon occupation of the proposed development, and suggests, if necessary, improvement measures to alleviate the foreseeable traffic problem;
 - Chapter 6 Public Transport Service Assessment, presents the assessment results on the utilisation of the public transport upon occupation of the proposed development, and suggests, if necessary, improvement measures to alleviate the foreseeable problem;
 - Chapter 7 Pedestrian Impact Assessment, describes the pedestrian forecasting methodology and presents the results;
 - Chapter 8 –Conclusion, summarises the study findings and presents the conclusion accordingly.

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2. PROPOSED DEVELOPMENT

2.1 Site Location

2.1.1 The application site is located in Sha Ha. It is bounded by Tai Mong Tsai Road to the north, existing residential developments to the west and planned CDA(1) site to the south.

2.2 Development Parameters

2.2.1 The subject site is proposed to be developed into a residential development. The proposed development parameters are summarised in **Table 2.1**. It is anticipated to be completed in year 2032. The Master Layout Plan (MLP) and basement plan are illustrated in **Drawing 2.1** and **Drawing 2.2** respectively.

| | a Development Parameters |
|------------------------|-----------------------------|
| | Parameter |
| Plot Ratio | about 1.5 |
| Domestic GFA | about 11,421m ² |
| No. of Blocks | 3 |
| No. of Units | about 280 |
| Average Flat size | approx. 40.79m ² |
| Anticipated Population | about 756 ⁽¹⁾ |

 Table 2.1
 Proposed Development Parameters

Remark : (1) Adopting the average domestic household size of 2.7 in the District Council Constituency Area Q01 Sai Kung Central in 2021 Population Census.

2.3 Vehicular Access Arrangement

2.3.1 The vehicular access for the proposed development is Tai Mong Tsai Road, which is the only road abutting the site. A left-in/left-out arrangement is proposed for the vehicular access to minimize the traffic impact to Tai Mong Tsai Road. The indicative design of the vehicular access is illustrated in **Drawing No. 2.3**. The access design is subject to change in the later detailed design stage.

2.4 Provision of Public Pedestrian Walkway

2.4.1 It is noted that a 6m wide public pedestrian walkway will be provided by others to connect Tai Mong Tsai Road and Mei Fuk Street for public use according to the approved planning application of nearby CDA(1) site (Application No. A/SK-SKT/28). As part of the planned pedestrian walkway will fall within boundary of the application site, a 6m wide public pedestrian walkway will be reserved on the west of the application site. The proposed 6m public pedestrian walkway within the site is indicated in the **Drawing 2.1**.

2.5 Internal Transport Facility

2.5.1 The proposed residential development would be provided with internal transport facilities in accordance with the latest Hong Kong Planning Standards and Guidelines (HKPSG). In addition, public parking spaces are proposed to increase the parking space supply to the community. Taking into consideration of the basement extent, 10 nos. public parking spaces for private car are proposed. The proposed provisions are summarised in **Table 2.2**.

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| ltem | High-end of HKPSG Requirements | | Parameters | Provision (nos.) | | | |
|----------------------------------|--|---|------------|---------------------|-------------------|-----------|-------------------|
| Residential Develop | ment | | | | | - | |
| Private Car | GPS ⁽¹⁾ | R1 ⁽¹⁾ | - | R2 ⁽¹⁾ | R3 ⁽¹⁾ | | |
| | 1 space per | FS ≤ 40m ² | 0.5 | 1 | 1 1 | 160 units | 22 |
| | 4 units | 40m ² <fs≤70m<sup>2</fs≤70m<sup> | 1.2 | 1 | 1.1 | 120 units | 40 |
| Visitor Parking | 4 spaces for e | ach block with 61- | 75 uni | ts ⁽²⁾ | | 2 blocks | 8 |
| | 5 spaces for each block with more than 75 units | | | | ts | 1 block | 5 |
| | | | | | | Total | 75 ⁽³⁾ |
| Motorcycle Parking | Motorcycle Parking1 space per 100 units280 units | | | 280 units | 3 | | |
| HGV Loading/Unloading Bays | HGV Loading/Unloading 1 bay per residential block Bays | | | 3 blocks | 3 | | |
| Public Parking Spaces | | | | | | | |
| Private Car | Private Car - 10 | | | | | | |

| Table 2.2 | Proposed Internal | Transport F | acility Provisions |
|-----------|-------------------|-------------|--------------------|
|-----------|-------------------|-------------|--------------------|

Remarks:

(1) Parking Requirement = GPS x R1 x R2 x R3, where GPS = 1 car space per 4 flats, R1=1.2 for flat size 40m²<FS≤70m², R2=1 for the site outside a 500-radius of rail station, R3=1.1 for domestic plot ratio 1<PR≤2.</p>

(2) With reference to the other similar residential developments.

(3) Including 2 disabled spaces for total 51-150 parking spaces, with reference to Regulation 72 of the Building (Planning) Regulations.

2.5.2 Both the ancillary carpark and public parking spaces would be located in the basement, whilst the loading/unloading bays would be located on the ground floor level along the 7.3m wide internal driveway.









3. TRAFFIC CONTEXT

3.1 Road Network

Existing Road Network

- 3.1.1 Sha Ha area is mainly served by Tai Mong Tsai Road, a rural road which functions as local distributor running in north-south direction. It connects Po Tung Road to Hiram's Highway and to Clear Water Bay Road further on the south and Sai Sha Road on the north.
- 3.1.2 Hiram's Highway is a strategic road linking up Sai Kung to East Kowloon and Tseung Kwan O. The existing Hiram's Highway between Marina Cove to Sai Kung Town is generally a single 2-lane carriageway.

Planned Road Network

- 3.1.3 Improvement works to Hiram's Highway has been planned by Highways Department (HyD), with the objectives to relieve existing traffic congestion and enhance the resilience to unexpected incidents. The works has been divided into 2 stages. Stage 1 works included the road widening of Hiram's Highway between Clear Water Bay Road and Marina Cove, which has been completed in 2021.
- 3.1.4 The Stage 2 works includes widening of the road section between Marina Cove to Sai Kung Town, which covered Hiram's Highway, Po Tung Road and a section of Tai Mong Tsai Road abutting the application site. According to the HyD's press releases dated 29 September 2023, the design and construction of the works is scheduled to commence in the Q2 2024 and will take about 84 months to complete. As such, it is anticipated that the improvement works would be completed by 2032. **Drawing No. 3.1** shows the extent of the planned Stage 2 improvement works.

3.2 Existing Traffic Condition

3.2.1 A total of nine local junctions and six road links have been identified with reference to the major ingress and egress routes of the proposed development for assessment purpose. The key local junctions are listed in **Table 3.1**, whilst their locations are indicated in **Drawing 3.2**.

| Ref. (1) | Junction/Road Link | Туре | Drawing No. | | | | | |
|----------|---|------------|-------------|--|--|--|--|--|
| Junction | Junction | | | | | | | |
| А | Tai Mong Tsai Road/Wai Man Road | Roundabout | 3.3 | | | | | |
| В | Tai Mong Tsai Road/Mei Yu Street/Po Tung Road | Priority | 3.4 | | | | | |
| С | Po Tung Road/Fuk Man Road | Roundabout | 3.5 | | | | | |
| D | Po Tung Road/Man Nin Street | Priority | 3.6 | | | | | |
| E | Pedestrian Crossing near Yau Ma Po Street | Signal | 3.7 | | | | | |
| F | Po Tung Road/Yau Ma Po Street | Priority | 3.8 | | | | | |
| G | Hiram's Highway/Chui Tong Road | Priority | 3.8 | | | | | |
| Н | Hiram's Highway/Po Lo Che Road /Hong Kin Road | Signal | 3.9 | | | | | |
| I | Tai Mong Tsai Road /Sai Sha Road | Roundabout | 3.10 | | | | | |

 Table 3.1
 Identified Key Local Junctions and Road Links

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| Ref. (1) | Junction/Road Link | Туре | Drawing No. |
|-----------------|---|----------|----------------|
| Road | Link | | |
| S1 | Tai Mong Tsai Road (section between Wai Man Road and Sha Ha Path) | Single-2 | 3.2 |
| S2 | Tai Mong Tsai Road (section between Sha Kok Mei Road and Sha Kok Mei Village (North) | Single-2 | 3.2 |
| S3 | Fuk Man Road (section between Po Tung Road and Chan Man Street) | Single-2 | 3.2 |
| S4 | Po Tung Road (section between Fuk Man Road and Man Nin Street) | Single-2 | 3.2 |
| S5 | Hiram's Highway (section between Hong Kin Road and Po Lo Che Path) | Single-2 | 3.2 |
| S6 | Sai Sha Road (section near its roundabout with Tai Mong Tsai Road) | Single-2 | 3.2 |

 Table 3.1
 Identified Key Local Junctions and Road Links (Cont'd)

Remark: (1) Locations refer to Drawing 3.2.

- 3.2.2 In order to establish the current traffic condition in the area, traffic surveys in form of manual classified count were conducted at the identified key local junctions. Since Sai Kung is not only a residential area, but also is a popular recreational place during the weekends, the traffic surveys were not only conducted during the typical weekday morning and evening peak hours, but also the weekend peak period.
- 3.2.3 The traffic surveys were arranged and conducted on a typical weekday in April 2024 during morning peak hours between 07:30-09:30 and the evening peak hours between 17:00-19:00 and a typical weekend in April 2024 (Saturday) during the hours of 12:00-19:00.
- 3.2.4 The observed traffic data indicates that the weekday morning and evening peak hours occurred from 07:45 to 08:45 and 17:30 to 18:30 respectively while the weekend peak hour occurred from 13:45 to 14:45. The observed peak hour traffic flows are shown in **Drawing 3.11**.

Junction Operational Performance

3.2.5 Junction capacity assessments have been conducted to evaluate the current operational performance of the identified key local junctions. The assessment results are summarised in **Table 3.2**.

| | | | Reserve Fl | / Ratio to ty | | |
|--|--|------------|---------------|------------------|------|--|
| (1) | Junction | Туре | Weel | Magkand | | |
| | | | AM Peak | PM Peak | Peak | |
| А | Tai Mong Tsai Road/Wai Man Road | Roundabout | 0.62 | 0.48 | 0.53 | |
| В | Tai Mong Tsai Road/Mei Yu Street/Po Tung Road | Priority | 0.03 | 0.05 | 0.07 | |
| С | Po Tung Road/Fuk Man Road | Roundabout | 1.14 | 1.02 | 1.29 | |
| D | Po Tung Road/Man Nin Street | Priority | 0.65 | 0.91 | 1.34 | |
| Е | Pedestrian Crossing near Yau Ma Po Street | Signal | 37% | 41% | 32% | |
| F | Po Tung Road/Yau Ma Po Street | Priority | 0.21 | 0.22 | 0.13 | |
| G | Hiram's Highway/Chui Tong Road | Priority | 0.19 | 0.30 | 0.37 | |
| Hiram's Highway/Po Lo Che Road /Hong Kin Road | | Signal | 45% | 43% | 44% | |
| I | Tai Mong Tsai Road /Sai Sha Road | Roundabout | 0.32 | 0.33 | 0.30 | |

Table 3.2Current Junction Operational Performance

Remark: (1) Locations refer to Drawing 3.2.

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3.2.6 The assessment results indicated that all the identified key junctions are currently operating with capacity, except the roundabout of Po Tung Road/Fuk Man Road (C) and the priority junction of Po Tung Road/Man Nin Street (D).

Road Link Operational Performance

3.2.7 Traffic surveys have also been conducted to establish the current traffic flows at the identified road links as indicated in **Drawing 3.2**. The Volume to Capacity (V/C) ratio of each identified road links have been evaluated and the results are summarised in **Table 3.3**.

| Ref. | Road Link | Dir | Obse (p | rved Fl ocu/hr) | ows | Obse (` | erved F Veh/hi | lows [.]) | Design Capacity | v | io | |
|------|-----------|-----|------------|--------------------|-----|------------|-------------------|------------------------|-------------------------|------|------|------|
| | | | AM | PM | WE | AM | PM | WE | (Veh/hr) ⁽²⁾ | AM | PM | WE |
| C1 | Tai Mong | NB | 500 | 630 | 655 | 442 | 571 | 592 | 850 | 0.52 | 0.67 | 0.70 |
| 21 | Tsai Road | SB | 685 | 535 | 590 | 621 | 494 | 527 | 850 | 0.73 | 0.58 | 0.62 |
| S2 | Tai Mong | NB | 435 | 585 | 585 | 402 | 548 | 539 | 850 | 0.47 | 0.64 | 0.63 |
| | Tsai Road | SB | 605 | 470 | 505 | 549 | 441 | 450 | 850 | 0.65 | 0.52 | 0.53 |
| \$2 | Fuk Man | WB | 455 | 495 | 615 | 400 | 400 | 530 | 850 | 0.47 | 0.47 | 0.62 |
| 35 | Road | EB | 485 | 420 | 555 | 408 | 345 | 470 | 850 | 0.48 | 0.41 | 0.55 |
| C / | Po Tung | NB | 750 | 900 | 960 | 667 | 811 | 851 | 850 | 0.78 | 0.95 | 1.00 |
| 54 | Road | SB | 945 | 835 | 980 | 844 | 753 | 876 | 850 | 0.99 | 0.89 | 1.03 |
| CE | Hiram's | NB | 810 | 970 | 935 | 720 | 886 | 822 | 850 | 0.85 | 1.04 | 0.97 |
| 35 | Highway | SB | 1065 | 860 | 975 | 955 | 774 | 876 | 850 | 1.12 | 0.91 | 1.03 |
| 56 | Sai Sha | NB | 500 | 615 | 505 | 448 | 580 | 457 | 850 | 0.53 | 0.68 | 0.54 |
| S6 | Road | SB | 565 | 410 | 440 | 520 | 391 | 393 | 850 | 0.61 | 0.46 | 0.46 |

| Table 3.3 | Current Road Link | Operational | Performance |
|-----------|--------------------------|-------------|-------------|
| | | | |

Remarks:

(1) Refer to Drawing 3.2.

(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

3.2.8 The assessment results in **Table 3.3** indicated that all the identified sections are currently operating within capacity, except the road link of Po Tung Road (S4) and a section of Hiram's Highway near Hong Kin Road (S5).

3.3 Existing Public Transport Services

3.3.1 Franchised bus and minibus are the major public transport services in Sai Kung. The nearby public transport facilities of the site are indicated in **Drawing 3.12**, whilst the details and servicing schedules are summarised in **Table 3.4**.



| Route | Origin/Destination | Frequency (min.) | Remark |
|-------------------|--|--|--|
| Franchise | d Bus | | |
| 92 | Diamond Hill Railway Station <-> Sai Kung | 10-30 | - |
| 92R | Sai Kung → Tsim Sha Tsui Star Ferry | From Tsim Sha Tsui Star Ferry: 60 From Sai Kung: 20-30 | Saturday, Sunday and Public Holiday only |
| 94 | Wong Shek Pier <-> Sai Kung | 20 – 40 | - |
| 96R | Diamond Hill Railway Station <> Wong Shek Pier | 18 - 30 | Saturday, Sunday and Public Holiday only |
| 99 | Heng On Bus Terminus <-> Sai Kung | 15 – 30 | - |
| 99R | University Railway Station Bus Terminus <-> Sai Kung North Bus Terminus | 60 | Public Holiday only |
| 292P | Sai Kung → Kwun Tong | (for ref. one trip at 7:30a.m only) | Weekday Morning Peak Hour only |
| 299X | Shatin Central Bus Terminus <-> Sai Kung | 15 – 20 | - |
| 792M | Tseung Kwan O Station <-> Sai Kung | 15 –30 | - |
| Green Mi | nibus | | |
| 1 | Kowloon Bay (Telford Gardens) <-> Sai Kung | 8 – 20 | - |
| 1A ⁽¹⁾ | Diamond Hill (Choi Hung Road) Public Transport Interchange <> Sai Kung | 4 | - |
| 15 | Diamond Hill (Choi Hung Road) Public Transport Interchange <> Sai Kung | 10 – 15 | Overnight Service only |
| 7 | Hoi Ha <-> Sai Kung | 20 - 30 | - |
| 9 | Lady Maclehose Holiday Village <-> Sai Kung | 30 | - |
| 12 | Po Lam <-> Sai Kung | 10 - 15 | - |
| 101M (2) | Hang Hau Station <> Sai Kung | 3 – 30 | - |
| Red Minil | bus | | |
| - | Causeway Bay <-> Sai Kung | Non-scheduled | - |
| - | Kwun Tong <> Sai Kung | Non-scheduled | - |
| - | Mong Kok <-> Sai Kung | Non-scheduled | - |

Table 3.4 Existing Public Transport Services

Remarks:

(1) Apart from regular services, short-working journeys from Sai Kung North Public Transport Interchange will be operated daily from 5:30 am and 9:00 am at a frequency of 20 minutes.

(2) Apart from regular services, special trips (between Sai Kung and Hang Hau Station (via Sai Kung North Public Transport Interchange)) are operated from 7:00 am to 9:30 am between Mondays and Fridays (except public holidays) and from 4:00 pm to 6:30pm daily at a frequency of 10 minutes.

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600 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

(435) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[500] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

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4. TRAFFIC FORECASTING

4.1 Design Year

4.1.1 The tentative completion year of the proposed development is year 2032. Hence, the design year of 2035 three years upon operation of the proposed development, has been adopted for traffic forecast and assessment purposes.

4.2 Forecast Assumptions

Traffic Growth Rate from 2024 to 2035

4.2.1 As Hiram's Highway would still be the only major road to serve the area (with or without the improvement works), the current general traffic circulation pattern in the vicinity at the design year of 2035 is expected to be very similar to the current situation. Therefore, the simple growth rate method is adopted for the traffic forecasting exercise.

Historical Trend

4.2.2 Annual Traffic Census (ATC) traffic count stations are available in the vicinity of the development. The annual traffic counts in the latest Annual Traffic Census (ATC) report published by Transport Department (TD) over a period between Year 2019 and Year 2023 are summarised in **Table 4.1**.

| Station | Road | А | nnual Aver | age Daily T | raffic (AAD | т) | Annual Growth Rate |
|---------|--------------------------------------|---------|------------|-------------|-------------|--------|-----------------------|
| 110. | | 2019 | 2020 | 2021 | 2022 | 2023 | 2019/2023 |
| 5258 | Po Tung Road & Tai Mong Tsai Road | 31,970 | 30,760* | 32,210* | 30,800* | 28400 | -2.92% |
| 6055 | Hiram's Highway | 24,280* | 23,360* | 24,460* | 23,480 | 22860 | -1.50% |
| | Total | 56,250 | 54,120 | 56,670 | 54,280 | 51,260 | -2.30% |

Table 4.1ATC Traffic Counts between Year 2019 to Year 2023

Note: (*) AADT estimated by growth factor.

4.2.3 As shown in **Table 4.1**, the average annual traffic growth rates are -2.3% per annum over the past 5 years.

Planning Data

4.2.4 Besides, reference has been made to the latest available 2019-Based Territorial Population and Employment Data Matrices (TPEDM) published by Planning Department for determination of traffic growth rate. The average annual growth rates in terms of population and employment from year 2019 to 2031 in Southeast New Territories (Other Area) are illustrated in **Table 4.2**. The relevant zone plan in TPEDM is indicated in **Drawing 4.1**

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Table 4.22019-based TPEDM Population and Employment Growths in Southeast New
Territories (Other Area)

| Zone ⁽¹⁾ | Popu | lation | Annual Growth Rate (p.a.) | Emplo | oyment | Annual Growth Rate (p.a.) | | |
|---|--------|--------|---------------------------------|--------|--------|------------------------------|--|--|
| | 2019 | 2031 | 2019/2031 | 2019 | 2031 | 2019/2031 | | |
| Southeast New Territories (Other Area) | 68,900 | 59,750 | -1.18% | 27,250 | 28,100 | +0.26% | | |

Remark: (1) Refer to Drawing 4.1.

- 4.2.5 The TPEDM population data indicates that the annual population and employment growth rate in Southeast New Territories (Other Area) is -1.18% p.a. and +0.26% p.a. respectively.
- 4.2.6 Having reviewed the historical growth trend and planning data, a traffic growth rate of +0.26% p.a. was adopted for producing the traffic forecast from Year 2024 up to Year 2035.

Adjacent Planned/Committed Development

4.2.7 According to the latest available information from public domain, there is a planned residential development in CDA(1) zone adjacent to the Applicant site that are expected to be completed by year 2035. The estimated trip generations of this planned development is listed in Table
 4.3. which would be considered in the traffic forecast.

Table 4.3Estimated Trip Generations of Planned and Committed Developments

| | No. of | | Weekday | | | | Weekend | | | |
|--|--------|-----|---------|------|------|------|---------|--|--|--|
| | NO. OT | AM | Peak | PM I | Peak | Peak | | | | |
| | Onits | GEN | ATT | GEN | ATT | GEN | ATT | | | |
| Proposed Residential Development in CDA(1) zone ⁽¹⁾ | 972 | 192 | 109 | 94 | 129 | 108 | 134 | | | |

Note: (1) As extracted from the approved TIA report for the Section 16 planning application No. A/SK-SKT/28).

4.3 Development Trips

- 4.3.1 The proposed residential development will provide 280 units with average flat size of about 40.8m². The development trips for residential portion was estimated with reference to the trip rates in Transport Planning Design Manual (TPDM) published by TD.
- 4.3.2 Besides, 10 nos. public parking spaces for private car will be provided within the site. To estimate the trips of proposed public parking spaces, a trip generation survey was conducted at the existing nearby Public Vehicle Park (i.e. Kau Sai Chau Public Golf Course) on the same survey period as described in **Section 3.2**. The observed trip rates of surveyed PVP during the peak hours are computed and summarized in **Table 4.4**.

 Table 4.4
 Observed Trip Rates of Existing PVP at Kau Sai Chau Public Golf Course

| | | | Wee | | Weekend Beak | | | |
|---------------------------|--------------|--------|--------|--------|--------------|--------------|-------|--|
| | No. of Space | AM | Peak | PM | Peak | weekend Peak | | |
| | | GEN | ATT | GEN | ATT | GEN | ATT | |
| Observed Trips (pcu/hr) | 283 | 4 | 8 | 5 | 15 | 39 | 40 | |
| Trip Rates (pcu/hr/space) | | 0.0141 | 0.0283 | 0.0177 | 0.0530 | 0.138 | 0.142 | |

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4.3.3 Based on above, the estimated development trips during the weekday morning and evening and weekend peak hours are summarised in **Table 4.5**.

| | | | Wee | kday | | Weekend Peak | | |
|---|-----------|--------|--------|--------|--------|-----------------------|-----------------------|--|
| | Parameter | AM | Peak | PM | Peak | | | |
| | | GEN | ATT | GEN | ATT | GEN | ATT | |
| Residential | | | | | | | | |
| Trip Rates (pcu/hr/unit) ⁽¹⁾ | - | 0.0718 | 0.0425 | 0.0286 | 0.037 | 0.0258 ⁽²⁾ | 0.0393 ⁽²⁾ | |
| Trips (pcu/hr) | 280 units | 20 | 12 | 8 | 10 | 7 | 11 | |
| PVP | | | | | | | | |
| Trip Rates (pcu/hr/space) | - | 0.0141 | 0.0283 | 0.0177 | 0.0530 | 0.138 | 0.142 | |
| Trips (pcu/hr) | 10 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Total | | 21 | 13 | 9 | 11 | 9 | 13 | |

Table 4.5Estimated Development Traffic Trips

Notes :

(1) Mean value of trip rates for private housing with average flat size of 60 m² in TPDM is adopted for weekday peak scenarios.

(2) Ratios of weekday PM trips to weekend trips were applied. The ratios were derived with reference to the trip generation survey at the similar residential development in the vicinity (i.e. The Mediterranean) in April 2024.

4.3.4 As indicated in **Table 4.5**, the proposed development would generate the two-way trips total of 34, 20 and 22 pcu/hr during the weekday morning, evening and weekend peak hours respectively.

- 4.3.5 According to the above, the anticipated 2035 peak hour reference traffic flows are obtained by applying the adopted growth rates to the 2024 traffic flows and superimposing the estimated trip generations of the planned development. The 2035 reference peak-hour traffic flows are shown in **Drawing 4.2**.
- 4.3.6 The estimated development trips summarised in **Table 4.5** would be superimposed onto the year 2035 reference peak hour traffic flows to produce the anticipated year2035 design peak hour traffic flows (with proposed development), as shown in **Drawing 4.3**.





735 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

(500) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[580] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

| Ŀ | - | - | - | Project Title | Drawing Tit | 0 | | | | | | | |
|-----|-----------------------------------|---------|---------|--|--------------------|-----|---------|-----|-------|------|------|------|-------|
| - | - | - | - | SECTION 16 PLANNING APPLICATION FOR | | | | | | | | | |
| • | - | - | - | PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS | YEAR 2035 REFERENC | | | | | CE T | 'RA | | |
| A | MINOR AMENDMENT | PTC | 19DEC24 | SHA HA, SAI KUNG | Designed | | Chookod | | Saala | | Data | | Droud |
| Rev | Description | Checked | Date | 1 | Designed | HZF | Checked | PTC | Scale | NTS | SEF | 2024 | Diaw |
| CHK | 0791710/TIA/F42-A.CDR/LLH/19DEC24 | | | | | | | | | | | | |







750 WEEKDAY AM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

(505) WEEKDAY PM PEAK HOUR TRAFFIC FLOWS (PCU/HR)

[585] WEEKEND PEAK HOUR TRAFFIC FLOWS (PCU/HR)

| Ŀ | - | - | - | Project Title | Drawing Tit | le | | | | | | | |
|-----|------------------------------------|---------|---------|--|-------------|-----|---------|-----|-------|-------|-------|------|------|
| • | - | - | - | SECTION 16 PLANNING APPLICATION FOR | | | | | | | | | |
| ŀ | - | - | - | PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS | | | | YEA | R 20 | 35 DI | ESIGN | TR/ | AFF |
| A | MINOR AMENDMENT | PTC | 20DEC24 | SHA HA, SAI KUNG | Decigned | | Checked | | Scale | | Data | | Draw |
| Rev | . Description | Checked | Date | | Designed | HZF | CHECKED | PTC | Scale | NTS | SEP | 2024 | Diav |
| CHK | 50791710/TIA/F43-A.CDR/LLH/20DEC24 | | | | | | | | | | | | |







5. TRAFFIC IMPACT ASSESSMENT

5.1 Traffic Impact Assessment

5.1.1 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2035, operational performance of the identified key local junctions and critical links have been assessed for both reference and design scenarios.

Planned Hiram's Highway Improvement Stage 2

5.1.2 As mentioned in **Section 3.1**, the planned improvement works to Hiram's Highway has been gazetted and is anticipated to be completed by 2032. The planned road and junction improvements works under the project were adopted in the assessment. The possible planned junction layouts, which has been adopted in the assessment, are summarized in **Table 5.1** and illustrated in **Drawing Nos. 5.1 – 5.6**.

| Ref. ⁽¹⁾ | Junction | Туре | Drawing No. | | | | | |
|---|---|------------|-------------|--|--|--|--|--|
| В | Tai Mong Tsai Road/Mei Yu Street/Po Tung Road | Roundabout | 5.1 | | | | | |
| С | 5.2 | | | | | | | |
| D | 5.3 | | | | | | | |
| E | Pedestrian Crossing near Yau Ma Po Street | Signal | 5.4 | | | | | |
| F | Po Tung Road/Yau Ma Po Street | Priority | 5.4 | | | | | |
| G Hiram's Highway/Chui Tong Road Signal 5.5 | | | | | | | | |
| н | Hiram's Highway/Po Lo Che Road /Hong Kin Road | Signal | 5.6 | | | | | |
| Remark: (| 1) Locations refer to Drawing 3.2 . | | | | | | | |

 Table 5.1
 Identified Key Local Junctions

(,)

Junction Operational Performance

5.1.3 Based on the existing/planned layouts, the junction assessment results for the 2035 reference and design scenarios are summarized in **Table 5.2**. The junction calculation sheets are attached in **Appendix A**.

| | | Туре | | Reserve | Capacity / R | atio to F | low Capa | city | |
|-----|---|------------|-------|----------|--------------|-------------|----------|----------|--|
| Def | | | R | eference | Case | Design Case | | | |
| (1) | Junction | | Wee | kday | Weekend | Wee | kday | Weekend | |
| | | | AM | PM | Peak | AM | PM | Peak | |
| | | | Peak | Peak | | Peak | Peak | <u> </u> | |
| Α | Tai Mong Tsai Road/ Wai Man Road | Roundabout | 0.69 | 0.55 | 0.61 | 0.70 | 0.55 | 0.62 | |
| В | Tai Mong Tsai Road/Mei Yu Street/Po Tung Road ⁽²⁾ | Roundabout | 0.57 | 0.49 | 0.49 | 0.59 | 0.49 | 0.49 | |
| С | Po Tung Road/Fuk Man Road ⁽²⁾ | Roundabout | 0.42 | 0.37 | 0.44 | 0.43 | 0.37 | 0.44 | |
| D | Po Tung Road/Man Nin Street ⁽²⁾ | Signal | 51% | 43% | 29% | 50% | 42% | 28% | |
| E | Pedestrian Crossing near Yau Ma Po Street ⁽²⁾ | Signal | >100% | >100% | >100% | >100% | >100% | >100% | |
| F | Po Tung Road/Yau Ma Po Street ⁽²⁾ | Priority | 0.15 | 0.18 | 0.13 | 0.15 | 0.18 | 0.13 | |
| G | Hiram's Highway/Chui Tong Road ⁽²⁾ | Signal | 80% | 91% | 51% | 78% | 91% | 50% | |
| н | Hiram's Highway/Po Lo Che Road/ Hong Kin Road ⁽²⁾ | Signal | 86% | >100% | >100% | 84% | >100% | >100% | |
| Ι | Tai Mong Tsai Road /Sai Sha Road | Roundabout | 0.35 | 0.36 | 0.33 | 0.36 | 0.36 | 0.33 | |

Table 5.2Junction Operational Performance at Year 2035

Remarks: (1) Locations refer to **Drawing 3.2**.

(2) Based on the possible planned junction layout under Hiram's Highway Improvement Stage 2.

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5.1.4 The assessment results in **Table 5.2** indicate that all identified key junctions would operate within their capacity under the reference (without the proposed development) and design cases (with the proposed development).

Road Link Performance

5.1.5 Apart from junction capacity assessment, the road link operation performance was also undertaken for both reference and design scenarios. Based on the existing/planned layouts with traffic forecast, the results of the assessment are summarized in **Tables 5.3** and **5.4**.

| Ref. | Road Link | Dir | Reference Traffic Flows (pcu/hr) | | | Reference Traffic Flows (Veh/hr) | | | Design Capacity | V/C Ratio | | | |
|------|---------------|-----|-------------------------------------|------|------|-------------------------------------|-----|------|--------------------|-----------|------|------|--|
| (1) | KOđu Link | | AM | РМ | WE | AM | РМ | WE | (Veh/hr) (2) | AM | РМ | WE | |
| C 1 | Tai Mong Tsai | NB | 580 | 680 | 710 | 520 | 620 | 645 | 850 | 0.61 | 0.73 | 0.76 | |
| 51 | Road | SB | 740 | 590 | 650 | 675 | 550 | 585 | 850 | 0.79 | 0.65 | 0.69 | |
| 52 | Tai Mong Tsai | NB | 515 | 680 | 685 | 480 | 645 | 635 | 850 | 0.56 | 0.76 | 0.75 | |
| 52 | Road | SB | 740 | 530 | 585 | 685 | 505 | 530 | 850 | 0.81 | 0.59 | 0.62 | |
| 62 | Fuk Man Road | WB | 470 | 505 | 635 | 410 | 410 | 545 | 850 | 0.48 | 0.48 | 0.64 | |
| 22 | | EB | 495 | 430 | 570 | 420 | 355 | 485 | 850 | 0.49 | 0.42 | 0.57 | |
| C A | Do Tung Bood | NB | 920 | 1105 | 1145 | 810 | 990 | 1010 | 2,600 | 0.31 | 0.38 | 0.39 | |
| 54 | PO TUNg Koau | SB | 1175 | 1005 | 1150 | 1045 | 900 | 1020 | 2,600 | 0.40 | 0.35 | 0.39 | |
| C E | Hiram's | NB | 900 | 1075 | 1045 | 810 | 990 | 930 | 2,600 | 0.31 | 0.38 | 0.36 | |
| 35 | Highway | SB | 1215 | 935 | 1065 | 1100 | 845 | 970 | 2,600 | 0.42 | 0.33 | 0.37 | |
| 56 | Sai Sha Boad | NB | 580 | 665 | 555 | 530 | 625 | 510 | 850 | 0.62 | 0.74 | 0.60 | |
| S6 | Sai Sha Road | SB | 620 | 465 | 500 | 575 | 445 | 450 | 850 | 0.68 | 0.52 | 0.53 | |

 Table 5.3
 Year 2035 Road Link Operational Performance for Reference Case

Remarks:

(1) Refer to Drawing 3.2.

(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway and 2,600 veh/hr for each bound of dual 2 lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

| Table 5.4 | Year 2035 Road Link Operational Performance for Design Case Scenario |
|-----------|--|
|-----------|--|

| Ref. | Road Link | Dir | Design Traffic Flows (pcu/hr) | | | Design Traffic Flows (Veh/hr) | | | Design Capacity | v | /C Rati | 0 |
|------|---------------|-----|----------------------------------|------|------|----------------------------------|------|------|--------------------|------|---------|------|
| (1) | | | AM | PM | WE | AM | PM | WE | (Veh/hr) (2) | АМ | PM | WE |
| C1 | Tai Mong Tsai | NB | 585 | 685 | 715 | 525 | 620 | 650 | 850 | 0.62 | 0.73 | 0.76 |
| 21 | Road | SB | 745 | 595 | 655 | 680 | 555 | 590 | 850 | 0.80 | 0.65 | 0.69 |
| 6.2 | Tai Mong Tsai | NB | 530 | 690 | 695 | 495 | 655 | 650 | 850 | 0.58 | 0.77 | 0.76 |
| 52 | Road | SB | 755 | 535 | 590 | 695 | 510 | 535 | 850 | 0.82 | 0.60 | 0.63 |
| 6.2 | Fuk Man | WB | 470 | 505 | 635 | 410 | 410 | 545 | 850 | 0.48 | 0.48 | 0.64 |
| 33 | Road | EB | 495 | 430 | 570 | 420 | 355 | 485 | 850 | 0.49 | 0.42 | 0.57 |
| сл | Do Tung Dood | NB | 930 | 1110 | 1155 | 820 | 1000 | 1020 | 2,600 | 0.32 | 0.38 | 0.39 |
| 54 | PO TUlig Koau | SB | 1190 | 1010 | 1155 | 1060 | 905 | 1030 | 2,600 | 0.41 | 0.35 | 0.40 |
| сг | Hiram's | NB | 910 | 1080 | 1055 | 815 | 1000 | 935 | 2,600 | 0.31 | 0.38 | 0.36 |
| 35 | Highway | SB | 1230 | 940 | 1070 | 1115 | 850 | 975 | 2,600 | 0.43 | 0.33 | 0.38 |
| 56 | Sai Sha Road | NB | 585 | 670 | 560 | 535 | 630 | 515 | 850 | 0.63 | 0.74 | 0.61 |
| S6 | Sai Sila Kudu | SB | 625 | 470 | 505 | 580 | 445 | 455 | 850 | 0.68 | 0.52 | 0.54 |

Remarks:

(1) Refer to Drawing 3.2.

(2) Design capacity of 850 veh/hr for each bound of single 2-lane carriageway and 2,600 veh/hr for each bound of dual 2 lane carriageway, as extracted from TPDM Volume 2 Chapter 2.4.

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5.1.6 The assessment results in **Table 5.3** and **Table 5.4** indicated that all identified road links would operate within their capacity under the reference (without the proposed development) and design cases (with the proposed development).

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6. PUBLIC TRANSPORT SERVICE ASSESSMENT

6.1 Existing Public Transport Services

- 6.1.1 Since the Application Site would be developed as a residential development, it is anticipated that most of the public transport trip generations would be the outbound trips to work and school during weekday morning peak period. As such, the weekday AM peak will be considered as peak scenario to be adopted in the assessment.
- 6.1.2 As mentioned in **Section 3**, franchised bus and minibus are the major public transport modes in Sai Kung, which serve as feeder routes to MTR stations. The existing public transport services during weekday peak hour is shown in **Drawing 6.1**.
- 6.1.3 In order to establish the current public transport demand, a public transport survey was conducted at bus/GMB bus stops in Sai Kung Town Center and the peak loading points on a typical weekday from 07:00 to 09:00 during the morning peak period in April 2024. Analysis of the survey results suggested that the peak passenger demand of PT services in the morning peak hour was occurred during 08:00 to 09:00. The corresponding peak hour results are summarised in **Table 6.1**.

| Route No. | Destinations | Observed Trips (veh/hr) | Bus Capacity (pax/hr) ⁽¹⁾ | Average Peak Hourly Occupancy | Observed Passenger Pattern of PT Demand |
|--------------|----------------------------------|----------------------------|---|-------------------------------------|--|
| Franchised B | luses | | | | |
| 92 | Diamond Hill Railway Station | 4 | 480 | 56% | 15% |
| 99 | Heng On Bus Terminus | 4 | 480 | 33% | 16% |
| 292P | Kwun Tong | 0 | 0 | 0% | 0% |
| 299X | Shatin Central Bus Terminus | 3 | 360 | 60% | 50% |
| 792M | Tseung Kwan O Station | 3 | 360 | 48% | 19% |
| Total | | 14 | 1680 | - | 100% |
| Minibus | | | | | |
| GMB 1 | Kowloon Bay (Telford Gardens) | 4 | 76 | 95% | 8% |
| GMB 1A | Diamond Hill Railway Station | 21 | 399 | 91% | 37% |
| GMB 12 | Po Lam | 5 | 95 | 51% | 5% |
| GMB 101M | Hang Hau Station | 24 | 456 | 88% | 39% |
| RMB | Mongkok | 5 | 95 | 48% | 3% |
| RMB | Kwun Tong | 8 | 152 | 45% | 8% |
| | Total | 67 | 1273 | - | 100% |

 Table 6.1
 Observed Public Transport Demand (Outbound) during AM Peak Hour

Note : (1) The passenger capacities of bus and minibus are assumed 120 pax/hr and 19 pax/hr during peak hours.

6.1.4 The assessment results in **Table 6.1** indicates that local public transport services in Sai Kung area (outbound) are operating with capacities during the weekday morning peak hour.

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6.1.5 Besides, the distribution of passenger trips among bus and minibus in Sai Kung Town Center was also identified in the PT survey. Based on the observed total number of boarding and alighting passengers at the bus/minibus stops in Sai Kung Town Center, 18% was bus passengers and 82% was minibus passengers.

6.2 Future Public Transport Demand

6.2.1 With reference to Travel Characteristics Survey 2011 (TCS 2011) published by Transport Department (TD), the pedestrian trips of the proposed development in morning peak hour has been derived in **Table 6.2**.

| Estimated Location Population ⁽¹ [i] | | Average daily mechanized trips per person ⁽²⁾ [ii] | Peak hour factor ⁽³⁾ [iii] | Peak hour transport demand (pax/hr) =[i] x [ii] x [iii] | |
|---|-----|--|--|--|--|
| Proposed Development (280 units) | 756 | 1.83 | 12% | 166 | |

| Table 6.2 | Anticipated Transpo | rt Demand of Pr | oposed development |
|-----------|----------------------------|-----------------|--------------------|
| | | | |

Notes: (1) Refer to Table 2.1.

(2) Average daily mechanised trips per person as extracted from TCS 2011.

- (3) Weekday morning peak hour factor for all merchandised trips of 20% as a conservative approach (with reference to TCS 2011) and peak direction split of 60% assumed (i.e. 1-way Peak hour factor = 20% x 60% = 12%).
- 6.2.2 Based on the calculation in **Table 6.2**, it is anticipated that the pedestrian trips of the proposed development is 166 nos. during the morning peak hour.

Review on Transport Modal Splits

6.2.3 To identify the transport mode shares in local area, Population Census 2021 published by Census and Statistics Department has also been reviewed. The extracted transport modal splits for Large Tertiary Planning Unit Group - Sai Kung Area are analysed in **Table 6.3**.

| Main Mode of Transport to Place of Work | Modal Split |
|---|-------------|
| Mass Transit Railway | 19.4% |
| Franchised Bus | 9.1% |
| On foot only | 12.8% |
| Public light bus ⁽⁴⁾ | 39.8% |
| Private car / Passenger van | 15.6% |
| Company bus / van | 1.3% |
| Mass Transit Railway (Light Rail) | 0% |
| Taxi | 0.6% |
| Residential coach service | 0.1% |
| Ferry/ Vessel | 0% |
| Others ⁽⁵⁾ | 1.3% |
| Total | 100% |

Table 6.3Transport Modal Splits of Local Area

Note : (1) Data of Large Tertiary Planning Unit Group Nos. 821 and 826 - 828 under "Working Population with Fixed Place of Work in Hong Kong by Year, Main Mode of Transport to Place of Work and Large Subunit Group" in Population Census 2021.

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6.2.4 With reference to the transport modal splits in **Table 6.3** and the existing available transport modes in Sai Kung Town Centre, it is assumed that the modal splits for PT mode and non-PT (i.e. private car and taxi) are 83.8% and 16.2% respectively. The PT mode was further split to bus and minibus mode based on the surveyed distribution of passenger trips among bus and minibus in Sai Kung area. The estimated pedestrian trips of proposed development in weekday are summarized in **Table 6.4**.

| Transport Mode | | Modal Split | Pedestrian Trips for (ped/hr) | |
|---------------------------|----------------------|----------------------|-------------------------------|--|
| Bus | | 15.1% ⁽²⁾ | 25 | |
| PT (83.8%) ⁽⁻⁾ | Minibus | 68.7% ⁽²⁾ | 114 | |
| Non-PT (includir | ng Taxi/Private Car) | 16.2%(1) | 27 | |
| | Total | 100% | 166 | |

 Table 6.4
 Estimated Pedestrian Trips of Proposed Development during peak hours in Weekday

Remarks:

- (1) Based on the Population Census 2021.
- (2) Based on the surveyed distribution of passenger trips among bus and minibus in Sai Kung Town Centre. 82% was minibus passengers and 18% was bus passengers.
- 6.2.5 As shown in **Table 6.4**, it is estimated that 139 nos. pedestrian from the proposed development would rely on the road-based public transport services.
- 6.2.6 It is noted that there is a planned residential development in CDA(1) zone adjacent to the Application Site. According to TIA report of its planning application, the planned development will provide 972 units with 2,615 population. Based on above same methodology, the estimated PT trips of the planned development would be 481 nos. (including 394 nos. for minibus passenger and 87 nos. for bus passenger), which would be considered in the traffic forecast.

Capacity Assessment on Public Transport Services

6.2.7 Based on the observed passenger pattern of PT demand in Sai Kung area in **Table 6.1**, the PT demand of the proposed development and planned development were split to the existing bus and minibus services. The anticipated bus and minibus demands during peak hours are shown in **Table 6.5**.

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| | | Bus | Reference Case (Without the Proposed Development) | | Design Case (with the Proposed Development) | | opment) |
|---------------------|----------------------------------|---|--|--|--|--|---|
| Route No. | Destinations | Capacity (pax/hr) ⁽¹⁾ [B] | Future PT demand (Without Proposed Development) [E] | Anticipated Average Peak Hourly Occupancy [E]/ [B] | PT Demand of Proposed Development (pax/hr) [F] | Anticipated PT demand (With Proposed Development) [G] = [E] + [F] | Anticipated Average Peak Hourly Occupancy ⁽³⁾ [G]/ [B] |
| Franchised | d Buses | | | | | | |
| 92 | Diamond Hill Railway Station | 480 | 282 | 59% | 4 | 286 | 60% |
| 99 | Heng On Bus Terminus | 480 | 172 | 36% | 4 | 176 | 37% |
| 292P ⁽²⁾ | Kwun Tong | - | - | - | - | - | - |
| 299X | Shatin Central Bus Terminus | 360 | 260 | 72% | 13 | 273 | 76% |
| 792M | Tseung Kwan O Station | 360 | 190 | 53% | 5 | 195 | 54% |
| | Total | 1680 | 904 | - | 26 | 930 | - |
| MiniBus | | | | | | | |
| GMB 1 | Kowloon Bay (Telford Gardens) | 76 | 104 | 137% | 9 | 113 | 149% |
| GMB 1A | Diamond Hill Railway Station | 399 | 509 | 128% | 42 | 551 | 138% |
| GMB 12 | Po Lam | 95 | 68 | 72% | 6 | 74 | 78% |
| GMB 101M | Hang Hau Station | 456 | 555 | 122% | 44 | 599 | 131% |
| RMB | Mongkok | 95 | 58 | 61% | 3 | 61 | 64% |
| RMB | Kwun Tong | 152 | 100 | 66% | 9 | 109 | 72% |
| | Total | 1273 | 1394 | - | 113 | 1507 | - |

Table 6.5 Future Public Transport Demand (Outbound) during AM Peak Hour

Notes : (1) The passenger capacities of bus and minibus are assumed 120 pax/hr and 19 pax/hr during peak hours. (2) No trip was observed during the identified peak hour in the survey.

(3) According to the Guidelines on Bus Service Improvement and Reduction published by TD, TD may consider frequency improvement if the average occupancy of bus route reaches 75% during peak hour to enhance the service level.

According to **Table 6.5**, it is anticipated that the existing services of GMB routes No. 1, 1A and 101M would be overcapacities upon population intakes in the vicinity of Sha Ha Area. Taking into consideration that the bus and GMB services in Sai Kung area are both served as feeders to MTR Stations, the GMB passenger is assumed to be shifted to use the bus service as alternative transport service when the GMBs are full. The anticipated bus and minibus demands during peak hours are re-distributed and shown in **Table 6.6**.

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| | Bus Capacity (pax/hr) [B] | Anticipated PT demand (With Proposed Development) [H] | Anticipated Average Peak Hourly Occupancy ⁽³⁾ [H]/ [B] | |
|-----------------------------|---------------------------------|--|--|--|
| Bus | | | | |
| KMB 92 (to Diamond Hill) | 480 | 475 ⁽¹⁾ | 99% | |
| CTB 792M (to TKO Station) | 480 | 338 ⁽²⁾ | 70% | |
| GMB | | | | |
| GMB 1 (to Kowloon Bay) | 76 | 76 ⁽¹⁾ | 100% | |
| GMB 1A (to Diamond Hill) | 399 | 399 ⁽¹⁾ | 100% | |
| GMB 101M (Hang Hau Station) | 456 | 45 ⁶⁽²⁾ | 100% | |

 Table 6.6
 Future Public Transport Demand (Outbound) during AM Peak Hour

Remarks: (1) Refer to Column G in **Table 6.5**. 189 nos. passengers of GMB Route Nos. 1 and 1A are assumed to be shifted to use the KMB's bus route no. 92 when the GMBs are full.

(2) Refer to Column G in **Table 6.5**. 143 nos. passengers of GMB Route No. 101M is assumed to be shifted to use the CTB's bus route no. 792M when the GMB is full.

6.2.8 Based on the assessment result in **Table 6.5** and **Table 6.6**, enhancement of the existing PT services would be required under both reference and design cases (i.e. with and without the proposed development) to meet the passenger demand arising from the population intakes in the vicinity of Sha Ha area. The suggested enhancement of PT services for TD's future planning are discussed in the following paragraphs.

Frequency Improvement of Existing Bus Route 299x

6.2.9 Based on **Table 6.5**, it is suggested to increase additional 1 trip for bus route 299x (Shatin bound) during AM peak hour period to enhance the service level. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.

Frequency Improvement of Existing Bus Route KMB 92

6.2.10 Based on **Table 6.6**, it is suggested to increase additional 2 trips for bus route KMB 92 (Diamond Hill bound) during AM peak hour period to meet the passenger demand arising from the population intakes in the vicinity of Sha Ha area. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.

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7. PEDESTRIAN IMPACT ASSESSMENT

7.1 Existing Pedestrian Connections

- 7.1.1 At present, footpaths and crossings are provided in the vicinity of the site along Tai Mong Tsai Road, Mei Yuen Street and Wai Man Road to facilitate pedestrians to/from the nearby bus/minibus stops.
- 7.1.2 In order to establish the current pedestrian demand in the area, pedestrian head count survey was conducted at the key sections of footpaths along the anticipated access routes of the sites during the morning peak 07:00-09:00 and evening peak 17:00-19:00 on a typical weekday in February 2025. The locations of the surveyed sections are shown in **Drawing No. 7.1**.
- 7.1.3 The survey result indicated that the observed peak-hour pedestrian demand occurred during 07:10 to 08:10 and 17:10 to 18:10 in the morning and evening peak periods respectively. With the observed pedestrian flows, the key footpaths were assessed under the 'Level of Service (LOS)' approach in accordance with TPDM. The results of the Level of Service (LOS) assessment for existing footpaths are summarized in **Table 7.1**.

| Ref | Section | Existing Footpath | Effective Width ⁽²⁾ | Two-way Observed Flows (pph) | | Flow Rate (ppm/m) | | Level of Service ⁽³⁾ | |
|-----|--|----------------------|-----------------------------------|------------------------------------|------------|----------------------|------------|------------------------------------|------------|
| (1) | | (m) | (m) | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak |
| А | Tai Mong Tsai Road (Eastern Footpath) | 2.3 | 1.3 | 60 | 135 | 0.8 | 1.7 | А | А |
| В | Mei Fuk Street (Northern Footpath) | 2.5 | 1.5 | 15 | 10 | 0.2 | 0.1 | А | А |
| С | Mei Yuen Street (Western Footpath) | 3.1 | 2.1 | 15 | 10 | 0.1 | 0.1 | А | А |
| D | Wai Man Road (Northern Footpath) | 3 | 2 | 90 | 85 | 0.8 | 0.7 | А | А |

 Table 7.1
 LOS Assessments of Existing Footpaths

Remarks: (1) Location refer to Drawing No. 7.1.

- (2) Effective width = Existing Width 1m Dead width (i.e. 0.5m clearance for each side of kerb/tree pit/railing)
- (3) Details of Pedestrian Walkway LOS refer to TPDM. Volume 6 Chapter 10 Section 10.4.2. The definitions of different level of LOS on footpaths extracted from TPDM is shown in **Appendix B**.
- 7.1.4 As shown in **Table 7.1**, all existing footpaths are operating within capacity (i.e. LOS C or better).

7.2 Future Pedestrian Connections

- 7.2.1 As mentioned in **Section 2.4**, a 6m wide footpath will be provided by others to connect Tai Mong Tsai Road and Mei Fuk Street for public use according to the approved planning application of nearby CDA(1) site (Application No. A/SK-SKT/28). This would facilitate residents of the proposed development to/from the bus/minibus termini near Sai Kung Pier.
- 7.2.2 Besides, as mentioned in **Section 3.1**, the planned improvement works to Hiram's Highway is anticipated to be completed by 2032 before the completion of the proposed development. The planned road works at Tai Mong Tsai Road was adopted in the assessment.

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7.3 Year 2035 Pedestrian Forecast

7.3.1 In order to investigate the impact induced by the proposed development to the surrounding pedestrian network, year 2035 (i.e. three years upon completion of the proposed development) has been adopted for the pedestrian assessment.

Pedestrian Growth

7.3.2 Same as traffic forecast as discussed in **Section 4.2**, the traffic growth rate of +0.26% will be adopted for the pedestrian forecast.

Pedestrian Trips of the Proposed Development and Adjacent Planned Development

7.3.3 As discussed in **Section 6.2**, the pedestrian trips of the proposed development and adjacent planned development during peak hours are 166 pax/hr and 574 pax/hr respectively.

| | No. of Units | Estimated Pedestrian Trips during peak hours ⁽¹⁾ (pax/hr) |
|---|-----------------|--|
| Proposed Development | 280 | 166 |
| Planned residential development in CDA(1) zone (Application No. A/SK-SKT/28) | 972 | 574 |

Anticipated Pedestrian Trips during Peak Hours

Remark: (1) Details refer to Section 6.2.

Table 7.2

- 7.3.4 According to the above, the anticipated 2035 pedestrian forecast are obtained by applying the adopted growth rates to the observed pedestrian flows and superimposing the anticipated pedestrian trips of the proposed development and the adjacent planned development.
- 7.3.5 The anticipated 2035 pedestrian forecast with the LOS assessment result at the critical footpaths are shown in **Table 7.3**.

| Ref | Section | Footpath Width | Effective Width ⁽²⁾ | Two-way Observed Flows (pph) | | Flow Rate (ppm/m) | | Level of Service ⁽³⁾ | |
|-----|---|-------------------|-----------------------------------|------------------------------------|------------|----------------------|------------|------------------------------------|------------|
| (-) | | (m) | (m) | AM Peak | PM Peak | AM Peak | PM Peak | AM Peak | PM Peak |
| А | Planned Tai Mong Tsai Road (Eastern Footpath) | 2 | 1 | 175 | 265 | 2.9 | 4.4 | А | А |
| В | Mei Fuk Street (Northern Footpath) | 2.5 | 1.5 | 600 | 585 | 6.7 | 6.5 | А | А |
| С | Mei Yuen Street (Western Footpath) | 3.1 | 2.1 | 590 | 570 | 4.7 | 4.5 | A | А |
| D | Wai Man Road (Northern Footpath) | 3 | 2 | 220 | 210 | 1.8 | 1.8 | А | A |

 Table 7.3
 LOS Assessments of Footpaths in Design Year 2035

Remarks: (1) Location refer to Drawing No. 7.1.

(2) Effective width = Footpath Width - 1m Dead width (i.e. 0.5m clearance for each side of kerb/tree pit/railing)

(3) Details of Pedestrian Walkway LOS refer to T.P.D.M. Volume 6 Chapter 10 Section 10.4.2. The definitions of different level of LOS on footpaths is extracted from TPDM is shown in **Appendix B**.

7.3.6 The assessment results in **Table 7.3** indicated that all the critical footpaths will still be operating within capacity (i.e. LOS C or better) during peak hours upon completion of the proposed development.

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8. SUMMARY & CONCLUSION

8.1 Summary

- 8.1.1 The application site is at various lots in DD221 and adjoining Government land, Sai Kung. It is currently in an area shown as "Road" in the approved Sai Kung Town Outline Zoning Plan (OZP) S/SK-SKT/6. The applicant intends to develop the site into a residential development with a view to better utilizing the "leftover" land resources between the CDA(1) zone and the planned Tai Mong Tsai Road.
- 8.1.2 The applicant intends to develop the site into a residential development with about 280 units. The tentative completion year of the development is year 2032.
- 8.1.3 The development vehicular access will be located at Tai Mong Tsai Road. The internal transport facilities provisions will be provided in accordance with the relevant guidelines stipulated in the latest HKPSG. Also, 10 nos. public parking space for private car have been included in the proposed MLP in order to increase the parking space supply to the community.
- 8.1.4 Traffic surveys have been conducted to establish the current traffic condition in the vicinity of the subject site. The junction and link capacity assessments revealed that all the identified local junctions and road links are currently operating with ample capacity except the roundabout of Po Tung Road/Fuk Man Road (C), the priority junction of Po Tung Road/Man Nin Street (D), a section of Po Tung Road (S4) and a section of Hiram's Highway near Hong Kin Road (S5).
- 8.1.5 Improvement works to Hiram's Highway has been planned by Highways Department (HyD), with the objectives to relieve existing traffic congestion and enhance the resilience to unexpected incidents. The works is divided into 2 stages. Stage 1 works included the road widening of Hiram's Highway between Clear Water Bay Road and Marina Cove, which has been completed in 2021. The Stage 2 works includes widening of the road section between Marina Cove to Sai Kung Town, which included Hiram's Highway, Po Tung Road and a section of Tai Mong Tsai road abutting the application site. According to the HyD's press releases dated 29 September 2023, the design and construction of the works is scheduled to commence in the Q2 2024 and will take about 84 months to complete. As such, it is anticipated that the improvement works would be completed by 2032. This planned improvement works was adopted for assessment.
- 8.1.6 Operational performance of the identified local junctions and road links have been assessed based on the anticipated year 2035 traffic flows and the existing/planned layouts. The assessment results as shown in **Table 5.1** and **Table 5.2** revealed that all identified key junctions and road links will operate with ample capacity.
- 8.1.7 Public transport service assessments have been conducted with full occupation of the proposed development. To meet the passenger demand arising from the population intake in the vicinity of Sha Ha area, enhancement of the existing PT services are suggested for Transport Department's planning. Actual service enhancement is subject to the Transport Department's review at a later stage and actual passenger demand.
- 8.1.8 Performance of the identified critical footpaths has also been assessed and the results revealed that all the identified sections will still be operating with satisfactory performance upon completion of the proposed development.

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8.2 Conclusion

8.2.1 In conclusion, the traffic impact assessment has demonstrated that the development traffic generation by the subject site can be absorbed by the nearby road network and would not cause any adverse traffic impact. Hence it can be concluded that the proposed development is considered acceptable in traffic terms.



Appendix A

Junction Calculation Sheets

| S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining | 03/0 | 3/202 | 25 |
|---|------|-------|----|
| government land, Sha Ha, Sai Kung | | | |
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| Job Title: | Proposed | Residential | l Developme | nt In Area S | shown As 'Road', ' | Various | Lots In D.D. | 221 And 2 | Adjoining Gover | mment La | ind, Sha H | a, Sai Kung |
|--------------|---------------|-------------|-------------|--------------|--------------------|----------------|--------------|----------------|-----------------|----------|------------|-------------|
| Junction: | Tai Mong | Tsai Roac | l/Wai Man | Road | | | | Ref. No. | : A (Obs) | | | |
| Scheme: | Year 2024 | Observed | l Flow | 1 | | | | Ref. No. | : | | | |
| Year: | 2024 | | | Job No.: | CHK50791710 | | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Tai Mong Ts | sai Road | Southern | | | | | | | | | |
| ARM B: | Tai Mong Ts | sai Road | Northern | | | | | | | | | |
| ARM C: | Wai Man Ro | oad | | | | | | \frown | | | | |
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| GEOMETI | RY | | | | | | | С | | | | |
| ARM | v | e | L | r | D | Phi | S | - | | | | |
| А | 3.00 | 7.50 | 15 | 50 | 42 | 30 | 0.48 | | | | | |
| В | 3.20 | 4.80 | 7 | 30 | 42 | 60 | 0.37 | | | | | |
| С | 3.60 | 5.00 | 7 | 30 | 42 | 50 | 0.32 | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| AM FLOW | /S | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 360 | 70 | | | | | 145 | 435 | | | |
| В | 515 | 10 | 160 | | | | | 80 | 685 | | | |
| С | 50 | 130 | 5 | | | | | 530 | 185 | | | |
| - | | | | | | | | | | | | |
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| DM FLOW | | | | | | | | l | | | | |
| | | р | C | | | | | C'm | Ester | | | |
| | A 5 | D 525 | 25 | | | | | 110 | Entry | | | |
| A | 3 | 525 | 55 | | | | | 110 | 505 | | | |
| В | 405 | 5 | 125 | | | | | 45 | 555 | | | |
| C | 45 | 100 | 5 | | | | | 415 | 150 | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| WEEKENI | DFLOWS | | ~ | | | | | . ~. | - | | | |
| from \ to | A | В | C | | | | | Circ | Entry | | | |
| A | 5 | 515 | 60 | | | | | 145 | 580 | | | |
| В | 415 | 5 | 170 | | | | | 70 | 590 | | | |
| С | 40 | 135 | 5 | | | | | 425 | 180 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| CALCULA | TIONS | | | | | | | Q _E | | RFC | | |
| ARM | K | X2 | М | F | t _D | f _c | AM | PM | WEEKEND | AM | PM | WEEKEND |
| А | 1.03 | 5.30 | 0.17 | 1605 | 1.43 | 0.62 | 1560 | 1582 | 1560 | 0.28 | 0.36 | 0.37 |
| В | 0.91 | 4.12 | 0.17 | 1250 | 1.43 | 0.55 | 1100 | 1117 | 1105 | 0.62 | 0.48 | 0.53 |
| С | 0.95 | 4.45 | 0.17 | 1349 | 1.43 | 0.57 | 993 | 1055 | 1049 | 0.19 | 0.14 | 0.17 |
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| | I | | | | | | I | | Crtical Arm. | в | в | В |
| | | | | | | | | | RFC: | 0.62 | 0.48 | 0.53 |
| - In accorda | ince with TPD | M V2 Ch4 | | | | | | | 2. | AM | PM | WEEKEND |
| Calculated H | oy: | | | Date: | Dec-24 | | Checked by | | | | | |
| | - | | | | | | | | | | | |

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | idential Develop | pment In Area S | hown As 'Road', | Various Lots I | n D.D. 221 A | nd Adjoining G | overnment Land | l, Sha Ha, Sai Kung |
|------------------|---------------------|------------------|----------------------|-------------------|--|---------------|----------------|----------------|---------------------|
| Junction: | Po Tung Roa | d/Mei Yu Stre | et/Tai Mong Ts | ai Road | | | | Ref. No.: | B (Obs) |
| Scheme: | Year 2024 Ol | oserved Flow | | | | | | Ref. No.: | |
| Year: | 2024 | | | Job No.: CHK50 | 0791710 | | | Rev.: | |
| | Po Tuna Bo | ad (Northern | | | | | | ite in | |
| | Mei Vu Stre | at (Northorn) | 1 | | | | | | |
| | Bo Tung Bo | od (Southorn | \ \ | | | | | | |
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| CA | 430 | 590 | 570 | | | | | | |
| СВ | 5 | 25 | 35 | | _ | | | | |
| ARM C | | | | | | | | | |
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| | | [ITEEREND] | 40 | 13 | | | | | |
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| Major road wir | dtla | | 14/ | 0.00 | h | ana widtha | | (h. a) | 0.05 |
| iviajor road wid | | | vv | 9.00 | L. L | Lane widths | | w(b-a) | 3.35 |
| Central Reser | ve width | | Wcr | 0.00 | | | | w(b-c) | 3.35 |
| 2 Lane Minor / | Arm (Y/N) | | | Y | | | | w(c-b) | 3.85 |
| Visibilities | | | Vr(b-a) | 140 | (| Calculated | | D | 0.95 |
| | | | VI(b-a) | 90 | | | | E | 1.00 |
| | | | Vr(b-c) | 150 | | | | F | 0.96 |
| | | | Vr(c-b) | 55 | | | | Y | 0.69 |
| | | | . , | | | | | | |
| ANALYSIS | | | | | | | | | |
| | | | | | | | ΔΜ ΡΕΔΚ | (PM) PEAK | |
| | WS. | | g(c-2) | | | | 420 | 590 | 570 |
| INALLICTEC | W3 | | q(c-a) | | | | 430 | 550 | 570 |
| | | | d(c-p) | | | | 5 | 25 | 35 |
| | | | q(a-b) | | | | 25 | 10 | 30 |
| | | | q(a-c) | | | | 600 | 435 | 500 |
| | | | q(b-a) | | | | 10 | 5 | 15 |
| | | | q(b-c) | | | | 15 | 30 | 40 |
| | | | f | | | | 0.60 | 0.86 | 0.73 |
| | | | | Factor | | | | | |
| CAPACITIES | | | Q(b-a) | 1 | | | 386 | 395 | 378 |
| | | | Q(b-c) | 1 | | | 591 | 634 | 615 |
| | | | $\Omega(c-b)$ | 1 | | | 564 | 607 | 587 |
| | | | Q(0, b) | 1 | | | 487 | 582 | 525 |
| | | | Q(D-ac) | | | | 407 | 565 | 525 |
| | | | h - | | | | 0.000 | 0.010 | 0.040 |
| REGS | | | D-a | | | | 0.026 | 0.013 | 0.040 |
| | | | D-C | | | | 0.025 | 0.047 | 0.065 |
| | | | c-b | | | | 0.009 | 0.041 | 0.060 |
| | | | b-ac | | | | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| Worst RFC | | | | | | | 0.026 | 0.047 | 0.065 |
| | | | | | | | | | |
| Where VI and | Vr are visibility d | listances to the | left or right of the | respective stream | าร | | | | |
| D = (1+0.094) | w(b-a)-3.65))(1+ | 0.0009(Vr(b-a)- | 120))(1+0.00060 | /l(b-a)-150)) | | | | | |
| F = (1+0.094) | w(b-c)-3 65))(1 - | 0.009(Vr(b-c)) | 20)) | (, =,, | | | | | |
| E = (1 + 0.004) | w(c-b) 2 65)/(1+) | | 20)) | | | | | | |
| 1 = (1+0.094) | w(c-u-3,03))(1+(| J.0009(VI(C-D)-I | 20)) | | | | | | |
| r = 1-0.0345V | v | | | | | | | | |
| t = proportion | ot minor traffic tu | rning left | | | | | | | |
| Q(b-ac) = Q(b) | o-c)*Q(b-a)/(1-f)* | Q(b-c)+f*Q(b-a) | | C | apacity of com | bined streams | | | |
| | | | | <u>'-</u> | In accordance | with TPDM V2 | 2 Ch4 | | <u> </u> |
| Calculated I | by: | | | Date: | Dec | -24 | Checked by | : | |

| Job Title: | Proposed Rea | sidential D | evelopmen | t In Area Sh | own As 'Road | ', Various I | ots In D.D. 2 | 21 And A | djoining Governi | nent Lan | d, Sha H | a, Sai Kung |
|--------------|---------------------|-------------|----------------|-----------------|--------------------|--------------|---------------|----------|------------------|-------------|------------|-----------------|
| Junction: | Tai Mong T | 'sai Road | /Fuk Man | Road | | | | Ref. No. | : C (Obs) | | | |
| Scheme: | Year 2024 0 | Observed | Flow | | | | | Ref. No. | • | | | |
| Year: | 2024 | | | Job No.: | CHK507917 | 710 | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Po Tung Road | l | SB | | | | | Б | | | | |
| ARM B. | Po Tung Road | l | NB | | | | | В | | | | |
| ARM C: | Fuk Man Road | 1 | 112 | | | | | | | | | |
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| | | | | | | | | | | | | |
| GEOMET | RY | | | | | | | Α | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| А | 7.00 | 7.50 | 1 | 20 | 28 | 35 | 0.80 | | | | | |
| В | 3.50 | 9.00 | 43 | 40 | 28 | 35 | 0.20 | | | | | |
| С | 3.50 | 8.50 | 35 | 10 | 28 | 40 | 0.23 | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| AM FLOW | vs | _ | _ | | | | 1 | I | _ | | | |
| from \ to | A | В | С | | | | | Circ | Entry | | | |
| Α | 5 | 330 | 420 | | | | | 110 | 755 | | | |
| В | 590 | 5 | 60 | | | | | 430 | 655 | | | |
| С | 350 | 100 | 5 | | | | | 600 | 455 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PM FLOW | /S | | | | | | 1 | i . | | | | |
| from \ to | A | В | C | | | | | Circ | Entry | | | |
| Α | 5 | 525 | 370 | | | | | 90 | 900 | | | |
| В | 420 | 5 | 45 | | | | | 380 | 470 | | | |
| С | 410 | 80 | 5 | | | | | 430 | 495 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| WEEVEN | | | | | | | | l | | | | |
| WEEKEN | | D | G | | | | ĺ | a: | | | | |
| from \ to | A | В | С | | | | | Circ | Entry | | | |
| A | 5 | 485 | 475 | | | | | 135 | 965 | | | |
| В | 460 | 5 | 75 | | | | | 485 | 540 | | | |
| С | 485 | 125 | 5 | | | | | 470 | 615 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| CALCULA | TIONS | | | | | | | O_{r} | | REC | | |
| ADM | | v | м | F | t | f | AM | | WEEVEND | AM | DM | WEEVEND |
| | 0.00 | 7 10 | 0.04 | 2170 | ч <u>р</u> 1 ле | 0.76 | 2040 | 2074 | 2041 | 0.27 | 0.42 | 0 47 |
| A | 0.98 | 7.19 | 0.04 | 21/9 | 1.48 | 0.76 | 2000 | 2074 | 2041 | 0.57 | 0.43 | 0.47 |
| В | 1.01 | 7.40 | 0.04 | 2243 | 1.48 | 0.77 | 572 | 584 | 559 # | 1.14 | 0.81 | 0.97 |
| С | 0.92 | 6.93 | 0.04 | 2100 | 1.48 | 0.74 | 451 | 485 | 477 # | 1.01 | 1.02 | 1.29 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Remark (#) | Site factors have b | een applied | to reflect the | observed long | traffic queues or | Po Tung | 1 | | Crtical Arm | в | С | C |
| Road southbo | ound and Fuk Ma | n Road on w | eekend peak | coser ven tollg | aarrie queues of | | | | DEC. | 1 14 | 1 02 | 1 20 |
| ' In coord | anaa wid. TDD | AV2 CLA | | | | | | | KrC: | 1.14 A M | 1.02 DM | 1,47 WEEKEND |
| - in accord | unce with IPDI | v1 v2 Ch4 | | D | Da- 24 | | Charles 11 | | | AW | PN | WEEKEND |
| Calculated | uy. | | | Date: | Dec-24 | | спескеа by: | | | | | |

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | dential Develop | oment In Area S | shown As 'Road', V | arious Lots | In D.D. 221 Ar | nd Adjoining G | overnment Land | 1, Sha Ha, Sai Kung |
|--|---|---|---|---------------------------------------|---------------|---------------------|----------------|----------------|---------------------|
| Junction: | Po Tung Road | d/Man Nin Stre | eet | | | | | Ref. No.: | D (Obs) |
| Scheme: | Year 2024 Ob | oserved Flow | _ | | | | | Ref. No.: | |
| Year: | 2024 | | | Job No.: CHK507 | 791710 | | | Rev.: | |
| ARM A: | Po Tung Roa | ad (Northern) |) | | | | | | |
| ARM B: | Man Nin Stre | eet | | | | | | | |
| ARM C: | Po Tung Roa | ad (Southern) |) | | | | | | |
| | | | | | | | | | |
| | AM | (PM) | [WEEKEND] | _ | | | | | |
| CA | 680 | 805 | 795 |] > | | | | | |
| СВ | 120 | 155 | 125 | | | | | | |
| ARM C | | | | - | | | | | |
| | | | _ | | | ↓ . | | | _ |
| | | |] | | | | | | |
| | | | | | | | | | _ |
| | | | - | | | AM | (PM) | [WEEKEND] | • |
| | | | | | | 855 | 765 | 845 | AC |
| | | | | - | | 90 | 70 | 135 | AB |
| | | 4 | | | | | | _ | ARM A |
| | | | | | | | | | |
| | | | 1 | | | 1 | | | • |
| | | | | | | | | | |
| | | | | | * | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | A M | 125 | 70 | | | | | |
| | | | 135 | 70 | | | | | |
| | | | 195 | 95 | | | | | |
| | | [WEEKEND] | 180 | 165 | | | | | |
| OFOMETRY | | | BC | BA | | | | | |
| GEOMETRY | h. _ | | 14/ | 7 50 | | Lana a contratala a | | | 0.05 |
| Major road wid | | | vv | 7.50 | | Lane widths | | w(b-a) | 3.65 |
| Central Reserv | e width | | Wcr | 0.00 | | | | w(b-c) | 3.65 |
| 2 Lane Minor A | Arm (Y/N) | | | n | | - | | w(c-b) | 3.00 |
| Visibilities | | | Vr(b-a) | 30 | | Calculated | | D | 0.86 |
| | | | VI(b-a) | 40 | | | | E | 0.92 |
| | | | Vr(b-c) | 30 | | | | F | 0.92 |
| | | | Vr(c-b) | 100 | | | | Y | 0.74 |
| | | | | | | | | | |
| ANALYSIS | | | | | | | | | |
| | | | | | | | AM PEAK | (PM) PEAK | [WEEKEND] PEAK |
| TRAFFIC FLO | WS | | q(c-a) | | | | 680 | 805 | 795 |
| | | | q(c-b) | | | | 120 | 155 | 125 |
| | | | q(a-b) | | | | 90 | 70 | 135 |
| | | | q(a-c) | | | | 855 | 765 | 845 |
| | | | q(b-a) | | | | 70 | 95 | 165 |
| | | | q(b-c) | | | | 135 | 195 | 180 |
| | | | f | | | | 0.66 | 0.67 | 0.52 |
| | | | | Factor | | | | | |
| CAPACITIES | | | Q(b-a) | 1 | | | 193 | 186 | 173 |
| | | | Q(b-c) | 1 | | | 422 | 426 | 352 |
| | | | Q(c-b) | 1 | | | 452 | 479 | 443 |
| | | | $\Omega(b-ac)$ | 1 | | | 314 | 319 | 257 |
| | | | G(0 40) | · | | | 014 | 010 | 207 |
| PECIA | | | ha | | | | 0.26 | 0.51 | 0.05 |
| nf0 s | | | D-a | | | | 0.30 | 0.31 | 0.95 |
| | | | D-C | | | | 0.32 | 0.46 | 0.51 |
| | | | C-D | | | | 0.27 | 0.32 | 0.28 |
| | | | b-ac | | | | 0.65 | 0.91 | 1.34 |
| | | | | | | | | | |
| Worst RFC | | | | | | | 0.65 | 0.91 | 1.34 |
| Where VI and D = (1+0.094(v E = (1+0.094(v | Vr are visibility d w(b-a)-3.65))(1+0 v(b-c)-3.65))(1+0 | istances to the I 0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1 | eft or right of the 120))(1+0.0006(¹ 20)) | → respective streams VI(b-a)-150)) | i | | | | |
| F = (1+0.094) | v(c-b)-3.65))(1+0 |).0009(Vr(c-b)-1 | 20)) | | | | | | |
| Y = 1-0.0345W | 1 | | | | | | | | |
| f = proportion of | of minor traffic tu | rning left | | | | | | | |
| Q (b-ac) = Q(b | -c)*Q(b-a)/(1-f)*0 | Q(b-c)+f*Q(b-a) | | Ca | pacity of con | nbined streams | | | |
| | | | | - in | accordance | with TPDM V2 | Ch4 | | |
| Calculated b | ov: | | | Date: | Dec | -24 | Checked by | | |

| TRAFFIC S | IGN/ | ALS (| JALC | ULAI | ON | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | | IVA HON | G KONG | LIMITED |
|---------------------------------|---------|----------|----------|--------------|---------|---------|----------|---------|-----------|---------------------|-----------------------|------------------|-----------------|------------|--------------------|-----------------|------------|
| Junction: | Pedest | rian Cro | ssing ne | ear Yau Ma | Po Stre | et (JE) | | - | | | | | | | Design Yea | r: <u>2024</u> | |
| Description: | Year 20 |)24 Obs | erved Tr | raffic Flow | | | | - | | - | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | nts | | | | Radi | us (m) | (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway | - | A | 1 | 3.500 | | • | | | | 1965 | 1965 | 800 | 0.407 | | 960 | 0.489 | 0.489 |
| (NB) Hiram's Highway (SB) | ← | В | 1 | 3.500 | | | | | | 1965 | 1965 | 990 | 0.504 | 0.504 | 960 | 0.489 | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | |
| Pedestrian Crossir | na | Cn | 2 | | EN ± FI | ASH - | 6 | | 5 | _ | 11 | | | * | | | |
| | ig | Οp | 2 | | | A011 - | Ū | Ŧ | 5 | - | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Notes: | | | | Flow: (po | :u/hr) | | | | | | ++ | Group | A.Cp | B,Cp | Group | A,Cp | A.Cp |
| | | | | | | | | | | | N | у | 0.407 | 0.504 | у | 0.489 | 0.489 |
| | | | | | | | | | | | | L (sec) | 20 | 20 | L (sec) | 20 | 20 |
| | | | | | | 800(960 |) | | | 990(960) < | | C (sec) | 85 | 85 | C (sec) | 85 | 85 |
| | | | | | | | | | | | | y pract. | 0.688 | 0.688 | y pract. | 0.688 | 0.688 |
| | | | | | | | | | | | | R.C. (%) | 69% | 37% | R.C. (%) | 41% | 41% |
| Stage / Phase Dia | grams | | | 2 | | | | 2 | | | | 4 | | | 5 | | |
| 1. | | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| A | | | — в | | | | Ŷ | | | | | | | | | | |
| | | | | | | Ср | ¥ | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| I/G= 4 | | | I/G= | 6 | | 11 | | I/G= | | | I/G= | | | I/G= | | | |
| I/G= 4 | | | I/G= | 6 | | 11 | | I/G= | | | I/G= | | | I/G= | tion: | | (F) |
| | | | | | | | | | | | Date | DEC, 2024 | | Pedestria | n Crossing near Ya | au Ma Po Street | |

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50791710

| TRAFFIC | SIGN | ALS (| CALC | ULAT | ION | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | I | | G KONG | LIMITED |
|---|------------|-----------|----------|----------------|-----------|---------|----------|---------|-----------|---------------------|-----------------------|------------------|-----------------|--------------------|----------------------------|----------------|------------|
| Junction: | Pedes | trian Cro | ssing ne | ear Yau Ma | a Po Stre | et (JE) | | _ | | | | | | | Design Yea | r:2024 | |
| Description: | Year 2 | 024 Obs | erved Tr | affic Flow | | | | - | | | Designed | By: MLC | | | Checked By | : LLW | |
| | nts | | | | Radi | us (m) | (%): | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | tleft | Right | Gradient | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway (NB) Hiram's Highway | y → 4 ← | A B | 1 1 | 3.500 3.500 | | | | | | 1965 1965 | 1965 1965 | 920 1025 | 0.468 0.522 | 0.522 | 920 1025 | 0.468 0.522 | 0.522 |
| Pedestrian Crossing Cp 2 MIN GREEN + FLASH = 6 Notes: Flow: (pcu/hr) | | | | | | | | + | 5 | - | 11 | | | | | | |
| Notes: | | | | Flow: (po | :u/hr) | | | | | | → N | Group | A,Cp | B,Cp | Group | A,Cp | B,Cp |
| | | | | | | | | | | | | У | 0.468 | 0.522 | У | 0.468 | 0.522 |
| | | | | | | | | | | | | L (sec) | 20 | 20 | L (sec) | 20 | 20 |
| | | | | | | 920(920 |) | | | 1025(1025) | — | C (sec) | 85 | 85 | C (sec) | 85 | 85 |
| | | | | | | | | | | | | y pract. | 0.688 | 0.688 | y pract. | 0.688 | 0.688 |
| | | | | | | | | | | | | R.C. (%) | 47% | 32% | R.C. (%) | 47% | 32% |
| Stage / Phase D | iagrams | | | 2 | | | | 3 | | | | 4 | | | 5 | | |
| A | | | — в | 2. | | Ср | <> | 3 | | | | 4. | | | . | | |
| I/G= 4 | | | I/G= 6 | 6 | | 11 | | I/G= | | | I/G= | | | I/G= | | | |
| | | | 1.0-1 | - 1 | | | | 1.0- | | | Date | DEC, 2024 | | Junct Pedestria | ion: n Crossing near Ya | u Ma Po Street | Ē |

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | idential Develop | oment In Area S | hown As 'Road', | Various Lots I | n D.D. 221 An | d Adjoining G | overnment Land | d, Sha Ha, Sai Kung |
|-------------------|---------------------|----------------------|---------------------|---------------------|----------------|----------------|---------------|----------------|---------------------|
| Junction: | Po Tung Roa | d/Yau Ma Po S | treet | | | | | Ref. No.: | F (Obs) |
| Scheme: | Year 2024 Ob | oserved Flow | | | | | | Ref. No.: | |
| Year: | 2024 | | | Job No.: CHK50 | 0791710 | | | Rev.: | |
| ARM A | Po Tuna Bo | ad (NB) | | | | | | | |
| | Vau Ma Po 9 | Stroot | | | | | | | |
| | Po Tupo Po | | | | | | | | |
| ARIVI C. | | au (3D) | | | | | | | |
| | | | | | | | | | |
| | AM | (PM) | [WEEKEND] | 7 | | | | | |
| CA | 975 | 905 | 995 | → | | | | | |
| СВ | 20 | 35 | 20 | | | | | | |
| ARM C | | | | | | | | | |
| Po Tung Road | l (SB) | | _ | | r r | ↓ _ | | | _ |
| | | |] | | | ſ | | | - |
| | | | | | | | | | |
| | | | • | | | AM | (PM) | | - |
| | | | | | Г | 810 | 975 | 925 | AC |
| | | | | | | 30 | 25 | 15 | AB |
| | | • | | | | 30 | 25 | 15 | |
| | | | | | | | | | |
| | | | , | | | | | | Po Tung Road (NB) |
| | | | | | | | | | |
| | | | | | Ţ | | | | |
| | | | | | • | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | АМ | 30 | 25 | | • | | | |
| | | (DM) | 25 | 20 | | | | | |
| | | | 15 | 15 | , | | | | |
| | | [WEEKEND] | 15 | 15 | 1 | rau wa Po Sire | et | | |
| | | | BC | BA | | | | | |
| GEOMETRY | | | | | | | | | |
| Major road wic | dth | | W | 7.50 | L | ane widths | | w(b-a) | 2.75 |
| Central Reserv | ve width | | Wcr | 0.00 | | | | w(b-c) | 2.75 |
| 2 Lane Minor A | Arm (Y/N) | | | n | | | | w(c-b) | 2.50 |
| Visibilities | | | Vr(b-a) | 25 | C | Calculated | | D | 0.78 |
| | | | VI(b-a) | 45 | | | | E | 0.84 |
| | | | Vr(b-c) | 25 | | | | F | 0.86 |
| | | | Vr(c-b) | 80 | | | | Y | 0.74 |
| | | | 11(0 0) | | | | | • | 0 |
| | | | | | | | | | |
| ANAL 1515 | | | | | | | | | |
| | | | | | | | | (PIVI) PEAK | |
| TRAFFIC FLO |)WS | | q(c-a) | | | | 975 | 905 | 995 |
| | | | q(c-b) | | | | 20 | 35 | 20 |
| | | | q(a-b) | | | | 30 | 25 | 15 |
| | | | q(a-c) | | | | 810 | 975 | 925 |
| | | | q(b-a) | | | | 25 | 20 | 15 |
| | | | q(b-c) | | | | 30 | 35 | 15 |
| | | | f | | | | 0.55 | 0.64 | 0.50 |
| | | | - | Factor | | | | | |
| CARACITIES | | | $O(h_{a})$ | racior | | | 192 | 150 | 156 |
| CALACITIES | | | | | | | 102 | 152 | 100 |
| | | | Q(b-c) | 1 | | | 423 | 388 | 403 |
| | | | Q(c-b) | 1 | | | 446 | 409 | 422 |
| | | | Q(b-ac) | 1 | | | 267 | 251 | 227 |
| | | | | | | | | | |
| RFC's | | | b-a | | | | 0.137 | 0.132 | 0.096 |
| | | | b-c | | | | 0.071 | 0.090 | 0.037 |
| | | | c-b | | | | 0.045 | 0.086 | 0.047 |
| | | | h-ac | | | | 0 206 | 0.210 | 0.132 |
| | | | 2 40 | | | | 0.200 | 5.213 | 0.102 |
| | | | | | | | 0.01 | 0.00 | 0.40 |
| Where VI and | Vr are visibility d | listances to the I | eft or right of the | e respective stream | IS | | 0.21 | 0.22 | 0.13 |
| D = (1+0.094) | w(b-a)-3.65))(1+ | u.uuu9(Vr(b-a)-1 | 20))(1+0.0006(| vi(b-a)-150)) | | | | | |
| E = (1+0.094) | w(b-c)-3.65))(1+0 | 0.0009(Vr(b-c)-1 | 20)) | | | | | | |
| F = (1+0.094) | w(c-b)-3.65))(1+0 | 0.0009(Vr(c-b)-1 | 20)) | | | | | | |
| Y = 1-0.0345W | v | | | | | | | | |
| f = proportion of | of minor traffic tu | rning left | | | | | | | |
| Q(b-ac) = O(b) | p-c)*Q(b-a)/(1-f)* | _ Q(b-c)+f*Q(b-a) | | С | apacity of com | bined streams | | | |
| (, , , | , | (,, u) | | _ i | n accordance v | with TPDM V20 | Ch4 | | |
| Calculated | by: | | | Date: | Daa | .24 | Chackad hu | | |
| ∎ ∪aiuidleu (| υ γ. | | | Dale. | Dec- | L-1 | UNCORED DY | | |

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | idential Develop | pment In Area S | hown As 'Road', V | arious Lots | In D.D. 221 An | d Adjoining G | overnment Land | d, Sha Ha, Sai Kung |
|--|---|---|---|---------------------------------------|---------------|----------------|-----------------|-----------------|----------------------|
| Junction: | Hiram's High | way/Chui Ton | g Road | | | | | Ref. No.: | G (Obs) |
| Scheme: | Year 2024 Ot | bserved Flow | | | | | | Ref. No.: | |
| Year: | 2024 | | | Job No.: CHK507 | 791710 | | | Rev.: | |
| ARM A: | Hiram's High | hway (EB) | | <u>.</u> | | | | <u> </u> | |
| ARM B: | Chui Tong F | Road | | | | | | | |
| ARM C: | Hiram's High | hway (WB) | | | | | | | |
| / | | , , , , , , , , , , , , , , , , , , , | | | | | | | |
| | AM | (PM) | | | | | | | - |
| CΔ | 795 | 925 | 1 860 | 1 | | | | | |
| 0A 0D | 50 | 80 | 95 | <u>├</u> | | | | | |
| | 50 | 80 | 90 |] | | | | | |
| ARM C | | | | | | | | | |
| Hiram's Highw | ay (WB) | - | ٦ | | | + r | | - | - |
| | | | | | | | | | |
| | | | J | | | | | | - |
| | | | | | | AM | (PM) | [WEEKEND] | - |
| | | | | | | 900 | 800 | 895 | AC |
| | | <u>ـــــــ</u> | | | | 100 | 120 | 115 | AB |
| | | • | | | | | | | ARM A |
| | | | | | | | | | Hiram's Highway (EB) |
| | | | 1 | | | ſ | | | • |
| | | | | | | | | | |
| | | | | | ¥ | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | I | | | |
| | | AM | 55 | 45 | | | | | |
| | | (PM) | 40 | 70 | | ARM B | | | |
| | | [WEEKEND] | 110 | 80 | | Chui Tong Road | t | | |
| | | | BC | BA | | | | | |
| GEOMETRY | | | | | | | | | |
| Major road wic | dth | | W | 9.00 | - | Lane widths | | w(b-a) | 4.00 |
| Central Reserv | ve width | | Wcr | 0.00 | | l | | w(b-c) | 4.00 |
| 2 Lane Minor / | Arm (Y/N) | | | у | | l | | w(c-b) | 4.50 |
| Visibilities | · · · | | Vr(b-a) | 80 | | Calculated | | D | 0.97 |
| | | | VI(b-a) | 100 | | | | Ę | 1.00 |
| | | | Vr(b-c) | 80 | | l | | F | 1.11 |
| | | | Vr(c-b) | 150 | | l | | v | 0.69 |
| | | | VI(0-0) | 100 | | <u> </u> | | 1 | 0.00 |
| | | | | | | ſ | | | |
| ANAL 1315 | | | | | | ł | | | |
| | | | | | | ł | | | |
| I KAFFIG FLO |)WS | | q(c-a) | | | l | /95 | 925 | 860 |
| | | | q(c-b) | | | l | 50 | 80 | 95 |
| | | | q(a-b) | | | l | 100 | 120 | 115 |
| | | | q(a-c) | | | l | 900 | 800 | 895 |
| | | | q(b-a) | | | | 45 | 70 | 80 |
| | | | q(b-c) | | | | 55 | 40 | 110 |
| | | | f | | | | 0.55 | 0.36 | 0.58 |
| | | | | Factor | | | | | |
| CAPACITIES | | | Q(b-a) | 1 | | | 239 | 231 | 214 |
| | | | Q(b-c) | 1 | | | 483 | 490 | 459 |
| | | | | 1 | | | 4 05 | 4 30 | 435 |
| | | | Q(C-D) | 1 | | | 546 | 570 | 545 |
| | | | Q(b-ac) | 1 | | l | 337 | 291 | 322 |
| | | | | | | | | | |
| RFC's | | | b-a | | | | 0.188 | 0.303 | 0.374 |
| | | | b-c | | | | 0.114 | 0.082 | 0.240 |
| | | | c-b | | | | 0.091 | 0.140 | 0.174 |
| | | | b-ac | | | | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | |
| Worst RFC | | | | | | l | 0.19 | 0.30 | 0.37 |
| Where VI and ¹ D = (1+0.094(v E = (1+0.094(v F = (1+0.094(v Y = 1-0.0345V f = proportion | Vr are visibility d w(b-a)-3.65))(1+ w(b-c)-3.65))(1+(w(c-b)-3.65))(1+(v of minor traffic tu | listances to the I 0.0009(Vr(b-a)-1 0.0009(Vr(b-c)-1 0.0009(Vr(c-b)-1 urning left | eft or right of the 120))(1+0.0006(¹ 120)) 120)) | y respective streams VI(b-a)-150)) | | | | | |
| Q (b-ac) = Q(t) | o-c)*Q(b-a)/(1-f)* | Q(b-c)+f*Q(b-a) |) | Ca | pacity of con | obined streams | | | |
| Q (b db) = Q(b | () a(b u)/(1 i) | | | - in | accordance | with TPDM V2 (| Ch4 | | |
| Coloulated | by a | | | Deter | accordance | | Checked by | | |
| valuulaten r | UV. | | | Dale. | Dec | - <u>-</u> 4 | Unecked DV | | |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| Junction: | Hiram's | s Highw | ay/Hong | Kin Road | (JH) | | | _ | | | | | | | Design Yea | r: <u>2024</u> | |
|-----------------------|------------------|----------------------|-------------------------------|--|---|---|-----------------------|------------------|------------------|----------------|----------------------------|------------------|----------------|--------------------|----------------------------|----------------|------------|
| Description: | Year 20 | 024 Obs | erved Tra | affic Flow | | | | - | | | Designed | By: MLC | | | Checked By | : PTC | |
| | ents | | | | Radi | us (m) | t (%) | Pro. Tu | rning (%) | Revised Flow (| Saturation (pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | C D | 1,2,3 1,2,3 | 3.500 3.500 | | 20 | | | | 1965 1960 | 1965 1960 | 745 65 | 0.379 0.033 | | 900 70 | 0.458 0.036 | 0.458 |
| Hiram's Highway SB | ↓ | A A | 1,2,5 1,2,5 | 3.500 3.500 | 20 | | | 13% | 20% | 1750 * 2105 | 1740 2105 | 466 559 | 0.266 0.266 | | 394 476 | 0.226 0.226 | |
| Hong Kin Road WB | *] _► | G G | 4 4 | 4.000 4.000 | 15 | 20 | | | | 1830 2005 | 1830 2005 | 100 50 | 0.055 0.025 | | 70 75 | 0.038 0.037 | 0.038 |
| Hiram's Highway NB | _ 4 → | E | 2,3,4 2,3,4 | 3.500 3.500 | 10 | | | 6% | 9% | 1945 1895 * | 1940 1895 | 405 395 | 0.208 0.208 | | 491 479 | 0.253 0.253 | |
| Hiram's Highway SB | € € | F | 2,3,4,5 2,3,4,5 | 3.500 3.500 | | 20 | | | | 1965 1745 | 1965 1745 | 905 60 | 0.461 0.034 | 0.461 | 755 90 | 0.384 0.052 | |
| Po Lo Che Road EB | * ¹ * | В | 1 | 3.000 | 15 | 20 | | 38% / 62% | a 41% / 59% | 1765 | 1765 | 195 | 0.110 | 0.110 | 195 | 0.110 | |
| Pedestrian Crossi | ng | Нр Мр Кр Јр | 1,2,3,5 4 3,4 5 1 | MIN GRE MIN GRE MIN GRE MIN GRE | EN + FL EN + FL EN + FL EN + FL EN + FL | ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 5 | + + + + | 7 6 6 6 | | 12 11 11 11 11 | | | | | | |
| *Site Factor of 0.9 |) is annli | ed due t | n | Flow: (po | :u/nr) | | | 25(45) | | λ | X | Group | C,G,Lp | B,F | Group | C,Mp,Lp | C,G,Lp |
| merging lane at th | ie exit ar | m | 0 | \rightarrow | 745(900) | | | ⊥, | 120(115) | √ ∕► | 75(80) | У | 0.434 | 0.571 | У | 0.458 | 0.496 |
| | | | | ¥ | | | 965(790 |) | 775(925) | | 60(90) | L (sec) | 100 | 100 | L (sec) | 100 | 100 |
| | | | | 65(70) | | | 60(80) | | | 905(755) |) | v pract. | 0.657 | 0.828 | v pract. | 0.675 | 0 710 |
| | | | | 100(70) | \mathbf{V} | 50(75) | | | | | | R.C. (%) | 51% | 45% | R.C. (%) | 47% | 43% |
| Stage / Phase Dia | agrams | | | | | | | | | | | | | | | | |
| 1. ≪> ↓ Hp | Ā | Jp | → | 2. | ← | E A | F | - | C D Hp | E ↑ ↓ Кр | F | 4. | Kp | F | 5. | Lp A | F |
| I/G= 5 I/G= 2 | | | I/G= 5 | | | | | I/G= | | | I/G= | = 5 | | I/G= | 11 | 11 | |
| | | | | 1 | | | | 1./0- | 1 | | Date | DEC, 2024 | | Junct Hiram's H | ion: lighway/Hong Kin F | Road | \oplus |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| Junction: | Hiram's | s Highw | ay/Hong | Kin Road | (JH) | | | _ | | | | | | | Design Yea | : <u>2024</u> | |
|-----------------------|------------------|----------------------|-------------------------------|--|--|---|-----------------------|------------------|------------------|---------------------|----------------------------|------------------|----------------|------------|------------------|----------------|------------|
| Description: | Year 20 | 024 Obs | erved Tr | affic Flow | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | nts | | | | Radi | us (m) | (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE Peak | | | WE Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | WE Peak | WE Peak | WE Peak | WE Peak | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | C D | 1,2,3 1,2,3 | 3.500 3.500 | | 20 | | | | 1965 1960 | 1965 1960 | 880 55 | 0.448 0.028 | 0.448 | 880 55 | 0.448 0.028 | 0.448 |
| Hiram's Highway SB | ↓ ↓ | A A | 1,2,5 1,2,5 | 3.500 3.500 | 20 | | | 16% | 16% | 1745 * 2105 | 1745 2105 | 435 525 | 0.249 0.249 | | 435 525 | 0.249 0.249 | |
| Hong Kin Road WB | *] ≁ | G G | 4 4 | 4.000 4.000 | 15 | 20 | | | | 1830 2005 | 1830 2005 | 85 55 | 0.046 0.027 | 0.046 | 85 55 | 0.046 0.027 | 0.046 |
| Hiram's Highway NB | _ 4 → | E E | 2,3,4 2,3,4 | 3.500 3.500 | 10 | | | 11% | 11% | 1935 1895 * | 1935 1895 | 470 460 | 0.243 0.243 | | 470 460 | 0.243 0.243 | |
| Hiram's Highway SB | † Γ* | F F | 2,3,4,5 2,3,4,5 | 3.500 3.500 | | 20 | | | | 1965 1745 | 1965 1745 | 890 110 | 0.453 0.063 | | 890 110 | 0.453 0.063 | |
| Po Lo Che Road EB | * * | В | 1 | 3.000 | 15 | 20 | | 52% / 48% | 52% / 48% | 1760 | 1760 | 145 | 0.082 | | 145 | 0.082 | |
| Pedestrian Crossi | ng | Hp Mp Kp Jp | 1,2,3,5 4 3,4 5 1 | MIN GRE MIN GRE MIN GRE MIN GRE | EN + FL EN + FL EN + FL EN + FL | ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 5 | + + + + | 7 6 6 6 | | 12 11 11 11 11 | | | | | | |
| *Site Factor of 0.9 | is appli | ed due t | 0 | | , | | | 50(50) | | X | \times N | Group | C,Mp,Lp | C,G,Lp | Group | C,Mp,Lp | C,G,Lp |
| merging lane at th | e exit ar | m | | \checkmark | 880(880) | | | | 70(70) | * * | 75(75) | L (sec) | 32 | 27 | , L (sec) | 32 | 27 |
| | | | | * | | | 890(890) | ~ | 880(880) | | 110(110) | C (sec) | 128 | 128 | C (sec) | 128 | 128 |
| | | | | 85(85) | | 55(55) | 70(70) | | | 890(890) | \leftarrow | y pract. | 0.675 | 0.710 | y pract. | 0.675 | 0.710 |
| | | | | 00(00) | \mathbf{V} | 00(00) | | | | | | R.C. (%) | 51% | 44% | R.C. (%) | 51% | 44% |
| Stage / Phase Dia | agrams | | | - | | | | | | | | | | | - | | |
| 1. | Ā | Jr | ★ <> | 2. ← C ≪> Hp | ← | E A | F | 3. | C D Hp | Kp | F | 4. | Kp | F | 5. | Lp A | F |
| I/G= 2 | | | I/G= | | | | | I/G= | | | I/G= | = 5 | | I/G= | 11 | 11 | |
| "U= L | | | #G= | I | | | | //G= | | | Date | | | Junct | ion: | 11 | \oplus |

| Job Title: | Proposed | Residentia | l Developme | ent In Area S | hown As 'Road', | Various | Lots In D.D. | 221 And | Adjoining Gover | mment L | and, Sha H | a, Sai Kung |
|--------------|---------------|------------|-------------|---------------|-----------------|---------|--------------|----------------|-----------------|---------|------------|-------------|
| Junction: | Tai Mong | Tsai Roa | l/Sai Sha R | oad | | | | Ref. No | .: I (obs) | | | |
| Scheme: | Year 2024 | Observed | d Flow | | | | | Ref. No | .: | | | |
| Year: | 2024 | | | Job No.: | CHK50791710 | | | Rev.: | | | | |
| AM | PM | | | | | | | c | | | | |
| ARM A: | Tai Mong Ts | sai Road | (West) | | | | | i | | | | |
| ARM B: | Tai Mong Ta | sai Road | (East) | | | | | | | | | |
| ARM C: | Sai Sha Roa | d | | | | | | | | | | |
| | | | | | | | | (| | | | |
| | | | | | | | Α | | | | | |
| | | | | | | | | \smile | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| GEOMETH | RY | | _ | | _ | | _ | | | | | |
| ARM | V | e | L | r | D | Phi | S | | | | | |
| A | 3.4 | 8.2 | 36 | 100 | 35 | 35 | 0.21 | | | | | |
| В | 3.4 | 8.1 | 15 | 100 | 35 | 20 | 0.50 | | | | | |
| С | 4.2 | 7.7 | 13 | 10 | 35 | 35 | 0.43 | | | | | |
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| AM FLOW | 'S | | | | | | i | 1 | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| Α | 10 | 405 | 140 | | | | | 100 | 555 | | | |
| В | 465 | 5 | 95 | | | | | 155 | 565 | | | |
| С | 170 | 90 | 5 | | | | | 480 | 265 | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| PM FLOW | Ś | | | | | | | - | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 10 | 520 | 145 | | | | | 100 | 675 | | | |
| В | 315 | 5 | 90 | | | | | 380 | 410 | | | |
| С | 145 | 90 | 5 | | | | | 685 | 240 | | | |
| | | | | | | | | | | | | |
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| WEEKENI | D FLOWS | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 375 | 220 | | | | | 135 | 600 | | | |
| В | 300 | 5 | 135 | | | | | 230 | 440 | | | |
| С | 215 | 125 | 5 | | | | | 310 | 345 | | | |
| | | | | | | | | | | | | |
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| CALCULA | TIONS | | | | | | Q | 2 _E | | RFC | | |
| ARM | K | X_2 | М | F | t _D | f_c | AM | PM | WEEKEND | AM | PM | WEEKEND |
| А | 1.02 | 6.76 | 0.08 | 2050 | 1.46 | 0.72 | 2020 | 2020 | 1995 | 0.27 | 0.33 | 0.30 |
| В | 1.07 | 5.75 | 0.08 | 1741 | 1.46 | 0.66 | 1760 | 1601 | 1707 | 0.32 | 0.26 | 0.26 |
| С | 0.93 | 6.08 | 0.08 | 1842 | 1.46 | 0.68 | 1415 | 1285 | 1523 | 0.19 | 0.19 | 0.23 |
| | | | | | | | | | I | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | • | | | | | | • | | Crtical Arm: | В | А | А |
| | | | | | | | | | RFC: | 0.32 | 0.33 | 0.30 |
| - In accorda | ince with TPD | M V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated b | by: | | | Date: | Dec-24 | | Checked by: | | | | | |

| Job Title: | Proposed I | Residential Tsai Road | Developmer I/Wai Man | nt In Area Sl Road | nown As 'Roa | ad', Various | Lots In D. | D. 221 And Ref. No. | Adjoining Gove | rnment L | and, Sha H | Ia, Sai Kung |
|--------------------------------|--------------|--------------------------|-------------------------|-----------------------|----------------|--------------|------------|------------------------|----------------------|-----------|------------|--------------|
| Scheme: | Year 2035 | Referenc | e Flow | Rouu | | | | Ref No | . A (Ref) | | | |
| Year: | 2035 | reference | 01101 | Job No.: | CHK50791 | 710 | | Rev.: | | | | |
| AM | PM | | | 0001101 | 0111100777 | | | 110 111 | | | | |
| ARM A: | Tai Mong Ta | sai Road | Southern | | | | | | | | | |
| ARM B. | Tai Mong To | sai Road | Northern | | | | | | | | | |
| ARM C | Wai Man Ro | had | rormeni | | | | | - | | | | |
| | | | | | | | Α | -(| Ъ | | | |
| GEOMETH | ov | | | | | | | ċ | | | | |
| APM | | ٩ | т | r | D | Dhi | s | • | | | | |
| | 2 00 | 7 50 | 15 | 50 | 42 | 20 | 0.49 | _ | | | | |
| A D | 2.20 | 1.50 | 15 | 20 | 42 | 50 | 0.40 | | | | | |
| Б | 5.20 | 4.80 | 7 | 50 | 42 | 50 | 0.37 | | | | | |
| C | 3.00 | 5.00 | Τ | 30 | 42 | 50 | 0.32 | | | | | |
| AM FLOW | 'S | | | | | | | | | | | |
| from \ to | Ā | R | C | | | | | Circ | Entry | | | |
| | 5 | 370 | 140 | | | | | 215 | 515 | | | |
| р | 520 | 10 | 200 | | | | | 150 | 740 | | | |
| D C | 170 | 200 | 200 | | | | | 545 | 740 | | | |
| | | 200 | U | | | | | | | | | |
| PM FLOW | S | | | | | | | I | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 540 | 115 | | | | | 145 | 660 | | | |
| в | 415 | 5 | 170 | | | | | 125 | 590 | | | |
| С | 105 | 135 | 5 | | | | | 425 | 245 | | | |
| WEEKENI |) FLOWS | В | C | | | | | Circ | Entry | | | |
| | 5 | 520 | 145 | | | | | 195 | 680 | | | |
| R | 425 | 5 | 220 | | | | | 105 | 650 | | | |
| C D | 110 | 175 | 5 | | | | | 435 | 290 | | | |
| | 110 | 175 | 5 | | | | | -55 | 290 | | | |
| CALCULA | TIONS | | | | | | | Q_E | | RFC | | |
| ARM | К | AD2 | М | F | t _D | f_c | AM | PM | WEEKEND | AM | PM | WEEKEND |
| А | 1.03 | 5.30 | 0.17 | 1605 | 1.43 | 0.62 | 1515 | 1560 | 1534 | 0.34 | 0.42 | 0.44 |
| В | 0.91 | 4.12 | 0.17 | 1250 | 1.43 | 0.55 | 1065 | 1077 | 1062 | 0.69 | 0.55 | 0.61 |
| C C | 0.95 | 4 4 5 | 0.17 | 1349 | 1 43 | 0.57 | 985 | 1049 | 1044 | 0.38 | 0.23 | 0.28 |
| | | | | | | | | | Crtical Arm: RFC: | B 0.69 | B 0.55 | B 0.61 |
| In accorda | nce with TPD | 0M V2 Ch4 | | - | | | | | | AM | PM | WEEKEND |
| Calculated b | y: | | | Date: | Dec-24 | | Checked b | by: | | | | |

| Iob Title | Proposed I | Residential D | evelonmer | nt In Area Sl | own As 'Roa | d' Various | Lots In D I |) 221 And | Adioining Gove | rnment I | and Sha H | Ia Sai Kung |
|--------------|---------------|---------------|-----------|---------------|----------------|----------------|--------------|----------------|----------------|----------|------------|--------------|
| Junction: | Po Tung R | Coad/Mei Yu | Street/T | ai Mong To | ai Road | a, various | Lots III D.I | Ref No | · B (Ref) | innent i | and, one r | ia, Sui Rung |
| Schomo: | Vear 2035 | Reference I | Flow | ai wiong it. | ai itoud | | | Dof No. | . B (Ref) | | | |
| Voor: | 2025 | | 10% | Job No · | CUV507017 | 10 | | Dov · | • | | | |
| | 2035 DM | | | JUU INU | CIIK307917 | 10 | | KUV | | | | |
| | Toi Mong T | noi Pood (N) | | | | | | | | | | |
| ARM A: | Tai Mong T | sai Koad (IN) | | | | | | | | | | |
| ARM B: | Mel ru Stre | et | | | | | | | | | | |
| АКМ С: | Po Tung Ro | ad (S) | | | | | | \frown | | | | |
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| | | | | | | | с — | | | 4 | | |
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| GEOMETI | RY | | | | | | | В | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| А | 3.65 | 4.50 | 12 | 35 | 28 | 30 | 0.11 | | | | | |
| В | 4.00 | 4.00 | 1 | 12 | 28 | 40 | 0.00 | | | | | |
| С | 5.00 | 5.00 | 1 | 45 | 28 | 45 | 0.00 | | | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| AM FLOW | s | | | | | | | | | | | |
| from \ to | A | в | C | | | | | Circ | Entry | | | |
| A | 5 | 25 | 735 | | | | | 1 | 5 765 | | | |
| D | 10 | 5 | 15 | | | | | 74 | 5 705 | | | |
| C | 510 | 5 | 5 | | | | | 2 | 0 520 | | | |
| C | 510 | 5 | 5 | | | | | 2 | 0 520 | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PM FLOW | S | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 10 | 500 | | | | | 3 | 5 515 | | | |
| В | 5 | 5 | 30 | | | | | 51 | 0 40 | | | |
| С | 685 | 25 | 5 | | | | | 1 | 5 715 | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WEEKENI | DFLOWS | | | | | | | I | | | | |
| from \ to | | в | C | | | | | Circ | Fntry | | | |
| Δ | 5 | 30 | 580 | | | | | 4 | 5 615 | | | |
| B | 15 | 5 | 40 | | | | | 50 | 0 60 | | | |
| C D | 670 | 25 | 40 | | | | | 39 | 5 710 | | | |
| C | 070 | 33 | 5 | | | | | 2 | 5 /10 | | | |
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| | <u> </u> | | | | | | | ļ | | | | |
| CALCULA | TIONS | | | | | | 1 | Q _E | | RFC | | |
| ARM | K | X_2 | М | F | t _D | f _c | AM | PM | WEEKEND | AM | PM | WEEKEND |
| А | 1.02 | 4.34 | 0.04 | 1316 | 1.48 | 0.58 | 1335 | 1323 | 1317 | 0.57 | 0.39 | 0.47 |
| В | 0.93 | 4.00 | 0.04 | 1212 | 1.48 | 0.56 | 742 | 864 | 822 | 0.04 | 0.05 | 0.07 |
| С | 0.98 | 5.00 | 0.04 | 1515 | 1.48 | 0.62 | 1465 | 1468 | 1462 | 0.35 | 0.49 | 0.49 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | • | | | | | | • | | Crtical Arm: | А | С | С |
| | | | | | | | | | RFC: | 0.57 | 0.49 | 0.49 |
| - In accorda | unce with TPD | OM V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated h | oy: | | | Date: | Dec-24 | | Checked by | v: | | | | |
| | - | | | | | | | | | | | |

| Job Title: | Proposed Res | sidential I | Development | t In Area Sh | own As 'Road', | Various I | Lots In D.D. 22 | 21 And A | djoining Govern | nent Lan | d, Sha H | a, Sai Kung |
|--------------|---------------|-------------|-------------|--------------|----------------|----------------|-----------------|--------------|-----------------|--------------|----------|-------------|
| Junction: | Tai Mong T | 'sai Road | l/Fuk Man | Road | | | | Ref. No. | : C (Ref) | | | |
| Scheme: | Year 2035 I | Reference | e Flow | | | | | Ref. No. | : | | | |
| Year: | 2035 | | | Job No.: | CHK5079171 | .0 | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Po Tung Road | I | Southern | | | | | в | | | | |
| ARM B: | Po Tung Road | I | Northern | | | | | ĭ | | | | |
| ARM C: | Fuk Man Road | d | | | | | | | | | | |
| | • | | | | | | | \frown | | | | |
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| 67.01 (F) | | | | | | | | ļ | | | | |
| GEOMETI | RY | | _ | | _ | | _ | Α | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| A | 4.50 | 4.50 | 1 | 10 | 26 | 15 | 0.00 | | | | | |
| В | 7.00 | 8.50 | 5 | 40 | 26 | 45 | 0.48 | | | | | |
| С | 3.50 | 6.00 | 12 | 10 | 26 | 30 | 0.33 | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| AM FLOW | I IS | | | | | | | | | | | |
| from \ to | | D | C | | | | 1 | Circ | Enter | | | |
| Irom \ to | A | В | 120 | | | | | Circ | Entry | | | |
| A | 85 | 0 | 430 | | | | | 115 | 515 | | | |
| В | 725 | 5 | 60 | | | | | 520 | 790 | | | |
| С | 0 | 105 | 5 | | | | | 815 | 110 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PM FLOW | l VS | | | | | | I | | | | | |
| from \ to | | D | C | | | | 1 | Ciro | Entry | | | |
| | 105 | D | 280 | | | | | 00 | 495 | | | |
| A | 105 | 0 | 580 | | | | | 90 | 485 | | | |
| В | 480 | 5 | 45 | | | | | 490 | 530 | | | |
| С | 0 | 80 | 5 | | | | | 590 | 85 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| WEEKENI | DELOWS | | | | | | I | | | | | |
| from \ to | | р | C | | | | l l | Circ | Enterr | | | |
| | A 75 | D | 100 | | | | | 140 | Elitry | | | |
| A | /5 | 0 | 490 | | | | | 140 | 565 | | | |
| В | 540 | 5 | 75 | | | | | 570 | 620 | | | |
| С | 0 | 130 | 5 | | | | | 620 | 135 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | TIONS | | | | | | | 0. | | REC | | |
| | | v | м | Б | t | f | 4.14 | VE DM | WEEKEND | AM | DM | WEEKEND |
| AKM | N. 1.00 | A_2 | NI 0.02 | F | ι _D | 1 _c | AM | PM | 1205 | AIVI 0.40 | C 27 | WEEKEIND |
| A _ | 1.00 | 4.50 | 0.03 | 1364 | 1.48 | 0.59 | 1299 | 1314 | 1285 | 0.40 | 0.37 | 0.44 |
| В | 0.97 | 7.77 | 0.03 | 2353 | 1.48 | 0.80 | 1886 | 1909 | 1847 | 0.42 | 0.28 | 0.34 |
| С | 0.95 | 5.00 | 0.03 | 1515 | 1.48 | 0.62 | 958 | 1091 | 1073 | 0.11 | 0.08 | 0.13 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | I | | | | | | I | | Cutical A | р | | |
| | | | | | | | | | Crucal Arm: | D 0.12 | A | A |
| | | | | | | | | | RFC: | 0.42 | 0.37 | 0.44 |
| - In accorda | nce with TPDN | 1 V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated l | by: | | | Date: | Dec-24 | | Checked by: | | | | | |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| Junction: | Po Tun | g Road/ | Man Ni | n Street (J | ID) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
|----------------------|-------------|-------------|-------------|-------------------------|---------------|-------------|----------|----------------|-----------|----------------------|-----------------------|-------------------|-------------------------|------------|----------------------------|-------------------------|------------|
| Description: | 2035 Re | eference | Traffic | Flow | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | ents | | | | Radi | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Po Tung Road NB | | A A B | 1 1 2 | 3.400 3.400 3.400 | | 15 | • | | | 1955 2095 1905 | 1955 2095 1905 | 410 440 125 | 0.210 0.210 0.066 | | 485 520 160 | 0.248 0.248 0.084 | 0.248 |
| Po Tung Road SB | ↓ | C C | 1 1 | 3.400 3.400 | 15 | | | 17% | 15% | 1925 2095 | 1925 2095 | 562 613 | 0.292 0.293 | 0.293 | 482 523 | 0.250 0.250 | |
| Man Nin Street WB | ۳ | Ep | 2 | 3.800 MIN GRE | 15 EN + FL | 20 ASH = | 13 | 67% / 33% + | 67% / 33% | 1900 * | 1900 * 20 | 210 | 0.111 | | 300 | 0.158 | |
| Notes: | | | | Flow: (pc | :u/hr) | | | | | | ++ | Group | C.B.D | C.Ep.D | Group | C.Ep .D | A.Ep .D |
| *Additional satura | tion flow | of 80 pc | u/hr | | | | | | | | N | y | 0.469 | 0.403 | y | 0.408 | 0.406 |
| (3600s / 90s per c | cycle * rel | ease 2 | eu | | | | | | | | | L (sec) | 13 | 29 | L (sec) | 29 | 32 |
| peu/cycle) | | | | | | 850(100 | 5) | | | 1080(935) | • | C (sec) | 90 | 90 | C (sec) | 90 | 90 |
| | | | | | 125(160) | | 140(200) | | ▶70(100) | 95(70) | , | y pract. | 0.770 | 0.610 | y pract. | 0.610 | 0.580 |
| | | | | | 125(100) | | | Y | | | | R.C. (%) | 64% | 51% | R.C. (%) | 49% | 43% |
| Stage / Phase Di | agrams | | | | | | | | | | | | | | | | |
| 1. A | 4 | | — c | 2. | В | ¥ | | Ep | D | * | | 4. | | | 5. | | |
| I/G= 5 | | | I/G= 4 | 1 | | 20 20 | | I/G= 2 | | | I/G= | | | I/G= | | | |
| | | | 1.021 | | | _0 | | 1.00-2 | 1 | | Date | DEC, 2024 | | Po Tung F | ion: Road/ Man Nin Stre | et | D |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| Junction: | Po Tun | g Road/ | Man Ni | n Street (J | ID) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
|----------------------------------|--------------|-------------|-------------|-------------------------|---------------|-------------|---------|----------------|-----------|----------------------|-----------------------|-------------------|-------------------------|--------------------|----------------------------|-------------------------|------------|
| Description: | 2035 Re | eference | Traffic | Flow | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | ents | | | | Radi | us (m) | ıt (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Po Tung Road NB | | A A B | 1 1 2 | 3.400 3.400 3.500 | | 15 | | | | 1955 2095 1915 | 1955 2095 1915 | 471 504 130 | 0.241 0.241 0.068 | | 471 504 130 | 0.241 0.241 0.068 | |
| Po Tung Road SB | ₩ | C C | 1 1 | 3.400 3.400 | 15 | | | 26% | 26% | 1905 2095 | 1905 2095 | 548 602 | 0.288 0.287 | 0.288 | 548 602 | 0.288 0.287 | 0.288 |
| Man Nin Street WB | * ⊺ * | D | 3 | 3.800 MIN GRE | 15 EN + FL | 20 ASH = | 13 | 52% / 48% + | 52% / 48% | 1905 * = | 1905 * 20 | 355 | 0.186 | 0.186 | 355 | 0.186 | . 186 |
| | | | | | | | | | | | | | | | | | |
| Notes: | | | | Flow: (po | :u/hr) | | | | | | + → | Group | A,Ep,D | C,Ep,D | Group | A,Ep,D | C,Ep,D |
| *Additional satura | tion flow | of 80 pc | u/hr ed | | | | | | | | | у | 0.427 | 0.474 | у | 0.427 | 0.474 |
| (3600s / 90s per (pcu/cycle) | cycle * rel | ease 2 | | | | | | | | | | L (sec) | 32 | 29 | L (sec) | 32 | 29 |
| | | | | | \rightarrow | 975(975 |) | | | 1010(1010) | | C (sec) | 90 | 90 | C (sec) | 90 | 90 |
| | | | | | 130(130) | | 185(185 | | ▶170(170) | 140(140) |) | y pract. | 0.580 | 0.610 | y pract. | 0.580 | 0.610 |
| | | | | | , | | | Y | | | | R.C. (%) | 36% | 29% | R.C. (%) | 36% | 29% |
| Stage / Phase Di | agrams | | | | | | | | | | | | 1 | | | | |
| 1. A | * | | — c | 2. | В | ¥ | | Ep | D | * | | 4. | | | 5. | | |
| I/G= 5 I/G= 5 | | | I/G= 4 | 1 1 | | 20 20 | | I/G= 2 | | | I/G= | : | | I/G= | | | |
| <u> </u> | | | | | | | | 1.100 | | | Date | DEC, 2024 | | Junct Po Tung F | ion: Road/ Man Nin Stre | et | D |
| TRAFFIC S | AFFIC SIGNALS CALCULATION | | | | | | | | | | | : <u>CHK5</u> | <u>07917</u> 10 | Ν | IVA HON | G KONG | LIMITED |
|-------------------------|---------------------------|----------|----------|----------------|-----------|----------|---------|---------|------------|---------------------|-----------------------|------------------|-----------------|--------------------|----------------------------|----------------|------------|
| Junction: | Pedest | rian Cro | ssing ne | ear Yau Ma | a Po Stre | et (JE) | | - | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | Year 20 |)35 Refe | rence T | raffic Flow | | | | | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | ents | | | | Radi | us (m) | t (%) | Pro. Tu | ırning (%) | Revised S Flow (| Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Movem | Phase | Stage | Width (m) | Left | Right | Gradien | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway (NB) | \rightarrow | A A | 1 1 | 3.400 3.400 | 1 | | | 1 | 1 | 1955 2095 | 1955 2095 | 471 504 | 0.241 0.241 | 1 | 560 600 | 0.286 0.286 | 0.286 |
| Hiram's Highway (SB) | t t | B B | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 591 634 | 0.302 0.303 | 0.303 | 548 587 | 0.280 0.280 | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Pedestrian Crossi | ng | Ср | 2 | MIN GRE | EN + FL | ASH = | 13 | + | 7 | = | 20 | | | * | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | I | | | | | | | | | | | | | |
| Notes: | | | | Flow: (po | cu/hr) | | | | | | → N | Group | A,Cp | B,Cp | Group | B,Cp | A,Cp |
| | | | | | | | | | | | | У | 0.241 | 0.303 | y L (see) | 0.280 | 0.286 |
| | | | | | | 075/116 | 2) | | | 1005(1105) | | | 20 | 20 | L (sec) | 20 | 20 |
| | | | | | | 375(110 | , | | | 1223(1133) | | v pract | 0.640 | 0.640 | v pract | 0 640 | 0.640 |
| | | | | | | | | | | | | R.C. (%) | 166% | 111% | R.C. (%) | 128% | 123% |
| Stage / Phase Dia | agrams | | | | | | | | | | | . , | | | | | |
| 1. | | | | 2. | | | | 3 | • | | | 4. | | | 5. | | |
| A | | | | | | ^ | | | | | | | | | | | |
| | | | в | | | Ср | | | | | | | | | | | |
| | | | | | | v | | | | | | | | | | | |
| I/G= 3 I/G= 3 | | | I/G= 4 | 4 | | 20 20 | | I/G= | | | I/G= | | | I/G= | | | |
| | | | | | | • | | 1 | | | Date | e: DEC, 2024 | | Junct Pedestria | ion: n Crossing near Ya | u Ma Po Street | E |

| I NAFFIC 3 | | LSC | ALU | ULAI | | | | | | | JOD NO. | : <u>CHK5</u> | <u>J7917</u> 10 | N | | GRONG | |
|---|---------------|----------|----------|----------------|----------|----------|----------|---------|-----------|---------------------|-----------------------|------------------|-----------------|---------------------|----------------------------|----------------|------------|
| Junction: | Pedestr | ian Cros | ssing ne | ear Yau Ma | Po Stree | et (JE) | | | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | Year 203 | 35 Refe | rence T | raffic Flow | | | | | | | Designed | By: MLC | | | Checked By | : PTC | |
| | nts | | | | Radiu | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway (NB) | \rightarrow | A A | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 529 566 | 0.271 0.270 | | 529 566 | 0.271 0.270 | |
| Hiram's Highway (SB) | ↓ | B B | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 577 618 | 0.295 0.295 | 0.295 | 577 618 | 0.295 0.295 | 0.295 |
| Pedestrian Crossing Cp 2 MIN GREEN + FLASH = 13 + | | | | | | | | | 7 | - | 20 | | | | | | |
| Notes | | | | Flow: (pg | su/br) | | | | | | | | | 1 | | | |
| | | | | . iow. (pc |) | | | | | | → N | Group | A,Cp | B,Cp | Group | A,Cp | B,Cp |
| | | | | | | | | | | | | у 1 (ала) | 0.271 | 0.295 | y | 0.271 | 0.295 |
| | | | | | | 1005/10 | | | | 1105(1105) | | | 20 | 20 | | 20 | 20 |
| | | | | | F | 1095(10 | 55) | | | 1195(1195) | • | v pract | 90 | 0.640 | v pract | 0.640 | 90 |
| | | | | | | | | | | | | BC (%) | 137% | 117% | BC (%) | 137% | 117% |
| Stage / Phase Dia | grams | | | | | | | | | | | 1 | 107 /0 | 117 /0 | 1 | 107 /0 | 117 /0 |
| 1. | 9 | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| | 4 | | B | | | Cp | | | | | | | | | | | |
| I/G= 3 I/G= 3 | | | I/G= 4 | 4 | | 20 20 | | I/G= | | | I/G= | | | I/G= | | | |
| | | | | | | | | | | | Date | DEC, 2024 | | Junct Pedestriar | ion: n Crossing near Ya | u Ma Po Street | E |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CH</u>K50791710

MVA HONG KONG LIMITED

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | dential Develop | oment In Area S | hown As 'Road', V | arious Lots | In D.D. 221 Au | nd Adjoining G | overnment Land | l, Sha Ha, Sai Kung |
|------------------|--------------------------|-------------------|---------------------|--------------------|----------------|-----------------|----------------|----------------|---------------------|
| Junction: | Po Tung Road | d/Yau Ma Po S | Street | | | | | Ref. No.: | F (Ref) |
| Scheme: | Year 2035 Re | eferene Flow | | | | | | Ref. No.: | |
| Year: | 2035 | | | Job No.: CHK50 | 791710 | | | Rev.: | |
| ABM A | Po Tuna Bo | ad (NB) | | | | | | | |
| ARM B | Yau Ma Po S | Street | | | | | | | |
| ABM C: | Po Tuna Bo | ad (SB) | | | | | | | |
| ALINE C. | 10 Tung Ho | ad (OD) | | | | | | | |
| | | | | | | | | | |
| ~ . | AM | (PM) | | 1 | | | | | |
| CA | 1150 | 1000 | 1105 | ► ► | | | | | |
| СВ | 40 | 60 | 50 | | | | | | |
| ARM C | | | | | | | | | |
| Po Tung Road | (SB) | | • | | | ¥ | | | |
| | | | | | | | | | |
| | | | | | | | | | _ |
| | | | - | | | AM | (PM) | [WEEKEND] | - |
| | | | | |] | 900 | 1085 | 1035 | AC |
| | | | | | | 30 | 25 | 15 | AB |
| | | • | | | | 00 | 20 | 10 | |
| | | | | | | | | | |
| | | | ו ו ו | | | | | | Po Tung Road (NB) |
| | | | | | | | | | |
| | | | | | Ļ | | | | |
| | | | | | • | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | AM | 75 | 0 | | | | | |
| | | (PM) | 80 | 0 | | ARM B | | | |
| | | | | 0 | | Vau Ma Po Str | oot | | |
| | | | 60 | 0 | | | et . | | |
| | | | BC | BA | | | | | |
| GEOMETRY | | | | | | | | | |
| Major road wid | lth | | W | 11.00 | | Lane widths | | w(b-a) | 0.00 |
| Central Reserv | ve width | | Wcr | 1.50 | | | | w(b-c) | 3.50 |
| 2 Lane Minor / | Arm (Y/N) | | | n | | | | w(c-b) | 3.30 |
| Visibilities | | | Vr(b-a) | 0 | | Calculated | | D | 0.53 |
| | | | VI(b-a) | 0 | | | | E | 0.91 |
| | | | Vr(b-c) | 35 | | | | F | 0.89 |
| | | | Vr(c-b) | 35 | | | | Y | 0.62 |
| | | | VI(0 D) | 00 | | | | | 0.02 |
| | | | | | | | | | |
| ANAL 1515 | | | | | | | | | |
| | | | | | | | AM PEAK | (PM) PEAK | [WEEKEND] PEAK |
| I RAFFIC FLO | ws | | q(c-a) | | | | 1150 | 1000 | 1105 |
| | | | q(c-b) | | | | 40 | 60 | 50 |
| | | | q(a-b) | | | | 30 | 25 | 15 |
| | | | q(a-c) | | | | 900 | 1085 | 1035 |
| | | | q(b-a) | | | | 0 | 0 | 0 |
| | | | q(b-c) | | | | 75 | 80 | 60 |
| | | | f | | | | 1.00 | 1.00 | 1.00 |
| | | | | Factor | | | | | |
| CADACITICO | | | O(b, c) | 1 40101 | | | 140 | 100 | 100 |
| UAFAUITES | | | | 1 | | | 142 | 120 | 120 |
| | | | Q(b-c) | 1 | | | 491 | 453 | 464 |
| | | | Q(c-b) | 1 | | | 478 | 441 | 454 |
| | | | Q(b-ac) | 1 | | | 491 | 453 | 464 |
| | | | | | | | | | |
| RFC's | | | b-a | | | | 0.000 | 0.000 | 0.000 |
| | | | b-c | | | | 0.153 | 0.177 | 0.129 |
| | | | c-b | | | | 0.084 | 0 136 | 0 110 |
| | | | - ~ | | | | 0 159 | 0 177 | 0.120 |
| | | | 5 40 | | | | 0.100 | 0.177 | 0.123 |
| | | | | | | | | | |
| Worst RFC | | | | | | | 0.15 | 0.18 | 0.13 |
| | | | | | | | | | |
| Where VI and | Vr are visibility d | istances to the I | eft or right of the | respective streams | 6 | | | | |
| D = (1+0.094) | w(b-a)-3.65))(1+0 | 0.0009(Vr(b-a)-1 | 120))(1+0.0006(| √I(b-a)-150)) | | | | | |
| E = (1+0.094(v | w(b-c)-3.65))(1+0 | 0.0009(Vr(b-c)-1 | 20)) | | | | | | |
| F = (1+0.094) | v(c-b)-3.65))(1+0 |).0009(Vr(c-b)-1 | 20)) | | | | | | |
| Y = 1-0 03451 | / | | .,, | | | | | | |
| f = proportion | • of minor troffic to | rning loft | | | | | | | |
| r = proportion (| | | | ~ | popitri of | binod atra | | | |
| ປ (ມ-ac) = Q(b | -c) Q(D-a)/(1-t)*(| Q(D-C)+1"Q(D-A) | | Ca | ipacity of com | iuirieu streams | <u>.</u> | | |
| | | | | - ir | n accordance | with TPDM V2 | Un4 | | |
| Calculated I | ov: | | | Date: | Dec | -24 | Checked by | : | |

| TRAFFIC S | AFFIC SIGNALS CALCULATION | | | | | | | | | | Job No. | : <u>CHK5</u> | 07917 <u>1</u> 0 | Ν | IVA HON | g kong | LIMITED |
|--|---------------------------|----------------------|-------------------|-------------------------|----------------------|----------------|----------|-----------|-----------|-----------------------|-----------------------|-------------------|-------------------------|------------|-------------------|-------------------------|------------|
| Junction: | Hiram's | Highwa | ay / Chui | Tong Roa | ad (JG) | | | _ | | | | | | | Design Year | 2035 | |
| Description: | 2035 R | eference | e Traffic | Flow | | | | _ | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | ints | | | | Radi | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | A A E | 1,2 1,2 2 | 4.300 4.300 4.300 | | 15 | | | | 2045 2185 1985 | 2045 2185 1985 | 428 457 50 | 0.209 0.209 0.025 | 0.025 | 498 532 80 | 0.244 0.243 0.040 | 0.040 |
| Hiram's Highway (SB) | ↓ ↓ | B B B | 1 1 1 | 3.300 3.300 3.300 | 20 | | | | | 1810 2085 2085 | 1810 2085 2085 | 105 523 522 | 0.058 0.251 0.250 | 0.251 | 125 438 437 | 0.069 0.210 0.210 | 0.210 |
| Chui Tong Road | *T• | С | 3 | 3.300 | 15 | 22.5 | | 55% / 45% | 36% / 64% | 1850 * | 1860 * | 100 | 0.054 | 0.054 | 110 | 0.059 | 0.059 |
| Pedestrian Crossi | ng | Fp Нр | 4 | MIN GRE | :EN + FL :EN + FL | ASH = ASH = | 10 11 | + + | 8 10 | | 18 21 | | | | | | |
| Notes: | | | | Flow: (po | :u/hr) | | | | | | ₹N | Group | B,E,C,Fp | B,E,C,Hp | Group | A,C,Hp | B,E,C,Hp |
| *Additional satura added due to poc | tion flow ket provid | of 60 po ded (360 | cu/hr is)0s / | | | | | | | | | У | 0.330 | 0.330 | У | 0.303 | 0.310 |
| 120s per cycle * re | elease 2 | pcu/cyc | le) | | | | | | | | | L (sec) | 31 | 41 | L (sec) | 36 | 41 |
| l | | | | | $ \rightarrow$ | 885(1030 |)) | • | 45(70) | 1045(875) | \mathbf{k} | C (sec) | 120 | 120 | C (sec) | 120 | 120 |
| l | | | | | 50(80) |) | 55(40) | · \ | 45(70) | 105(125) | | y pract. | 0.668 | 0.593 | y pract. | 0.630 | 0.593 |
| | | | | | | | | γ | | | | R.C. (%) | 102% | 80% | R.C. (%) | 108% | 91% |
| Stage / Phase Dia 1. | agrams | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| l | | | | | | | | | | | | | | ٨ | | | |
| l | | | | | Δ | | | | | | | | | | | | |
| А► | | | | | E | | | | | | | | | Нр | | | |
| 1 | • | | <u> </u> | | | | | | * | $\mathbf{\mathbf{h}}$ | | | | | | | |
| l | ۲ | <i>.</i> | Б | | | | | | | Y | | < | Fp | > | | | |
| I/G= 3 | | | I/G= 5 | 5 | | | | I/G= 5 | | | I/G= | = 10 | 21 | I/G= | · | | |
| | | | 1/0 | . 1 | | | | 1/0 5 | | | 1/0 | 10 | 01 | 1/0 | | | |

| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | TRAFFIC S | AFFIC SIGNALS CALCULATION | | | | | | | | | | | : <u>CHK5</u> | 0791710 | Ν | IVA HON | g kong | LIMITED |
|---|--|---------------------------|----------------------|-------------------|-------------------------|--------------------|----------------|----------|-----------|-----------|----------------------|-----------------------|-------------------|-------------------------|------------|-------------------|-------------------------|------------|
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Junction: | Hiram's | Highw | ay / Chui | Tong Roa | id (JG) | | | _ | | | | | | | Design Year | :2035 | |
| Approach g g g g g g g g g g g g g g g g g g g | Description: | 2035 R | eferenci | e Traffic | Flow | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| Approach 9 1 1 4 1 4 0 | | ents | | | | Radi | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (j | Saturation pcu/hr) | | WE | | | WE | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hiram's Highway NB | | A A E | 1,2 1,2 2 | 4.300 4.300 4.300 | | 15 | | | | 2045 2185 1985 | 2045 2185 1985 | 469 501 100 | 0.229 0.229 0.050 | 0.050 | 469 501 100 | 0.229 0.229 0.050 | 0.050 |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Hiram's Highway (SB) | ↓ | B B B | 1 1 1 | 3.300 3.300 3.300 | 20 | | | | | 1810 2085 2085 | 1810 2085 2085 | 120 495 495 | 0.066 0.237 0.237 | 0.237 | 120 495 495 | 0.066 0.237 0.237 | 0.237 |
| Notes: Pedestrian Crossing Fp 4 MIN GREEN + FLASH = 10 + 8 - 18 Notes: hp 4 MIN GREEN + FLASH = 11 + 10 = 21 . . . *Additional saturation flow of 80 pouhr is added due pocket provided (9000 / 100(100) Flow: (pcu/hr) \sqrt{n} Group 8.6.0% Group 8.6.0% Group 8.6.0% 9.0.393 0.393 y 0.393 14 L (sec) 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 </td <td>Chui Tong Road</td> <td>*†*</td> <td>С</td> <td>3</td> <td>3.300</td> <td>15</td> <td>22.5</td> <td></td> <td>59% / 41%</td> <td>59% / 41%</td> <td>1845</td> <td>1845</td> <td>195</td> <td>0.106</td> <td>0.106</td> <td>195</td> <td>0.106</td> <td>0.106</td> | Chui Tong Road | * † * | С | 3 | 3.300 | 15 | 22.5 | | 59% / 41% | 59% / 41% | 1845 | 1845 | 195 | 0.106 | 0.106 | 195 | 0.106 | 0.106 |
| Notes: Flow: (pcu/hr) Flow: (pcu/hr) $Additional saturation flow of 60 pcu/hr is added due to pocket provided (3600s / 120 sper cycle * release 2 pcu/cycle) B.E.C.Fp B.E$ | Pedestrian Cross | ng | Fp Hp | 4 4 | MIN GRE | EN + FL EN + FL | ASH = ASH = | 10 11 | + + | 8 10 | = | 18 21 | | | | | | |
| *Additional saturation flow of 60 pcu/hr is added due to pocket provided (3600s / 120s per cycle * release 2 pcu/cycle) 120s per cycle * release 2 pcu/cycle) 100(100) 115(115) 100(100) 115(115) 100(100) 115(115) 120(120) 120 | Notes: | | | | Flow: (po | :u/hr) | | | | | | ∠ N | Group | B,E,C,Fp | B,E,C,Hp | Group | B,E,C,Fp | B,E,C,Hp |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | *Additional satura added due to poc | tion flow ket provid | of 60 po ded (360 | cu/hr is)0s / | | | | | | | | | у | 0.393 | 0.393 | У | 0.393 | 0.393 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 120s per cycle * r | elease 2 | pcu/cyc | le) | | | | | | | | | L (sec) | 31 | 41 | L (sec) | 31 | 41 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | | | $ \rightarrow$ | 970(970) | | | | 990(990) | \checkmark | C (sec) | 120 | 120 | C (sec) | 120 | 120 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | | | 100(100) | | 115(115 | | ▶80(80) | 120(120) | | y pract. | 0.668 | 0.593 | y pract. | 0.668 | 0.593 |
| Stage / Phase Diagrams 1. $A \longrightarrow E$ 3. 4. 5. Hp | | | | | | | | | Y | | | | R.C. (%) | 70% | 51% | R.C. (%) | 70% | 51% |
| $A \longrightarrow Hp$ | Stage / Phase Di 1. | agrams | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| | Α. | | | | | A | | | | | | | | | < | | | |
| | | 4 | | в | | E | | | | * | \bigvee | | | | Hp √ | | | |
| · · · · · · · · · · · · · · · · · · · | | • | | | | | | | | | ľ | | < | Fp | > | | | |
| VG=3 V/G=5 V/G=10 21 V/G= | I/G= 3 | | | I/G= 5 | 5 | | | | I/G= 5 | | ÷ | I/G: | = 10 | 21 | I/G= | | | |
| <u> va= 5 va= 5 va= 5 va= 5 va= 10 21 va= </u> Date: Junction: G | i/G=3 | | | I/G= | D | | | | I/G= 5 | | | Date | = IU : | 21 | Junct | ion: | | G |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| conceptor: 2002 References Turble Fiber PTC Description Fiber F | Junction: | Hiram's | Highw | ay/Hong | Kin Road | (JH) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
|--|--|-------------------------------------|----------------------------|--------------------------------------|---|--|--|-----------------------|------------------|-----------------------------|----------------------|----------------------------------|------------------|-------------------------|-----------------------|-------------------------|-------------------------|------------------------|
| Augure the form of | Description: | 2035 Re | eference | e Traffic | Flow | | | | _ | | | Designed | By: MLC | | | Checked By | /: <u>PTC</u> | |
| Approach 9 | | nts | | | | Radi | us (m) | t (%) | Pro. Tu | ırning (%) | Revised Flow (| Saturation (pcu/hr) | | AM Peak | | | PM Peak | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hiram's Highway NB | | с с о | 1,2,3 1,2,3 3 | 3.400 3.400 4.000 | | 18 | • | | | 1955 2095 1990 | 1955 2095 1990 | 403 432 65 | 0.206 0.206 0.033 | | 485 520 70 | 0.248 0.248 0.035 | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hiram's Highway SB | ↓ ↓ | A A A | 1,2,5 1,2,5 1,2,5 | 3.300 3.300 3.300 | 15 | | | | | 1770 2085 2085 | 1770 2085 2085 | 60 555 555 | 0.034 0.266 0.266 | | 80 433 432 | 0.045 0.208 0.207 | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hong Kin Road WB | *] * | G G | 4 4 | 3.700 3.700 | 20 | 18 | | | | 1845 1960 | 1845 1960 | 105 50 | 0.057 0.026 | | 70 75 | 0.038 0.038 | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hiram's Highway NB | t ← ← | E E E | 2,3 2,3 2,3 | 3.400 3.400 3.400 | 20 | | | | | 1820 2095 2095 | 1820 2095 2095 | 20 365 365 | 0.011 0.174 0.174 | 0.174 | 35 243 242 | 0.019 0.116 0.116 | 0.116 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Hiram's Highway SB | ↓ ↓ ↓ | F F P | 2,3,4 2,3,4 4 | 3.400 3.400 3.500 | | 18 | | | | 1955 2095 1945 | 1955 2095 1945 | 507 543 60 | 0.259 0.259 0.031 | 0.031 | 398 427 95 | 0.204 0.204 0.049 | 0.049 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Po Lo Che Road EB | 4 | В | 1 | 3.000 | 10 | 15 | | 38% / 63% | s 40% / 60% | 1745 * | 1740 * | 200 | 0.115 | 0.115 | 200 | 0.115 | 0.115 |
| Notes: Additional saturation flow of 36 pcu/hr is added due to pocket provided (3600s / 100s per cycle * release 1 pcu/cycle)Flow: (pcu/hr) $20(35)$ $20(35)$ $75(80)$ N $125(120)$ $730(485)$ GroupB.E.G.LpB.E.P.NpGroupB.F.NpB.E.P.Np y 0.346 0.320 y 0.319 0.280 $100s$ per cycle * release 1 pcu/cycle) $1110(865)$ $75(80)$ $125(120)$ $12(sec)$ 27 34 $L(sec)$ 20 34 $100s$ per cycle * release 1 pcu/cycle) $1110(865)$ $1050(825)$ $60(95)$ 100 100 $C(sec)$ 100 100 $105(70)$ $\sqrt{50(75)}$ $50(75)$ $1050(825)$ $1050(825)$ $66(7)$ 0.594 y pract. 0.720 0.594 100 $1050(825)$ $1050(825)$ $1050(825)$ 0.657 0.594 y pract. 0.720 0.594 100 $1050(825)$ $1050(825)$ $1050(825)$ 100 100 100 100 100 $105(70)$ $\sqrt{50(75)}$ $50(75)$ $1050(825)$ $1050(825)$ 100 </th <th>Pedestrian Crossi</th> <th>ng</th> <th>Hp Kp Lp Jp Np</th> <th>1,2,3,5 4 3,4 5 1,5 5</th> <th>MIN GRE MIN GRE MIN GRE MIN GRE MIN GRE</th> <th>EN + FL EN + FL EN + FL EN + FL EN + FL EN + FL</th> <th>ASH = ASH = ASH = ASH = ASH = ASH =</th> <th>5 5 5 5 9</th> <th>+ + + +</th> <th>7 6 8 7 10 5</th> <th>= = = =</th> <th>12 11 13 12 15 14</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> | Pedestrian Crossi | ng | Hp Kp Lp Jp Np | 1,2,3,5 4 3,4 5 1,5 5 | MIN GRE MIN GRE MIN GRE MIN GRE MIN GRE | EN + FL EN + FL EN + FL EN + FL EN + FL EN + FL | ASH = ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 9 | + + + + | 7 6 8 7 10 5 | = = = = | 12 11 13 12 15 14 | | | | | | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Notes: | | | | Flow: (po | :u/hr) | | | 20(35) | | 4 | ▲ ► | Group | B,E,G,Lp | B,E,P,Np | Group | B,F,Np | B,E,P,Np |
| $1050(825) \leftarrow 100 \\ 1050(825) \leftarrow 100 \\ 1050(825) \leftarrow 100 \\ 1050(825) \leftarrow 100 \\ 1050 $ | added due to poch 100s per cycle * re | on flow o ket provic elease 1 | led (36 pc pcu/cyc | u/nr is)0s / :le) | 65(70) | 835(100 | 5) | 1110(865 | 5) 5) | 75(80) 730(485) | •~~ | 125(120) 60(95) | y L (sec) | 0.346 27 100 | 0.320 34 100 | y L (sec) C (sec) | 0.319 20 100 | 0.280 34 100 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | | 105(70) | | 50(75) | 60(80) | (| | 1050(825) | | y pract. | 0.657 | 0.594 | y pract. | 0.720 | 0.594 |
| $1.$ $C \longrightarrow B$ $A \longrightarrow V$ Hp $C \longrightarrow P$ Hp Hp Hp Hp Hp Hp Hp Hp | Stage / Phase Dia | agrams | | | | Ŷ | | | | | | | R.C. (%) | 90% | 86% | R.C. (%) | 126% | 112% |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 1. | • | | Y | 2. | | E | ٠ | 3 | | E | | 4. | | | 5. | | <> |
| I/G=3 I/G=5 I/G= I/G=5 I/G=10 14 I/G=3 I/G=5 I/G=6 I/G=5 I/G=10 14 Date: Junction: (H) | С | A | _ | B B ↓ Jp | с — +р < | → > | A | → - + | F | Hp > | ^^ -∵ Kp | • • F | G | Кр ^ ▲ Мр > | F | Нр <> | ↑ Lp ↓ A | qı ^ qt ∧ ↓ ↓ |
| | I/G= 3 I/G= 3 | | | I/G= | 5 | | | | I/G= I/G= | | | I/G: I/G: Date | = 5 = 5 e: | | I/G= I/G= Junct | 10 10 10 iion: | 14 14 | (H) |

TRAFFIC SIGNALS CALCULATION

Job No.: <u>CHK507917</u>10

MVA HONG KONG LIMITED

| Junction: | Hiram's | s Highw | ay/Hong | Kin Road | (JH) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
|--|------------------------|----------------------------------|--------------------------------------|---|---|--|-----------------------|------------------|-----------------------------|----------------------|----------------------------------|-------------------|-------------------------|------------|-------------------|-------------------------|-------------------------------|
| Description: | 2035 R | eferenc | e Traffic | Flow | | | | _ | | | Designed | By: MLC | | | Checked By | : PTC | |
| | nts | | | | Radi | us (m) | t (%) | Pro. Tu | ırning (%) | Revised Flow (| Saturation (pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | C C O | 1,2,3 1,2,3 3 | 3.400 3.400 4.000 | | 18 | • | · | | 1955 2095 1990 | 1955 2095 1990 | 478 512 55 | 0.245 0.244 0.028 | | 478 512 55 | 0.245 0.244 0.028 | |
| Hiram's Highway SB | ↓ ↓ | A A A | 1,2,5 1,2,5 1,2,5 | 3.300 3.300 3.300 | 15 | | | | | 1770 2085 2085 | 1770 2085 2085 | 70 490 490 | 0.040 0.235 0.235 | | 70 490 490 | 0.040 0.235 0.235 | |
| Hong Kin Road WB | *] * | G G | 4 4 | 3.700 3.700 | 20 | 18 | | | | 1845 1960 | 1845 1960 | 85 55 | 0.046 0.028 | | 85 55 | 0.046 0.028 | |
| Hiram's Highway NB | ₽ ← ← | E E E | 2,3 2,3 2,3 | 3.400 3.400 3.400 | 20 | | | | | 1820 2095 2095 | 1820 2095 2095 | 35 288 287 | 0.019 0.137 0.137 | 0.137 | 35 288 287 | 0.019 0.137 0.137 | 0.137 |
| Hiram's Highway SB | ↓ ↓ ↓ | F F P | 2,3,4 2,3,4 4 | 3.400 3.400 3.500 | | 18 | | | | 1955 2095 1945 | 1955 2095 1945 | 473 507 115 | 0.242 0.242 0.059 | 0.059 | 473 507 115 | 0.242 0.242 0.059 | 0.059 |
| Po Lo Che Road EB | ₄∔ | В | 1 | 3.000 | 10 | 15 | | 52% / 48% | 52% / 48% | 1735 * | 1735 * | 145 | 0.084 | 0.084 | 145 | 0.084 | 0.084 |
| Pedestrian Crossi | ng | Hp Mp Kp Lp Jp Np | 1,2,3,5 4 3,4 5 1,5 5 | MIN GRE MIN GRE MIN GRE MIN GRE MIN GRE | EN + FL EN + FL EN + FL EN + FL EN + FL | ASH = ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 9 | + + + + | 7 6 8 7 10 5 | = = = = | 12 11 13 12 15 14 | | | | | | |
| Notes: | on flow o | 1 00 mg | u/brio | Flow: (po | :u/hr) | | | 35(35) | | ٨ | ▲ | Group | B,F,Np | B,E,P,Np | Group | B,F,Np | B,E,P,Np |
| added due to pool 100s per cycle * re | ket provid elease 1 | ded (36 pcu/cyc | 00s / :le) | \rightarrow | 990(990) |) | | | 75(75) | • | 70(70) | y | 0.326 | 0.280 | y | 0.326 | 0.280 |
| | | | | ↓ 55(55) | | | 980(980 4 |) | 575(575) | | 115(115) \ | C (sec) | 100 | 100 | C (sec) | 100 | 100 |
| | | | | 85(85) | • | 55(55) | 70(70) | - | | 980(980) | | y pract. | 0.720 | 0.594 | y pract. | 0.720 | 0.594 |
| | | | | | γ | | | | | | | R.C. (%) | 121% | 112% | R.C. (%) | 121% | 112% |
| Stage / Phase Dia | agrams | | | 2 | | | | 3 | | | | 4 | | | 5 | | |
| 1. C → Hp <> | A | • | Å B P | 2. c | → > | E A | <u>/</u> - + | F - | C O Hp | Е ↓ Кр | F | 4. G | Кр> | P F | 5. Hp <> | ↑ Lp ↓ ↓ | Np <> ↓ Lp ↓ Jp ↓ |
| I/G= 3 | | | I/G= | 5 | | | | I/G= | | | 1/G: | = 5 = 5 | | I/G= | 10 | 14 14 | C 12 |
| | | _ | | | | | | | | | Date | e: | | Junct | ion: | | H |

| Job Title: | Proposed | Residentia | l Developme | ent In Area S | hown As 'Road', | Various | s Lots In D.D. | 221 And . | Adjoining Gover | mment La | and, Sha H | a, Sai Kung |
|--------------|---------------|----------------|-------------|---------------|-----------------|---------|----------------|----------------|-----------------|-----------|------------|-------------|
| Junction: | Tai Mong | Tsai Road | l/Sai Sha R | load | | | | Ref. No. | : I (Ref) | | | |
| Scheme: | Year 2035 | Reference | e Flows | | | | | Ref. No. | : | | | |
| Year: | 2035 Ref | | | Job No.: | CHK50791710 | | | Rev.: | | | | |
| AM | PM | | | | | | | c | | | | |
| ARM A: | Tai Mong Ta | sai Road | (West) | | | | | i i | | | | |
| ARM B: | Tai Mong Ts | sai Road | (East) | | | | | | | | | |
| ARM C: | Sai Sha Roa | d | | | | | | | | | | |
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| GEOMETH | RY | | | | | | ~ | | | | | |
| ARM | V | e | L | r | D | Phi | S | - | | | | |
| A | 3.4 | 8.2 | 36 | 100 | 35 | 35 | 0.21 | | | | | |
| В | 3.4 | 8.1 | 15 | 100 | 35 | 20 | 0.50 | | | | | |
| С | 4.2 | 7.7 | 13 | 10 | 35 | 35 | 0.43 | | | | | |
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| AM FLOW | 'S | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 10 | 480 | 145 | | | | | 105 | 635 | | | |
| В | 515 | 5 | 100 | | | | | 160 | 620 | | | |
| С | 175 | 95 | 5 | | | | | 530 | 275 | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| PM FLOW | S | | | | | | | - | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 10 | 565 | 150 | | | | | 105 | 725 | | | |
| В | 365 | 5 | 95 | | | | | 390 | 465 | | | |
| С | 150 | 95 | 5 | | | | | 745 | 250 | | | |
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| | | | | | | | | | | | | |
| WEEKENI | FLOWS | | | | | | | • | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 420 | 225 | | | | | 140 | 650 | | | |
| В | 355 | 5 | 140 | | | | | 235 | 500 | | | |
| С | 220 | 130 | 5 | | | | | 365 | 355 | | | |
| | | | | | | | | | | | | |
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| CALCULA | TIONS | | | | | | (| D _F | | RFC | | |
| ARM | K | X ₂ | М | F | to | f. | AM | PM | WEEKEND | AM | PM | WEEKEND |
| A | 1.02 | 6.76 | 0.08 | 2050 | 1.46 | 0.72 | 2017 | 2017 | 1991 | 0.31 | 0.36 | 0.33 |
| B | 1.07 | 5 75 | 0.08 | 1741 | 1.46 | 0.66 | 1756 | 1593 | 1703 | 0.35 | 0.29 | 0.00 |
| C C | 0.93 | 6.08 | 0.00 | 1842 | 1.46 | 0.68 | 1384 | 1247 | 1488 | 0.20 | 0.20 | 0.23 |
| C | 0.75 | 0.00 | 0.00 | 1042 | 1.40 | 0.00 | 1504 | 1247 | 1400 | 0.20 | 0.20 | 0.24 |
| | | | | | | | | | | | | |
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| | I | | | | | | I | | 0-4-14 | ъ | * | |
| | | | | | | | | | Crucal Arm: | в 0.25 | A | A 0.22 |
| | | | | | | | | | RFC: | 0.35 | 0.36 | 0.55 |
| - In accorda | ince with TPD | WIV2Ch4 | | 5 | D 01 | | 01 1 11 | | | AM | PM | WEEKEND |
| Calculated b | y: | | | Date: | Dec-24 | | Checked by: | | | | | |

| Job Title: | Proposed R | esidential | Developmen | t In Area Sho | wn As 'Road', Va | rious Lots | In D.D. 221 | And Adjoi | ining Governmer | t Land, Sl | ha Ha, Sai | Kung |
|--------------|---------------|------------|------------|---------------|------------------|------------|-------------|------------------------|-----------------|------------|------------|---------|
| Junction: | Tai Mong | Tsai Road | l/Wai Man | Road | | | | Ref. No. | : A (Des) | | | |
| Scheme: | Year 2035 | Design F | low | | | | | Ref. No. | : | | | |
| Year: | 2035 | | | Job No.: O | CHK50791710 | | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Tai Mong Ta | sai Road | Southern | | | | | | | | | |
| ARM B: | Tai Mong Ta | sai Road | Northern | | | | | | | | | |
| ARM C: | Wai Man Ro | oad | | | | | | \sim | \ | | | |
| | | | | | | | | 1 | | | | |
| | | | | | | | Α —— | { |) В | | | |
| | | | | | | | | $\mathbf{\mathcal{L}}$ | | | | |
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| | | | | | | | | | | | | |
| GEOMETI | RY | | | | | | | С | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| А | 3.00 | 7.50 | 15 | 50 | 42 | 30 | 0.48 | - | | | | |
| В | 3.20 | 4.80 | 7 | 30 | 42 | 60 | 0.37 | | | | | |
| С | 3.60 | 5.00 | 7 | 30 | 42 | 50 | 0.32 | | | | | |
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| AM FLOW | /S | | | | | | | | | | | |
| from \ to | Ĭ A | в | С | | | | | Circ | Entry | | | |
| A | 15 | 375 | 140 | | | | | 215 | 530 | | | |
| B | 535 | 10 | 200 | | | | | 160 | 745 | | | |
| C C | 170 | 200 | 5 | | | | | 560 | 375 | | | |
| C | 170 | 200 | 5 | | | | | 500 | 575 | | | |
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| | 10 | | | | | | | I | | | | |
| | | р | 0 | | | | | C. | E. t. | | | |
| from \ to | A 10 | B | 115 | | | | | | Entry | | | |
| A | 10 | 545 | 115 | | | | | 145 | 670 | | | |
| В | 420 | 5 | 170 | | | | | 130 | 595 | | | |
| C | 105 | 135 | 5 | | | | | 435 | 245 | | | |
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| WEEKENI | DFLOWS | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| A | 15 | 535 | 145 | | | | | 185 | 695 | | | |
| В | 430 | 5 | 220 | | | | | 165 | 655 | | | |
| С | 110 | 175 | 5 | | | | | 450 | 290 | | | |
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| CALCULA | TIONS | | | | | | . (| Q _E | | RFC | | |
| ARM | K | X_2 | М | F | t _D | f_c | AM | PM | WEEKEND | AM | PM | WEEKEND |
| Α | 1.03 | 5.30 | 0.17 | 1605 | 1.43 | 0.62 | 1515 | 1560 | 1534 | 0.35 | 0.43 | 0.45 |
| В | 0.91 | 4.12 | 0.17 | 1250 | 1.43 | 0.55 | 1060 | 1075 | 1057 | 0.70 | 0.55 | 0.62 |
| С | 0.95 | 4.45 | 0.17 | 1349 | 1.43 | 0.57 | 977 | 1044 | 1036 | 0.38 | 0.23 | 0.28 |
| | | | | | | | | | · | | | |
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| I | | | | | | | 1 | | | | | |
| I | | | | | | | 1 | | | | | |
| I | • | | | | | | • | | Crtical Arm: | В | В | В |
| | | | | | | | | | RFC: | 0.70 | 0.55 | 0.62 |
| - In accorda | ince with TPD | M V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated h | ov: | | | Date: | Dec-24 | | Checked by: | | | | | |

| Job Title: | Proposed R | Residential Dev | elopment | t In Area Sho | own As 'Road | ', Various | Lots In D.D. | 221 And Ad | ljoining Gover | nment Land | l, Sha Ha, S | ai Kung |
|--------------|---------------|-----------------|------------|---------------|----------------|------------------|--------------|----------------|----------------|------------|--------------|---------|
| Junction: | Po Tung Ro | oad/Mei Yu St | reet/Tai N | /Iong Tsai R | oad | | | Ref. No.: | B (Des) | | | |
| Scheme: | Year 2035 | Design Flow | V | | | | | Ref. No.: | | | | |
| Year: | 2035 | | | Job No.: | CHK507917 | 10 | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Tai Mong T | sai Road (N) | | | | | | | | | | |
| ARM B: | Mei Yu Stre | et | | | | | | | | | | |
| ARM C: | Po Tung Ro | ad (S) | | | | | | \sim | | | | |
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| | | | | | | | с — | (|) <u> </u> | Α | | |
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| | | | | | | | | | | | | |
| GEOMETI | RY | | | | | | | В | | | | |
| ARM | v | e | L | r | D | Phi | S | - | | | | |
| Α | 3.65 | 4.50 | 12 | 35 | 28 | 30 | 0.11 | | | | | |
| В | 4.00 | 4.00 | 1 | 12 | 28 | 40 | 0.00 | | | | | |
| С | 5 | 5 | 1 | 45 | 28 | 45 | 0.00 | | | | | |
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| AM FLOW | VS I. | | - | | | | | 1 ~ | | | | |
| from \ to | A | B | C | | | | | Circ | Entry | | | |
| A | 8 | 25 | /50 | | | | | 15 | /85.29487 | | | |
| ь С | 520 | 5 | 15 | | | | | 23 204874 | 530 | | | |
| C | 520 | 5 | 5 | | | | | 23.294074 | . 550 | | | |
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| | | | | | | | | | | | | |
| DM FLOW | 19 | | | | | | | I | | | | |
| from \ to | | в | С | | | | | Circ | Entry | | | |
| A | 10 | 10 | 505 | | | | | 35 | 525 | | | |
| В | 5 | 5 | 30 | | | | | 520 | 40 | | | |
| C | 690 | 25 | 5 | | | | | 20 | 720 | | | |
| C | 0,0 | 20 | 5 | | | | | 20 | 720 | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| WEEKEN | DFLOWS | | | | | | | I | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 10 | 30 | 585 | | | | | 45 | 625 | | | |
| В | 15 | 5 | 40 | | | | | 600 | 60 | | | |
| С | 680 | 35 | 5 | | | | | 30 | 720 | | | |
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| CALCULA | TIONS | | | | | | | Q _E | | RFC | | |
| ARM | K | \mathbf{X}_2 | М | F | t _D | \mathbf{f}_{c} | AM | PM | WEEKEND | AM | PM | WEEKEND |
| А | 1.02 | 4.34 | 0.04 | 1316 | 1.48 | 0.58 | 1335 | 1323 | 1317 | 0.59 | 0.40 | 0.47 |
| В | 0.93 | 4.00 | 0.04 | 1212 | 1.48 | 0.56 | 732 | 859 | 817 | 0.04 | 0.05 | 0.07 |
| С | 0.98 | 5.00 | 0.04 | 1515 | 1.48 | 0.62 | 1463 | 1465 | 1459 | 0.36 | 0.49 | 0.49 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | Crtical Arm: | Α | С | С |
| | | | | | | | | | RFC: | 0.59 | 0.49 | 0.49 |
| - In accorda | ance with TPD | OM V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated b | by: | | | Date: | Dec-24 | | Checked by | r: | | | | |

| Job Title: | Proposed R | esidential | Developme | nt At Variou | is Lots In DE | 0221 And A | djoining Gov | ernment | Land, Sha Ha, S | ai Kung | | |
|-------------|---------------|----------------|-----------|--------------|----------------|----------------|--------------|-------------|-----------------|---------|-----------|---------|
| Junction: | Tai Mong | Tsai Road | l/Wai Man | Road | | | | Ref. No. | : C (Des) | | | |
| Scheme: | Year 2035 | Design F | low | | | | | Ref. No. | | | | |
| Year: | 2035 | U | | CHK505 | 57510 | | | Rev.: | | | | |
| AM | | | | | | | | | | | | |
| ARM A: | Po Tung Roa | ıd | Southern | | | | | | | | | |
| ARM B. | Po Tung Roa | nd | Northern | | | | | В | | | | |
| ARM C: | Fuk Man Ro | ad | ronnem | | | | | | | | | |
| ARM C. | Fuk Mail Kö | au | | | | | | | | | | |
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| GEOMET | RY | | | | | | | Α | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| А | 4.50 | 4.50 | 1 | 10 | 26 | 15 | 0.00 | | | | | |
| В | 7.00 | 8.50 | 5 | 40 | 26 | 45 | 0.48 | | | | | |
| С | 3.50 | 6.00 | 12 | 10 | 26 | 30 | 0.33 | | | | | |
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| AM FLOV | l VS | | | | | | | | | | | |
| from 1 to | 1.0 | D | C | | | | 1 | Circ | Enter | | | |
| | A | D | 120 | | | | | 115 | Elluy | | | |
| A | 85 | 0 | 430 | | | | | 115 500 | 515 | | | |
| В | 740 | 5 | 60 | | | | | 520 | 805 | | | |
| С | 0 | 105 | 5 | | | | | 830 | 110 | | | |
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| FLOWS | • | | | | | | | | | | | |
| from \ to | А | в | С | | | | 1 | Circ | Entry | | | |
| A | 105 | 0 | 380 | | | | | 90 | 485 | | | |
| D | 105 | 5 | 45 | | | | | 400 | 525 | | | |
| C | 485 | 80 | 40 | | | | | 490 505 | 95 | | | |
| C | 0 | 80 | 5 | | | | | 595 | 85 | | | |
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| WEEKEN | D FLOWS | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 75 | 0 | 490 | | | | | 140 | 565 | | | |
| В | 545 | 5 | 75 | | | | | 570 | 625 | | | |
| С | 0 | 130 | 5 | | | | | 625 | 135 | | | |
| Ũ | 0 | 100 | 5 | | | | | 020 | 100 | | | |
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| G 1 7 7 7 7 | more | | | | | | | ~ | | DEC | | |
| CALCULA | ATIONS | | | | | | 1 | $Q_{\rm E}$ | 1 | RFC | | |
| ARM | K | X ₂ | М | F | t _D | f _c | AM | 0 | WEEKEND | AM | 0 | WEEKEND |
| А | 1.00 | 4.50 | 0.03 | 1364 | 1.48 | 0.59 | 1299 | 1314 | 1285 | 0.40 | 0.37 | 0.44 |
| В | 0.97 | 7.77 | 0.03 | 2353 | 1.48 | 0.80 | 1886 | 1909 | 1847 | 0.43 | 0.28 | 0.34 |
| С | 0.95 | 5.00 | 0.03 | 1515 | 1.48 | 0.62 | 949 | 1088 | 1070 | 0.12 | 0.08 | 0.13 |
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| | | | | | | | | | Crucal Arm: | В | A 0.37 | A |
| | | | | | | | | | RFC: | 0.43 | 0.37 | 0.44 |
| - In accord | ance with TPD | M V2 Ch4 | | | | | | | | AM | 0 | WEEKEND |
| Calculated | by: | | | Date: | Dec-24 | | Checked by: | | | | | |

| TRAFFIC S | SIGNA | ALS (| CALC | ULAT | ION | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | Ν | IVA HON | g kong | LIMITED |
|--------------------|---------------|----------|-----------|----------------|----------|----------|----------|--------------|------------|--------------|--------------|------------------|-----------------|------------|-----------------------------|----------------|------------|
| Junction: | Po Tun | ig Road | Man Ni | n Street (| JD) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | 2035 D | esign Tr | affic Flo | w | | | | _ | | | Designed | By: MLC | | | Checked By | :PTC | |
| | | | | | Badi | us (m) | | Pro. Tu | rning (%) | Revised S | Saturation | | AM Peak | | | PM Peak | |
| | ments | | | | | , | ient (% | | g (//) | Flow (| pcu/hr) | | , and out | | | . mr ouk | |
| Approach | Моче | Phase | Stage | Width (m) | Left | Right | Grad | АМ | PM | AM | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Po Tung Road NB | \rightarrow | A A | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 415 445 | 0.212 0.212 | | 488 522 | 0.250 0.249 | 0.250 |
| | -+ | В | 2 | 3.400 | | 15 | | | | 1905 | 1905 | 125 | 0.066 | | 160 | 0.084 | |
| Po Tung Road SB | ₩ | C C | 1 1 | 3.400 3.400 | 15 | | | 17% | 14% | 1925 2095 | 1925 2095 | 570 620 | 0.296 0.296 | 0.296 | 484 526 | 0.251 0.251 | |
| Man Nin Street | *†* | D | 3 | 3.800 | 15 | 20 | | 67% / 33% | 67% / 33% | 1900 * | 1900 * | 210 | 0.111 | 0.111 | 300 | 0.158 | 0.158 |
| WB | | | | | | | | | | | | | | | | | |
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| Pedestrian Cross | ng | Ep | 2 | MIN GRE | EN + FL | ASH = | 13 | + | 7 | = | 20 | | | | | | * |
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| Notes: | | | | Flow: (po | cu/hr) | | | | | | -+-> | Group | C,B,D | C,Ep,D | Group | C,Ep,D | A,Ep,D |
| *Additional satura | tion flow | of 80 po | cu/hr | | | | | | | | | у | 0.472 | 0.407 | у | 0.409 | 0.408 |
| (3600s / 90s per o | cycle * rel | lease 2 | cu | | | | | | | | | L (sec) | 13 | 29 | L (sec) | 29 | 32 |
| pourojoloj | | | | | | 860(1010 | D) | | | 1095(940) | - | C (sec) | 90 | 90 | C (sec) | 90 | 90 |
| | | | | | A | | 140(200) | | ▶70(100) | 95(70) | | v pract | 0 770 | 0.610 | v pract | 0.610 | 0 580 |
| | | | | | 125(160) | | | \backslash | | 33(70) | , , | | 0.770 | 5.010 | | 0.010 | 0.000 |
| | | | | | | | | Ŷ | | | | R.C. (%) | 63% | 50% | R.C. (%) | 49% | 42% |
| Stage / Phase Di | agrams | | | 2 | | | | 3 | | | | 4 | | | 5 | | |
| | | | | 2. | | | 4 | , J. | | | | | | | 5. | | |
| | | | | - | \frown | | | | | | | | | | | | |
| A> | | | | | В | 4 | | F | | | | | | | | | |
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| | | | | | | | v | | I | | | | | | | | |
| I/G= 5 | | | I/G= 4 | 4 | | 20 | | /G= 2 | | | I/G= | | | I/G= | I | | |
| I/G= 5 | | | I/G= | 7 | | 20 | | I/G= 2 | | | I/G= | <u>,</u> | | I/G= | ion: | | |
| | | | | | | | | | | | Date | DEC. 2024 | | Po Tung F | IOTI: Road/ Man Nin Stre | et | U |

| TRAFFIC | SIGNA | ALS (| CALC | ULATI | ION | | | | | | Job No. | : <u>CHK5</u> | <u>05575</u> 10 | Ν | IVA HON | g kong | LIMITED |
|--|--------------------------|----------------------|-------------|-------------------------|----------|----------|----------|-----------|--------------|----------------------|----------------------|-------------------|-------------------------|------------|----------------------------|-------------------------|------------|
| Junction: | Po Tun | g Road | / Man Ni | in Street (J | JD) | | | _ | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | 2035 D | esign Tr | affic Flo | w | | | | _ | | | Designed | By: MLC | | | Checked By | :PTC | |
| | (0 | | | | Radiu | us (m) | (9 | Pro. Tu | rning (%) | Revised | Saturation | | WE | | | WE | |
| | ments | | | | | , | ent (% | | y (,, | Flow (| pcu/hr) | | | | | | |
| Approach | Move | Phase | Stage | Width (m) | Left | Right | Grad | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Po Tung Road NB | | A A B | 1 1 2 | 3.400 3.400 3.400 | | 15 | | | | 1955 2095 1905 | 1955 2095 1905 | 475 510 130 | 0.243 0.243 0.068 | | 475 510 130 | 0.243 0.243 0.068 | |
| Po Tung Road SB | ↓ | C C | 1 1 | 3.400 3.400 | 15 | | | 25% | 25% | 1905 2095 | 1905 2095 | 550 605 | 0.289 0.289 | 0.289 | 550 605 | 0.289 0.289 | 0.289 |
| Man Nin Street WB | •↑• | D | 3 | 3.800 | 15 | 20 | | 52% / 48% | 52% / 48% | 1905 * | 1905 * | 355 | 0.186 | 0.186 | 355 | 0.186 | 0.186 |
| Pedestrian Cross | ing | Ep | 2 | MIN GRE | EN + FL | ASH = | 13 | + | 7 | - | 20 | | | | | | |
| *Additional satura | tion flow | of 80 pr | :u/hr | Flow: (pc | :u/nr) | | | | | | → N | Group | A,Ep,D | C,Ep,D | Group | A,Ep,D | C,Ep,D |
| due to the additio (3600s / 90s per | nal pocke cycle * rel | et provid lease 2 | ed | | | | | | | | | y L (aaa) | 0.430 | 0.475 | у (аса) | 0.430 | 0.475 |
| pcu/cycle) | | | | | | 005(005) | | | | 1015/1015 | | L (sec) | 32 | 29 | | 32 | 29 |
| | | | | | <u> </u> | 985(985) | 185(185) | | ▶170(170) | 140(140) | | C (sec) | 90 | 90 | C (sec) | 90 | 90 |
| | | | | | 130(130) | | | \bigvee | | 140(140) | , | | 25% | 0.010 | | 25% | 0.010 |
| Stage / Phase Di | agrams | | | | | | | Y | | | | n.c. (%) | 33% | 20 /0 | n.c. (%) | 33 % | 20 /0 |
| 1. | <u> </u> | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| | • | $\overline{1}$ | — c | - | В | • | **** | Ep | D D | • | | | | | | | |
| I/G= 5 | | | I/G= | 4 4 | | 20 | | I/G= 2 | | | I/G= | | | I/G= | | | |
| | | | | | | | | | | | Date | DEC. 2024 | | Po Tuna F | ION: Road/ Man Nin Stre | net. | ▣ |

| TRAFFIC S | SIGN/ | ALS C | CALC | ULATI | ION | | | | | | Job No. | : <u>CHK5</u> | <u>05575</u> 10 | Ν | IVA HON | G KONG | LIMITED |
|-------------------------|---------------|----------|------------|----------------|-----------|----------|----------|---------|------------|----------------------|-----------------------|------------------|-----------------|------------|----------------------------|-----------------|------------|
| Junction: | Pedest | rian Cro | ssing ne | ar Yau Ma | a Po Stre | et (JE) | | - | | | | | | | Design Year | r: <u>2035</u> | [|
| Description: | 2035 Dr | esign Tr | affic Flov | w | | | | - | | | Designed | By: MLC | | | Checked By | C PTC | |
| | ents | | | | Radi | us (m) | t (%) | Pro. To | urning (%) | Revised S Flow (j | Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway (NB) | \rightarrow | A A | 1 1 | 3.400 3.400 | | 1 | 1 | 1 | - I | 1955 2095 | 1955 2095 | 475 510 | 0.243 0.243 | | 562 603 | 0.287 0.288 | 0.288 |
| Hiram's Highway (SB) | Ļ | B B | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 599 641 | 0.306 0.306 | 0.306 | 550 590 | 0.281 0.282 | |
| Pedestrian Crossi | ng | Ср | 2 | MIN GRE | EN + FL | ASH = | 13 | + | 7 | - | 20 | | | | | | • |
| Notes: | | | | Flow: (pc | ;u/hr) | | | | | | + | Group | A,Cp | B,Cp | Group | В,Ср | A,Cp |
| | | | | | | | | | | | | у | 0.243 | 0.306 | y L (see) | 0.282 | 0.288 |
| | | | | | | 095/116 | =\ | | | 1240(1140 | L | L (Sec) | 26 | 26 | L (sec) | 26 90 | 26 90 |
| | | | | | | 900(110 | 5) | | | 1240(1140) | | v pract. | 0.640 | 0.640 | v pract. | 0.640 | 0.640 |
| | | | | | | | | | | | | R.C. (%) | 163% | 109% | R.C. (%) | 127% | 122% |
| Stage / Phase Di | agrams | | | | | | | | | | | | - | - | | L | |
| 1. | | | | 2. | | | | 3 | I. | | | 4. | | | 5. | | |
| A | 4 | | в | | | Ср У | | | | | | | | | | | |
| I/G= 3 I/G= 3 | | | I/G= 4 | 4 | | 20 20 | | I/G= | | | I/G= | | | I/G= | | | |
| vd= v | | | 1/0= 4 | <u> </u> | | | | | | | Date | DEC. 2024 | | Junct | ion: n Crossing near Ya | au Ma Po Street | E |

| TRAFFIC S | SIGNA | ALS C | CALC | ULATI | ON | | | | | | Job No.: | : <u>CHK5</u> | 0 <u>5575</u> 10 | Ν | IVA HON | g kong | LIMITED |
|-------------------------|---------------|----------|------------|----------------|----------|----------|----------|---------|-----------|---------------------|-----------------------|------------------|------------------|------------|----------------------------|----------------|------------|
| Junction: | Pedest | rian Cro | ssing ne | ar Yau Ma | Po Stree | et (JE) | | _ | | | | | | | Design Year | r: <u>2035</u> | |
| Description: | 2035 D | esign Tr | affic Flov | N | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | nts | | | | Radiu | ıs (m) | (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE Peak | | | WE Peak | |
| Approach | Movemer | Phase | Stage | Width (m) | Left | Right | Gradient | WE Peak | WE Peak | WE Peak | WE Peak | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway (NB) | \rightarrow | A A | 1 1 | 3.400 3.400 | | | | • | | 1955 2095 | 1955 2095 | 533 572 | 0.273 0.273 | | 533 572 | 0.273 0.273 | |
| Hiram's Highway (SB) | ÷ | B B | 1 1 | 3.400 3.400 | | | | | | 1955 2095 | 1955 2095 | 579 621 | 0.296 0.296 | 0.296 | 579 621 | 0.296 0.296 | 0.296 |
| Pedestrian Cross | ing | Ср | 2 | MIN GRE | EN + FL/ | ASH = | 13 | + | 7 | - | 20 | | | | | | |
| Notes: | | | | Flow: (pc | :u/hr) | | | | | | → N | Group | A,Cp | B,Cp | Group | A,Cp | B,Cp |
| | | | | | | | | | | | | y L (sec) | 0.273 | 0.296 | y L (sec) | 0.273 | 0.296 |
| | | | | | | 1105(110 |)5) | | | 1200(1200) | | C (sec) | 20 90 | 20 90 | C (sec) | 20 90 | 20 90 |
| | | | | | | | , | | | , | | v pract. | 0.620 | 0.640 | v pract. | 0.620 | 0.640 |
| | | | | | | | | | | | | R.C. (%) | 127% | 116% | R.C. (%) | 127% | 116% |
| Stage / Phase Di | agrams | | | | | | | | | | | | | | . , | | |
| 1. | | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| A | | | В | | | Cp | | | | | | | | | | | |
| I/G= 3 I/G= 3 | | | I/G= 4 | 1 | | 20 20 | | I/G= | | | I/G= | | | I/G= | - | | |
| | | | 1.0 | | | | | 1.0- | 1 | | Date | DEC. 2024 | | Junct | ion: n Crossing near Ya | u Ma Po Street | E |

Simplified Priority Junction Capacity Calculation

| Job Title: | Proposed Resi | idential Develop | oment In Area Sh | own As 'Road', V | arious Lots In | D.D. 221 And A | Adjoining Gove | rnment Land, Sl | a Ha, Sai Kung |
|--------------------|---------------------|------------------|----------------------|-------------------|----------------|----------------|----------------|-----------------|---------------------|
| Junction: | Po Tung Roa | d/Yau Ma Po | Street | | | | | Ref. No.: | F (Des) |
| Scheme: | Year 2035 D | esign Flow | | | | | | Ref. No.: | |
| Year: | 2035 | | | Job No.: CHK5 | 50791710 | | | Rev.: | |
| ARM A: | Po Tung Ro | bad (SB) | | | | | | | |
| ARM B: | Yau Ma Po | Street | | | | | | | |
| ARM C: | Po Tung Ro | oad (NB) | | | | | | | |
| | | | | | | | | | |
| | AM | (PM) | [WEEKEND] | 1 | | | | | |
| CA | 1165 | 1005 | 1110 | → | | | | | |
| СВ | 40 | 60 | 50 | | | | | | |
| ARM C | | | | | | | | | |
| Po Tung Road | (NB) | | 7 | | | + | | | |
| | | | | | | | | | |
| | | | J | | | | (514) | | - |
| | | | | | | AM | (PM) | [WEEKEND] | 1.0 |
| | | | | | • | 910 | 1090 | 1045 | |
| | | • | | | | 30 | 20 | 15 | |
| | | | | | | | | | Po Tung Road (SB) |
| | | | ר | | | | | | - 10 Tung Noad (3D) |
| | | | | | | | | | |
| | | | | | ¥ | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | AM | 75 | 0 | | 1 | | | |
| | | (PM) | 80 | 0 | | ARM B | | | |
| | | | 60 | 0 | | Yau Ma Po Stre | eet | | |
| | | . , | BC | BA | | | | | |
| GEOMETRY | | | | Di l | | | | | |
| Major road wid | lth | | W | 11.00 | | Lane widths | | w(b-a) | 0.00 |
| Central Reserv | /e width | | Wcr | 1.50 | | | | w(b-c) | 3.50 |
| 2 Lane Minor A | Arm (Y/N) | | | n | | | | w(c-b) | 3.30 |
| Visibilities | | | Vr(b-a) | 0 | | Calculated | | D | 0.53 |
| | | | VI(b-a) | 0 | | | | E | 0.91 |
| | | | Vr(b-c) | 35 | | | | F | 0.89 |
| | | | Vr(c-b) | 35 | | | | Υ | 0.62 |
| | | | | | | | | | |
| ANALYSIS | | | | | | | | | |
| | | | | | | | AM PEAK | (PM) PEAK | [WEEKEND] PEAK |
| TRAFFIC FLO | WS | | q(c-a) | | | | 1165 | 1005 | 1110 |
| | | | q(c-b) | | | | 40 | 60 | 50 |
| | | | q(a-b) | | | | 30 | 25 | 15 |
| | | | q(a-c) | | | | 910 | 1090 | 1045 |
| | | | q(b-a) | | | | 0 | 0 | 0 |
| | | | q(b-c) | | | | 75 | 80 | 60 |
| | | | f | | | | 1.00 | 1.00 | 1.00 |
| | | | o | Factor | | | | | |
| CAPACITIES | | | Q(b-a) | 1 | | | 139 | 127 | 126 |
| | | | Q(b-c) | | | | 489 | 452 | 462 |
| | | | Q(c-b) | 1 | | | 476 | 440 | 452 |
| | | | Q(b-ac) | 1 | | | 489 | 452 | 462 |
| | | | | | | | | | |
| HFC's | | | b-a | | | | 0.000 | 0.000 | 0.000 |
| | | | D-C | | | | 0.153 | 0.177 | 0.130 |
| | | | c-b | | | | 0.084 | 0.136 | 0.111 |
| | | | b-ac | | | | 0.153 | 0.177 | 0.130 |
| | | | | | | | | | |
| Worst RFC | | | | | | | 0.15 | 0.18 | 0.13 |
| | | | | | | | | | |
| Where VI and | Vr are visibility | distances to the | left or right of the | respective stream | ms | | | | |
| D = (1+0.094) | w(b-a)-3.65))(1+ | -0.0009(Vr(b-a)- | 120))(1+0.0006() | /I(b-a)-150)) | | | | | |
| ⊨ = (1+0.094(v | v(b-c)-3.65))(1+ | 0.0009(Vr(b-c)- | 120)) | | | | | | |
| ⊢ = (1+0.094(v | v(c-b)-3.65))(1+ | 0.0009(Vr(c-b)- | 120)) | | | | | | |
| Y = 1-0.0345W | , | | | | | | | | |
| t = proportion o | or minor traffic to | urning left | | | - ·· · | | | | |
| Q (b-ac) = Q(b | -c)*Q(b-a)/(1-f) | ^Q(b-c)+f*Q(b-a |) | (| apacity of con | noined streams | 01-4 | | |
| O al avel a series | | | | - | in accordance | with 1PDM V2 | | | |
| Calculated b | by: | | | Date: | Dec | :-24 | Cnecked by | r: | |

| TRAFFIC S | IGNA | LS C | CALC | ULATI | ON | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | Ν | IVA HON | g kong | LIMITED |
|--|--|----------------------|-----------------|-------------------------|--------------------|----------------|----------|-----------|-----------|----------------------|-----------------------|-------------------|-------------------------|-----------------------|--------------------|-------------------------|------------|
| Junction: | Hiram's | Highwa | ay / Chui | Tong Roa | d (JG) | | | - | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | 2035 De | esign Tr | affic Flo | N | | | | - | | | Designed | By: <u>MLC</u> | | | Checked By | : <u>PTC</u> | |
| | ents | | | | Radi | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | АМ | РМ | АМ | РМ | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | \rightarrow \rightarrow \uparrow | A A E | 1,2 1,2 2 | 4.300 4.300 4.300 | | 15 | | | | 2045 2185 1985 | 2045 2185 1985 | 433 462 50 | 0.212 0.211 0.025 | | 500 535 80 | 0.244 0.245 0.040 | 0.040 |
| Hiram's Highway (SB) | ↓ ↓ ↓ | B B B | 1 1 1 | 3.300 3.300 3.300 | 20 | | | | | 1810 2085 2085 | 1810 2085 2085 | 105 530 530 | 0.058 0.254 0.254 | 0.254 | 125 440 440 | 0.069 0.211 0.211 | 0.211 |
| Chui Tong Road | *†* | С | 3 | 3.300 | 15 | 22.5 | | 55% / 45% | 36% / 64% | 1850 * | 1860 * | 100 | 0.054 | 0.054 | 110 | 0.059 | 0.059 |
| Pedestrian Crossin | ığ | Fp Hp | 4 | MIN GRE MIN GRE | EN + FL EN + FL | ASH = ASH = | 10 11 | + + | 8 10 | = | 18 21 | | | | | | |
| *Additional saturat | ion flow | of 60 pc | u/hr is | Flow: (pc | u/nr) | | | | | | ∕™ | Group | B,E,C,Fp | B,E,C,Hp | Group | A,C,Hp | B,E,C,Hp |
| added due to pock 120s per cycle * re | et provic lease 2 | led (360 pcu/cycl | 10s / le) | | | | | | | | | y L (sec) | 31 | 47 | y L (sec) | 36 | 41 |
| | | | | | $ \rightarrow$ | 895(103 | 5) | | | 1060(880) | - | C (sec) | 120 | 120 | C (sec) | 120 | 120 |
| | | | | | 50(80) | | 55(40) | | ►45(70) | 105(125) | · | y pract. | 0.668 | 0.548 | y pract. | 0.630 | 0.593 |
| | | | | | | | | Y | | | | R.C. (%) | 100% | 78% | R.C. (%) | 107% | 91% |
| Stage / Phase Dia 1. | grams | | | 2. | | | | 3. | | | | 4. | | | 5. | | |
| A | ÷ | | B | | A E | 5 | | //G= 5 | • | C C | | = 10 | Fp 21 | +Hp ↓ ↓ ↓/G= | | | |
| I/G= 3 | | | I/G= { | 5 | | | | I/G= 5 | | | I/G= Date | = 10 e: | 21 | I/G= Junct | ion: | | (G) |
| | | | | | | | | | | | | DEC, 2024 | | Hiram's H | ighway / Chui Tong | g Road | \cup |

| TRAFFIC S | GNA | LS (| CALC | ULAT | ON | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | Ν | IVA HON | G KONG | LIMITED |
|--|------------------------|---------------------|-----------------|-------------------------|--------------------|----------------|----------|-----------|-----------|----------------------|-----------------------|-------------------|-------------------------|--------------------|----------------------------|-------------------------|------------|
| Junction: | Hiram's | Highwa | ay / Chui | Tong Roa | d (JG) | | | - | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | 2035 De | esign Tr | affic Flo | w | | | | - | | | Designed | By: MLC | | | Checked By | : <u>PTC</u> | |
| | ents | | | | Radiu | us (m) | t (%) | Pro. Tu | rning (%) | Revised S Flow (| Saturation pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | A A E | 1,2 1,2 2 | 4.300 4.300 4.300 | | 15 | | | | 2045 2185 1985 | 2045 2185 1985 | 474 506 100 | 0.232 0.232 0.050 | 0.050 | 474 506 100 | 0.232 0.232 0.050 | 0.050 |
| Hiram's Highway (SB) | ↓ ↓ | B B B | 1 1 1 | 3.300 3.300 3.300 | 20 | | | | | 1810 2085 2085 | 1810 2085 2085 | 120 498 497 | 0.066 0.239 0.238 | 0.239 | 120 498 497 | 0.066 0.239 0.238 | 0.239 |
| Chui Tong Road | ⁺ๅ► | С | 3 | 3.300 | 15 | 22.5 | | 59% / 41% | 59% / 41% | 1845 * | 1845 * | 195 | 0.106 | 0.106 | 195 | 0.106 | 0.106 |
| Pedestrian Crossi | ng | Fp Hp | 4 4 | MIN GRE MIN GRE | EN + FL EN + FL | ASH = ASH = | 10 11 | + + | 8 10 | - | 18 21 | Group | | | Craw | | |
| *Additional satura | tion flow | of 60 pc | :u/hr is | Flow. (pc | u/m) | | | | | | Ϋ́ν | Group | B,E,C,Fp | B,E,C,Hp | Group | B,E,C,Fp | B,E,C,Hp |
| added due to poch 120s per cycle * re | ket provid elease 2 | led (360 pcu/cyc | 00s / le) | | | | | | | | | y L (sec) | 31 | 41 | y L (sec) | 31 | 41 |
| | | | | | \rightarrow | 980(980) |) | | | 995(995) | - | C (sec) | 120 | 120 | C (sec) | 120 | 120 |
| | | | | | ▼ 100(100) | | 115(115) | | ▶80(80) | 120(120) | * | y pract. | 0.668 | 0.593 | y pract. | 0.668 | 0.593 |
| | | | | | | | | γ | | | | R.C. (%) | 69% | 50% | R.C. (%) | 69% | 50% |
| Stage / Phase Di | agrams | | | | | | | | | | | | | | - | | |
| A | ÷ | | в | 2. | A E | | | 3. | • | c | | 4 . | Fp | Hp | 5. | | |
| I/G= 3 | | | I/G= | 5 | | | | I/G= 5 | | | I/G= I/G= | = 10 | 21 | I/G= I/G= | ioni | | (|
| | | | | | | | | | | | Date | DEC, 2024 | | Junct Hiram's H | ion: ighway / Chui Tong | g Road | G |

| TRAFFIC S | SIGNA | ALS (| CALC | ULAT | ION | | | | | | Job No. | .: <u>CHK5</u> | <u>07917</u> 10 | N | IVA HON | G KONG | LIMITED |
|--|------------------------------|----------------------------|--------------------------------------|--|--|--|----------------------------|-----------------------|-----------------------------|----------------------|----------------------------------|------------------|-------------------------|--------------------|----------------------------|-------------------------|-------------|
| Junction: | Hiram's | Highw | ay/Hong | Kin Road | (JH) | | | - | | | | | | | Design Yea | r: <u>2035</u> | |
| Description: | 2035 D | esign Ti | affic Flo | w | | | | - | | | Designed | By: MLC | | | Checked By | : PTC | |
| | nts | | | | Radi | us (m) | (%) | Pro. 1 | Furning (%) | Revised Flow (| Saturation (pcu/hr) | | AM Peak | | | PM Peak | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradient | АМ | РМ | АМ | PM | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | C C O | 1,2,3 1,2,3 3 | 3.400 3.400 4.000 | | 18 | | | | 1955 2095 1990 | 1955 2095 1990 | 408 437 65 | 0.209 0.209 0.033 | | 488 522 70 | 0.250 0.249 0.035 | |
| Hiram's Highway SB | ↓ ↓ | A A A | 1,2,5 1,2,5 1,2,5 | 3.300 3.300 3.300 | 15 | | | | | 1770 2085 2085 | 1770 2085 2085 | 60 563 562 | 0.034 0.270 0.270 | | 80 435 435 | 0.045 0.209 0.209 | |
| Hong Kin Road WB | ¶ ר* | G G | 4 4 | 3.700 3.700 | 20 | 18 | | | | 1845 1960 | 1845 1960 | 105 50 | 0.057 0.026 | | 70 75 | 0.038 0.038 | |
| Hiram's Highway NB | - - - - - - - - - - - | E E E | 2,3 2,3 2,3 | 3.400 3.400 3.400 | 20 | | | | | 1820 2095 2095 | 1820 2095 2095 | 20 373 372 | 0.011 0.178 0.178 | 0.178 | 35 245 245 | 0.019 0.117 0.117 | 0.117 |
| Hiram's Highway SB | ↓ ↓ ↓ | F F P | 2,3,4 2,3,4 4 | 3.400 3.400 3.500 | | 18 | | | | 1955 2095 1945 | 1955 2095 1945 | 514 551 60 | 0.263 0.263 0.031 | 0.031 | 401 429 95 | 0.205 0.205 0.049 | 0.049 |
| Po Lo Che Road EB | • | В | 1 | 3.000 | 10 | 15 | | 38% / 63 | % 40% / 60% | 1745 * | 1740 * | 200 | 0.115 | 0.115 | 200 | 0.115 | 0.115 |
| Pedestrian Cross | ing | Hp Mp Kp Jp Np | 1,2,3,5 4 3,4 5 1,5 5 | Min Gre Min Gre Min Gre Min Gre Min Gre Min Gre | :EN + FL :EN + FL :EN + FL :EN + FL :EN + FL :EN + FL | ASH = ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 5 9 | + + + + + | 7 6 8 7 10 5 | | 12 11 13 12 15 14 | | | | | | |
| Notes: | | | | Flow: (po | cu/hr) | | | 20(35) | | | × ↓ | Group | B,E,G,Lp | B,E,P,Np | Group | B,F,Np | B,E,P,Np |
| Additional saturat added due to poc | ion flow o ket provid | of 36 pc ded (360 | u/hr is 00s / | | 845(101 | 0) | | • | 75(80) | •/ | 125(120) | У | 0.350 | 0.324 | У | 0.320 | 0.281 |
| 100s per cycle * r | elease 1 | pcu/cyc | le) | Ĵ, | | | 1125(870) |) | ► 745(490) | | 60(95) | L (sec) | 27 | 34 | L (sec) | 20 | 34 |
| | | | | 65(70) | | | • | ~ | | | , t | C (sec) | 100 | 100 | C (sec) | 100 | 100 |
| | | | | 105(70) | ► / | 50(75) | 60(80) [•] | | | 1065(830 |) | y pract. | 0.657 | 0.594 | y pract. | 0.720 | 0.594 |
| | | | | | γ | | | | | | | R.C. (%) | 88% | 84% | R.C. (%) | 125% | 112% |
| Stage / Phase Di | agrams | | | | | | | | • | | | 1. | | | - | | |
| 1. | | | \bigwedge | 2. | | E | ٠ | | с. | E "A | | 4. | | | 5. | | <> |
| C | A | • | B | с — | → | | < → | F | 0 | Кр | F | | Кр ↑ ◀ | P F | | Υµ Υ | ∱Lp ∳ Jp |
| Нр <> | | | Υ Ψ | H¢ ≪ | .> | ~ | - 4 | | Hp > | · | | G | ÷> | | Hp <> | | — ↓ |
| I/G= 3 | | | I/G= | 5 | | | | I/G= | | | I/G | = 5 | | I/G= | 10 | 14 14 | |
| | | | , a= | - | | | | 100- | I | | Date | e: DEC, 2024 | | Junct Hiram's H | ion: lighway/Hong Kin F | Road | H |

| TRAFFIC S | SIGNA | LS (| CALC | ULAT | ON | | | | | | Job No. | : <u>CHK5</u> | <u>07917</u> 10 | Ν | JVA HON | G KONG | LIMITED |
|---|------------------------|----------------------------|--------------------------------------|---|---|--|-----------------------|-------------|-----------------------------|----------------------|----------------------------------|-------------------|-------------------------|----------------------------|-----------------------------------|-------------------------|--|
| Junction: | Hiram's | Highwa | ay/Hong | Kin Road | (JH) | | | _ | | | | | | | Design Year | r: <u>2035</u> | |
| Description: | 2035 De | esign Tr | affic Flo | w | | | | _ | | | Designed | By: MLC | | | Checked By | : PTC | |
| | ents | | | | Radi | us (m) | t (%) | Pro. Tu | urning (%) | Revised S Flow (| Saturation pcu/hr) | | WE | | | WE | |
| Approach | Moveme | Phase | Stage | Width (m) | Left | Right | Gradien | WE | WE | WE | WE | Flow (pcu/hr) | y Value | Critical y | Flow (pcu/hr) | y Value | Critical y |
| Hiram's Highway NB | | С С О | 1,2,3 1,2,3 3 | 3.400 3.400 4.000 | | 18 | | | | 1955 2095 1990 | 1955 2095 1990 | 483 517 55 | 0.247 0.247 0.028 | | 483 517 55 | 0.247 0.247 0.028 | |
| Hiram's Highway SB | ↓ ↓ ↓ | A A A | 1,2,5 1,2,5 1,2,5 | 3.300 3.300 3.300 | 15 | | | | | 1770 2085 2085 | 1770 2085 2085 | 70 493 492 | 0.040 0.236 0.236 | | 70 493 492 | 0.040 0.236 0.236 | |
| Hong Kin Road WB | *] [* | G G | 4 4 | 3.700 3.700 | 20 | 18 | | | | 1845 1960 | 1845 1960 | 85 55 | 0.046 0.028 | | 85 55 | 0.046 0.028 | |
| Hiram's Highway NB | _ ↓ ↓ | E E E | 2,3 2,3 2,3 | 3.400 3.400 3.400 | 20 | | | | | 1820 2095 2095 | 1820 2095 2095 | 35 290 290 | 0.019 0.138 0.138 | 0.138 | 35 290 290 | 0.019 0.138 0.138 | 0.138 |
| Hiram's Highway SB | ← ← Ł | F F P | 2,3,4 2,3,4 4 | 3.400 3.400 3.500 | | 18 | | | | 1955 2095 1945 | 1955 2095 1945 | 475 510 115 | 0.243 0.243 0.059 | 0.059 | 475 510 115 | 0.243 0.243 0.059 | 0.059 |
| Po Lo Che Road EB | 4 | В | 1 | 3.000 | 10 | 15 | | 52% / 48% | ° 52% / 48% | 1735 * | 1735 * | 145 | 0.084 | 0.084 | 145 | 0.084 | 0.084 |
| Pedestrian Crossi | ng | Hp Mp Kp Jp Np | 1,2,3,5 4 3,4 5 1,5 5 | MIN GRE MIN GRE MIN GRE MIN GRE MIN GRE | EN + FL EN + FL EN + FL EN + FL EN + FL | ASH = ASH = ASH = ASH = ASH = ASH = | 5 5 5 5 9 | + + + + + + | 7 6 8 7 10 5 | | 12 11 13 12 15 14 | | | | | | |
| Notes: | ion flow c | of 36 pc | u/hr is | Flow: (pc | ;u/hr) | | | 35(35) | | 人 | ▲ + | Group | B,F,Np | B,E,P,Np | Group | B,F,Np | B,E,P,Np |
| added due to pock 100s per cycle * r | ket provic elease 1 | led (360 pcu/cyc |)0s / ;le) | \rightarrow | 1000(10 | 00) | | | 75(75) | • • | 70(70) | у (ааа) | 0.327 | 0.281 | y L (aaa) | 0.327 | 0.281 |
| | | | | 55(55) | | | 985(985) |) | 580(580) | | 115(115) | L (sec) | 20 | 100 | L (sec) | 20 | 34 100 |
| | | | | | | | 70(70) | , | | 985(985) | , – | v pract | 0 720 | 0 594 | v pract | 0 720 | 0.594 |
| | | | | 85(85) | \sim | 55(55) | | | | | | B.C. (%) | 120% | 111% | B.C. (%) | 120% | 111% |
| Stage / Phase Di | agrams | | | | | | | | | | | | | | | | |
| 1. | | | Y | 2. | | E | <u>ب</u> | 3 | | E | | 4. | | | 5. | | <> |
| С Нр <> | A | - | B ↓ Jp | С — нр < | | | ∠ → ← | F | Hp > | ^^ ~-у Кр | ← F | G | кр ^ ↓ Мр | F | Нр <> | ↑ Lp ↓ A | , rb , rb , rb , rb , rb , rb , rb , rb |
| I/G= 3 | | | I/G= 5 | 5 | | | | I/G= | | | I/G= | = 5 | | I/G= | 10 | 14 | |
| I/G= 3 | | | I/G= 5 | 5 | | | | //G= | | | Date | = 5 DEC, 2024 | | I/G= Junct Hiram's H | 10 Jion: Highway/Hong Kin F | 14 Road | H |

| Job Title: | Proposed 1 | Residentia | l Developme | nt In Area S | shown As 'Road', ' | Various | s Lots In D.D. | 221 And | Adjoining Gover | mment La | and, Sha H | a, Sai Kung |
|--------------|---------------|----------------|-------------|--------------|--------------------|---------|----------------|----------------|-----------------|----------|------------|-------------|
| Junction: | Tai Mong | Tsai Road | d/Sai Sha R | oad | | | | Ref. No | .: I (Des) | | | |
| Scheme: | Year 2035 | Design F | Flows | | | | | Ref. No | : | | | |
| Year: | 2035 desig | gn | | Job No.: | CHK50791710 | | | Rev.: | | | | |
| AM | PM | | | | | | | | | | | |
| ARM A: | Tai Mong Ts | sai Road | (West) | | | | | C | | | | |
| ARM B: | Tai Mong Ts | sai Road | (East) | | | | | | | | | |
| ARM C: | Sai Sha Roa | d | | | | | | | | | | |
| | | | | | | | | 1 | | | | |
| | | | | | | | Α | (|)— в | | | |
| | | | | | | | | | | | | |
| | | | | | | | | \sim | | | | |
| | | | | | | | | | | | | |
| GEOMET | RY | | | | | | | | | | | |
| ARM | v | e | L | r | D | Phi | S | | | | | |
| А | 3.4 | 8.2 | 36 | 100 | 35 | 35 | 0.21 | - | | | | |
| В | 3.4 | 8.1 | 15 | 100 | 35 | 20 | 0.50 | | | | | |
| C C | 4.2 | 77 | 13 | 10 | 35 | 35 | 0.43 | | | | | |
| C | | | 10 | 10 | 00 | 00 | 0.15 | | | | | |
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| AM FLOW | ve ve | | | | | | | | | | | |
| from \ to | | D | C | | | | | Circ | Enter | | | |
| | A 10 | 195 | 145 | | | | | 105 | 640 | | | |
| A | 10 | 465 | 143 | | | | | 105 | 640 | | | |
| В | 520 | 5 | 100 | | | | | 160 | 625 | | | |
| C | 175 | 95 | 3 | | | | | 555 | 275 | | | |
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| | | | | | | | | | | | | |
| PM FLOW | 'S | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 10 | 570 | 150 | | | | | 105 | 730 | | | |
| В | 370 | 5 | 95 | | | | | 390 | 470 | | | |
| C | 150 | 95 | 5 | | | | | 750 | 250 | | | |
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| WEEKEN | D FLOWS | | | | | | | | | | | |
| from \ to | А | В | С | | | | | Circ | Entry | | | |
| А | 5 | 425 | 225 | | | | | 140 | 655 | | | |
| В | 360 | 5 | 140 | | | | | 235 | 505 | | | |
| С | 220 | 130 | 5 | | | | | 370 | 355 | | | |
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| | | | | | | | | | | | | |
| CALCULA | TIONS | | | | | | (| Q _E | | RFC | | |
| ARM | К | X ₂ | М | F | to | f. | AM | PM | WEEKEND | AM | PM | WEEKEND |
| A | 1.02 | 6.76 | 0.08 | 2050 | 1.46 | 0.72 | 2017 | 2017 | 1991 | 0.32 | 0.36 | 0.33 |
| B | 1.07 | 5 75 | 0.08 | 1741 | 1.46 | 0.66 | 1756 | 1593 | 1703 | 0.36 | 0.29 | 0.00 |
| C C | 0.03 | 6.08 | 0.00 | 1842 | 1.46 | 0.68 | 1380 | 1244 | 1485 | 0.20 | 0.20 | 0.00 |
| C | 0.93 | 0.08 | 0.00 | 1042 | 1.40 | 0.08 | 1580 | 1244 | 1405 | 0.20 | 0.20 | 0.24 |
| | | | | | | | | | | | | |
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| | 1 | | | | | | | | <i></i> | | | |
| | | | | | | | | | Crtical Arm: | В | A | A |
| | | | | | | | | | RFC: | 0.36 | 0.36 | 0.33 |
| - In accorda | ance with TPD | M V2 Ch4 | | | | | | | | AM | PM | WEEKEND |
| Calculated b | ov: | | | Date: | Dec-24 | | Checked by: | | | | | |



Appendix B

Description of Level-of-Service (LOS)

on Footpaths

| S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining government land, Sha Ha, Sai Kung | 03/03 | 8/202 | 25 |
|---|-------|-------|----|
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Appendix B - Description of Level-of-Service (LOS) for Footpaths

| LOS | Flow Rate (ped/min/m) | Description |
|-----|--------------------------|--|
| А | ≤ 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. |
| В | 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. |
| С | 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 from Transport Planning & Design Manual. Volume 6 Chapter 10 Section 10.4.2.

| S16 Planning Application for Proposed Residential Development at various lots in D.D. 221 and adjoining | 1 | 03/03 | /202 | 5 |
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| government land, Sha Ha, Sai Kung | ļ | | / 202 | |
| Traffic Impact Assessment | | Page | 25 | |