

Job No. EO/J/2025/005

Planning Consultancy Service for Redevelopment of Middleton Towers to Student Hostel for the University of Hong Kong

Traffic Impact Assessment

(Ref. TIA-01)

May 2026

AECOM ASIA COMPANY LIMITED

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1 INTRODUCTION

1.1. Background

- 1.1.1. In view of the shortage of student housing in the University and the significant increase in student enrolment in coming years, the University of Hong Kong (HKU) explores opportunity to collaborate with private partner for the joint re-development of the Middleton Towers in Pokfulam to transform the existing staff quarters into modern student hostels. This initiative not only seeks to enhance the quality of life for students but also reinforces the University's commitment to providing a supportive and enriching campus experience.
- 1.1.2. The application site (140 Pokfulam Road, RBL No. 825 RP) falls within an area zoned "Residential (Group C)" ("R(C)") use on the approved Pok Fu Lam Outline Zoning Plan (OZP) No. S/H10/23. According to the Notes of the OZP, the proposed student hostel falls under Column 2, requiring a section 16 planning application to seek approval from the Town Planning Board (TPB). The site location is shown in **Figure 1.1**.
- 1.1.3. AECOM Asia Company Limited has been commissioned by the HKU to provide professional consultancy services to assist the University to prepare and submit a Section 16 Town Planning Application in order to seek approval from the TPB on column 2 usages to facilitate the student hostel development.
- 1.1.4. Planning application at this stage shall be restricted to modification of the existing buildings internally, without alterations to the bulk of the existing buildings, landscaping or external works. It aims to transform the three existing staff quarter towers into modern hostels by internal re-partitioning to provide 900beds for undergraduate/postgraduate students.

1.2. Purpose of the Report

- 1.2.1. The purposes of this Traffic Impact Assessment (TIA) are summarized as follows:-
- (a) To review and collect the traffic and transport data presently available, and forecast traffic flow pattern generated and attracted by the proposed development;
 - (b) To identify roads and junctions in the road network nearby affected by the proposed development and recommend improvement measures if necessary;
 - (c) To devise suitable vehicular access, parking arrangements and loading/unloading facilities for the proposed development; and
 - (d) To assess adjacent public transport facilities affected by the proposed development and recommend improvement measures if necessary.

1.3. Structure of the Report

- 1.3.1. This Report is organized into 8 sections including this introductory section:-
- **Section 2** reviews the existing traffic condition;
 - **Section 3** summarizes the planning parameters of the proposed development;
 - **Section 4** outlines the methodology and traffic forecasts of the TIA;
 - **Section 5** presents traffic impacts assessments for future design year;
 - **Section 6** presents the construction traffic impact assessment;
 - **Section 7** reviews future public transport services; and

- **Section 8** summarizes the findings and recommendations of the TIA.

1.4. Abbreviations

- 1.4.1. The following table lists out the abbreviated titles of Government bureaux, departments, offices, statutory bodies, public organisations and expressions mentioned in this Technical Note:

| Abbreviation | Full title |
|---------------------|---|
| DFC | Design Flow over Capacity |
| GFA | Gross Floor Area |
| GIC | Global Innovation Centre |
| HKPSG | Hong Kong Planning Standards and Guidelines |
| HKU | University of Hong Kong |
| HWC | High West Campus Development |
| L/UL | Loading/unloading |
| OZP | Outline Zoning Plan |
| PCU | Passenger Car Unit |
| PlanD | Planning Department |
| PT | Public transport |
| RC | Reserved Capacity |
| R(C) | Residential (Group C) |
| TPB | Town Planning Board |
| TPDM | Transport Planning and Design Manual |
| TPEDM | Territorial Population and Employment Data Matrix |
| TTIA | Traffic and Transport Impact Assessment |

2 EXISTING CONDITIONS

2.1. Existing Road Network

- 2.1.1. The existing road network in the vicinity of the Site is shown in **Figure 2.1**. The Site is served by an unnamed single track access road which connects the Middleton Towers to Pok Fu Lam Road. Pok Fu Lam Road is a primary distributor running in a north-south direction, connecting Queen's Road West to the north and Shek Pai Wan Road to the south. The section in the vicinity of the Site features a single 4-lane arrangement.
- 2.1.2. A summary of the key junctions to be assessed along the major access routes from/to the Site is shown in **Table 2.1**. Existing junction layouts are presented in **Appendix A**.

Table 2.1 Key Junctions for Assessment

| Junction No. | Junction Location | Junction Type |
|--------------|---|---------------|
| J1 | Pok Fu Lam Road / Access Road to Middleton Towers | Priority |
| J2 | Pok Fu Lam Road / Access Road to University Hall | Priority |
| J3 | Pok Fu Lam Road / Victoria Road | Signal |
| J4 | Pok Fu Lam Road / Sassoon Road / Access Road To Queen Mary Hospital | Signal |
| J5 | Pok Fu Lam Road / Sassoon Road | Priority |
| J6 | Pok Fu Lam Road / Smithfield / Mount Davis Road | Signal |
| J7 | Pok Fu Lam Road / Pokfield Road | Signal |
| J8 | Pok Fu Lam Road | Signal |

2.2. Existing Performance of Key Junctions

- 2.2.1. Manual traffic counts of key junctions were conducted on a normal weekday in March 2026 during 07:30 – 09:30 and 17:00 – 19:00. Based on the surveyed data, the AM and PM peak hours for the assessed junctions are 07:45 – 08:45 and 17:45 – 18:45 respectively. The observed traffic flows are presented in **Figure 2.2**.
- 2.2.2. Performance of key junctions in 2026 are presented in **Table 2.2**. Detailed junction calculation sheets are presented in **Appendix B**.
- 2.2.3. The results indicate that all key road junctions are operating with sufficient capacity in 2026.

Table 2.2 Existing Key Junction Performance

| Junction No. | Junction Location | Junction Type | 2026 Existing Case | |
|--------------|---|---------------|-----------------------|------|
| | | | RC/DFC ⁽¹⁾ | |
| | | | AM | PM |
| J1 | Pok Fu Lam Road / Access Road to Middleton Towers | Priority | 0.05 | 0.03 |
| J2 | Pok Fu Lam Road / Access Road to University Hall | Priority | 0.03 | 0.03 |
| J3 | Pok Fu Lam Road / Victoria Road | Signal | 37% | 38% |
| J4 | Pok Fu Lam Road / Sassoon Road / Access Road To Queen Mary Hospital | Signal | 44% | 53% |
| J5 | Pok Fu Lam Road / Sassoon Road | Priority | 0.61 | 0.64 |
| J6 | Pok Fu Lam Road / Smithfield / Mount Davis Road | Signal | 34% | 44% |
| J7 | Pok Fu Lam Road / Pokfield Road | Signal | 92% | 87% |
| J8 | Pok Fu Lam Road | Signal | 37% | 42% |

Note:

(1) Signalized junction capacity is measured by the Reserved Capacity (RC) of the junction. Priority junction and roundabout are measured by the ratio of Design Flow over Capacity (DFC).

2.3. Existing Public Transport Services

2.3.1. Existing public transport (PT) services in the vicinity of the Site are illustrated in **Figure 2.3** and listed in **Table 2.3**.

Table 2.3 Existing Public Transport Services

| Route No. | Origin – Destination |
|-----------------------|---|
| Franchised Bus | |
| 4 | Wah Fu (South) / Wong Chuk Hang – Central |
| 4X | Wah Fu (South) – Central |
| 7 | Shek Pai Wan – Central |
| 30X | Cyberport – Admiralty (East) |
| 33X | Cyberport – Shau Kei Wan |
| 37A | Chi Fu Fa Yuen – Central |
| 37B | Chi Fu Fa Yuen – Admiralty |
| 37X | Chi Fu Fa Yuen – Admiralty |

| Route No. | Origin – Destination |
|----------------------|--|
| 40 | Wah Fu (North) – Exhibition Centre Station |
| 40M | Wah Fu (North) – Exhibition Centre Station |
| 40P | Wah Fu (North) – Robinson Road |
| 43M | Tin Wan – Shek Tong Tsui |
| 47P | Belcher Bay – Wong Chuk Hang |
| 71 | Wong Chuk Hang – Central (Rumsey Street) |
| 71P | Sham Wan – Central (Ferry Piers) |
| 90B | South Horizons – Admiralty (East) |
| 91 | Ap Lei Chau Estate – Central (Ferry Piers) |
| 93 | South Horizons / Ap Lei Chay Estate – Robinson Road |
| 93A | Lei Tung Estate – Robinson Road |
| 93C | Ap Lei Chau Main Street / Tin Wan – Caine Road |
| 970 | Cyberport – So Uk Estate |
| 970X | Aberdeen – Cheung Sha Wan (Kom Tsun Street) |
| 971 | Aberdeen (Shek Pai Wan) – Hoi Lai Estate |
| 973 | Stanley Village – Tsim Sha Tsui (Mody Road) |
| A10 | Ap Lei Chau (Lee Lok Street) – Airport (via HZMB Hong Kong Port) |
| NA10 | Ap Lei Chau (Lee Lok Street) – Airport (via HZMB Hong Kong Port) |
| X970 | South Horizons – Cheung Sha Wan (Kom Tsun Street) |
| Green Minibus | |
| 8 | Baguio Villas (Lower) – Central (Exchange Square) |
| 8X | Baguio Villas (Lower) – Central (Exchange Square) |
| 10 | Cyberport – Causeway Bay (Jaffe Road) |
| 10P | Cyberport – Causeway Bay (Jaffe Road) |
| 22 | Pok Fu Lam Gardens – Central (Exchange Square) |
| 22S | Pok Fu Lam Gardens – Central (Ferry Piers) |
| 22X | Pok Fu Lam Gardens – Central (Ferry Piers) |

| Route No. | Origin – Destination |
|------------------|--|
| 23 | Kennedy Town Station – Pok Fu Lam |
| 23M | Chi Fu Fa Yuen – Kennedy Town Station |
| 28 | Baguio Villas (Upper) – Causeway Bay |
| 28M | Baguio Villas (Upper) – HKU Station |
| 28S | Baguio Villas (Upper) – HKU Station |
| 31 | Tin Wan Estate – Causeway Bay (Jaffe Road) |
| 31X | Tin Wan Estate – Causeway Bay (Jaffe Road) |
| 58 | Aberdeen Centre – Kennedy Town Station |
| 58A | Aberdeen (Wu Nam Street) – Kennedy Town Station |
| 58M | Bel-Air – Kennedy Town Station |
| 59 | Shum Wan Road Public Terminus – Kennedy Town Station |
| 69 | Cyberport – Quarry Bay (Shipyards Lane) |
| 69A | Cyberport – Wong Chuk Hang Station |
| 69X | Cyberport – Causeway Bay (Lockhart Road) |
| N31 | Tin Wan Estate – Causeway Bay (Jaffe Road) |

3 THE DEVELOPMENT

3.1. Existing Site Condition

3.1.1. The existing Middleton Towers serves as staff quarters for HKU. It should be noted that currently only 16 out of a total of 72 flats are occupied, representing occupancy rate of 22%. The detailed development parameters are as below:

- Number of Blocks: 3
- Total Number of Flats: 72
- Average Flat Size: Approximately 240m²
- Number of Private Car Parking Space: 92

3.2. Proposed Development

3.2.1. The Middleton Towers is proposed to be internally re-partitioned and converted into a student hostel. Upon completion, it is anticipated that the three buildings will provide approximately 900 student housing units in single-occupancy rooms.

3.2.2. Internal re-partitioning works of the Middleton Towers are anticipated to commence in 2027 and reach completion in 2028 Q1. The design year for operation stage will be 3 years after the completion of construction works, which is 2031. The years of assessment are summarized in **Table 3.1**.

Table 3.1 Assessment Years

| Stage | Design Year |
|--------------|-------------|
| Construction | 2027 |
| Completion | 2028 Q1 |
| Operation | 2031 |

3.3. Existing and Proposed Site Access Arrangement

3.3.1. Currently, the unnamed single-track access road off Pok Fu Lam Road is the only vehicular access point for the Middleton Towers, with existing traffic consisting mainly of private vehicles and shuttle buses. Due to limited road width, certain sections of the road, particularly at road bends, do not allow for simultaneous two-way movement. The operational constraints for private vehicle two-way movement are further detailed in the swept path analysis provided in **Appendix E**.

3.3.2. Technical constraints, including the presence of slopes, existing retaining walls and the proximity of the HKU High West Campus Development (HWC), have been identified as significant barriers to widening the existing access road. Consequently, road conditions are likely to remain unchanged. To enhance future traffic safety, convex mirrors will be proposed at tight bends in accordance with the standards outlined in Vol. 3, Chapter 2.3.4 of the Transport Planning and Design Manual (TPDM) in later design stages.

3.3.3. The proposed vehicular access for the HWC, located to the east of Pok Fu Lam Road between Junctions J1 and J2, involves a reconfiguration of the local traffic layout which this Project will adopt.

3.3.4. The unnamed access road to University Hall will be converted from 2-way to 1-way ingress only, while the access road to the Middleton Towers will transition to 1-way egress only. These two routes will be integrated via a new internal link road connecting both access roads. In addition, right turn traffic from Pok Fu Lam Road northbound will be prohibited at Junction J2.

Under this arrangement, northbound traffic from Pok Fu Lam Road will be required to turn around near Junction J5 to approach the Site from the southbound direction. The rearranged traffic layout is illustrated in **Appendix C**.

3.4. Parking Provision

- 3.4.1. For parking and loading/ unloading (L/UL) provision, there is no parking standard available in the Hong Kong Planning Standards and Guidelines (HKPSG) for student hostel. To cater for parking and L/UL needs, reference was made to the existing and proposed student hostels of similar size, as shown in **Table 3.2**.

Table 3.2 Parking Space and L/UL bay for Similar Student Hostels

| Elements | Wei Lun Hall, Richard Charles Lee Hall, Lee Hysan Hall | Planned High West Student Hostel |
|-----------------------|---|---|
| No. of Students Rooms | 1,134 | 938 |
| Car Parking Space | 16 | 9 |
| L/UL Bay | / | 1 |

- 3.4.2. From the above table, car parking ratio is around 1 parking space per 70 - 100 students and only 1 L/UL bay is provided for the student hostels. On average, car parking ratio of 1 to 90 students and 1 L/UL bay are adopted for the redevelopment of Middleton Towers. The provision of internal transport facilities are as follows:
- Car Parking Space: 10 parking spaces with dimensions of 5m x 2.5m
 - Good Vehicle L/UL Bay: 1 L/UL bay with dimensions of 11m x 3.5m

3.5. Trip Generation

Trip Generation Survey

- 3.5.1. To understand the trip rate associated with the existing use of the Middleton Towers, conducting trip generation survey there is straightforward. However, it would lead to great variation for the projected trip generation for full occupancy if the trip rate is based on the current low occupancy condition. Therefore, a trip generation survey was conducted at another staff quarters site with similar average flat size, which is Tam Towers & Gardens with a higher occupancy rate of 79%, to capture vehicular movements associated with staff quarters and to provide a baseline for assessing current traffic conditions.
- 3.5.2. The University Hall, an existing student hostel comprising single-occupancy rooms and having a location and land-use comparable to the proposed use of the Middleton Towers, was surveyed as a reference site. The survey data was used to represent trip generation of a student hostel.
- 3.5.3. Pedestrian survey was also conducted for the University Hall to capture pedestrian movements. The pedestrian counted is assumed to be travelling by non-private modes, i.e. public transport.
- 3.5.4. There is currently construction work at the University Hall. Therefore, traffic and pedestrian flows related to the construction work would be excluded to reflect conditions under normal circumstances.

- 3.5.5. The surveys were conducted on a normal school day in January and February 2026. Based on the survey results, the AM and PM peak hours are 08:30 – 09:30 and 18:00 – 19:00 respectively.

Trip Generation under Existing Use

- 3.5.6. **Table 3.3** presents the inbound and outbound traffic flows and trip rates associated with the staff quarters at Tam Towers & Gardens during the AM and PM peak hours. Trip rates of the Tam Towers & Gardens were derived based on the current occupancy of 95 flats.

Table 3.3 Existing Trip Generation of the Middleton Towers

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|----------------------|---|--------------------------|---------|-------|-------|---------|-------|-------|
| | | | In | Out | Total | In | Out | Total |
| Tam Towers & Gardens | Existing Use – Staff Quarters (95 flats occupied) | Trip Generation (pcu/hr) | 28 | 37 | 65 | 35 | 25 | 60 |
| | | Trip Rate (pcu/hr/flat) | 0.295 | 0.389 | / | 0.368 | 0.263 | / |

- 3.5.7. The trip generation of the Middleton Towers under full occupancy condition is projected based on trip rate in **Table 3.3**, and the resulting trip generation is presented in **Table 3.4**.

Table 3.4 Trip Generation of the Existing Use under Full Occupancy Condition

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|------------------|--|--------------------------|---------|-----|-------|---------|-----|-------|
| | | | In | Out | Total | In | Out | Total |
| Middleton Towers | Existing Use – Staff Quarters (72 flats) | Trip Generation (pcu/hr) | 21 | 28 | 49 | 27 | 19 | 46 |

Trip Generation under Proposed Use

Trip Generation of Private Modes

- 3.5.8. Trip generation survey was conducted at the University Hall to understand the trip rates of student hostel. **Table 3.5** presents trip generation and trip rates associated with the University Hall during the AM and PM peak hours.

Table 3.5 Trip Generation of the University Hall

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|-----------------|----------------------------|--------------------------|---------|-------|-------|---------|-------|-------|
| | | | In | Out | Total | In | Out | Total |
| University Hall | Student Hostel (110 units) | Trip Generation (pcu/hr) | 1 | 3 | 4 | 2 | 1 | 3 |
| | | Trip Rate (pcu/hr/flat) | 0.009 | 0.027 | / | 0.018 | 0.009 | / |

- 3.5.9. The trip generation of the Middleton Towers under the proposed use (student hostel) is projected based on trip rate in **Table 3.5**, and the resulting trip generation is presented in **Table 3.6**.

Table 3.6 Trip Generation of the Proposed Use

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|------------------|---|--------------------------|---------|-----|-------|---------|-----|-------|
| | | | In | Out | Total | In | Out | Total |
| Middleton Towers | Proposed Use – Student Hostel (900 units) | Trip Generation (pcu/hr) | 8 | 25 | 33 | 16 | 8 | 24 |

Trip Generation of Non-Private Modes

- 3.5.10. To understand the patronage demand on non-private modes, i.e. modes other than private cars or taxis, pedestrian count survey was also conducted at the University Hall. **Table 3.7** presents the pedestrian generation associated with the University Hall during the AM and PM peak hours.

Table 3.7 Pedestrian Generation of the University Hall

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|-----------------|----------------------------|--|---------|-------|-------|---------|-------|-------|
| | | | In | Out | Total | In | Out | Total |
| University Hall | Student Hostel (110 units) | Pedestrian Flow (ped/hr) | 5 | 14 | 19 | 15 | 9 | 24 |
| | | Pedestrian Generation Rate (ped/hr/unit) | 0.045 | 0.127 | / | 0.136 | 0.082 | / |

- 3.5.11. Currently, residents of the Middleton Towers rely primarily on the Route 3 shuttle bus to access the Sassoon Road Campus, Main Camps, and Prince Philip Dental Hospital. Following the re-partitioning, Route 3 will no longer serve the Middleton Towers; instead, the school bus service planned under the HKU HWC (adjacent to the Middleton Towers) will be enhanced to serve the proposed student hostels at the Middleton Towers.
- 3.5.12. Under the planned transport provisions for the HKU HWC (adjacent to the Middleton Towers), school buses operating with 10-minute headway at peak hour are scheduled to serve both High West and the University Hall. This can provide 6 school bus (one-way) in an hour with carrying capacity of 300 passengers, assuming a capacity of 50 passengers for each school bus. To optimise utilisation of the planned school bus service, its frequency could be enhanced to also serve the proposed student hostel at the Middleton Towers. Therefore, as a conservative approach, it is assumed that students travelling by non-private modes would primarily use the school bus rather than public transport. **Table 3.8** proposes additional bus trips for accommodating the proposed use at the Middleton Towers.

Table 3.8 School Bus Trips for Accommodating the Proposed Use at the Middleton Towers

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|------------------|---|--|---------|-----|-------|---------|-----|-------|
| | | | In | Out | Total | In | Out | Total |
| Middleton Towers | Proposed Use – Student Hostel (900 units) | Patronage Demand (pax/hr) | 41 | 115 | 156 | 123 | 74 | 197 |
| | | Additional No. of School Bus per hour ⁽¹⁾ | 3 | 3 | 6 | 3 | 3 | 6 |
| | | Additional Capacity per hour | 150 | 150 | 300 | 150 | 150 | 300 |

Note:

(1) School bus capacity of 50 passengers was adopted under the transport planning for High West and is also adopted in this assessment.

- 3.5.13. As shown **Table 3.8**, it is required to enhance the school bus services under HKU HWC with an additional of 3 school buses (one-way) at peak hour for an additional capacity of 150 passengers per hour to accommodate the peak demand (123 passengers per hour). This result in enhancing the planned school bus service from 10-minute headway to 6-minute to 7-minute headway, providing a total hourly capacity of 450 passengers per hour.

Total Trip Generation

- 3.5.14. With reference to trip generation for private modes and additional bus trips presented in **Table 3.6** and **Table 3.8** respectively, **Table 3.9** summarizes total trip generation of the proposed use at the Middleton Towers.

Table 3.9 Total Trip Generation of the Proposed Use at the Middleton Towers (pcu/hr)

| Location | Land Use and Parameters | Item | AM Peak | | | PM Peak | | |
|------------------|---|---------------------------|---------|-----|-------|---------|-----|-------|
| | | | In | Out | Total | In | Out | Total |
| Middleton Towers | Proposed Use – Student Hostel (900 units) | Private Modes | 8 | 25 | 33 | 16 | 8 | 24 |
| | | School Bus ⁽¹⁾ | 6 | 6 | 12 | 6 | 6 | 12 |
| | | Total | 14 | 31 | 45 | 22 | 14 | 36 |

Note:

(1) Passenger Car Unit (PCU) factor for school bus = 2.

4 FUTURE TRAFFIC CONDITIONS

4.1. Traffic Forecast Methodology

4.1.1. The traffic forecast for this study is based on the 2021-based Territorial Population and Employment Data Matrix (TPEDM) issued by the Planning Department (PlanD). To determine the background traffic for the horizon years, population and employment projections for the Central and Western, and Southern Districts were extracted for the years 2026 and 2031, which are presented in **Table 4.1**.

Table 4.1 2021-Based TPEDM Distributions of Population and Employment in 2026 and 2031

| District | Item | 2026 | 2031 |
|---------------------|------------|----------------|----------------|
| Central and Western | Population | 226,250 | 222,600 |
| | Employment | 379,150 | 381,450 |
| Southern | Population | 258,800 | 267,200 |
| | Employment | 126,700 | 121,850 |
| Total | | 990,900 | 993,100 |

4.1.2. The annual growth rate was derived through linear interpolation of the 2026 and 2031 data. Analysis indicated that the calculated annual growth rate for these districts falls below 0.5%, which is presented in **Table 4.2**. To maintain a conservative assessment and account for potential fluctuations in development density, a nominal annual growth rate of 0.5% was therefore adopted. This adopted growth rate was subsequently applied to the 2026 observed traffic flows to establish the background traffic for assessment year 2031.

Table 4.2 Annual Growth Rate based on 2021-Based TPEDM

| District | Total Population and Employment | |
|-------------------------------|---------------------------------|---------|
| | 2026 | 2031 |
| Central and Western, Southern | 990,900 | 993,100 |
| Annual Growth Rate | 0.04% | |

4.2. Future Traffic Context

Planned Road and Junction Improvement Schemes

4.2.1. Although no major changes to the road network are expected, planned junction improvement works for the 2031 design year have been identified in **Table 4.3**. The planned junction improvement of J1 and J2, ingress and egress access of Middleton Tower and High West, are provided in **Appendix C**, while other planned junction improvements layouts are provided in **Appendix D**.

Table 4.3 Planned Road and Junction Improvement Schemes

| Junction No. | Junctions with Planned Improvement Works |
|--------------|---|
| J1 | Pok Fu Lam Road / Access Road to Middleton Towers |
| J2 | Pok Fu Lam Road / Access Road to University Hall |
| J3 | Pok Fu Lam Road / Victoria Road |
| J5 | Pok Fu Lam Road / Sassoon Road |

Planned Developments in the Vicinity

4.2.2. Major planned/committed developments in the surrounding areas of the Middleton Towers under the 2031 design year have been considered and summarized in **Table 4.4**.

Table 4.4 Planned Developments in the Vicinity

| | Planned Development | Type of Use | Anticipated Completion Year |
|---|--|---|-----------------------------|
| 1 | HKU Academic Complex Development at Inland Lot No. 7704 RP (Part), Pokfield Road | Academic Building & Staff Residence | 2027 |
| 2 | HKU Clinical Training Amenities Centre Phase 1 and II at No. 6 Sassoon Road | Student Hostel | 2029 |
| 3 | HKU High West Site Development – Student Hostel and Senior Staff Quarters | Private Housing | 2026 |
| 4 | Cyberport Expansion | Office / Commercial / Data Service Platform | 2026 |
| 5 | Public Housing Developments at the Five Sites in Pokfulam South | Public Housing | 2026 – 2031 |
| 6 | Queen Mary Hospital Redevelopment (Phase 1) | Hospital | 2026 |
| 7 | Redevelopment of Jockey Club Care and Attention Home for Elderly at 9 Sandy Bay Road | G/IC (Care and Attention Home) | 2030 |
| 8 | The Ebenezer School and Home for The Visually Impaired Redevelopment | Private Housing | 2027 |

4.3. Development Traffic

4.3.1. The development traffic for the proposed use of the Middleton Towers was established using trip rates derived from comprehensive trip generation surveys conducted at various

representative locations. These surveys captured the actual traffic characteristics associated with similar land uses to ensure the forecast reflects the specific operational requirements of the re-partitioned Middleton Towers. The resulting development traffic generated by the proposed use of the Middleton Towers has been summarized in **Table 3.9** of this report.

4.4. Traffic Forecast

- 4.4.1. While only 22% of the flats at the existing site are currently occupied, full occupancy remains permissible under the existing land use without requiring further planning approval. Consequently, a full intake scenario has been adopted for both the existing and proposed uses in design year 2031 to ensure a robust and conservative assessment of the potential traffic impact on the surrounding road network.
- 4.4.2. For the 2031 design year, the assessment evaluates the net impact through two distinct scenarios. The Reference Case establishes the future baseline by combining projected background traffic with the traffic generated by planned developments and the existing use of Middleton Towers at full occupancy. Building upon this, the Design Case incorporates the traffic generated by the proposed use at Middleton Towers, while removing the traffic associated with the existing use to isolate the specific impact of the redevelopment.
- 4.4.3. Forecast traffic flows for design year 2031 are presented in **Figures 5.1** and **5.2**. Details of traffic impact assessment based on the traffic forecast will be presented in **Section 5**.

5 OPERATION TRAFFIC AND TRANSPORT IMPACT ASSESSMENTS

5.1. General

5.1.1. In this section, the operational performance of the identified junctions in **Table 2.1** was assessed for design year 2031. The junction layouts adopted for assessment are summarized in **Table 5.1**.

Table 5.1 Adopted Layouts for Key Junction Assessments in Design Year 2031

| Junction No. | Junction Location | Junction Type | Adopted Layout |
|--------------|---|---------------|------------------------------|
| J1 | Pok Fu Lam Road / Access Road to Middleton Towers | Priority | Planned Layout in Appendix C |
| J3 | Pok Fu Lam Road / Victoria Road | Signal | Planned Layout in Appendix D |
| J4 | Pok Fu Lam Road / Sassoon Road / Access Road To Queen Mary Hospital | Signal | Existing Layout |
| J5 | Pok Fu Lam Road / Sassoon Road | Priority | Planned Layout in Appendix D |
| J6 | Pok Fu Lam Road / Smithfield / Mount Davis Road | Signal | Existing Layout |
| J7 | Pok Fu Lam Road / Pokfield Road | Signal | Existing Layout |
| J8 | Pok Fu Lam Road | Signal | Existing Layout |

5.2. Key Junction Assessments

5.2.1. The performance of key junctions has been evaluated and results are summarized in **Table 5.2**. Detailed junction calculation sheets are presented in **Appendix B**.

5.2.2. The results indicate that all key junctions will operate with sufficient capacity in 2031.

Table 5.2 Key Junction Assessments for Design Year 2031

| Junction No. | Junction Location | Junction Type | 2031 | | | |
|--------------|--|---------------|-----------------------|------|-----------------------|------|
| | | | Reference Case | | Design Case | |
| | | | RC/DFC ⁽¹⁾ | | RC/DFC ⁽¹⁾ | |
| | | | AM | PM | AM | PM |
| J1 | Pok Fu Lam Road / Access Road to Middleton Towers | Priority | 0.74 | 0.28 | 0.77 | 0.26 |
| J3 | Pok Fu Lam Road / Victoria Road | Signal | 19% | 34% | 19% | 34% |
| J4 | Pok Fu Lam Road / Sassoon Road / Access Road To Queen Mary Hospital | Signal | 35% | 43% | 35% | 43% |
| J5 | Pok Fu Lam Road / Sassoon Road | Priority | 0.65 | 0.66 | 0.65 | 0.66 |
| J6 | Pok Fu Lam Road / Smithfield / Mount Davis Road | Signal | 17% | 22% | 17% | 22% |
| J7 | Pok Fu Lam Road / Pokfield Road | Signal | 63% | 63% | 62% | 63% |
| J8 | Pok Fu Lam Road | Signal | 15% | 21% | 15% | 21% |

6 CONSTRUCTION TRAFFIC AND TRANSPORT IMPACT ASSESSMENTS

- 6.1.1. As the construction works will mainly involve internal re-partitioning, only a limited amount of construction materials and waste is anticipated. In addition, the site is sufficiently spacious to accommodate the storage of construction materials and waste. Therefore, it is expected to generate minimal construction traffic, i.e. 15 pcu/hr (1-way), and result in insignificant impact on the surrounding road network. Construction works of the Middleton Towers will be carried out in 2027 with an anticipated completion in 2028 Q1, ahead of the HKU Global Innovation Centre (GIC) which will be commenced in 2028. Therefore, no concurrent impacts are anticipated.
- 6.1.2. In the event that construction traffic impacts are of concern, construction traffic can be scheduled during non-peak hours to minimize potential impacts on the surrounding road network. This measure would help avoid conflicts with peak-hour commuter traffic and maintain acceptable traffic conditions in the vicinity of the Site.

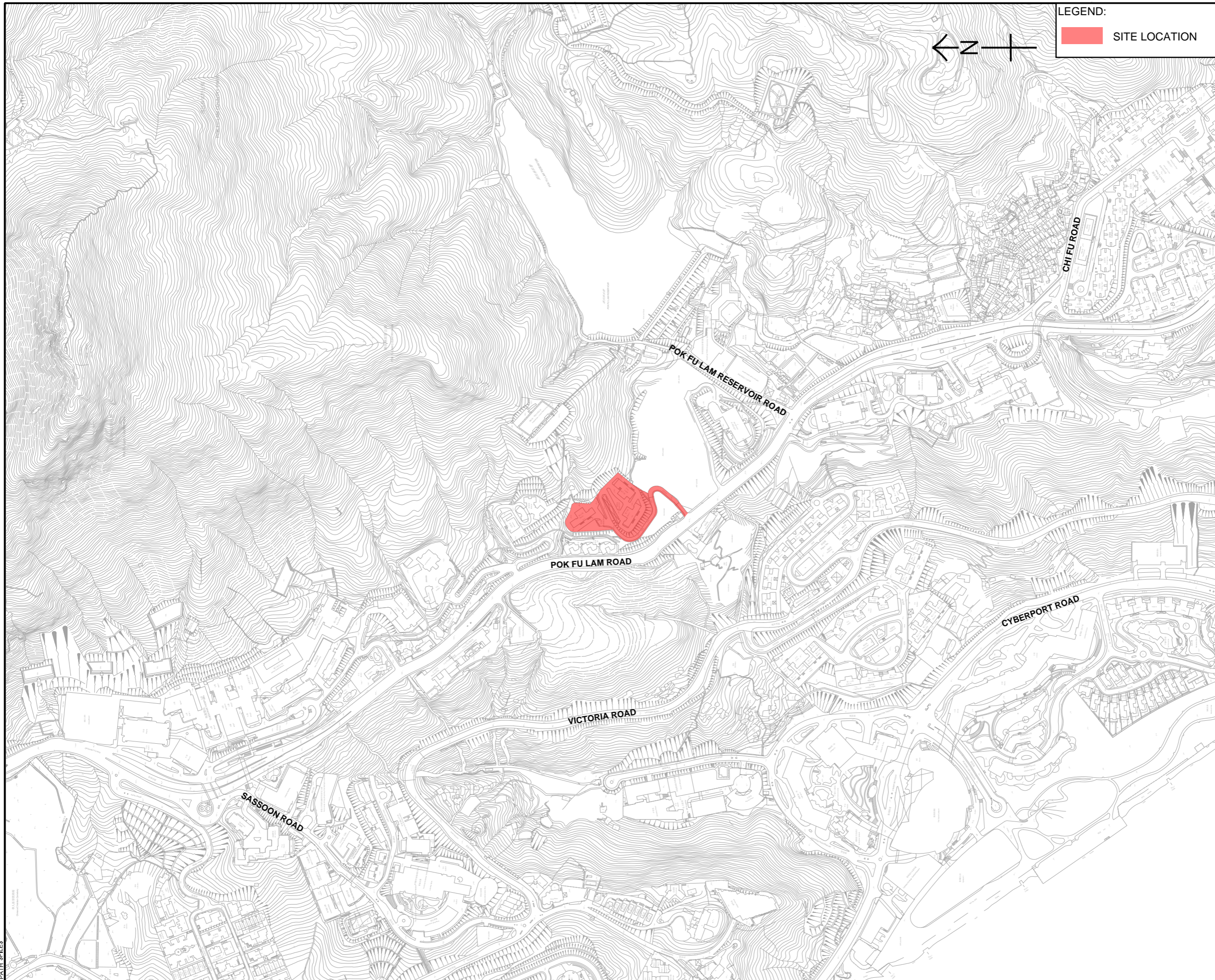
7 FUTURE PUBLIC TRANSPORT SERVICES

- 7.1.1. Building on the details in **Section 3.5**, the future provision of public transport for the Middleton Towers centers on the school bus services planned for the HKU HWC. These school buses are intended to serve both the High West Campus and the University Hall, providing a direct link between key campus locations.
- 7.1.2. Following the internal re-partitioning of the Middleton Towers, it is now assumed that students and staff travelling to / from the Middleton Towers via non-private modes will primarily rely on the planned school bus services rather than traditional public transport networks.
- 7.1.3. To maintain operational efficiency and accommodate trips generated from the re-partitioned Middleton Towers, it is recommended that the planned school bus services undergo optimization. This involves the addition of 3 supplementary trips (one-way) for both peak hours to support the proposed use of the Middleton Towers which the assessment has been detailed in **Table 3.8**.

8 SUMMARY

- 8.1.1. The proposed internal re-partitioning of the Middleton Towers into a modern student hostel aims to address the HKU's housing shortage by transforming existing staff quarters into approximately 900 student beds. This TTIA report is prepared to evaluate traffic flows, identify necessary junction improvements, and devise suitable parking and public transport arrangements.
- 8.1.2. An assessment of existing conditions indicates that the site is currently served by an unnamed single-track access road connecting to Pok Fu Lam Road. Traffic counts conducted in March 2026 for seven key junctions show that the surrounding road network operates with sufficient capacity during both AM and PM peak hours. All assessed junctions meet acceptable performance standards, maintaining R.C. above 15% or DFC ratios below 0.85.
- 8.1.3. The project involves internally re-partitioning the three existing towers to provide housing units. Proposed site access will feature a reconfigured layout where the University Hall access road becomes a one-way ingress and the Middleton Towers access road becomes a one-way egress, linked by a new internal road. Total trip generation for the proposed use is estimated at 45 trips during the AM peak and 36 trips during the PM peak.
- 8.1.4. Future traffic forecasts for the 2031 design year utilize a conservative annual growth rate of 0.5%. This projection accounts for several major planned developments in the vicinity. The assessment evaluates the net impact by comparing a Reference Case, which includes background traffic and existing land use at full occupancy, against a Design Case that isolates the specific impact of the student hostel.
- 8.1.5. The operational impact assessment confirms that all identified key junctions will continue to operate with sufficient capacity through the 2031 design year. Even with the added traffic from the hostel and nearby planned developments, the junctions maintain acceptable performance levels, suggesting that the redevelopment will not significantly degrade local road network efficiency.
- 8.1.6. Construction impacts are expected to be insignificant as the work primarily involves internal re-partitioning. Traffic generated during this phase is estimated at only 15 pcu per hour and is scheduled for completion in 2028 Q1, avoiding overlap with the HKU GIC project. If necessary, construction traffic can be restricted to non-peak hours to further minimize the impact on commuters.
- 8.1.7. Future public transport provisions focus on optimizing the school bus services planned for the HKU HWC. It is assumed that students and staff will primarily rely on these school buses rather than traditional public transport networks. By adding supplementary trips, as detailed in the report, the project can accommodate the increased demand internally and prevent additional pressure on the general public transportation infrastructure.

Figure



LEGEND:

SITE LOCATION

AECOM

PROJECT
項目
PLANNING CONSULTANCY
SERVICE FOR REDEVELOPMENT OF MIDDLETON
TOWERS TO STUDENT
HOSTEL

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STATUS
階段

SCALE
比例
A3 1:5000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

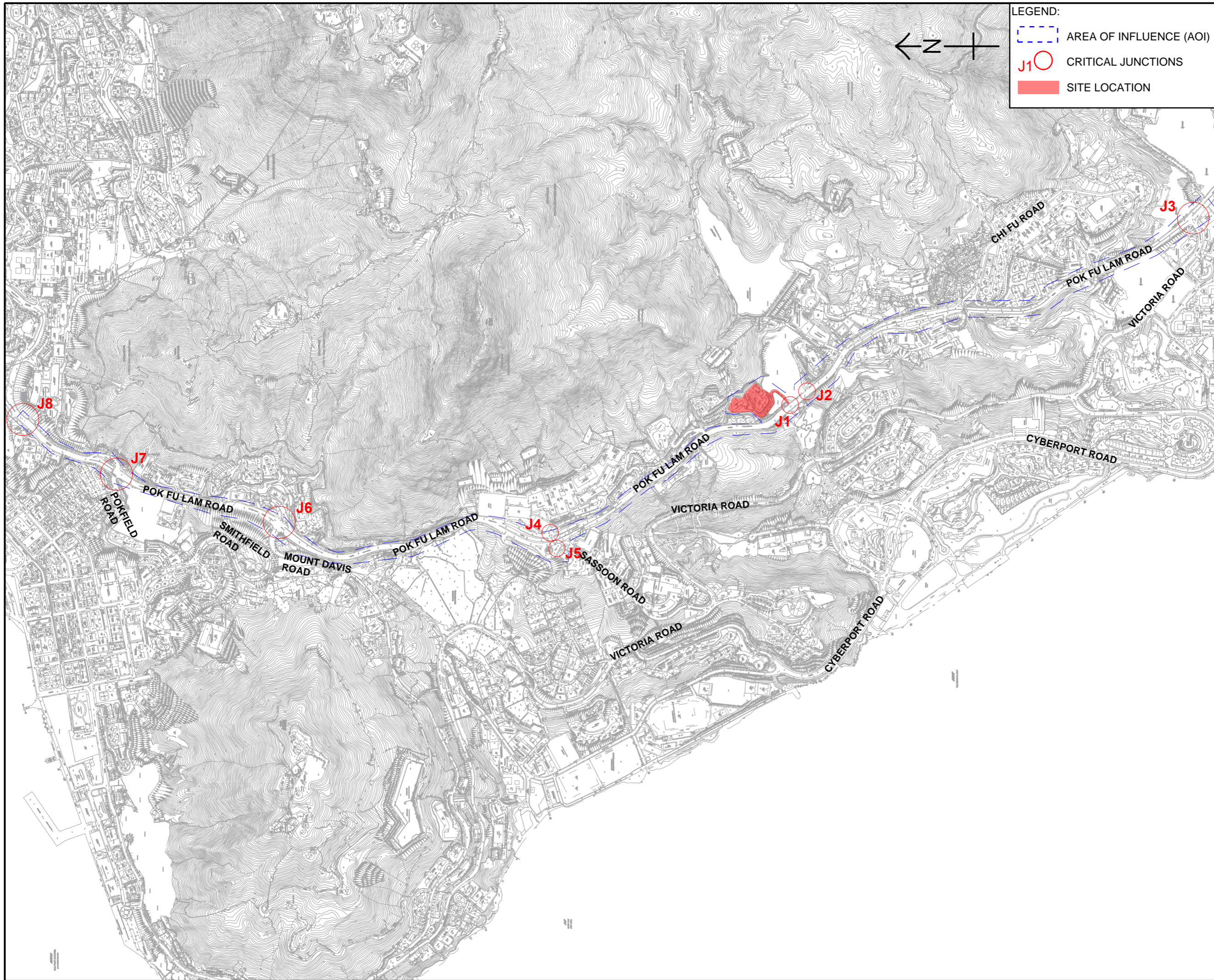
PROJECT NO.
項目編號
60776275

CONTRACT NO.
合約編號
EO/J/2025/005

SHEET TITLE
圖紙名稱
LOCATION PLAN

SHEET NUMBER
圖紙編號
FIGURE 1.1

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LEGEND:

- AREA OF INFLUENCE (AOI)
- CRITICAL JUNCTIONS
- SITE LOCATION



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STATUS
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SCALE **DIMENSION UNIT**
 比例 尺寸單位

KEY PLAN
 索引圖

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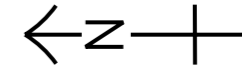
SHEET TITLE
 圖紙名稱
 LOCATION PLAN

SHEET NUMBER
 圖紙編號
 FIGURE 1.1

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LEGEND:

888(888) AM(PM) PEAK HOUR TRAFFIC FLOW (PCU/HR)



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STATUS

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DIMENSION UNIT

KEY PLAN

PROJECT NO.

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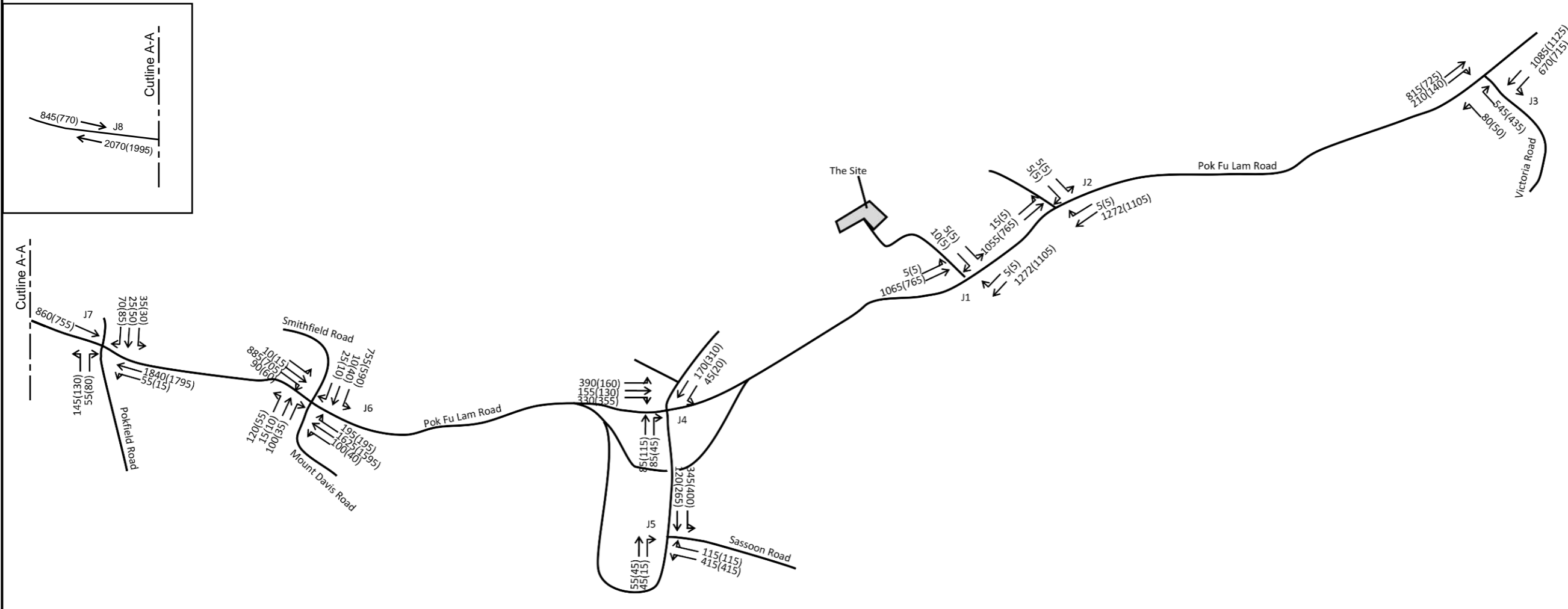
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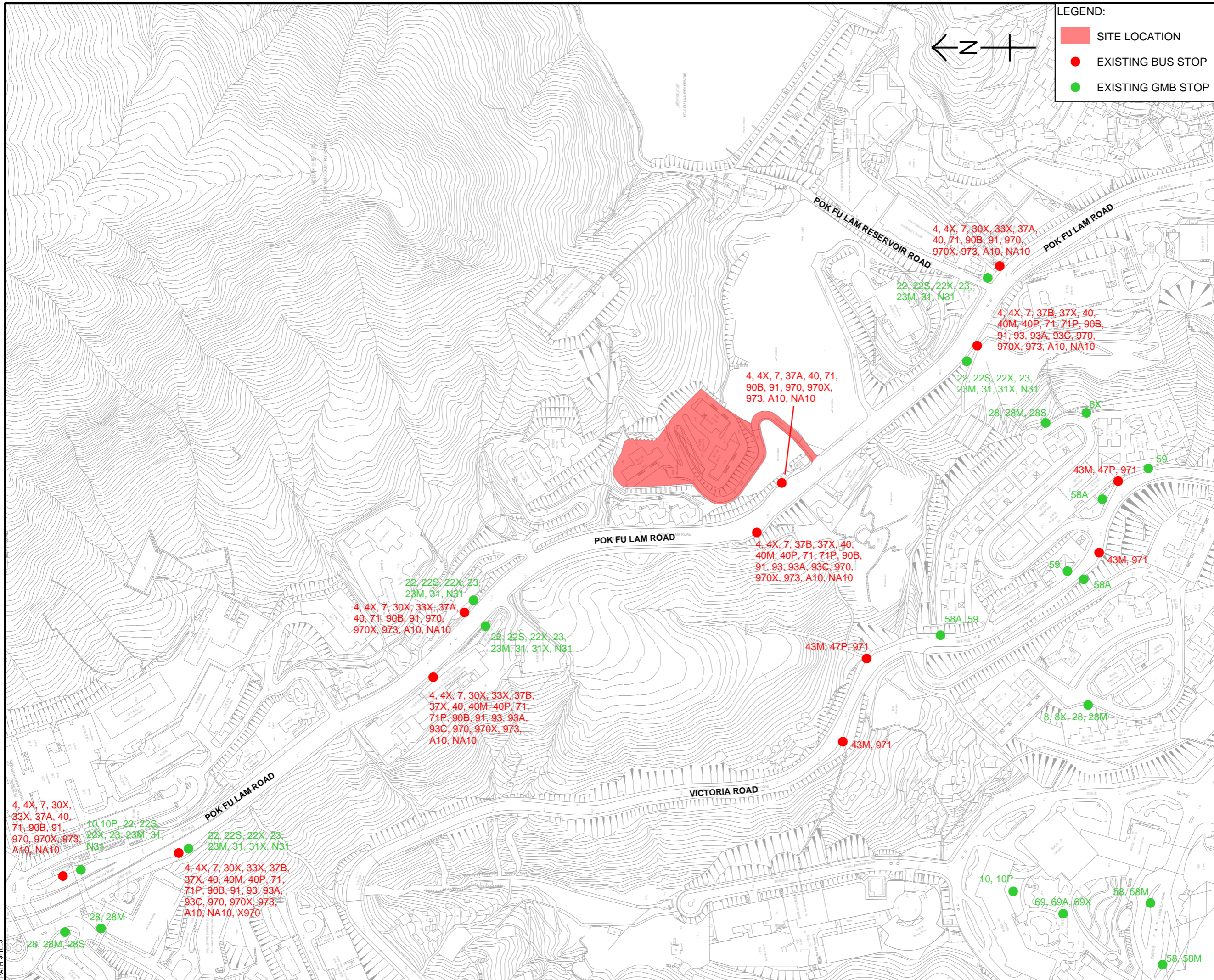
2026 OBSERVED TRAFFIC FLOWS

SHEET NUMBER

FIGURE 2.2

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LEGEND:

- SITE LOCATION
- EXISTING BUS STOP
- EXISTING GMB STOP



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STATUS
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SCALE
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 A3 1:3000

DIMENSION UNIT
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KEY PLAN
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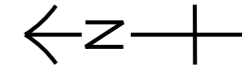
SHEET TITLE
 圖紙名稱
 EXISTING PUBLIC TRANSPORT SERVICES

SHEET NUMBER
 圖紙編號
 FIGURE 2.3

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LEGEND:

888(888) AM(PM) PEAK HOUR TRAFFIC FLOW (PCU/HR)



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STATUS

SCALE DIMENSION UNIT
比例 尺寸單位

KEY PLAN

PROJECT NO. CONTRACT NO.
項目編號 合約編號

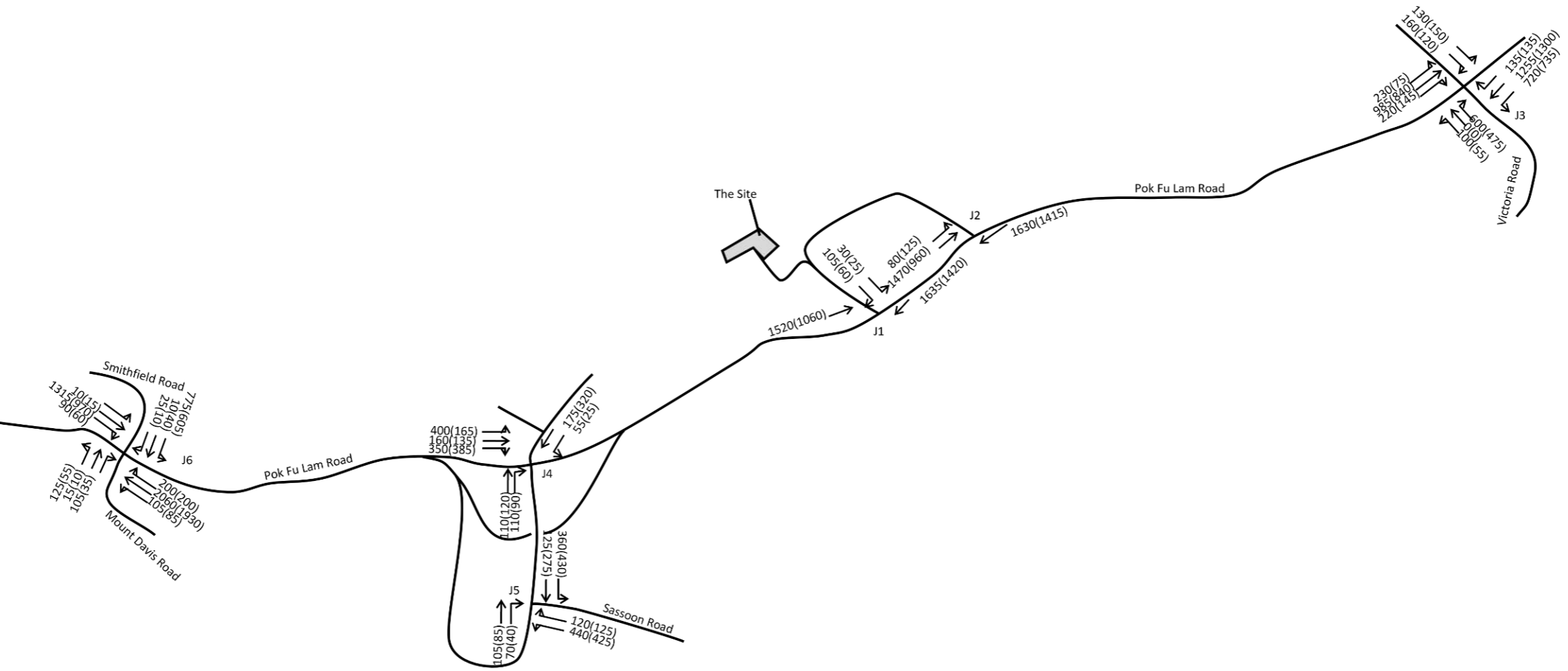
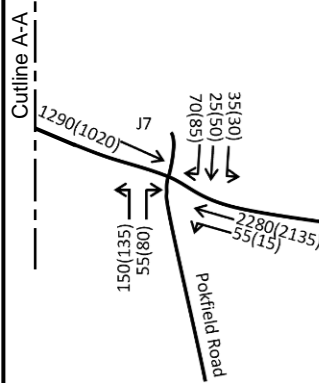
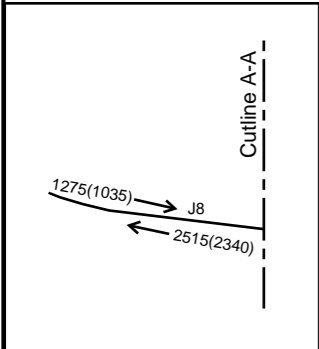
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SHEET TITLE

2031 REFERENCE TRAFFIC FLOWS

SHEET NUMBER

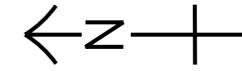
FIGURE 5.1



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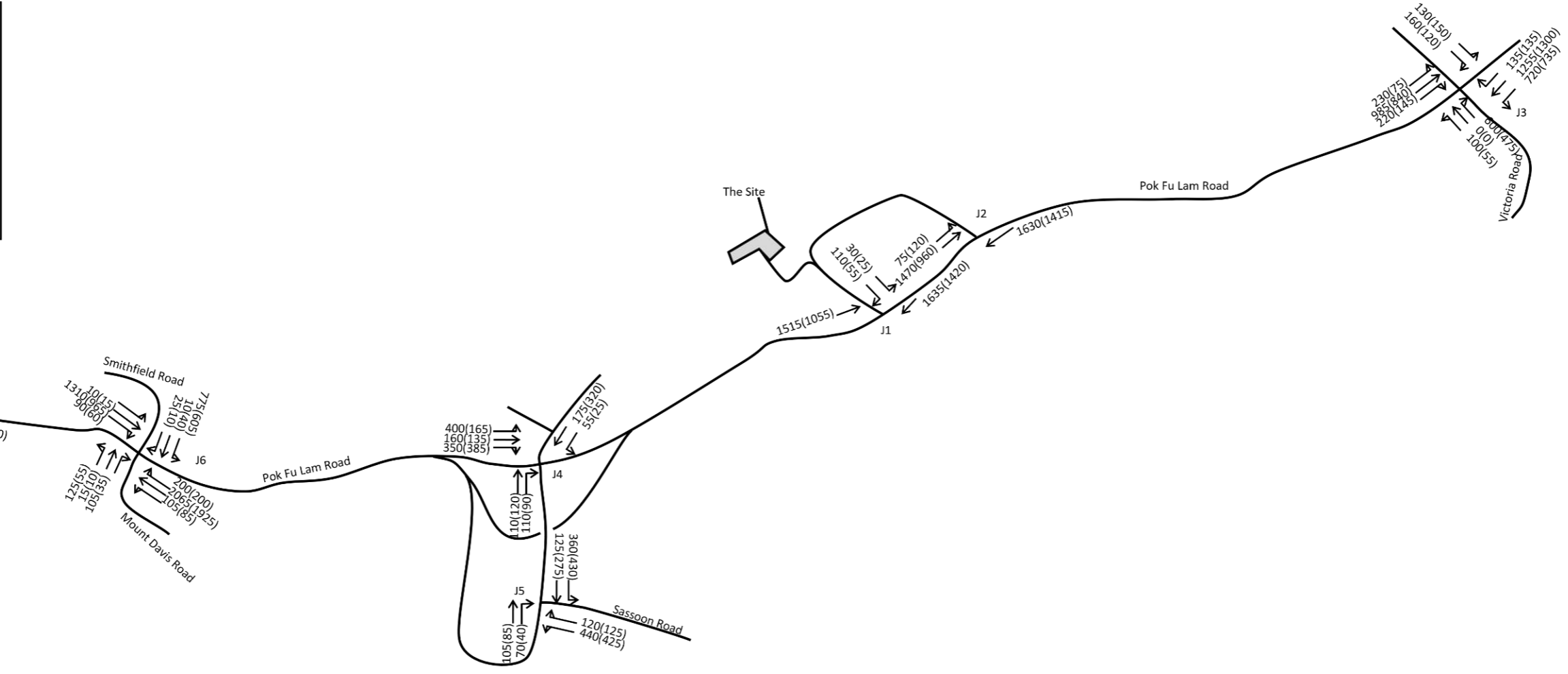
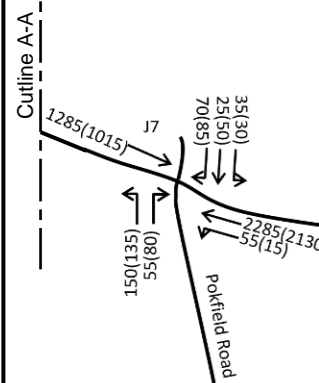
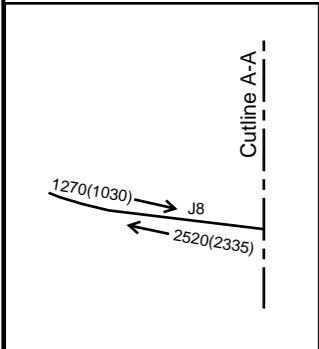
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2031 DESIGN TRAFFIC FLOWS

SHEET NUMBER

FIGURE 5.2

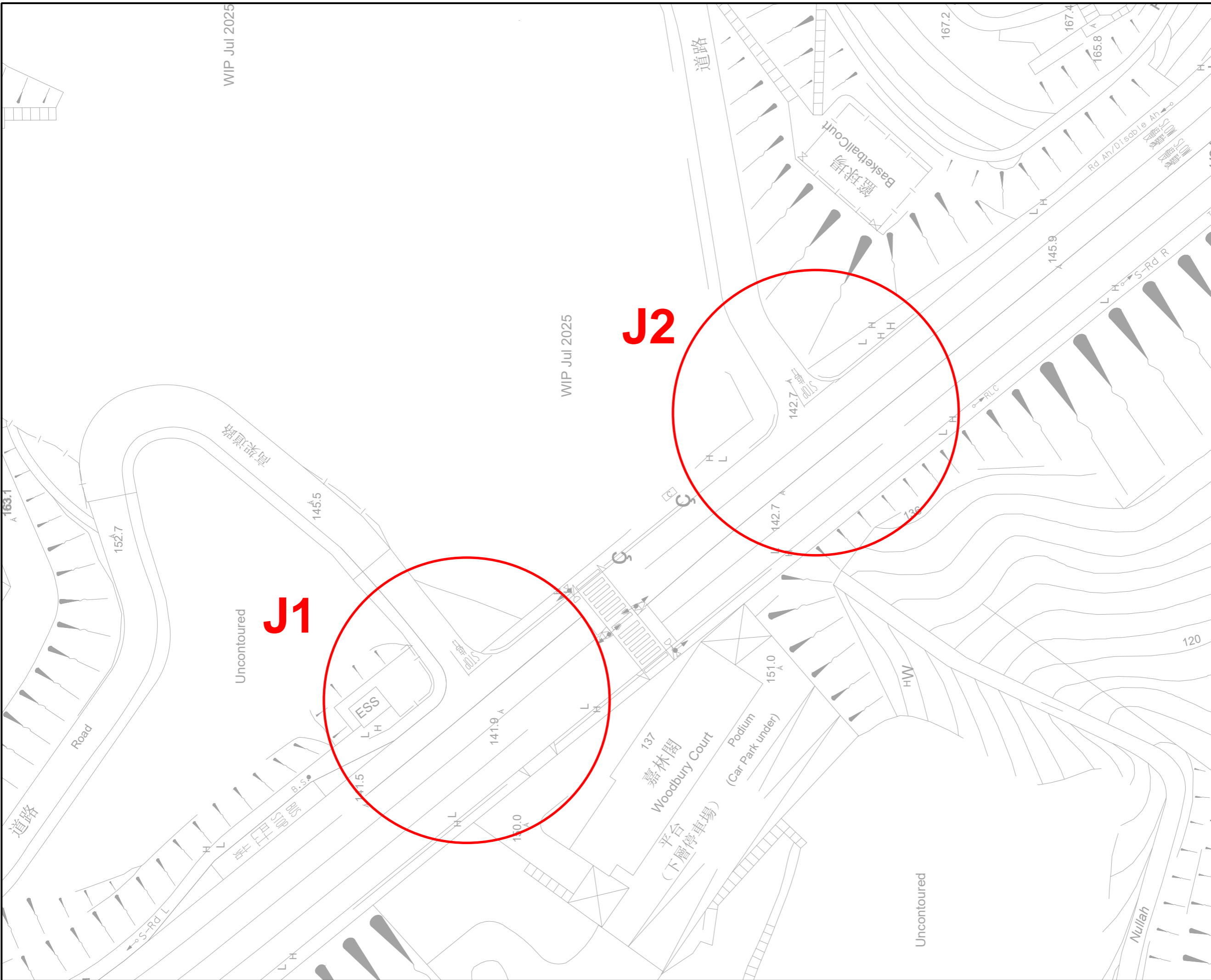


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Appendix A

Existing Junction Layouts

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DATE \$DATES
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Checked:
Designer:
Project Management Initials:



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STATUS
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SCALE
比例
A3 1:500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

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項目編號
60776275

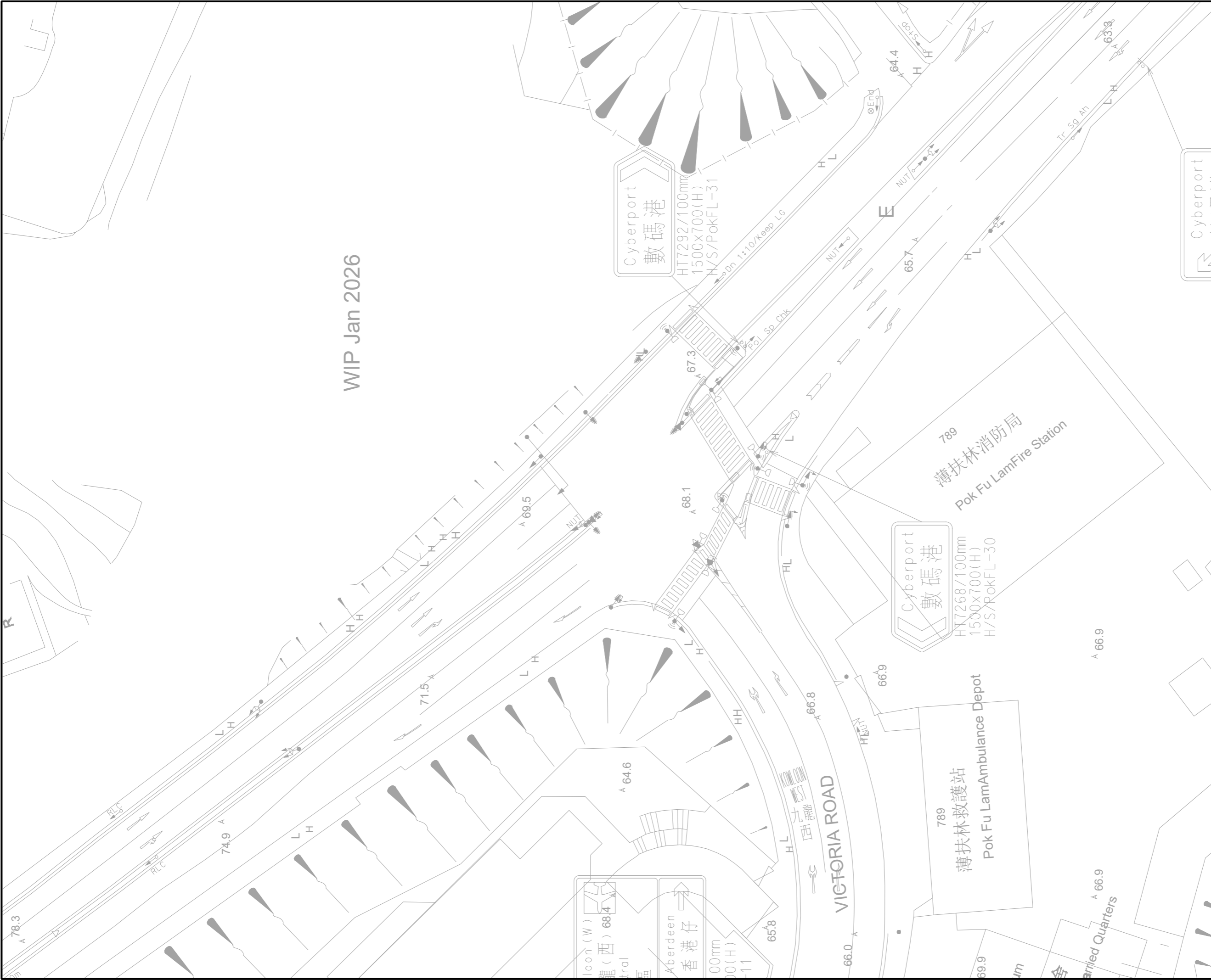
CONTRACT NO.
合約編號
EO/J/2025/005

SHEET TITLE
圖紙名稱
EXISTING JUNCTION LAYOUT - POK FU LAM ROAD / ACCESS ROAD TO MIDDLETON TOWERS (J1) & POK FU LAM ROAD / ACCESS ROAD TO UNIVERSITY HALL (J2)

SHEET NUMBER
圖紙編號
APPENDIX A-1

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SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:500 METRES

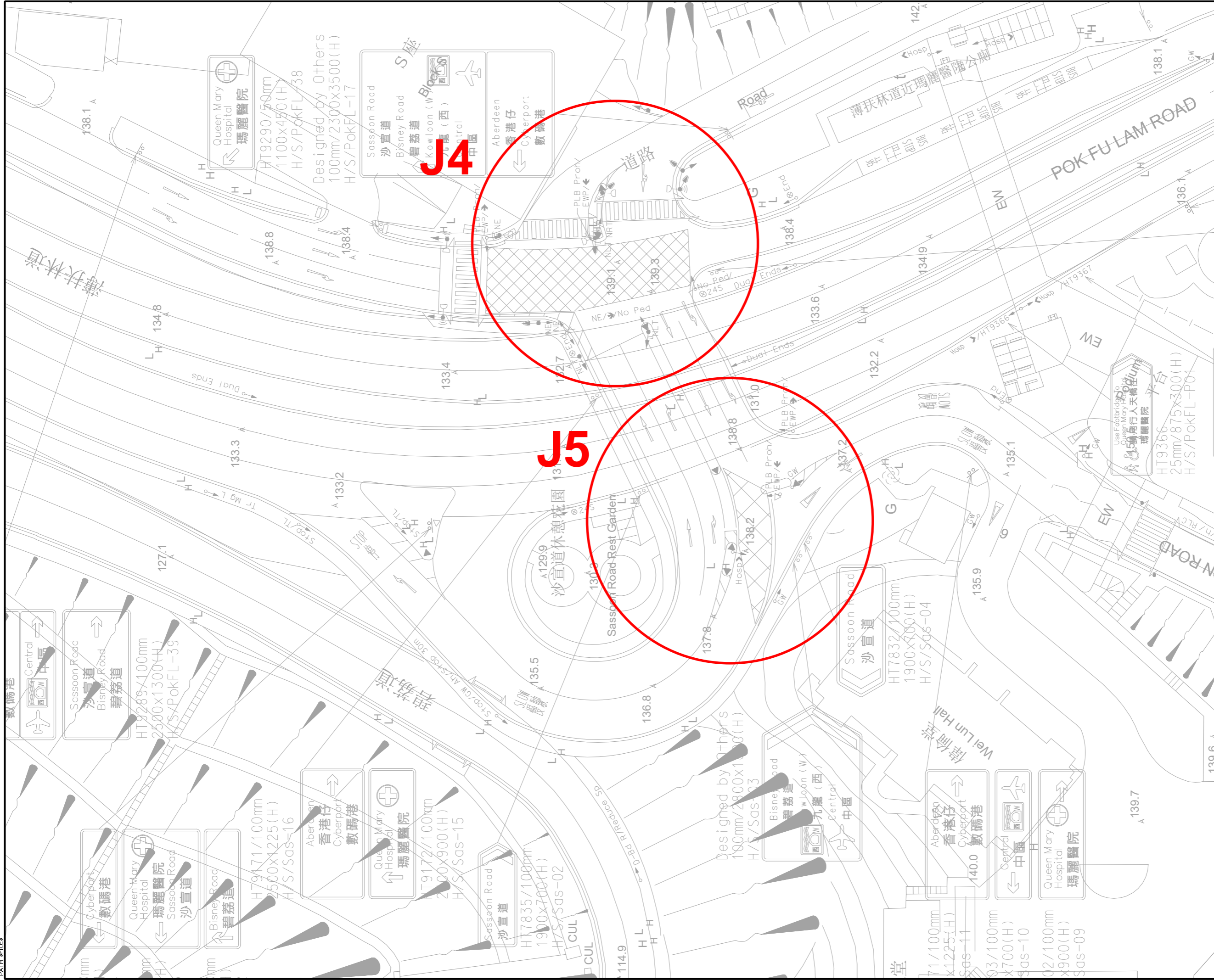
KEY PLAN
 索引圖

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SHEET TITLE
 圖紙名稱
EXISTING JUNCTION LAYOUT - POK FU LAM ROAD / VICTORIA ROAD (J3)

SHEET NUMBER
 圖紙編號

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KEY PLAN
 索引圖

PROJECT NO.
 項目編號: 60776275

CONTRACT NO.
 合約編號: EO/J/2025/005

SHEET TITLE
 圖紙名稱: EXISTING JUNCTION LAYOUT - POK FU LAM ROAD / SASSOON ROAD / ACCESS ROAD TO QUEEN MARY HOSPITAL (J4) & POK FU LAM ROAD / SASSOON ROAD (J5)

SHEET NUMBER
 圖紙編號: APPENDIX A-3

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STATUS
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SCALE
比例

A3 1:500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

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CONTRACT NO.
合約編號

EO/J/2025/005

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT - POK FU LAM ROAD / SMITHFIELD / MOUNT DAVIS ROAD (J6)

SHEET NUMBER
圖紙編號

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OPMENT OF MIDDLETON
TOWERS TO STUDENT
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STATUS
階段

SCALE
比例

A3 1:500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60776275

CONTRACT NO.
合約編號

EO/J/2025/005

SHEET TITLE
圖紙名稱

EXISTING JUNCTION LAYOUT -
POK FU LAM ROAD / POKFIELD
ROAD (J7)

SHEET NUMBER
圖紙編號

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Appendix B

Junction Calculation Sheets

Appendix B-1

Junction Calculation Sheet

2026 Base Case

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

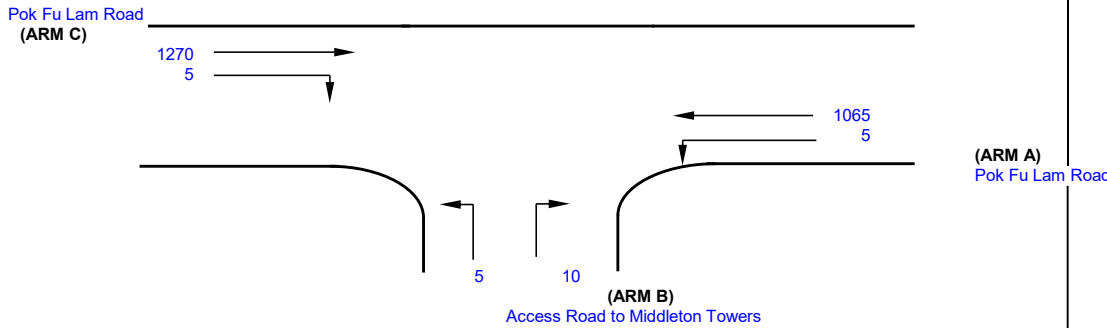
2026 AM Observed Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J1

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 5 (pcu/hr) |
| q a-c | = | 1065 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1270 (pcu/hr) |
| q c-b | = | 5 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 2.2 (metres) |
| W b-c | = | 2.2 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 10 (pcu/hr) |
| q b-c | = | 5 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.822709 |
| E | = | 0.848153 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 237 |
| Q b-c | = | 468 |
| Q c-b | = | 478 |
| Q b-ac | = | 284 |

CRITICAL DFC = 0.05

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.04 |
| DFC b-c | = | 0.01 |
| DFC c-b | = | 0.01 |
| DFC b-ac | = | 0.05 |

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

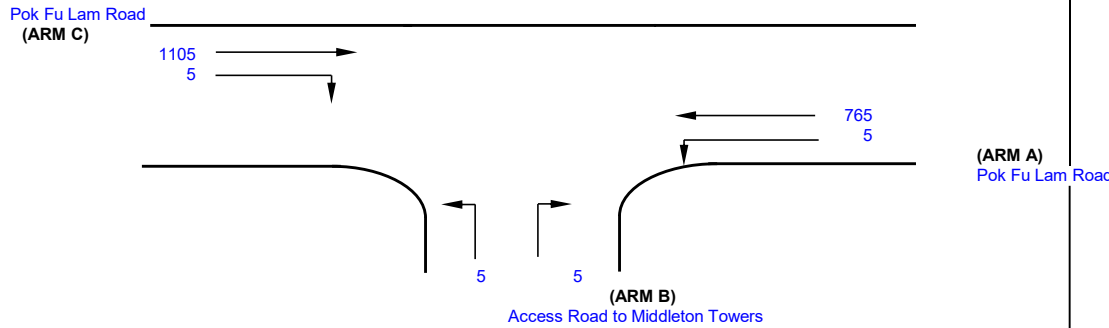
2026 PM Observed Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J1

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 5 (pcu/hr) |
| q a-c | = | 765 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1105 (pcu/hr) |
| q c-b | = | 5 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 2.2 (metres) |
| W b-c | = | 2.2 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 5 (pcu/hr) |
| q b-c | = | 5 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.822709 |
| E | = | 0.848153 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 297 |
| Q b-c | = | 514 |
| Q c-b | = | 525 |
| Q b-ac | = | 377 |

CRITICAL DFC = 0.03

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.02 |
| DFC b-c | = | 0.01 |
| DFC c-b | = | 0.01 |
| DFC b-ac | = | 0.03 |

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J2 - Pok Fu Lam Road / Access Road to University Hall

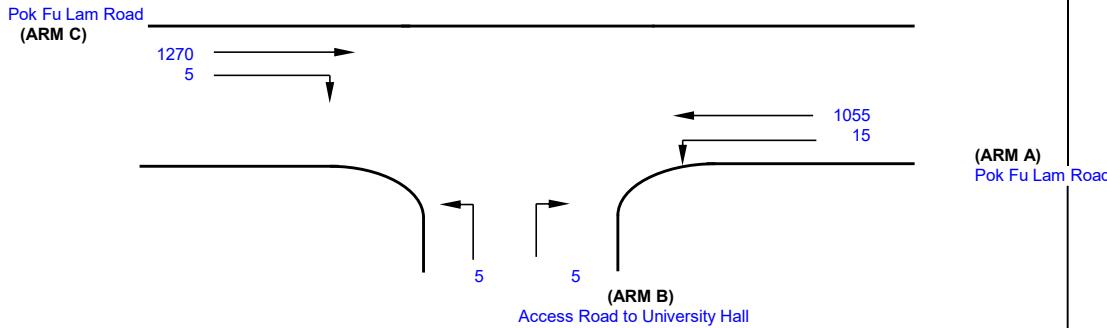
2026 AM Observed Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J2

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 15 (pcu/hr) |
| q a-c | = | 1055 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 3.5 (metres) |
| Vr c-b | = | 45 (metres) |
| q c-a | = | 1270 (pcu/hr) |
| q c-b | = | 5 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|-------------|
| W b-a | = | 3 (metres) |
| W b-c | = | 3 (metres) |
| VI b-a | = | 35 (metres) |
| Vr b-a | = | 22 (metres) |
| Vr b-c | = | 22 (metres) |
| q b-a | = | 5 (pcu/hr) |
| q b-c | = | 5 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.797019 |
| E | = | 0.856089 |
| F | = | 0.919352 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 231 |
| Q b-c | = | 474 |
| Q c-b | = | 507 |
| Q b-ac | = | 310 |

CRITICAL DFC = 0.03

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.02 |
| DFC b-c | = | 0.01 |
| DFC c-b | = | 0.01 |
| DFC b-ac | = | 0.03 |

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J2 - Pok Fu Lam Road / Access Road to University Hall

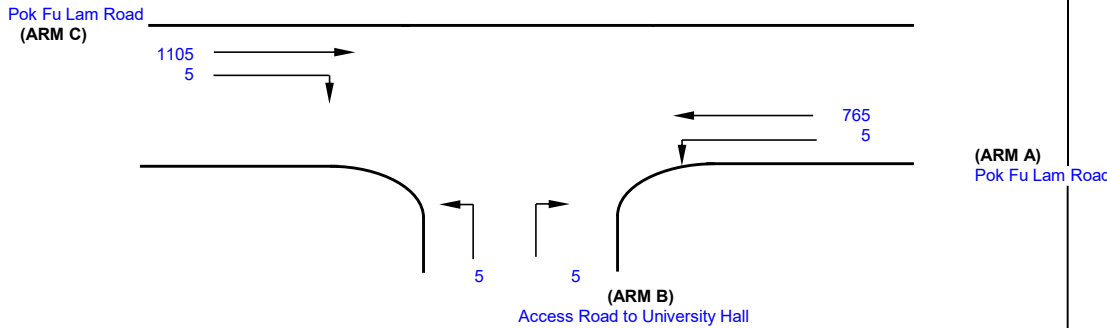
2026 PM Observed Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J2

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 5 (pcu/hr) |
| q a-c | = | 765 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 3.5 (metres) |
| Vr c-b | = | 45 (metres) |
| q c-a | = | 1105 (pcu/hr) |
| q c-b | = | 5 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|-------------|
| W b-a | = | 3 (metres) |
| W b-c | = | 3 (metres) |
| VI b-a | = | 35 (metres) |
| Vr b-a | = | 22 (metres) |
| Vr b-c | = | 22 (metres) |
| q b-a | = | 5 (pcu/hr) |
| q b-c | = | 5 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.797019 |
| E | = | 0.856089 |
| F | = | 0.919352 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 288 |
| Q b-c | = | 519 |
| Q c-b | = | 557 |
| Q b-ac | = | 371 |

CRITICAL DFC = 0.03

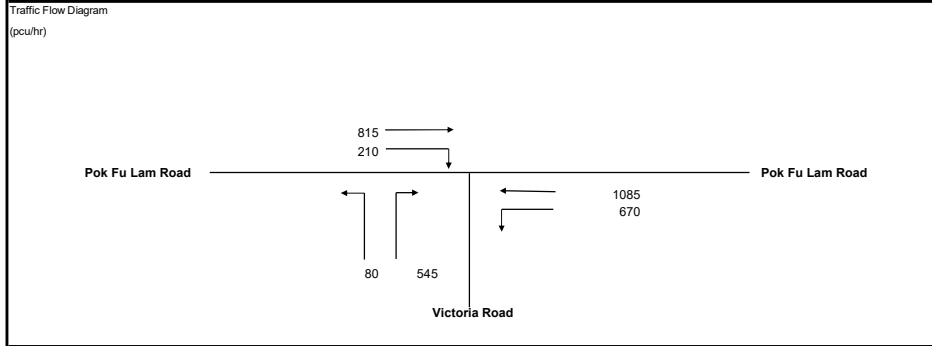
COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.02 |
| DFC b-c | = | 0.01 |
| DFC c-b | = | 0.01 |
| DFC b-ac | = | 0.03 |

JUNCTION CAPACITY CALCULATION

ACOM

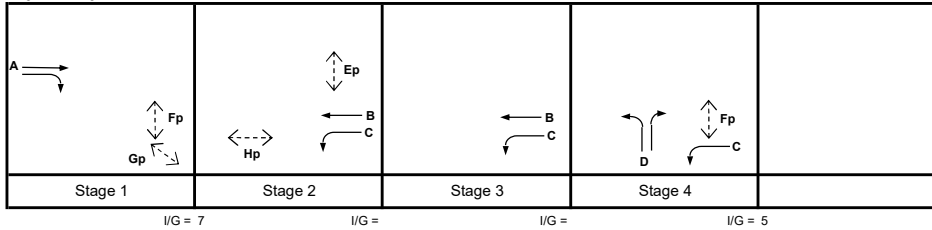
Junction J3 - Pok Fu Lam Road / Victoria Road 2026 AM Observed Traffic Flows DESIGN: JW CHECK: OC #VALUE! DATE: Apr 26



| | | |
|----------------------------|--------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 140 sec |
| Sum(y) | Y = | 0.611 |
| Lost time | L = | 10 sec |
| Total Flow | = | 3,405 pcu |
| Optimum Cycle C_o | $= (1.5 \times L + 5) / (1 - Y) =$ | 51 sec |
| Min. Cycle Time C_{in} | $= L / (1 - Y) =$ | 26 sec |
| Y_{ult} | $= 0.9 - 0.0075 \times L =$ | 0.825 |
| R.C. _{ult} | $= (Y_{ult} - Y) / Y \times 100\% =$ | 35.0 % |
| Practical Cycle Time C_p | $= 0.9 \times L / (0.9 - Y) =$ | 31 sec |
| Y_{max} | $= 1 - L/C =$ | 0.929 |

J3

Stage/Phase Diagrams



Critical Case : A,C

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 37\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | ↔ | A | | | | | | | 1 | 3.600 | 1 | | | | | | | | | | |
| ↔ | A | 1 | 3.300 | 1 | | 20 | 0 | | 0 | 130 | | 2085 | 324 | 210 | 534 | | 39% | 2152 | 0.248 | 0.248 | 53 | 52 | 0.658 | 13 | |
| ↔ | B | 2,3 | 3.500 | 3 | | | | | 0 | | | 6315 | | 1085 | 1085 | | | 6315 | 0.172 | | 37 | | 0.000 | 14 | |
| ↔ | C | 2,3,4 | 3.700 | 1 | | 20 | | | 0 | | | 1985 | 670 | | 670 | 100% | | 1847 | 0.363 | 0.363 | 77 | 76 | 0.658 | 12 | |
| ↔ | D | 4 | 4.200 | 1 | | 15 | 25 | 0 | 1 | | | 2035 | 80 | | 303 | 26% | 74% | 1901 | 0.160 | | 34 | | 0.000 | 12 | |
| ↔ | D | 4 | 3.800 | 1 | | 25 | 0 | 0 | 0 | | | 2135 | | 322 | 322 | 100% | | 2014 | 0.160 | | 34 | | 0.000 | 12 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 2 | min. | 10 | + | 8 | = | 18 | sec | | | | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 14 | + | 5 | = | 19 | sec | | | | | | | | | | | | | | | | |
| | Hp | 2 | min. | 10 | + | 8 | = | 18 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J3 - Pok Fu Lam Road / Victoria Road

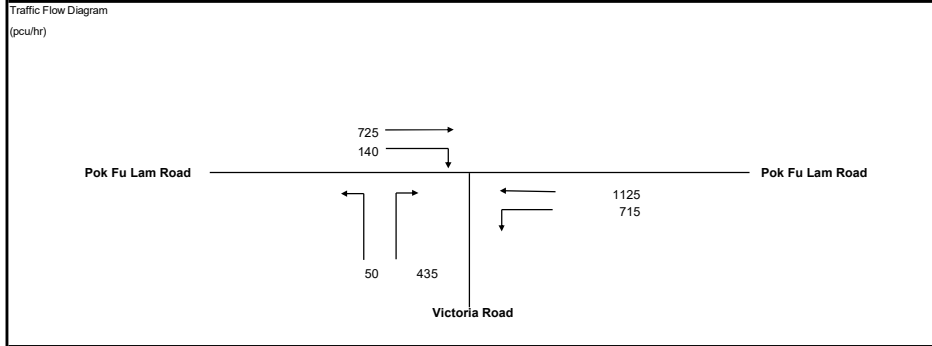
2026 PM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

DATE: Apr 26



No. of stages per cycle N = 4

Cycle time C = 120 sec

Sum(y) Y = 0.596

Lost time L = 10 sec

Total Flow = 3,190 pcu

Optimum Cycle $C_o = (1.5 \times L + 5) / (1 - Y) = 50$ sec

Min. Cycle Time $C_{in} = L / (1 - Y) = 25$ sec

$Y_{ult} = 0.9 - 0.0075 \times L = 0.825$

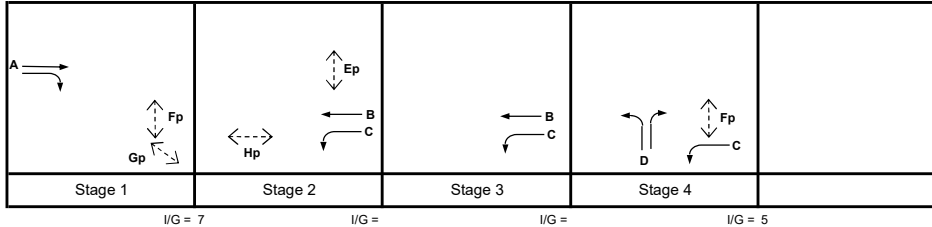
$R.C._{ult} = (Y_{ult} - Y) / Y \times 100\% = 38.4\%$

Practical Cycle Time $C_p = 0.9 \times L / (0.9 - Y) = 30$ sec

$Y_{max} = 1 - L/C = 0.917$

J3

Stage/Phase Diagrams



Critical Case : A,C

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 38\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | A | 1 | 3.600 | 1 | | | | | | 0 | 130 | 1975 | 413 | | 413 | | | 1975 | 0.209 | | 39 | 38 | 0.650 | 9 | |
| | A | 1 | 3.300 | 1 | | 20 | 0 | | | 0 | | 2085 | 312 | 140 | 452 | | 31% | 2165 | 0.209 | 0.209 | 39 | 38 | 0.650 | 10 | |
| | B | 2,3 | 3.500 | 3 | | | | 0 | | | 0 | 6315 | | 1125 | 1125 | | | 6315 | 0.178 | | 33 | | 0.000 | 12 | |
| | C | 2,3,4 | 3.700 | 1 | | 20 | | 1 | | | 0 | | 1985 | 715 | | 715 | 100% | | 1847 | 0.387 | 0.387 | 71 | 70 | 0.650 | 10 |
| | D | 4 | 4.200 | 1 | | 15 | 25 | 0 | 1 | | | 2035 | 50 | 186 | 236 | 21% | 79% | 1905 | 0.124 | | 23 | | 0.000 | 8 | |
| | D | 4 | 3.800 | 1 | | 25 | 0 | 0 | | 0 | | 2135 | | 249 | 249 | | 100% | 2014 | 0.124 | | 23 | | 0.000 | 8 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 2 | min. | 10 | + | 8 | = | 18 | sec | | | | | | | | | | | | | | | | |
| | Fp | 1,4 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 14 | + | 5 | = | 19 | sec | | | | | | | | | | | | | | | | |
| | Hp | 2 | min. | 10 | + | 8 | = | 18 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital

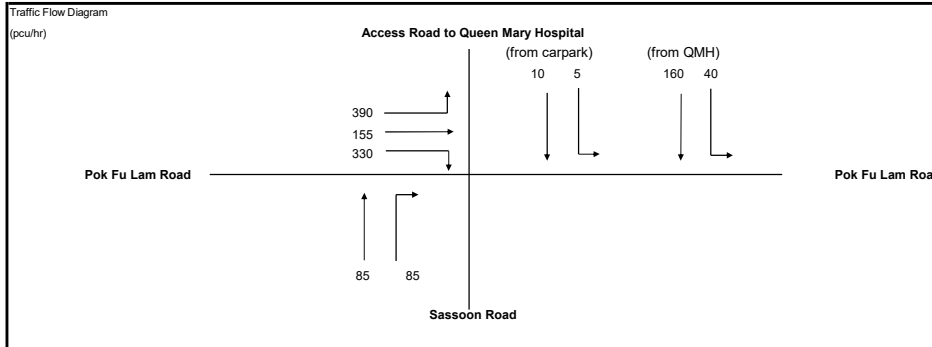
2026 AM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

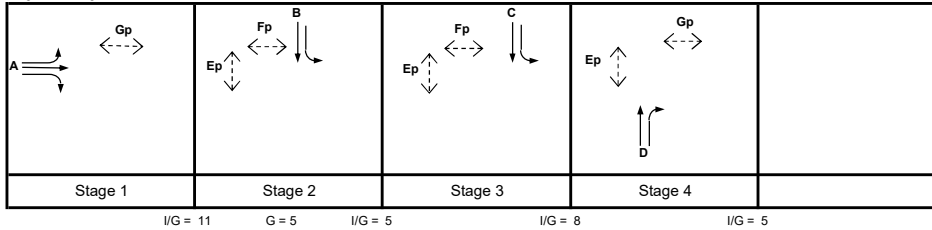
DATE: Apr 26



| | | |
|----------------------------|------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 105 sec |
| Sum(y) | Y = | 0.442 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,260 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 92 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 56 sec |
| Y_{ult} | = $0.9 - 0.0075 \times L$ | 0.668 |
| $R.C._{ult}$ | = $(Y_{ult} - Y) / Y \times 100\%$ | 51.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 61 sec |
| Y_{max} | = $1 - L/C$ | 0.705 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 44\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|--|--|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A | 1 | 3.300 | 1 | 12.5 | | | 1 | 0 | 100 | 1945 | 390 | 155 | | 545 | 72% | | 1883 | 0.289 | 0.289 | 48 | 47 | 0.627 | 9 | | | |
| | A | 1 | 3.300 | 1 | | | | 0 | 0 | | 2085 | | | 330 | 330 | 100% | | 1813 | 0.182 | | 31 | 47 | 0.394 | 5 | | | |
| | B | 2 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 5 | 10 | | 15 | 33% | | 1824 | 0.008 | | 1 | | 0.000 | 0 | | | |
| | D | 4 | 3.800 | 1 | | | | 1 | 0 | | 1995 | | 85 | | 85 | | | 1995 | 0.043 | | 7 | 6 | 0.599 | 3 | | | |
| | D | 4 | 3.800 | 1 | | | | 0 | 0 | | 2135 | | | 85 | 85 | 100% | | 1906 | 0.045 | 0.045 | 7 | 6 | 0.627 | 3 | | | |
| | C | 3 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 40 | 160 | | 200 | 20% | | 1859 | 0.108 | 0.108 | 18 | 17 | 0.627 | 5 | | | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital

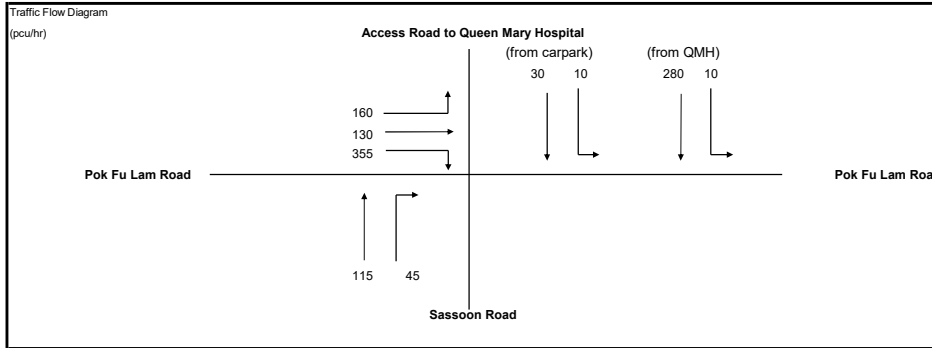
2026 PM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

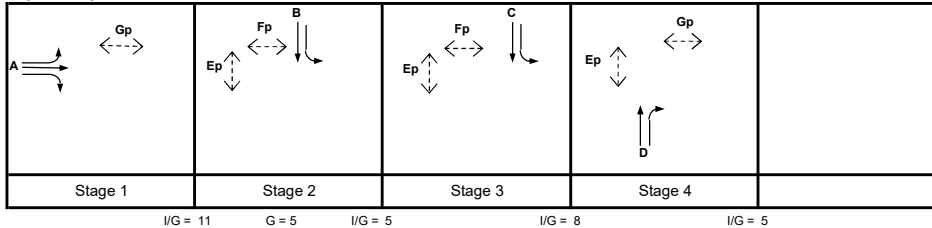
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 100 sec |
| Sum(y) | Y = | 0.406 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,135 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 87 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 52 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.668 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | 64.5 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 56 sec |
| Y_{max} | = $1 - L/C$ | 0.690 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 53\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | | | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|--|--|--|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | | | |
| A | A | 1 | 3.300 | 1 | 12.5 | | | 1 | 0 | 100 | 1945 | 160 | 130 | | 290 | 55% | | 1918 | 0.151 | | 26 | 32 | 0.454 | 5 | | | | |
| | | | | | | | | | | | | | | 355 | 355 | 100% | 1813 | 0.196 | 0.196 | 33 | 32 | 0.588 | 7 | | | | | |
| | B | 2 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 10 | 30 | | 40 | 25% | | 1846 | 0.022 | | 4 | | 0.000 | 1 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | D | 4 | 3.800 | 1 | 12.5 | | 0 | 0 | 0 | | 1995 | | 115 | | 115 | | | 1995 | 0.058 | 0.058 | 10 | 9 | 0.588 | 3 | | | | |
| | | | | | | | | | | | | | | 45 | 45 | 100% | 1906 | 0.024 | | 4 | 9 | 0.241 | 1 | | | | | |
| C | C | 3 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 10 | 280 | | 290 | 3% | | 1905 | 0.152 | 0.152 | 26 | 25 | 0.588 | 6 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | | | | |

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J5 - Pok Fu Lam Road / Sassoon Road

2026 AM Observed Traffic Flows

Designed By : JW

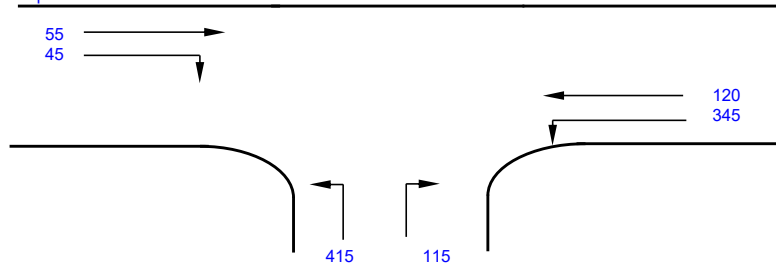
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

55
45



(ARM A)
Sassoon Road

(ARM B)
Sassoon Road

NOTES : (GEOMETRIC INPUT DATA)

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

J5

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
W cr = 1.5 (metres)
q a-b = 345 (pcu/hr)
q a-c = 120 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
Vr c-b = 45 (metres)
q c-a = 55 (pcu/hr)
q c-b = 45 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
W b-c = 3.7 (metres)
VI b-a = 65 (metres)
Vr b-a = 75 (metres)
Vr b-c = 75 (metres)
q b-a = 115 (pcu/hr)
q b-c = 415 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
E = 0.964010
F = 0.884290
Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 477
Q b-c = 676
Q c-b = 589
Q b-ac = 620

CRITICAL DFC = 0.61

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.24
DFC b-c = 0.61
DFC c-b = 0.08
DFC b-ac =

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J5 - Pok Fu Lam Road / Sassoon Road

2026 PM Observed Traffic Flows

Designed By : JW

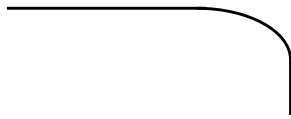
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

45
15



415

115

(ARM B)
Sassoon Road

(ARM A)
Sassoon Road

NOTES : (GEOMETRIC INPUT DATA)

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

J5

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
W cr = 1.5 (metres)
q a-b = 400 (pcu/hr)
q a-c = 265 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
Vr c-b = 45 (metres)
q c-a = 45 (pcu/hr)
q c-b = 15 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
W b-c = 3.7 (metres)
VI b-a = 65 (metres)
Vr b-a = 75 (metres)
Vr b-c = 75 (metres)
q b-a = 115 (pcu/hr)
q b-c = 415 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
E = 0.964010
F = 0.884290
Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 461
Q b-c = 649
Q c-b = 559
Q b-ac = 596

CRITICAL DFC = 0.64

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.25
DFC b-c = 0.64
DFC c-b = 0.03
DFC b-ac =

JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

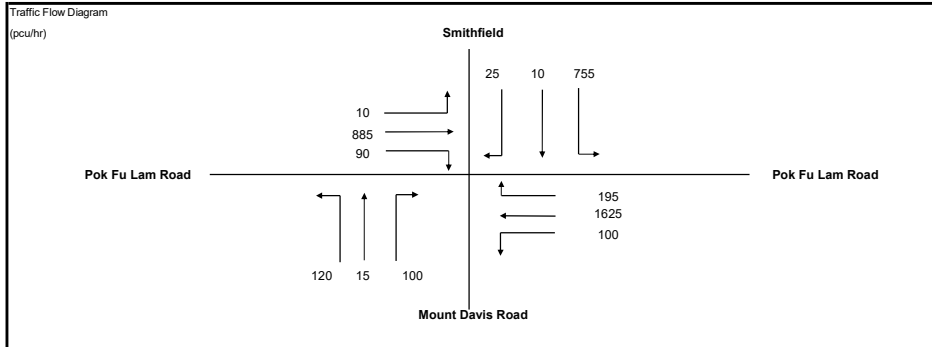
2026 AM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

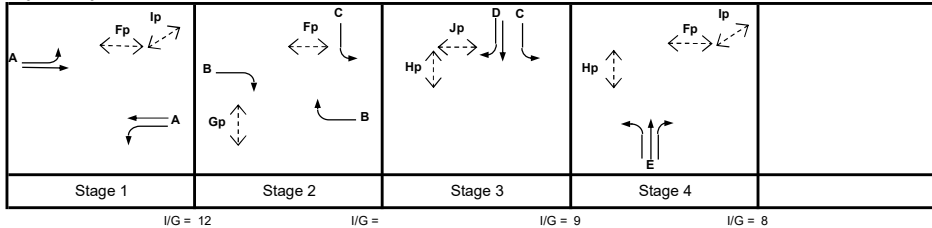
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.540 |
| Lost time | L = | 26 sec |
| Total Flow | = | 3,930 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5)(1 - Y)$ | 96 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 57 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.705 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 30.5 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 65 sec |
| Y_{max} | = $1 - L/C$ | 0.807 |

J6

Stage/Phase Diagrams



Critical Case : A,C,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 34\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / (y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|--|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | |
| A | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 10 | 421 | | 431 | 2% | | 1948 | 0.221 | | 45 | 56 | 0.521 | 9 | |
| | A | 1 | 3.400 | 1 | | | 0 | 0 | 0 | | | 2095 | | 464 | | 464 | | | 2095 | 0.221 | | 45 | 56 | 0.521 | 10 | |
| | B | 2 | 3.400 | 1 | | 15 | 0 | 0 | 0 | 0 | | | | | 90 | 90 | | 100% | 1905 | 0.047 | | 10 | | 0.000 | 3 | |
| B | B | 2 | 3.500 | 1 | | 15 | 0 | 0 | 0 | | | 2105 | | | 195 | 195 | | 100% | 1914 | 0.102 | | 21 | | 0.000 | 7 | |
| | A | 1 | 3.300 | 1 | 10 | | 1 | 1 | 0 | | | 1945 | 100 | 438 | | 538 | 19% | | 1892 | 0.285 | 0.285 | 57 | 56 | 0.669 | 12 | |
| | A | 1 | 3.300 | 2 | | | 0 | 0 | 0 | 0 | | 4170 | | 1187 | | 1187 | | | 4170 | 0.285 | | 57 | 56 | 0.669 | 13 | |
| C | C | 2,3 | 3.400 | 2 | 30 | | 1 | 1 | 0 | | | 4050 | 755 | | 25 | 755 | 100% | | 3857 | 0.196 | 0.196 | 39 | 38 | 0.669 | 10 | |
| | D | 3 | 3.800 | 1 | 20 | 0 | 0 | 0 | 0 | | | 2135 | | 10 | 25 | 35 | | 71% | 2026 | 0.017 | | 3 | | 0.000 | 1 | |
| E | E | 4 | 5.000 | 1 | 10 | | 1 | 1 | 0 | | | 2115 | 110 | | | 110 | 100% | | 1839 | 0.060 | | 12 | 11 | 0.669 | 4 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2255 | 10 | 15 | 100 | 125 | 8% | 80% | 2073 | 0.060 | 0.060 | 12 | 11 | 0.669 | 5 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

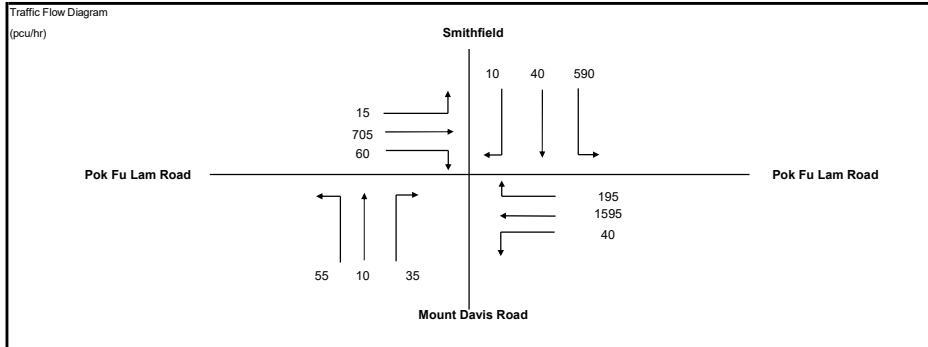
2026 PM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

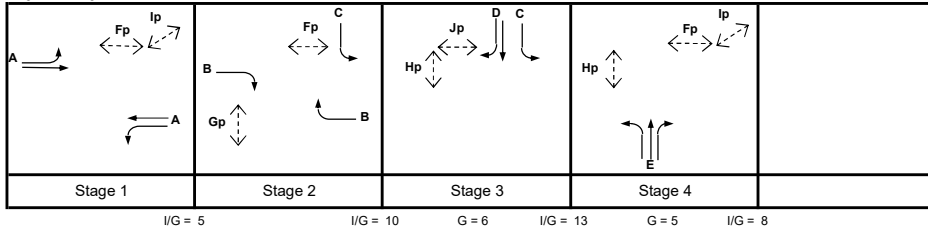
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.370 |
| Lost time | L = | 45 sec |
| Total Flow | = | 3,350 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 115 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 71 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.563 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 51.9 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 76 sec |
| Y_{max} | = $1 - L/C$ | 0.591 |

J6

Stage/Phase Diagrams



Critical Case : A,B,Jp,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 44\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN g = y/(C-L) (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|-----------------------------------|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| A | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 15 | 331 | | 346 | 4% | | 1942 | 0.178 | | 31 | 46 | 0.416 | 6 |
| | A | 1 | 3.400 | 1 | | | 0 | 0 | 0 | | | 2095 | | 374 | | 374 | | | 2095 | 0.178 | | 31 | 46 | 0.416 | 7 |
| | B | 2 | 3.400 | 1 | | | 15 | 0 | 0 | 0 | | | | | 60 | 60 | 100% | | 1905 | 0.032 | | 6 | 17 | 0.194 | 2 |
| B | B | 2 | 3.500 | 1 | | | 15 | 0 | 0 | 0 | | 2105 | | | 195 | 195 | 100% | | 1914 | 0.102 | 0.102 | 18 | 17 | 0.627 | 5 |
| | A | 1 | 3.300 | 1 | 10 | | 1 | 1 | 0 | 0 | | 1945 | 40 | 476 | | 516 | 8% | | 1923 | 0.268 | | 47 | 46 | 0.627 | 9 |
| | A | 1 | 3.300 | 2 | | | 0 | 0 | 0 | 0 | | 4170 | | 1119 | | 1119 | | | 4170 | 0.268 | | 47 | 46 | 0.627 | 10 |
| C | C | 2,3 | 3.400 | 2 | 30 | | 1 | 1 | 0 | 0 | | 4050 | 590 | | 590 | 100% | | 3857 | 0.153 | | 27 | | 0.000 | 9 | |
| | D | 3 | 3.800 | 1 | | | 20 | 0 | 0 | 0 | | 2135 | | 40 | 10 | 50 | 20% | | 2103 | 0.024 | | 4 | | 0.000 | 2 |
| E | E | 4 | 5.000 | 1 | 10 | | 1 | 1 | 0 | 0 | | 2115 | 47 | | 47 | 100% | | 1839 | 0.025 | | 4 | | 0.000 | 1 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | 0 | 0 | 0 | 0 | | 2255 | 8 | 10 | 35 | 53 | 15% | 66% | 2086 | 0.025 | | 4 | | 0.000 | 2 |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

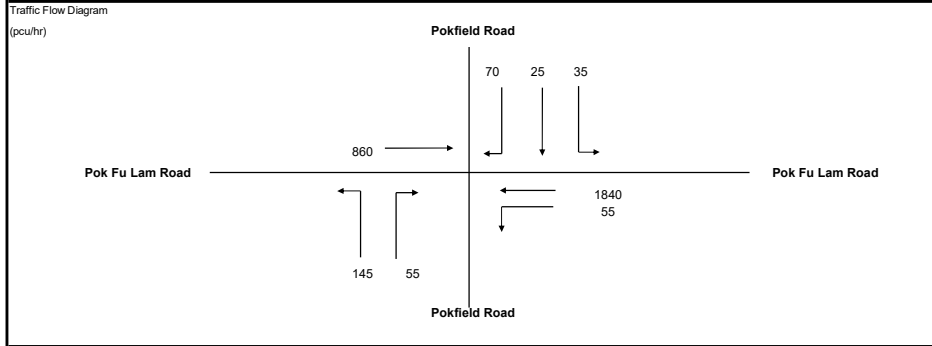
2026 AM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

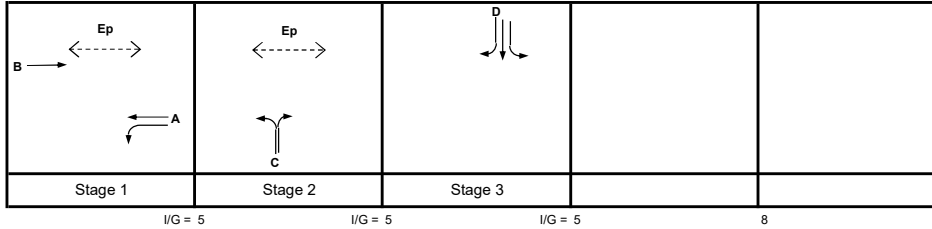
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.399 |
| Lost time | L = | 20 sec |
| Total Flow | = | 3,085 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 58 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 33 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 88.1 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 36 sec |
| Y_{max} | = $1 - L/C$ | 0.852 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\%$ = 92%

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | ↔ | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| ↔ | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1296 | | 1296 | | | 4210 | 0.308 | | 89 | 88 | 0.468 | 8 |
| → | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 860 | | 860 | | | 4070 | 0.211 | | 61 | | 0.000 | 16 |
| ↔ | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 97 | | | 97 | 100% | | 1781 | 0.054 | | 16 | 15 | 0.468 | 3 |
| ↔ | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 48 | | 55 | 103 | 47% | 53% | 1891 | 0.054 | 0.054 | 16 | 15 | 0.468 | 3 |
| ↔ | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 35 | | 70 | 70 | | | 1914 | 0.037 | 0.037 | 11 | 10 | 0.468 | 2 |
| ↔ | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | | 25 | | 60 | 58% | | 1857 | 0.032 | | 9 | 10 | 0.414 | 2 |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 12 | + | 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

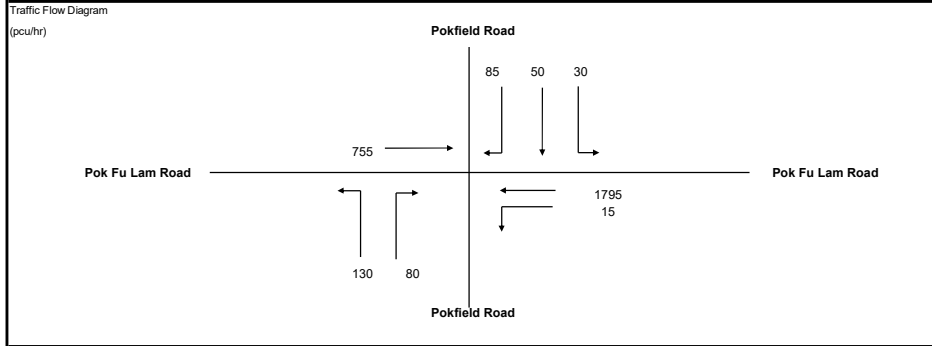
2026 PM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

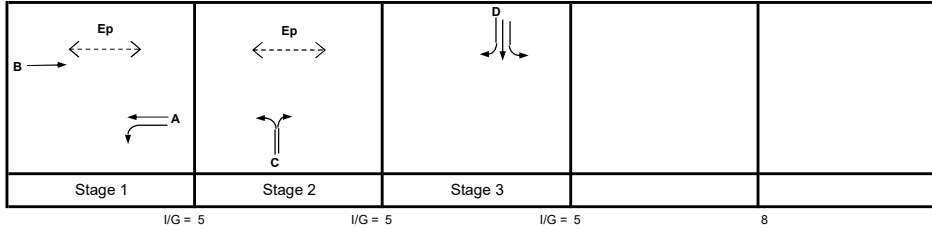
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.395 |
| Lost time | L = | 20 sec |
| Total Flow | = | 2,940 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 58 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 33 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 90.0 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 36 sec |
| Y_{max} | = $1 - L/C$ | 0.818 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 87\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|--------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1235 | | 1235 | | | 4210 | 0.293 | | 67 | 66 | 0.483 | 7 |
| | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 755 | | 755 | | | 4070 | 0.186 | | 42 | | 0.000 | 11 |
| | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 102 | | | 102 | 100% | | 1781 | 0.057 | | 13 | 12 | 0.483 | 3 |
| | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 28 | | 80 | 108 | 26% | 74% | 1900 | 0.057 | 0.057 | 13 | 12 | 0.483 | 3 |
| | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 30 | 50 | 85 | 85 | 38% | 100% | 1914 | 0.044 | 0.044 | 10 | 9 | 0.483 | 2 |
| | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | | 50 | 80 | 80 | | | 1894 | 0.042 | | 10 | 9 | 0.459 | 2 |
| Pedestrian Crossing | Ep | 1,2 | min. | GM 12 | + | FGM 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

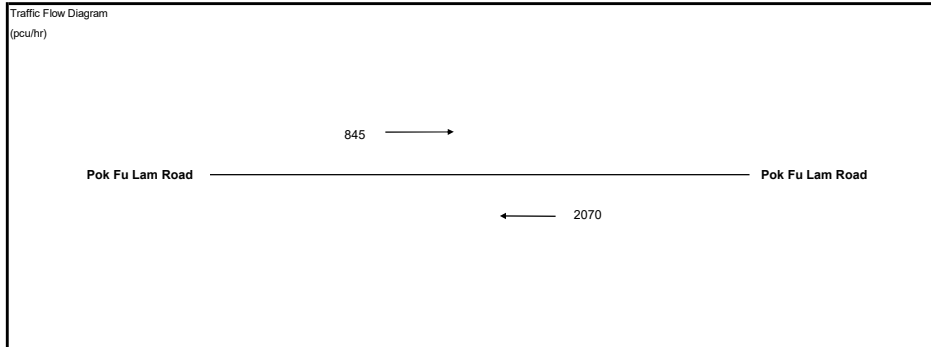
2026 AM Observed Traffic Flows

DESIGN: JW

CHECK: OC

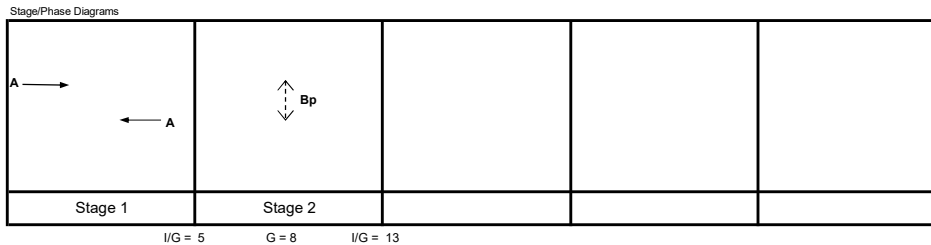
#VALUE!

DATE: Apr 26



| | | |
|----------------------------|-----------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.509 |
| Lost time | L = | 25 sec |
| Total Flow | = | 2,915 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5)/(1 - Y)$ | = 86 sec |
| Min. Cycle Time C_m | = $L/(1 - Y)$ | = 51 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | = 0.713 |
| $R.C._{crit}$ | = $(Y_{crit} - Y)/Y \times 100\%$ | = 40.1 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | = 57 sec |
| Y_{max} | = $1 - L/C$ | = 0.773 |

J8



Critical Case : A,Bp

$R.C.(C) = (0.9 \times Y_{max} - Y)/Y \times 100\% = 37\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g=y/(C-L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|-----------------------------------|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 845 | | 845 | | | 4070 | 0.208 | | 35 | 84 | 0.269 | 3 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | 2070 | | 2070 | | | 4070 | 0.509 | 0.509 | 85 | 84 | 0.658 | 7 | |
| Pedestrian Crossing | | Bp | 2 min. | | GM 8 | + | FGM 10 | = | 18 | sec | | | | | | | | | | | * | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

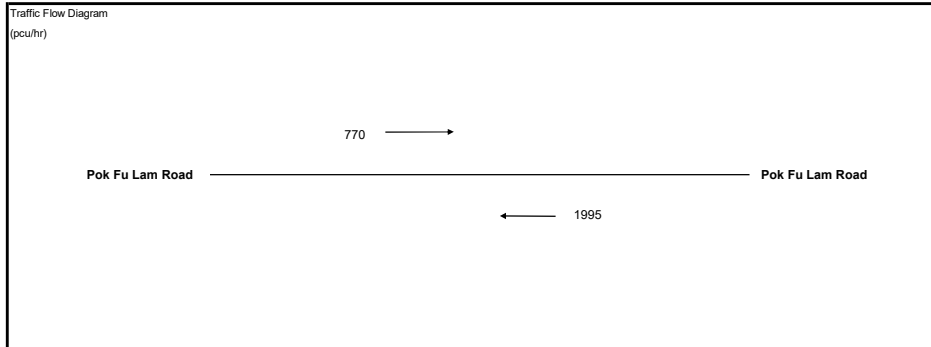
2026 PM Observed Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.490 |
| Lost time | L = | 25 sec |
| Total Flow | = | 2,765 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | = 83 sec |
| Min. Cycle Time C_m | = $L / (1 - Y)$ | = 49 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | = 0.713 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | = 45.4 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | = 55 sec |
| Y_{max} | = $1 - L/C$ | = 0.773 |

J8

Stage/Phase Diagrams



Critical Case : A,Bp

$R.C.(C) = (0.9 \times Y_{max} - Y) / Y \times 100\% = 42\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 770 | | 770 | | | 4070 | 0.189 | | 33 | 84 | 0.245 | 3 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 1995 | | 1995 | | | 4070 | 0.490 | 0.490 | 85 | 84 | 0.634 | 7 |
| Pedestrian Crossing | | Bp | 2 min. | | GM 8 | + | FGM 10 | = | 18 | sec | | | | | | | | | | | * | | | | |

Appendix B-2

Junction Calculation Sheet

2031 Reference Case

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

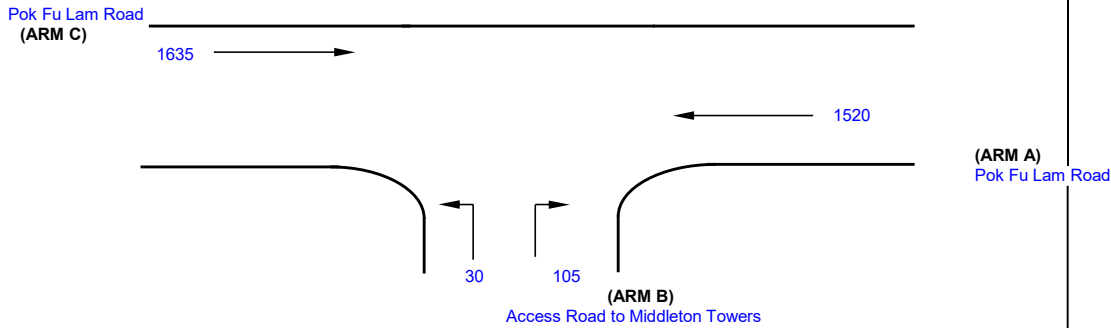
2031 AM Reference Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J1

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 0 (pcu/hr) |
| q a-c | = | 1520 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1635 (pcu/hr) |
| q c-b | = | 0 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 3.5 (metres) |
| W b-c | = | 2.5 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 105 (pcu/hr) |
| q b-c | = | 30 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.939109 |
| E | = | 0.875846 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 156 |
| Q b-c | = | 412 |
| Q c-b | = | 408 |
| Q b-ac | = | 181 |

CRITICAL DFC = 0.74

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.67 |
| DFC b-c | = | 0.07 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.74 |

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

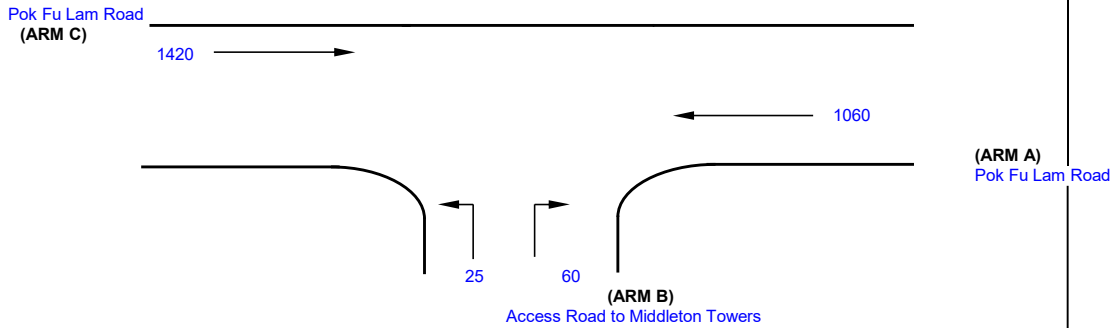
2031 PM Reference Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 0 (pcu/hr) |
| q a-c | = | 1060 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1420 (pcu/hr) |
| q c-b | = | 0 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 3.5 (metres) |
| W b-c | = | 2.5 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 60 (pcu/hr) |
| q b-c | = | 25 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.939109 |
| E | = | 0.875846 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 257 |
| Q b-c | = | 485 |
| Q c-b | = | 480 |
| Q b-ac | = | 299 |

CRITICAL DFC = 0.28

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.23 |
| DFC b-c | = | 0.05 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.28 |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Pok Fu Lam Road / Victoria Road

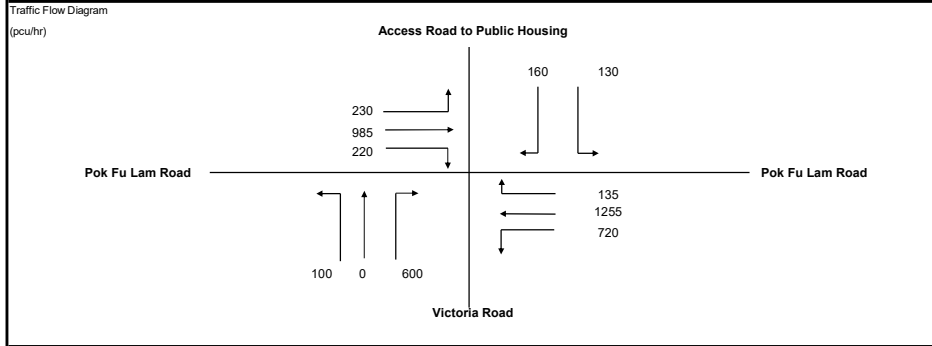
2031 AM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

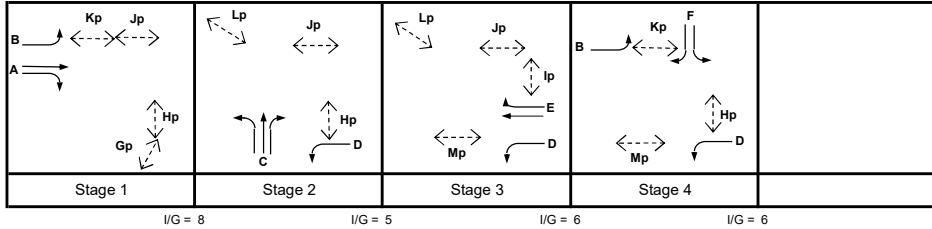
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 140 sec |
| Sum(y) | Y = | 0.643 |
| Lost time | L = | 21 sec |
| Total Flow | = | 4,535 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 102 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 59 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.743 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 15.4 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 74 sec |
| Y_{max} | = $1 - L/C$ | 0.850 |

J3

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 19\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| A | A | 1 | 3.700 | 2 | | | | | | | | 4250 | | 811 | | 811 | | | | | | 35 | 34 | 0.757 | 12 |
| | A | 1 | 3.650 | 1 | | 30 | 0 | 0 | | | | 2120 | | 174 | | 394 | | 56% | | | | 35 | 34 | 0.757 | 12 |
| | B | 1,4 | 3.700 | 1 | | 20 | | 1 | | | | 1985 | 230 | | 220 | 230 | 100% | | | | | 23 | | 0.000 | 9 |
| C | C | 2 | 3.600 | 1 | | 20 | 25 | 0 | 1 | | 100 | 1975 | 100 | 0 | 247 | 347 | 29% | 71% | | | | 33 | 32 | 0.757 | 11 |
| | C | 2 | 3.500 | 1 | | 25 | 0 | 0 | | | | 2105 | | | 353 | 353 | 100% | | | | | 33 | 32 | 0.757 | 11 |
| D | D | 2,3,4 | 3.700 | 1 | | 20 | | 1 | | | | 1985 | 720 | | 720 | 100% | | | | | | 72 | | 0.000 | 28 |
| | E | 3 | 3.500 | 2 | | | 0 | 0 | | | | 4210 | | 939 | | 939 | | | | | | 41 | 40 | 0.757 | 13 |
| | F | 3 | 3.500 | 1 | | | 11 | 0 | 0 | | | 2105 | | 316 | 135 | 451 | 30% | | | | | 41 | 40 | 0.757 | 12 |
| F | F | 4 | 3.650 | 1 | | 10 | | 1 | | | | 1980 | 89 | | 89 | 100% | | | | | | 10 | 9 | 0.757 | 4 |
| | F | 4 | 3.650 | 1 | | 10 | 20 | 0 | 0 | | | 2120 | 41 | | 99 | 1917 | 41% | 59% | | | | 10 | 9 | 0.757 | 4 |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | | | | 2120 | | | 102 | 102 | 100% | | | | | 10 | | 0.000 | 4 |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | | | | 2120 | | | 102 | 102 | 100% | | | | | 10 | | 0.000 | 4 |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | |
| | Ip | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 1,2,3 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | |
| | Kp | 1,4 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | | | | | |
| | Lp | 2,3 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | |
| | Mp | 3,4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Pok Fu Lam Road / Victoria Road

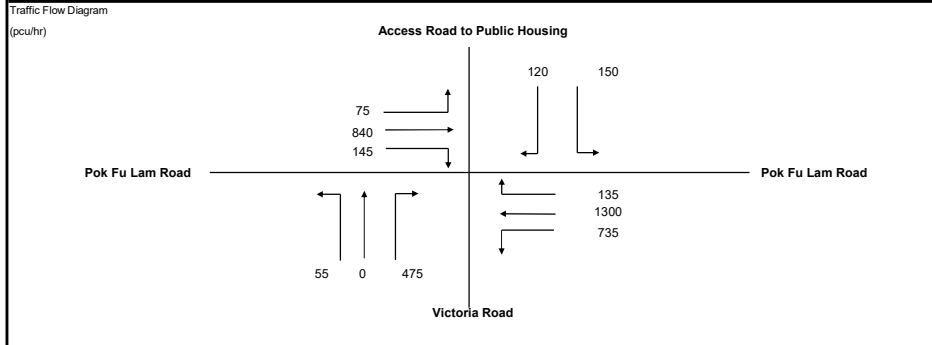
2031 PM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

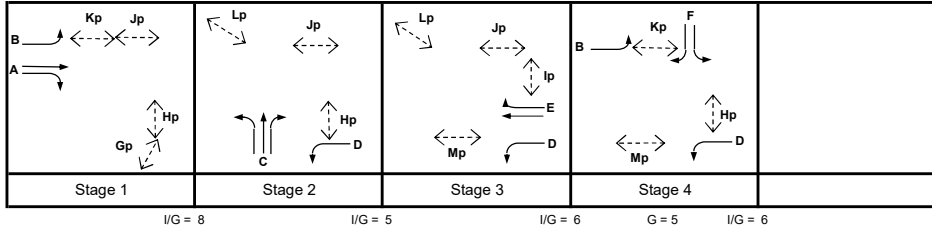
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 120 sec |
| Sum(y) | Y = | 0.521 |
| Lost time | L = | 27 sec |
| Total Flow | = | 4,030 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 95 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 56 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.698 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 34.0 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 64 sec |
| Y_{max} | = $1 - L/C$ | 0.775 |

J3

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 34\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN g = y/(C-L) (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|-----------------------------------|----------------------|------------------------|-----------------|---|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | |
| A | A | 1 | 3.700 | 2 | | 30 | 0 | 0 | 0 | | | 4250 | | 662 | | 662 | | | | | | | | | | 8 |
| | A | 1 | 3.650 | 1 | | | 0 | 0 | 0 | | | 2120 | | 178 | | 323 | | 45% | 2073 | 0.156 | 0.156 | 28 | 27 | 0.672 | 8 | |
| | B | 1,4 | 3.700 | 1 | | 20 | | 1 | | 0 | | 1985 | 75 | | 145 | 75 | 100% | | 1847 | 0.041 | | 7 | | 0.000 | 2 | |
| C | C | 2 | 3.600 | 1 | | 20 | 25 | 0 | 1 | 0 | 100 | 1975 | 55 | 0 | 208 | 263 | 21% | 79% | 1952 | 0.135 | 0.135 | 24 | 23 | 0.672 | 7 | |
| | C | 2 | 3.500 | 1 | | 25 | 0 | 0 | | 0 | | 2105 | | | 267 | 267 | 100% | | 1986 | 0.135 | | 24 | 23 | 0.672 | 7 | |
| D | D | 2,3,4 | 3.700 | 1 | | 20 | | 1 | | 0 | | 1985 | 735 | | 735 | 100% | | 1847 | 0.398 | | 71 | | 0.000 | 24 | | |
| | E | 3 | 3.500 | 2 | | | 0 | 0 | | 0 | | 4210 | | 969 | | 969 | | | 4210 | 0.230 | | 41 | 40 | 0.672 | 11 | |
| | F | 3 | 3.500 | 1 | | | 11 | 0 | 0 | | 0 | 2105 | | 331 | 135 | 466 | 29% | | 2025 | 0.230 | 0.230 | 41 | 40 | 0.672 | 10 | |
| F | F | 4 | 3.650 | 1 | | 10 | | 1 | | 0 | | 1980 | 83 | | 83 | 100% | | 1722 | 0.048 | | 9 | | 0.000 | 3 | | |
| | F | 4 | 3.650 | 1 | | 10 | 20 | 0 | | 0 | | 2120 | 67 | | 24 | 91 | 73% | 27% | 1876 | 0.048 | | 9 | | 0.000 | 3 | |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | | 0 | | 2120 | | | 96 | 96 | 100% | | 1972 | 0.048 | | 9 | | 0.000 | 3 | |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | | |
| | Ip | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | | |
| | Jp | 1,2,3 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | | |
| | Kp | 1,4 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | | | | | | |
| | Lp | 2,3 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | | |
| | Mp | 3,4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital

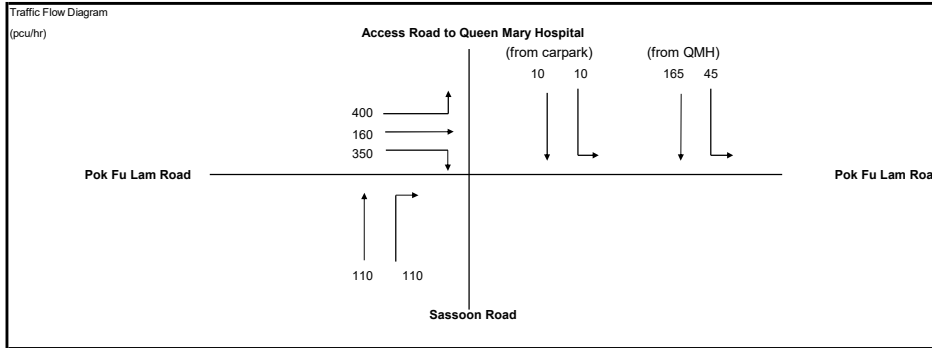
2031 AM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

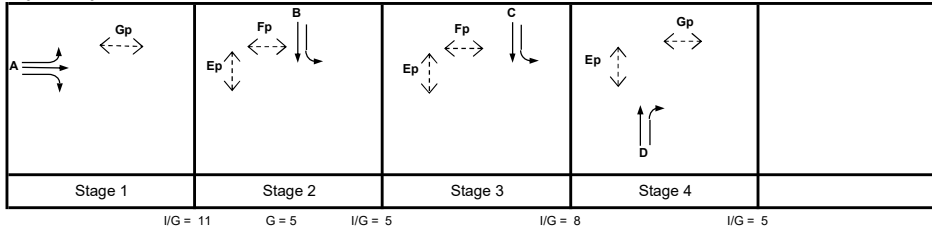
DATE: Apr 26



| | | |
|----------------------------|------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 105 sec |
| Sum(y) | Y = | 0.468 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,360 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 97 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 58 sec |
| Y_{ult} | = $0.9 - 0.0075 \times L$ | 0.668 |
| $R.C._{ult}$ | = $(Y_{ult} - Y) / Y \times 100\%$ | 42.6 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 65 sec |
| Y_{max} | = $1 - L/C$ | 0.705 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 35\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | A | | | | | | | 1 | 3.300 | 1 | | 12.5 | | | | | | | | |
| | A | 1 | 3.300 | 1 | | 10 | 0 | 0 | | 2085 | | 350 | 350 | 100% | | 1813 | 0.193 | | 31 | 46 | 0.431 | 6 | | | |
| | B | 2 | 3.000 | 1 | 10 | | 1 | 0 | | 1915 | 10 | 10 | 20 | 50% | | 1781 | 0.011 | | 2 | | 0.000 | 1 | | | |
| | D | 4 | 3.800 | 1 | | | 1 | 0 | | 1995 | | 110 | 110 | | | 1995 | 0.055 | | 9 | 8 | 0.635 | 3 | | | |
| | D | 4 | 3.800 | 1 | 12.5 | | 0 | 0 | | 2135 | | 110 | 110 | 100% | | 1906 | 0.058 | 0.058 | 9 | 8 | 0.664 | 3 | | | |
| | C | 3 | 3.000 | 1 | 10 | | 1 | 0 | | 1915 | 45 | 165 | 210 | 21% | | 1855 | 0.113 | 0.113 | 18 | 17 | 0.664 | 5 | | | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital

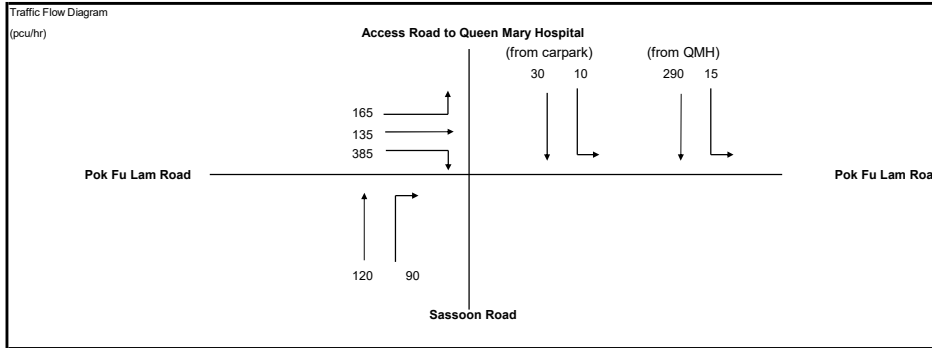
2031 PM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

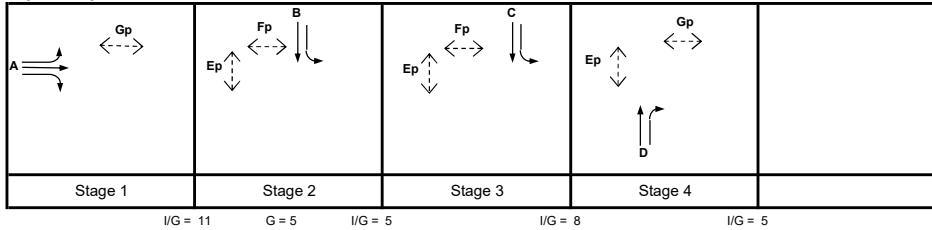
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 100 sec |
| Sum(y) | Y = | 0.433 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,240 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 91 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 55 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.668 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | 54.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 60 sec |
| Y_{max} | = $1 - L/C$ | 0.690 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 43\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A | 1 | 3.300 | 1 | 12.5 | | | 1 | 0 | 100 | 1945 | 165 | 135 | | 300 | 55% | | 1918 | 0.156 | | 25 | 33 | 0.462 | 6 | |
| | A | 1 | 3.300 | 1 | | 10 | 0 | 0 | 0 | | 2085 | | | 385 | 385 | 100% | | 1813 | 0.212 | 0.212 | 34 | 33 | 0.627 | 7 | |
| | B | 2 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 10 | 30 | | 40 | 25% | | 1846 | 0.022 | | 3 | | 0.000 | 1 | |
| | D | D | 4 | 3.800 | 1 | | | 1 | 0 | | | 1995 | | 120 | | 120 | | | 1995 | 0.060 | 0.060 | 10 | 9 | 0.627 | 3 |
| | | D | 4 | 3.800 | 1 | | 12.5 | 0 | 0 | 0 | | 2135 | | | 90 | 90 | 100% | | 1906 | 0.047 | | 8 | 9 | 0.493 | 2 |
| | C | 3 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 15 | 290 | | 305 | 5% | | 1901 | 0.160 | 0.160 | 26 | 25 | 0.627 | 6 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | |

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J5 - Pok Fu Lam Road / Sassoon Road

2031 AM Reference Traffic Flows

Designed By : JW

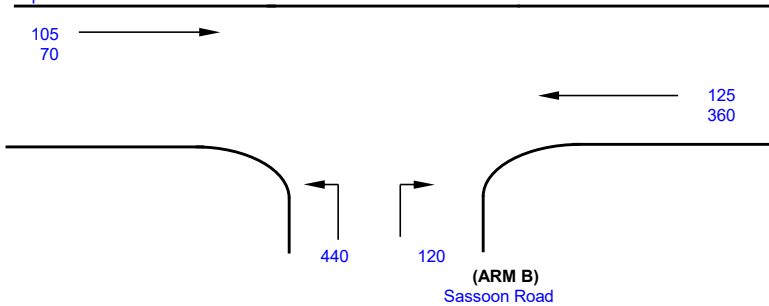
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

105
70



NOTES : (GEOMETRIC INPUT DATA)

W = Major Road Width (6.4 - 20.0)
 W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
 W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
 W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
 W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
 V l b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
 V r b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
 V r b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
 V r c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

J5

D = Stream-specific B-A
 E = Stream-specific B-C
 F = Stream-specific C-B
 Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
 W cr = 1.5 (metres)
 q a-b = 360 (pcu/hr)
 q a-c = 125 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
 V r c-b = 45 (metres)
 q c-a = 105 (pcu/hr)
 q c-b = 70 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
 W b-c = 3.7 (metres)
 V l b-a = 65 (metres)
 V r b-a = 75 (metres)
 V r b-c = 75 (metres)
 q b-a = 120 (pcu/hr)
 q b-c = 440 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
 E = 0.964010
 F = 0.884290
 Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 467
 Q b-c = 675
 Q c-b = 586
 Q b-ac = 616

CRITICAL DFC = 0.65

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.26
 DFC b-c = 0.65
 DFC c-b = 0.12
 DFC b-ac =

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J5 - Pok Fu Lam Road / Sassoon Road

2031 PM Reference Traffic Flows

Designed By : JW

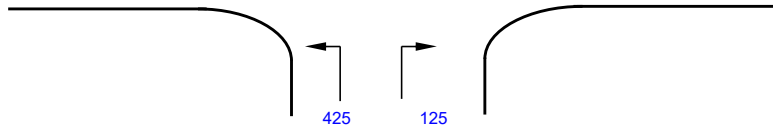
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

85
40



(ARM A)
Sassoon Road

(ARM B)
Sassoon Road

NOTES : (GEOMETRIC INPUT DATA)

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

J5

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
W cr = 1.5 (metres)
q a-b = 430 (pcu/hr)
q a-c = 275 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
Vr c-b = 45 (metres)
q c-a = 85 (pcu/hr)
q c-b = 40 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
W b-c = 3.7 (metres)
VI b-a = 65 (metres)
Vr b-a = 75 (metres)
Vr b-c = 75 (metres)
q b-a = 125 (pcu/hr)
q b-c = 425 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
E = 0.964010
F = 0.884290
Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 450
Q b-c = 646
Q c-b = 553
Q b-ac = 587

CRITICAL DFC = 0.66

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.28
DFC b-c = 0.66
DFC c-b = 0.07
DFC b-ac =

JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

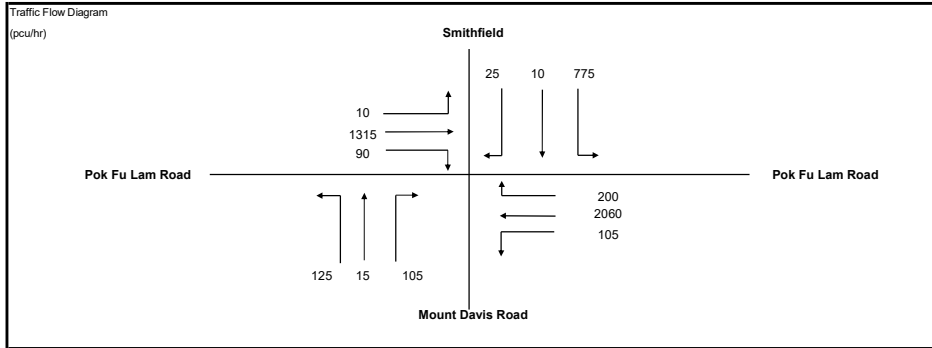
2031 AM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

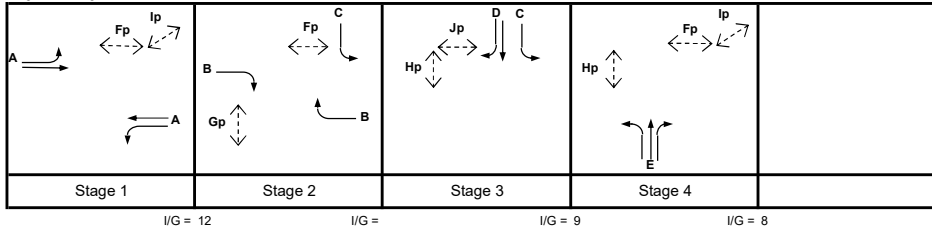
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.620 |
| Lost time | L = | 26 sec |
| Total Flow | = | 4,835 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 116 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 68 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.705 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 13.7 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 84 sec |
| Y_{max} | = $1 - L/C$ | 0.807 |

J6

Stage/Phase Diagrams



Critical Case : A,C,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 17\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| A | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 10 | 629 | | 639 | 2% | | 1950 | 0.328 | | 58 | 62 | 0.705 | 13 |
| | A | 1 | 3.400 | 1 | | | 0 | 0 | 0 | | | 2095 | | 686 | | 686 | | | 2095 | 0.328 | | 58 | 62 | 0.705 | 14 |
| | B | 2 | 3.400 | 1 | | | 15 | 0 | 0 | 0 | | | | | 90 | 90 | 100% | | 1905 | 0.047 | | 8 | | 0.000 | 3 |
| B | B | 2 | 3.500 | 1 | | | 15 | 0 | 0 | 0 | | 2105 | | | 200 | 200 | 100% | | 1914 | 0.105 | | 18 | | 0.000 | 7 |
| | A | 1 | 3.300 | 1 | 10 | | | 1 | 0 | 0 | | 1945 | 105 | 573 | | 678 | 15% | | 1901 | 0.357 | 0.357 | 63 | 62 | 0.768 | 14 |
| | A | 1 | 3.300 | 2 | | | | 0 | 0 | 0 | | 4170 | | 1487 | | 1487 | | | 4170 | 0.357 | | 63 | 62 | 0.768 | 15 |
| C | C | 2,3 | 3.400 | 2 | 30 | | | 1 | 0 | 0 | | 4050 | 775 | | 775 | 100% | | 3857 | 0.201 | 0.201 | 35 | 34 | 0.768 | 11 | |
| | D | 3 | 3.800 | 1 | | | 20 | 0 | 0 | 0 | | 2135 | | 10 | 25 | 35 | 71% | | 2026 | 0.017 | | 3 | | 0.000 | 1 |
| E | E | 4 | 5.000 | 1 | 10 | | | 1 | 0 | 0 | | 2115 | 115 | | 115 | 100% | | 1839 | 0.063 | | 11 | 10 | 0.768 | 5 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | 0 | 0 | 0 | 0 | | 2255 | 10 | 15 | 105 | 130 | 8% | 81% | 2072 | 0.063 | 0.063 | 11 | 10 | 0.768 | 5 |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AZCOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

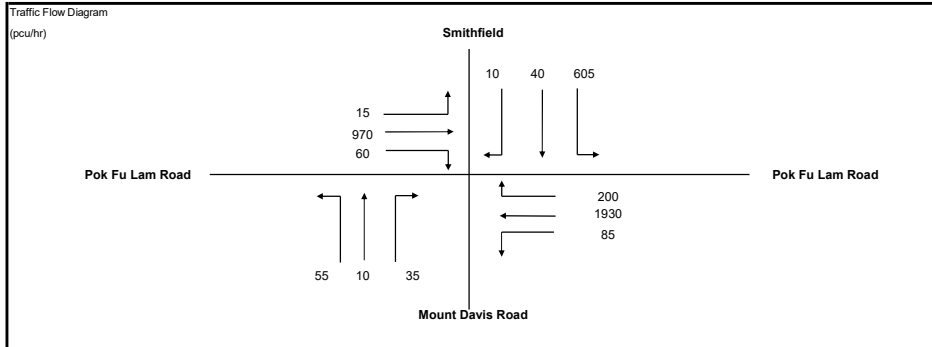
2031 PM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

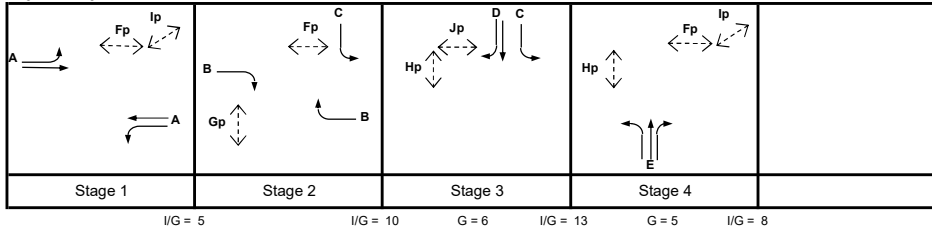
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.436 |
| Lost time | L = | 45 sec |
| Total Flow | = | 4,015 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 129 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 80 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.563 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 29.0 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 87 sec |
| Y_{max} | = $1 - L/C$ | 0.591 |

J6

Stage/Phase Diagrams



Critical Case : A,B,Jp,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 22\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| ← | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 15 | 459 | | 474 | 3% | | 1946 | 0.244 | | 36 | 48 | 0.543 | 8 |
| | A | 1 | 3.400 | 1 | | | | 0 | 0 | | | 2095 | | 511 | | 511 | | | 2095 | 0.244 | | 36 | 48 | 0.543 | 9 |
| | B | 2 | 3.400 | 1 | | | 15 | 0 | 0 | 0 | | | | | | 60 | 60 | 100% | 1905 | 0.032 | | 5 | 15 | 0.222 | 2 |
| → | B | 2 | 3.500 | 1 | | | 15 | 0 | 0 | 0 | | 2105 | | | 200 | 200 | 100% | 1914 | 0.105 | 0.105 | 16 | 15 | 0.738 | 6 | |
| | A | 1 | 3.300 | 1 | 10 | | | 1 | 0 | 0 | | 1945 | 85 | 547 | | 632 | 13% | 1907 | 0.332 | 0.332 | 49 | 48 | 0.738 | 11 | |
| | A | 1 | 3.300 | 2 | | | | 0 | 0 | 0 | | 4170 | | 1383 | | 1383 | | 4170 | 0.332 | | 49 | 48 | 0.738 | 12 | |
| ↕ | C | 2,3 | 3.400 | 2 | 30 | | | 1 | 0 | 0 | | 4050 | 605 | 40 | | 605 | 100% | 3857 | 0.157 | | 23 | | 0.000 | 9 | |
| | D | 3 | 3.800 | 1 | | | 20 | 0 | 0 | 0 | | 2135 | | 10 | | 50 | 20% | 2103 | 0.024 | | 4 | | 0.000 | 2 | |
| ↕ | E | 4 | 5.000 | 1 | 10 | | | 1 | 0 | 0 | | 2115 | 47 | | | 47 | 100% | 1839 | 0.025 | | 4 | | 0.000 | 1 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | | 0 | 0 | 0 | | 2255 | 8 | 10 | 35 | 53 | 15% | 2086 | 0.025 | | 4 | | 0.000 | 2 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

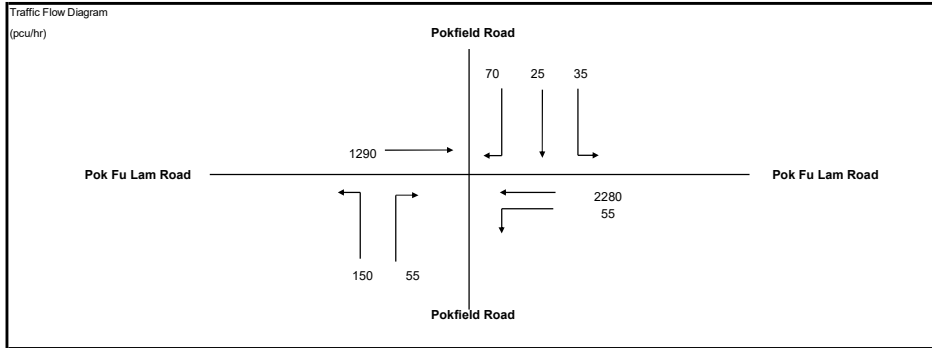
2031 AM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

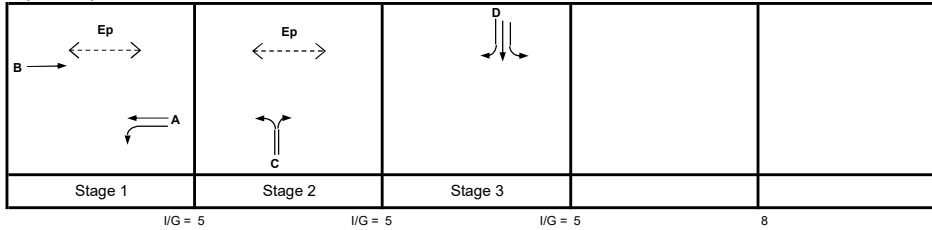
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.471 |
| Lost time | L = | 20 sec |
| Total Flow | = | 3,960 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 66 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 38 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 59.1 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 42 sec |
| Y_{max} | = $1 - L/C$ | 0.852 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 63\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | ↔ | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| ↔ | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1596 | | 1596 | | | 4210 | 0.379 | 0.379 | 92 | 91 | 0.553 | 9 |
| → | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 1290 | | 1290 | | | 4070 | 0.317 | | 77 | | 0.000 | 24 |
| ↔ | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 99 | | | 99 | 100% | | 1781 | 0.056 | | 14 | 13 | 0.553 | 3 |
| ↔ | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 51 | | 55 | 106 | 48% | 52% | 1891 | 0.056 | 0.056 | 14 | 13 | 0.553 | 4 |
| ↔ | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 35 | | 70 | 70 | | | 1914 | 0.037 | 0.037 | 9 | 8 | 0.553 | 3 |
| ↔ | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | | 25 | | 60 | 58% | | 1857 | 0.032 | | 8 | 8 | 0.489 | 2 |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 12 | + | 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

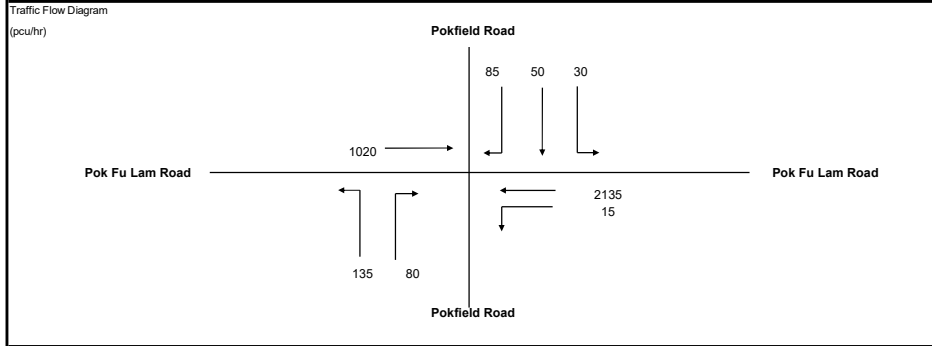
2031 PM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

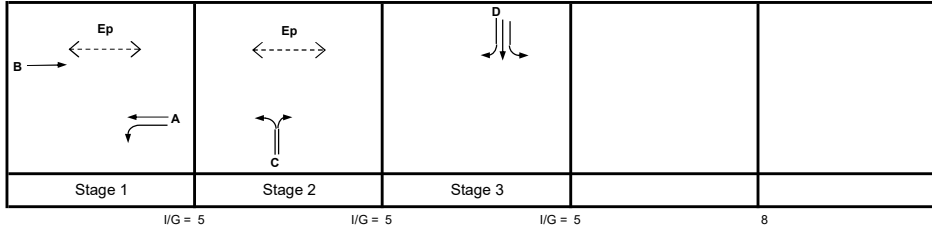
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.451 |
| Lost time | L = | 20 sec |
| Total Flow | = | 3,550 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 64 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 36 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 66.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 40 sec |
| Y_{max} | = $1 - L/C$ | 0.818 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 63\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|--------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1467 | | | 4210 | 0.348 | | 69 | 68 | 0.552 | 8 | | |
| | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 1020 | | | 4070 | 0.251 | | 50 | | 0.000 | 15 | | |
| | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 104 | 104 | 100% | | 1781 | 0.058 | | 12 | 11 | 0.552 | 3 | | |
| | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 31 | 111 | 28% | 72% | 1899 | 0.058 | 0.058 | 12 | 11 | 0.552 | 3 | | |
| | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 30 | 85 | 38% | 100% | 1914 | 0.044 | 0.044 | 9 | 8 | 0.552 | 3 | | |
| | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | 50 | 80 | | | 1894 | 0.042 | | 8 | 8 | 0.524 | 2 | | |
| Pedestrian Crossing | Ep | 1,2 | min. | GM 12 | + | FGM 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

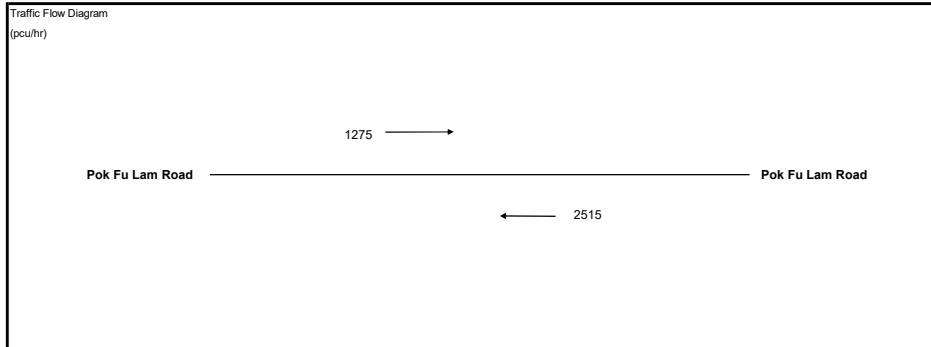
2031 AM Reference Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 120 sec |
| Sum(y) | Y = | 0.618 |
| Lost time | L = | 25 sec |
| Total Flow | = | 3,790 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | = 111 sec |
| Min. Cycle Time C_m | = $L / (1 - Y)$ | = 65 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | = 0.713 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | = 15.3 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | = 80 sec |
| Y_{max} | = $1 - L/C$ | = 0.792 |

J8

Stage/Phase Diagrams



I/G = 5 G = 8 I/G = 13

Critical Case : A,Bp

$$R.C.(C) = (0.9 \times Y_{max} - Y) / Y \times 100\% = 15\%$$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 1275 | | 1275 | | | 4070 | 0.313 | | 48 | 94 | 0.396 | 4 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 2515 | | 2515 | | | 4070 | 0.618 | 0.618 | 95 | 94 | 0.781 | 9 |
| Pedestrian Crossing | | Bp | 2 min. | | GM 8 | + | FGM 10 | = | 18 | sec | | | | | | | | | | | * | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

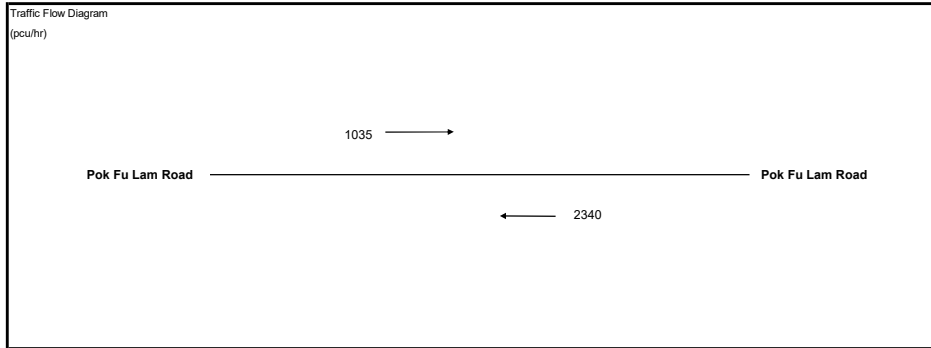
2031 PM Reference Traffic Flows

DESIGN: JW

CHECK: OC

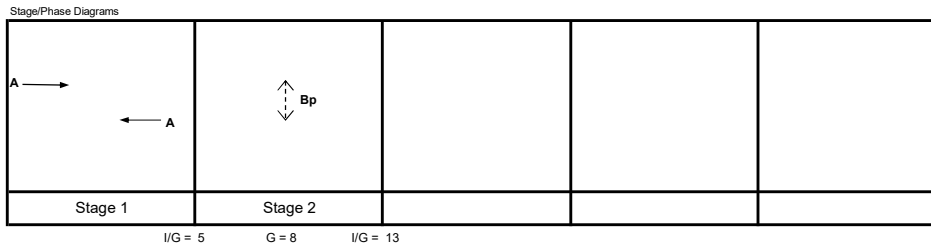
#VALUE!

DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.575 |
| Lost time | L = | 25 sec |
| Total Flow | = | 3,375 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | = 100 sec |
| Min. Cycle Time C_m | = $L / (1 - Y)$ | = 59 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | = 0.713 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | = 23.9 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | = 69 sec |
| Y_{max} | = $1 - L/C$ | = 0.773 |

J8



Critical Case : A,Bp

$R.C.(C) = (0.9 \times Y_{max} - Y) / Y \times 100\% = 21\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|--------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 1035 | | 1035 | | | 4070 | 0.254 | | 38 | 84 | 0.329 | 4 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 2340 | | 2340 | | | 4070 | 0.575 | 0.575 | 85 | 84 | 0.744 | 8 |
| Pedestrian Crossing | | Bp | 2 min. | GM 8 | + | FGM 10 | = | 18 | sec | | | | | | | | | | | | * | | | | |

Appendix B-3

Junction Calculation Sheet

2031 Design Case

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

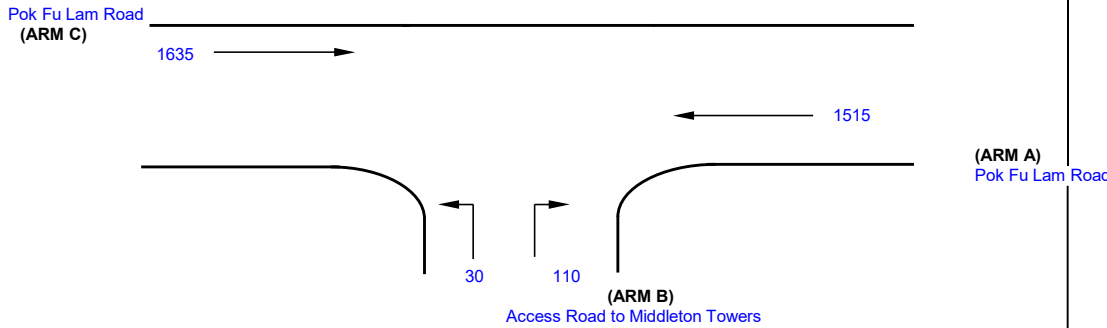
2031 AM Design Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J1

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)
- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 0 (pcu/hr) |
| q a-c | = | 1515 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1635 (pcu/hr) |
| q c-b | = | 0 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 3.5 (metres) |
| W b-c | = | 2.5 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 110 (pcu/hr) |
| q b-c | = | 30 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.939109 |
| E | = | 0.875846 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 157 |
| Q b-c | = | 413 |
| Q c-b | = | 408 |
| Q b-ac | = | 181 |

CRITICAL DFC = 0.77

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.70 |
| DFC b-c | = | 0.07 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.77 |

PRIORITY JUNCTION CAPACITY CALCULATION

AECOM

Junction J1 - Pok Fu Lam Road / Access Road to Middleton Towers

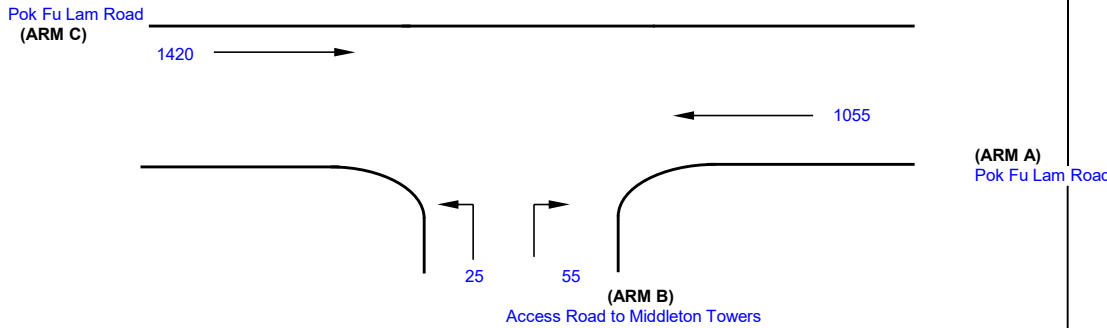
2031 PM Design Traffic Flows

Designed By : JW

Checked By : OC

Job No. :

Date : Apr 26



NOTES : (GEOMETRIC INPUT DATA)

J1

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

| | | |
|-------|---|---------------|
| W | = | 14.6 (metres) |
| W cr | = | 0 (metres) |
| q a-b | = | 0 (pcu/hr) |
| q a-c | = | 1055 (pcu/hr) |

MAJOR ROAD (ARM C)

| | | |
|--------|---|---------------|
| W c-b | = | 2.4 (metres) |
| Vr c-b | = | 100 (metres) |
| q c-a | = | 1420 (pcu/hr) |
| q c-b | = | 0 (pcu/hr) |

MINOR ROAD (ARM B)

| | | |
|--------|---|--------------|
| W b-a | = | 3.5 (metres) |
| W b-c | = | 2.5 (metres) |
| VI b-a | = | 100 (metres) |
| Vr b-a | = | 100 (metres) |
| Vr b-c | = | 100 (metres) |
| q b-a | = | 55 (pcu/hr) |
| q b-c | = | 25 (pcu/hr) |

GEOMETRIC FACTORS :

| | | |
|---|---|----------|
| D | = | 0.939109 |
| E | = | 0.875846 |
| F | = | 0.866615 |
| Y | = | 0.496300 |

THE CAPACITY OF MOVEMENT :

| | | |
|--------|---|-----|
| Q b-a | = | 258 |
| Q b-c | = | 486 |
| Q c-b | = | 480 |
| Q b-ac | = | 303 |

CRITICAL DFC = 0.26

COMPARISON OF DESIGN FLOW TO CAPACITY :

| | | |
|----------|---|------|
| DFC b-a | = | 0.21 |
| DFC b-c | = | 0.05 |
| DFC c-b | = | 0.00 |
| DFC b-ac | = | 0.26 |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Pok Fu Lam Road / Victoria Road

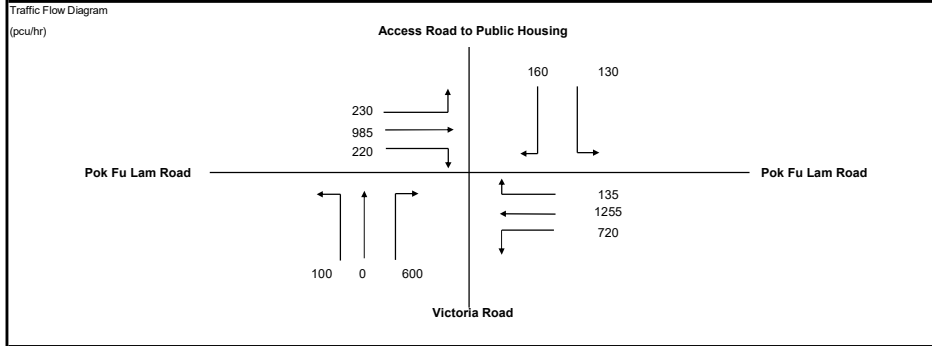
2031 AM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

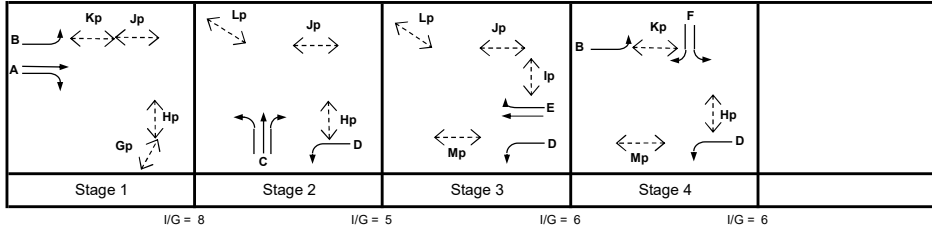
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 140 sec |
| Sum(y) | Y = | 0.643 |
| Lost time | L = | 21 sec |
| Total Flow | = | 4,535 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 102 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 59 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.743 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 15.4 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 74 sec |
| Y_{max} | = $1 - L/C$ | 0.850 |

J3

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 19\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| A | A | 1 | 3.700 | 2 | | | | | | | | 4250 | | 811 | | 811 | | | 4250 | 0.191 | 0.191 | 35 | 34 | 0.757 | 12 |
| | A | 1 | 3.650 | 1 | | 30 | 0 | 0 | | | | 2120 | | 174 | | 394 | | 56% | 2062 | 0.191 | | 35 | 34 | 0.757 | 12 |
| | B | 1,4 | 3.700 | 1 | | 20 | | 1 | | | | 1985 | 230 | | 220 | 230 | 100% | | 1847 | 0.125 | | 23 | | 0.000 | 9 |
| C | C | 2 | 3.600 | 1 | | 20 | 25 | 0 | 1 | | 100 | 1975 | 100 | 0 | 247 | 347 | 29% | 71% | 1950 | 0.178 | 0.178 | 33 | 32 | 0.757 | 11 |
| | C | 2 | 3.500 | 1 | | 25 | 0 | 0 | | | | 2105 | | | 353 | 353 | 100% | | 1986 | 0.178 | | 33 | 32 | 0.757 | 11 |
| D | D | 2,3,4 | 3.700 | 1 | | 20 | | 1 | | | | 1985 | 720 | | 720 | 100% | | 1847 | 0.390 | | 72 | | 0.000 | 28 | |
| | E | 3 | 3.500 | 2 | | | | 0 | | | | 4210 | | 939 | 939 | | | 4210 | 0.223 | | 41 | 40 | 0.757 | 13 | |
| | F | 3 | 3.500 | 1 | | | 11 | 0 | 0 | | | 2105 | | 316 | 135 | 451 | 30% | | 2022 | 0.223 | 0.223 | 41 | 40 | 0.757 | 12 |
| F | F | 4 | 3.650 | 1 | | 10 | | 1 | | | | 1980 | 89 | | 89 | 100% | | 1722 | 0.052 | | 10 | 9 | 0.757 | 4 | |
| | F | 4 | 3.650 | 1 | | 10 | 20 | 0 | | | | 2120 | 41 | | 99 | 99 | 41% | 59% | 1917 | 0.052 | 0.052 | 10 | 9 | 0.757 | 4 |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | | | | 2120 | | | 102 | 102 | 100% | | 1972 | 0.052 | | 10 | | 0.000 | 4 |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | | | | 2120 | | | 102 | 102 | 100% | | 1972 | 0.052 | | 10 | | 0.000 | 4 |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | |
| | Ip | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 1,2,3 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | |
| | Kp | 1,4 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | | | | | |
| | Lp | 2,3 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | |
| | Mp | 3,4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J3 - Pok Fu Lam Road / Victoria Road

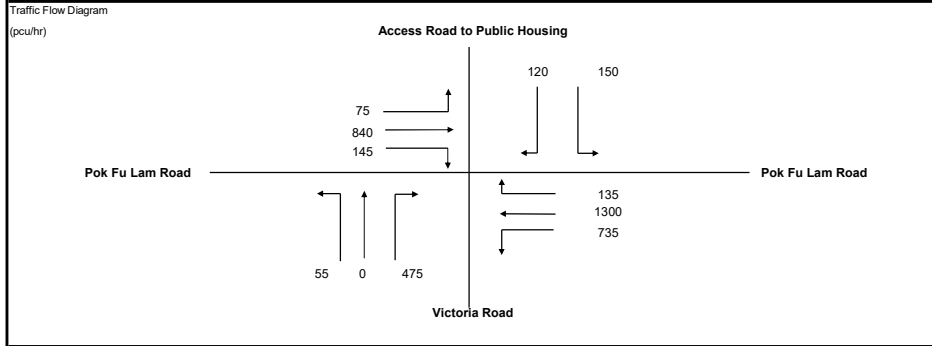
2031 PM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

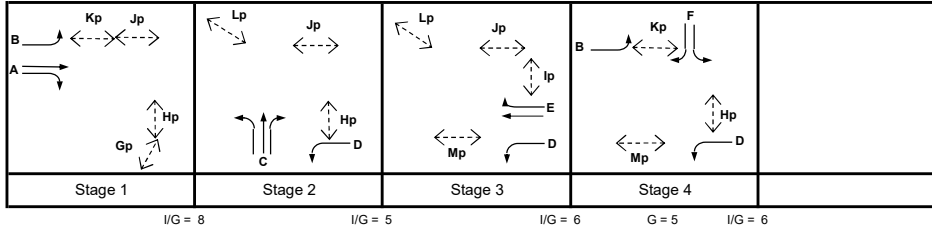
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 120 sec |
| Sum(y) | Y = | 0.521 |
| Last time | L = | 27 sec |
| Total Flow | = | 4,030 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 95 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 56 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.698 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 34.0 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 64 sec |
| Y_{max} | = $1 - L/C$ | 0.775 |

J3

Stage/Phase Diagrams



Critical Case : A,C,E,F

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 34\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN g _y /Yx(C-L) (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|---|----------------------|------------------------|-----------------|----|---|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | | |
| A | A | 1 | 3.700 | 2 | | 30 | 0 | 0 | 0 | | | 4250 | | 662 | | 662 | | | | | | | | | | | 8 |
| | A | 1 | 3.650 | 1 | | | 0 | 0 | 0 | | | 2120 | | 178 | | 323 | | 45% | | | | | | | | | 8 |
| | B | 1,4 | 3.700 | 1 | | 20 | | 1 | | 0 | | | 1985 | 75 | 178 | 75 | 100% | | | | | | | | | | 2 |
| C | C | 2 | 3.600 | 1 | | 20 | 25 | 0 | 1 | 0 | 100 | 1975 | 55 | 0 | 208 | 263 | 21% | 79% | 1952 | 0.135 | | | 24 | 23 | 0.672 | 7 | |
| | C | 2 | 3.500 | 1 | | 25 | 0 | 0 | 0 | 0 | | 2105 | | | 267 | 267 | 100% | | 1986 | 0.135 | 0.135 | | 24 | 23 | 0.672 | 7 | |
| D | D | 2,3,4 | 3.700 | 1 | | 20 | | 1 | 0 | | | 1985 | 735 | | | 735 | 100% | | | | | | | | | 24 | |
| | E | 3 | 3.500 | 2 | | | 0 | 0 | 0 | | | 4210 | | 969 | | 969 | | | | | | | 41 | 40 | 0.672 | 11 | |
| | F | 3 | 3.500 | 1 | | | 11 | 0 | 0 | 0 | | 2105 | | 331 | 135 | 466 | 29% | | 2025 | 0.230 | 0.230 | | 41 | 40 | 0.672 | 10 | |
| F | F | 4 | 3.650 | 1 | | 10 | | 1 | 0 | | | 1980 | 83 | | | 83 | 100% | | | | | | | | | 3 | |
| | F | 4 | 3.650 | 1 | | 10 | 20 | 0 | 0 | 0 | | 2120 | 67 | | 24 | 91 | 73% | 27% | 1876 | 0.048 | | | | | | 3 | |
| | F | 4 | 3.650 | 1 | | 20 | 0 | 0 | 0 | 0 | | 2120 | | | 96 | 96 | 100% | | 1972 | 0.048 | | | | | | 3 | |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | | | |
| | Gp | 1 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | | | |
| | Hp | 1,2,4 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | | | |
| | Ip | 3 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | | | |
| | Jp | 1,2,3 | min. | 5 | + | 9 | = | 14 | sec | | | | | | | | | | | | | | | | | | |
| | Kp | 1,4 | min. | 5 | + | 6 | = | 11 | sec | | | | | | | | | | | | | | | | | | |
| | Lp | 2,3 | min. | 5 | + | 5 | = | 10 | sec | | | | | | | | | | | | | | | | | | |
| | Mp | 3,4 | min. | 5 | + | 10 | = | 15 | sec | | | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

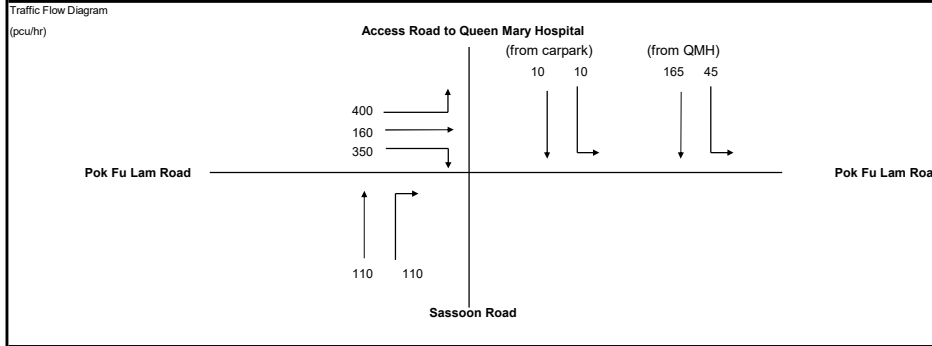
Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital 2031 AM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

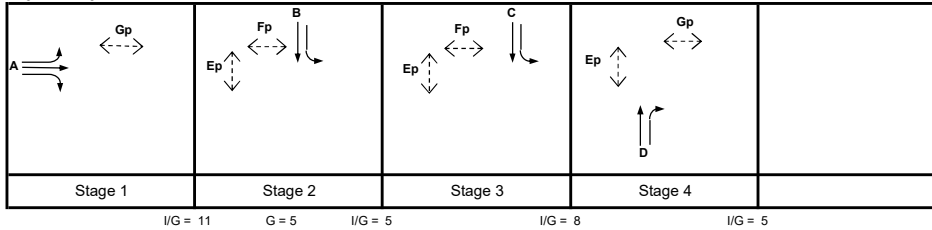
DATE: Apr 26



| | | |
|----------------------------|------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 105 sec |
| Sum(y) | Y = | 0.468 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,360 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 97 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 58 sec |
| Y_{ult} | = $0.9 - 0.0075 \times L$ | 0.668 |
| R.C. _{ult} | = $(Y_{ult} - Y) / Y \times 100\%$ | 42.6 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 65 sec |
| Y_{max} | = $1 - L/C$ | 0.705 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 35\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N | |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|--|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A | 1 | 3.300 | 1 | 12.5 | | | 1 | 0 | 100 | 1945 | 400 | 160 | | 560 | 71% | | 1884 | 0.297 | 0.297 | 47 | 46 | 0.664 | 9 | | |
| | A | 1 | 3.300 | 1 | | 10 | 0 | 0 | 0 | | 2085 | | | 350 | 350 | 100% | | 1813 | 0.193 | | 31 | 46 | 0.431 | 6 | | |
| | B | 2 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 10 | 10 | | 20 | 50% | | 1781 | 0.011 | | 2 | | 0.000 | 1 | | |
| | D | 4 | 3.800 | 1 | | | | 1 | 0 | | 1995 | | 110 | | 110 | | | 1995 | 0.055 | | 9 | 8 | 0.635 | 3 | | |
| | D | 4 | 3.800 | 1 | | 12.5 | 0 | 0 | 0 | | 2135 | | | 110 | 110 | 100% | | 1906 | 0.058 | 0.058 | 9 | 8 | 0.664 | 3 | | |
| | C | 3 | 3.000 | 1 | 10 | | | 1 | 0 | | 1915 | 45 | 165 | | 210 | 21% | | 1855 | 0.113 | 0.113 | 18 | 17 | 0.664 | 5 | | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACOM

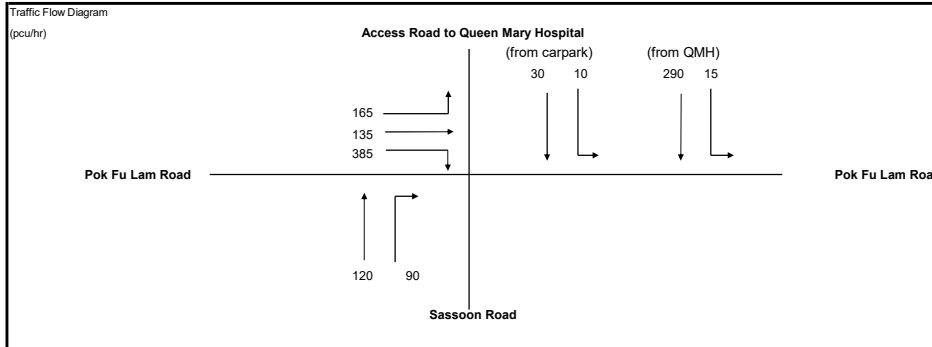
Junction J4 - Pok Fu Lam Road / Sassoon Road / Access Road to Queen Mary Hospital 2031 PM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

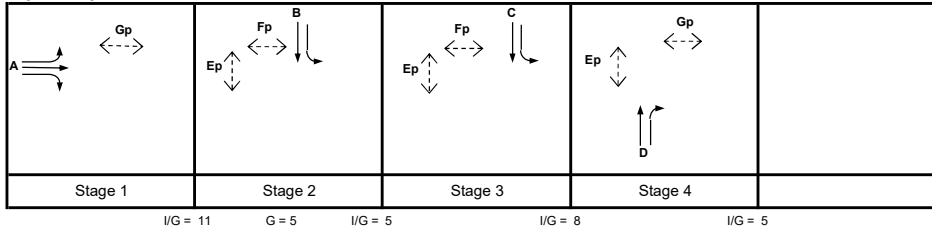
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 100 sec |
| Sum(y) | Y = | 0.433 |
| Lost time | L = | 31 sec |
| Total Flow | = | 1,240 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 91 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 55 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.668 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | 54.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 60 sec |
| Y_{max} | = $1 - L/C$ | 0.690 |

J4

Stage/Phase Diagrams



Critical Case : A,B,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\%$ = 43%

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | A | | | | | | | 1 | 3.300 | 1 | | 12.5 | | | | | | | | |
| | A | 1 | 3.300 | 1 | | 10 | 0 | 0 | 0 | | 2085 | | | 385 | 385 | 100% | 1813 | 0.212 | 0.212 | 34 | 33 | 0.627 | 7 | | |
| | B | 2 | 3.000 | 1 | 10 | | 1 | 0 | 0 | | 1915 | 10 | 30 | 40 | 25% | | 1846 | 0.022 | | 3 | | 0.000 | 1 | | |
| | D | 4 | 3.800 | 1 | | 12.5 | 0 | 1 | 0 | | 1995 | | 120 | 120 | | | 1995 | 0.060 | 0.060 | 10 | 9 | 0.627 | 3 | | |
| | D | 4 | 3.800 | 1 | | | 0 | 0 | 0 | | 2135 | | | 90 | 90 | 100% | 1906 | 0.047 | | 8 | 9 | 0.493 | 2 | | |
| | C | 3 | 3.000 | 1 | 10 | | 1 | 0 | 0 | | 1915 | 15 | 290 | 305 | 5% | | 1901 | 0.160 | 0.160 | 26 | 25 | 0.627 | 6 | | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 2,3,4 | min. | 9 | + | 12 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Fp | 2,3 | min. | 8 | + | 13 | = | 21 | sec | | | | | | | | | | | | | | | | |
| | Gp | 1,4 | min. | 5 | + | 14 | = | 19 | sec | | | | | | | | | | | | | | | | |

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J5 - Pok Fu Lam Road / Sassoon Road

2031 AM Design Traffic Flows

Designed By : JW

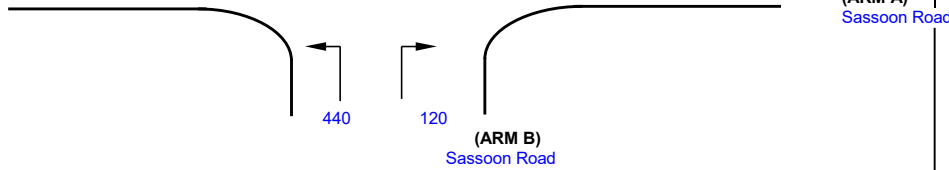
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

105
70



NOTES : (GEOMETRIC INPUT DATA)

J5

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
W cr = 1.5 (metres)
q a-b = 360 (pcu/hr)
q a-c = 125 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
Vr c-b = 45 (metres)
q c-a = 105 (pcu/hr)
q c-b = 70 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
W b-c = 3.7 (metres)
VI b-a = 65 (metres)
Vr b-a = 75 (metres)
Vr b-c = 75 (metres)
q b-a = 120 (pcu/hr)
q b-c = 440 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
E = 0.964010
F = 0.884290
Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 467
Q b-c = 675
Q c-b = 586
Q b-ac = 616

CRITICAL DFC = 0.65

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.26
DFC b-c = 0.65
DFC c-b = 0.12
DFC b-ac =

PRIORITY JUNCTION CAPACITY CALCULATION

Junction J5 - Pok Fu Lam Road / Sassoon Road

2031 PM Design Traffic Flows

Designed By : JW

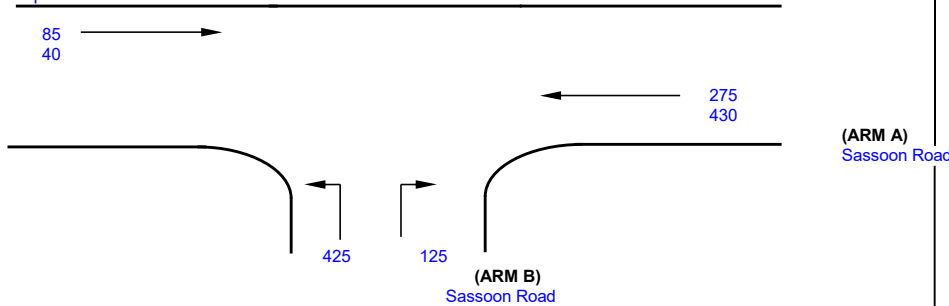
Checked By : OC

Job No. :

Date : May 26

Pok Fu Lam Road Slip Road
(ARM C)

85
40



NOTES : (GEOMETRIC INPUT DATA)

J5

- W = Major Road Width (6.4 - 20.0)
- W cr = Central Reserve width (1.2 - 9.0, kerbed central reserve only)
- W b-a = Lane width available to vehicle waiting in stream b-a (2.05 - 4.70)
- W b-c = Lane width available to vehicle waiting in stream b-c (2.05 - 4.70)
- W c-b = Lane width available to vehicle waiting in stream c-b (2.05 - 4.70)
- VI b-a = Visibility to the left for vehicles waiting in stream b-a (22.0 - 250.0)
- Vr b-a = Visibility to the right for vehicles waiting in stream b-a (17.0 - 250.0)
- Vr b-c = Visibility to the right for vehicles waiting in stream b-c (17.0 - 250.0)
- Vr c-b = Visibility to the right for vehicles waiting in stream c-b (17.0 - 250.0)

- D = Stream-specific B-A
- E = Stream-specific B-C
- F = Stream-specific C-B
- Y = (1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W = 15.5 (metres)
W cr = 1.5 (metres)
q a-b = 430 (pcu/hr)
q a-c = 275 (pcu/hr)

MAJOR ROAD (ARM C)

W c-b = 3.1 (metres)
Vr c-b = 45 (metres)
q c-a = 85 (pcu/hr)
q c-b = 40 (pcu/hr)

MINOR ROAD (ARM B)

W b-a = 2.5 (metres)
W b-c = 3.7 (metres)
VI b-a = 65 (metres)
Vr b-a = 75 (metres)
Vr b-c = 75 (metres)
q b-a = 125 (pcu/hr)
q b-c = 425 (pcu/hr)

GEOMETRIC FACTORS :

D = 0.812133
E = 0.964010
F = 0.884290
Y = 0.465250

THE CAPACITY OF MOVEMENT :

Q b-a = 450
Q b-c = 646
Q c-b = 553
Q b-ac = 587

CRITICAL DFC = 0.66

COMPARISON OF DESIGN FLOW TO CAPACITY :

DFC b-a = 0.28
DFC b-c = 0.66
DFC c-b = 0.07
DFC b-ac =

JUNCTION CAPACITY CALCULATION

AECOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

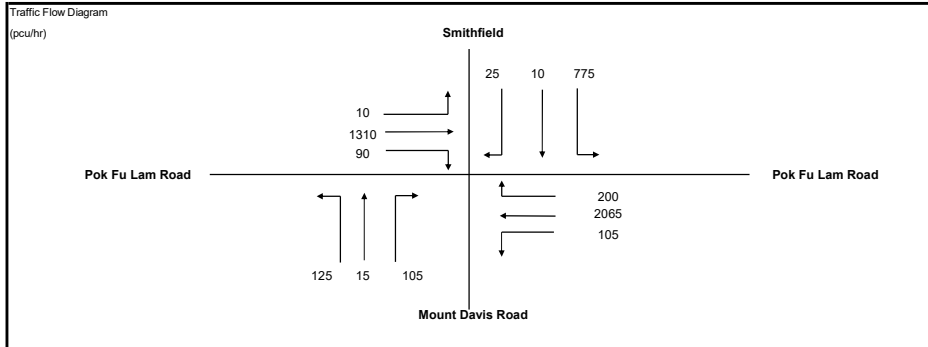
2031 AM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

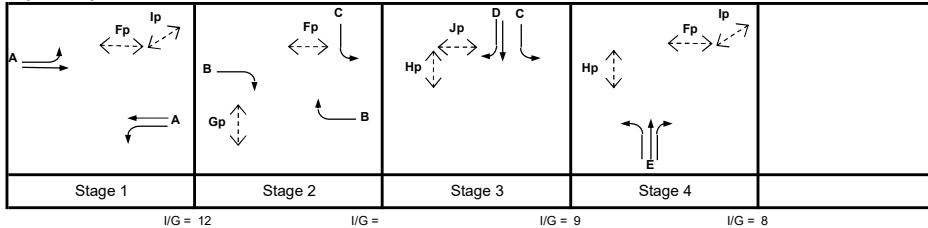
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.621 |
| Lost time | L = | 26 sec |
| Total Flow | = | 4,835 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 116 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 69 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.705 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 13.5 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 84 sec |
| Y_{max} | = $1 - L/C$ | 0.807 |

J6

Stage/Phase Diagrams



Critical Case : A,C,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 17\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| ← | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 10 | 626 | | 636 | 2% | | 1950 | 0.326 | | 57 | 62 | 0.702 | 13 |
| | A | 1 | 3.400 | 1 | | | | 0 | 0 | | | 2095 | | 684 | | 684 | | | 2095 | 0.326 | | 57 | 62 | 0.702 | 14 |
| | B | 2 | 3.400 | 1 | | 15 | 0 | 0 | 0 | 0 | | | 2095 | | | 90 | 90 | 100% | 1905 | 0.047 | | 8 | | 0.000 | 3 |
| → | B | 2 | 3.500 | 1 | | 15 | 0 | 0 | 0 | | | 2105 | | | 200 | 200 | 100% | 1914 | 0.105 | | 18 | | 0.000 | 7 | |
| | A | 1 | 3.300 | 1 | 10 | | | 1 | 0 | | | 1945 | 105 | 574 | | 679 | 15% | 1901 | 0.357 | 0.357 | 63 | 62 | 0.769 | 14 | |
| | A | 1 | 3.300 | 2 | | | | 0 | 0 | 0 | | 4170 | | 1491 | | 1491 | | 4170 | 0.357 | | 63 | 62 | 0.769 | 15 | |
| ↔ | C | 2,3 | 3.400 | 2 | 30 | | | 1 | 0 | | | 4050 | 775 | 10 | | 775 | 100% | 3857 | 0.201 | 0.201 | 35 | 34 | 0.769 | 11 | |
| | D | 3 | 3.800 | 1 | | 20 | 0 | 0 | 0 | | | 2135 | | | 25 | 35 | 71% | 2026 | 0.017 | | 3 | | 0.000 | 1 | |
| ↔ | E | 4 | 5.000 | 1 | 10 | | | 1 | 0 | | | 2115 | 115 | | | 115 | 100% | 1839 | 0.063 | | 11 | 10 | 0.769 | 5 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2255 | 10 | 15 | 105 | 130 | 8% | 2072 | 0.063 | 0.063 | 11 | 10 | 0.769 | 5 | |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AZCOM

Junction J6 - Pok Fu Lam Road / Smithfield / Mount Davis Road

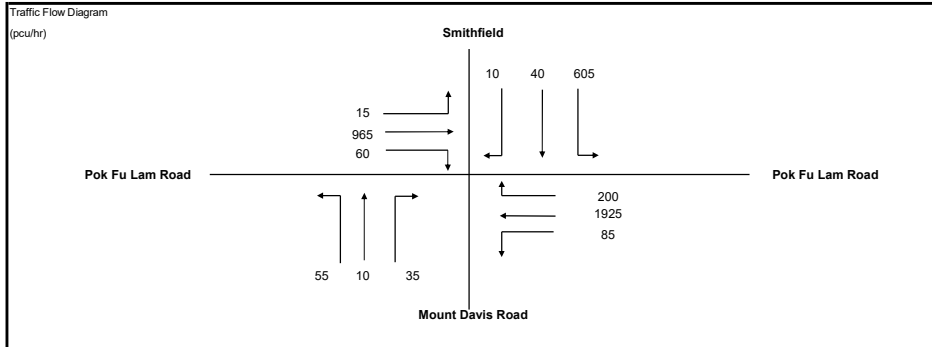
2031 PM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

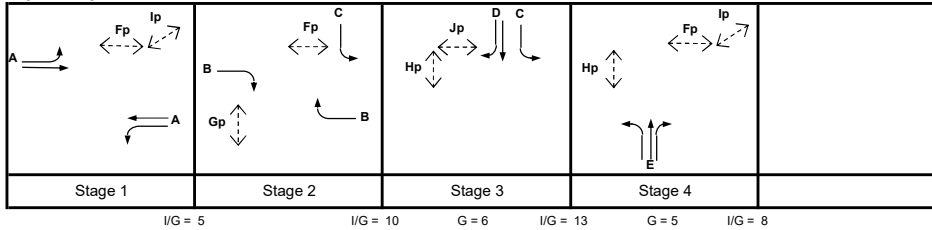
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 4 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.435 |
| Lost time | L = | 45 sec |
| Total Flow | = | 4,005 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 128 sec |
| Min. Cycle Time C_{min} | = $L / (1 - Y)$ | 80 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.563 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 29.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 87 sec |
| Y_{max} | = $1 - L/C$ | 0.591 |

J6

Stage/Phase Diagrams



Critical Case : A,B,Ip,E

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 22\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| ← | A | 1 | 3.400 | 1 | 10 | | | 1 | 0 | | | 1955 | 15 | 457 | | 472 | 3% | | 1946 | 0.243 | | 36 | 48 | 0.540 | 8 |
| | A | 1 | 3.400 | 1 | | | | 0 | 0 | | | 2095 | | 508 | | 508 | | | 2095 | 0.243 | | 36 | 48 | 0.540 | 9 |
| | B | 2 | 3.400 | 1 | | | 15 | 0 | 0 | 0 | | | | | | 60 | 60 | 100% | 1905 | 0.032 | | 5 | 15 | 0.222 | 2 |
| → | B | 2 | 3.500 | 1 | | | 15 | 0 | 0 | 0 | | 2105 | | | 200 | 200 | 100% | 1914 | 0.105 | 0.105 | 16 | 15 | 0.737 | 6 | |
| | A | 1 | 3.300 | 1 | 10 | | | 1 | 0 | | | 1945 | 85 | 546 | | 631 | 13% | 1906 | 0.331 | 0.331 | 49 | 48 | 0.737 | 11 | |
| | A | 1 | 3.300 | 2 | | | | 0 | 0 | 0 | | 4170 | | 1379 | | 1379 | | 4170 | 0.331 | | 49 | 48 | 0.737 | 12 | |
| ↔ | C | 2,3 | 3.400 | 2 | 30 | | | 1 | 0 | | | 4050 | 605 | | 605 | 100% | | 3857 | 0.157 | | 23 | | 0.000 | 9 | |
| | D | 3 | 3.800 | 1 | | | 20 | 0 | 0 | 0 | | 2135 | | 40 | 10 | 50 | 20% | 2103 | 0.024 | | 4 | | 0.000 | 2 | |
| ↔ | E | 4 | 5.000 | 1 | 10 | | | 1 | 0 | | | 2115 | 47 | | 47 | 100% | | 1839 | 0.025 | | 4 | | 0.000 | 1 | |
| | E | 4 | 5.000 | 1 | 15 | 15 | 0 | 0 | 0 | 0 | | 2255 | 8 | 10 | 35 | 53 | 15% | 2086 | 0.025 | | 4 | | 0.000 | 2 | |
| Pedestrian Crossing | | | | | GM | FGM | | | | | | | | | | | | | | | | | | | |
| | Fp | 1,2,4 | min. | 7 | + | 5 | = | 12 | sec | | | | | | | | | | | | | | | | |
| | Gp | 2 | min. | 7 | + | 9 | = | 16 | sec | | | | | | | | | | | | | | | | |
| | Hp | 3,4 | min. | 12 | + | 12 | = | 24 | sec | | | | | | | | | | | | | | | | |
| | Ip | 1,4 | min. | 7 | + | 8 | = | 15 | sec | | | | | | | | | | | | | | | | |
| | Jp | 3 | min. | 6 | + | 11 | = | 17 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

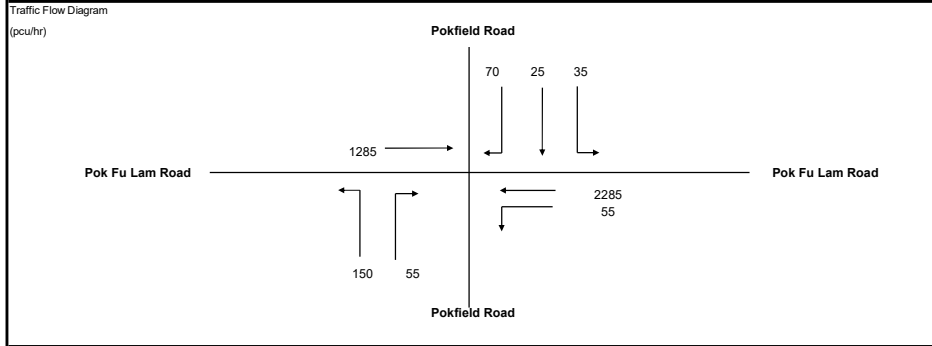
2031 AM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

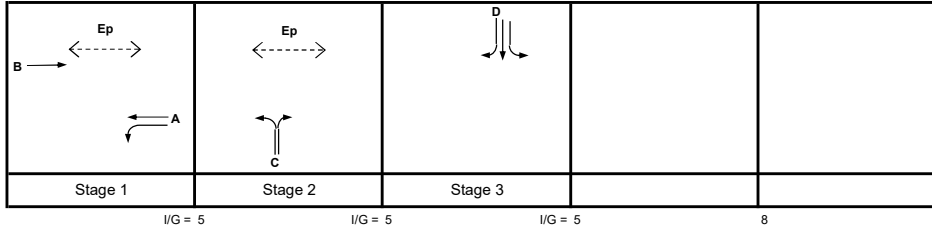
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 135 sec |
| Sum(y) | Y = | 0.472 |
| Lost time | L = | 20 sec |
| Total Flow | = | 3,960 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 66 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 38 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{crit} | = $(Y_{crit} - Y) / Y \times 100\%$ | 58.8 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 42 sec |
| Y_{max} | = $1 - L/C$ | 0.852 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 62\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|--------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1599 | | 1599 | | | 4210 | 0.380 | | 92 | 91 | 0.554 | 9 |
| | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 1285 | | 1285 | | | 4070 | 0.316 | | 77 | | 0.000 | 24 |
| | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 99 | | | 99 | 100% | | 1781 | 0.056 | | 14 | 13 | 0.554 | 3 |
| | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 51 | | 55 | 106 | 48% | 52% | 1891 | 0.056 | 0.056 | 14 | 13 | 0.554 | 4 |
| | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 35 | | 70 | 70 | 100% | | 1914 | 0.037 | 0.037 | 9 | 8 | 0.554 | 3 |
| | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | | 25 | | 60 | 58% | | 1857 | 0.032 | | 8 | 8 | 0.490 | 2 |
| Pedestrian Crossing | Ep | 1,2 | min. | GM 12 | + | FGM 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

ACCOM

Junction J7 - Pok Fu Lam Road / Pokfield Road

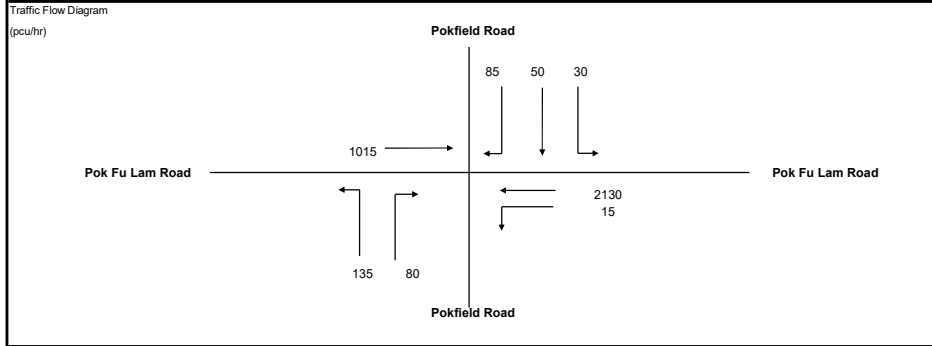
2031 PM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

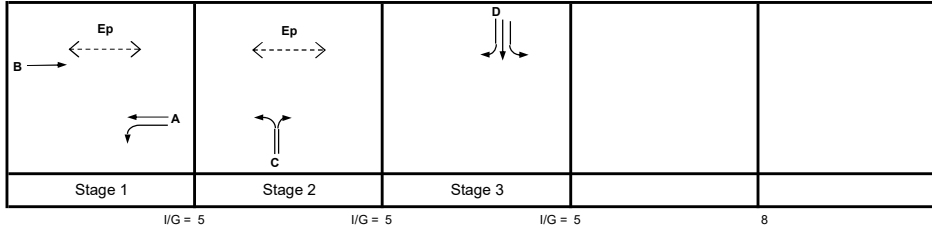
DATE: Apr 26



| | | |
|----------------------------|------------------------------------|-----------|
| No. of stages per cycle | N = | 3 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.450 |
| Lost time | L = | 20 sec |
| Total Flow | = | 3,540 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 64 sec |
| Min. Cycle Time C_{in} | = $L / (1 - Y)$ | 36 sec |
| Y_{ult} | = $0.9 - 0.0075 \times L$ | 0.750 |
| R.C. _{ult} | = $(Y_{ult} - Y) / Y \times 100\%$ | 66.5 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 40 sec |
| Y_{max} | = $1 - L/C$ | 0.818 |

J7

Stage/Phase Diagrams



Critical Case : A,C,D

R.C.(C) = $(0.9 \times Y_{max} - Y) / Y \times 100\% = 63\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / (Y \times (C - L))$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| | | | | | ↔ | A | | | | | | | 1 | 3.500 | 1 | | 15 | | | | | | | | |
| ↔ | A | 1 | 3.500 | 2 | | | | 0 | 0 | | | 4210 | | 1463 | | 1463 | | | 4210 | 0.348 | | 69 | 68 | 0.551 | 8 |
| → | B | 1 | 3.500 | 2 | | | | 1 | 0 | | | 4070 | | 1015 | | 1015 | | | 4070 | 0.249 | | 50 | | 0.000 | 15 |
| ↔ | C | 2 | 3.000 | 1 | 20 | | | 1 | 0 | | | 1915 | 104 | | | 104 | 100% | | 1781 | 0.058 | | 12 | 11 | 0.551 | 3 |
| ↔ | C | 2 | 3.000 | 1 | 15 | 20 | 0 | 0 | 0 | | | 2055 | 31 | | 80 | 111 | 28% | 72% | 1899 | 0.058 | 0.058 | 12 | 11 | 0.551 | 3 |
| ↔ | D | 3 | 3.500 | 1 | 15 | 15 | 0 | 0 | 0 | | | 2105 | 30 | | 85 | 85 | 38% | 100% | 1914 | 0.044 | 0.044 | 9 | 8 | 0.551 | 3 |
| ↔ | D | 3 | 3.500 | 1 | 15 | | | 1 | 0 | | | 1965 | | 50 | 80 | 80 | | | 1894 | 0.042 | | 8 | 8 | 0.524 | 2 |
| Pedestrian Crossing | | | | | GM | | FGM | | | | | | | | | | | | | | | | | | |
| | Ep | 1,2 | min. | 12 | + | 14 | = | 26 | sec | | | | | | | | | | | | | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

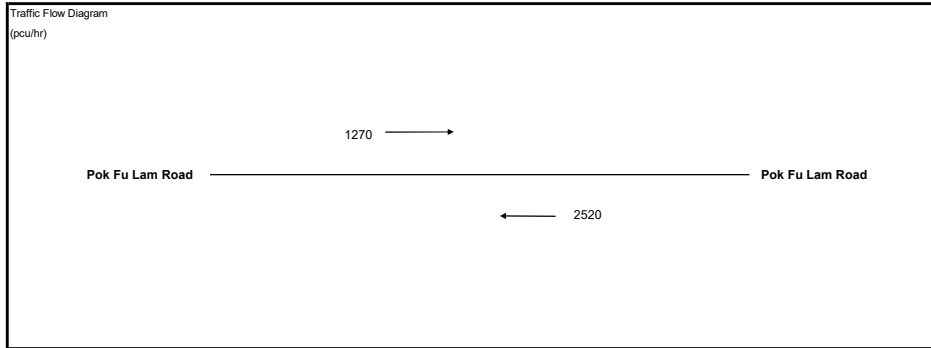
2031 AM Design Traffic Flows

DESIGN: JW

CHECK: OC

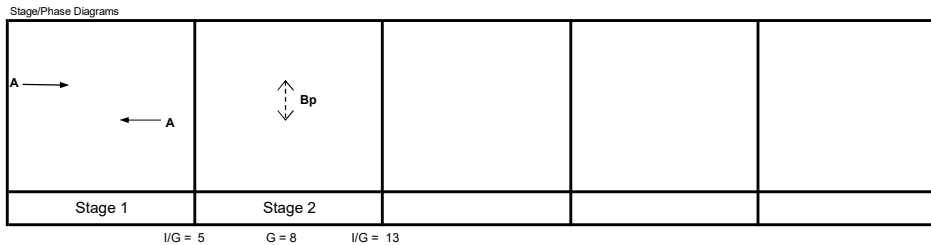
#VALUE!

DATE: Apr 26



| | | |
|----------------------------|---------------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 120 sec |
| Sum(y) | Y = | 0.619 |
| Lost time | L = | 25 sec |
| Total Flow | = | 3,790 pcu |
| Optimum Cycle C_o | $= (1.5 \times L + 5) / (1 - Y) =$ | 112 sec |
| Min. Cycle Time C_m | $= L / (1 - Y) =$ | 66 sec |
| Y_{crit} | $= 0.9 - 0.0075 \times L =$ | 0.713 |
| $R.C._{crit}$ | $= (Y_{crit} - Y) / Y \times 100\% =$ | 15.1 % |
| Practical Cycle Time C_p | $= 0.9 \times L / (0.9 - Y) =$ | 80 sec |
| Y_{max} | $= 1 - L/C =$ | 0.792 |

J8



Critical Case : A,Bp

$R.C.(C) = (0.9 \times Y_{max} - Y) / Y \times 100\% = 15\%$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|-----------------|--------------|--|------------------------|--------------------------|-------------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 1270 | | 1270 | | | 4070 | 0.312 | | 48 | 94 | 0.394 | 4 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 2520 | | 2520 | | | 4070 | 0.619 | 0.619 | 95 | 94 | 0.782 | 9 |
| Pedestrian Crossing | | Bp | 2 min. | | GM 8 | + | FGM 10 | = | 18 | sec | | | | | | | | | | | * | | | | |

JUNCTION CAPACITY CALCULATION

AECOM

Junction J8 - Lady Ho Tung Hall Signalized Crossing

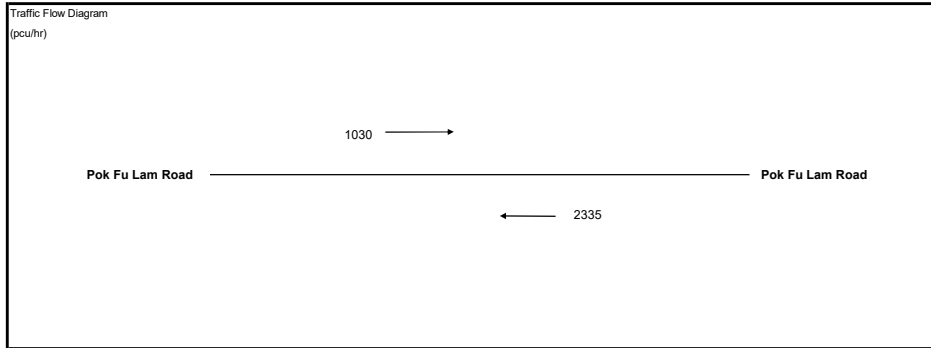
2031 PM Design Traffic Flows

DESIGN: JW

CHECK: OC

#VALUE!

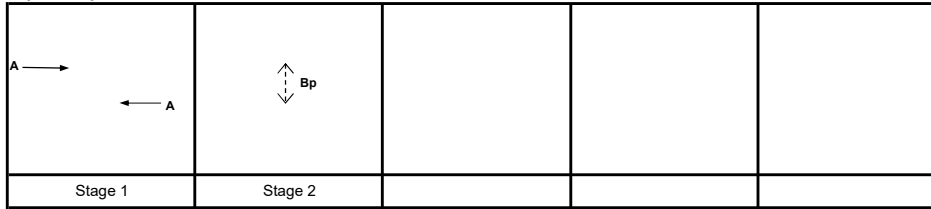
DATE: Apr 26



| | | |
|----------------------------|-------------------------------------|-----------|
| No. of stages per cycle | N = | 2 |
| Cycle time | C = | 110 sec |
| Sum(y) | Y = | 0.574 |
| Lost time | L = | 25 sec |
| Total Flow | = | 3,365 pcu |
| Optimum Cycle C_o | = $(1.5 \times L + 5) / (1 - Y)$ | 100 sec |
| Min. Cycle Time C_m | = $L / (1 - Y)$ | 59 sec |
| Y_{crit} | = $0.9 - 0.0075 \times L$ | 0.713 |
| $R.C._{crit}$ | = $(Y_{crit} - Y) / Y \times 100\%$ | 24.2 % |
| Practical Cycle Time C_p | = $0.9 \times L / (0.9 - Y)$ | 69 sec |
| Y_{max} | = $1 - L/C$ | 0.773 |

J8

Stage/Phase Diagrams



I/G = 5 G = 8 I/G = 13

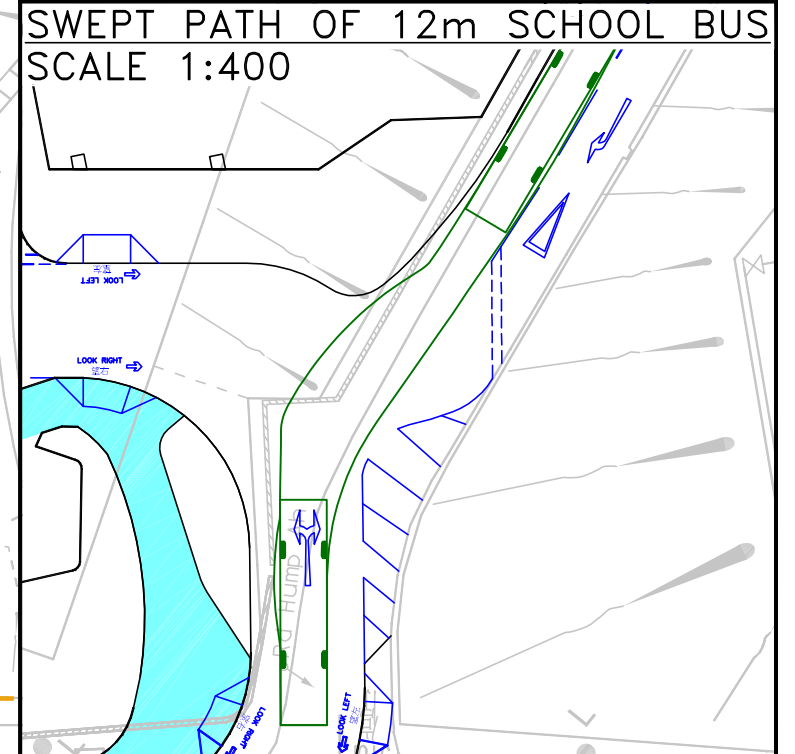
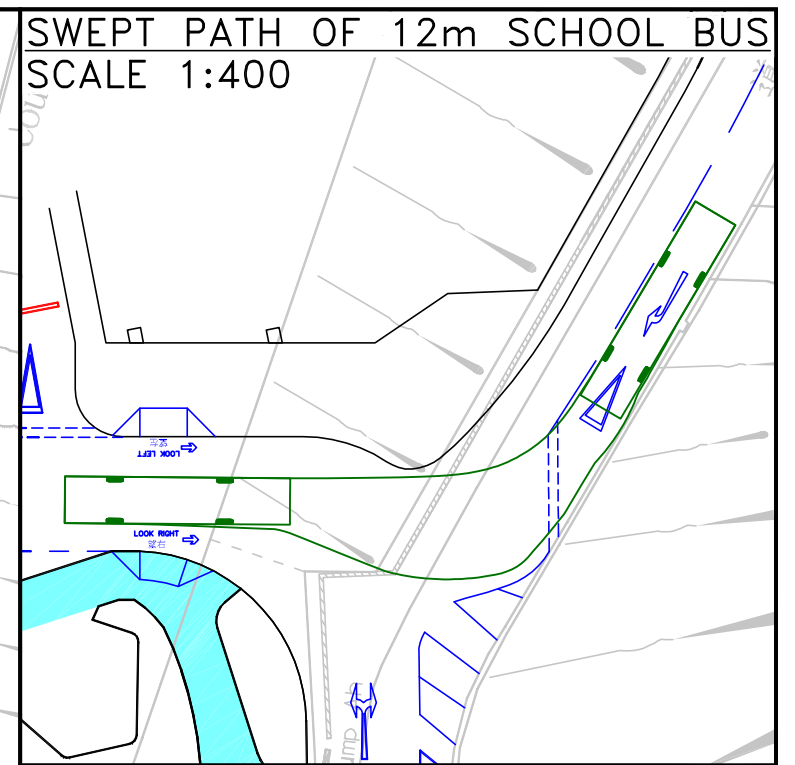
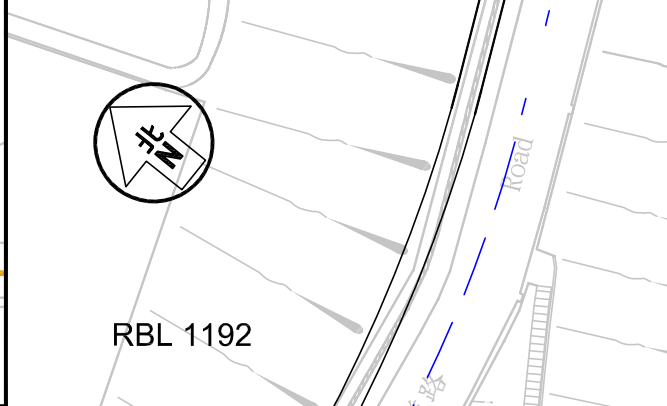
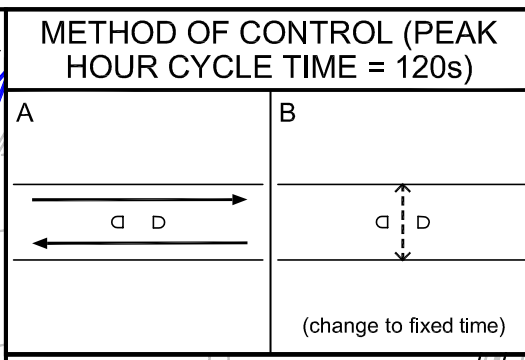
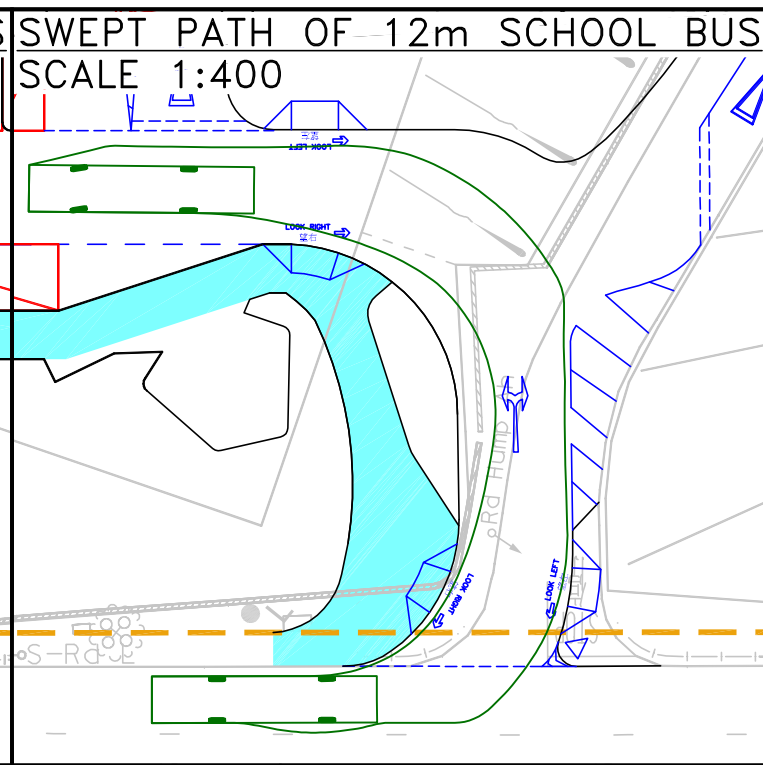
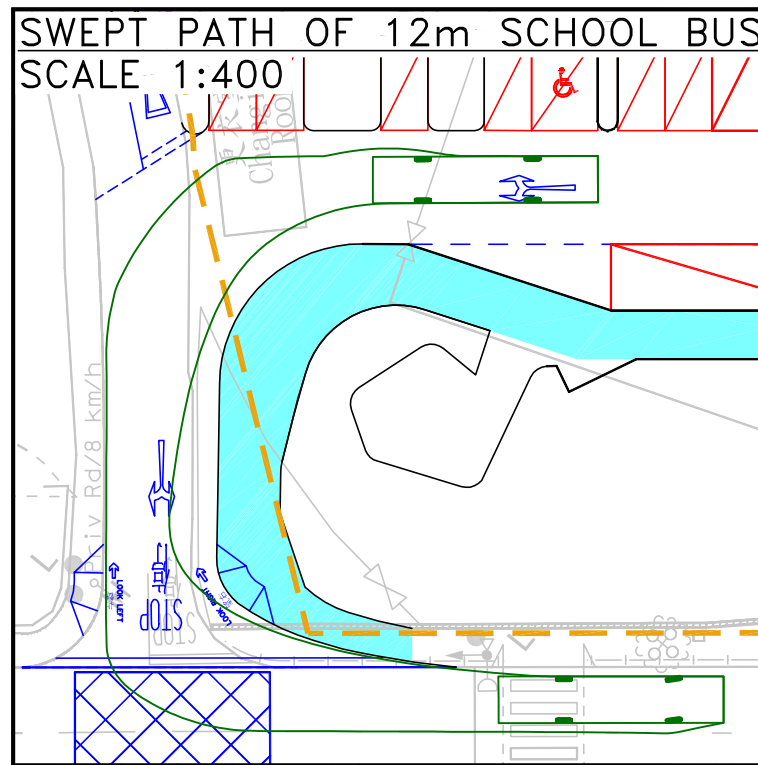
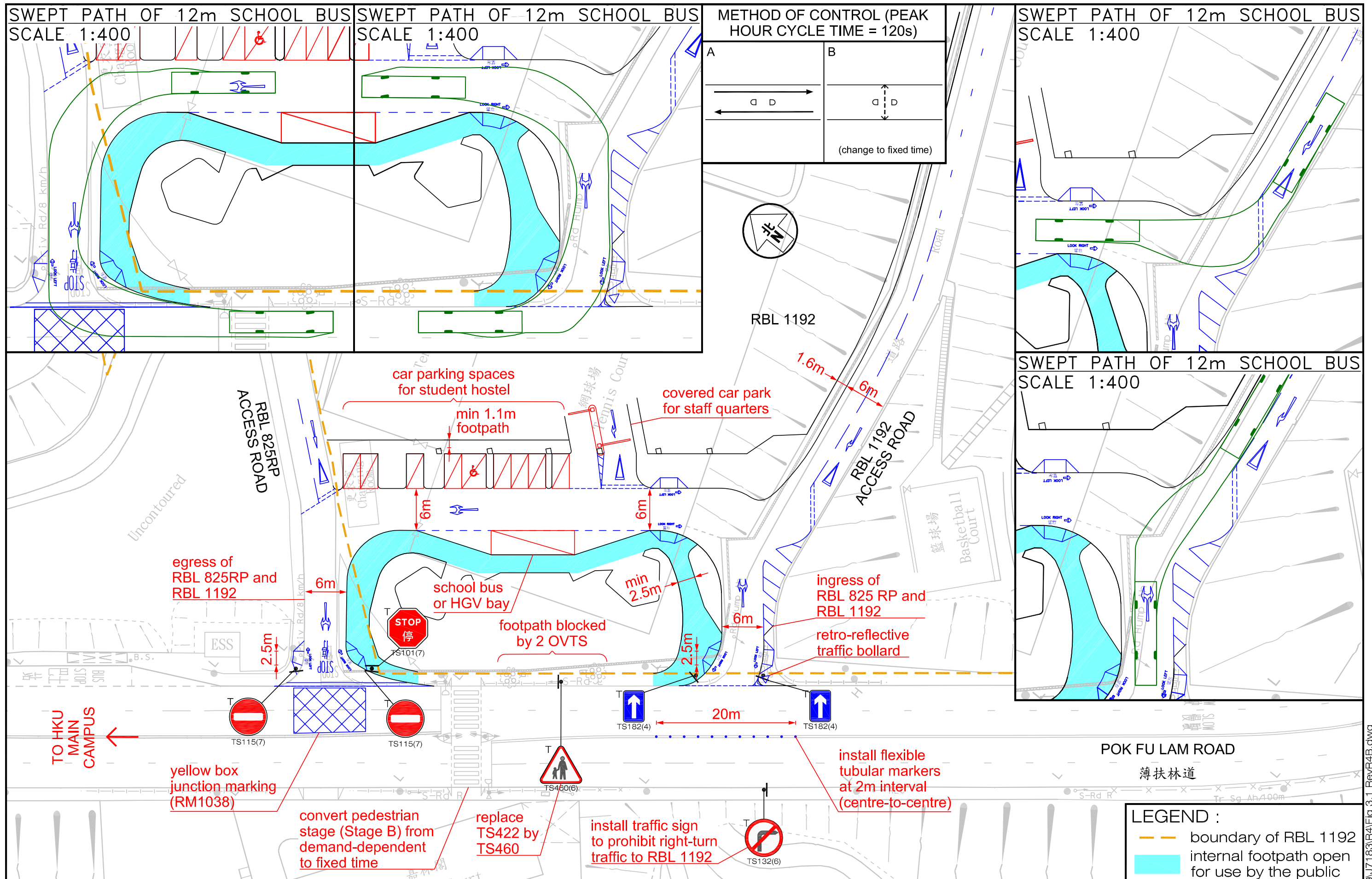
Critical Case : A,Bp

$$R.C.(C) = (0.9 \times Y_{max} - Y) / Y \times 100\% = 21\%$$

| MOVEMENT | PHASE | STAGE | LANE WIDTH (m) | NO. OF LANES | RADIUS (m) | | OPPOSING TRAFFIC | NEAR SIDE LANE | UPHILL GRADIENT (%) | GRADIENT EFFECT (pcu/hr) | ADDITIONAL CAPACITY (pcu/hr) | STRAIGHT-AHEAD SAT. FLOW (pcu/hr) | FLOW (pcu/hr) | | | TOTAL FLOW (pcu/hr) | PROPORTION OF TURNING VEHICLES (%) | | REVISED SAT. FLOW (pcu/hr) | FLOW FACTOR y | CRITICAL y | EFFECTIVE GREEN $g = y / Y \times (C - L)$ (sec) | ACTUAL GREEN G (sec) | DEGREE OF SATURATION X | Average Queue N |
|---------------------|-------|-------|----------------|--------------|------------|-------|------------------|----------------|---------------------|--------------------------|------------------------------|-----------------------------------|---------------|----------------|-------|---------------------|------------------------------------|-------|----------------------------|---------------|------------|--|----------------------|------------------------|-----------------|
| | | | | | LEFT | RIGHT | | | | | | | LEFT | STRAIGHT AHEAD | RIGHT | | LEFT | RIGHT | | | | | | | |
| → | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 1030 | | 1030 | | | 4070 | 0.253 | | 37 | 84 | 0.328 | 4 |
| ← | A | 1 | 3.500 | 2 | | | | 1 | | 0 | | 4070 | | 2335 | | 2335 | | | 4070 | 0.574 | 0.574 | 85 | 84 | 0.742 | 8 |
| Pedestrian Crossing | | Bp | 2 min. | | GM 8 | + | FGM 10 | = | 18 sec | | | | | | | | | | | | * | | | | |

Appendix C

Rearranged Traffic Layout at J1 & J2



| | | | | | | | | |
|---------------|---|--|--|-------------|-------|-------------|-------------|--|
| Project Title | RBL 1192, HIGH WEST, 142 POK FU LAM ROAD, HKU | | | Figure No. | 3.1 | Revision | R4B | CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk |
| Figure Title | VEHICULAR ACCESS ARRANGEMENT OF RBL 1192 | | | Designed by | T H C | Drawn by | C C L | |
| | | | | Checked by | K C | Scale in A3 | Date | |
| | | | | | | 1 : 500 | 07 OCT 2022 | |

T:\JOB\J7150-J7199\J7183\R4\Fig 3.1 RevR4B.dwg

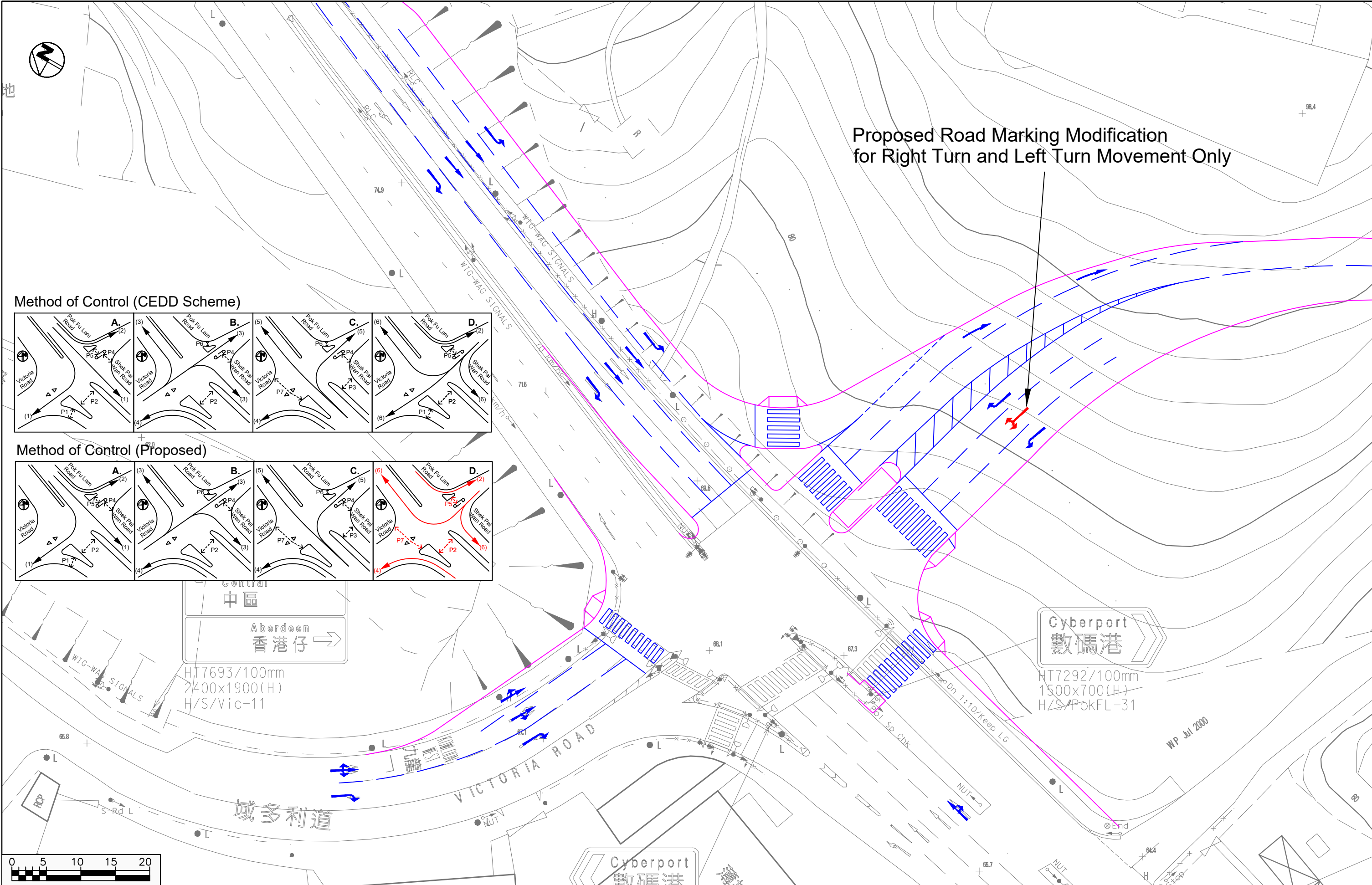
Appendix D

Planned Junction Improvements

Appendix D-1

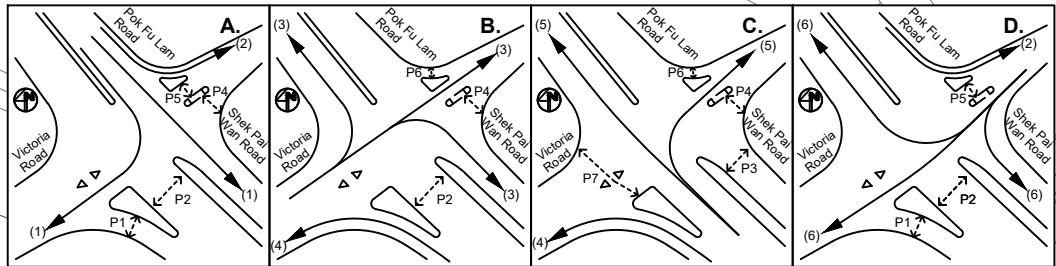
Planned Junction Layout

Pok Fu Lam Road / Victoria Road (J3)

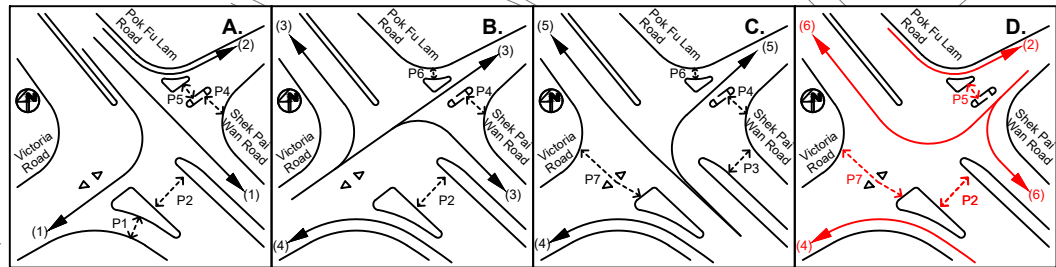


Proposed Road Marking Modification
for Right Turn and Left Turn Movement Only

Method of Control (CEDD Scheme)



Method of Control (Proposed)



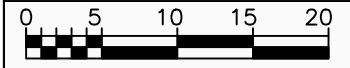
Central
中區
Aberdeen
香港仔

HT7693/100mm
2400x1900(H)
H/S/Vic-11

Cyberport
數碼港

HT7292/100mm
1500x700(H)
H/S/PokFL-31

WP Jul 2000



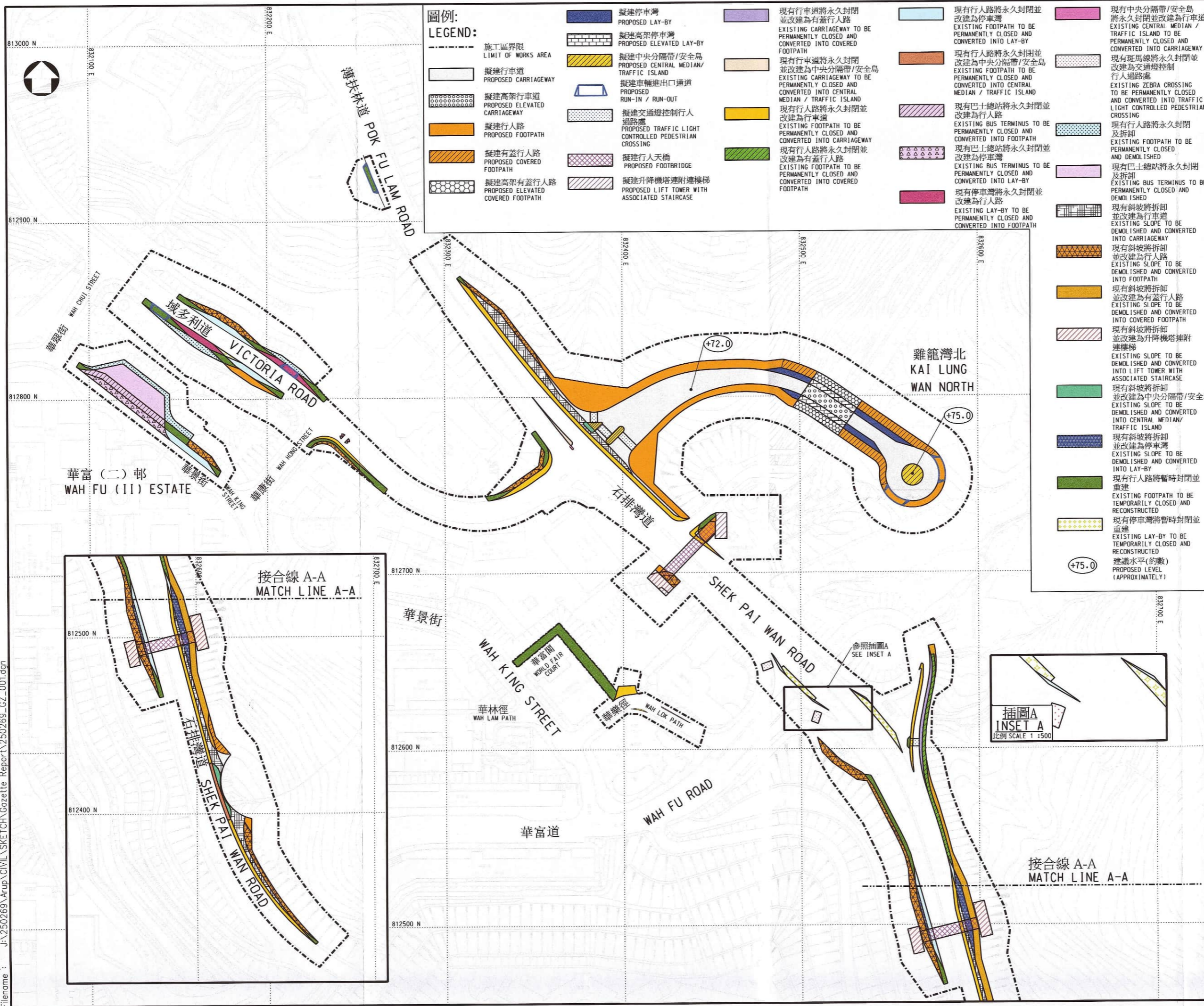
Date 26/06/2019 Scale 1:500

Proposed Cyberport Expansion

Proposed Modifications at Junction of Pok Fu Lam Road, Shek Pai Wan Road and Victoria Road (J9)

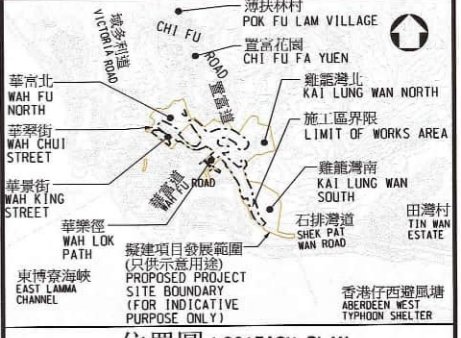


Project No. 81110 Rev. A
Dwg No. Figure 5-4



圖例: LEGEND:

| | | | | | | | | | |
|--|---|--|---|--|--|--|--|--|--|
| | 施工區界限 LIMIT OF WORKS AREA | | 擬建停車灣 PROPOSED LAY-BY | | 現有行人路將永久封閉並改建為有蓋行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO COVERED FOOTPATH | | 現有行人路將永久封閉並改建為停車灣 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO LAY-BY | | 現有中央分隔帶/安全島將永久封閉並改建為行人路 EXISTING CENTRAL MEDIAN / TRAFFIC ISLAND TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH |
| | 擬建行人車道 PROPOSED CARRIAGEWAY | | 擬建中央分隔帶/安全島 PROPOSED CENTRAL MEDIAN / TRAFFIC ISLAND | | 現有行人路將永久封閉並改建為中央分隔帶/安全島 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL MEDIAN / TRAFFIC ISLAND | | 現有行人路將永久封閉並改建為中央分隔帶/安全島 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO CENTRAL MEDIAN / TRAFFIC ISLAND | | 現有行人路將永久封閉並改建為有蓋行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO COVERED FOOTPATH |
| | 擬建高架行人車道 PROPOSED ELEVATED CARRIAGEWAY | | 擬建交通燈控制行人過路處 PROPOSED TRAFFIC LIGHT CONTROLLED PEDESTRIAN CROSSING | | 現有行人路將永久封閉並改建為行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH | | 現有巴士總站將永久封閉並改建為行人路 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH | | 現有巴士總站將永久封閉並改建為停車灣 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO LAY-BY |
| | 擬建行人路 PROPOSED FOOTPATH | | 擬建行人天橋 PROPOSED FOOTBRIDGE | | 現有行人路將永久封閉並改建為有蓋行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO COVERED FOOTPATH | | 現有巴士總站將永久封閉並改建為行人路 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH | | 現有巴士總站將永久封閉並改建為停車灣 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO LAY-BY |
| | 擬建有蓋行人路 PROPOSED COVERED FOOTPATH | | 擬建升降機塔連附樓梯 PROPOSED LIFT TOWER WITH ASSOCIATED STAIRCASE | | 現有行人路將永久封閉並改建為有蓋行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO COVERED FOOTPATH | | 現有巴士總站將永久封閉並改建為行人路 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH | | 現有巴士總站將永久封閉並改建為停車灣 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO LAY-BY |
| | 擬建高架有蓋行人路 PROPOSED ELEVATED COVERED FOOTPATH | | | | 現有行人路將永久封閉並改建為有蓋行人路 EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO COVERED FOOTPATH | | 現有巴士總站將永久封閉並改建為行人路 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH | | 現有巴士總站將永久封閉並改建為停車灣 EXISTING BUS TERMINUS TO BE PERMANENTLY CLOSED AND CONVERTED INTO LAY-BY |



位置圖 LOCATION PLAN
比例 SCALE 1:20000

- 註釋 NOTES**
- 除在其他方面指定外，所有量度以米為單位。
ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - 所有水平均為約數，以米為單位，並在香港主水平基準上。
ALL LEVELS ARE APPROXIMATE VALUES AND IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
 - 如有需要，施工區界限內部分現有的行人車道、行人路、停車灣和中央分隔帶/安全島或將分階段暫時封閉。
SECTIONS OF THE EXISTING CARRIAGEWAYS, FOOTPATHS, LAY-BYS AND CENTRAL MEDIANS / TRAFFIC ISLANDS WITHIN THE LIMIT OF WORKS AREA MAY BE TEMPORARILY CLOSED IN PHASES AS AND WHEN REQUIRED.

現有斜坡將拆卸並改建為行人路
EXISTING SLOPE TO BE DEMOLISHED AND CONVERTED INTO FOOTPATH

現有斜坡將拆卸並改建為有蓋行人路
EXISTING SLOPE TO BE DEMOLISHED AND CONVERTED INTO COVERED FOOTPATH

現有斜坡將拆卸並改建為升降機塔連附樓梯
EXISTING SLOPE TO BE DEMOLISHED AND CONVERTED INTO LIFT TOWER WITH ASSOCIATED STAIRCASE

現有斜坡將拆卸並改建為中央分隔帶/安全島
EXISTING SLOPE TO BE DEMOLISHED AND CONVERTED INTO CENTRAL MEDIAN / TRAFFIC ISLAND

現有斜坡將拆卸並改建為停車灣
EXISTING SLOPE TO BE DEMOLISHED AND CONVERTED INTO LAY-BY

現有行人路將暫時封閉並重建
EXISTING FOOTPATH TO BE TEMPORARILY CLOSED AND RECONSTRUCTED

現有停車灣將暫時封閉並重建
EXISTING LAY-BY TO BE TEMPORARILY CLOSED AND RECONSTRUCTED

建議水平(約數)
PROPOSED LEVEL (APPROXIMATELY)

批簽 ENDORSED BY

Original Signed
黎以德 JOSEPH Y T LAI
運輸及房屋局
常任秘書長(運輸)
PERMANENT SECRETARY FOR
TRANSPORT AND HOUSING (TRANSPORT)
日期: 14 SEP 2018
DATE:

核准 APPROVED BY

薛鳳聲 F S SIT
總工程師/房屋工程3
土木工程處
土木工程拓展署
CHIEF ENGINEER / HOUSING PROJECTS 3
CIVIL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
日期: 12 SEP 2018
DATE:

工程名稱 PROJECT TITLE
工務計劃項目第B795CL號
薄扶林南公營房屋發展之
工地平整及基礎設施工程
PWP ITEM NO. B795CL
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PUBLIC HOUSING DEVELOPMENTS AT
POK FU LAM SOUTH

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

圖則編號 PLAN NO. GZ/001
比例 SCALE 1:1000 (A1)
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辦事處 OFFICE
土木工程處 房屋工程3部
HOUSING PROJECTS 3 DIVISION
CIVIL ENGINEERING OFFICE



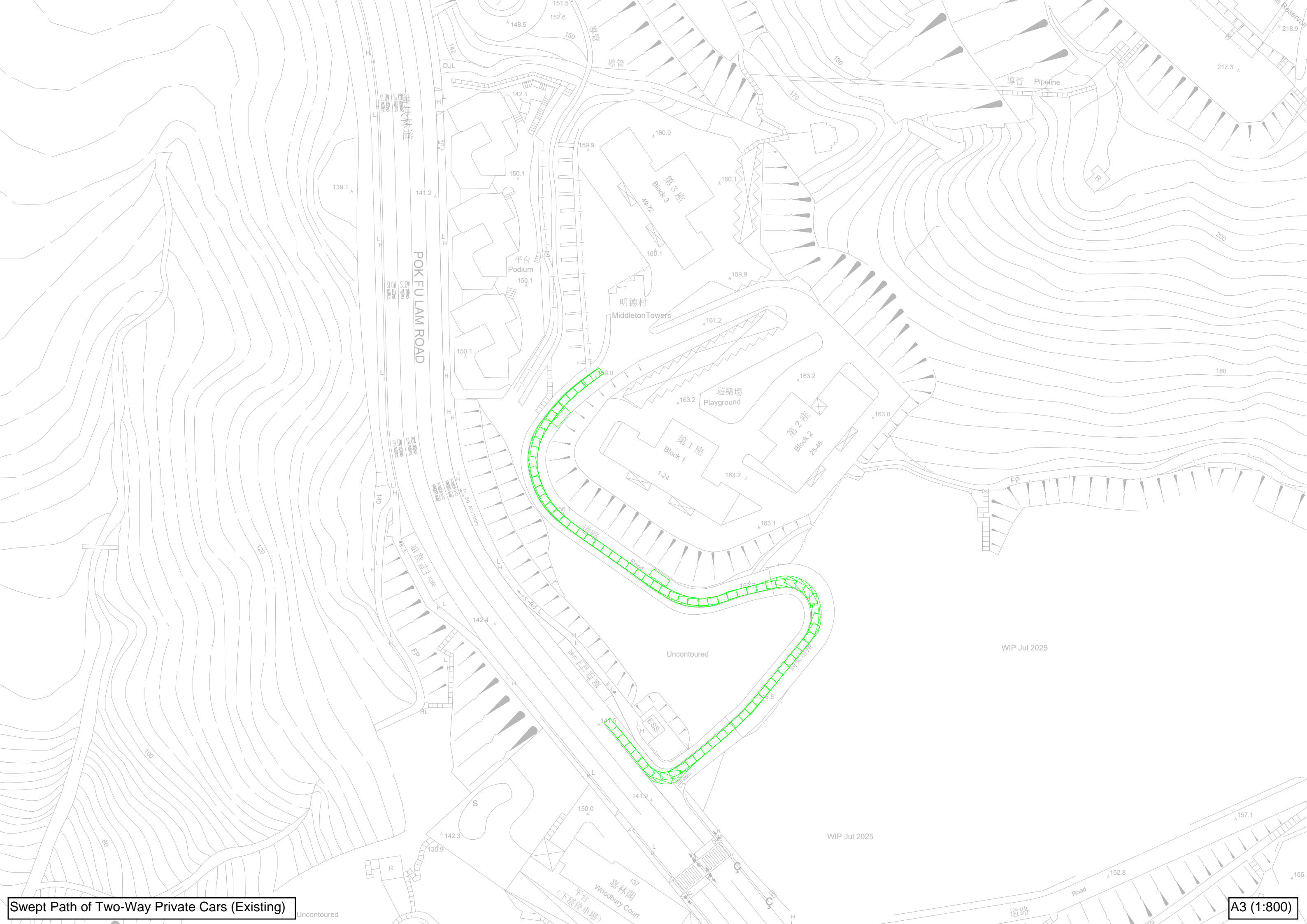
Appendix D-2

Planned Junction Layout

Pok Fu Lam Road / Sassoon Road (J5)

Appendix E

Swept Path Analysis of Existing Access Road



嘉林閣
POK FULAM ROAD

第3座
Block 3
49-72

明德村
Middleton Towers

遊樂場
Playground

第1座
Block 1
1-24

第2座
Block 2
25-48

ESS

嘉林閣
Woodbury Court
137
平台
(下層停車場)

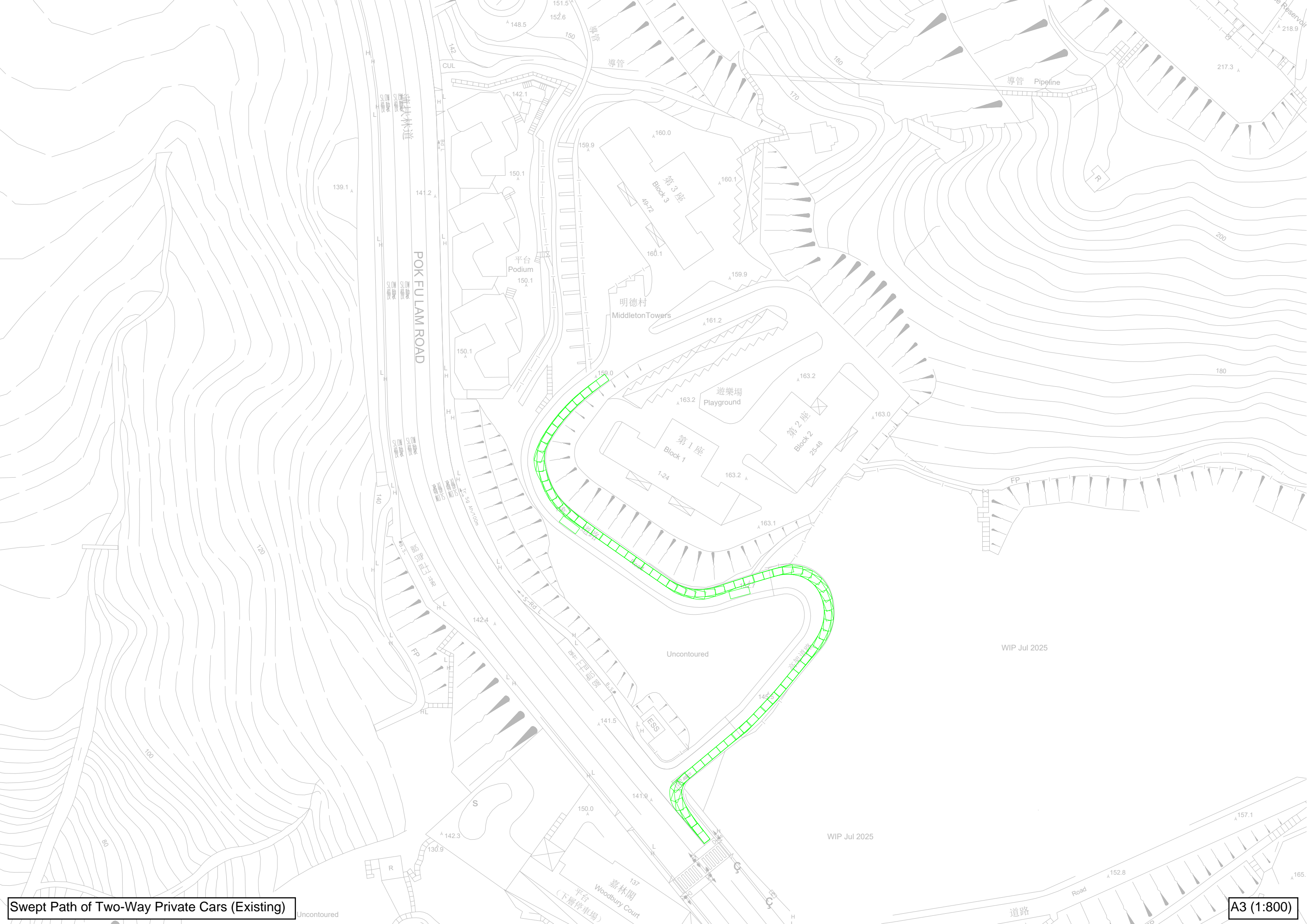
導管 Pipeline

WIP Jul 2025

WIP Jul 2025

Swept Path of Two-Way Private Cars (Existing)

A3 (1:800)



POK FULAM ROAD

明德村
Middleton Towers

第1座
Block 1

第2座
Block 2

第3座
Block 3

平台
Podium

遊樂場
Playground

嘉林閣
Woodbury Court
(下層停車場)

導管 Pipeline

WIP Jul 2025

WIP Jul 2025

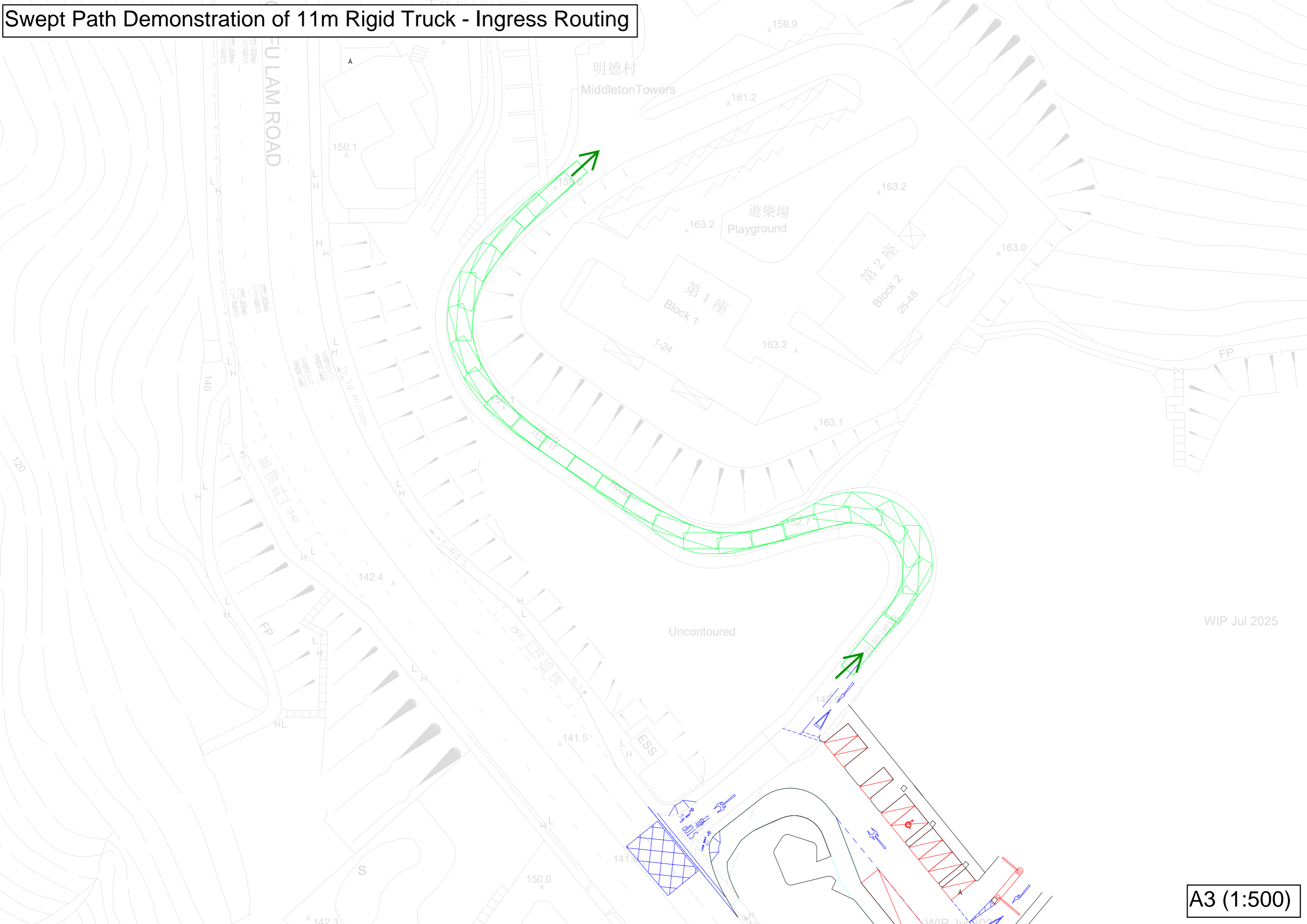
Swept Path of Two-Way Private Cars (Existing)

A3 (1:800)

Uncontoured

Uncontoured

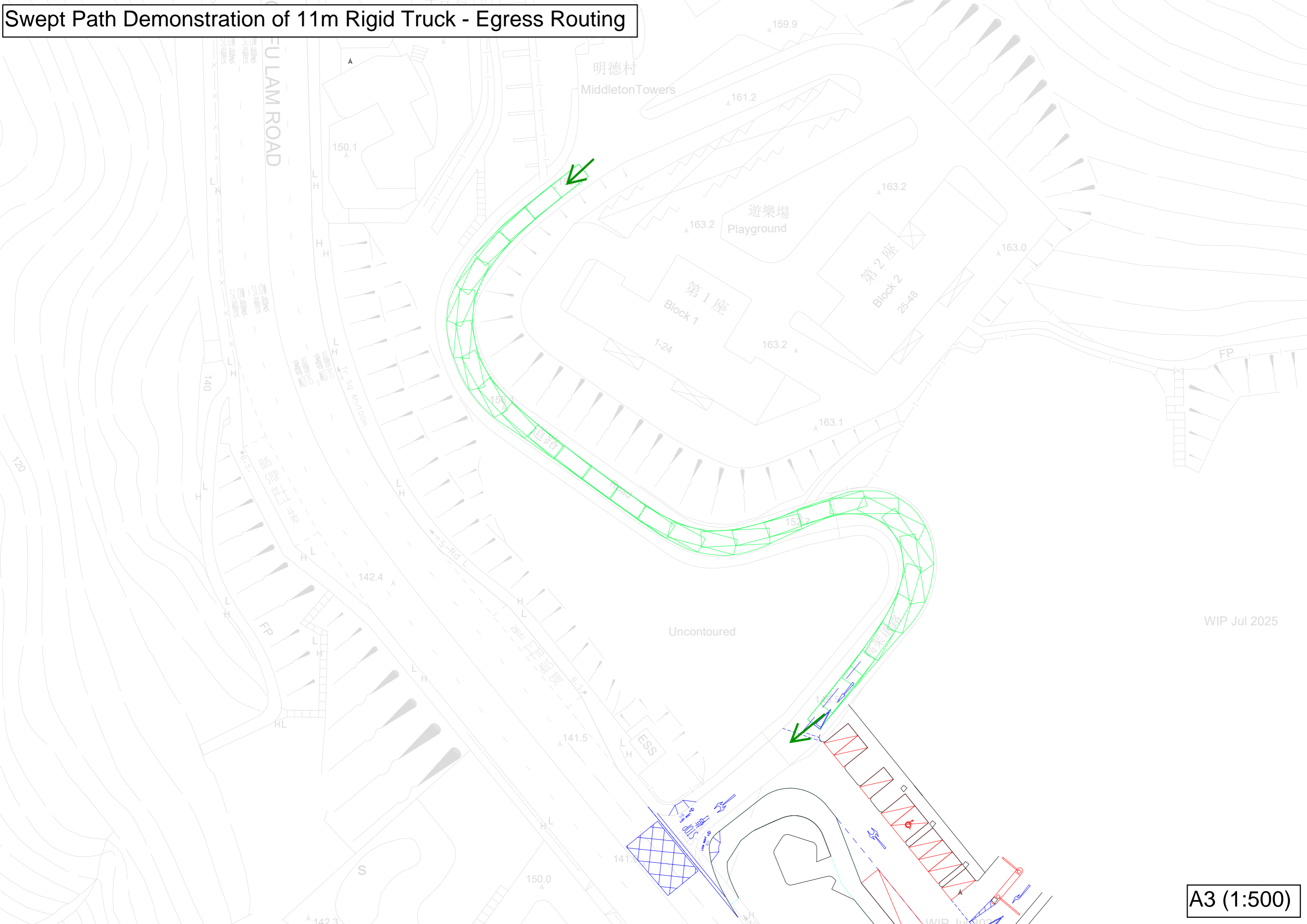
Swept Path Demonstration of 11m Rigid Truck - Ingress Routing



WIP Jul 2025

A3 (1:500)

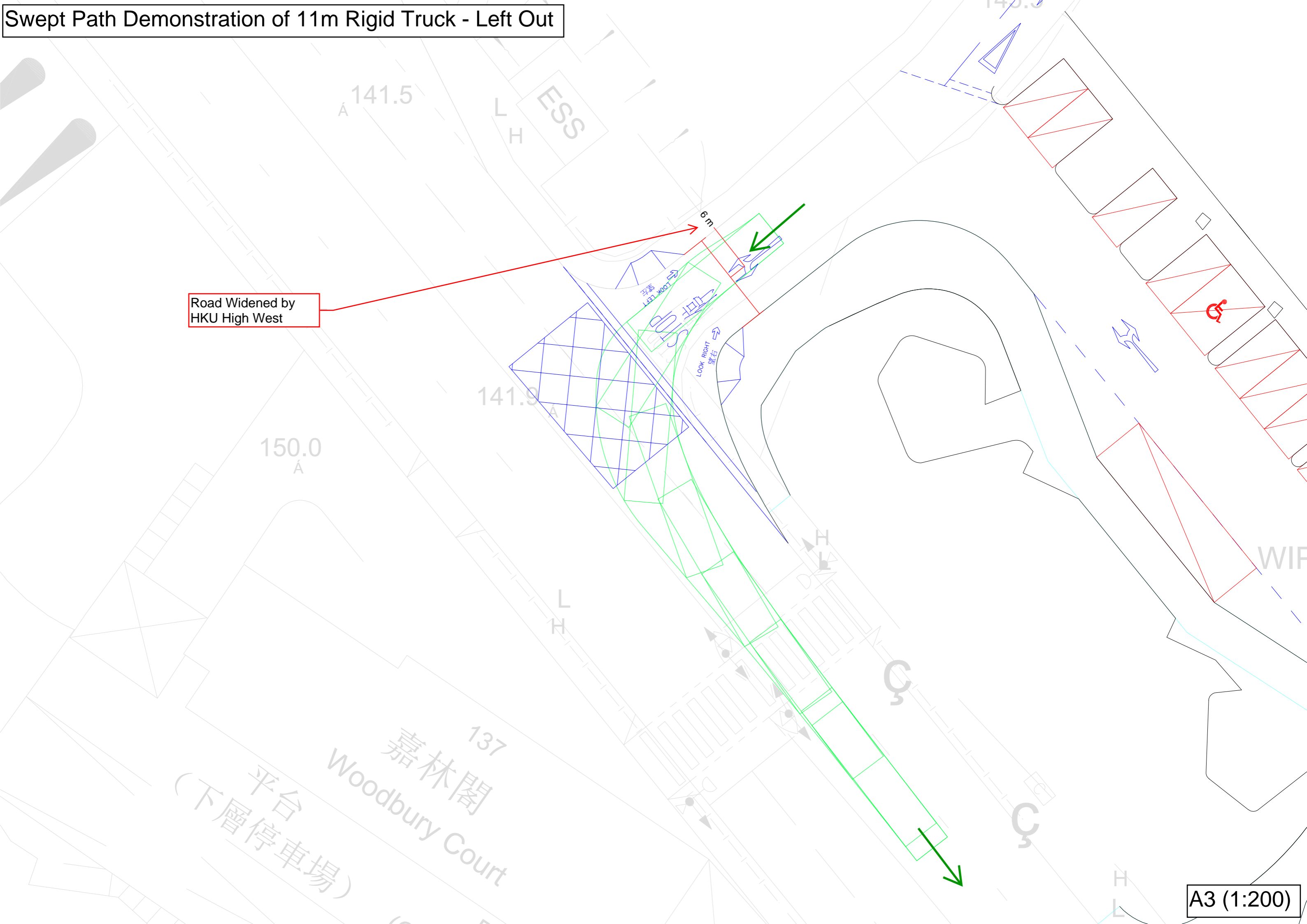
Swept Path Demonstration of 11m Rigid Truck - Egress Routing



WIP Jul 2025

A3 (1:500)

Swept Path Demonstration of 11m Rigid Truck - Left Out



Road Widened by
HKU High West

6 m

150.0
A

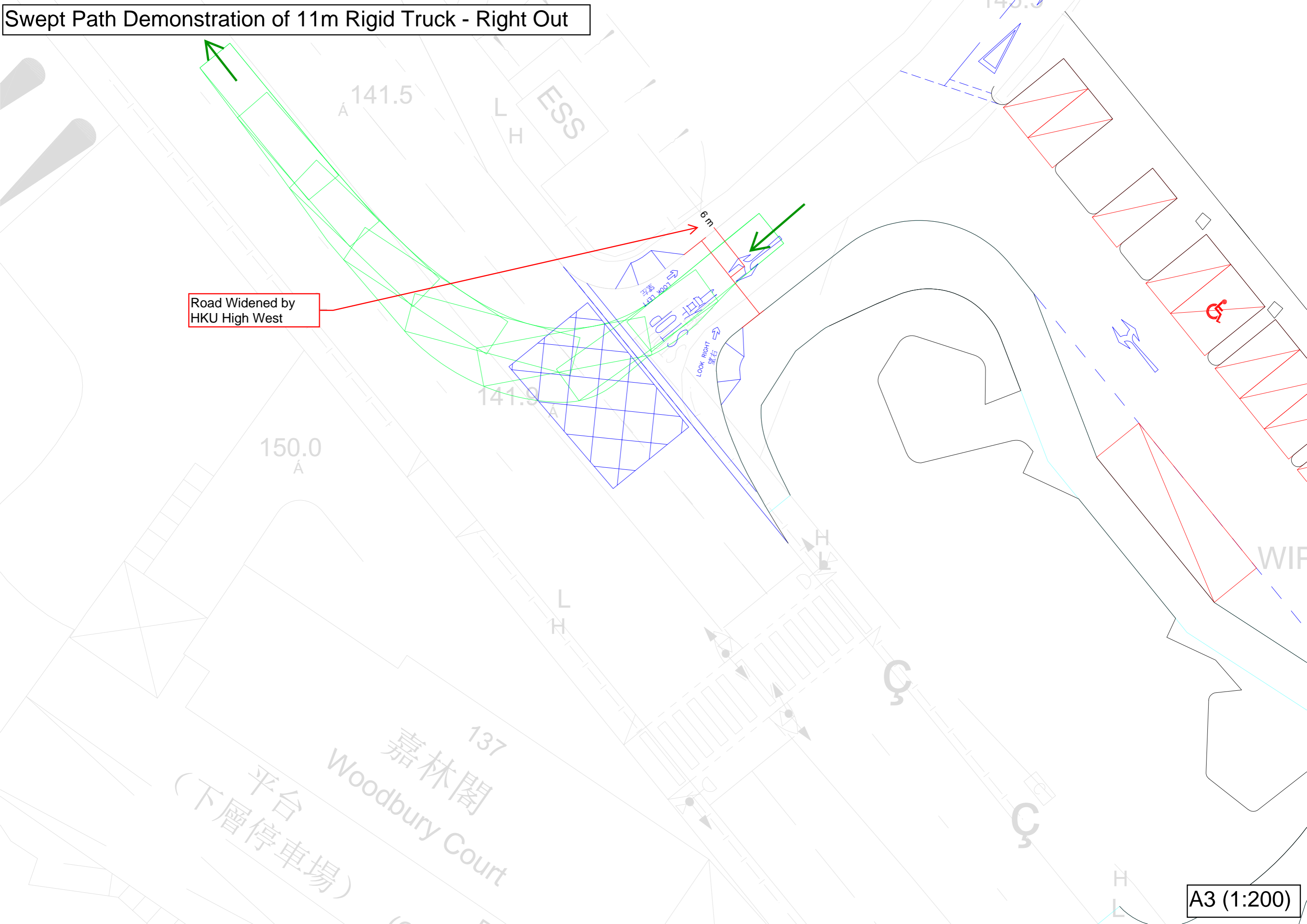
141.9
A

137
嘉林閣
Woodbury Court

平台
(下層停車場)

A3 (1:200)

Swept Path Demonstration of 11m Rigid Truck - Right Out



Road Widened by HKU High West