

ICS 43.020

CCS R 04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 43758.2-2024

**Technical specifications for driving safety test environment for
intelligent and connected vehicles - Part 2: Semi-open road**

智能网联汽车运行安全测试环境技术条件 第2部分：半开放道路

Issued on: December 31, 2024

Implemented on: July 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Road environment	6
5 Traffic facilities	8
6 Traffic control	10
7 Road lighting	12
8 Traffic Operation	12
9 Road monitoring and communication	13
10. Test assurance	13
Annex A (informative) Special sign patterns for semi-open test roads	15
Annex B (informative) Semi-open test items for road safety driving ability	17
Bibliography	19

Foreword

This document was issued on 31 December 2024 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 July 2025.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 43758.2-2024 specifies the semi-open road test environment for intelligent and connected vehicles, the second stage of the Chinese autonomous vehicle testing ladder between the closed proving ground and the public road. The semi-open road is the environment in which a system meets real traffic, pedestrians and weather while the operator still controls access, and its value depends entirely on it being specified rather than improvised: a test result is only transferable if the road environment it was obtained in is defined. The standard sets the requirements on the road environment, its geometry, surface, markings and boundaries, on the traffic facilities, signs, signals and roadside units, on the traffic control and the management of access and of other road users, on the road

lighting and the environmental conditions, and on the monitoring, communication and data recording infrastructure that the test requires, together with the safety measures and the emergency arrangements. It takes effect on 1 July 2025.

This document specifies the requirements for the road environment, traffic facilities, traffic control, road lighting, traffic operation, road monitoring and communication, and test assurance of semi-open roads used for operational safety testing of intelligent connected vehicles.

This document is applicable to the selection, construction and determination of semi-open roads for safety testing of intelligent connected vehicles at level 3 driving automation (conditional autonomous driving) and above as specified in GB/T 40429-2021. It is also used as a reference for the selection, construction and determination of semi-open roads required for demonstration applications of intelligent connected vehicles.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 2894, Safety signs and guideline for the use

GB 5768.2, Road traffic signs and markings -- Part 2. Road traffic signs

GB 5768.3, Road Traffic Signs and Markings -- Part 3. Road Traffic Markings

GB 13495.1, Fire safety signs -- Part 1. Signs

GB/T 24969, Specification for highway lighting

GB/T 35785, Specification for the Installation of Read-Write Equipment of the Electronic Identification of motor Vehicles

GB/T 35786, General specification for read-write equipment of the electronic identification of motor vehicles

GB/T 35787, Security technical requirement for the read-write equipment of the electronic identification of motor vehicles

4.1.2 The number of level intersections contained in the semi-open test road shall be

greater than or equal to 4.

4.1.3 The semi-open test road shall be equipped with an entrance (test starting point) and an exit (test end point). The entrance and exit shall be set at the existing entrances and exits of factories, mines, ports, parks, residential areas, etc.

4.1.4 The area around the semi-open test road shall be free of strong electromagnetic interference environments such as high-voltage power grids with an AC voltage greater than 330 kV and high-voltage substations.

4.1.5 Semi-open test roads shall be selected on sections with good visibility.

4.2 Factory and mine roads

4.2.1 The traffic environment of factory and mine roads shall include cement concrete pavement and asphalt concrete pavement. It shall not include sections passing through areas where flammable and explosive materials are stored.

4.2.2 The traffic environment of factory and mine roads shall.

- a) include gravel roads;
- b) include continuous curved sections, slope sections, and bridge sections;
- c) include railway level crossings;
- d) include one-way roads;
- e) mainly consist of sections separated from vehicles and non-motor vehicles or sections where non-motor vehicles and pedestrians are prohibited from passing.

4.3 Port roads

4.3.1 The port road traffic environment shall.

- a) comply with the requirements of JTS 168;
- b) include cement concrete pavement and asphalt concrete pavement;
- c) include one-way roads;
- d) not include sections passing through dangerous goods yards or dangerous goods loading and unloading terminals.

4.3.2 The port road traffic environment shall.

- a) include railway level crossings;

- b) include right-angle turning sections, slope sections, and waterside sections;
- c) pass through the container loading and unloading operation areas of docks and yards with facilities such as quay cranes or cranes;
- d) mainly consist of sections separated by motor vehicles and non-motor vehicles or sections where non-motor vehicles and pedestrians are prohibited from passing.

4.4 Park roads

4.4.1 The park's road traffic environment shall include tree-lined avenues.

4.4.2 The traffic environment of the park roads shall be.

- a) mainly asphalt concrete pavement, including cement concrete pavement;
- b) including roundabouts;
- c) including continuous curved sections, slope sections, bridges and sections close to water bodies or cliffs;
- d) mainly unseparated mixed traffic sections;
- e) including sections with roadside parking spaces or through ground parking lots (areas).

4.5 Roads in residential areas

4.5.1 The road traffic environment in residential areas shall comply with the requirements of GB 50180.

4.5.2 The road traffic environment in residential areas shall.

- a) include roundabouts;
- b) be mainly asphalt concrete pavement, including cement concrete pavement;
- c) include curved sections, right-angle turning sections, and narrow sections with a road width of less than or equal to 3 m;
- d) be mainly non-segregated mixed traffic sections;
- e) include sections with roadside parking spaces or through ground parking lots (areas).

5 Traffic facilities

5.1 General requirements