

**Proposed School at Various Lots
in D.D. 94, 98 & 100 and
adjoining Government Land,
Kwu Tung South, New Territories**

**Traffic Review
Final Report**

October 2025

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Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

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1.0 INTRODUCTION

Background

- 1.1 The Applicant intends to build and operate an international school which is located at various lots in D.D.94, D.D.98 and D.D.100 and adjoining Government Land, in Kwu Tung South in the New Territories (the "Proposed School"). The location of the subject site is shown in Figure 1.1.
- 1.2 The Proposed School has the following facilities:
- Kindergarten with 30 classrooms which is for up to 600 students;
 - Primary school with 46 classrooms which is for up to 1,000 students;
 - Middle / high school with 65 classrooms which is for up to 1,400 boarding students;
 - Student dormitory which is for the boarding middle / high school;
 - Staff dormitory with 571 dwelling units;
 - Auditorium with 660 seats; and
 - Other ancillary facilities for the operation of the Proposed School.
- 1.3 CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Applicant to prepare a Traffic Review in support of the Proposed School.

Scope of Study

- 1.4 The main objectives of this Study are as follows:
- To assess the existing traffic issues in the vicinity of the subject site;
 - To provide adequate internal transport facilities for the Proposed School;
 - To quantify the traffic generated by the Proposed School; and
 - To examine the traffic impact of the Proposed School on the local road network.

Contents of the Report

- 1.5 After this introduction, the remaining chapters contain the following:

- chapter two – describes the existing and future conditions;
- chapter three – presents the Proposed School;
- chapter four – describes the traffic impact analysis; and
- chapter five – gives the overall conclusion.

2.0 EXISTING AND FUTURE CONDITION

Site Location

- 2.1 The subject site is located in an area flanked by Ki Lun Shan (Hadden Hill) to the west, with Hang Tau Tai Po and Hang Tau Village to the east.
- 2.2 At present, the subject site could only be accessed via single track village road, which is connected to Kwu Tung Road.

Planned Northern Metropolis Highway

- 2.3 The Northern Metropolis Highway connects the New Development Areas in the Northern Metropolis with Ping Che at the eastern end and Tin Shui Wai at the western end. This proposed highway will enhance accessibility to the New Development Areas and enhance cross-boundary road connections for passengers and goods. The investigation study of the Northern Metropolis Highway is currently in progress.
- 2.4 According to the preliminary alignment of the Northern Metropolis Highway published by Highways Department and the San Tin Technopole Outline Zoning Plan No. S/STT/2, the Northern Metropolis Highway will have an interchange with the San Tin Technopole (the "San Tin Technopole Interchange"). The indicative location of the San Tin Technopole Interchange is shown in Figure 2.1.
- 2.5 The San Tin Section of the Northern Metropolis Highway is scheduled to be commissioned in or before 2036. Since the western boundary of the subject site is some 200m to the east of the Northern Metropolis Highway, a road connection is proposed to connect the San Tin Technopole Interchange and the Proposed School.

3.0 THE PROPOSED SCHOOL

Completion Year

- 3.1 The Proposed School is expected to be completed in 2036, subject to the commissioning of the San Tin Section of Northern Metropolis Highway, which is in or before 2036.

Development Schedule

- 3.2 The development parameters of the Proposed School are presented in Table 3.1.

TABLE 3.1 DEVELOPMENT PARAMETERS

Item	School Hours (Tentative)	No. of Unit / Classroom	No. of Students / Staff / Seats
Kindergarten	1000 – 1600	30	600
Primary School	0830 – 1500	46	1,000
Middle / High School	0900 – 1630	65	1,400
Student Dormitory ⁽¹⁾		350	1,400
Staff Dormitory ⁽²⁾		571	571
Auditorium			660

Note: ⁽¹⁾ include 3 housing blocks

⁽²⁾ include 5 housing blocks and 6 houses

Master Layout Plan

- 3.3 The conceptual ground floor plan is presented in Figure 3.1. The western part of the Proposed School is connected to the San Tin Technopole Interchange of the Northern Metropolis Highway. The internal roads are of single carriageway with 2 traffic lanes, say 7.3m wide, and vehicle turning facilities are provided at the cul-de-sac.
- 3.4 Subsequent to the approval of this planning application by the Town Planning Board, the internal transport layout including road network and car park, etc., will be submitted in the detailed design stage / General Building Plan (“GBP”) submission.
- 3.5 It is noted that to the south of the Proposed School is the planned Agricultural Park. Hence, there is an opportunity to improve accessibility by providing a public road connecting the San Tin Technopole Interchange with the Agricultural Park. As shown in Figure 3.1, the proposed public road could be provided either within the Proposed School (Option 1) or outside the Proposed School (Option 2), and the final alignment will be determined in the detailed design stage.

Internal Transport Facilities

- 3.6 The internal transport facilities for the Proposed School will be provided on the following basis:
- (i) **Kindergarten, Primary School and Middle / High School**
- 3.7 The internal transport facilities for Kindergarten, Primary School and Middle / High School are provided based on the **maximum** recommendations found in Chapter 8 of the Hong Kong Planning Standards and Guidelines (“HKPSG”).

(ii) Staff and Student Dormitories

3.8 To operate the boarding middle / high school, residential accommodations will also be provided for teaching staff, apart from those for boarding students. To err on the high side, internal transport facilities for staff dormitory are provided as per the **maximum** HKPSG recommendation for *“Private Housing”*.

3.9 No car parking spaces will be provided for student dormitory, because students are not expected to drive. Nevertheless, goods vehicle loading / unloading bays will be provided for student dormitory, as per HKPSG recommendation for *“Private Housing”* to meet the operational needs.

(iii) Auditorium

3.10 The auditorium is an ancillary facility of the Proposed School with 660 seats which is for activities such as school assembly, performance and ceremony.

3.11 To err on the high side, additional internal transport facilities are provided for the auditorium as per the **maximum** HKPSG recommendation for *“Commercial Entertainment Facilities (e.g. cinemas, theatres)”*.

(iv) Other Ancillary Facilities

3.12 Other ancillary facilities within the Proposed School, such as music classroom, art / music studio, sport facilities and canteen, etc., are provided to support the international curriculum and to create a conducive learning environment. Additional internal transport facilities are provided based on the operational needs.

(v) Calculation of Internal Transport Facilities

3.13 Based on the above, the calculation of internal transport facilities for the Proposed School is presented in Table 3.2.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES

Type	Use	HKPSG Recommendations	Provision
Car Parking Space	Kindergarten	0 – 1 space per 4 – 6 classrooms Min = $30 \div 6$ = 5 nos. Max = $30 \div 4$ = 8 nos.	8 nos.
	Primary School	1 space per 4 – 6 classrooms Min = $46 \div 6$ = 8 nos. Max = $46 \div 4$ = 12 nos.	12 nos.
	Middle / High School	1 space per 3 – 4 classrooms Min = $65 \div 4$ = 17 nos. Max = $65 \div 3$ = 22 nos.	22 nos.
	Staff Dormitory	Staff GPS $\times R1 \times R2 \times R3$, where GPS = 1 car space per 4 – 7 flats R1 = 1.2 for flat size 40 – 70m ² 7.0 for flat size > 160m ² R2 = 1.0 for development outside a 500m-radius of rail station R3 = 1.1 for domestic plot ratio 1 – 2 Min = $(571 \times 1.2 + 6 \times 7) \div 7 \times 1.1$ = 115 nos. Max = $(571 \times 1.2 + 6 \times 7) \div 4 \times 1.1$ = 200 nos.	200 nos.
		Visitor 5 visitor car parking spaces for developments with more than 75 units per block 5×5 = 25 nos.	25 nos.
	Auditorium	0 – 1 space per 20 seats $660 \div 20$ = 33 nos..	33 nos.
	Total	Min = 5 + 8 + 17 + 115 + 25 + 33 = 203 nos. Max = 8 + 12 + 22 + 200 + 25 + 33 = 300 nos.	300 nos.⁽¹⁾
Lay-by for Taxi and Private Car	Kindergarten	1 lay-by per 5 – 8 classrooms Min = $30 \div 8$ = 4 nos. Max = $30 \div 5$ = 6 nos.	6 nos.
	Primary School	1 lay-by per 2 – 3 classrooms Min = $46 \div 3$ = 16 nos. Max = $46 \div 2$ = 23 nos.	23 nos.
	Middle / High School	1 lay-by per 3 – 5 classrooms Min = $65 \div 5$ = 13 nos. Max = $65 \div 3$ = 22 nos.	22 nos.
	Auditorium	1 lay-by per 400 seats $660 \div 400$ = 2 nos.	2 nos.
	Total	Min = 4 + 16 + 13 + 2 = 35 nos. Max = 6 + 23 + 22 + 2 = 53 nos.	53 nos.
Lay-by for School Bus	Kindergarten	Minimum 2 lay-bys for kindergarten, or equivalent to 6 classrooms ⁽²⁾ $30 \div 6 \times 2$ = 10 nos.	10 nos.
	Primary School	Minimum 3 lay-bys for primary school, or equivalent to 18 – 30 classrooms ⁽²⁾ Min = $46 \div 30 \times 3$ = 5 nos. Max = $46 \div 18 \times 3$ = 8 nos.	8 nos.
	Middle / High School	Up to 3 lay-bys for secondary school, or equivalent to 30 classrooms ⁽²⁾ $65 \div 30 \times 3$ = 7 nos.	7 nos.
	Total	Min = 10 + 5 + 7 = 22 nos. Max = 10 + 8 + 7 = 25 nos.	25 nos.

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

Type	Use	HKPSG Recommendations	Provision
Loading / Unloading Bay for Goods Vehicle	Student Dormitory	Minimum 1 bay for every 800 units or parts thereof, subject to minimum 1 bay per block	3 nos. (HGV)
	Staff Dormitory	Minimum 1 bay for every 800 units or parts thereof, subject to minimum 1 bay per block	5 nos. (HGV)
	Auditorium	1 bay for goods vehicles	1 no. (HGV)
	Other Ancillary Facilities	based on operational needs	11 nos. (HGV)
	Total	3 + 5 + 1 + 11 = 20 nos.	20 nos. (HGV)

Note: ⁽¹⁾ According to Chapter 8 of HKPSG, 4 car parking spaces for persons with disabilities shall be provided

⁽²⁾ According to Chapter 3 of HKPSG, the recommended size of a kindergarten, primary school and secondary school should be a minimum of 6 classrooms, 18 – 30 classrooms and 30 classrooms respectively

Proposed Traffic Mitigation Measures

3.14 In order to minimise the traffic generation of the Proposed School, the following traffic mitigation measures are proposed:

(i) Staggered School Hours

3.15 To avoid potential traffic congestion especially during the school start and end times, the start and end times of the kindergarten, primary school and middle / high school are staggered. For example, the kindergarten will have start and end times at 1000 and 1600 hours respectively. Whilst, the start and end times for the primary school are 0830 and 1500 hours respectively.

3.16 For the middle / high school, boarding students leave the Proposed School on Fridays, say after 1700 hours, and return to school on Sunday evening, say by 8pm, or early Monday morning, say before 0730 hours.

(ii) In-Campus Parking and Pick-up / Drop-off Activities

3.17 The kindergarten, primary school and middle / high school are located within the centre portion of the Proposed School. The internal transport facilities as shown in Table 3.2 will be located on the ground floor with separate run-in and run-out. From the pick-up / drop-off area, students would have convenient and weather-protected access to their respective buildings.

(iii) Drop-arm Barrier Away from Vehicular Access

3.18 To ensure vehicles will not tailback onto the public road, the drop-arm barrier for vehicles entering the Proposed School will be positioned at the run-in to the pick-up / drop-off area, which is around 300m from the vehicular access and with queueing capacity for some 50 vehicles.

3.19 As a traffic management measure, vehicles conducting student pick-up / drop-off are required to follow the one-way traffic routing within the Proposed School as shown in Figure 3.2. This routing could enhance traffic circulation by minimising the conflicting movements within the school campus.

(iv) Internal Transport Facilities for Staff and Student Dormitories

- 3.20 The staff dormitory is located in the southern part of the Proposed School and the student dormitory is located in the northern part.
- 3.21 In view of the above, separate parking and loading / unloading area will be provided on the ground floor of the staff dormitory. To facilitate goods delivery and pick-up / drop-off of boarding students, loading / unloading and pick-up / drop-off area will be provided at the student dormitory.

4.0 TRAFFIC IMPACT

Design Year

- 4.1 The Proposed School is expected to be completed in 2036, and the design years adopted for the capacity analysis is 2036 and 2041.

Traffic Generation

- 4.2 In view that the Transport Planning and Design Manual ("TPDM") has no trip generation rates for school, reference is made to the "Quotation No. TD 507/2023 Base District Traffic Models for the New Territories Area (2024 Update)" (the "BDTM Study") obtained from Transport Department. The adopted trip generation rates are presented in Table 4.1.

TABLE 4.1 TRIP GENERATION RATES

Use	Unit	Trip Generation Rates			
		AM Peak		PM Peak	
		IN	OUT	IN	OUT
Kindergarten (Private) ⁽¹⁾	pcu/hr/class	6.9375	6.9375	5.4375	5.4375
Primary School (Private) ⁽¹⁾	pcu/hr/class	9.7600	9.7600	5.8273	5.8273
Secondary School (Private) ⁽¹⁾	pcu/hr/class	8.7667	7.7667	3.8000	3.9667

Note: ⁽¹⁾ extract from Final Report of the BDTM Study

- 4.3 With the proposed staggered school hours outlined in Chapter 3, traffic generated by the kindergarten, primary school and middle / high school will not occur at the same time.
- 4.4 For the middle / high school, which is a boarding school, students would leave the Proposed School on Friday or Saturday and return to school on Sunday or by early Monday morning. Hence, traffic generated by the middle / high school occur during the weekend or early Monday morning.
- 4.5 Based on Table 4.1 and Paragraphs 4.2 – 4.3, the traffic generation is calculated and presented in Table 4.2.

TABLE 4.2 PROPOSED SCHOOL TRAFFIC GENERATION

Use	No. of Class	Traffic Generation (pcu/hr)					
		AM Peak			PM Peak		
		IN	OUT	2-way	IN	OUT	2-way
Kindergarten [a]	30	209	209	418	164	164	328
Primary School [b]	46	449	449	898	269	269	538
Middle / High School ⁽¹⁾	65	570	505	1,075	247	258	505
Maximum among [a] and [b] ⁽²⁾		449	449	898	269	269	538

Note: ⁽¹⁾ traffic generated by the boarding school occur during the weekend or early Monday morning

⁽²⁾ traffic associated with the kindergarten and primary school do not occur at the same time

- 4.6 In view that traffic generated by the middle / high school occur during the weekend or early Monday morning, Table 4.2 shows that the primary school generates the highest peak hour traffic, i.e. **898 and 538 pcu (two-way)** during the AM and PM peak hours respectively.

Impact to Northern Metropolis Highway

- 4.7 According to the *BDTM Study*, the San Tin Section of Northern Metropolis Highway is included in the 2036 BDTM, whilst, the remaining sections, including Tin Shui Wai Section, Kwu Tung Section and New Territories North New Town Section, are only included in the 2041 BDTM. The 2036 and 2041 BDTM projected traffic flows for the Northern Metropolis Highway are used to conduct the link capacity analysis for the case without and with the Proposed School, and is presented in Table 4.3.

TABLE 4.3 LINK CAPACITY ASSESSMENT

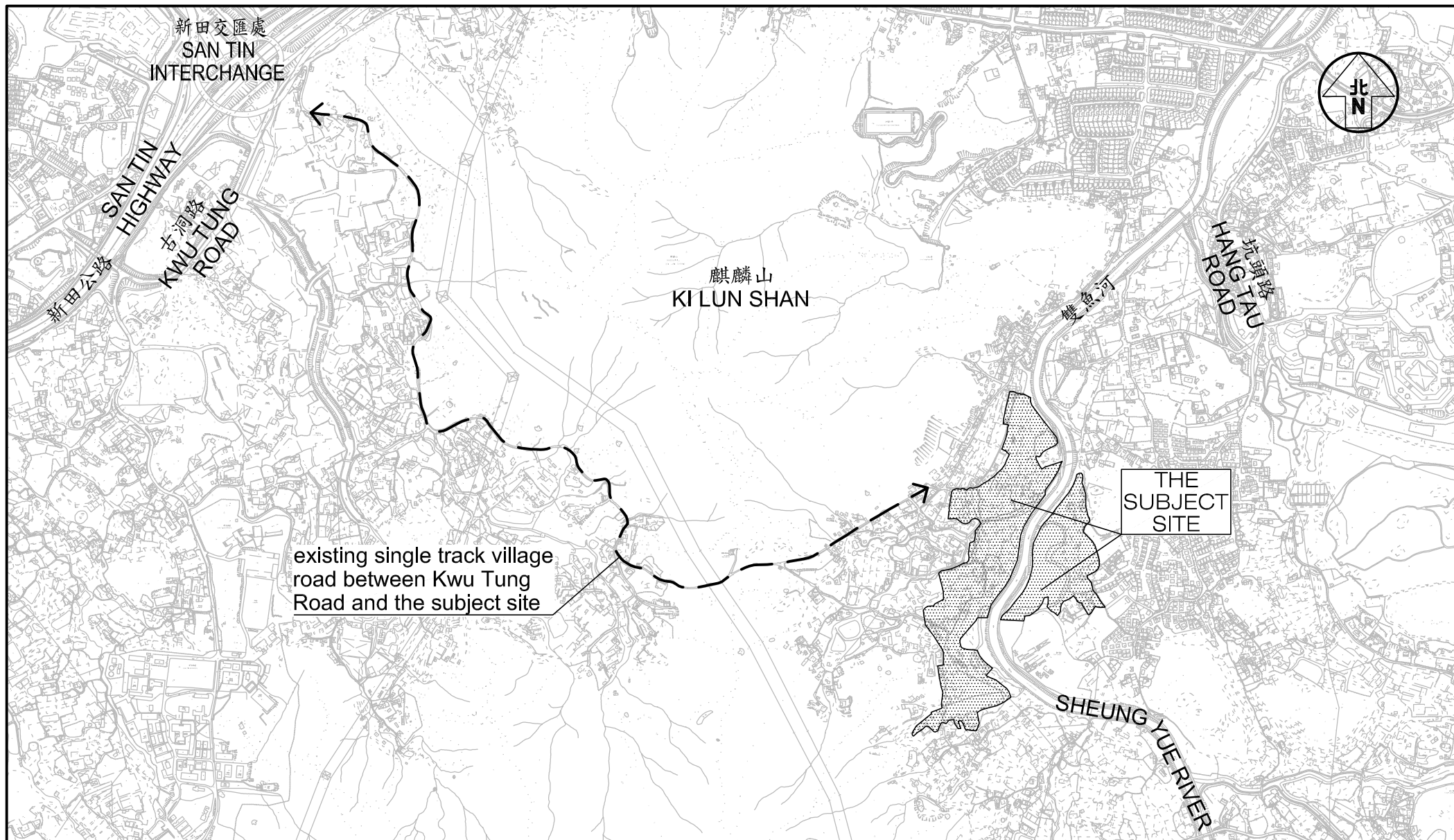
Design Year	Road Section	Bound ⁽³⁾	Northern Metropolis Highway							
			Without Proposed School				With Proposed School			
			Traffic Flows (pcu/hr)		Volume to Capacity Ratio ⁽⁴⁾		Traffic Flows (pcu/hr)		Volume to Capacity Ratio ⁽⁴⁾	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2036 ⁽¹⁾	between Fanling Highway Interchange and San Tin Technopole Interchange	NB	287	332	0.05	0.06	474	444	0.08	0.08
		SB	255	199	0.05	0.04	442	311	0.08	0.06
	between Ngau Tam Mei Interchange and San Tin Technopole Interchange	NB	750	575	0.13	0.10	1,012	732	0.18	0.13
		SB	482	518	0.09	0.09	744	675	0.13	0.12
2041 ⁽²⁾	between Fanling Highway Interchange and San Tin Technopole Interchange	NB	2,810	1,752	0.50	0.31	2,997	1,864	0.53	0.33
		SB	1,967	2,074	0.35	0.37	2,154	2,186	0.38	0.39
	between Ngau Tam Mei Interchange and San Tin Technopole Interchange	NB	3,824	1,991	0.68	0.35	4,086	2,148	0.72	0.38
		SB	2,897	3,079	0.51	0.55	3,159	3,236	0.56	0.57

Note: ⁽¹⁾ assumed completion year of the San Tin Section of Northern Metropolis Highway
⁽²⁾ assumed completion year of the remaining sections of Northern Metropolis Highway
⁽³⁾ NB – northbound SB – southbound
⁽⁴⁾ With reference to the *BDTM Study*, Northern Metropolis Highway is a dual 3-lane expressway. According to the TPDM, the capacity of a dual 3-lane expressway is 4,700 veh/hr, or equivalent to 5,640 pcu/hr (assuming pcu factor of 1.2)

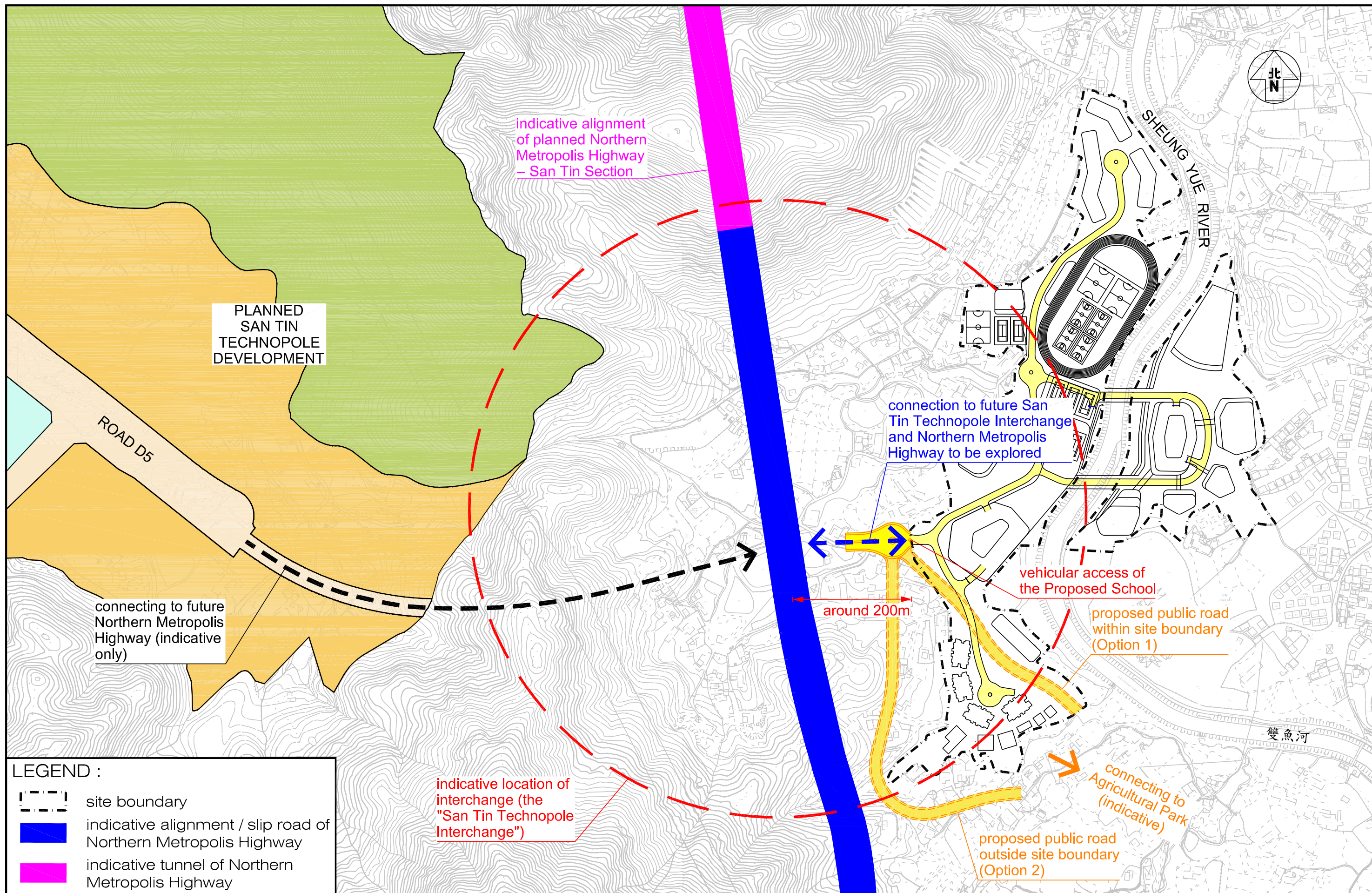
- 4.8 The results in Table 4.3 show that the Northern Metropolis Highway has sufficient capacity to accommodate the additional traffic generated by the Proposed School.

5.0 SUMMARY

- 5.1 The Applicant intends to build and operate an international school which is located at various lots in D.D.94, D.D.98 and D.D.100 and adjoining Government Land, in Kwu Tung South. The Proposed School comprises a kindergarten, a primary school and a boarding middle / high school and with other ancillary facilities.
- 5.2 Internal transport facilities will be provided in accordance with the maximum recommendations of the HKPSG and based on operational needs.
- 5.3 The Proposed School is connected to the San Tin Technopole Interchange of Northern Metropolis Highway which is the main access point upon commissioning in or before 2036. In addition, there is an opportunity to improve accessibility by providing a public road connecting the San Tin Technopole Interchange with the planned Agricultural Park.
- 5.4 Traffic mitigation measures are proposed to minimise traffic generated by the Proposed School arriving at the same time:
- The Proposed School operates with staggered hours, including (i) kindergarten from 1000 – 1600 hours; (ii) primary school from 0830 – 1500 hours; and (iii) boarding middle / high school from 0900 – 1630 hours;
 - All student pick-up / drop-off activities could be confined within the Proposed School, and students would have convenient pick-up / drop-off on the ground floor which are provided close to their respective schools;
 - The drop-arm barrier will be positioned around 300m from the vehicular access with queueing capacity of some 50 vehicles.; and
 - Separate parking and loading / unloading area will be provided on the ground floor of the staff dormitory. Similarly, loading / unloading and pick-up / drop-off area will be provided at the student dormitory.
- 5.5 The 2036 and 2041 link capacity analyses were undertaken for the cases with and without the Proposed School. The analysis found that the Northern Metropolis Highway would have sufficient capacity to accommodate the traffic generated by the Proposed School.
- 5.6 With the completion of the San Tin Section of Northern Metropolis Highway in 2036, the Traffic Review concluded that the Proposed School will result in **no** adverse impact. From traffic engineering grounds, the Proposed School is acceptable.



Project Title	PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES	Figure No. 1.1		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	LOCATION OF THE SUBJECT SITE	Designed by T H C	Revision R2A	
		Scale in A4 N.T.S.	Checked by K C Date 16 OCT 2025	

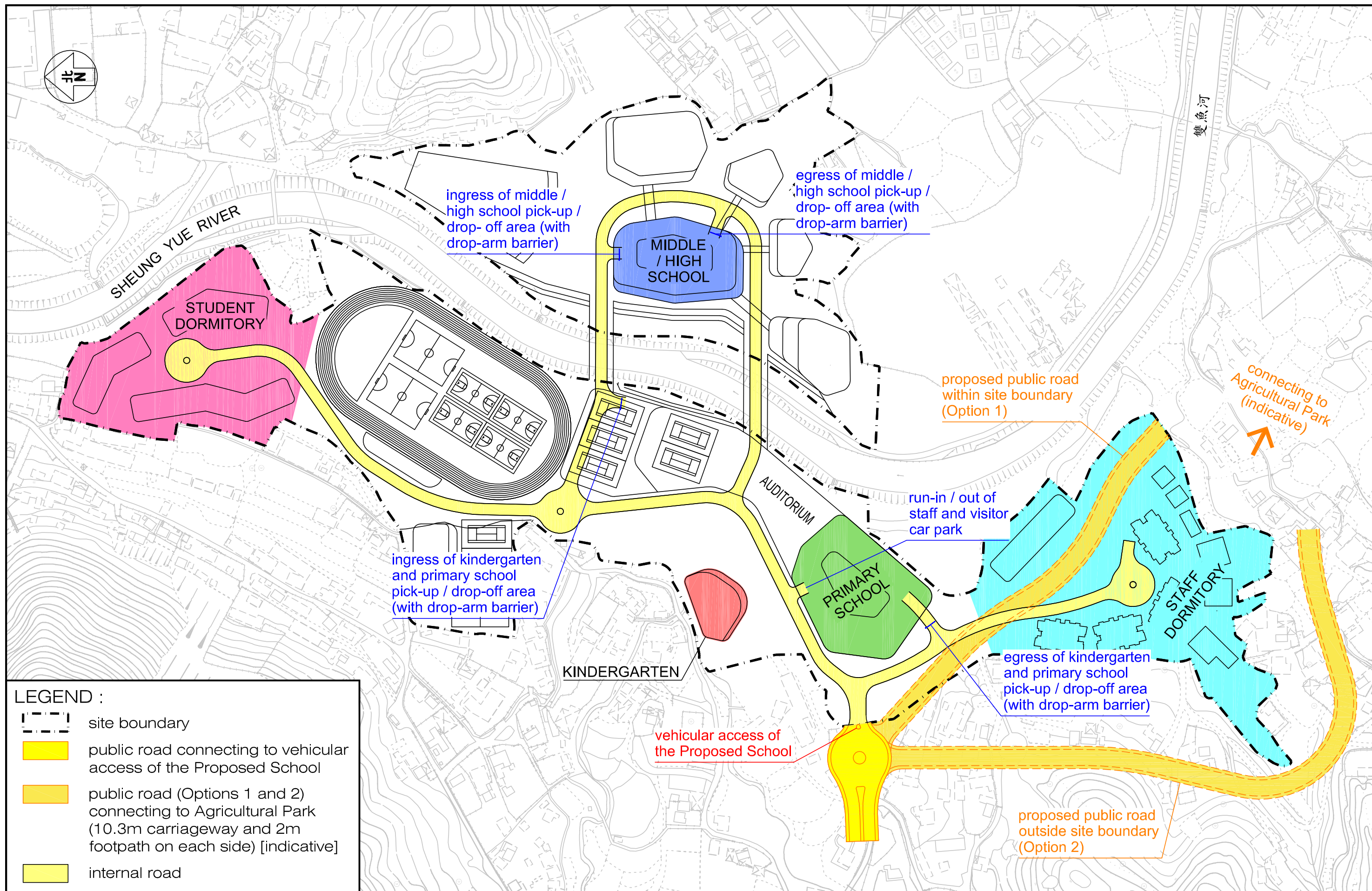


LEGEND :

- site boundary
- indicative alignment / slip road of Northern Metropolis Highway
- indicative tunnel of Northern Metropolis Highway

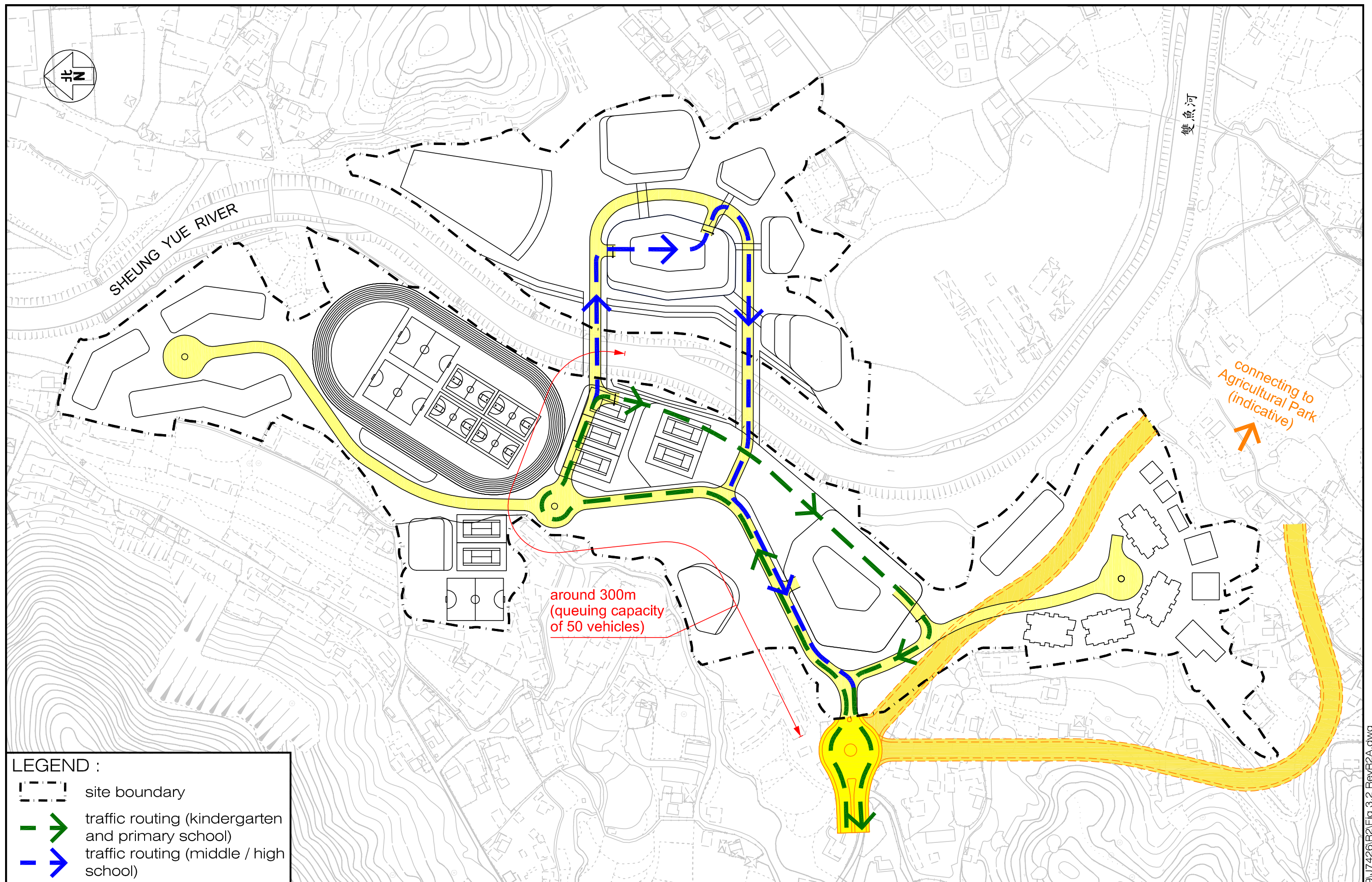
Project Title	PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES			Figure No.	2.1	Revision	R2A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title	CONCEPTUAL CONNECTION BETWEEN THE PROPOSED SCHOOL AND THE NORTHERN METROPOLIS HIGHWAY			J7426	Designed by	THC	Drawn by	CC L
					Checked by	K C	Scale in A3	N.T.S.
					Date	16 OCT 2025		

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Project Title	PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES			Figure No.	3.1	Revision	R2A	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	MASTER LAYOUT PLAN OF THE PROPOSED SCHOOL			Designed by	T H C	Drawn by	C C L	
				Checked by	K C			
				Scale in A3	N.T.S.	Date	16 OCT 2025	

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Project Title	PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES			Figure No.	3.2	Revision	R2A	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	TRAFFIC ROUTING FOR PICK-UP / DROP-OFF OF STUDENTS			Designed by	T H C	Drawn by	C C L	
				Scale in A3	N.T.S.	Date	16 OCT 2025	
				Checked by	K C			

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