

# **Transport Department**

## **Guide to Application for Type Approval of Taximeter**

### **Introduction**

1. This guide is a consolidated and updated version of documents relating to technical requirements of taximeter and relevant type approval application, which were issued previously (“*previous documents*”). This guide supersedes the *previous documents*.

### **Taximeter**

2. In accordance with regulation 41(1) of Road Traffic (Construction and Maintenance of Vehicles) Regulations (Cap.374A), every taxi shall be fitted with taximeter of a design and construction approved by the Commissioner.

### **Type Approval of Taximeter**

3. The application for approval of a taximeter shall be submitted by the manufacturer or his representative. On approving the taximeter, the Commissioner will issue a type approval number to that product and he may signify his approval either by notice in the Gazette or in writing.
4. The application should be submitted to the address as follows:  
1M/F, Transport Department Vehicle Examination Complex,  
18 Sai Tso Wan Road, Tsing Yi, New Territories  
(Attn: Type Approval Section)

### **Validity of the Type Approval**

5. The approval is only applied to the model bearing a type approval number issued by Transport Department and will become invalid automatically if there is any variation from the approved design and specification. The approved taximeter shall have its make and model code permanently marked at the front of its casting for identification during future’s examination (e.g. annual examination).
6. Type approval of a taximeter model is associated with specific taxi model. In case the use of an approved taximeter to be extended to a new vehicle taxi model, application for extending the use with supporting information specific to taxi model (e.g. transducer, installation plan and sealing plan, etc.) shall be submitted in accordance with relevant requirements mentioned in stage II below.
7. The type approval on any make of taximeter may become invalid if there is a change in concerned regulations, resulting in non-compliances of approved taximeters under the new requirements. Resubmission of the type approval application shall be required.
8. In case the applicant is going to deploy a new taximeter software version to an approved taximeter, the applicant shall inform TD and obtain the consensus from TD before the

software deployment. Only software version agreed by TD could be installed in the approved taximeter.

9. The approval of taximeter does not include any payment gateway and payment terminal, if any, which is connected to the taximeter and their operation are not under TD's purview. Nevertheless, the taximeter supplier shall ensure all matters related to the payment gateway and payment terminal, including but not limited to their function, payment means, operation, etc., must comply with the laws of Hong Kong.

## **Liability**

10. Upon obtaining the type approval of taximeter, the taximeter supplier is liable for installing/ deploying the approved taximeter and version to a taxi make and model in accordance with the approved installation plan and sealing method. Non-compliance of above-mentioned requirement may result in suspension or withdrawal from the relevant type approval.

## **Technical and Test Requirements of Taximeters**

11. The technical and test requirements of taximeter are provided in Annex A and Annex B respectively.

## **Application Flow**

### Stage I - Approval for design and construction of taximeter

12. Applicants shall provide the following documents and certificate to support their application.
  - a. An application letter with information and the make and model number of taximeter
  - b. A3 technical drawing of the product shall be provided. All dimensions specified in the regulation 42 of Cap.374A and Part I of Schedule 9 of Cap.374D should be marked on the drawing.
  - c. A3 technical drawing concerning the recommended sealing method shall be provided.
  - d. Technical specification of the product and supporting documents substantiating the compliance with the requirements in Annex A.
  - e. Third party test report issued by any laboratory recognized under Hong Kong Laboratory Accreditation Scheme (HOKLAS) or any nationally accredited laboratory on both electromagnetic compatibility (EMC) tests in item 4 of Annex A and all tests (except those specified) in Annex B.
  - f. Provide one unit of pulse generator prototype meeting the requirements in Annex A.
  - g. User manual for the pulse generator.
  - h. The applicant shall provide service hotline and workshop address to support the maintenance of taximeter.

### Stage II - Examination of the taximeter fitted in a taxi at Transport Department Vehicle Examination Complex (TDVEC)

13. Upon satisfactory vetting of information in stage I, the taximeter shall be fitted in a taxi for a vehicle examination at TDVEC. The applicant shall submit information in relation to the taxi make and model, including mileage signal source (e.g. transducer), installation plan of taximeter in the taxi, the sealing plan for transducer, transducer cable, and a sample metal information plate fitted in the taxi as mentioned in item 9 of Annex A.
14. In case the mileage signal is obtained from a separately installed measurement system (i.e. not directly from the original equipment of the taxi), for “each” taxi, the applicant shall submit additional information about the design, construction and installation of the measurement system, and arrange the taxi with the taximeter fitted to conduct a self-checking on any of a 2,000m route specified in Annex C or any route specified by TD. A relevant test report with photos showing the detail of the self-checking (i.e. vehicle passing by the start point and end point of the road and receipt showing distance travelled) and compliance with the accuracy requirement (i.e. the first 2,000m record on the taximeter is made when the taxi travels between 2,000m and 2,060m on road.)
15. Upon satisfactory vetting of information as required in item 9 and 10 (if required), the applicant may make appointment for the examination of the taximeter fitted in a taxi with type approval section.
16. Subject to the test result of the examination, the approval of taximeter model associated with the relevant taxi make and model may be granted. The applicant shall provide 2 sets of pulse generator in addition to the first set of pulse generator in item 8 above in order to support future examination of the taximeter at the TDVEC.

## Reference Materials

- I. Guidelines to Taxi Regulations (remark: refer to the information under “useful taxi information” )  
[https://www.td.gov.hk/en/transport\\_in\\_hong\\_kong/public\\_transport/taxi/index.html](https://www.td.gov.hk/en/transport_in_hong_kong/public_transport/taxi/index.html)
- II. Statutory Requirements of Taximeter, receipt printing device, taximeter drive and sealing and testing of taximeter (reg. 41 to 44 of Cap.374A and part VI of Cap.374D)  
[https://www.elegislation.gov.hk/hk/cap374A!en?xid=ID\\_1438403118718\\_002&INDEX\\_CS=N](https://www.elegislation.gov.hk/hk/cap374A!en?xid=ID_1438403118718_002&INDEX_CS=N)  
[https://www.elegislation.gov.hk/hk/cap374D!en?INDEX\\_CS=N](https://www.elegislation.gov.hk/hk/cap374D!en?INDEX_CS=N)

**Vehicle Safety and Standards Division**  
**Transport Department**  
**First issue in March 2025**

**Technical Requirements of Taximeter**

The taximeter shall comply with the provisions under Road Traffic (Construction and Maintenance of Vehicles) Regulations (Cap. 374A) and Road Traffic (Public Service Vehicles) Regulations (Cap. 374D), relating to taximeter. In connection with the above, the taximeter shall also comply with the following requirements:-

1. The taximeter shall be designed to operate on one electronic pulse per metre and the transducer shall be designed to generate signal with one electronic pulse per metre.
2. The taximeter shall be incorporated with an anti-tampering protection system and be so constructed that the input of any pulse other than the unique pulse will result in the following:-
  - a). A continuous audible alarm sounding from the meter for a period of at least 30 seconds.
  - b). The recorded fare and extras will revert to the minimum applicable fare and extra charge figure respectively, with a letter “C” appearing to the left of the fare.
  - c). The taximeter will remain inoperable for a period of at least 60 minutes.
  - d). The function of (b) & (c) above will continue even if the power supply is interrupted.

If the meter fare increases at a faster rate than an input equivalent to a driven speed of 150 km/h, the function of the taximeter in item 2(a), (b) and (c) shall also take effect.

3. The encoder and decoder shall be so designed that they shall be an integral part of the transducer and the taximeter respectively and shall not be removed without damage.
4. Standard of Electromagnetic Compatibility (EMC) could be either UN Regulation No.10, GB or GB/T standards mentioned in JJF1604 with regard to EMC.
5. The pulse generator shall provide individual button for sending the following signals-
  - a). 1 metre travelled
  - b). 2000 metres travelled (provide a function to keep generating pulse signal until appx. 2000 metres automatically)
  - c). 200 metres travelled
  - d). For long distance travelled (Urban taxi: appx. 9000 metres, New Territories taxi: appx. 8,000 metres, Lantau taxi: 20,000 metres)
  - e). “tampered” signal triggering the anti-tampering protection in item 2 above
  - f). “over-speed” signal triggering the anti-tampering protection in item 2 above
  - g). “reset” to have the figure set as zero

Remark: The time required to send the signal for 5(b) of Annex A shall not exceed one minute.

6. The taximeter shall support sound indication upon each fare increment and audio announcement function in item 6(a)&(b) of Annex B.

**Transducer**

7. The transducer cable shall be equipped with anti-tampering protection. If there is any joint/connection, anti-tampering measures shall be provided.

8. The transducer fitted in a taximeter drive shall be so designed that the number of electronic pulse produced and the drive cable connexions are applicable to the taximeter.
9. A metal plate shall be attached to every taximeter transducer with the following information clearly marked:
  - a). Vehicle make and model;
  - b). Taximeter make and model;
  - c). Tyre pressure;
  - d). Final drive ratio;
  - e). Type of tyre (e.g. radial);
  - f). The minimum effective circumference of the tyre on the wheels of the taxi to which the taximeter is connected; and
  - g). The number of electronic pulse produced in one kilometre

Additional Requirements for taximeter which is designed to connect to any networked system

10. The applicant shall provide architect illustrating any networked system(s) linked to the taximeter.
11. In case the taximeter is designed to connect to networked system(s), the applicant shall submit documents (e.g. third party audit report or test report by recognized laboratory) to substantiate that sufficient level of protection measures is in place to prevent the taximeter from being tampered.

Additional Requirements for using light emitting diode (LED) panel as the indicator (“LED indicator”)

12. The illuminated area of the LED indicator shall be of a size not less than 100 millimetres by 50 millimetres displaying the static words “FOR HIRE” or the word “TAXI” only. No other message is allowed.
13. To avoid causing confusion to other road users, the colour and display design of LED indicator shall be aligned with the requirements of similar LED destination indicator on public light bus posted on TD's website; (i.e. item 2. of Specifications of destination indicator [https://www.td.gov.hk/en/transport\\_in\\_hong\\_kong/public\\_transport/minibuses/new\\_regulations/index.html#2](https://www.td.gov.hk/en/transport_in_hong_kong/public_transport/minibuses/new_regulations/index.html#2) )
14. Compared to traditional indicator, the presence of LED indicator shall not result in any deterioration of driver's direct vision. For example, photos may be taken from the driver's ocular points to compare the "field of direct vision" in the presence of original indicator and LED indicator respectively.
15. The LED indicator shall be positioned in such a way that the driver is not affected by any glare due to the reflection of light from the LED indicator.

**Test Requirements****TEST RECORD**

<b>Specification</b>	<b>Pass</b>	<b>Fail</b>	<b>Actual Reading/Remark</b>
<p>(1) The amount of fare calculated by time or distance or a combination of time and distance as prescribed shall be as follows:-</p> <p>Accuracy of Taximeter</p> <p>(a) Flag-fall for the first 2 km (Acceptance criteria: fall between 2000 and 2060 m travelled on roller tester)</p> <p>i. Number of pulse per unit distance</p> <p>ii. Fare</p> <p>(b) Surcharge for every 0.2 km after the first 2 km (Acceptance criteria: fall between 200 and 206 m travelled on roller tester)</p> <p>i. Number of pulse per unit distance</p> <p>ii. Fare</p> <p>(c) Waiting time charge for every 1 minute</p> <p>i. Clock accuracy</p> <p>ii. Fare</p> <p>(d) Combination of time and distance charge</p> <p>i. Number of pulse per unit distance/time</p> <p>ii. Clock accuracy</p> <p>iii. Fare</p> <p>(Distance charge – vehicle speed is equal or greater than 12 km/hr; Time charge – vehicle speed is smaller than 12 km/hr)</p> <p>(e) Surcharge (No. of digit for fare indication, increment)</p> <p>(A minimum of six digits including two decimal places for fare indication is required. Updated taxi fare shall refer to Schedule 5 of Road Traffic (Public Services Vehicles) Regulations)</p>			<p>HK\$</p> <p>HK\$</p> <p>HK\$</p> <p>HK\$</p> <p>HK\$</p>
<p>(2) The height of the figures indicating the fare and additional fare shall not less than 10 mm</p>			mm
<p>(3) The fare dial markings are as follows:-</p> <p>(a) The words “FARE” and “EXTRAS” appear above, below or beside the figures indicating such item. The amount of “fare” and that of “extra” shall be separated at all time.</p> <p>(b) The letters and words “H.K.dollars” and “cents” or the letters and symbols “H.K.\$” and “c” appear immediately above, below or beside the figures indicating the fare and the extras.</p> <p>(c) The fare is indicated with a clear division between dollars and cents.</p> <p>(d) The fare dial and the indicator display can be illuminated during the hours of darkness when required so as to render the readings on the dial.</p>			

Specification	Pass	Fail	Actual Reading/Remark
<p>(4) An indicator of size not less than 100 mm by 50 mm for displaying the words 'FOR HIRE' or 'TAXI' shall be provided and shall be clearly visible to any person in front of the taxi at a distance of 20 metres</p> <p>(5) A device shall cause the taximeter to be set to and to operate in any one of the following positions with the following displays:</p> <p>(a) "FOR HIRE" - when the taximeter is not recording and the indicator is set at a position to display the 'FOR HIRE of TAXI' visible outside the taxi.</p> <p>i. Position</p> <p>ii. Display</p> <p>(b) "HIRED" - when the taximeter is recording by time or distance or a combination of time and distance and the indicator display is not visible outside the taxi.</p> <p>i. Position</p> <p>ii. Display</p> <p>(c) "STOPPED"</p> <p>(1) When the taximeter is recording by distance only and the indicator display is not visible outside the taxi or;</p> <p>(2) When the mechanism of the taxi is not in motion and the indicator display is not visible outside the taxi.</p> <p>i. Position</p> <p>ii. Display</p> <p>(d) The sequence of the actuating device shall be as follows:</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>'FOR HIRE' → 'HIRED' ←→ STOPPED</p> <p>↑ _____ ↑</p> </div> <p>(e) Protection for electromagnetic compatibility</p>			mm x mm

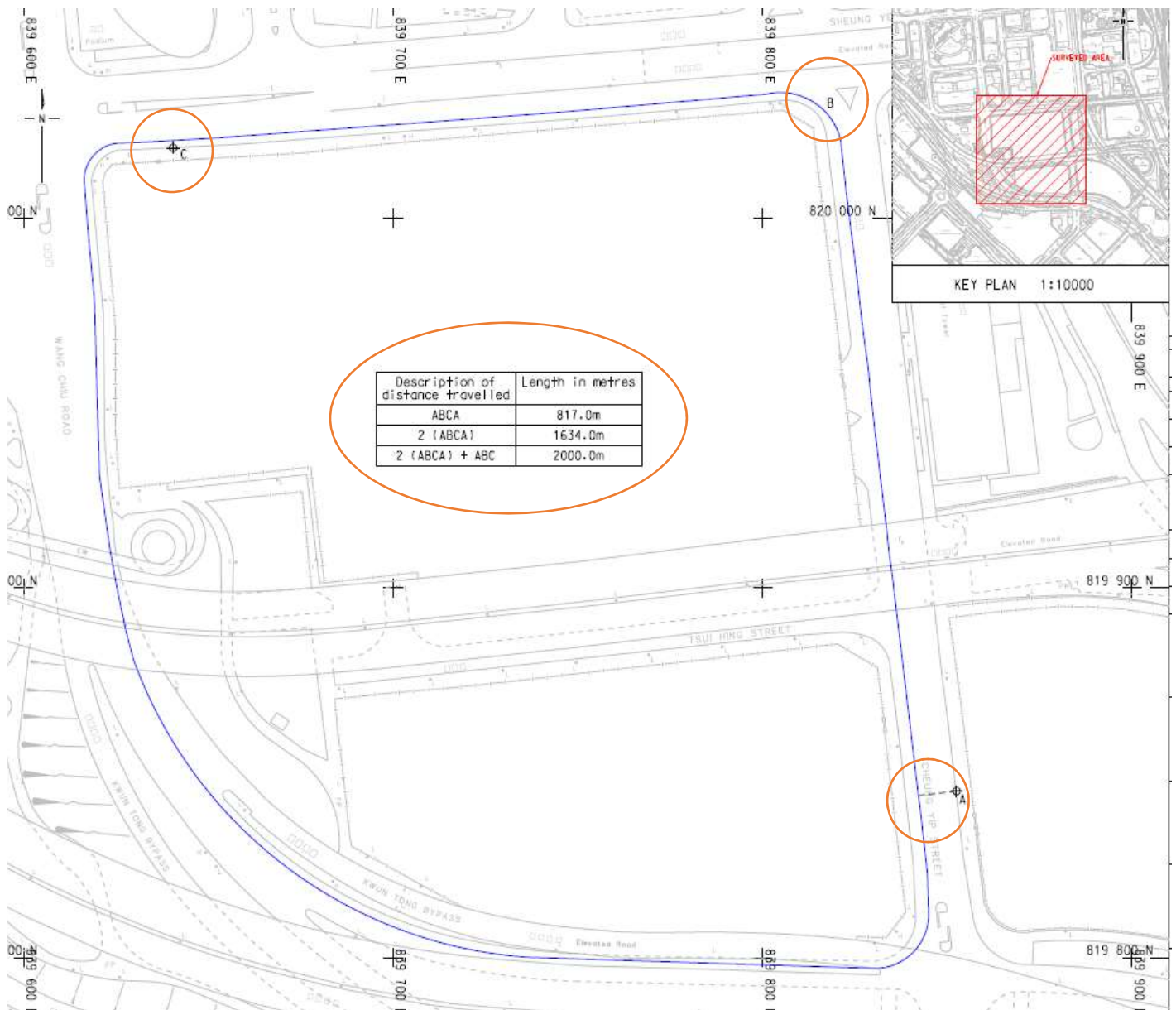
<div>(6) Sound Indication and Message Announcement</div> <div><div>(a) A clear acoustic indication (e.g. a “beep” sound) shall be provided to the passenger at every fare increment and whenever there is any button pressed.</div><div>(b) Message announcement in 3 languages (including Cantonese, Putonghua and English) of the followings message –<div><div>(i) Welcome to take this taxi, registration number of the taxi and please fasten your seatbelt;</div><div>(ii) You have reached the destination, total fare of the trip; and thank you.</div></div></div></div>			
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<p>(a minimum of six digits including two decimal places for fare indication is recommended.)</p> <p>(9) If the meter fare increases at a faster rate than an input equivalent to a driven speed of 150 km/h, the function of the taximeter in para. 7(a), (b) and (c) shall be maintained.</p> <p>(10) The encoder and decoder shall be so designed that they shall be an integral part of the sensor and the taximeter respectively and shall not be removed without damage.</p> <p>(11) The taximeter shall be designed to operate on ONE electronic pulse per meter.</p> <p><b>Transducer</b></p> <p>(12) The transducer shall be designed to generate ONE electronic pulse per meter.</p> <p>(13) The gear box or transducer fitted in the taximeter drive shall be designed that the output revolution or the number of electronic pulse signal produced and the drive cable connections shall be acceptable to the type of taximeter.</p> <p>The transducer cable shall be equipped with anti-tampering protection. If there is any joint/connection, anti-tampering measures shall be provided.</p>			<p>(A printout shall be attached to the report)</p>
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**Route No.1- Sheung Yee Road, Kowloon Bay, Kowloon**








## ENGINEERING CONTROL STATION SUMMARY

STATION NO. : C (FORMER NO. :                     )  
 NORTHING = NIL m EASTING = NIL m HEIGHT = NIL m  
*Note : Height is above the HKPD and measured to the top of mark.*  
 TYPE OF MARK : ☐ Concrete Pillar, ☐ Cut Mark, ☐ Iron spike, ☐ Iron tube, ☒ Nail,  
☐ GCP, ☐ Wooden Peg #, ☐ Aerial photo control point #, ☐ Others #  
 LOCALITY : SHEUNG YEE ROAD, KOWLOON BAY

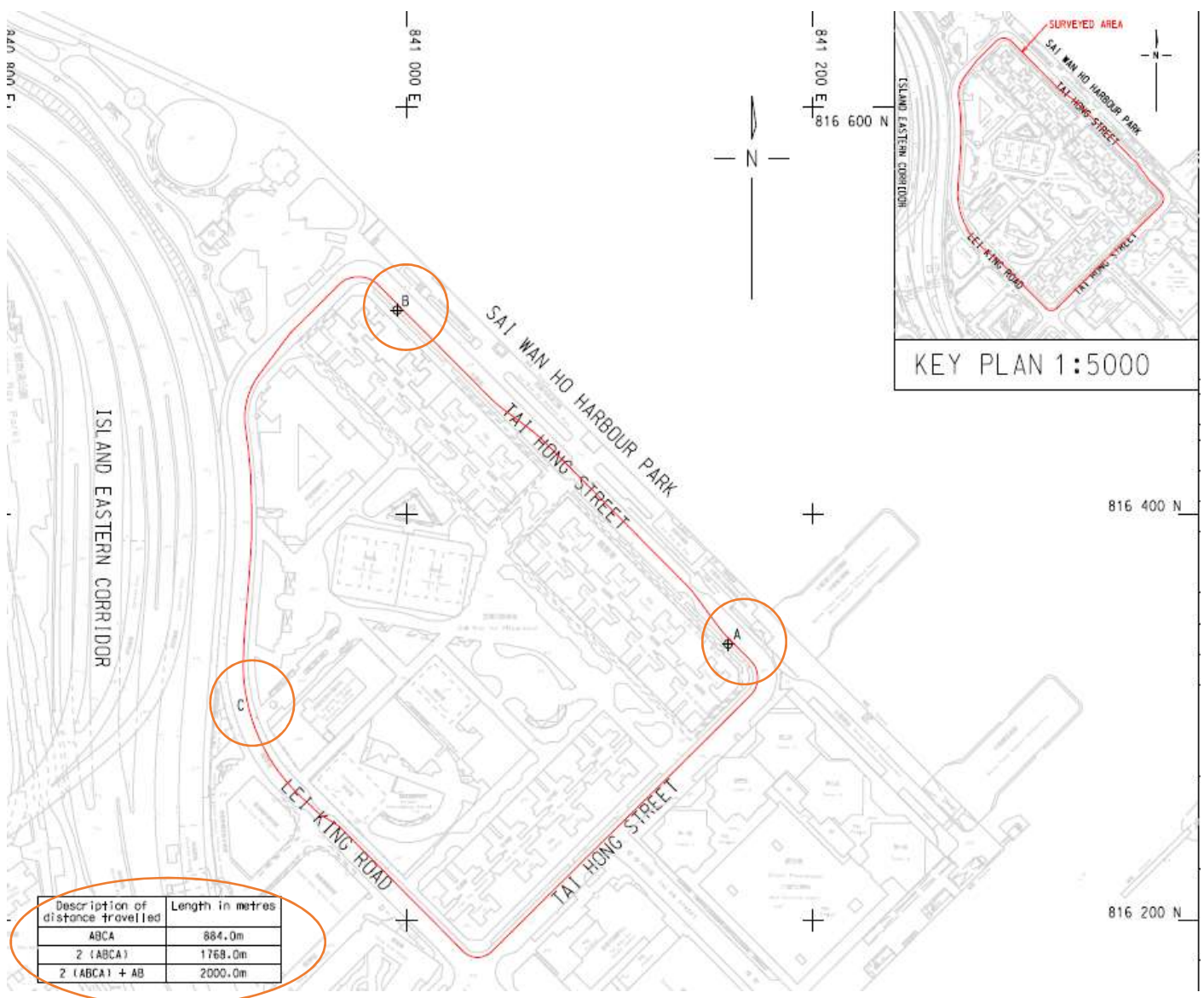
		STATION / LOCATION SKETCH A REMARKS :
		STATION / LOCATION SKETCH B REMARKS :

DEPARTMENT : Highways Department SECTION :                      TASK FORCE :                      DATE OF SURVEY : 02/09/2024  
 SURVEYED BY : HUI C.K. SOI/TF CHECKED BY : NG C.M. SSO3/TF

Note :

- ☐ Please tick as appropriate
- # Marker type for use in Highways Department only. It is not included in the data set distributed through Geospatial Information Hub (GIH).

## Route No.2- Tai Hong Street, Sai Wan Ho









Form No. SDF-SDTI 04/98-1  
Rev. A  
31/03/2023

### ENGINEERING CONTROL STATION SUMMARY

STATION NO. : A (FORMER NO. :                     )  
NORTHING = NIL m EASTING = NIL m HEIGHT = NIL m  
*Note : Height is above the HKPD and measured to the top of mark.*  
TYPE OF MARK : ☐ Concrete Pillar, ☐ Cut Mark, ☐ Iron spike, ☐ Iron tube, ☒ Nail,  
☐ GCP, ☐ Wooden Peg #, ☐ Aerial photo control point #, ☐ Others #  
LOCALITY : Tai Hong Street, Sai Wan Ho

		<p>STATION / LOCATION SKETCH A REMARKS :</p>
		<p>STATION / LOCATION SKETCH B REMARKS :</p>

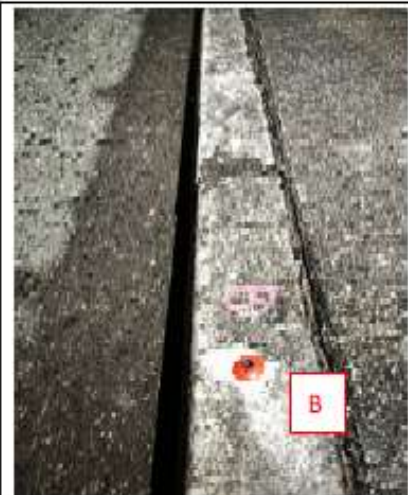



DEPARTMENT : Highways Department SECTION : TASK FORCE DATE OF SURVEY : 05/12/2024  
SURVEYED BY : LAIPS, SO4/TF CHECKED BY : NG C.M. SS03/TF

Note :

- ☐ Please tick as appropriate
- # Marker type for use in Highways Department only. It is not included in the data set distributed through Geospatial Information Hub (GIH).

## ENGINEERING CONTROL STATION SUMMARY

STATION NO. : B (FORMER NO. :                     )  
 NORTHING = NIL m EASTING = NIL m HEIGHT = NIL m  
*Note : Height is above the HKPD and measured to the top of mark.*  
 TYPE OF MARK : ☐ Concrete Pillar, ☐ Cut Mark, ☐ Iron spike, ☐ Iron tube, ☒ Nail,  
☐ GCP, ☐ Wooden Peg #, ☐ Aerial photo control point #, ☐ Others #  
 LOCALITY : Tai Hong Street, Sai Wan Ho

		STATION / LOCATION SKETCH A REMARKS :
		STATION / LOCATION SKETCH B REMARKS :

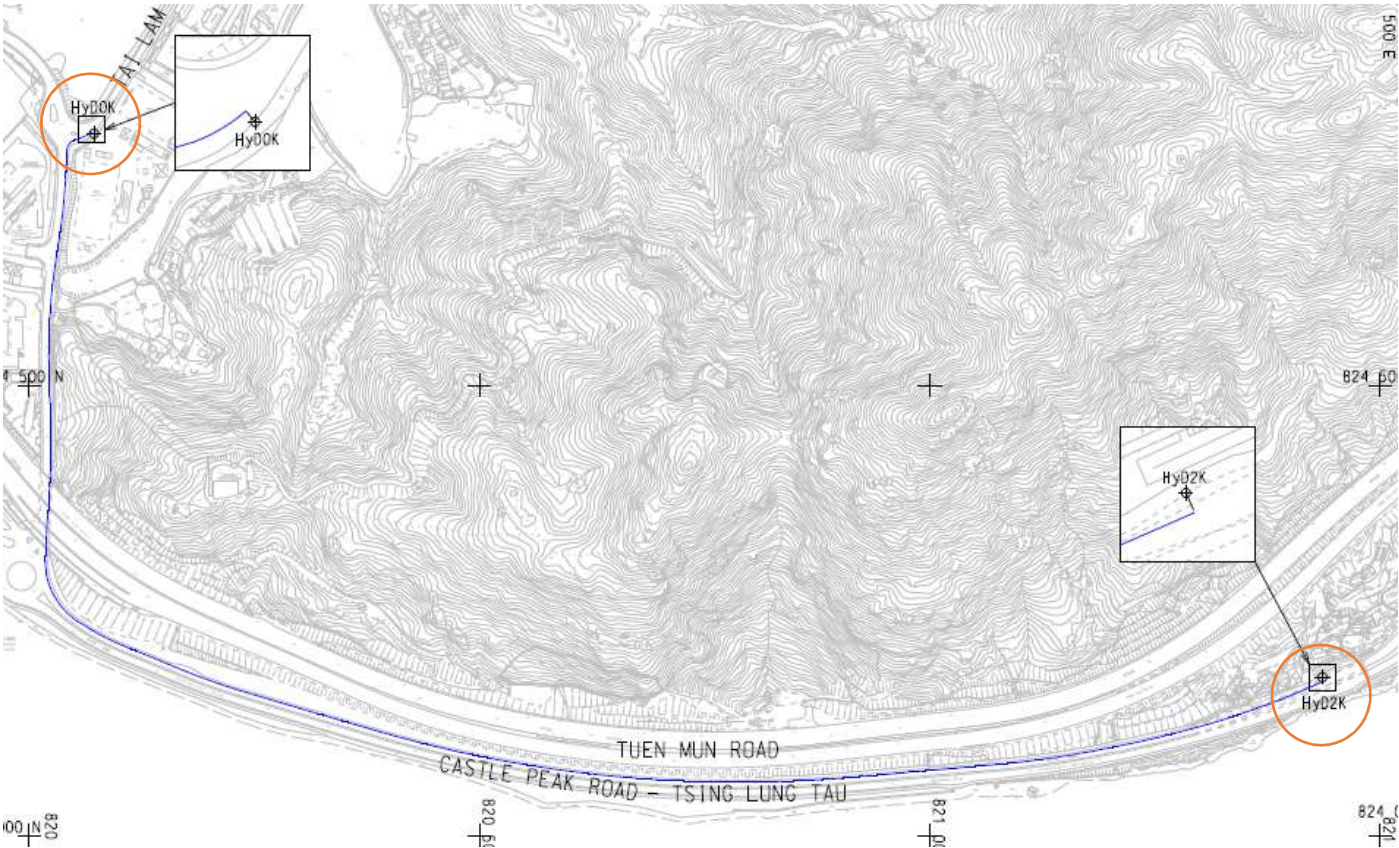
DEPARTMENT : Highways Department SECTION :                      TASK FORCE :                      DATE OF SURVEY : 05/12/2024  
 SURVEYED BY : LAIP S. SO4/TF CHECKED BY : NG C.M. SS03/TF

Note :

- ☐ Please tick as appropriate
- # Marker type for use in Highways Department only. It is not included in the data set distributed through Geospatial Information Hub (GIH).






Route No.3- Tai Lam Chung Road, Tuen Mun



### ENGINEERING CONTROL STATION SUMMARY

STATION NO. : HyD0K (FORMER NO. :                     )  
 NORTHING = NIL m EASTING = NIL m HEIGHT = NIL m  
*Note : Height is above the HKPD and measured to the top of mark.*  
 TYPE OF MARK : ☐ Concrete Pillar, ☐ Cut Mark, ☐ Iron spike, ☐ Iron tube, ☒ Nail,  
☐ GCP, ☐ Wooden Peg #, ☐ Aerial photo control point #, ☐ Others #  
 LOCALITY : Tai Lam Chung Road, Tuen Mun

		STATION / LOCATION SKETCH A REMARKS :
		STATION / LOCATION SKETCH B REMARKS :

DEPARTMENT : Highways Department SECTION :                      TASK FORCE :                      DATE OF SURVEY : 02/10/2024  
 SURVEYED BY : CHOI W.S. SO2/TF CHECKED BY : NG C.M. SSO3/TF

Note :

- ☐ Please tick as appropriate
- # Marker type for use in Highways Department only. It is not included in the data set distributed through Geospatial Information Hub (GIH).

### ENGINEERING CONTROL STATION SUMMARY

STATION NO. : HyD2K (FORMER NO. :                      )  
 NORTHING = NIL m EASTING = NIL m HEIGHT = NIL m  
*Note : Height is above the HKPD and measured to the top of mark.*  
 TYPE OF MARK : ☐ Concrete Pillar, ☐ Cut Mark, ☐ Iron spike, ☐ Iron tube, ☒ Nail,  
☐ GCP, ☐ Wooden Peg #, ☐ Aerial photo control point #, ☐ Others #  
 LOCALITY : Castle Peak Road – Tsing Lung Tau, Tuen Mun

	STATION / LOCATION SKETCH A REMARKS :
	STATION / LOCATION SKETCH B REMARKS :

DEPARTMENT : Highways Department SECTION : TASK FORCE DATE OF SURVEY : 02/10/2024  
 SURVEYED BY : CHOI W.S. SO2/TF CHECKED BY : NG C.M. SSO3/TF

Note :

- ☐ Please tick as appropriate
- # Marker type for use in Highways Department only. It is not included in the data set distributed through Geospatial Information Hub (GIH).