

1. The applicant should justify why the capacity of Dao Yang Road is 300 vehicle/hour. Otherwise, the applicant should refer to the Transport Planning and Design Manual for the capacity.

## Traffic Capacity Analysis for Dao Yang Road

### 1. Road Capacity Calculation

#### Methodology:

- **Road Classification:** Dao Yang Road is classified as a secondary road.
- **Lane Configuration:** The road has 1 lane, with a width of 3.5 meters.
- **Capacity Reference:** According to the *Transport Planning and Design Manual*, the capacity for secondary roads is approximately 100 vehicles per lane per hour.

#### Calculation Formula:

$$\text{Capacity} = \text{Number of Lanes} \times \text{Capacity per Lane}$$

#### Application:

$$\text{Capacity} = 1 \text{ lane} \times 100 \text{ vehicles/hour} = 100 \text{ vehicles/hour}$$

### 2. v/c Ratio Calculation

#### Methodology:

- **Traffic Flow Data:** Actual flow record during the peak hour
  - **Known Road Capacity:** The theoretical capacity has been established at 100 vehicles per hour. hour (according to the "Traffic Planning and Design Manual")

#### Calculation Formula:

$$v/c = \frac{v}{c}$$

#### Application:

$$v/c = \frac{29 \text{ vehicles/hour}}{100 \text{ vehicles/hour}} \approx 0.29$$

### 3. Results Interpretation

- **Theoretical Road Capacity:** The maximum theoretical capacity of Dao Yang Road is 100 vehicles per hour.
- **v/c Ratio Analysis:** The calculated v/c ratio is approximately 0.29, indicating that the road operates at 29% of its maximum capacity during peak hours. This suggests that the road is functioning efficiently and has not reached a congested state.

## 2. The applicant should include the existing traffic flow in calculating the v/c ratio of Dao Yang Road.

### Remarks:

- **v/c Ratio for Dao Yang Road:** During the peak hour period and high in/out traffic estimation, the v/c ratio is 0.59, indicating that the traffic flow is well below the road's design capacity, and the traffic conditions are good.
- **Proposed parking lot is intended for long term parking (not daily parking) so the traffic volume in/out to the premise is more likely to be closer to the low estimation**

### 1. Overview of Traffic Flow Data

According to the provided data on 7 SEP 2024 , below are the traffic flows for Dao Yang Road during peak periods (07:00 – 12:00 & 16:00 & 19:00):

#### Traffic Flow Out of Sha Tau Kok Road (Dao Yang Road):

- 07:00 - 08:00: 10 vehicles
- 08:00 - 09:00: 19 vehicles
- 09:00 - 10:00: 17 vehicles
- 10:00 - 11:00: 16 vehicles
- 11:00 - 12:00: 14 vehicles
- 16:00 - 17:00: 18 vehicles
- 17:00 - 18:00: 17 vehicles
- 18:00 - 19:00: 15 vehicles

#### Traffic Flow Into Dao Yang Road:

- 07:00 - 08:00: 8 vehicles
- 08:00 - 09:00: 16 vehicles
- 09:00 - 10:00: 23 vehicles
- 10:00 - 11:00: 17 vehicles
- 11:00 - 12:00: 19 vehicles
- 16:00 - 17:00: 16 vehicles
- 17:00 - 18:00: 18 vehicles
- 18:00 - 19:00: 21 vehicles

## 2. Capacity of Dao Yang Road

- **Road Type:** Minor arterial road
- **Number of Lanes:** 1 lane
- **Capacity per Lane:** 100 vehicles/hour (according to the "Traffic Planning and Design Manual")

## 3. Calculation of v/c Ratio

### 3.1 Collect Traffic Flow Data

Highest volume during peak period (from survey data):

- Outflow : 19 vehicles
- Inflow : 23 vehicles
- in/out premise (LOW ESTIMATION) : 20% parking capacity (34 lot) = 7 vehicles
- in/out premise (HIGH) : 50% parking capacity (34 lot) = 17 vehicles

### 3.2 Calculate Total Flow V

$$V = \text{outflow} + \text{inflow} + \text{in/out premise (HIGH)}$$

$$V = 19 + 23 + (34 * 0.5) = 59 \text{ vehicles/hour}$$

### 3.3 Known Road Capacity C

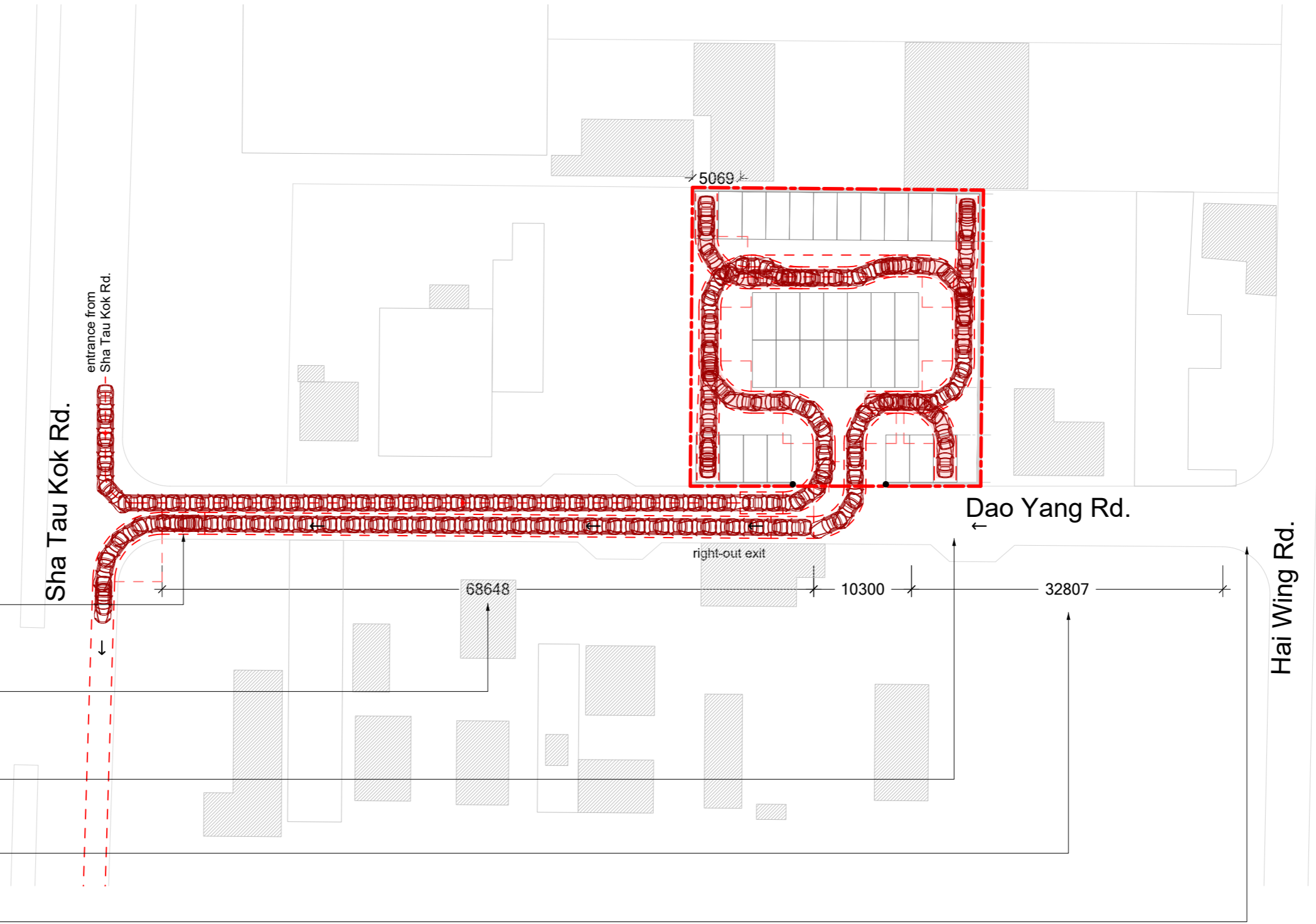
- **Road Capacity:** 100 vehicles/hour

### 3.4 Calculate v/c Ratio (HIGH ESTIMATE)

$$V/C = 59 / 100 = 0.590$$

**3. In the latest swept path analysis diagrams provided by the applicant, only the discrete positions of the vehicle were shown. Continuous profile of the outline of the vehicle should be shown along the whole path of travelling.**





VOLUME-TO-CAPACITY RATIO < 0.65.  
REASONABLY UNIMPENDED OPERATIONS  
WITH LIGHT RESTRICTED  
MANEUVERABILITY.

68.6 METER CLEARANCE FROM  
TURNING RADIUS TO SHA TAU KOK ROAD  
INTERSECTION.  
(DEPT. COMMENT #3)

LEFT-IN ENTRANCE ACCESS FROM  
HAI WING ROAD.  
(DEPT. COMMENT #3)

32.8 METER CLEARANCE FROM  
HAI WING ROAD.  
(DEPT. COMMENT #3)

VOLUME-TO-CAPACITY RATIO < 0.5.  
FREE-FLOW CONDITION. STOPPED DELAY AT  
INTERSECTION IS MINIMAL

1 SITE PLAN: Access  
000 SCALE = 1:500



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SITE PLAN: Access

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