Appendix H

Updated Traffic Impact Assessment

19/06/2025

Reference number CHK50748310

SECTION 16 APPLICATION FOR PROPOSED FLAT, SHOP AND SERVICES AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN "RESIDENTIAL (GROUP E)" ZONE AT NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

TRAFFIC IMPACT ASSESSMENT REPORT

IDENTIFICATION TABLE	
Client/Project owner	China Resources Land (Overseas) Limited
Project	Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon
Type of document	Traffic Impact Assessment Report
Date	19/06/2025
File name	No. 4 Tung Yuen Street Development Traffic Impact Assessment Report .docx
Reference number	CHK50748310

TABLE OF CONTENTS

LIST OF DRAWINGS

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon | CHK50748310

Traffic Impact Assessment Report | 19/06/2025

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with
Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group
E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025

LIST OF TABLES

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025

1. INTRODUCTION

1.1 Background

1.1.1 The application site is located at No. 4 Tung Yuen Street, as indicated in **Drawing 1.1**. It is currently zoned "Residential (Group E)" ("R(E)") under the latest approved Cha Kwo Ling, Yau Tong, Lei Yue Mun Outline Zoning Plan (OZP) no. S/K15/27.

1.1.2 The application site is currently occupied by an industrial building, and is planned to be re-developed into a residential-based development with shop & services, and eating place as No. 4 Tung Yuen Street Redevelopment.
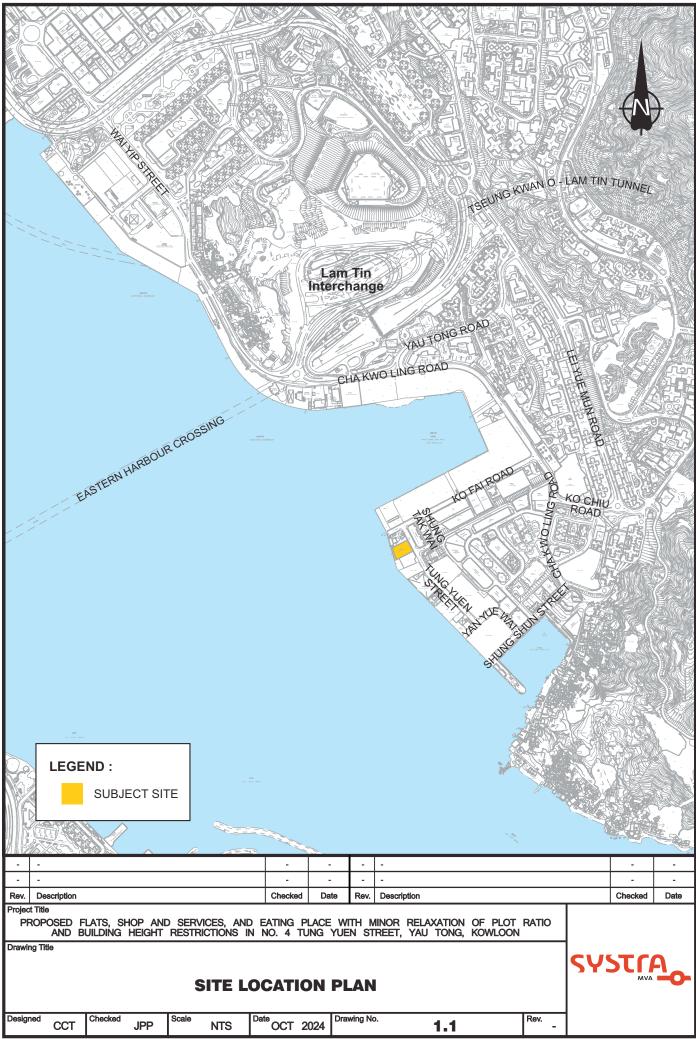
1.2 Study Objective

1.2.1 The main objective of this study is to investigate the anticipated traffic impact of proposed No. 4 Tung Yuen Street Redevelopment to the adjacent local road network, by performing the following tasks:

- review the current traffic condition in the vicinity;
- study the traffic related matters of the proposed MLP;
- produce traffic forecasts on the adjacent local road network;
- assess the traffic impact of this development scheme to the adjacent local road network and suggest mitigation measures, if applicable.

1.3 Report Structure

1.3.1 Following this introductory chapter, there are six further chapters.

- Chapter 2 – Traffic Context, review the current traffic condition in the vicinity;
- Chapter 3 – The Redevelopment, introduces the proposed No. 4 Tung Yuen Street Redevelopment scheme, planning parameters, internal transport facilities and etc.;
- Chapter 4 – Traffic Forecasts, describes the traffic forecasting methodology and presents the results;
- Chapter 5 – Traffic Impact Assessment, presents the assessment findings and suggests mitigation measures, if applicable;
- Chapter 6 – Public Transport, review the current public transport service in the vicinity, and analyse the public transport demand in the future; and,
- Chapter 7 – Summary and Conclusion, summarises the study findings and presents the conclusion accordingly.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon | CHK50748310

Traffic Impact Assessment Report | 19/06/2025 | **Page** 1

LEGEND :

■ SUBJECT SITE

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

SITE LOCATION PLAN

SYSTRA MVA

| Designed | CCT | Checked | JPP | Scale | NTS | Date | OCT 2024 | Drawing No. | 1.1 | Rev. | - |

CHK50748310/TIA/F11.CDR/LLH/10OCT24

Original Size : A4

2. TRAFFIC CONTEXT

2.1 Existing Road Network

2.1.1 The application site is located at No. 4 Tung Yuen Street. The application site situates at the northwestern fringe of YTIA and is accessible from Tung Yuen Street. The site location is indicated in **Drawing 1.1**. The vehicular access routes of the application site are through Tung Yuen Street, Ko Fai Road, Cha Kwo Ling Road, Yau Tong Road, and Ko Chiu Road.

2.1.2 Cha Kwo Ling Road, a single 4-lane district distributor, is the main transport corridors of Yau Tong area to provide external linkage to Eastern Harbour Crossing (EHC), Tseung Kwan O – Lam Tin Tunnel (TKO-LTT), Kwun Tong Bypass and Kwun Tong Road.

2.1.3 Yau Tong Road and Ko Chiu Road are both local distributors, linking up Lei Yue Mun Road and Cha Kwo Ling Road on the North and South respectively.

2.1.4 Tung Yuen Street and Ko Fai Road are both single 2-lane local distributors, connecting the application site to Yan Yue Wai and Cha Kwo Ling Road.
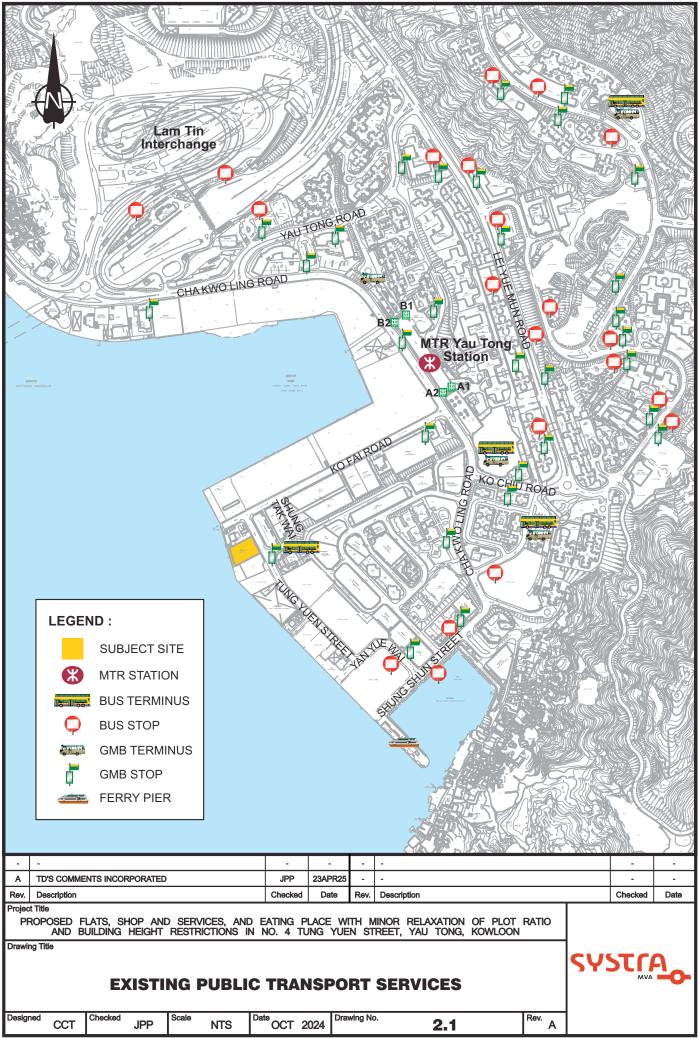
2.2 Public Transport Services
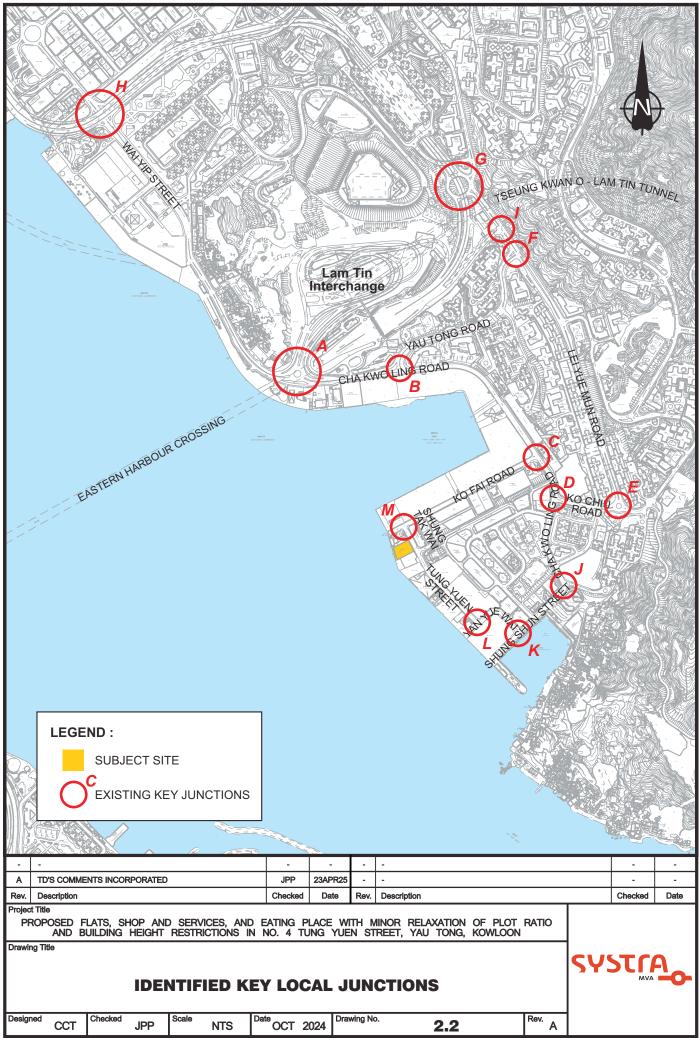
2.2.1 MTR Yau Tong Station is the nearest MTR station to the application site. It is located on the north-east of the application site across Cha Kwo Ling Road, and can be reached within 10 minutes of walk. Yau Tong MTR Station is the interchange station of Kwun Tong Line and Tseung Kwan O Line leading to Island Line.

2.2.2 There are two public transport interchanges (PTI) located at The Domain Mall and Lei Yue Mun Estate, near Ko Chiu Road, in the vicinity of the application site. There is one franchised bus route - 14X and one Green Minibus (GMB) route - 24, operating along Tung Yuen Street.

2.2.3 The nearby public transport services are indicated in **Drawing 2.1**, whilst their service details are summarised in **Appendix A**.

2.3 Junction Operational Performance

2.3.1 A total of thirteen key local junctions have been identified for assessment purpose in this study. The identified key local junctions, as listed in **Table 2.1**, are indicated in **Drawing 2.2**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report | 19/06/2025 | **Page** 2

Lam Tin Interchange

YAU TONG ROAD

CHA KWO LING ROAD

LEI YUE MUN ROAD

B1
B2

MTR Yau Tong Station

A2 A1

KO FAI ROAD

KO CHIU ROAD

SHUNG TAK WAI

CHA KWO LING ROAD

TUNG YUEN STREET

YAN YUE WAI

SHUNG SHUN STREET

VICTORIA HARBOUR

LEGEND :

▢ (yellow)	SUBJECT SITE
✳	MTR STATION
🚌	BUS TERMINUS
⬤	BUS STOP
🚐	GMB TERMINUS
▯	GMB STOP
🚢	FERRY PIER

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
-	-	-	-	-	-	-	-
A	TD'S COMMENTS INCORPORATED	JPP	23APR25	-	-	-	-

Project Title
PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

EXISTING PUBLIC TRANSPORT SERVICES

SYSTRA MVA

Designed	CCT	Checked	JPP	Scale	NTS	Date	OCT 2024	Drawing No.	2.1	Rev.	A

CHK50748310/TIA/F21-A.CDR/LLH/23APR25

Original Size : A4

LEGEND :

◼ SUBJECT SITE

◯ EXISTING KEY JUNCTIONS

Table 2.1   Identified Key Local Junctions

Ref. [1]	Junction	Control Method	Drawing No.
A	Cha Kwo Ling Road / Lam Tin Interchange	Roundabout	2.3
B	Cha Kwo Ling Road / Yau Tong Road	Signal	2.4
C	Cha Kwo Ling Road / Ko Fai Road	Priority	2.5
D	Cha Kwo Ling Road / Ko Chiu Road	Signal	2.6
E	Lei Yue Mun Road / Ko Chiu Road	Roundabout	2.7
F	Lei Yue Mun Road / Yau Tong Road	Signal	2.8
G	Kai Tin Road / Lei Yue Mun Road	Roundabout	2.9
H	Wai Yip Street / Wai Fat Road	Signal	2.10
I	Lei Yue Mun Road / Slip Road to EHC	Signal	2.11
J	Cha Kwo Ling Road / Shung Shun Road	Priority	2.12
K	Shung Shun Road / Yan Yue Wai	Priority	2.13
L	Tung Yuen Street / Yan Yue Wai	Priority	2.14
M	Tung Yuen Street / Ko Fai Road	Priority	2.15

Remarks:
(1)   Refer to **Drawing 2.2**.

2.3.2   In order to establish the current peak hour traffic condition in the area, traffic surveys in the form of manual classified count were conducted at the identified key local junctions during the morning and evening peak hours of a typical weekday.

2.3.3   The traffic surveys were arranged and conducted during morning peak hours between 07:30 – 09:30 and the evening peak hours between 17:00 – 19:00 on 9th and 10th of September 2024. The survey results reveal that the weekday morning and evening peak hour occur during 08:15 – 09:15 and 17:00 – 18:00 respectively. The observed peak hour traffic flows are summarised in **Drawing 2.16**.

2.3.4   Junction capacity assessments have been conducted to evaluate the current operational performance of the identified key local junctions. The assessments would be validated with the site observations, such as queue length, by applying appropriate site factors and adjustments accordingly in order to reflect the actual site conditions. The assessment results are summarised in **Table 2.2**. The junction calculation sheets are attached in **Appendix B**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 3

天后宮
Tin
Hau
Temple

INC

茶果嶺通風大樓
Cha Kwo Ling
Ventilation Building

LAM TIN INTERCHANGE

藍田交滙處

LAM TIN INTERCHANGE

LAM TIN INTERCHANGE

CHA KWO LING ROAD

CHA KWO LING RO

茜嶺道

CUL

CUL

Ramp

道路

ESS

N

Rev.	Description	Checked	Date	Project Title	Drawing Title				
-	-	-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	**EXISTING JUNCTION LAYOUT OF CHA KWO LING ROAD / LAM TIN INTERCHANGE (A)**				
-	-	-	-						
-	-	-	-						
-	-	-	-						

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	OCT 2024	Drawing No.	**2.3**	Rev. -

SYSTRA
MVA

Original Size : A3

METHOD OF CONTROL

1	2	3

Kwo Ling Ventilation Building

YAU TONG ROAD

N

6.8

7.5

TS

30

+8.4

TS

中華基督教會基法小學(油塘)

Basketball Court

Basketball Court

C.C.C. Kei Faat Primary School (Yau Tong)

Tunnel Bus Stop
隧道巴士站
K-TS441

Tunnel Bus Stop
隧道巴士站
K-TS439

K-TS439

15.7

5.7

5.8

CHA KWO LING ROAD

CHA KWO LING ROAD

PLB Proh

+5.9

NUT

茶果嶺道

5.8

6.5

H

6.3

6.1

6.2

PLB Proh

Hong Kong (E)
香港 (東)

K/KT/ChaKL-09

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
A	TD'S COMMENTS INCORPORATED, JUNCTION ADDED	JPP	19JUN25

Project Title
PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title
EXISTING JUNCTION LAYOUT OF
CHA KWO LING ROAD / YAU TONG ROAD (B)

SYSTRA MVA

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	OCT 2024	Drawing No.	2.4	Rev.	A

CHK50748310/TIA/F24-A.DGN/KCM/19JUN25

Original Size : A3

EW

CHA KWO LING ROAD

5.2

5.2

4.8 +

30.1 +

30.8

VS

VS

VS

VS

VS

VS

VS

VS

VS

VS

VS

CW

CW

CW

CW

CW

CW

CW

CW

Hong Kong (E)
香港（東）
K/KT/KoF-01

4.9 +

4.8

5.3

31.9

50.0

Podium
平台

18.2+

Podium

KO FAI ROAD

FAI ROAD

平台

20.0+

7.9

4.5 +

Yau Tong
Public Transport Interchange
油塘
公共運輸交滙處
K/KT/ChaKL-11

油塘消防局
Yau Tong Fire Station

CUL

N

-	-	-	-	Project Title	Drawing Title			EXISTING JUNCTION LAYOUT OF		
-	-	-	-					CHA KWO LING ROAD / KO FAI ROAD (C)		
-	-	-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON						
A	TD'S COMMENTS INCORPORATED, JUNCTION ADDED	JPP	19FEB25							
Rev.	Description	Checked	Date		Designed CCT	Checked JPP	Scale 1:500(A3)	Date FEB 2025	Drawing No. 2.5	Rev. A

SYSTRA MVA

CHK50748310/TIA/F25-A.DGN/KCM/19FEB25

Original Size : A3

METHOD OF CONTROL

1	2	3	4

N

Domain
(Bus Terminus under)

CHA KWO LING ROAD

生利工業中心
Sunray Industrial Centre

油塘工業大廈第三座
Yau Tong Industrial Building Block 3

N-TS84

高超道

KO CHIU ROAD

KO CHIU ROAD

Fai Building

鯉魚門
Lei Yue Mun

K/KT/KoC-07
Tower 1

Yau Tong Public Transport Interchange
油塘
公共運輸交匯處
K/KT/KoC-08 Tower 2

Except goods vehicles Loading/unloading
貨車上落貨除外

嘉華商場

嘉榮街

KA-WING

EXISTING JUNCTION LAYOUT OF LEI YUE MUN ROAD / KO CHIU ROAD (E)

Map labels:
- 54.2
- EW
- 49.6
- K/KT/LeiYMo35D House
- 高瑞閣
- 28.5
- 濤美閣
- To Mei House
- 34.0
- 26.9
- Lam Tin 藍田
- Kwun Tong 觀塘
- HongKong(E) 香港(東)
- Lei Yue Mun 鯉魚門
- K/KT/LeiYM-32
- 平台 Podium
- Chinese Permanent Cemetery 華人永遠墳場
- K/KT/LeiYM-34
- Ko On House
- 高安閣
- +29.5
- (層油塘社區會堂)
- (Yau Tong Community Hall under)
- Chinese Permanent Cemetery 華人永遠墳場
- K/KT/KoC-03D
- K/KT/KoC-02A
- 平台 Podium
- RCP
- LEI YUE MUN ROAD
- 24.5
- Sharp Devi/TL
- Sharp Devi/TL
- Sharp Devi/TL
- +25.4
- 23.8
- KO CHIU ROAD
- 29.4
- 27.5+
- KO CHIU ROAD
- 高超道
- K-TS436
- Ferry 渡輪
- K-TS436
- 第三座 Tower 3
- 29.6+
- 25.1
- 26.4+
- 25.N-TS83
- 29.9
- 30.9
- 30.6
- +25.2
- 24.9
- EW
- 25.3
- 6:30 am –11pm
- 由上午六時半至下午十一時
- +29.7 N-TS82
- 33
- LeiYue M 鯉魚門
- Public Tra 公共運

Title block:

				Project Title		
-	-		-	-		
-	-		-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	Drawing Title	EXISTING JUNCTION LAYOUT OF LEI YUE MUN ROAD / KO CHIU ROAD (E)
-	-		-	-		
-	-		-	-		SYSTRA MVA
Rev.	Description		Checked	Date		

Designed: CCT Checked: JPP Scale: 1:500(A3) Date: OCT 2024 Drawing No.: 2.7 Rev.: -

CHK50748310/TIA/F27.DGN/KCM/08OCT24

Original Size : A3

METHOD OF CONTROL

| 1 | 2 | 3 |

Kwun Tong
觀塘
Tseung Kwan O
將軍澳
Hong Kong (E)
香港 (東)

K/KT/LeiYM-21A

Kwun Tong
觀塘
Tseung Kwan O
將軍澳
Hong Kong (E)
香港 (東)

K/KT/YauT-02

34.9

雅麗樓
Nga Lai House

35.0

平台　Podium

遊樂場
Playground

35.1

智麗樓
Chi Lai House

35.1

YAU TONG ROAD
油塘道
YAU-TONG ROAD

34↗

Bd L/S-Rd L

Cha Kwo Ling
茶果嶺

K/KT/LeiYM-19

36.2

35.4

35.7

35.6

38.5

39.8+

39.4+

33.3

33.7

33.4

N-TS83

N-TS83

LEI YUE MUN ROAD

32.0

31.6

Taxi

N

KAI TIN ROAD

觀塘 Kwun Tong
將軍澳 Tseung Kwan O
西貢 Sai Kung
K/KT/LeiYM-24A

SLOW 慢駛
SLOW 慢駛

34.4

38.2

Lam Tin 藍田
K/KT/LeiYM-13

Lei Yue Mun 鯉魚門
Hong Kong (E) 香港(東)
觀塘 Kwun Tong
Tseung Kwan O 將軍澳
K/KT/KaiT-03

59.9

TL/Sharp Devi.

CUL
CUL

+29.0

35.2

TL/Sharp Devi.

+37.8

Lei Yue Mun 鯉魚門
Hong Kong (E) 香港(東)
K/KT/LeiYM-14A

40

LEI YUE MUN ROAD

鯉魚門道

36.1

Elevated Road

+37.9

Lei Yue Mun 鯉魚門
Hong Kong (E) 香港(東)
K/KT/LeiYM-15A

藍田 Lam Tin
油塘 Yau Tong
K/KT/LeiYM-3

辦事處
nagement
Office

+65.8

27.

38.4

CUL

70 KM/H
RADAR SPEED CHECK

Rev.	Description	Checked	Date	Project Title	Drawing Title		Rev.
-	-	-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	**EXISTING JUNCTION LAYOUT OF KAI TIN ROAD / LEI YUE MUN ROAD (G)**		-
-	-	-	-				
-	-	-	-				
-	-	-	-	Designed CCT	Checked JPP	Scale 1:500(A3)	Date OCT 2024	Drawing No. **2.9**	Rev. -

SYSTRA
MVA

Original Size : A3

METHOD OF CONTROL

1	2	3	4

Hoi Yuen Road
開源道
K/KT/WaiY-21

翠屏河

Elevated R

15.9

WAI YIP STREET

高架道路

No Ped

WAI FAT ROAD

4.5

16.3+

3.8+

No Ped

Kwun Tong Road
觀塘道

Kwun Tong
Business Area
觀塘商貿區

Laguna City
麗港城
Cha Kwo Ling
茶果嶺

K/KT/WaiF-09B

Outfall 排水

Merging Ah 2661

Merging Ah 2660

16.4+

Rd Ah

Tseung Kwan O
將軍澳
Hong Kong(E)
香港(東)
K/KT/WaiF-11

Laguna City
麗港城
Cha Kwo Ling
茶果嶺
K/KT/WaiF-08A

No Ped/Cyt/E
⊗/Exp/w End

Tseung Kwan O
將軍澳
2B
K/KT/TsuiKwuTB-XG12B

Ping River

Rd Ah

5.9

No Ped/Cyt 15.0

Kowloon Bay
九龍灣
Sha Tin
沙田
Cha Kwo Ling
茶果嶺
K/KT/WaiF-X15

15.8

Bd Rd

KWUN TONG BYPASS

14.6

Elevated Road

No Ped/Cyt/Exp/w Sta

Bd R

5.0

ExpS4.9R2

KWUN TONG BYPASS

5.7+

斜路

4.9

高架道路

No Ped/Cyt/Exp/w Sta

GW

70 km/h ExpN4.9R2

15.6

KWUN TONG BYPASS

觀塘繞道

4.2+

4.6

70 km/h ExpN4.9R2

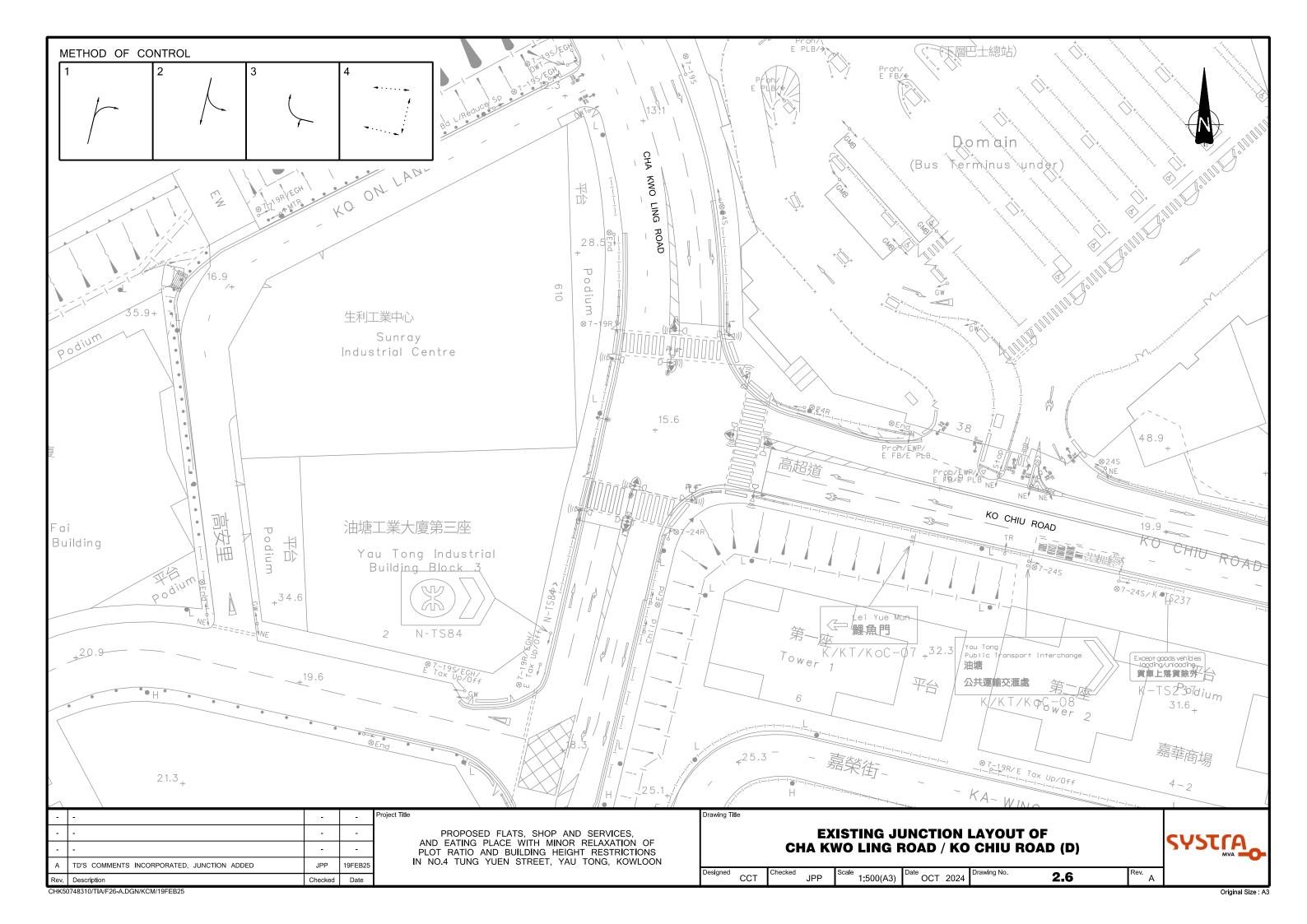| Project Title	Drawing Title
PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	**EXISTING JUNCTION LAYOUT OF WAI YIP STREET / WAI FAT ROAD (H)**

Rev.	Description	Checked	Date	Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	OCT 2024	Drawing No.	**2.10**	Rev.	-

SYSTRA MVA

CHK50748310/TIA/F210.DGN/KCM/10APR24

Original Size : A3

Map Labels

藍田救護站

Lam Tin
Ambulance Depot

38.0

30

37.0

27.6

Lam Tin Ambulance
Depot only
祇往藍田救護站
K/KT/LeiYueM-P07

WIP Jun 2023

WIP Jun 2023

隧道口
Tunnel Portal

Tun Area Stn

SLIP ROAD TO EHC

25.4

TSEUNG LAM HIGHWAY

Road

CW

平台
Podium

信麗樓
Shun Lai House

41.8

50.1

House

LEI YUE MUN ROAD

將軍澳－藍田隧道

60

CUL

Lei Yue
鯉魚門

Cha Kwo Ling
茶果嶺

K/KT/LeiYM-17

Tr Sq Ah Chi Id Sch

N-TS84

N-TS84

60

35.8

Lam Tin (South)
藍田 (南)
Kwong Tin Estate
廣田邨

K/KT/LeiYM-18

WIP Jun 2023

L

Kwun Tong
觀塘
Tseung Kwan O
將軍澳

Hong Kong (E)
香港 (東)

K/KT/LeiYM-21A

Kwun Tong
觀塘
Tseung Kwan O

LEI YUE MUN ROAD

CUL

34.9

Title Block

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
A	TD'S COMMENTS INCORPORATED, JUNCTION ADDED	JPP	19FEB25

Project Title

PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

**EXISTING JUNCTION LAYOUT OF LEI YUE MUN ROAD /
SLIP ROAD TO EASTERN HARBOUR CROSSING (I)**

SYSTRA MVA

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	FEB 2025	Drawing No.	**2.11**	Rev.	A

CHK50748310/TIA/F211.DGN/KCM/19FEB25

Original Size : A3

Lei Yue Mun
鯉魚門
K/KT/YanW-01

高宏苑
Ko Wang Court

WIP Oct 2024

服務設施大樓
Ancillary Facilities Block

B座
Block B

+20.2

球場
ball Field

CHA KWO LING ROAD

平台
Podium

11.4 +

9.3 +

STOP

道路
Road

8.8 +

油塘工業大廈
第一座
Yau Tong Industrial Building
Block 1

平台 2 Podium

22.2 +

CUL

SLOW
慢

Stop

6 +

6.5

平台
20.5
+
Podium

6 +

5.9

SHUNG SHUN STREET

Ocean One

21.0 +

21.0 +

平台
Podium

pm
下午
am
上午

+ 37.2

K-TS44

6

平台
Podium

24.4

海傲灣
One East Coast

第2座
Tower 2

5.4 +

5.4 +

20.2 +

H

Rev.	Description		Checked	Date	Project Title	Drawing Title		Rev.
-	-	-	-	-				
-	-	-	-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	EXISTING JUNCTION LAYOUT OF CHA KWO LING ROAD / SHUNG SHUN ROAD (J)		

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	FEB 2025	Drawing No.	2.12	Rev.	-

SYSTRA
MVA

CHK50748310/TIA/F212.DGN/KCM/19FEB25

Original Size : A3

平台

+17.7

平台

海逸中心
Harbour Sky

Except bus
pick up/drop off
巴士上落客除外

K-TS150

+5.3

28

5.2 +

Sam Ka Tsuen
三家村
K/KT/LeiYueMP-P

Sam Ka Tsuen
三家村
K/KT/LeiYueMP-P

N

YAN YUE WAI

YAN YUE WAI

+14.8

第3座
Tower 3

+21.7

平台(下層停車場)
Podium (Car Park under)

蔚藍東岸
Montego Bay

+21.7

+10.6

第5座
Tower 5

14.8

SHUNG SHUN STREET

+4.8

SHUNG SHUN STREET

酒灣
TSAU WAN

18

第1座
Tower 1

+4.4

三家村避風塘

SAM KA TSUEN TYPHOON SHELTER

HWM

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

**EXISTING JUNCTION LAYOUT OF
SHUNG SHUN ROAD / YAN YUE WAI (K)**

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	FEB 2025	Drawing No.	**2.13**	Rev. -

CHK50748310/TIA/F213.DGN/KCM/19FEB25

Original Size : A3

8 pm–8 am
下午八時至上午八時
K-TS249

WIP Dec 2024

東源街
TUNG YUEN STREET

水泥廠
Cement Works

仁宇圍

海堤

YAN YUE WAI

仁宇圍

平台(下層停車場)
Podium (Car Park under)

蔚藍東岸
Montego Bay

第3座
Tower 3

第5座
Tower 5

第2座
Tower 2

平台

N

Rev.	Description			Checked	Date
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Project Title
PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title
**EXISTING JUNCTION LAYOUT OF
TUNG YUEN STREET / YAN YUE WAI (L)**

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	FEB 2025	Drawing No.	**2.14**	Rev. -

SYSTRA
MVA

CHK50748310/TIA/F214.DGN/KCM/19FEB25

Original Size : A3

沙倉
Sand Depot

8 pm–8 am
下午八時至上午八時
K-TS249

+4.0

+4.0

4.1+

4.3+

44

3.6+

KO FAI ROAD
KO FAI ROAD

P/P1/2 2251

P/P1/2 2255

8-10,17-19R/ P/P1/2 2255
EGH
4.0

PGV P1/2 2251

27

PGV/P1/2 2250

4.0+

+22.9

8-10,17-19R/EGH

高輝道

3.9+

+3.9

B座
Block B

平台

Union Industrial Building

方聯工業大廈

+4.2

18.1+

L

8-10,17-19 TS/EGH
EGH

3.8+

H
GW

PGV/P1/2 2251

Gloria Weaving & Knitting Factory Limited

大業織造廠有限公司

平台

+4.4

3.9+

PGV/K-TS249

8 pm–8 am
下午八時至上午八時
K-TS249

TS

ESS

油塘污水泵房
Yau Tong Sewage Pumping Station

TUNG YUEN STREET

2

P/P1/2 2250

東源街

PGV/P1/2 2250

A座
Block A

Podium

+19.5

2

Podium

8 pm–8 am
下午八時至上午八時
K-TS249

Disable v

Adisable v

+15.7

排水口
Outfall

SHUNG TAK WAI

4.5+

導管

P/P1/2 2251

Seawa

N

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title
PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title
**EXISTING JUNCTION LAYOUT OF
TUNG YUEN STREET / KO FAI ROAD (M)**

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	FEB 2025	Drawing No.	**2.15**	Rev. -

CHK50748310/TIA/F215.DGN/KCM/19FEB25

Original Size : A3

YEAR 2024 OBSERVED TRAFFIC FLOWS

LEGEND :

145(145)   AM(PM) PEAK TRAFFIC FLOW IN PCU/HR

Table 2.2   Current Junction Operational Performance

Ref. [1]	Junction	RC/RFC [2]	
		AM Peak	PM Peak
A	Cha Kwo Ling Road / Lam Tin Interchange	0.43	0.33
B	Cha Kwo Ling Road / Yau Tong Road	>100%	>100%
C	Cha Kwo Ling Road / Ko Fai Road	0.67	0.64
D	Cha Kwo Ling Road / Ko Chiu Road	>100%	100%
E	Lei Yue Mun Road / Ko Chiu Road	0.23	0.28
F	Lei Yue Mun Road / Yau Tong Road	>100%	>100%
G	Kai Tin Road / Lei Yue Mun Road	0.72	0.53
H	Wai Yip Street / Wai Fat Road	64%	56%
I	Lei Yue Mun Road / Slip Road to EHC	51%	>100%
J	Cha Kwo Ling Road / Shung Shun Road	0.10	0.12
K	Shung Shun Road / Yan Yue Wai	0.05	0.05
L	Tung Yuen Street / Yan Yue Wai	0.04	0.01
M	Tung Yuen Street / Ko Fai Road	0.65	0.50

Remarks:

(1)   Refer to **Drawing 2.2**.

(2)   The operational performance of a signal junction is represented in Reserve Capacity (RC), which is defined as overloaded while the RC is less than 0%, The operational performance of a priority/roundabout is represented in Ratio to Flow Capacity (RFC), which is defined as overloaded if RFC over 1.00.

2.3.5   The assessment results indicate that all the identified key local junctions are operating within capacity during the weekday peak hour periods.
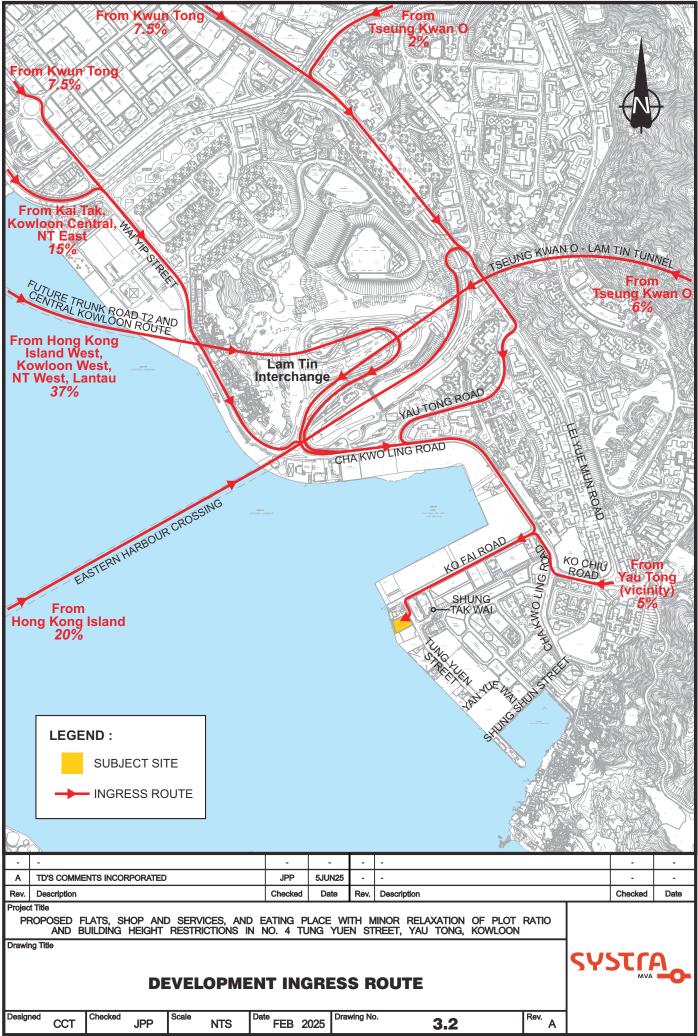
Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon   CHK50748310

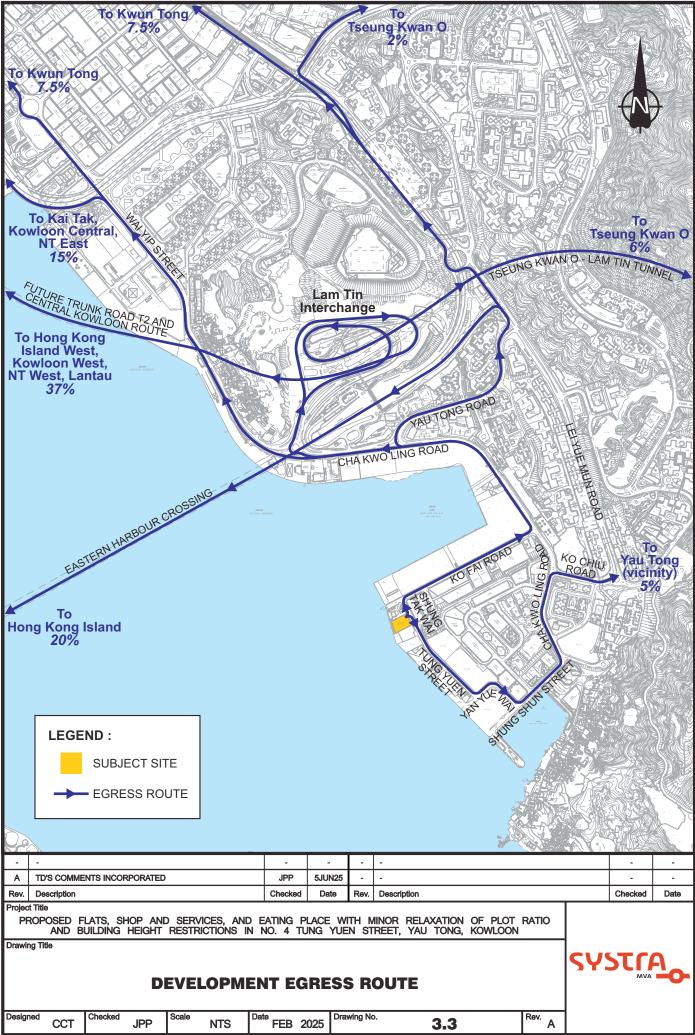Traffic Impact Assessment Report   19/06/2025   **Page** 4

3. THE REDEVELOPMENT

3.1 Development Parameter

3.1.1 For the purpose of Section 16 planning application, No. 4 Tung Yuen Street is this TIA study area.

3.1.2 Currently, there is a 7-storey industrial building on the site, and the subject site has been rezoned as R(E). The current proposed development comprises a residential tower with clubhouse, shop and services, and eating place. The proposed main development parameters of the No. 4 Tung Yuen Street Redevelopment are summarised in **Table 3.1** and the master layout plan is shown in **Drawing 3.1**.

Table 3.1   Proposed Development Parameters

		Proposed MLP
Site Area (m²)		Approx. 2,419 m²
Total Plot Ratio		Not more than 6.9
Total GFA (m²)		Not more than 16,691.1 m²
Key Development Parameters		
Residential	no. of units	342
Commercial – retail	GFA (m²)	2,177.1
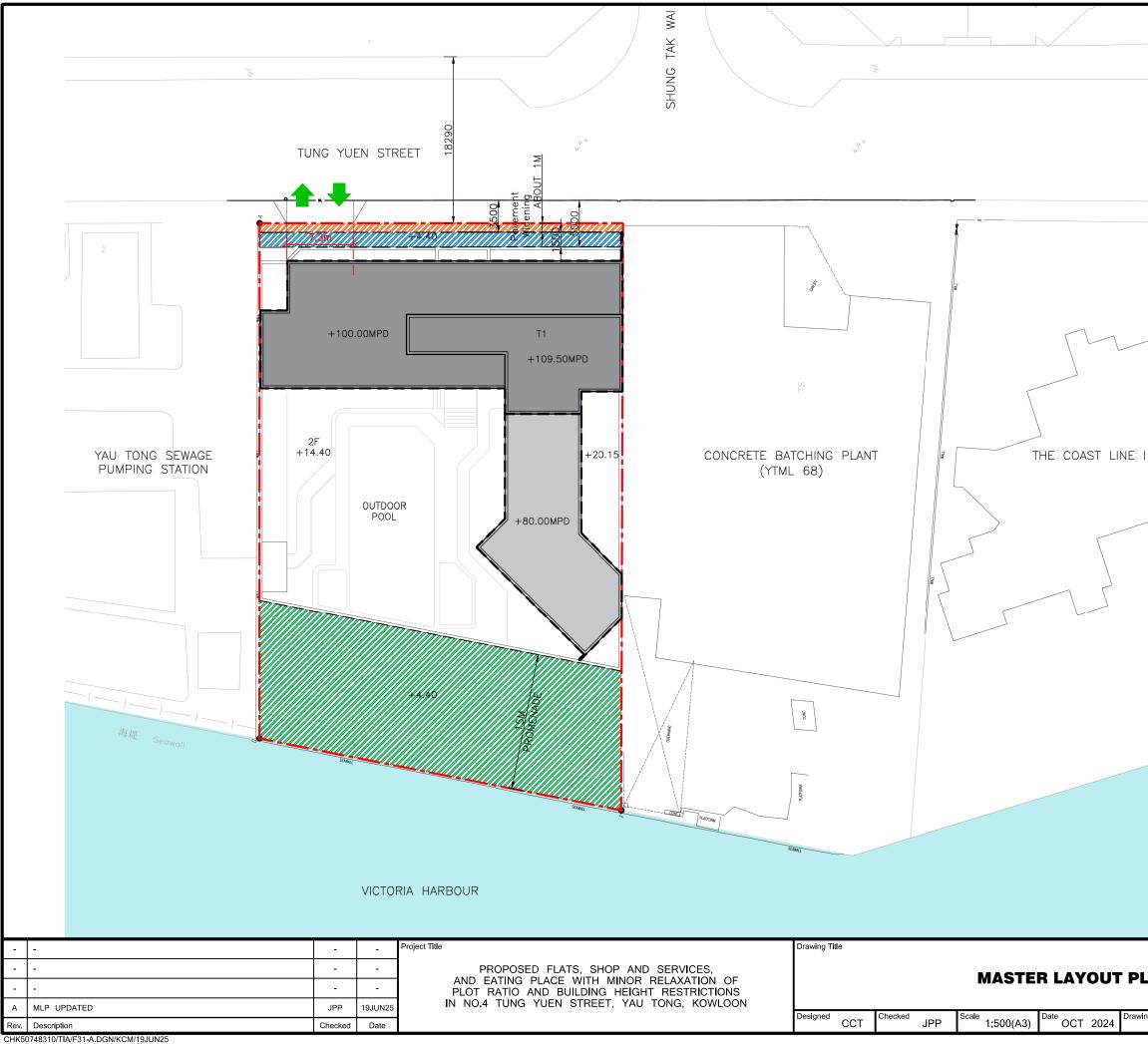
3.1.3 The No. 4 Tung Yuen Street Redevelopment would be completed in year 2032.

3.2 Internal Traffic Arrangement

Vehicular Access

3.2.1 Under the proposed MLP, there is one vehicular access of subject site and is located on Tung Yuen Street. The location of the vehicular accesses of No. 4 Tung Yuen Street Redevelopment under the proposed MLP are indicated in **Drawing 3.1**.

3.2.2 Vehicular Access to the Proposed Scheme is provided at Tung Yuen Street, which is a major road connecting to Ko Fai Road at its western end and to Shung Shun Street at its eastern end. The traffic going to/from Hong Kong Island would pass through Ko Fai Road priority junction / Cha Kwo Ling Road / Yau Tong Road / EHC or Ko Fai Road priority junction / Cha Kwo Ling Road / Lam Tin Interchange. For the traffic going to/from Tseung Kwan O, which would pass through Ko Fai Road priority junction / Cha Kwo Ling Road / Lam Tin Interchange or Ko Fai Road priority junction / Cha Kwo Ling Road / Yau Tong Road / Lei Yue Mun Road. And the traffic can also pass through the Wai Yip street to Kwun Tong Action Area to/from Kwun Tong. The traffic ingress and egress routings of the site are illustrated in **Drawing Nos. 3.2 to 3.3**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon | CHK50748310

Traffic Impact Assessment Report | 19/06/2025 | **Page** 5

SHUNG TAK WAI

TUNG YUEN STREET

18290

ABOUT 1M

Pavement widening

1500

1000

1500

+100.00MPD

T1

+109.50MPD

YAU TONG SEWAGE PUMPING STATION

2F
+14.40

OUTDOOR POOL

+20.15

+80.00MPD

CONCRETE BATCHING PLANT
(YTML 68)

THE COAST LINE I

+4.40

1.5M PROMENADE

海堤 Seawall

VICTORIA HARBOUR

LEGEND

SURRENDERED SETBACK AREA
(39.586m²)

VOLUNTARY 1.5M WIDE FULL
HEIGHT SETBACK (65.219m²)

VOLUNTARY WATERFRONT
PROMENADE
(NOT LESS THAN 608m²)

+100mPD PORTION

+80mPD PORTION

0 1 2   5   10   20m

Rev.	Description					Checked	Date
-	-				-	-	-
-	-				-	-	-
-	-				-	-	-
A	MLP UPDATED				JPP		19JUN25

Project Title

PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

MASTER LAYOUT PLAN

| Designed | CCT | Checked | JPP | Scale | 1:500(A3) | Date | OCT 2024 | Drawing No. | **3.1** | Rev. | A |

SYSTRA
MVA

Original Size : A3

From Kwun Tong
7.5%

From
Tseung Kwan O
2%

From Kwun Tong
7.5%

From Kai Tak,
Kowloon Central,
NT East
15%

TSEUNG KWAN O - LAM TIN TUNNEL

From
Tseung Kwan O
6%

WAI YIP STREET

FUTURE TRUNK ROAD T2 AND
CENTRAL KOWLOON ROUTE

From Hong Kong
Island West,
Kowloon West,
NT West, Lantau
37%

Lam Tin
Interchange

YAU TONG ROAD

LEI YUE MUN ROAD

CHA KWO LING ROAD

EASTERN HARBOUR CROSSING

From
Hong Kong Island
20%

KO FAI ROAD

KO CHIU ROAD

From
Yau Tong
(vicinity)
5%

CHA KWO LING ROAD

SHUNG
TAK WAI

TUNG YUEN STREET

YAN YUE WAI STREET

SHEUNG SHUN STREET

LEGEND :

☐ SUBJECT SITE

→ INGRESS ROUTE

-	-			-	-	-	-		-	-
A	TD'S COMMENTS INCORPORATED			JPP	5JUN25	-	-		-	-
Rev.	Description			Checked	Date	Rev.	Description		Checked	Date

Project Title
PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

DEVELOPMENT INGRESS ROUTE

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	NTS	Date	FEB 2025	Drawing No.	3.2	Rev.	A

CHK50748310/TIA/F32-A.CDR/LLH/5JUN25

Original Size : A4

To Kwun Tong
7.5%

To Tseung Kwan O
2%

To Kwun Tong
7.5%

To Kai Tak,
Kowloon Central,
NT East
15%

To Tseung Kwan O
6%

WAI YIP STREET

TSEUNG KWAN O - LAM TIN TUNNEL

FUTURE TRUNK ROAD T2 AND
CENTRAL KOWLOON ROUTE

To Hong Kong
Island West,
Kowloon West,
NT West, Lantau
37%

Lam Tin
Interchange

YAU TONG ROAD

LEI YUE MUN ROAD

CHA KWO LING ROAD

EASTERN HARBOUR CROSSING

KO FAI ROAD

CHA KWO LING ROAD

KO CHIU ROAD

To Yau Tong
(vicinity)
5%

To
Hong Kong Island
20%

SHUNG TAK WAI

TUNG YUEN STREET

YAN YUE WAI

SHUNG SHUN STREET

LEGEND :

SUBJECT SITE

EGRESS ROUTE

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
-	-	-	-	-	-	-	-
A	TD'S COMMENTS INCORPORATED	JPP	5JUN25	-	-	-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

DEVELOPMENT EGRESS ROUTE

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	NTS	Date	FEB 2025	Drawing No.	3.3	Rev.	A

CHK50748310/TIA/F33-A.CDR/LLH/5JUN25

Original Size : A4

Internal Driveway

3.2.3 The vehicular accesses and the internal transport facilities are linked up by internal driveway. Car parking spaces are located at the two basement floors and the loading/unloading spaces are located at ground floor. There are total 66 private car parking spaces (included 2 accessible car parking spaces) and 3 loading/unloading bay (1 light goods vehicle space and 2 heavy goods vehicle spaces).
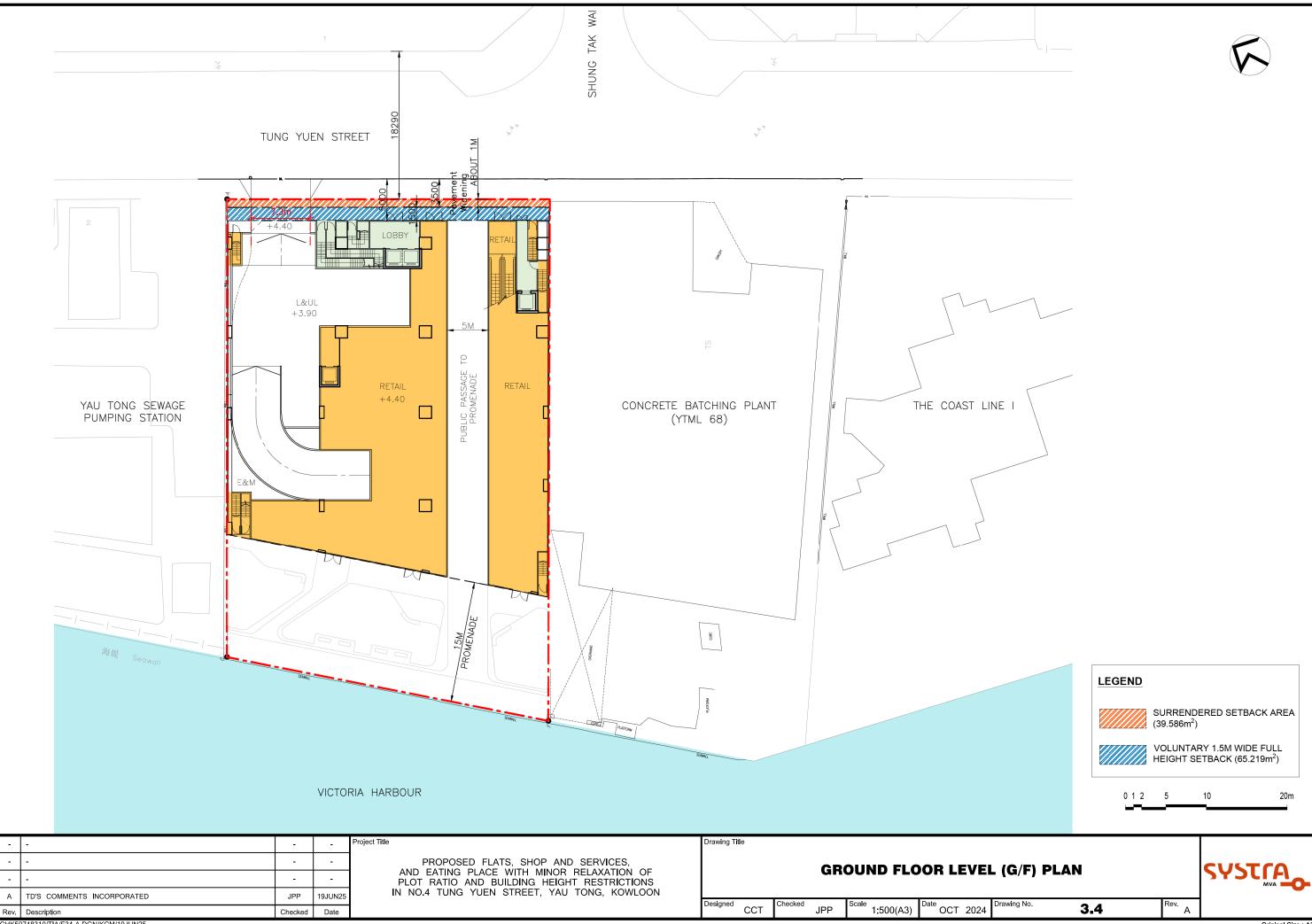
3.3 Internal Transport Facility

3.3.1 Provisions of internal transport facilities, including parking spaces, loading/unloading bays and etc., for No. 4 Tung Yuen Street Redevelopment are proposed in accordance with the relevant requirements stipulated in the latest Hong Kong Planning Standard Guideline (HKPSG). The location of loading/unloading bays, ramps and parking spaces area are shown in **Drawing 3.4 to 3.6**.

3.3.2 The proposed provisions have taken into consideration the factors of building function, residential flat mix and locality of No. 4 Tung Yuen Street Redevelopment. **Table 3.2** summarises the requirement and proposed provisions of internal transport facility of subject site.

Table 3.2   Proposed Internal Transport Facility

Component	HKPSG Requirements [1]				Parameters	Provision Range	Proposed Provision
Residential – 342 units							
Private Car Parking Space	GPS [2]	R1 [3]	R2 [4]	R3 [5]			
Flat Size (FS) ≤ 40m^2	1 space per 4-7 units	0.5	1.0	R3=1,when 2.00< PR ≤ 5.00; R3=0.90, when 5.00< PR ≤ 8.00	139 units	9-16	9
40m^2 < FS ≤ 70m^2		1.2			158 units	25-43	26
70m^2 < FS ≤ 100m^2		2.4			43 units	14-24	15
100m^2 < FS ≤ 130m^2		4.1			0 units	0	0
130m^2 < FS ≤ 160m^2		5.5			0 units	0	0
FS >160m^2		7.0			2 units	2-3	3
	Sub-total				342 units	50-86	53
Visitor Parking Space	5 spaces per block				1 block	5	5
	Sub-total					55-91	58
Motorcycle Parking Space	1 space per 100-150 units				342 units	3-4	4
Loading/Unloading Bay	1 bay per block				1 block	1	1 (HGV)

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 6

SHUNG TAK WAI

TUNG YUEN STREET

18290

ABOUT 1M
Pavement Widening

LOBBY

L&UL
+3.90

+4.40

5M

RETAIL
+4.40

RETAIL

RETAIL

PUBLIC PASSAGE TO PROMENADE

E&M

CONCRETE BATCHING PLANT
(YTML 68)

THE COAST LINE I

YAU TONG SEWAGE
PUMPING STATION

15M PROMENADE

海堤 Seawall

SEAWALL

SEAWALL

PLATFORM

VICTORIA HARBOUR

LEGEND

| | SURRENDERED SETBACK AREA (39.586m²) |
| | VOLUNTARY 1.5M WIDE FULL HEIGHT SETBACK (65.219m²) |

0 1 2   5   10   20m

	-	-	-	Project Title		Drawing Title	
-	-	-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON		**GROUND FLOOR LEVEL (G/F) PLAN**	
-	-	-	-				
A	TD'S COMMENTS INCORPORATED	JPP	19JUN25				
Rev.	Description	Checked	Date				

Designed CCT | Checked JPP | Scale 1:500(A3) | Date OCT 2024 | Drawing No. 3.4 | Rev. A

SYSTRA MVA

CHK50748310/TIA/F34-A.DGN/KCM/19JUN25

Original Size : A3

ABOUT 1M

E&M

LOBBY

E&M

CARPARK
(RESIDENTIAL 19)
−0.10

E&M

CARPARK
(RETAIL 8)
−0.10

E&M

E&M

LEGEND

SURRENDERED SETBACK AREA
(39.586m^2)

0 1 2   5   10   20m

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

FIRST BASEMENT LEVEL (B1) PLAN

Designed	CCT	Checked	JPP	Scale	1:500(A3)	Date	JUN 2025	Drawing No.	**3.5**	Rev.	-

SYSTRA
MVA

Original Size : A3

ABOUT 1M

E&M

LOBBY

E&M

E&M

CARPARK
(RESIDENTIAL 39)
-4.60

E&M

E&M

E&M

LEGEND

SURRENDERED SETBACK AREA
(39.586m^2)

0 1 2   5   10   20m

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES,
AND EATING PLACE WITH MINOR RELAXATION OF
PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

SECOND BASEMENT LEVEL (B2) PLAN

| Designed | CCT | Checked | JPP | Scale | 1:500(A3) | Date | JUN 2024 | Drawing No. | **3.6** | Rev. | - |

SYSTRA
MVA

Original Size : A3

Component	HKPSG Requirements [1]	Parameters	Provision Range	Proposed Provision
Commercial – retail – 2,177m²				
Private Car Parking Space	1 space per 150-300m² GFA	2,177.1m²	8-15	8
Motorcycle Parking Space	5%-10% of total car parking spaces	8-15 spaces	1-2	2
Loading/Unloading Bay	1 bay per 800-1,200m² GFA	2,177.1m²	2-3	2 (1 for HGV and 1 for LGV)
Total :				
Car Parking Space				66
Reserved Space for Disabilities	TPDM Volume 6, Chapter 8.5: 	Total No. of Car Parking Space in Lot	Required Space for Disabilities
---	---
1-50	1
51-150	2
151-250	3
251-350	4
351-450	5
Above 450	6		55-91 spaces	2	2 (Included in the above 66 spaces)
Motorcycle Parking Space				6
Loading/Unloading Bay				3 (2 for HGVs and 1 for LGV)

Remarks:
(1)   Provision requirements are based on the latest HKPSG Chapter 8, Section 7, unless specified otherwise.
(2)   GPS refers as Global Parking Standard.
(3)   R1 is the Demand Adjustment Ratio, subject to the corresponding unit size.
(4)   R2 is the Accessibility Adjustment Ratio, subject to the location of application site. Ratio of 1 is applied in this case, as the application site is not within the 500m-radius catchment of the nearest rail station.
(5)   R3 is the Domestic Plot Ratio.

3.3.3   **Table 3.2** suggests that the No. 4 Tung Yuen Street Redevelopment would provide 66 car parking spaces, in which 2 parking spaces would be reserved for disabilities. Besides, 6 motorcycle parking spaces and 3 loading/unloading bays (2 loading/unloading bays for HGVs and 1 loading/unloading bay for LGV) would be provided as ancillary transport facilities.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon   CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 7

4. TRAFFIC FORECASTS

4.1 Forecasting Assumptions and Methodology

Design Year

4.1.1 The tentative full occupation year of No. 4 Tung Yuen Street Redevelopment is year 2032. The design year of 2035, three years after full occupation, is therefore adopted in this study for forecasting and assessment purposes.

Future Road Network

4.1.2 Review of the Hong Kong Government planning documents reveals the one planned strategic highway structure in East Kowloon – Trunk Road T2 in Kai Tak, which would affect the traffic circulation of Yau Tong area.

4.1.3 Trunk Road T2 is a dual two-lane trunk road of approximately 3 km long connecting Central Kowloon Route (CKR) leading to Western Harbour Crossing (WHC) on the West, and TKO-LTT leading to the Cross Bay Link on the East. Trunk Road T2 runs along South East Kowloon connecting CKR at its west and TKO-LTT at its east.

4.1.4 The major function of Trunk Road T2 is to relieve the internal traffic loading of East Kowloon. Trunk Road T2, together with CKR and TKO-LTT will form the Route 6 alignment in the strategic road network, providing an east-west express link across Kowloon to relief the existing heavily utilised road network in the Central and East Kowloon areas. Together with CKR, the tentative commissioning year of Trunk Road T2 is 2026.

4.1.5 The latest future planned Trunk Road T2 alignment is shown in **Drawing 4.1**.

Traffic Growth Rate

4.1.6 To estimate the year 2035 reference traffic flows in the local road network, an appropriate growth factor was identified for the area. The derivation of the growth rate is determined with reference to population data, historical growth trends and area planning data, which are summarised below.
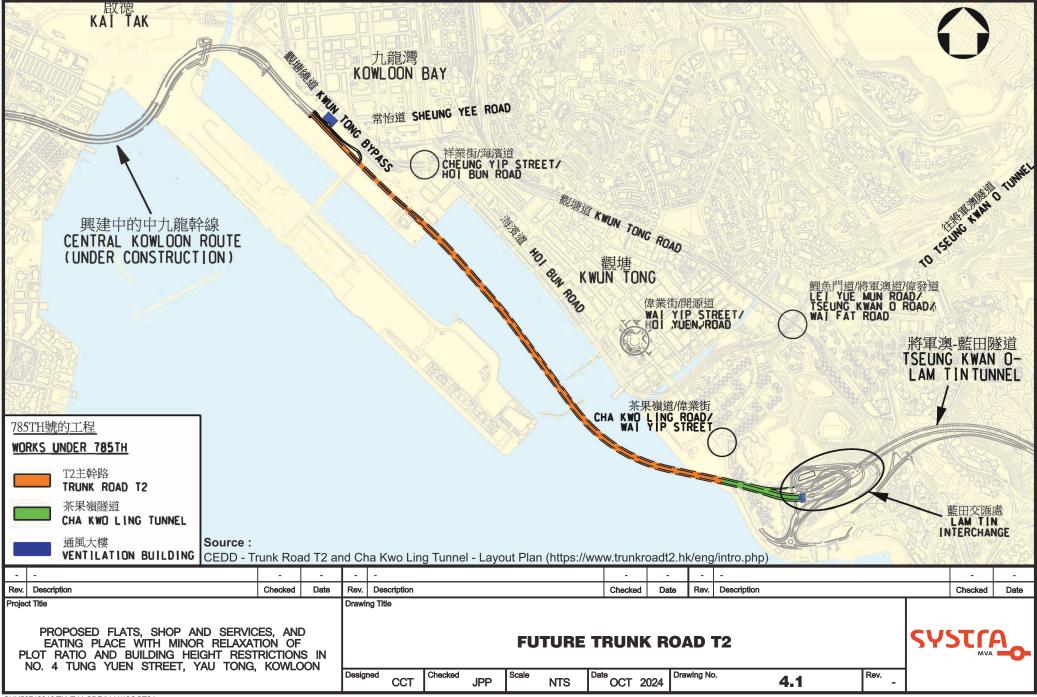
Population Data (From The Census and Statistics Department (C&SD)

4.1.7 According to the Census and Statistics Department (C&SD), the Hong Kong resident population will increase to 8.19 million in 2046, and the average growth rate from years 2024 to 2046 is +0.38%. The Hong Kong Resident Population between Year 2024 and Year 2046 are summarised in **Table 4.1**.

Table 4.1   Hong Kong Resident Population between Year 2024 and Year 2046

Year	Hong Kong Resident Population
2024	7,526,800
2030	7,777,100
2032	7,862,100
2035	7,987,900
2040	8,137,300

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon   CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 8

啟德
KAI TAK

九龍灣
KOWLOON BAY

觀塘繞道
KWUN TONG BYPASS

常怡道 SHEUNG YEE ROAD

興建中的中九龍幹線
CENTRAL KOWLOON ROUTE
(UNDER CONSTRUCTION)

祥業街/海濱道
CHEUNG YIP STREET/
HOI BUN ROAD

觀塘道 KWUN TONG ROAD

往將軍澳隧道
TO TSEUNG KWAN O TUNNEL

海濱道
HOI BUN ROAD

觀塘
KWUN TONG

偉業街/開源道
WAI YIP STREET/
HOI YUEN ROAD

鯉魚門道/將軍澳道/偉發道
LEI YUE MUN ROAD/
TSEUNG KWAN O ROAD/
WAI FAT ROAD

將軍澳-藍田隧道
TSEUNG KWAN O-
LAM TIN TUNNEL

茶果嶺道/偉業街
CHA KWO LING ROAD/
WAI YIP STREET

藍田交匯處
LAM TIN
INTERCHANGE

785TH號的工程
WORKS UNDER 785TH

T2主幹路
TRUNK ROAD T2

茶果嶺隧道
CHA KWO LING TUNNEL

通風大樓
VENTILATION BUILDING

Source :
CEDD - Trunk Road T2 and Cha Kwo Ling Tunnel - Layout Plan (https://www.trunkroadt2.hk/eng/intro.php)

Rev.	Description		Checked	Date	Rev.	Description		Checked	Date	Rev.	Description		Checked	Date
-		-	-	-	-		-	-	-	-		-	-	-

Project Title	Drawing Title		
PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON	**FUTURE TRUNK ROAD T2**		

Designed	CCT	Checked	JPP	Scale	NTS	Date	OCT 2024	Drawing No.	**4.1**	Rev.	-

SYSTRA MVA

CHK50748310/TIA/F41.CDR/LLH/10OCT24

Original Size : A4

Year	Hong Kong Resident Population
2045	8,190,700
2046	8,190,400
Annual Growth Rate (p.a.) – 2046/2024	**+0.38%**

Historical Growth Trends

4.1.8   Reference has also been made to the historic records extracted in the latest Annual Traffic Census (ATC) published by Transport Department, the Average Annual Daily Traffic (AADT) of the nearby count station between Year 2019 and Year 2023 have been taken into account to establish the historical growth trend, the findings are summarised in **Table 4.2** and location of total 7 count stations are indicated in **Drawing 4.2**.

Table 4.2   AADT of nearby ATC Traffic Counts between Years 2019 to 2023
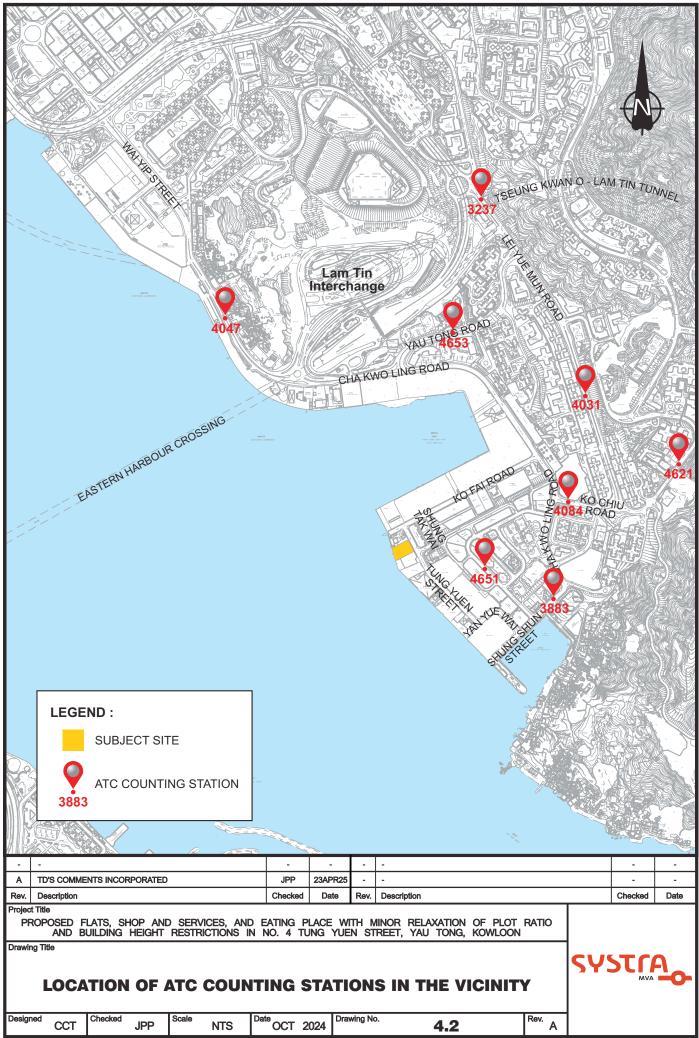
Road	Stn No.	Annual Average Daily Traffic (AADT)					Growth Rate (p.a.)
		2019	2020	2021	2022	2023	2023/ 2019
Sze Shan St (Cha Kwo Ling Rd - Shung Shun St)	4651	1,270	1,260	1,500	1,500	1,630	+6.44%
Shung Shun Street & Yan Wing Street (Ko Chiu Road - Sam Ka Tsuen Ferry Pier)	3883	11,400*	10,670*	11,900	11,000	11,610	+0.46%
Ko Chiu Road (Cha Kwo Ling Road - Lei Yue Mun Road)	4084	12,170*	11,390*	11,880*	13,120	13,580	+2.78%
Ko Chiu Road (Lei Yue Mun Road - Lei Yue Mun Road)	4621	8,390	8,690	9,390	8,590	9,180	+2.28%
Lei Yue Mun Road (Ko Chiu Road - Ko Chiu Road)	4031	20,860*	19,530*	20,360*	20,290	20,260	-0.73%
Yau Tong Road (Lei Yue Mun Road - Cha Kwo Ling Road)	4653	6,830	7,010	8,170	7,440	7,820	+3.44%
Lei Yue Mun Rd (Ko Chiu Rd - Kai Tin Rd)	3237	36,970	34,600	36,080	34,380	39,660	+1.77%
Total		**97,890**	**93,150**	**99,280**	**96,320**	**103,740**	**+1.46%**

Note: (*) Estimated by Growth Factor.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 9

LEGEND :

▢ SUBJECT SITE

📍 ATC COUNTING STATION
3883

Map labels:
- WAI YIP STREET
- TSEUNG KWAN O - LAM TIN TUNNEL
- 3237
- LEI YUE MUN ROAD
- Lam Tin Interchange
- 4047
- 4653
- YAU TONG ROAD
- CHA KWO LING ROAD
- 4031
- EASTERN HARBOUR CROSSING
- KO FAI ROAD
- 4621
- KO CHIU ROAD
- 4084
- CHA KWO LING ROAD
- SHUNG TAK WAI
- TUNG YUEN STREET
- 4651
- YAN YUE WAI
- 3883
- SHUNG SHUN STREET

4.1.9   As suggested in **Table 4.2** above, the average annual growth rate of the AADT of the nearby count stations from Year 2019 to 2023 is +1.46% per annum.

Planning Data (From Working Group on Population Distribution Projections (WGPD)

4.1.10   Based on the projections of population distribution from Working Group on Population Distribution Projections (WGPD), the population from 2021 to 2031 for Kwun Tong District has been projected. The average annual growth rate from years 2023 to 2031 is illustrated in **Table 4.3**.

Table 4.3   Projected Population of Kwun Tong District, 2021-2031

Year	Population
2021	673,200
2022	669,000
2023	670,800
2024	668,500
2025	675,400
2026	682,500
2027	682,700
2028	681,800
2029	693,100
2030	685,400
2031	690,700
Growth Rate (p.a.) – 2031/2023	**+0.37%**

4.1.11   In order to ensure the robust forecast scenario, the annual growth rate of +1.46% per annum derived from AADT of the nearby count stations from Year 2019 to 2023 is adopted, to produce the year 2035 traffic forecasts from the 2024 observed traffic flows.

Nearby Planned Developments

4.1.12   Large portion of Yau Tong industrial area is currently zoned into "CDA", "R(E)" and "C" uses in the latest Outline Zoning Plan (OZP) and a number of residential developments are being committed in the recent years. The substantial change of land use would have significant impact to the current local traffic pattern in the future year.

4.1.13   The planned and committed developments in Yau Tong area, as listed in **Table 4.4**, which would have traffic contribution to the road network in the vicinity, have been considered in the traffic forecast for the year 2035. The peak hour traffic trips of each developments are also summarised in **Table 4.4**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon   CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 10

Table 4.4   Estimated Trip Generations of Nearby Planned Developments

Ref.	Development	Type	AM Peak Gen	AM Peak Att	PM Peak Gen	PM Peak Att
			Peak Hour Traffic Trip (pcu/hr)			
			AM Peak		**PM Peak**	
			Gen	**Att**	**Gen**	**Att**
1.	5 and 8 Tung Yuen Street, and adjoining Government Land ("CDA(1) Zone")	- Private Residential: 903 units [1]	37	12	14	24
2.	Yau Tong Inland Lot s 4B and 9, Yau Tong Marine Lot 57 and adjoining Government Land, Tung Yuen Street ("CDA(3) Zone")	- Private Residential: 1,393 units [1]	57	19	21	38
3.	Lei Yue Mun Estate Phase 4	- Public Housing: 2,021 units [3] - GIC [3]	97	75	57	70
4.	New Kowloon Inland Lot No. 6593 at Ko Chiu Road	- Private: 634 units [4] - Retail: 5,520m^2 GFA [4]	57	39	35	42
5.	New Kowloon Inland Lot No. 6602 at Ko Chiu Road (Yau Tong Ventilation Building Redevelopment)	- Private Residential: 748 units [4]	53	31	21	27
6.	Public Housing Development at Pik Wan Road	- Public Housing: 3,208 units [4] - GIC [4]	214	151	110	143
7.	28 Sze Shan Street	- Private Residential: 92 units [1] - Retail: 2,061m^2 GFA [1]	24	15	15	20
8.	Ex-Cha Kwo Ling Kaolin Mine Site (Phase 2 Development)	- Public Housing: 2,250 units [5] - Primary School: 30 class [6]	112	88	71	82
9.	Various Lots and Adjoining Government Land at Yau Tong Bay, Yau Tong, Kowloon (Yau Tong Bay Development)	- Private Residential: 7,078 units [1] - Retail: 8,290m^2 GFA [1] - Hotel: 733 [1] - Kindergarten and GIC	445	261	246	353
10.	Redevelopment of Yau Tong Industrial Building Block 4	- Private Residential: - 676 units [4] - Commercial: 3,871.7m^2 GFA [1] - Day Care Centre for the Elderly [4]	41	23	27	36
11.	Redevelopment of Olympic Godown	- Private Residential 483 units [1] - Commercial: 3,587m^2 GFA [1]	28	14	18	25
12.	Gloria Weaving & Knitting Factory Site	- Transitional Housing 224 units [4]	9	7	5	6

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon   CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page 11**

| Ref. | Development | Type | Peak Hour Traffic Trip (pcu/hr) | | | |
| | | | AM Peak | | PM Peak | |
			Gen	Att	Gen	Att
13.	Public Housing Development at Cha Kwo Ling Village	- Public Housing: 4,500 units[1] - Retail: 29,097.05 m² GFA[4]	97	90	140	166
14.	Proposed Commercial Development at Yau Tong Marine Lots 73 and 74 in Yau Tong Bay	- Retail: 2,560m² GFA[1] - Office: 48,040 m² GFA[1]	86	123	82	65
15.	Kwun Tong Action Area	- Retail: 17,000m² GFA[4] - Office: 62,600 m² GFA[4] - Cultural/Institutional uses: 1,700m² - PTI: Approx. 7,050 m²	147	198	152	134
16.	18 Tung Yuen Street	- Private Residential: 224 units [1]	35	14	13	19

Remarks:
(1)   As extracted from the latest approved planning application.
(2)   As extracted from the Sale Brochure.
(3)   As extracted from the Planning Brief of Lei Yue Mun Estate Phase 4 published by Hong Kong Housing Authority
(4)   As extracted from newspaper articles / online information
(5)   As extracted from Public Housing Development at Ex-Cha Kwo Ling Kaolin Mine Site
(6)   As extracted from the Land Supply Initiatives, Paper No. 03/2017 from Task Force on Land Supply, Development Bureau and Planning Review on Development of Ex-Cha Kwo Ling Kaolin Mine Site Final Report (Quotation Ref.: PLNQ21/2011)
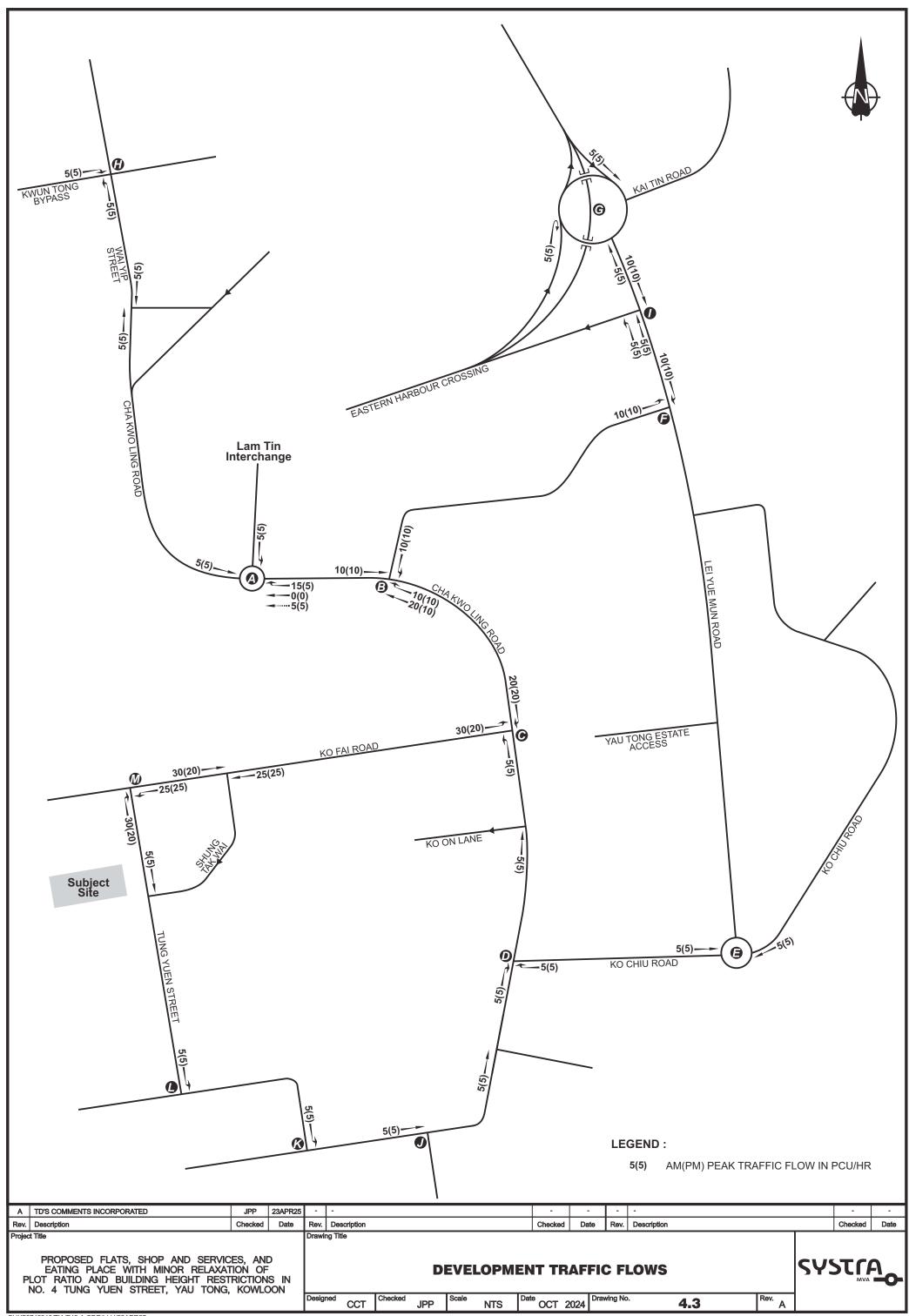
4.2   Forecasting Scenarios

4.2.1   The derived peak hour traffic trips of the subject site would be assigned onto the local road network in accordance with the observed traffic circulation pattern and the future planned road network described in **Section 4.1**. The distributions of the peak hour development traffic trips are shown in **Drawing 4.3**.

The Redevelopment Traffic Trips

4.2.2   The development peak hour traffic trips of the No. 4 Tung Yuen Street are estimated in accordance with the appropriate trip rates extracted from the latest T.P.D.M. Volume 1 Chapter 3 published by Transport Department with respect to the development parameters summarised in **Table 3.1**. The adopted trip rates and the estimated development traffic trips are summarised in **Table 4.5**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 12

LEGEND :

5(5)   AM(PM) PEAK TRAFFIC FLOW IN PCU/HR

A	TD'S COMMENTS INCORPORATED	JPP	23APR25	-	-				-	-	-			-	-
Rev.	Description	Checked	Date	Rev.	Description				Checked	Date	Rev.	Description		Checked	Date

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

DEVELOPMENT TRAFFIC FLOWS

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	NTS	Date	OCT 2024	Drawing No.	**4.3**	Rev.	A

CHK50748310/TIA/F43-A.CDR/LLH/23APR25

Original Size : A3

Table 4.5   Estimated No. 4 Tung Yuen Street Redevelopment Traffic Trips

| | Peak Hour Traffic Trip (pcu/hr) | | | |
| | AM Peak | | PM Peak | |
	Generation	Attraction	Generation	Attraction
Subject Site				
Residential				
Average unit size (m^2)	43 m^2			
Trip rates (pcu/hr/flat) [1]	0.0718	0.0425	0.0286	0.037
No. of units	342			
Trips (pcu/hr)	**25**	**15**	**10**	**13**
Commercial – retail				
Trip rates (pcu/100m^2/hr) [2]	0.2296	0.2434	0.3100	0.3563
GFA (m^2)	2,177.1 m^2			
Trips (pcu/hr)	5	6	7	8
Total	**30**	**21**	**17**	**21**

Remarks:
(1)   Mean values of residential trip rates for the unit size of 60m^2 are adopted as the average unit size of the proposed scheme is around 43m^2.
(2)   Mean values of trip rates are adopted.
(3)   Nominal traffic trips are adopted.

4.2.3   A two-way traffic trip generated by No. 4 Tung Yuen Street Redevelopment in 2035 will be 51 pcu/hr and 38 pcu/hr in the AM and PM peak respectively.

4.2.4   Currently, the industrial building on the site generate a two-way vehicles traffic trip of 8 pcu/hr and 9 pcu/hr during the AM and PM peak respectively. The current (2024) and future (2035) traffic trip of this site are summarised in **Table 4.6**.

Table 4.6   Trip Generations of Current Land-use and Proposed Future Land-use

| | Peak Hour Traffic Trip (pcu/hr) | | | |
| | AM Peak | | PM Peak | |
	Generation	Attraction	Generation	Attraction
Observed 2024	6	2	5	4
Forecasts 2035	30	21	17	21
Net Difference (Forecasts - Observed)	+24	+19	+12	+17

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page 13**
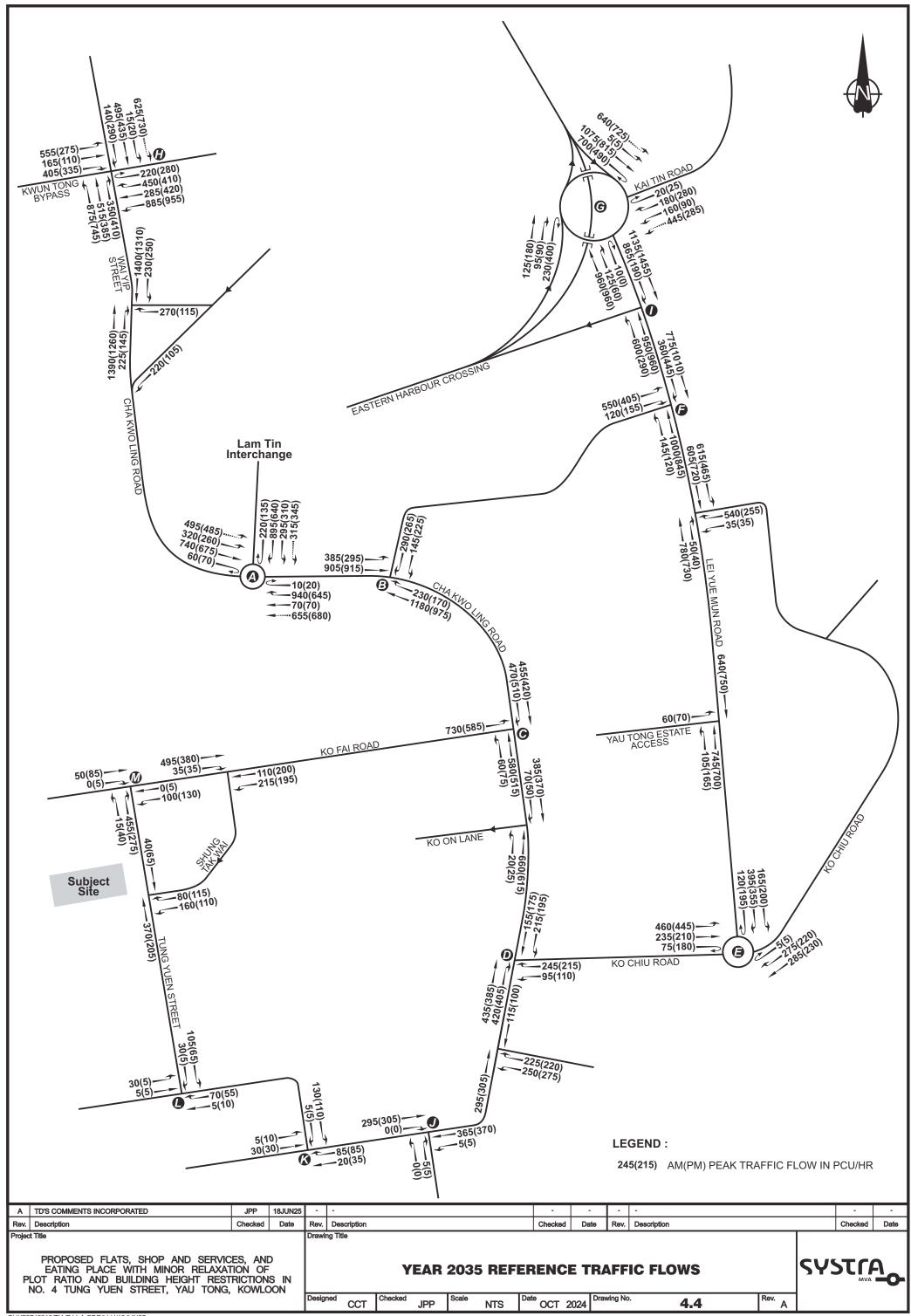
4.2.5   The result in **Table 4.6** reveals that the net difference is rather small in both peak hours. The proposed development will have little impact on the traffic of the vicinity in the peak hours.

4.2.6   The annual traffic growth rate and the nearby planned developments as discussed in **Section 4.1** would be considered to produce the year 2035 background traffic flows during the typical weekday morning and evening peak hours of the local road network.

4.2.7   The traffic trips of No. 4 Tung Yuen Street Redevelopment would be superimposed onto the background traffic flows to produce the anticipated year 2035 peak hour traffic flows for reference and design scenarios.

4.2.8   Based on an annual growth rate of +1.46% p.a. from 2024 to 2035, and the traffic generation of committed and potential developments is shown in **Table 4.4**. The reference traffic flows and design traffic flows in year 2035 as shown in **Drawing 4.4** and **Drawing 4.5** respectively.

2035 Reference Flows = 2024 Observed Traffic Flows + 2024-2035 background traffic growth + Committed Development Traffic
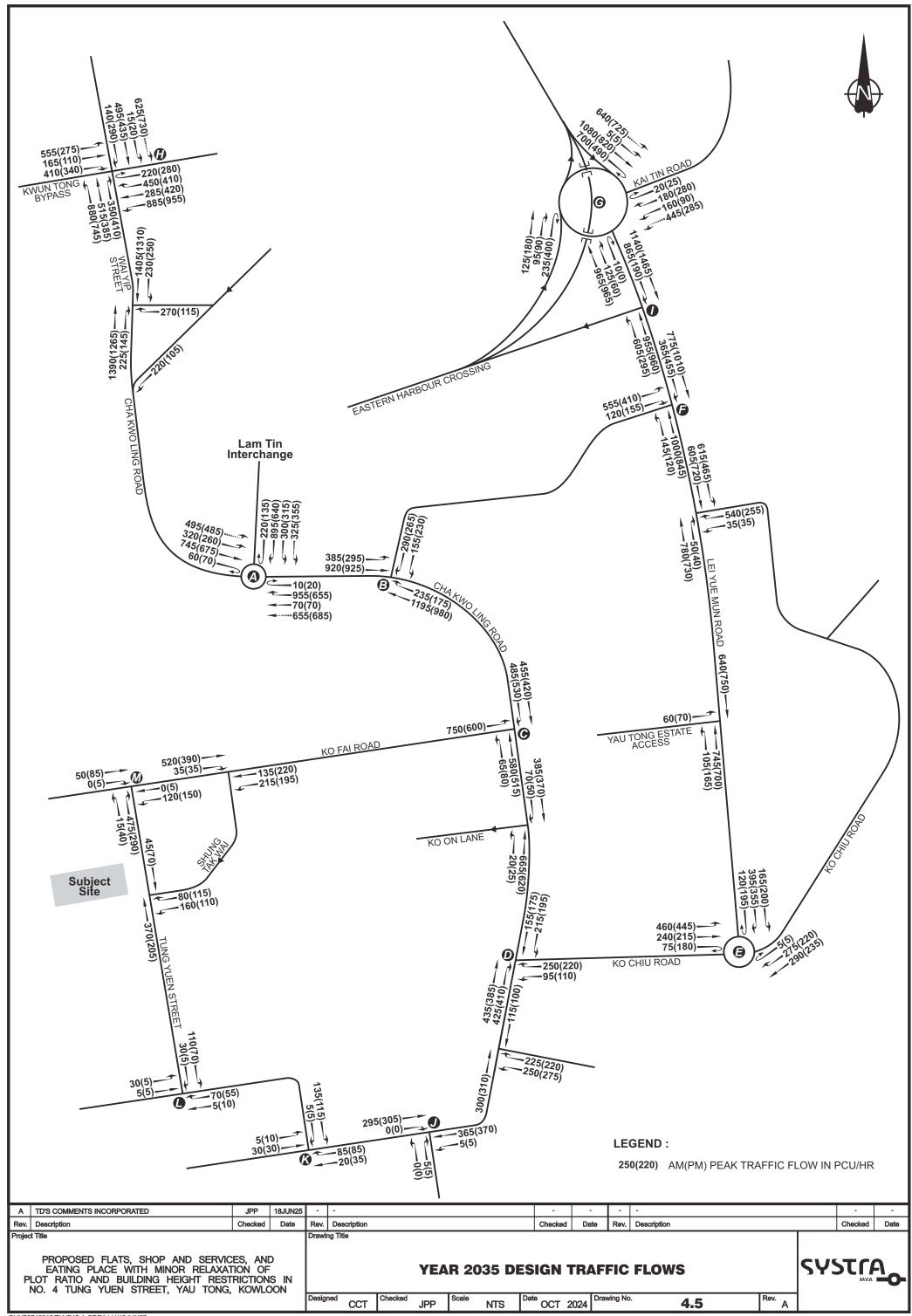
2035 Design Flows = 2024 Observed Traffic Flows + 2024-2035 background traffic growth - 2024 Application Site Traffic Flows + Proposed Development Traffic Flows
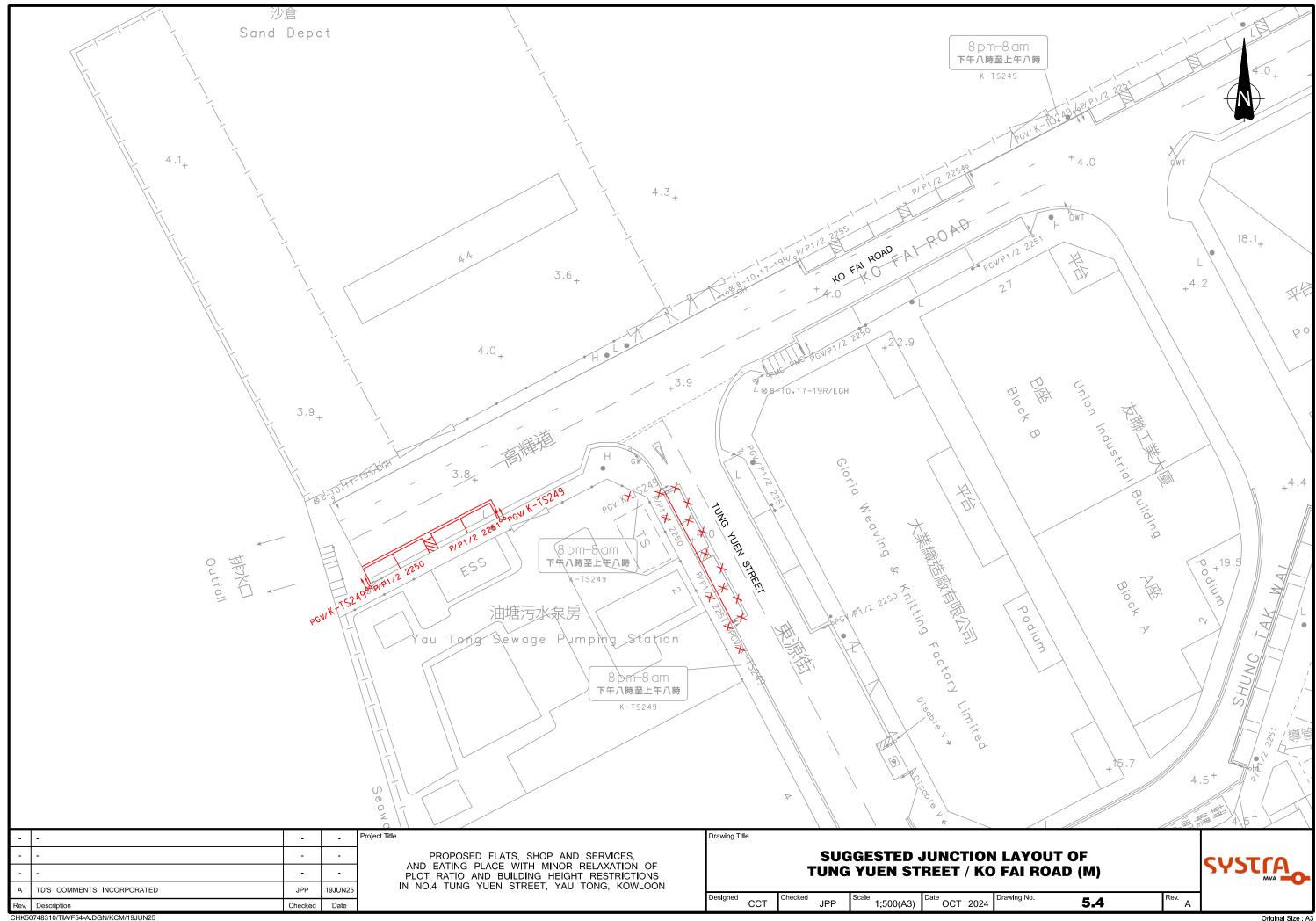
Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 14

YEAR 2035 REFERENCE TRAFFIC FLOWS

LEGEND :

245(215)   AM(PM) PEAK TRAFFIC FLOW IN PCU/HR

A	TD'S COMMENTS INCORPORATED		JPP	18JUN25	-	-			-	-	-	-			-	-
Rev.	Description		Checked	Date	Rev.	Description			Checked	Date	Rev.	Description			Checked	Date

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

YEAR 2035 REFERENCE TRAFFIC FLOWS

Designed	CCT	Checked	JPP	Scale	NTS	Date	OCT 2024	Drawing No.	**4.4**	Rev.	A

SYSTRA
MVA

CHK50748310/TIA/F44-A.CDR/LLH/18JUN25

Original Size : A3

YEAR 2035 DESIGN TRAFFIC FLOWS

625(730)
15(20)
495(435)
140(290)

555(275)
165(110)
410(340)

220(280)
450(410)
285(420)
885(955)

KWUN TONG BYPASS

350(410)
515(385)
880(745)

WAI YIP STREET

140(1310)
230(205)

270(115)

325(145)
1360(965)

220(105)

CHA KWO LING ROAD

H

640(725)
5(5)
1080(820)
700(490)

KAI TIN ROAD

20(25)
180(280)
160(90)
445(285)

G

125(180)
95(90)
235(400)

10(0)
125(60)
965(965)

1140(1465)
865(190)

I

955(960)
605(295)

775(1010)
365(455)

EASTERN HARBOUR CROSSING

555(410)
120(155)

F

1000(840)
605(720)
145(120)

615(465)

540(255)
35(35)

50(40)
780(730)

LEI YUE MUN ROAD
640(750)

Lam Tin Interchange

495(485)
320(260)
745(675)
60(70)

220(135)
895(640)
300(315)
325(355)

385(295)
920(925)

290(265)
155(230)

A

10(20)
955(655)
70(70)
655(685)

B

235(175)
1195(980)

CHA KWO LING ROAD

455(420)
485(530)

750(600)

C

KO FAI ROAD

580(515)
65(80)

385(370)
70(50)

60(70)

YAU TONG ESTATE ACCESS

745(700)
105(165)

520(390)
35(35)

50(85)
0(5)

M

0(5)
120(150)

135(220)
215(195)

475(290)
15(40)

SHUNG TAK WAI

45(70)

Subject Site

KO ON LANE

665(620)
20(25)

155(175)
215(195)

80(115)
160(110)

370(205)

TUNG YUEN STREET

110(70)
30(5)

30(5)
5(5)

L

70(55)
5(10)

135(115)
5(5)

D

435(385)
425(410)
115(100)

250(220)
95(110)

KO CHIU ROAD

300(310)

225(220)
250(275)

165(200)
395(355)
120(195)

460(445)
240(215)
75(180)

E

5(5)
275(220)
290(235)

KO CHIU ROAD

5(10)
30(30)

K

85(85)
20(35)

295(305)
0(0)

J

365(370)
5(5)

5(5)
0(0)

LEGEND :

250(220)   AM(PM) PEAK TRAFFIC FLOW IN PCU/HR

A	TD'S COMMENTS INCORPORATED	JPP	18JUN25	-	-				-	-	-				-	-
Rev.	Description	Checked	Date	Rev.	Description				Checked	Date	Rev.	Description			Checked	Date

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO. 4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

YEAR 2035 DESIGN TRAFFIC FLOWS

Designed	CCT	Checked	JPP	Scale	NTS	Date	OCT 2024	Drawing No.	4.5	Rev.	A

SYSTRA MVA

CHK50748310/TIA/F45-A.CDR/LLH/18JUN25

Original Size : A3

5. TRAFFIC IMPACT ASSESSMENT

5.1 Junction Operational Performance

5.1.1 The identified 13 key local junctions would be assessed in accordance with the anticipated year 2035 traffic flows for both reference and design scenarios in order to investigate the traffic impact of the proposed scheme with respect to the scenario without the subject development.

5.1.2 The J/O Cha Kwo Ling Road / Ko Fai Road (C) has been planned to be converted into a signalised junction under the previously approved Section 16 application of the Yau Tong Bay Comprehensive Development, the indicative planned junction layout is shown in **Drawing 5.1**.

5.1.3 The layout of J/O Cha Kwo Ling Road / Ko Chiu Road(D) has been modified according to the on-going improvement works under the PWP Item No. B812CL. The indicative planned junction layout is shown in **Drawing 5.2**.

5.1.4 An additional traffic lane from Lei Yue Mun Road Northbound to Slip Road to EHC at J/O Lei Yue Mun Road / Slip Road to EHC (I) has been planned, as shown in **Drawing 5.3**.

5.1.5 For the J/O Tung Yuen Street / Ko Fai Road (M), the four current on-street parking spaces are proposed to be cancelled. The planned junction layout is shown in **Drawing 5.4**. And there is an ongoing sewage rising mains construction project along Ko Fai Road by the Drainage Services Department (PWP No. 4420DS), before which 4 on-street private car parking spaces were located west of the access of Yau Tong Sewage Pumping Station. The 4 spaces near the Northbound approach on Tung Yuen Street are believed to be relocated from Ko Fai Road due to the construction works. The project is expected to finish in mid-2026, so relocating these 4 spaces back to Ko Fai Road afterwards is reasonable, without lowering the capacity of Junction M.

5.1.6 The assessment results are summarised in **Table 5.1**. The junction calculation sheets are attached in **Appendix B**.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 15

PROPOSED METHOD OF CONTROL

| 1 | 2 | 3 |

5.2

5.2
+

4.8
+

香港（東）
Hong Kong (E)
K/KT/KoF-01

4.8
+

4.9
+

4.8

KO FAI ROAD

KO FAI ROAD

平台

20.0+

4.6

4.5
+

油塘消防局
Yau Tong Fire Station

CUL

CHA KWO LING ROAD

7.9

5.3

30.1
+

VS

VS

VS

VS

VS

VS

VS

VS

VS

Podium
平台

18.2+

31.9
+

50

Yau Tong
Public Transport Interchange
油塘
公共運輸交滙處
K/KT/ChaKL-11

-	-			-	-	Project Title	Drawing Title		
-	-			-	-	PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON	**PLANNED JUNCTION LAYOUT OF CHA KWO LING ROAD / KO FAI ROAD (C)**		
-	-			-	-				
A	TD'S COMMENTS INCORPORATED			JPP	05JUN25				
Rev.	Description			Checked	Date				

| Designed | CCT | Checked | JPP | Scale | 1:500(A3) | Date | FEB 2025 | Drawing No. | **5.1** | Rev. | A |

CHK50748310/TIA/F51-A.DGN/KCM/23APR25

Original Size : A3

METHOD OF CONTROL

1	2	3	4

Domain
(Bus Terminus under)

N

CHA KWO LING ROAD

生利工業中心
Sunray
Industrial Centre

油塘工業大廈第三座
Yau Tong Industrial
Building Block 3

N-TS84

Fai
Building

Podium

KO CHIU ROAD

鯉魚門
Lei Yue Mun

第一座
K/KT/KoC-07
Tower 1

油塘
公共運輸交滙處
Yau Tong
Public Transport Interchange

第一座
K/KT/KoC-08
Tower 2

Except goods vehicles
Loading/unloading
貨車上落貨除外

嘉華商場

嘉榮街

KA-WING

NOTE: ROAD MARKINGS JUST FOR ILLUSTRATION PURPOSE

PLANNED ROAD WIDENING SCHEME NEAR
THE JUNCTION OF LEI YUE MUN ROAD / SLIP ROAD TO
EASTERN HARBOUR CROSSING (I)

Map labels:
- LEI YUE MUN ROAD
- 將軍澳－藍田隧道
- 藍田救護站
- Lam Tin Ambulance Depot
- 38.0
- 27.6
- 37.0
- 25.4
- 30
- 60
- CUL
- Lam Tin Ambulance Depot only 祇往藍田救護站 K/KT/LeiYueM-P07 WIP Jun 2023
- WIP Jun 2023
- 隧道 Tunnel Portal
- Tun Area Sig
- SLIP ROAD TO EHC
- TSEUNG LAM HIGHWAY
- Road
- 平台 Podium
- 信麗樓 Shun Lai House
- 41.8
- 50.1
- CW
- Lei Yue Mun 鯉魚門 Cha Kwo Ling 茶果嶺 K/KT/LeiYM-17
- N-TS84
- Tr Sq Ah Chi Md Sch N-TS84
- 35.8
- Lam Tin (South) 藍田 (南) Kwong Tin Estate 廣田邨 K/KT/LeiYM-18
- WIP 2023
- 觀塘 Kwun Tong Tseung Kwan O 將軍澳
- Hong Kong (E) 香港 (東)
- K/KT/LeiYM-21A
- 觀塘 Kwun Tong Tseung Kwan O House
- LEI YUE MUN ROAD
- CUL
- NU-TTR
- 34.9
- 60

沙倉
Sand Depot

8pm-8am
下午八時至上午八時
K-TS249

KO FAI ROAD
KO FAI ROAD

高輝道

TUNG YUEN STREET

Gloria Weaving & Knitting Factory Limited
大業繡造廠有限公司

Union Industrial Building
方聯工業大廈

B座
Block B

A座
Block A

平台
Podium

ESS

8pm-8am
下午八時至上午八時
K-TS249

8pm-8am
下午八時至上午八時
K-TS249

油塘污水泵房
Yau Tong Sewage Pumping Station

Outfall
排水口

SHUNG TAK WAI

東源街

Table 5.1   Junction Operational Performance in Year 2035

Ref. [1]	Junction	RC/RFC [6]			
		Reference		Design	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Cha Kwo Ling Road / Lam Tin Interchange	0.64	0.49	0.65	0.49
B	Cha Kwo Ling Road / Yau Tong Road	18%	35%	16%	34%
C	Cha Kwo Ling Road / Ko Fai Road[2]	80%	79%	75%	74%
D	Cha Kwo Ling Road / Ko Chiu Road[3]	32%	40%	32%	39%
E	Lei Yue Mun Road / Ko Chiu Road	0.36	0.39	0.36	0.39
F	Lei Yue Mun Road / Yau Tong Road	84%	82%	84%	81%
G	Kai Tin Road / Lei Yue Mun Road	0.94	0.71	0.94	0.71
H	Wai Yip Street / Wai Fat Road	17%	19%	16%	19%
I	Lei Yue Mun Road / Slip Road to EHC[4]	16%	107%	16%	106%
J	Cha Kwo Ling Road / Shung Shun Road	0.16	0.17	0.16	0.17
K	Shung Shun Road / Yan Yue Wai	0.07	0.06	0.07	0.06
L	Tung Yuen Street / Yan Yue Wai	0.05	0.01	0.05	0.01
M	Tung Yuen Street / Ko Fai Road[5]	0.79	0.53	0.83	0.55

Remarks:

(1)   Refer to **Drawing 2.2**;

(2)   Junction Layout as shown in **Drawing 5.1**;

(3)   Junction Layout as shown in **Drawing 5.2;**

(4)   Junction Layout as shown in **Drawing 5.3;**

(5)   Junction Layout as shown in **Drawing 5.4;**

(6)   The operational performance of a signal junction is represented in Reserve Capacity (RC), which is defined as overloaded while the RC is less than 0%, The operational performance of a priority/roundabout is represented in Ratio to Flow Capacity (RFC), which is defined as overloaded if RFC over 1.00.

5.1.7   The results in **Table 5.1** indicate that the identified key junctions would operate within capacities with the Proposed Development in Year 2035, the operational performance of all key junctions would be similar for the reference and design scenarios in year 2035. Therefore, it is anticipated that the Proposed Development would not induce significant traffic impact to the surrounding road network.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 16

6. PUBLIC TRANSPORT ASSESSMENT

6.1 Current Public Transport Services in the Vicinity

6.1.1 Road-based public transport services, such as franchised buses and GMB are provided in the vicinity of the proposed development. public transport occupancy surveys were conducted at Shung Tak Wai bus stop from 7:30-8:30 on 23th April 2025, to identify if there is surplus in the current public transport services. Details of the current services of franchised bus and GMB route and the survey results are listed in **Table 6.1**. Location of the public transport services in the vicinity are also shown in **Drawing.6.1**. And the pedestrian routes from subject site to nearby public transport facilities is shown in **Drawing. 6.2**.

Table 6.1   Existing Road-based Public Transport Services in the Vicinity (Peak Hour)

Mode	Route No.	From	To	Observed Vehicular Trips per hour (A)	Passenger capacity per hour (B)[1]	Surveyed passengers on board arriving bus stop (C)	Total no. of Boarding Passengers (D)	Total no. of Alighting Passengers (E)	Surplus Capacity (B)–(C)–(D)+(E)
To Tsim Sha Tsui/Sam Ka Tsuen/ Lam Tin									
Bus	14X	Shung Tak Wai	Tsim Sha Tsui	4	360	-	42	-	318
GMB	24	Lam Tin (Ping Tin PTI)	Sam Ka Tsuen Ferry/ Lam Tin (Ping Tin PTI)	6	96	24	2	0	70

Remarks:
(1)   Assume 16 passengers per GMB and 90 passengers per bus.

6.2 Additional Traffic Demand from the Proposed Development and Other New Residential Developments in the Vicinity
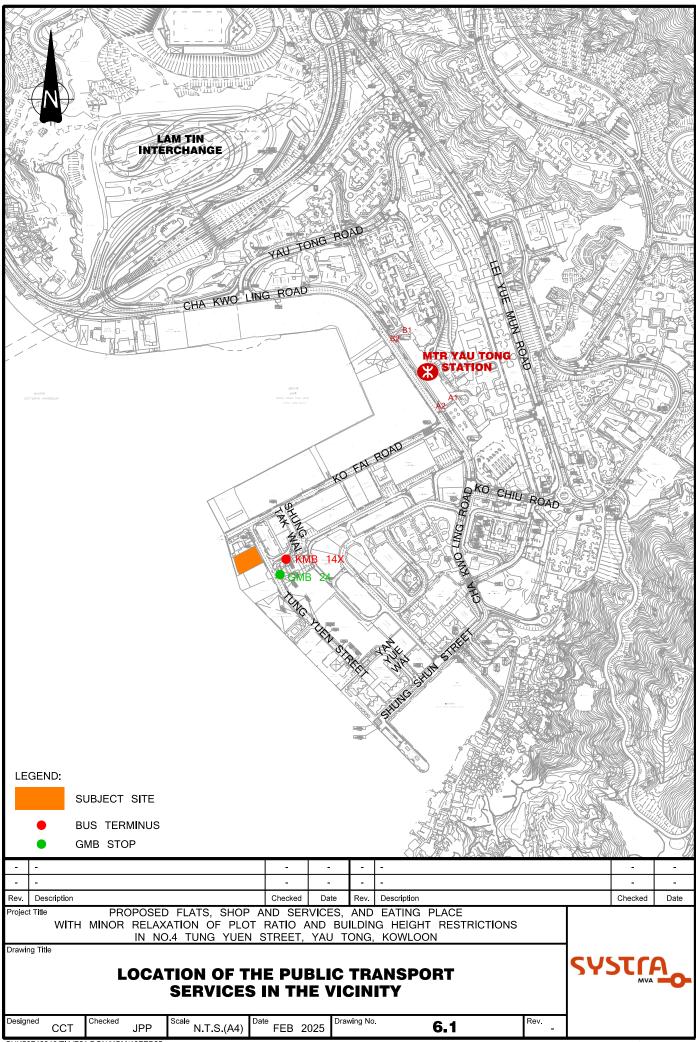
6.2.1 To be consistent with the annual traffic growth rate from 2025 to 2035, a +1.46% p.a. growth rate is applied to the 2025 surveyed passenger demand to estimate the 2035 reference demand for public transport. The detail of estimated passenger demand in design year 2035 are summarized in **Table 6.2**.
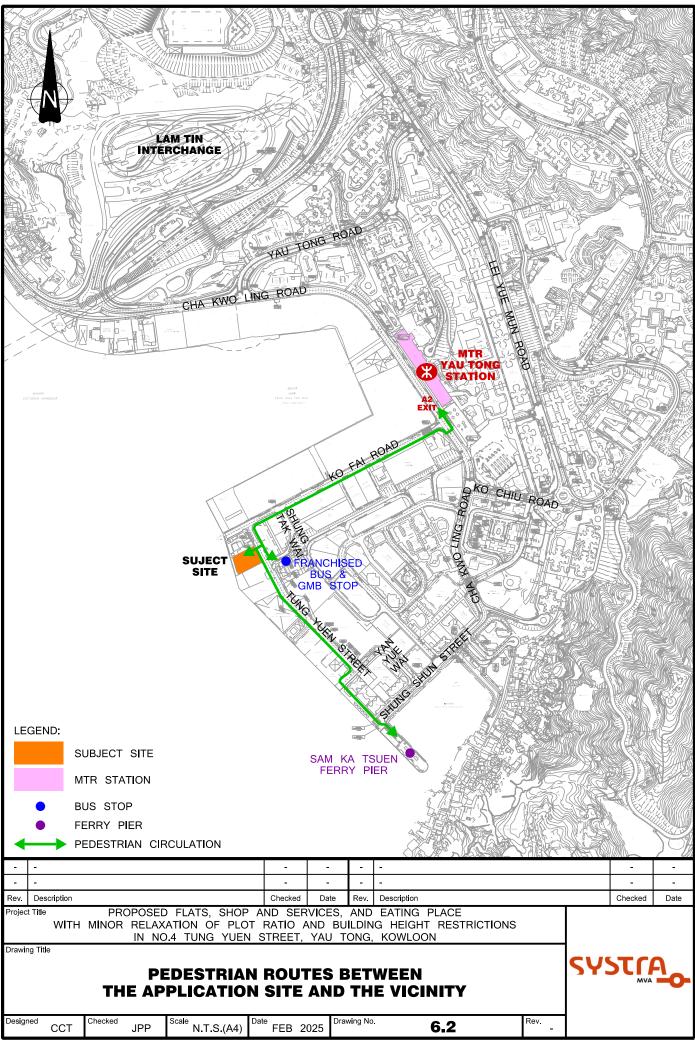
Table 6.2   Road-based Public Transport Services in the Vicinity in Design Year 2035 (Peak Hour)

Mode	Route No.	From	To	Observed Vehicular Trips per hour (A)	Passenger capacity per hour (B)[1]	Surveyed passengers on board arriving bus stop (F)=(C)*(1+G.F%)[10]	Total no. of Boarding Passengers (G)=(D)*(1+G.F%)[10]	Total no. of Alighting Passengers (H)=(E)*(1+G.F%)[10]	Surplus Capacity (B)–(F)-(G)+(H)
To Tsim Sha Tsui/Sam Ka Tsuen/ Lam Tin									
Bus	14X	Shung Tak Wai	Tsim Sha Tsui	4	360	-	49	-	311
GMB	24	Lam Tin (Ping Tin PTI)	Sam Ka Tsuen Ferry/ Lam Tin (Ping Tin PTI)	6	96	28	3	0	65

Remarks:
(1)   Assume 16 passengers per GMB and 90 passengers per bus.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 17

LAM TIN
INTERCHANGE

YAU TONG ROAD

CHA KWO LING ROAD

LEI YUE MUN ROAD

B1
B2

**MTR YAU TONG
STATION**

A1
A2

KO FAI ROAD

KO CHIU ROAD

SHUNG TAK WAI

● KMB 14X

● GMB 24

CHA KWO LING ROAD

TUNG YUEN STREET

YAN YUE WAI

SHUNG SHUN STREET

LEGEND:

■ SUBJECT SITE

● BUS TERMINUS

● GMB STOP

Rev.	Description		Checked	Date	Rev.	Description		Checked	Date
-	-		-	-	-	-		-	-
-	-		-	-	-	-		-	-

Project Title

PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE
WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

**LOCATION OF THE PUBLIC TRANSPORT
SERVICES IN THE VICINITY**

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	N.T.S.(A4)	Date	FEB 2025	Drawing No.	**6.1**	Rev.	-

CHK50748310/TIA/F61.DGN/KCM/19FEB25

Original Size : A4

LAM TIN INTERCHANGE

YAU TONG ROAD

CHA KWO LING ROAD

LEI YUE MUN ROAD

MTR YAU TONG STATION

A2 EXIT

KO FAI ROAD

KO CHIU ROAD

SHUNG TAK WAI

CHA KWO LING ROAD

SUJECT SITE

FRANCHISED BUS & GMB STOP

TUNG YUEN STREET

YAN YUE WAI

SHUNG SHUN STREET

SAM KA TSUEN FERRY PIER

LEGEND:

SUBJECT SITE	
MTR STATION	
●	BUS STOP
●	FERRY PIER
←→	PEDESTRIAN CIRCULATION

Rev.	Description		Checked	Date	Rev.	Description		Checked	Date
-	-		-	-	-	-		-	-
-	-		-	-	-	-		-	-

Project Title
PROPOSED FLATS, SHOP AND SERVICES, AND EATING PLACE
WITH MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS
IN NO.4 TUNG YUEN STREET, YAU TONG, KOWLOON

Drawing Title

**PEDESTRIAN ROUTES BETWEEN
THE APPLICATION SITE AND THE VICINITY**

SYSTRA
MVA

Designed	CCT	Checked	JPP	Scale	N.T.S.(A4)	Date	FEB 2025	Drawing No.	**6.2**	Rev.	-

CHK50748310/TIA/F62.DGN/KCM/19FEB25

Original Size : A4

6.2.2 Furthermore, consideration should be given to public transportation demand arsing form nearby new developments that are expected to be occupied before the design year 2035. Three new developments has been identified in the vicinity, namely the Coast Line with 903 flats (the year of occupation starts in 2025), Yau Tong Bay Development with 7,078 flats, and Yau Tong Inland Lot s 4B and 9, Yau Tong Marine Lot 57 and adjoining Government Land, Tung Yuen Street ("CDA(3) Zone") with 1,393 flats. Since the year of occupation for the last two developments is still unknown for the public, the demand for road-based public transport is considered for the residents of The Coast Line and the proposed development.

6.2.3 Based on 2021 Population Census, the modal split of Kwun Tong District is shown in **Table 6.3**. As seen from the table below, the modal share of road-based public transport is about 30% for Bus, and 8% for Public Light Bus.

Table 6.3   **Modal Share of Kwun Tong District**

Mode	MTR	Bus	Public Light Bus	Private Car	Taxi	Others	Total
Modal Share Percentage	43%	30%	8%	3%	1%	15%	100%

6.2.4 Reference is also made to the 'Travel Characteristics Survey 2011 Report' as published by Transport Department to derive the estimated public transport demand due to the proposed development and other new developments.

6.2.5 The total trips generated from the proposed development and the new development are derived from development parameters and assumptions from the TCS report 2011. The calculation of total trips during peak hours is summarised in **Table 6.4**.

Table 6.4   **Calculation of Total Trips from Proposed Development and New Development in the Vicinity**

Item	Proposed Development	New Development in the Vicinity
Nos. of units	342	903
Average household size	2.7 ppl/unit [1]	2.7 ppl/unit [1]
Total population	342*2.7=924	903*2.7=2,439
Trip rate per person	1.83 [2]	1.83 [2]
Daily trips generated from proposed development	924*1.83=1,691	2,439*1.83=4,462
% of Daily trips in peak hour	12% [3]	12% [3]
Peak hour trips (two-way)	1,691*12%=203	4,462*12%=536
Peak hour trips (Generation) [4]	203*0.9=183	536*0.9=482
Peak hour trips (Attraction)	203*0.1=20	536*0.1=54

Remarks:
(1) The anticipated population is based on an assumption of 2.7 occupants per unit, according to Census and Statistics Department in April 2024.
(2) Data extracted from TCS Report 2011
(3) 12% in TCS Report 2011
(4) For conservative approach, it is assumed that outbound trips will take up 90% and inbound trips for 10% during peak hour.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon | CHK50748310

Traffic Impact Assessment Report | 19/06/2025 **Page 18**

6.2.6 According to the peak hour trips of proposed development and nearby new development in **Table 6.4**, the trips of road-based public transport during peak hours in 2035 are shown **Table 6.5**. In the year 2035, about 200 trips will travel by bus, and 54 trips will travel by public light bus in the vicinity.

Table 6.5   Surplus Capacity of the Bus and PLB Service in the Vicinity in Design Year 2035

Mode	Bus	Public Light Bus (PLB)
%	30%	8%
Trips of proposed development	55	15
Trips of nearby new development	145	39
Surplus Capacity of the Mode(According to Table 6.2)	311-55-145=111	65-15-39=11

6.2.7 The result in **Table 6.5** shows that the road-based public transport services can meet the future public transport demand in the vicinity in the design year 2035.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report   19/06/2025   **Page** 19

7. CONCLUSION

7.1 Summary

7.1.1 The application site is currently zoned Residential (Group E)" ("R(E)") under the latest approved Cha Kwo Ling, Yau Tong, Lei Yue Mun Outline Zoning Plan (OZP) no. S/K15/27. The application site was intended to be re-developed into a residential-based development with shop and services, and eating place. The applicant's intention to propose more residential units and commercial services for the community.

7.1.2 Currently, the subject site is occupied by a 7-storey industrial building, which will be redeveloped into one residential block with 342 residential units, and a 2,177.1m^2 commercial area.

7.1.3 Provisions of internal ancillary transport facilities, including parking spaces, loading/unloading bays and etc., for the No. 4 Tung Yuen Street Redevelopment are proposed in accordance with the relevant requirements stipulated in the latest Hong Kong Planning Standard Guideline (HKPSG). The proposed provisions have taken into consideration the factors of building function, residential flat mix and locality of No. 4 Tung Yuen Street Redevelopment.

7.1.4 In order to review the traffic impact of the new developments on the vicinity, traffic surveys have been conducted to establish the current peak hour traffic condition in the vicinity.

7.1.5 The proposed Redevelopment would be completed in year 2032. The design year of 2035, three years after full occupation, is therefore adopted in this study for forecasting and assessment purposes. This study have considered the future strategic transport link - Trunk Road T2, future local developments and the latest Government planning assumptions.

7.1.6 For the J/O Tung Yuen Street / Ko Fai Road (M), the 4 current on-street private parking spaces are proposed to be cancelled. And after finishing the sewage rising mains construction project, these 4 cancelled parking spaces are proposed to be relocated back to Ko Fai Road.

7.1.7 Assessment results revealed that the traffic condition would be more or less the same in both Reference and Design scenarios in Year 2035. The traffic impact due to the Proposed Redevelopment is considered insignificant and could be accommodated by the surrounding road network.

7.1.8 Public transport surveys have been conducted to establish the current peak hours traffic condition and anticipated future public transport demands. The assessment indicated that all the existing public transport services have sufficient capacity to cater for the additional demands due to the proposed development.

7.2 Conclusion

7.2.1 In view of the above, the proposed Redevelopment under this Section 16 application is considered acceptable in traffic term.

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 20

Appendix A

Public Transport Details and Servicing Schedules

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with
Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group
E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 21

Route No.	Destinations		Frequency (min)
Franchised Bus			
6P	Lei Yue Mun Estate	Cheung Sha Wan (So Uk Estate)	3 scheduled service
14	Lei Yue Mun Estate	China Ferry Terminal	15
14D	Yau Tong	Choi Hung	5 scheduled service
14H	Yau Tong	(CIRCULAR) Shun Lee	60
14X	Yau Tong (Shung Tak Wai)	(CIRCULAR) Tsim Sha Tsui	15
33	Yau Tong	Tsuen Wan West Station	20
33B	Yau Tong	Tsuen Wan West Station	25
62P	Tuen Mun Central	Lei Yue Mun Estate	8
62X	Lei Yue Mun Estate	Siu Hong Station (South)	8
88X	Ping Tin	(CIRCULAR) Fo Tan Chun Yeung Estate	20
214	Yau Tong	Cheung Sha Wan (Kom Tsun Street)	12
215P	Lam Tin (Kwong Tin Estate)	Kowloon Station	1 scheduled service
216M	Lam Tin Station	(CIRCULAR) Yau Tong Station	15
259D	Lei Yue Mun Estate	Tuen Mun (Lung Mun Oasis)	7
603	Ping Tin	Central Ferry Piers	2 scheduled services
603A	Ping Tin	Central Market	15
603S	Ping Tin	Central (Guilman St)	3 scheduled service
613	On Tai (West) (Wo Tai House)	Shau Kei Wan Bus Terminal	15
A26	Yau Tong	Airport	30
A26P	Yau Tong	Airport	2 scheduled service
E22P	Yau Tong	AsiaWorld-Expo	3 scheduled service
E22X	Yau Tong	AsiaWorld-Expo	3 scheduled service
X42C	Yau Tong	Tsing Yi (Cheung Hang Estate)	1
N26	Yau Tong	Tung Chung Station	3 scheduled service
N214	Yau Tong	Mei Foo	2 scheduled service
N216	Yau Tong	Hung Hom Station	20
GMB			
23C	Laguna City	(CIRCULAR) Yau Tong Station	10
24	Lam Tin (Ping Tin PTI)	(CIRCULAR) Sam Ka Tsuen FerryPier	6
24M	Yau Tong PTI	Hing Tin (Pik Wan Road)	2
76B	Yau Tong PTI	United Christian Hospital	20
87	Lei Yue Mun Estate PTI	Kowloon Bay	20
90A	Hong Kong Children's Hospital	Yau Tong (Yau Lai Estate)	10

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 22

Appendix B

Signal Calculation Sheets

Section 16 Application for Proposed Flat, Shop and Services and Eating Place with
Minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group
E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon

CHK50748310

Traffic Impact Assessment Report

19/06/2025   **Page** 23

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)		Designed by:	SWY
Scheme:	2024 Observed Flow AM Peak		Checked by:	JPP
Design Year:	2024	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)			
Arm B	Cha Kwo Ling Rd (WB)			
Arm C	Cha Kwo Ling Rd (EB)			
Arm D				
Arm E				

Arm A   Lam Tin Interchange (SB)
188   669   200

Cha Kwo Ling Rd (WB)
Arm B
8
328
60

574
456
51

Arm C
Cha Kwo Ling Rd (EB)

	ENTRY ARM	A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	1,057	396	1,081		
Qc	Circulating Flow Across Entry (pcu/hour)	515	908	524		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2431	1990	2779		
Qp	$= Q*P$	1057	396	1081		
DFC	$= Qp / Qe$ **Design Flow / Capacity**	0.43	**0.43**	0.20	0.39	
	Total Entry Flows	2,534				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA				
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)			Designed by:	SWY
Scheme:	2024 Observed Flow PM Peak			Checked by:	JPP
Design Year:	2024	Job No.: CHK50748310		Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)				
Arm B	Cha Kwo Ling Rd (WB)				
Arm C	Cha Kwo Ling Rd (EB)				
Arm D					
Arm E					

Arm A   Lam Tin Interchange (SB)

115   423   206

Cha Kwo Ling Rd (WB)
Arm B

15
285
60

531
365
61

Arm C
Cha Kwo Ling Rd (EB)

	ENTRY ARM	A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	744	360	957		
Qc	Circulating Flow Across Entry (pcu/hour)	441	599	416		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ — Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2492	2241	2877		
Qp	$= Q*P$	744	360	957		

DFC	$= Qp / Qe$	Design Flow / Capacity	0.33	0.30	0.16	**0.33**		
		Total Entry Flows	2,061					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)		Designed by:	SWY
Scheme:	2035 Reference Flow AM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)			
Arm B	Cha Kwo Ling Rd (NB)			
Arm C	Cha Kwo Ling Rd (SB)			
Arm D				
Arm E				

Arm A   Lam Tin Interchange (SB)
220   895   295

Cha Kwo Ling Rd (NB)
Arm B
10
940
70

320
740
60

Arm C
Cha Kwo Ling Rd (SB)

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	1,410	1,020	1,120		
Qc	Circulating Flow Across Entry (pcu/hour)	810	1,175	1,170		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2186	1772	2193		
Qp	$= Q*P$	1410	1020	1120		

DFC	$= Qp / Qe$	Design Flow / Capacity	0.64	**0.64**	0.58	0.51		
		Total Entry Flows	3,550					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)		Designed by:	SWY
Scheme:	2035 Reference Flow PM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)			
Arm B	Cha Kwo Ling Rd (NB)			
Arm C	Cha Kwo Ling Rd (SB)			
Arm D				
Arm E				

Arm A   Lam Tin Interchange (SB)

135   640   310

Cha Kwo Ling Rd (NB)
Arm B

20
645
70

260
675
70

Arm C
Cha Kwo Ling Rd (SB)

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	1,085	735	1,005		
Qc	Circulating Flow Across Entry (pcu/hour)	765	845	800		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2224	2041	2529		
Qp	$= Q*P$	1085	735	1005		
DFC	$= Qp / Qe$	Design Flow / Capacity	0.49	**0.49**	0.36	0.40		
		Total Entry Flows	2,825					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)		Designed by:	SWY
Scheme:	2035 Design Flow AM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)			
Arm B	Cha Kwo Ling Rd (NB)			
Arm C	Cha Kwo Ling Rd (SB)			
Arm D				
Arm E				

Arm A   Lam Tin Interchange (SB)
220   895   296

320
743
60
Arm C
Cha Kwo Ling Rd (SB)

Cha Kwo Ling Rd (NB)
Arm B
10
954
70

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	1,411	1,034	1,123		
Qc	Circulating Flow Across Entry (pcu/hour)	813	1,175	1,184		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2184	1772	2181		
Qp	$= Q*P$	1411	1034	1123		

DFC	$= Qp / Qe$	Design Flow / Capacity	0.65	**0.65**	0.58	0.52		
		Total Entry Flows	3,568					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Lam Tin Interchange (A)		Designed by:	SWY
Scheme:	2035 Design Flow PM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lam Tin Interchange (SB)			
Arm B	Cha Kwo Ling Rd (NB)			
Arm C	Cha Kwo Ling Rd (SB)			
Arm D				
Arm E				

Arm A   Lam Tin Interchange (SB)

135   640   311

Cha Kwo Ling Rd (NB)
Arm B

20
653
70

260
674
70

Arm C
Cha Kwo Ling Rd (SB)

	ENTRY ARM	A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	8.20	8.10	9.10		
E	Entry Width (m)	10.50	8.60	11.20		
L	Effective Length of Flare (m)	3.75	1.40	6.20		
R	Entry Radius (m)	30.00	26.00	35.00		
D	Inscribed Circle Diameter (m)	52.00	52.00	52.00		
A	Entry Angle (degree)	20.00	10.00	18.00		
Q	Entry Flow (pcu/hour)	1,086	743	1,004		
Qc	Circulating Flow Across Entry (pcu/hour)	764	845	808		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.98	0.57	0.54		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.05	1.08	1.06		
X2	$= V + ((E-V) / (1+2S))$	8.98	8.33	10.11		
M	$= EXP ((D-60) /10)$	0.45	0.45	0.45		
F	$= 303 * X2$	2720	2525	3063		
Td	$= 1 + (0.5 / (1+M))$	1.34	1.34	1.34		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.79	0.75	0.85		
Qe	$= K (F - Fc*Qc*P)$	2225	2041	2522		
Qp	$= Q*P$	1086	743	1004		

DFC	$= Qp / Qe$	Design Flow / Capacity	0.49	**0.49**	0.36	0.40		
		Total Entry Flows	2,833					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310

MVA HONG KONG LIMITED

Junction: Cha Kwo Ling Road / Yau Tong Road

Design Year: 2024

Description: 2024 Observed Flows

Designed By: CCT

Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road	↑	B	1	3.300						1945	1945	249	0.128		228	0.117	
(EB)	↑	B	1	3.300						2085	2085	266	0.128		244	0.117	
Yau Tong Road	↰↑	D	3	4.500	17	15		80% / 20%	95% / 5%	1895	1895	113	0.060	0.060	152	0.080	
(SB)	↱	D	3	4.000		12				1915	1915	114	0.060		154	0.080	0.080
Cha Kwo Ling Road	↑	A	1,2	3.800						1995	1995	652	0.327	0.327	642	0.322	0.322
(WB)	↱	C	2	3.000			13			1840	1840	118	0.064		103	0.056	

Pedestrian Crossing	Ep	1,2,4	MIN GREEN + FLASH =	5	+	10	=	15
	Fp	2,4	MIN GREEN + FLASH =	5	+	9	=	14
	Gp	4	MIN GREEN + FLASH =	5	+	9	=	14
	Hp	3,4	MIN GREEN + FLASH =	5	+	5	=	10

Notes:

Flow: (pcu/hr)

137(162)   90(144)

118(103)

515(472)   652(642)

N

	A,Hp	A,D		A,Hp	A,D
Group			**Group**		
y	0.327	0.386	y	0.322	0.402
L (sec)	17	9	L (sec)	17	9
C (sec)	100	100	C (sec)	90	90
y pract.	0.747	0.819	y pract.	0.730	0.810
R.C. (%)	129%	112%	R.C. (%)	127%	101%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
Gp Ep <----> <----> B A	Ep <----> Fp C A	Gp <----> D Hp		

I/G=	I/G=	I/G= 6	I/G= 5	I/G=
I/G=	I/G=	I/G= 6	I/G= 5	I/G=

Date: 02 Oct 2024

Junction: Cha Kwo Ling Road / Yau Tong Road

Ⓑ

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310 **MVA HONG KONG LIMITED**

Junction: _____Cha Kwo Ling Road / Yau Tong Road_____ Design Year: __2035__

Description: __2035 Reference Flows__ Designed By: ___CCT___ Checked By: __JPP__

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road (EB)	↑	B	1	3.300						1945	1945	437	0.225		442	0.227	
	↑	B	1	3.300						2085	2085	468	0.224		473	0.227	
Yau Tong Road (SB)	↑↑	D	3	4.500	17	15		67% / 33%	92% / 8%	1890	1895	216	0.114	0.114	244	0.129	0.129
	↱	D	3	4.000		12				1915	1915	219	0.114		246	0.128	
Cha Kwo Ling Road (WB)	↑	A	1,2	3.800						1995	1995	1180	0.591	0.591	975	0.489	0.489
	↱	C	2	3.000		13				1840	1840	230	0.125		170	0.092	

Pedestrian Crossing	Ep	1,2	MIN GREEN + FLASH =	5	+	10	=	15
	Fp	2	MIN GREEN + FLASH =	5	+	9	=	14
	Gp	1,3	MIN GREEN + FLASH =	5	+	9	=	14
	Hp	3	MIN GREEN + FLASH =	5	+	5	=	10

Notes:

Flow: (pcu/hr)

290(265) ← 145(225) ←
230(170) ←
905(915) → 1180(975) ←

N ↑

Group	A,Hp	A,D	**Group**	A,Hp	A,D
y	0.591	0.706	**y**	0.489	0.617
L (sec)	17	9	**L (sec)**	17	9
C (sec)	120	120	**C (sec)**	120	120
y pract.	0.773	0.833	**y pract.**	0.773	0.833
R.C. (%)	31%	18%	**R.C. (%)**	58%	35%

Stage / Phase Diagrams

1. Gp Ep ← - - - > ← - - - >
B →
A ←

2. Ep ← - - - >
Fp ↕
C ↙
A ←

3. Gp ← - - - > D
Hp ↕

4.

5.

I/G= 5	I/G=	I/G= 6	I/G=	I/G=
I/G= 5	I/G=	I/G= 6	I/G=	I/G=

Date: 02 Oct 2024 **Junction:** Cha Kwo Ling Road / Yau Tong Road Ⓑ

TRAFFIC SIGNALS CALCULATION

Junction: Cha Kwo Ling Road / Yau Tong Road Design Year: 2035

Description: 2035 Design Flows Designed By: CCT Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Rev. Sat. Flow AM Peak	Rev. Sat. Flow PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road (EB)	↑	B	1	3.300						1945	1945	443	0.228		445	0.229	
	↑	B	1	3.300						2085	2085	474	0.227		478	0.229	
Yau Tong Road (SB)	←↑	D	3	4.500	17	15		70% / 30%	93% / 7%	1890	1895	220	0.116	0.116	245	0.129	0.129
	↱	D	3	4.000		12				1915	1915	223	0.116		248	0.130	
Cha Kwo Ling Road (WB)	↑	A	1,2	3.800						1995	1995	1194	0.598	0.598	980	0.491	0.491
	↱	C	2	3.000		13				1840	1840	235	0.128		172	0.093	

Pedestrian Crossing																	
		Ep	1,2	MIN GREEN + FLASH =	5	+	10	=	15								
		Fp	2	MIN GREEN + FLASH =	5	+	9	=	14								
		Gp	1,3	MIN GREEN + FLASH =	5	+	9	=	14								
		Hp	3	MIN GREEN + FLASH =	5	+	5	=	10								

Notes:

Flow: (pcu/hr)

↑N

290(265) ← 153(228)

235(172)

917(923) → 1194(980) ←

	Group	A,Hp	A,D	Group	A,Hp	A,D
y		0.598	0.715		0.491	0.621
L (sec)		17	9		17	9
C (sec)		120	120		120	120
y pract.		0.773	0.833		0.773	0.833
R.C. (%)		29%	16%		57%	34%

Stage / Phase Diagrams

1.
Gp Ep
<-----> <----->
B →
A ←

2.
Ep
<----->
Fp
C
A ←

3.
Gp D
<----->
Hp

4.

5.

I/G= 5   I/G=   I/G= 6   I/G=   I/G=
I/G= 5   I/G=   I/G= 6   I/G=   I/G=

Date: 02 Oct 2024

Junction: Cha Kwo Ling Road / Yau Tong Road

(B)

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA	
Junction:	Cha Kwo Ling Road / Ko Fai Road (C)	Designed by: SWY
Scheme:	2024 Observed Flows	Checked by: JPP
Design Year: 2024	Job No.: CHK50748310	Date: Oct-24
Arm A:	Cha Kwo Ling Road (NB)	
Arm B:	Ko Fai Road	
Arm C:	Cha Kwo Ling Road (SB)	

Arm C Cha Kwo Ling Road (SB)

	AM	PM
	273	233
	302	292

Arm A Cha Kwo Ling Road (NB)

	AM	PM
	332	341
	48	56

	AM	PM
	425	404

Arm B Ko Fai Road

GEOMETRY

Major Road Width (m)	W	12.30	Lane widths (m)	w(b-a)	0.00	
Central Reserve Width (m)	Wcr	0.00		w(b-c)	3.80	
Blockage of major road right turn	Y/N?	N		w(c-b)	2.87	
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	48	Calculated	D	0.57
	Vl(b-a)	31	Parameters	E	0.948
	Vr(b-c)	48		F	0.848
	Vr(c-b)	26		Y	0.576

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	273.35	233.4
	q(c-b)	301.95	291.7
	q(a-b)	48.1	56.1
	q(a-c)	331.8	341.5
	q(b-a)	0	0
	q(b-c)	425.25	404.1
	f	1.00	1.00
CAPACITIES (pcu/hr)	Q(b-ac)	636.831	634.3
	Q(c-b)	564.556	561.4
RFC's	c-b	0.53	0.52
	b-ac	0.67	0.64

RFC		**0.67**	**0.64**

Where Vl and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b\text{-}a)\text{-}3.65))(1+0.0009(Vr(b\text{-}a)\text{-}120))(1+0.0006(Vl(b\text{-}a)\text{-}150))$

$E = (1+0.094(w(b\text{-}c)\text{-}3.65))(1+0.0009(Vr(b\text{-}c)\text{-}120))$

$F = (1+0.094(wc\text{-}b)\text{-}3.65))(1+0.0009(Vr(c\text{-}b)\text{-}120))$

$Y = 1\text{-}0.0345W$

f = proportion of minor traffic turning left

$Q(b\text{-}ac) = Q(b\text{-}c)*Q(b\text{-}a)/(1\text{-}f)*Q(b\text{-}c)+f*Q(b\text{-}a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310   **MVA HONG KONG LIMITED**

Junction: Cha Kwo Ling Road / Ko Fai Road   Design Year: 2035

Description: 2035 Reference Flows   Designed By: CCT   Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road	↑	A	1	3.300						1945	1945	455	0.234		420	0.216	
(SB)	↱	A	1	3.300		15				1895	1895	470	0.248	0.248	510	0.269	0.269
Cha Kwo Ling Road	↰	B	2	3.300	15			20%	27%	1910	1895	306	0.160	0.160	281	0.148	
(NB)	↑	B	2	3.300						2085	2085	334	0.160		309	0.148	0.148
Ko Fai Road	↰	C	1,3	4.000	12.5					1800	1800	730	0.406		585	0.325	
(EB)																	

Pedestrian Crossing								
	Ep	2,3	MIN GREEN + FLASH =	5	+	5	=	10
	Fp	2	MIN GREEN + FLASH =	5	+	5	=	10
	Gp	3	MIN GREEN + FLASH =	5	+	5	=	10
	Hp	1,3	MIN GREEN + FLASH =	5	+	6	=	11

(* marks under AM Peak and PM Peak columns opposite pedestrian crossing rows)

Notes:

Flow: (pcu/hr)

470(510)   455(420)
730(585)
60(75)   580(515)

N

Group	A,B,Gp	C,Fp	Group	C,Fp	A,B,Gp
y	0.408	0.406	y	0.325	0.417
L (sec)	17	19	L (sec)	19	17
C (sec)	100	100	C (sec)	100	100
y pract.	0.747	0.729	y pract.	0.729	0.747
R.C. (%)	83%	80%	R.C. (%)	124%	79%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
C / A / Hp	Fp / B / Ep	C / Gp / Hp Ep		

I/G=	I/G= 5	10	I/G= 5	I/G=
I/G= 2	I/G= 5		I/G= 2	10

Date: 02 Oct 2024   **Junction:** Cha Kwo Ling Road / Ko Fai Road   Ⓒ

TRAFFIC SIGNALS CALCULATION

Junction: ____Cha Kwo Ling Road / Ko Fai Road____   Design Year: ____2035____

Description: ____2035 Design Flows____   Designed By: ____CCT____   Checked By: ____JPP____

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road	↑	A	1	3.300						1945	1945	455	0.234		420	0.216	
(SB)	↱	A	1	3.300		15				1895	1895	485	0.256	0.256	530	0.280	0.280
Cha Kwo Ling Road	↰	B	2	3.300	15			20%	27%	1905	1895	306	0.161	0.161	282	0.149	
(NB)	↑	B	2	3.300						2085	2085	335	0.161		310	0.149	0.149
Ko Fai Road	↱	C	1,3	4.000	12.5					1800	1800	749	0.416		597	0.332	
(EB)																	

Pedestrian Crossing																	
		Ep	2,3	MIN GREEN + FLASH =	5	+	5	=	10								
		Fp	2	MIN GREEN + FLASH =	5	+	5	=	10								
		Gp	3	MIN GREEN + FLASH =	5	+	5	=	10		*				*		
		Hp	1,3	MIN GREEN + FLASH =	5	+	6	=	11								

Notes:

Flow: (pcu/hr)

485(530) ← ↘ 455(420)

749(597) →

↗ 580(515)

61(77) ↘ ↑

N ↗

Group	A,B,Gp	C,Fp	Group	C,Fp	A,B,Gp
y	0.417	0.416	y	0.332	0.428
L (sec)	17	19	L (sec)	19	17
C (sec)	100	100	C (sec)	100	100
y pract.	0.747	0.729	y pract.	0.729	0.747
R.C. (%)	79%	75%	R.C. (%)	120%	74%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
C, A, Hp	Fp, B, Ep	C, Gp, Hp, Ep		
I/G=	I/G= 5 10	I/G= 5	I/G=	I/G=
I/G= 2	I/G= 5	I/G= 2 10	I/G=	I/G=

Date: 02 Oct 2024   **Junction:** Cha Kwo Ling Road / Ko Fai Road   Ⓒ

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310

MVA HONG KONG LIMITED

Junction: Cha Kwo Ling Road / Ko Chiu Road

Design Year: 2024

Description: 2024 Observed Flows

Designed By: CCT

Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road	↑	A	1	3.300						1945	1945	269	0.138		264	0.136	
(NB)	↱	A	1	3.300		15				1895	1895	276	0.146	0.146	297	0.157	0.157
Cha Kwo Ling Road	↰	C	2	3.000	15.5		4.7			1565	1565	136	0.087	0.087	128	0.082	0.082
(SB)	↑	C	2	3.600			4.7			1780	1780	60	0.034		65	0.037	
Ko Chiu Road	↰↑	B	3	3.500	10	16		69% / 31%	75% / 25%	1735	1730	102	0.059		106	0.061	0.061
(WB)	↱	B	3	3.800		12				1900	1900	112	0.059	0.059	116	0.061	

Pedestrian Crossing	Dp	4	MIN GREEN + FLASH =	8	+	7	=	15
	Ep	4	MIN GREEN + FLASH =	8	+	7	=	15
	Fp	4	MIN GREEN + FLASH =	10	+	8	=	18

AM Peak *   PM Peak *

Notes:

Flow: (pcu/hr)

136(128)
60(65)
144(143)
269(264)
276(297)
70(79)

	Group	A,C,B,Dp	A,C,B,Fp	Group	A,C,B,Dp	A,C,B,Fp
y		0.291	0.291		0.300	0.300
L (sec)		36	40		36	40
C (sec)		120	120		120	120
y pract.		0.630	0.600		0.630	0.600
R.C. (%)		116%	106%		110%	100%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
A	C	B	Fp / Ep / Dp	
I/G= 2	I/G= 7	I/G= 6	I/G= 10 18	I/G=
I/G= 2	I/G= 7	I/G= 6	I/G= 10 18	I/G=

Date: 02 Oct 2024

Junction: Cha Kwo Ling Road / Ko Chiu Road

D

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50748310**

MVA HONG KONG LIMITED

Junction: Cha Kwo Ling Road / Ko Chiu Road

Description: 2035 Reference Flows

Design Year: 2035

Designed By: CCT

Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road	↑	A	1	3.300						1945	1945	435	0.224		385	0.198	
(NB)	↱	A	1	3.300		15				1895	1895	420	0.222	0.222	405	0.214	0.214
Cha Kwo Ling Road	↰	C	2	3.000	15.5		4.7			1565	1565	215	0.137	0.137	195	0.125	0.125
(SB)	↑	C	2	3.600			4.7			1780	1780	155	0.087		175	0.098	
Ko Chiu Road	↰↑	B	3	3.120	10	16		58% / 42%	71% / 29%	1710	1700	164	0.096		156	0.092	0.092
(WB)	↱	B	3	3.120		12				1835	1835	176	0.096	0.096	169	0.092	

Pedestrian Crossing	Dp	4	MIN GREEN + FLASH =	8	+	7	= 15
	Ep	4	MIN GREEN + FLASH =	8	+	7	= 15
	Fp	4	MIN GREEN + FLASH =	10	+	8	= 18

AM Peak * PM Peak *

Notes:

Flow: (pcu/hr)

215(195)

155(175)   245(215)

435(385)

420(405)   95(110)

N

Group	A,C,B,Dp	A,C,B,Fp	**Group**	A,C,B,Dp	A,C,B,Fp
y	0.455	0.455	**y**	0.430	0.430
L (sec)	36	40	**L (sec)**	36	40
C (sec)	120	120	**C (sec)**	120	120
y pract.	0.630	0.600	**y pract.**	0.630	0.600
R.C. (%)	38%	32%	**R.C. (%)**	46%	40%

Stage / Phase Diagrams

1.

A

2.

C

3.

B

4.

Fp

Ep

Dp

5.

| I/G= 2 | | I/G= 7 | | I/G= 6 | | I/G= 10 | 18 | I/G= | |
| I/G= 2 | | I/G= 7 | | I/G= 6 | | I/G= 10 | 18 | I/G= | |

| Date: 02 Oct 2024 | Junction: Cha Kwo Ling Road / Ko Chiu Road | Ⓓ |

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50748310**   **MVA HONG KONG LIMITED**

Junction: Cha Kwo Ling Road / Ko Chiu Road   Design Year: 2035

Description: 2035 Design Flows   Designed By: CCT   Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Cha Kwo Ling Road (NB)	↑	A	1	3.300						1945	1945	435	0.224		385	0.198	
	↱	A	1	3.300		15				1895	1895	422	0.223	0.223	406	0.214	0.214
Cha Kwo Ling Road (SB)	↰	C	2	3.000	15.5		4.7			1565	1565	215	0.137	0.137	195	0.125	0.125
	↑	C	2	3.600			4.7			1780	1780	155	0.087		175	0.098	
Ko Chiu Road (WB)	↰↑	B	3	3.120	10	16		58% / 42%	70% / 30%	1710	1700	165	0.096		157	0.092	0.092
	↱	B	3	3.120		12				1835	1835	176	0.096	0.096	170	0.093	

Pedestrian Crossing																	
		Dp	4	MIN GREEN + FLASH =	8	+	7	=	15								
		Ep	4	MIN GREEN + FLASH =	8	+	7	=	15								
		Fp	4	MIN GREEN + FLASH =	10	+	8	=	18				*			*	

Notes:

Flow: (pcu/hr)

215(195)
155(175)   246(217)
435(385)
422(406)
95(110)

Group	A,C,B,Dp	A,C,B,Fp	Group	A,C,B,Dp	A,C,B,Fp
y	0.456	0.456	y	0.431	0.431
L (sec)	36	40	L (sec)	36	40
C (sec)	120	120	C (sec)	120	120
y pract.	0.630	0.600	y pract.	0.630	0.600
R.C. (%)	38%	32%	R.C. (%)	46%	39%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
A	C	B	Fp / Ep / Dp	
I/G= 2	I/G= 7	I/G= 6	I/G= 10 18	I/G=
I/G= 2	I/G= 7	I/G= 6	I/G= 10 18	I/G=

Date: 02 Oct 2024   **Junction:** Cha Kwo Ling Road / Ko Chiu Road   Ⓓ

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA				
Junction:	Lei Yue Mun Road / Ko Chiu Road (E)			Designed by:	SWY
Scheme:	2024 Observed Flow AM Peak			Checked by:	JPP
Design Year:	2024	Job No.: CHK50748310		Date:	JUN, 2025
Arm A	Lei Yue Mun Rd (SB)				
Arm B	Ko Chiu Rd (WB)				
Arm C	Ko Chiu Rd (EB)				
Arm D					
Arm E					

Arm A   Lei Yue Mun Rd (SB)
103   304   108

Ko Chiu Rd (WB)
Arm B
5
185
174

327
136
63

Arm C
Ko Chiu Rd (EB)

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	7.43	6.50	6.70		
E	Entry Width (m)	9.60	8.50	9.76		
L	Effective Length of Flare (m)	9.70	4.62	10.48		
R	Entry Radius (m)	40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)	38.70	38.70	38.70		
A	Entry Angle (degree)	38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)	514	364	526		
Qc	Circulating Flow Across Entry (pcu/hour)	203	469	292		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.36	0.69	0.47		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.00	0.88	0.99		
X2	$= V + ((E-V) / (1+2S))$	8.69	7.34	8.28		
M	$= EXP ((D-60) /10)$	0.12	0.12	0.12		
F	$= 303 * X2$	2634	2224	2509		
Td	$= 1 + (0.5 / (1+M))$	1.45	1.45	1.45		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.83	0.75	0.81		
Qe	$= K (F - Fc*Qc*P)$	2457	1640	2261		
Qp	$= Q*P$	514	364	526		

DFC	$= Qp / Qe$	Design Flow / Capacity	0.23	0.21	0.22	0.23		
		Total Entry Flows	1,404					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Arm A   Lei Yue Mun Rd (SB)

| 165 | 262 | 135 |

Ko Chiu Rd (WB)
Arm B

	3
	164
	143

343	
129	
155	

Arm C
Ko Chiu Rd (EB)

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	7.43	6.50	6.70		
E	Entry Width (m)	9.60	8.50	9.76		
L	Effective Length of Flare (m)	9.70	4.62	10.48		
R	Entry Radius (m)	40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)	38.70	38.70	38.70		
A	Entry Angle (degree)	38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)	562	310	627		
Qc	Circulating Flow Across Entry (pcu/hour)	287	582	332		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	= 1.6 (E - V) / L Sharpness of flare	0.36	0.69	0.47		
K	= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)	1.00	0.88	0.99		
X2	= V + ((E-V) / (1+2S))	8.69	7.34	8.28		
M	= EXP ((D-60) /10)	0.12	0.12	0.12		
F	= 303 * X2	2634	2224	2509		
Td	= 1 + (0.5 / (1+M))	1.45	1.45	1.45		
Fc	= 0.21*Td (1 + 0.2*X2)	0.83	0.75	0.81		
Qe	= K (F - Fc*Qc*P)	2388	1565	2229		
Qp	= Q*P	562	310	627		
DFC	= Qp / Qe	Design Flow / Capacity	0.28	0.24	0.20	**0.28**		
		Total Entry Flows	1,499				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA		
Junction:	Lei Yue Mun Road / Ko Chiu Road (E)	Designed by:	SWY
Scheme:	2035 Reference Flow AM Peak	Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date: JUN, 2025
Arm A	Lei Yue Mun Rd (SB)		
Arm B	Ko Chiu Rd (WB)		
Arm C	Ko Chiu Rd (EB)		
Arm D			
Arm E			

Arm A   Lei Yue Mun Rd (SB)

120   395   165

Ko Chiu Rd (WB)
Arm B

5
275
285

460
235
75

Arm C
Ko Chiu Rd (EB)

ENTRY ARM		A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	7.43	6.50	6.70		
E	Entry Width (m)	9.60	8.50	9.76		
L	Effective Length of Flare (m)	9.70	4.62	10.48		
R	Entry Radius (m)	40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)	38.70	38.70	38.70		
A	Entry Angle (degree)	38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)	680	565	770		
Qc	Circulating Flow Across Entry (pcu/hour)	315	590	400		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	= 1.6 (E - V) / L Sharpness of flare	0.36	0.69	0.47		
K	= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)	1.00	0.88	0.99		
X2	= V + ((E-V) / (1+2S))	8.69	7.34	8.28		
M	= EXP ((D-60) /10)	0.12	0.12	0.12		
F	= 303 * X2	2634	2224	2509		
Td	= 1 + (0.5 / (1+M))	1.45	1.45	1.45		
Fc	= 0.21*Td (1 + 0.2*X2)	0.83	0.75	0.81		
Qe	= K (F - Fc*Qc*P)	2364	1560	2174		
Qp	= Q*P	680	565	770		
DFC	= Qp / Qe	Design Flow / Capacity	0.36	0.29	0.36	0.35
		Total Entry Flows	2,015			

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Lei Yue Mun Road / Ko Chiu Road (E)		Designed by:	SWY
Scheme:	2035 Reference Flow PM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Rd (SB)			
Arm B	Ko Chiu Rd (WB)			
Arm C	Ko Chiu Rd (EB)			
Arm D				
Arm E				

Arm A   Lei Yue Mun Rd (SB)

195   355   200

Ko Chiu Rd (WB)
Arm B

5
220
230

445
210
180

Arm C
Ko Chiu Rd (EB)

	ENTRY ARM	A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	7.43	6.50	6.70		
E	Entry Width (m)	9.60	8.50	9.76		
L	Effective Length of Flare (m)	9.70	4.62	10.48		
R	Entry Radius (m)	40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)	38.70	38.70	38.70		
A	Entry Angle (degree)	38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)	750	455	835		
Qc	Circulating Flow Across Entry (pcu/hour)	395	730	420		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.36	0.69	0.47		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.00	0.88	0.99		
X2	$= V + ((E-V) / (1+2S))$	8.69	7.34	8.28		
M	$= EXP ((D-60) /10)$	0.12	0.12	0.12		
F	$= 303 * X2$	2634	2224	2509		
Td	$= 1 + (0.5 / (1+M))$	1.45	1.45	1.45		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.83	0.75	0.81		
Qe	$= K (F - Fc*Qc*P)$	2298	1468	2158		
Qp	$= Q*P$	750	455	835		
DFC	$= Qp / Qe$ **Design Flow / Capacity** 0.39	0.33	0.31	**0.39**		
	Total Entry Flows 2,040					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Lei Yue Mun Road / Ko Chiu Road (E)		Designed by:	SWY
Scheme:	2035 Design Flow AM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Rd (SB)			
Arm B	Ko Chiu Rd (WB)			
Arm C	Ko Chiu Rd (EB)			
Arm D				
Arm E				

Arm A   Lei Yue Mun Rd (SB)
120   395   165

460
237
75
Arm C
Ko Chiu Rd (EB)

Ko Chiu Rd (WB)
Arm B
5
275
286

ENTRY ARM			A	B	C		
INPUT PARAMETERS							
V	Approach Half Width (m)		7.43	6.50	6.70		
E	Entry Width (m)		9.60	8.50	9.76		
L	Effective Length of Flare (m)		9.70	4.62	10.48		
R	Entry Radius (m)		40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)		38.70	38.70	38.70		
A	Entry Angle (degree)		38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)		680	566	772		
Qc	Circulating Flow Across Entry (pcu/hour)		317	590	400		
P	Peak Hour Factor		1.0	1.0	1.0		
OUTPUT PARAMETERS							
S	$= 1.6 (E - V) / L$	Sharpness of flare	0.36	0.69	0.47		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$		1.00	0.88	0.99		
X2	$= V + ((E-V) / (1+2S))$		8.69	7.34	8.28		
M	$= EXP ((D-60) /10)$		0.12	0.12	0.12		
F	$= 303 * X2$		2634	2224	2509		
Td	$= 1 + (0.5 / (1+M))$		1.45	1.45	1.45		
Fc	$= 0.21*Td (1 + 0.2*X2)$		0.83	0.75	0.81		
Qe	$= K (F - Fc*Qc*P)$		2363	1560	2174		
Qp	$= Q*P$		680	566	772		
DFC	$= Qp / Qe$	Design Flow / Capacity	0.36	0.29	**0.36**	0.36	
		Total Entry Flows	2,018				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA				
Junction:	Lei Yue Mun Road / Ko Chiu Road (E)			Designed by:	SWY
Scheme:	2035 Design Flow PM Peak			Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310		Date:	JUN, 2025
Arm A	Lei Yue Mun Rd (SB)				
Arm B	Ko Chiu Rd (WB)				
Arm C	Ko Chiu Rd (EB)				
Arm D					
Arm E					

Arm A Lei Yue Mun Rd (SB)

| 195 | 355 | 200 |

Ko Chiu Rd (WB)
Arm B

| 5 |
| 220 |
| 232 |

| 445 |
| 211 |
| 180 |

Arm C
Ko Chiu Rd (EB)

	ENTRY ARM	A	B	C		
INPUT PARAMETERS						
V	Approach Half Width (m)	7.43	6.50	6.70		
E	Entry Width (m)	9.60	8.50	9.76		
L	Effective Length of Flare (m)	9.70	4.62	10.48		
R	Entry Radius (m)	40.00	19.00	49.50		
D	Inscribed Circle Diameter (m)	38.70	38.70	38.70		
A	Entry Angle (degree)	38.00	65.00	40.00		
Q	Entry Flow (pcu/hour)	750	457	836		
Qc	Circulating Flow Across Entry (pcu/hour)	396	730	420		
P	Peak Hour Factor	1.0	1.0	1.0		
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.36	0.69	0.47		
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.00	0.88	0.99		
X2	$= V + ((E-V) / (1+2S))$	8.69	7.34	8.28		
M	$= EXP ((D-60) /10)$	0.12	0.12	0.12		
F	$= 303 * X2$	2634	2224	2509		
Td	$= 1 + (0.5 / (1+M))$	1.45	1.45	1.45		
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.83	0.75	0.81		
Qe	$= K (F - Fc*Qc*P)$	2297	1468	2158		
Qp	$= Q*P$	750	457	836		
DFC	$= Qp / Qe$	Design Flow / Capacity	**0.39**	0.33	0.31	**0.39**
		Total Entry Flows	2,043			

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310 **MVA HONG KONG LIMITED**

Junction: _____ Lei Yue Mun Road / Yau Tong Road _____ Design Year: ____ 2024 ____

Description: _____ 2024 Observed Flows _____ Designed By: ____ CCT ____ Checked By: ____ JPP ____

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yau Tong Road (EB)	↱	C	2,3	4.200	25					1920	1920	153	0.080		112	0.058	
	↰	C	2,3	4.100	25					2040	2040	163	0.080		119	0.058	
	↱	D	3	4.600		11.5				1960	1960	27	0.014	0.014	55	0.028	0.028
Lei Yue Mun Road (SB)	↑	H	1,2,3	3.300						1945	1945	556	0.286		756	0.389	
	↱	B	2	3.600		13.2				1775	1775	117	0.066		151	0.085	
	↱	B	2	3.750		8.5				1810	1810	120	0.066	0.066	153	0.085	0.085
Lei Yue Mun Road (NB)	↰↑	A	1	3.850	10			12%	19%	1965	1945	329	0.167	0.167	319	0.164	
	↑	A	1	3.900						2145	2145	359	0.167		352	0.164	0.164

Pedestrian Crossing																	
	Ep	3	MIN GREEN + FLASH =	8	+	8	=	16									
	Fp	1,2	MIN GREEN + FLASH =	5	+	5	=	10									
	Gp	1	MIN GREEN + FLASH =	10	+	10	=	20									

Notes:

Flow: (pcu/hr)

237(304) 556(756)
316(231)
40(60) 648(611)
27(55)

N

Group	A,C	A,B,D	**Group**	A,C	A,B,D
y	0.247	0.248	**y**	0.222	0.277
L (sec)	10	12	**L (sec)**	10	12
C (sec)	130	130	**C (sec)**	110	110
y pract.	0.831	0.817	**y pract.**	0.818	0.802
R.C. (%)	236%	230%	**R.C. (%)**	268%	190%

Stage / Phase Diagrams

1. Gp, H, Fp, A

2. C, H, Fp, B

3. C, H, D, Ep

4.

5.

I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=
I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=

Date: 02 Oct 2024

Junction: Lei Yue Mun Road / Yau Tong Road

F

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50748310**

MVA HONG KONG LIMITED

Junction: Lei Yue Mun Road / Yau Tong Road   Design Year: 2035

Description: 2035 Reference Flows   Designed By: CCT   Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yau Tong Road (EB)	↱	C	2,3	4.200	25					1920	1920	267	0.139		196	0.102	
	↰	C	2,3	4.100	25					2040	2040	283	0.139		209	0.102	
	↱	D	3	4.600		11.5				1960	1960	120	0.061	0.061	155	0.079	0.079
Lei Yue Mun Road (SB)	↑	H	1,2,3	3.300						1945	1945	775	0.398		1010	0.519	
	↱	B	2	3.600		13.2				1775	1775	178	0.100		220	0.124	
	↱	B	2	3.750		8.5				1810	1810	182	0.101	0.101	225	0.124	0.124
Lei Yue Mun Road (NB)	↰↑	A	1	3.850	10			27%	26%	1925	1925	541	0.281	0.281	456	0.237	
	↑	A	1	3.900						2145	2145	604	0.282		509	0.237	0.237
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =	8	+	8	=	16								
		Fp	1,2	MIN GREEN + FLASH =	5	+	5	=	10								
		Gp	1	MIN GREEN + FLASH =	10	+	10	=	20								

Notes:

Flow: (pcu/hr)

360(445)
775(1010)
550(405)
1000(845)
145(120)
120(155)

N

Group	A,C	A,B,D	Group	A,C	A,B,D
y	0.420	0.443	y	0.339	0.441
L (sec)	10	12	L (sec)	10	12
C (sec)	130	130	C (sec)	110	110
y pract.	0.831	0.817	y pract.	0.818	0.802
R.C. (%)	98%	84%	R.C. (%)	141%	82%

Stage / Phase Diagrams

1. Gp, Fp, H, A
2. C, Fp, B, H
3. C, D, Ep, H
4.
5.

I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=
I/G= 5	I/G= 5	I/G= 5	I/G=	I/G=

Date: 02 Oct 2024

Junction: Lei Yue Mun Road / Yau Tong Road

F

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310   **MVA HONG KONG LIMITED**

Junction: Lei Yue Mun Road / Yau Tong Road   Design Year: 2035

Description: 2035 Design Flows   Designed By: CCT   Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Yau Tong Road (EB)	↱	C	2,3	4.200	25					1920	1920	269	0.140		197	0.103	
	↰	C	2,3	4.100	25					2040	2040	286	0.140		210	0.103	
	↱	D	3	4.600		11.5				1960	1960	120	0.061	0.061	155	0.079	0.079
Lei Yue Mun Road (SB)	↑	H	1,2,3	3.300						1945	1945	775	0.398		1010	0.519	
	↱	B	2	3.600		13.2				1775	1775	180	0.101		224	0.126	
	↱	B	2	3.750		8.5				1810	1810	183	0.101	0.101	229	0.127	0.127
Lei Yue Mun Road (NB)	↰↑	A	1	3.850	10			27%	26%	1925	1925	541	0.281	0.281	456	0.237	
	↑	A	1	3.900						2145	2145	604	0.282		509	0.237	0.237

Pedestrian Crossing																	
		Ep	3	MIN GREEN + FLASH =	8	+	8	=	16								
		Fp	1,2	MIN GREEN + FLASH =	5	+	5	=	10								
		Gp	1	MIN GREEN + FLASH =	10	+	10	=	20								

Notes:

Flow: (pcu/hr)

363(453)   775(1010)
555(407)
1000(845)
145(120)
120(155)

N

Group	A,C	A,B,D	**Group**	A,C	A,B,D
y	0.421	0.443	**y**	0.340	0.443
L (sec)	10	12	**L (sec)**	10	12
C (sec)	130	130	**C (sec)**	110	110
y pract.	0.831	0.817	**y pract.**	0.818	0.802
R.C. (%)	97%	84%	**R.C. (%)**	141%	81%

Stage / Phase Diagrams

1. Gp, Fp, A, H
2. C, Fp, B, H
3. C, D, Ep, H
4.
5.

| I/G= 5 | I/G= 5 | I/G= 5 | I/G= | I/G= |
| I/G= 5 | I/G= 5 | I/G= 5 | I/G= | I/G= |

Date: 02 Oct 2024   **Junction:** Lei Yue Mun Road / Yau Tong Road   F

YTT-SigCal.xlsm \ F_2035_Des

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Kai Tin Road / Lei Yue Mun Road (G)		Designed by:	CCT
Scheme:	2024 Observed Flow AM Peak		Checked by:	JPP
Design Year:	2024	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Road (SB)			
Arm B	Kai Tin Road (WB)			
Arm C	Lei Yue Mun Road (NB)			
Arm D	Easern Harbour Crossing (NB)			
Arm E				

Arm A   Lei Yue Mun Road (SB)

596	832	6

Arm B   Kai Tin Road (WB)

17	153	137

Lei Yue Mun Road (NB)
Arm C

8
106
645

105
83
95

Arm D
Easern Harbour Crossing (NB)

ENTRY ARM			A	B	C	D	
INPUT PARAMETERS							
V	Approach Half Width (m)		6.30	6.10	6.80	6.70	
E	Entry Width (m)		7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)		5.18	3.70	8.70	8.80	
R	Entry Radius (m)		61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)		80.00	80.00	80.00	80.00	
A	Entry Angle (degree)		28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)		1,434	307	759	283	
Qc	Circulating Flow Across Entry (pcu/hour)		309	1,531	766	1,525	
P	Peak Hour Factor		1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS							
S	$= 1.6 (E - V) / L$	Sharpness of flare	0.28	0.35	0.68	0.49	
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$		1.04	1.01	0.94	1.02	
X2	$= V + ((E-V) / (1+2S))$		6.88	6.57	8.37	8.06	
M	$= EXP ((D-60) /10)$		7.39	7.39	7.39	7.39	
F	$= 303 * X2$		2084	1992	2535	2443	
Td	$= 1 + (0.5 / (1+M))$		1.06	1.06	1.06	1.06	
Fc	$= 0.21*Td (1 + 0.2*X2)$		0.53	0.52	0.59	0.58	
Qe	$= K (F - Fc*Qc*P)$		1997	1210	1964	1589	
Qp	$= Q*P$		1434	307	759	283	

DFC	$= Qp / Qe$	Design Flow / Capacity	0.72	**0.72**	0.25	0.39	0.18	
		Total Entry Flows	2,782					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Kai Tin Road / Lei Yue Mun Road (G)		Designed by:	CCT
Scheme:	2024 Observed Flow PM Peak		Checked by:	JPP
Design Year:	2024	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Road (SB)			
Arm B	Kai Tin Road (WB)			
Arm C	Lei Yue Mun Road (NB)			
Arm D	Easern Harbour Crossing (NB)			
Arm E				

Arm A   Lei Yue Mun Road (SB)   Arm B   Kai Tin Road (WB)

416   611   6   22   237   76

Lei Yue Mun Road (NB)
Arm C

154   0
75   50
225   718

Arm D
Easern Harbour Crossing (NB)

ENTRY ARM		A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	6.30	6.10	6.80	6.70	
E	Entry Width (m)	7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)	5.18	3.70	8.70	8.80	
R	Entry Radius (m)	61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)	80.00	80.00	80.00	80.00	
A	Entry Angle (degree)	28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)	1,034	335	768	454	
Qc	Circulating Flow Across Entry (pcu/hour)	372	1,252	675	1,443	
P	Peak Hour Factor	1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS						
S	= 1.6 (E - V) / L Sharpness of flare	0.28	0.35	0.68	0.49	
K	= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)	1.04	1.01	0.94	1.02	
X2	= V + ((E-V) / (1+2S))	6.88	6.57	8.37	8.06	
M	= EXP ((D-60) /10)	7.39	7.39	7.39	7.39	
F	= 303 * X2	2084	1992	2535	2443	
Td	= 1 + (0.5 / (1+M))	1.06	1.06	1.06	1.06	
Fc	= 0.21*Td (1 + 0.2*X2)	0.53	0.52	0.59	0.58	
Qe	= K (F - Fc*Qc*P)	1963	1355	2015	1638	
Qp	= Q*P	1034	335	768	454	

DFC	= Qp / Qe	Design Flow / Capacity	0.53	**0.53**	0.25	0.38	0.28	
		Total Entry Flows	2,590					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Kai Tin Road / Lei Yue Mun Road (G)		Designed by:	CCT
Scheme:	2035 Reference Flow AM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Road (SB)			
Arm B	Kai Tin Road (WB)			
Arm C	Lei Yue Mun Road (NB)			
Arm D	Easern Harbour Crossing (NB)			
Arm E				

Arm A   Lei Yue Mun Road (SB)   700 1075 5

Arm B   Kai Tin Road (WB)   20 180 160

Lei Yue Mun Road (NB)
Arm C   10 125 960

Arm D   125 95 230
Easern Harbour Crossing (NB)

ENTRY ARM		A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	6.30	6.10	6.80	6.70	
E	Entry Width (m)	7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)	5.18	3.70	8.70	8.80	
R	Entry Radius (m)	61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)	80.00	80.00	80.00	80.00	
A	Entry Angle (degree)	28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)	1,780	360	1,095	450	
Qc	Circulating Flow Across Entry (pcu/hour)	480	2,015	900	1,995	
P	Peak Hour Factor	1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.28	0.35	0.68	0.49	
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.04	1.01	0.94	1.02	
X2	$= V + ((E-V) / (1+2S))$	6.88	6.57	8.37	8.06	
M	$= EXP ((D-60) /10)$	7.39	7.39	7.39	7.39	
F	$= 303 * X2$	2084	1992	2535	2443	
Td	$= 1 + (0.5 / (1+M))$	1.06	1.06	1.06	1.06	
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.53	0.52	0.59	0.58	
Qe	$= K (F - Fc*Qc*P)$	1903	959	1889	1310	
Qp	$= Q*P$	1780	360	1095	450	

DFC	$= Qp / Qe$	Design Flow / Capacity	0.94	**0.94**	0.38	0.58	0.34	
		Total Entry Flows	3,685					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Kai Tin Road / Lei Yue Mun Road (G)		Designed by:	CCT
Scheme:	2035 Reference Flow PM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Road (SB)			
Arm B	Kai Tin Road (WB)			
Arm C	Lei Yue Mun Road (NB)			
Arm D	Easern Harbour Crossing (NB)			
Arm E				

Arm A   Lei Yue Mun Road (SB)   490   815   5

Arm B   Kai Tin Road (WB)   25   280   90

Lei Yue Mun Road (NB) Arm C   0   60   960

Arm D Easern Harbour Crossing (NB)   180   90   400

	ENTRY ARM	A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	6.30	6.10	6.80	6.70	
E	Entry Width (m)	7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)	5.18	3.70	8.70	8.80	
R	Entry Radius (m)	61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)	80.00	80.00	80.00	80.00	
A	Entry Angle (degree)	28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)	1,310	395	1,020	670	
Qc	Circulating Flow Across Entry (pcu/hour)	575	1,705	795	1,815	
P	Peak Hour Factor	1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS						
S	= 1.6 (E - V) / L Sharpness of flare	0.28	0.35	0.68	0.49	
K	= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)	1.04	1.01	0.94	1.02	
X2	= V + ((E-V) / (1+2S))	6.88	6.57	8.37	8.06	
M	= EXP ((D-60) /10)	7.39	7.39	7.39	7.39	
F	= 303 * X2	2084	1992	2535	2443	
Td	= 1 + (0.5 / (1+M))	1.06	1.06	1.06	1.06	
Fc	= 0.21*Td (1 + 0.2*X2)	0.53	0.52	0.59	0.58	
Qe	= K (F - Fc*Qc*P)	1851	1120	1948	1417	
Qp	= Q*P	1310	395	1020	670	
DFC	= Qp / Qe	Design Flow / Capacity	0.71	**0.71**	0.35	0.52	0.47
		Total Entry Flows	3,395				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA		
Junction:	Kai Tin Road / Lei Yue Mun Road (G)	Designed by:	CCT
Scheme:	2035 Design Flow AM Peak	Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date: JUN, 2025
Arm A	Lei Yue Mun Road (SB)		
Arm B	Kai Tin Road (WB)		
Arm C	Lei Yue Mun Road (NB)		
Arm D	Easern Harbour Crossing (NB)		
Arm E			

Arm A Lei Yue Mun Road (SB)   700 1078 5

Arm B Kai Tin Road (WB)   20 180 160

Lei Yue Mun Road (NB) Arm C   10 125 964

125 95 235
Arm D Easern Harbour Crossing (NB)

ENTRY ARM		A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	6.30	6.10	6.80	6.70	
E	Entry Width (m)	7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)	5.18	3.70	8.70	8.80	
R	Entry Radius (m)	61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)	80.00	80.00	80.00	80.00	
A	Entry Angle (degree)	28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)	1,783	360	1,099	455	
Qc	Circulating Flow Across Entry (pcu/hour)	485	2,023	900	1,999	
P	Peak Hour Factor	1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.28	0.35	0.68	0.49	
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.04	1.01	0.94	1.02	
X2	$= V + ((E-V) / (1+2S))$	6.88	6.57	8.37	8.06	
M	$= EXP ((D-60) /10)$	7.39	7.39	7.39	7.39	
F	$= 303 * X2$	2084	1992	2535	2443	
Td	$= 1 + (0.5 / (1+M))$	1.06	1.06	1.06	1.06	
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.53	0.52	0.59	0.58	
Qe	$= K (F - Fc*Qc*P)$	1901	955	1889	1308	
Qp	$= Q*P$	1783	360	1099	455	
DFC	$= Qp / Qe$	Design Flow / Capacity 0.94	**0.94**	0.38	0.58	0.35
		Total Entry Flows 3,697				

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

Roundabout Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Kai Tin Road / Lei Yue Mun Road (G)		Designed by:	CCT
Scheme:	2035 Design Flow PM Peak		Checked by:	JPP
Design Year:	2035	Job No.: CHK50748310	Date:	JUN, 2025
Arm A	Lei Yue Mun Road (SB)			
Arm B	Kai Tin Road (WB)			
Arm C	Lei Yue Mun Road (NB)			
Arm D	Easern Harbour Crossing (NB)			
Arm E				

Arm A Lei Yue Mun Road (SB) 490 819 5

Arm B Kai Tin Road (WB) 25 280 90

Lei Yue Mun Road (NB)
Arm C   0   60   963

180 90 399

Arm D
Easern Harbour Crossing (NB)

	ENTRY ARM	A	B	C	D	
INPUT PARAMETERS						
V	Approach Half Width (m)	6.30	6.10	6.80	6.70	
E	Entry Width (m)	7.20	6.90	10.50	9.40	
L	Effective Length of Flare (m)	5.18	3.70	8.70	8.80	
R	Entry Radius (m)	61.00	30.00	20.00	40.00	
D	Inscribed Circle Diameter (m)	80.00	80.00	80.00	80.00	
A	Entry Angle (degree)	28.00	33.00	46.00	31.00	
Q	Entry Flow (pcu/hour)	1,314	395	1,023	669	
Qc	Circulating Flow Across Entry (pcu/hour)	574	1,708	795	1,818	
P	Peak Hour Factor	1.0	1.0	1.0	1.0	
OUTPUT PARAMETERS						
S	$= 1.6 (E - V) / L$ Sharpness of flare	0.28	0.35	0.68	0.49	
K	$= 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05)$	1.04	1.01	0.94	1.02	
X2	$= V + ((E-V) / (1+2S))$	6.88	6.57	8.37	8.06	
M	$= EXP ((D-60) /10)$	7.39	7.39	7.39	7.39	
F	$= 303 * X2$	2084	1992	2535	2443	
Td	$= 1 + (0.5 / (1+M))$	1.06	1.06	1.06	1.06	
Fc	$= 0.21*Td (1 + 0.2*X2)$	0.53	0.52	0.59	0.58	
Qe	$= K (F - Fc*Qc*P)$	1852	1118	1948	1415	
Qp	$= Q*P$	1314	395	1023	669	

DFC	$= Qp / Qe$	Design Flow / Capacity	0.71	**0.71**	0.35	0.53	0.47	
		Total Entry Flows	3,401					

All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310 **MVA HONG KONG LIMITED**

Junction: Wai Yip Street / Wai Fat Road / Kwun Tong Bypass

Description: 2024 Observed Flows

Designed By: CCT Checked By: JPP

Design Year: 2024

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Wai Yip Street (SB)	↰↑	A	1	3.500	11			8%	14%	1945	1930	159	0.082		132	0.068	
	↑	A	1	3.500						2105	2105	172	0.082		143	0.068	
	↱	A	1	3.600		20				1965	1965	120	0.061		249	0.127	
Wai Yip Street (NB)	↰	F	1,2,3	3.900	28					1905	1905	648	0.340	0.340	570	0.299	0.299
	↑	C	3	3.900						2145	2145	218	0.102		213	0.099	
	↱↱	C	3	3.500		18.6		51%	80%	2020	1975	205	0.101		196	0.099	
	↱	C	3	3.650		15				1925	1925	196	0.102		191	0.099	
Kwun Tong Bypass (EB)	↑↱	B	2	3.650		27		35%	39%	2080	2075	218	0.105		152	0.073	
	↱	B	2	4.100		23				1815	1815	191	0.105		133	0.073	
Wai Fat Road (WB)	↑	D	4	3.650						1980	1980	209	0.106		337	0.170	
	↱	D	4	3.650		25				2000	2000	198	0.099		179	0.090	
	↱	D	4	3.000		19				1905	1905	188	0.099		170	0.089	
	↳	E	4	9.550		6				1085	1085	141	0.130	0.130	212	0.195	0.195

Pedestrian Crossing								
Gp	2	MIN GREEN + FLASH =	13	+	12	=	25	
Hp	1,3,4	MIN GREEN + FLASH =	5	+	9	=	14	
Ip	2,3	MIN GREEN + FLASH =	5	+	10	=	15	
Jp	4	MIN GREEN + FLASH =	11	+	10	=	21	
Kp	1,2,3	MIN GREEN + FLASH =	7	+	13	=	20	
Lp	4	MIN GREEN + FLASH =	5	+	10	=	15	
Mp	4	MIN GREEN + FLASH =	5	+	5	=	10	

Notes:

Flow: (pcu/hr)

120(249) 13(18)
318(257)
142(93)
386(349) 141(212)
319(252) 209(337)
648(570) 300(348)
267(192)

Group	A,B,C,D	F,E	Group	A,B,C,D	F,E
y	0.394	0.470	y	0.469	0.495
L (sec)	17	20	L (sec)	17	20
C (sec)	140	140	C (sec)	140	140
y pract.	0.791	0.771	y pract.	0.791	0.771
R.C. (%)	101%	64%	R.C. (%)	68%	56%

Stage / Phase Diagrams

1. (A, Hp, Kp, F)
2. (Gp, B, Ip, Kp, F)
3. (Hp, Ip, C, Kp, F)
4. (Hp, Lp, E, D, Jp, Mp)
5.

I/G= 5
I/G= 5
I/G=
I/G=
I/G=
I/G= 17
I/G= 17
I/G=
I/G=

Date: 02 Oct 2024

Junction: Wai Yip Street / Wai Fat Road / Kwun Tong Bypass

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310

MVA HONG KONG LIMITED

Junction: _____ Wai Yip Street / Wai Fat Road / Kwun Tong Bypass _____

Description: _____ 2035 Reference Flows _____

Design Year: __2035__

Designed By: ____CCT____

Checked By: __JPP__

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Wai Yip Street (SB)	↰ ↑	A	1	3.500	11			6%	9%	1950	1940	245	0.126		218	0.112	
	↑	A	1	3.500						2105	2105	265	0.126		237	0.113	
	↱	A	1	3.600		20				1965	1965	140	0.071		290	0.148	
Wai Yip Street (NB)	↰	F	1,2,3	3.900	28					1905	1905	875	0.459	0.459	745	0.391	0.391
	↑	C	3	3.900				27%	60%	2145	2145	303	0.141		281	0.131	
	↱	C	3	3.500		18.6				2060	2005	290	0.141		262	0.131	
	↱	C	3	3.650		15				1925	1925	272	0.141		252	0.131	
Kwun Tong Bypass (EB)	↱	B	2	3.650		27		46%	54%	2065	2060	304	0.147		237	0.115	
	↱	B	2	4.100		23				1815	1815	266	0.147		208	0.115	
Wai Fat Road (WB)	↑	D	4	3.650						1980	1980	285	0.144		420	0.212	
	↱	D	4	3.650		25				2000	2000	230	0.115		210	0.105	
	↱	D	4	3.000		19				1905	1905	220	0.115		200	0.105	
	↱	E	4	9.550		6				1085	1085	220	0.203	0.203	280	0.258	0.258

Pedestrian Crossing

	Phase	Stage	MIN GREEN + FLASH				
	Gp	2	MIN GREEN + FLASH =	13	+	12	= 25
	Hp	1,3,4	MIN GREEN + FLASH =	5	+	9	= 14
	Ip	2,3	MIN GREEN + FLASH =	5	+	10	= 15
	Jp	4	MIN GREEN + FLASH =	11	+	10	= 21
	Kp	1,2,3	MIN GREEN + FLASH =	7	+	13	= 20
	Lp	4	MIN GREEN + FLASH =	5	+	10	= 15
	Mp	4	MIN GREEN + FLASH =	5	+	5	= 10

Notes:

Flow: (pcu/hr)

140(290)   15(20)
495(435)
165(110)   450(410)   220(280)
875(745)   515(385)   350(410)   285(420)
405(335)

	Group	A,B,C,D	F,E	Group	A,B,C,D	F,E
y		0.558	0.662		0.606	0.649
L (sec)		17	20		17	20
C (sec)		140	140		140	140
y pract.		0.791	0.771		0.791	0.771
R.C. (%)		42%	17%		31%	19%

Stage / Phase Diagrams

1. A, Hp, Kp, F

2. Gp, B, Ip, Kp, F

3. Hp, Ip, C, Kp, F

4. Hp, Lp, E, D, Jp, Mp

5.

I/G= 5 | I/G= | I/G= | I/G= 17 | I/G=
I/G= 5 | I/G= | I/G= | I/G= 17 | I/G=

Date: 02 Oct 2024

Junction: Wai Yip Street / Wai Fat Road / Kwun Tong Bypass

(H)

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50748310**

MVA HONG KONG LIMITED

Junction: Wai Yip Street / Wai Fat Road / Kwun Tong Bypass

Design Year: 2035

Description: 2035 Design Flows

Designed By: CCT

Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Wai Yip Street (SB)	← / ↑	A	1	3.500	11			6%	9%	1950	1940	245	0.126		218	0.112	
	↑	A	1	3.500						2105	2105	265	0.126		237	0.113	
	↱	A	1	3.600		20				1965	1965	140	0.071		290	0.148	
Wai Yip Street (NB)	←	F	1,2,3	3.900	28					1905	1905	880	0.462	0.462	742	0.390	0.390
	↑	C	3	3.900						2145	2145	303	0.141		281	0.131	
	↱	C	3	3.500		18.6		27%	60%	2060	2005	290	0.141		262	0.131	
	↱	C	3	3.650		15				1925	1925	272	0.141		252	0.131	
Kwun Tong Bypass (EB)	↑↱	B	2	3.650		27		46%	54%	2065	2060	305	0.148		239	0.116	
	↱	B	2	4.100		23				1815	1815	268	0.148		210	0.116	
Wai Fat Road (WB)	↑	D	4	3.650						1980	1980	285	0.144		420	0.212	
	↱	D	4	3.650		25				2000	2000	230	0.115		210	0.105	
	↱	D	4	3.000		19				1905	1905	220	0.115		200	0.105	
	↰	E	4	9.550		6				1085	1085	220	0.203	0.203	280	0.258	0.258

Pedestrian Crossing										
	Gp	2	MIN GREEN + FLASH =	13	+	12	=	25		
	Hp	1,3,4	MIN GREEN + FLASH =	5	+	9	=	14		
	Ip	2,3	MIN GREEN + FLASH =	5	+	10	=	15		
	Jp	4	MIN GREEN + FLASH =	11	+	10	=	21		
	Kp	1,2,3	MIN GREEN + FLASH =	7	+	13	=	20		
	Lp	4	MIN GREEN + FLASH =	5	+	10	=	15		
	Mp	4	MIN GREEN + FLASH =	5	+	5	=	10		

Notes:

Flow: (pcu/hr)

N

140(290) 15(20)
495(435)
165(110)
450(410) 220(280)
285(420)
515(385) 350(410)
880(742)
408(339)

Group	A,B,C,D	F,E	Group	A,B,C,D	F,E
y	0.559	0.665	y	0.607	0.648
L (sec)	17	20	L (sec)	17	20
C (sec)	140	140	C (sec)	140	140
y pract.	0.791	0.771	y pract.	0.791	0.771
R.C. (%)	42%	16%	R.C. (%)	30%	19%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
Hp, A, Kp, F	Gp, B, Ip, Kp, F	Hp, Ip, C, Kp, F	Hp, Lp, E, D, Mp, Jp	
I/G= 5	I/G=	I/G=	I/G= 17	I/G=
I/G= 5	I/G=	I/G=	I/G= 17	I/G=

Date: 02 Oct 2024

Junction: Wai Yip Street / Wai Fat Road / Kwun Tong Bypass

(H)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310

MVA HONG KONG LIMITED

Junction: Lei Yue Mun Road / Slip Road to EHC

Description: 2024 Observed Flows

Design Year: 2024

Designed By: CCT

Checked By: JPP

Approach	Movements	Phase	Stage	Width (m)	Radius Left	Radius Right	Gradient (%)	Pro. Turning AM Peak	Pro. Turning PM Peak	Rev. Sat. Flow AM Peak	Rev. Sat. Flow PM Peak	AM Flow (pcu/hr)	AM y Value	AM Critical y	PM Flow (pcu/hr)	PM y Value	PM Critical y
Lei Yue Mun Road (SB)	↑	A	1,2,3	3.240						1940	1940	387	0.199		517	0.266	
	↑	A	1,2,3	2.870						2040	2040	406	0.199		543	0.266	
	↱	C	3,4	2.890		18				1760	1760	354	0.201		78	0.044	0.044
	↱	C	3,4	2.970		19				1900	1900	383	0.202	0.202	84	0.044	
Lei Yue Mun Road (NB)	↰↑	B	1	3.350	16.5			72%	31%	1830	1895	458	0.250	0.250	406	0.214	
	↑	B	1	2.730						2030	2030	507	0.250		435	0.214	0.214

Pedestrian Crossing:

	Phase	Stage						
	Dp	2,3,4	MIN GREEN + FLASH =	5	+	7	=	12
	Ep	4	MIN GREEN + FLASH =	5	+	7	=	12
	Fp	2	MIN GREEN + FLASH =	5	+	8	=	13

AM Peak: *   PM Peak: *

Notes:

Flow: (pcu/hr)   N →

737(162) ←
793(1060)

637(716) ←
328(125) ←

Group	B,Dp	B,Fp,C	**Group**	A,Ep	B,Fp,C
y	0.250	0.452	y	0.266	0.259
L (sec)	19	29	L (sec)	19	29
C (sec)	120	120	C (sec)	120	120
y pract.	0.758	0.683	y pract.	0.758	0.683
R.C. (%)	203%	51%	R.C. (%)	184%	164%

Stage / Phase Diagrams

1. A ↓ B ↰
2. A ↓ Fp ↕ Dp ←→
3. C ↰ A ↓ Dp ←→
4. C ↰ Ep ←→ Dp ←→
5.

I/G= 6	I/G= 10	13	I/G= 2	I/G=	I/G=
I/G= 6	I/G= 10	13	I/G= 2	I/G=	I/G=

Date: 19 Feb 2025

Junction: Lei Yue Mun Road / Slip Road to EHC

I

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310 **MVA HONG KONG LIMITED**

Junction: _____Lei Yue Mun Road / Slip Road to EHC_____   Design Year: ___2035___

Description: _____2035 Reference Flows_____   Designed By: ___CCT___   Checked By: ___JPP___

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Lei Yue Mun Road (SB)	↑	A	1,2,3	3.240						1940	1940	553	0.285		709	0.365	
	↑	A	1,2,3	2.870						2040	2040	582	0.285		746	0.366	0.366
	↱	C	3,4	2.890		18				1760	1760	416	0.236	0.236	91	0.052	
	↱	C	3,4	2.970		19				1900	1900	449	0.236		99	0.052	
Lei Yue Mun Road (NB)	↰	B	1	3.500	10					1710	1710	600	0.351	0.351	290	0.170	
	↑	B	1	3.700						1985	1985	470	0.237		475	0.239	
	↑	B	1	2.730						2030	2030	480	0.236		485	0.239	

Pedestrian Crossing																	
		Dp	2,3,4	MIN GREEN + FLASH =	5	+	7	=	12								
		Ep	4	MIN GREEN + FLASH =	5	+	7	=	12						*		
		Fp	2	MIN GREEN + FLASH =	5	+	8	=	13					*			*

Notes:

Flow: (pcu/hr)

N →

865(190) ←
1135(1455)

950(960) ↑
600(290) →

Group	B,Dp	B,Fp,C	**Group**	B,Fp,C	A,Ep
y	0.351	0.587	**y**	0.291	0.366
L (sec)	19	29	**L (sec)**	29	19
C (sec)	120	120	**C (sec)**	120	120
y pract.	0.758	0.683	**y pract.**	0.683	0.758
R.C. (%)	116%	16%	**R.C. (%)**	134%	107%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
A ↓ B ↑	A ↓ Fp Dp	C A Dp	C Ep Dp	

I/G= 6	I/G= 10	13	I/G= 2	I/G=	I/G=
I/G= 3	I/G=		I/G=	I/G= 5 12	I/G=

Date: 19 Feb 2025   **Junction:** Lei Yue Mun Road / Slip Road to EHC   ①

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50748310   **MVA HONG KONG LIMITED**

Junction: _____Lei Yue Mun Road / Slip Road to EHC_____   Design Year: ___2035___

Description: _____2035 Design Flows_____   Designed By: ___CCT___   Checked By: ___JPP___

Approach	Movements	Phase	Stage	Width (m)	Radius (m) Left	Radius (m) Right	Gradient (%)	Pro. Turning (%) AM Peak	Pro. Turning (%) PM Peak	Revised Saturation Flow (pcu/hr) AM Peak	Revised Saturation Flow (pcu/hr) PM Peak	AM Peak Flow (pcu/hr)	AM Peak y Value	AM Peak Critical y	PM Peak Flow (pcu/hr)	PM Peak y Value	PM Peak Critical y
Lei Yue Mun Road (SB)	↑	A	1,2,3	3.240						1940	1940	555	0.286		713	0.368	
	↑	A	1,2,3	2.870						2040	2040	583	0.286		750	0.368	0.368
	↱	C	3,4	2.890		18				1760	1760	416	0.236	0.236	91	0.052	
	↱	C	3,4	2.970		19				1900	1900	449	0.236		99	0.052	
Lei Yue Mun Road (NB)	↰↑	B	1	3.500	10					1710	1710	601	0.351	0.351	294	0.172	
	↑	B	1	3.700						1985	1985	472	0.238		474	0.239	
	↑	B	1	2.730						2030	2030	482	0.237		484	0.238	

Pedestrian Crossing											
	Dp	2,3,4	MIN GREEN + FLASH =	5	+	7	=	12			
	Ep	4	MIN GREEN + FLASH =	5	+	7	=	12		*	*
	Fp	2	MIN GREEN + FLASH =	5	+	8	=	13			

Notes:

Flow: (pcu/hr)

865(190)
1138(1463)
954(958)
601(294)

	Group	B,Dp	B,Fp,C	Group	B,Fp,C	A,Ep
	y	0.351	0.588	**y**	0.291	0.368
	L (sec)	19	29	**L (sec)**	29	19
	C (sec)	120	120	**C (sec)**	120	120
	y pract.	0.758	0.683	**y pract.**	0.683	0.758
	R.C. (%)	116%	16%	**R.C. (%)**	135%	106%

Stage / Phase Diagrams

1.	2.	3.	4.	5.
A, B	A, Fp, Dp	C, A, Dp	C, Ep, Dp	

I/G= 6	I/G= 10	13	I/G= 2	I/G=	I/G=
I/G= 3	I/G=		I/G=	I/G= 5 12	I/G=

Date: 19 Feb 2025   **Junction:** Lei Yue Mun Road / Slip Road to EHC

Simplified Priority Junction Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Shung Shun Street (J)		Designed by:	CCT
Scheme:	2024 Observed Flows		Checked by:	JPP
Design Year: 2024		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Cha Kwo Ling Road			
Arm B:	Access Road to Lei Yue Mun Estate			
Arm C:	Shung Shun Street			

Arm C Shung Shun Street

	AM	PM
	182	218
	0	0

Arm A Cha Kwo Ling Road

	AM	PM
	232	244
	3	5

	AM	PM
	0	0
	3	3

Arm B Access Road to Lei Yue Mun Estate

GEOMETRY

Major Road Width (m)	W	11.25		Lane widths (m)	w(b-a)	2.00
Central Reserve Width (m)	Wcr	0.00			w(b-c)	2.00
Blockage of major road right turn	Y/N?	Y			w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	41		Calculated	D	0.832
	Vl(b-a)	250		Parameters	E	0.785
	Vr(b-c)	41			F	0.782
	Vr(c-b)	26			Y	0.612

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	182.05	217.8
	q(c-b)	0	0
	q(a-b)	3	5
	q(a-c)	232.1	244.4
	q(b-a)	3	3
	q(b-c)	0	0
	f	0.00	0.00
CAPACITIES (pcu/hr)	Q(b-ac)	457.077	450.5
	Q(c-a)	1800	1800
	Q(c-b)	541.768	539.3
RFC's	c-a	0.10	0.12
	c-b	0.00	0.00
	b-ac	0.01	0.01
RFC		**0.10**	**0.12**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

SYSTIA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Cha Kwo Ling Road / Shung Shun Street (J)		Designed by:	CCT
Scheme:	2035 Reference Flows		Checked by:	JPP
Design Year: 2035		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Cha Kwo Ling Road			
Arm B:	Access Road to Lei Yue Mun Estate			
Arm C:	Shung Shun Street			

Arm C Shung Shun Street

	AM	PM
	292	302
	0	0

	AM	PM	
	362	370	**Arm A**
	3	5	Cha Kwo Ling Road

	AM	PM
	0	0
	3	3

Arm B Access Road to Lei Yue Mun Estate

GEOMETRY

Major Road Width (m)	W	11.25		Lane widths (m)	w(b-a)	2.00
Central Reserve Width (m)	Wcr	0.00			w(b-c)	2.00
Blockage of major road right turn	Y/N?	Y			w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	41	Calculated	D	0.832
	Vl(b-a)	250	Parameters	E	0.785
	Vr(b-c)	41		F	0.782
	Vr(c-b)	26		Y	0.612

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	292	302
	q(c-b)	0	0
	q(a-b)	3	5
	q(a-c)	362	370
	q(b-a)	3	3
	q(b-c)	0	0
	f	0.00	0.00
CAPACITIES (pcu/hr)	Q(b-ac)	420.199	417.4
	Q(c-a)	1800	1800
	Q(c-b)	519.138	517.4
RFC's	c-a	0.16	0.17
	c-b	0.00	0.00
	b-ac	0.01	0.01
RFC		**0.16**	**0.17**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA	
Junction:	Cha Kwo Ling Road / Shung Shun Street (J)	Designed by: CCT
Scheme:	2035 Design Flows	Checked by: JPP
Design Year: 2035	Job No.: CHK50748310	Date: Feb-25
Arm A:	Cha Kwo Ling Road	
Arm B:	Access Road to Lei Yue Mun Estate	
Arm C:	Shung Shun Street	

Arm C

	AM	PM
	294	303
Shung Shun Street	0	0

	AM	PM	
	362	370	**Arm A**
	3	5	Cha Kwo Ling Road

	AM	PM
	0	0
	3	3

Arm B   Access Road to Lei Yue Mun Estate

GEOMETRY

Major Road Width (m)	W	11.25	Lane widths (m)	w(b-a)	2.00
Central Reserve Width (m)	Wcr	0.00		w(b-c)	2.00
Blockage of major road right turn	Y/N?	Y		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	41	Calculated	D	0.832
	Vl(b-a)	250	Parameters	E	0.785
	Vr(b-c)	41		F	0.782
	Vr(c-b)	26		Y	0.612

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	294	303
	q(c-b)	0	0
	q(a-b)	3	5
	q(a-c)	362	370
	q(b-a)	3	3
	q(b-c)	0	0
	f	0.00	0.00
CAPACITIES (pcu/hr)	Q(b-ac)	419.966	417.3
	Q(c-a)	1800	1800
	Q(c-b)	519.138	517.4
RFC's	c-a	0.16	0.17
	c-b	0.00	0.00
	b-ac	0.01	0.01

RFC		**0.16**	**0.17**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Shung Shun Street / Yan Yue Wai (K)		Designed by:	CCT
Scheme:	2024 Observed Flows		Checked by:	JPP
Design Year: 2024		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Shung Shun Street (SB)			
Arm B:	Shung Shun Street (NB)			
Arm C:	Yan Yue Wai			

Arm C   Yan Yue Wai

	AM	PM
	88	83
	4	6

Arm A   Shung Shun Street (SB)

	AM	PM
	71	71
	17	29

	AM	PM
	4	7
	24	25

Arm B   Shung Shun Street (NB)

GEOMETRY

Major Road Width (m)	W	10.60	Lane widths (m)	w(b-a)	2.41
Central Reserve Width (m)	Wcr	1.80		w(b-c)	2.41
Blockage of major road right turn	Y/N?	Y		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	74.59
	Vl(b-a)	32	Parameters	E	80.3
	Vr(b-c)	99999		F	0.798
	Vr(c-b)	47		Y	0.634

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	87.5	83.3
	q(c-b)	3.6	5.5
	q(a-b)	17.2	29.15
	q(a-c)	70.9	71.1
	q(b-a)	24.15	25.05
	q(b-c)	3.6	6.8
	f	0.13	0.21
CAPACITIES (pcu/hr)	Q(b-ac)	47550.9	48328
	Q(c-a)	1788.8	1783
	Q(c-b)	578.57	576.3
RFC's	c-a	0.05	0.05
	c-b	0.01	0.01
	b-ac	0.00	0.00

RFC		**0.05**	**0.05**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA				
Junction:	Shung Shun Street / Yan Yue Wai (K)		Designed by:	CCT	
Scheme:	2035 Reference Flows		Checked by:	JPP	
Design Year: 2035		Job No.: CHK50748310		Date:	Feb-25
Arm A:	Shung Shun Street (SB)				
Arm B:	Shung Shun Street (NB)				
Arm C:	Yan Yue Wai				

Arm C
Yan Yue Wai

	AM	PM
	130	110
	5	5

	AM	PM
	85	85
	20	35

Arm A
Shung Shun Street (SB)

	AM	PM
	5	10
	30	30

Arm B   Shung Shun Street (NB)

GEOMETRY

Major Road Width (m)	W	10.60		Lane widths (m)	w(b-a)	2.41
Central Reserve Width (m)	Wcr	1.80			w(b-c)	2.41
Blockage of major road right turn	Y/N?	Y			w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	74.59
	Vl(b-a)	32	Parameters	E	80.3
	Vr(b-c)	99999		F	0.798
	Vr(c-b)	47		Y	0.634

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	130	110
	q(c-b)	5	5
	q(a-b)	20	35
	q(a-c)	85	85
	q(b-a)	30	30
	q(b-c)	5	10
	f	0.14	0.25
CAPACITIES (pcu/hr)	Q(b-ac)	46967.9	48197
	Q(c-a)	1784.36	1784
	Q(c-b)	575.455	572.7
RFC's	c-a	0.07	0.06
	c-b	0.01	0.01
	b-ac	0.00	0.00
RFC		**0.07**	**0.06**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA	
Junction:	Shung Shun Street / Yan Yue Wai (K)	Designed by: CCT
Scheme:	2035 Design Flows	Checked by: JPP
Design Year: 2035	Job No.: CHK50748310	Date: Feb-25
Arm A:	Shung Shun Street (SB)	
Arm B:	Shung Shun Street (NB)	
Arm C:	Yan Yue Wai	

Arm C Yan Yue Wai

	AM	PM
	132	111
	5	5

Arm A Shung Shun Street (SB)

	AM	PM
	85	85
	20	35

	AM	PM
	5	10
	30	30

Arm B Shung Shun Street (NB)

GEOMETRY

Major Road Width (m)	W	10.60	Lane widths (m)	w(b-a)	2.41
Central Reserve Width (m)	Wcr	1.80		w(b-c)	2.41
Blockage of major road right turn	Y/N?	Y		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	74.59
	Vl(b-a)	32	Parameters	E	80.3
	Vr(b-c)	99999		F	0.798
	Vr(c-b)	47		Y	0.634

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	132	111
	q(c-b)	5	5
	q(a-b)	20	35
	q(a-c)	85	85
	q(b-a)	30	30
	q(b-c)	5	10
	f	0.14	0.25
CAPACITIES (pcu/hr)	Q(b-ac)	46948.1	48188
	Q(c-a)	1784.36	1784
	Q(c-b)	575.455	572.7
RFC's	c-a	0.07	0.06
	c-b	0.01	0.01
	b-ac	0.00	0.00
RFC		**0.07**	**0.06**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA	
Junction:	Tung Yuen Street / Yan Yue Wai (L)	Designed by: CCT
Scheme:	2024 Observed Flows	Checked by: JPP
Design Year: 2024	Job No.: CHK50748310	Date: Feb-25
Arm A:	Yan Yue Wai (SB)	
Arm B:	Yan Yue Wai (NB)	
Arm C:	Tung Yuen Street	

Arm C	AM	PM
Tung Yuen Street	70	49
	24	6

	AM	PM	Arm A
	61	48	Yan Yue Wai (SB)
	6	8	

	AM	PM
	26	5
	2	5

Arm B Yan Yue Wai (NB)

GEOMETRY

Major Road Width (m)	W	12.30	Lane widths (m)	w(b-a)	3.53
Central Reserve Width (m)	Wcr	1.60		w(b-c)	3.53
Blockage of major road right turn	Y/N?	N		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	83.02
	Vl(b-a)	23	Parameters	E	89.87
	Vr(b-c)	99999		F	0.797
	Vr(c-b)	46		Y	0.576

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	69.5	49
	q(c-b)	23.5	6
	q(a-b)	5.6	8
	q(a-c)	61.2	47.9
	q(b-a)	2	5
	q(b-c)	26	4.5
	f	0.93	0.47
CAPACITIES (pcu/hr)	Q(b-ac)	64477	58024
	Q(c-b)	582.961	584.8
RFC's	c-b	0.04	0.01
	b-ac	0.00	0.00

RFC

		0.04	**0.01**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA		
Junction:	Tung Yuen Street / Yan Yue Wai (L)	Designed by:	CCT
Scheme:	2035 Reference Flows	Checked by:	JPP
Design Year: 2035	Job No.: CHK50748310	Date:	Feb-25
Arm A:	Yan Yue Wai (SB)		
Arm B:	Yan Yue Wai (NB)		
Arm C:	Tung Yuen Street		

Arm C — Tung Yuen Street

	AM	PM
	105	65
	30	5

	AM	PM	**Arm A**
	70	55	Yan Yue Wai (SB)
	5	10	

	AM	PM
	30	5
	5	5

Arm B — Yan Yue Wai (NB)

GEOMETRY

Major Road Width (m)	W	12.30	Lane widths (m)	w(b-a)	3.53
Central Reserve Width (m)	Wcr	1.60		w(b-c)	3.53
Blockage of major road right turn	Y/N?	N		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	83.02
	Vl(b-a)	23	Parameters	E	89.87
	Vr(b-c)	99999		F	0.797
	Vr(c-b)	46		Y	0.576

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	105	65
	q(c-b)	30	5
	q(a-b)	5	10
	q(a-c)	70	55
	q(b-a)	5	5
	q(b-c)	30	5
	f	0.86	0.50
CAPACITIES (pcu/hr)	Q(b-ac)	62967	58139
	Q(c-b)	581.59	583.3
RFC's	c-b	0.05	0.01
	b-ac	0.00	0.00
RFC		**0.05**	**0.01**

Where Vl and Vr are visibility distances to the left or right of the respective streams
$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$
$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$
$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$
$Y = 1-0.0345W$
f = proportion of minor traffic turning left
$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Tung Yuen Street / Yan Yue Wai (L)		Designed by:	CCT
Scheme:	2035 Design Flows		Checked by:	JPP
Design Year: 2035		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Yan Yue Wai (SB)			
Arm B:	Yan Yue Wai (NB)			
Arm C:	Tung Yuen Street			

Arm C

	AM	PM
	107	66
Tung Yuen Street	30	5

Arm A

AM	PM	
70	55	
5	10	Yan Yue Wai (SB)

AM	PM
30	5
5	5

Arm B   Yan Yue Wai (NB)

GEOMETRY

Major Road Width (m)	W	12.30	Lane widths (m)	w(b-a)	3.53
Central Reserve Width (m)	Wcr	1.60		w(b-c)	3.53
Blockage of major road right turn	Y/N?	N		w(c-b)	2.10
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	99999	Calculated	D	83.02
	Vl(b-a)	23	Parameters	E	89.87
	Vr(b-c)	99999		F	0.797
	Vr(c-b)	46		Y	0.576

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	107	66
	q(c-b)	30	5
	q(a-b)	5	10
	q(a-c)	70	55
	q(b-a)	5	5
	q(b-c)	30	5
	f	0.86	0.50
CAPACITIES (pcu/hr)	Q(b-ac)	62962.2	58132
	Q(c-b)	581.59	583.3
RFC's	c-b	0.05	0.01
	b-ac	0.00	0.00

RFC		**0.05**	**0.01**

Where Vl and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

SYSTRA MVA

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Tung Yuen Street / Ko Fai Road (M)		Designed by:	CCT
Scheme:	2024 Observed Flows		Checked by:	JPP
Design Year: 2024		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Ko Fai Road (WB)			
Arm B:	Tung Yuen Street			
Arm C:	Ko Fai Road (EB)			

Arm C

Ko Fai Road (EB)

	AM	PM
	44	75
	2	4

	AM	PM
	1	3
	54	60

Arm A

Ko Fai Road (WB)

	AM	PM
	12	36
	281	191

Arm B   Tung Yuen Street

GEOMETRY

Major Road Width (m)	W	10.70		Lane widths (m)	w(b-a)	2.11
Central Reserve Width (m)	Wcr	0.00			w(b-c)	2.11
Blockage of major road right turn	Y/N?	N			w(c-b)	3.37
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	20		Calculated	D	0.721
	Vl(b-a)	27		Parameters	E	0.778
	Vr(b-c)	20			F	0.883
	Vr(c-b)	17			Y	0.631

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	43.9	74.6
	q(c-b)	1.5	3.6
	q(a-b)	53.7	59.5
	q(a-c)	1.1	2.5
	q(b-a)	280.95	191.2
	q(b-c)	12	36.2
	f	0.04	0.16
CAPACITIES (pcu/hr)	Q(b-ac)	447.443	456.1
	Q(c-b)	646.839	645.4
RFC's	c-b	0.00	0.01
	b-ac	0.65	0.50

RFC		**0.65**	**0.50**

Where Vl and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA			
Junction:	Tung Yuen Street / Ko Fai Road (M)		Designed by:	CCT
Scheme:	2035 Reference Flows		Checked by:	JPP
Design Year: 2035		Job No.: CHK50748310	Date:	Feb-25
Arm A:	Ko Fai Road (WB)			
Arm B:	Tung Yuen Street			
Arm C:	Ko Fai Road (EB)			

Arm C — Ko Fai Road (EB)

	AM	PM
	50	85
	0	5

Arm A — Ko Fai Road (WB)

	AM	PM
	0	5
	100	130

	AM	PM
	15	40
	455	275

Arm B   Tung Yuen Street

GEOMETRY

Major Road Width (m)	W	10.70	Lane widths (m)	w(b-a)	2.11
Central Reserve Width (m)	Wcr	0.00		w(b-c)	2.11
Blockage of major road right turn	Y/N?	N		w(c-b)	3.37
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	20	Calculated	D	0.721
	Vl(b-a)	27	Parameters	E	0.778
	Vr(b-c)	20		F	0.883
	Vr(c-b)	17		Y	0.631

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	50	85
	q(c-b)	0	5
	q(a-b)	100	130
	q(a-c)	0	5
	q(b-a)	455	275
	q(b-c)	15	40
	f	0.03	0.13
CAPACITIES (pcu/hr)	Q(b-ac)	443.37	446.1
	Q(c-b)	637.672	630.6
RFC's	c-b	0.00	0.01
	b-ac	1.06	0.71

RFC		**1.06**	**0.71**

Where Vl and Vr are visibility distances to the left or right of the respective streams
$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$
$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$
$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$
$Y = 1-0.0345W$
f = proportion of minor traffic turning left
$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA				
Junction:	Tung Yuen Street / Ko Fai Road (M)		Designed by:	CCT	
Scheme:	2035 Design Flows		Checked by:	JPP	
Design Year: 2035		Job No.: CHK50748310	Date:	Feb-25	
Arm A:	Ko Fai Road (WB)				
Arm B:	Tung Yuen Street				
Arm C:	Ko Fai Road (EB)				

Arm C — Ko Fai Road (EB)

	AM	PM
	50	85
	0	5

Arm A — Ko Fai Road (WB)

	AM	PM
	0	5
	116	147

	AM	PM
	15	40
	474	287

Arm B   Tung Yuen Street

GEOMETRY

Major Road Width (m)	W	10.70	Lane widths (m)	w(b-a)	2.11
Central Reserve Width (m)	Wcr	0.00		w(b-c)	2.11
Blockage of major road right turn	Y/N?	N		w(c-b)	3.37
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	20	Calculated	D	0.721
	Vl(b-a)	27	Parameters	E	0.778
	Vr(b-c)	20		F	0.883
	Vr(c-b)	17		Y	0.631

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	50	85
	q(c-b)	0	5
	q(a-b)	116	147
	q(a-c)	0	5
	q(b-a)	474	287
	q(b-c)	15	40
	f	0.03	0.12
CAPACITIES (pcu/hr)	Q(b-ac)	442.191	444.5
	Q(c-b)	634.427	627.1
RFC's	c-b	0.00	0.01
	b-ac	1.11	0.74

RFC		**1.11**	**0.74**

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)   Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA		
Junction:	Tung Yuen Street / Ko Fai Road (M)	Designed by:	CCT
Scheme:	2035 Reference Flows (with improvement scheme)	Checked by:	JPP
Design Year: 2035	Job No.: CHK50748310	Date:	Feb-25
Arm A:	Ko Fai Road (WB)		
Arm B:	Tung Yuen Street		
Arm C:	Ko Fai Road (EB)		

Arm C Ko Fai Road (EB)

	AM	PM
	50	85
	0	5

Arm A Ko Fai Road (WB)

	AM	PM
	0	5
	100	130

	AM	PM
	15	40
	455	275

Arm B   Tung Yuen Street

GEOMETRY

Major Road Width (m)	W	10.70		Lane widths (m)	w(b-a)	5.18
Central Reserve Width (m)	Wcr	0.00			w(b-c)	5.18
Blockage of major road right turn	Y/N?	N			w(c-b)	3.37
Combined stream on minor arm	Y/N?	Y				

Visibility Distances (m)	Vr(b-a)	20		Calculated	D	0.964
	Vl(b-a)	27		Parameters	E	1.041
	Vr(b-c)	20			F	0.883
	Vr(c-b)	17			Y	0.631

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	50	85
	q(c-b)	0	5
	q(a-b)	100	130
	q(a-c)	0	5
	q(b-a)	455	275
	q(b-c)	15	40
	f	0.03	0.13
CAPACITIES (pcu/hr)	Q(b-ac)	592.974	596.7
	Q(c-b)	637.672	630.6
RFC's	c-b	0.00	0.01
	b-ac	0.79	0.53

RFC		**0.79**	**0.53**

Where Vl and Vr are visibility distances to the left or right of the respective streams

$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$

$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$

$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$

$Y = 1-0.0345W$

f = proportion of minor traffic turning left

$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1

Simplified Priority Junction Capacity Calculation

Job Title:	No. 4 Tung Yuen Street TIA	
Junction:	Tung Yuen Street / Ko Fai Road (M)	Designed by: CCT
Scheme:	2035 Design Flows (with improvement scheme)	Checked by: JPP
Design Year: 2035	Job No.: CHK50748310	Date: Feb-25
Arm A:	Ko Fai Road (WB)	
Arm B:	Tung Yuen Street	
Arm C:	Ko Fai Road (EB)	

Arm C — Ko Fai Road (EB)

	AM	PM
	50	85
	0	5

Arm A — Ko Fai Road (WB)

	AM	PM
	0	5
	116	147

	AM	PM
	15	40
	474	287

Arm B   Tung Yuen Street

GEOMETRY

Major Road Width (m)	W	10.70	Lane widths (m)	w(b-a)	5.18
Central Reserve Width (m)	Wcr	0.00		w(b-c)	5.18
Blockage of major road right turn	Y/N?	N		w(c-b)	3.37
Combined stream on minor arm	Y/N?	Y			

Visibility Distances (m)	Vr(b-a)	20	Calculated	D	0.964
	Vl(b-a)	27	Parameters	E	1.041
	Vr(b-c)	20		F	0.883
	Vr(c-b)	17		Y	0.631

ANALYSIS

		AM PEAK	PM PEAK
TRAFFIC FLOWS (pcu/hr)	q(c-a)	50	85
	q(c-b)	0	5
	q(a-b)	116	147
	q(a-c)	0	5
	q(b-a)	474	287
	q(b-c)	15	40
	f	0.03	0.12
CAPACITIES (pcu/hr)	Q(b-ac)	591.398	594.5
	Q(c-b)	634.427	627.1
RFC's	c-b	0.00	0.01
	b-ac	0.83	0.55

RFC		**0.83**	**0.55**

Where Vl and Vr are visibility distances to the left or right of the respective streams
$D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))$
$E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))$
$F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))$
$Y = 1-0.0345W$
f = proportion of minor traffic turning left
$Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a)$ Capacity of combined streams

All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1