

ICS 13.020.20

CCS A 00



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

GB/T 44978-2024

**Smart community infrastructures - Smart transportation for
rapid transit in and between cities and urban agglomerations**

智慧城市基础设施 连接城市和城市群快速智慧交通

(English Translation)

Issued on: November 28, 2024

Implemented on: November 28, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Requirements for fast and intelligent transportation
5 Implementation of fast and smart transportation
6 Quality maintenance of fast and intelligent transportation
Appendix A (Informative) Rapid Intelligent Transportation Examples
References

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is modified to adopt ISO 31759:2019 "Smart city infrastructure. Rapid access within and between large urban areas and their surrounding areas".

"Speed Transport and Smart Transportation".

The technical differences between this document and ISO 31759:2019 and their reasons are as follows.

--- The scope of the standard has been changed (see Chapter 1) to match the current development of fast and intelligent transportation connecting cities and urban agglomerations in my country;

--- Changed the terminology and definitions of large urban areas and high-speed railways (see 3.1 and 3.3) to conform to the actual situation in my country;

--- Changed the overview of rapid intelligent transportation in large urban areas and surrounding areas in foreign countries to a general statement (see 4.1) to conform to the rapid intelligent transportation in my country.

The actual situation of intelligent transportation and the writing requirements of GB/T 1.1;

--- Deleted "same day" (see 4.2 and 5.2 of ISO 31759:2019) to meet the current rapid development of smart transportation in my country.

actual situation;

--- Added transportation mode options, "When the travel distance is greater than 200km", added "Long-distance passenger transport" (see 5.3) to meet the needs of my country the actual situation of fast and smart transportation operations;

--- Changed the departure frequency from "one bus every 5 minutes" to "one bus every 30 minutes" during peak hours (see 5.4.2.1).

It is in line with the actual situation of passenger transportation during peak periods in urban agglomerations in my country;

--- Changed some technical requirements, changing "should" to "should" to meet the actual situation of my country's rapid intelligent transportation operations (see 5.4.2, 5.4.4);

--- Deleted the connection methods such as "railway, bus, motorcycle, public transportation, car", and added "railway transportation, high-speed passenger transportation, public bus" the connection methods such as "tram" (see 5.4.2.4) are more in line with the connection services of our stations;

--- Deleted "level crossing" (see 5.4.2.6) to conform to the actual situation of my country's rapid intelligent transportation construction;

--- The dispatching and control methods have been changed (see 5.4.3.1) to meet the actual situation of my country's rapid intelligent transportation development;

--- Deleted "bicycle" as an example of item storage and added "baby carriage, wheelchair" (see 5.4.4.2) to comply with the vehicle storage requirements in my country.

The actual condition of the item;

---The monitoring parameters for rapid intelligent transportation quality maintenance (see 6.2) have been changed to meet the actual situation of rapid intelligent transportation construction in my country.

The following editorial changes were made to this document.

--- To coordinate with the existing standards, the name of the standard will be changed to "Smart City Infrastructure Connecting Cities and Urban Clusters with Rapid Smart Communications" Pass";

--- Changed the relevant information of the Beijing-Tianjin-Hebei urban agglomeration in the informative appendix (see Appendix A);

--- Added relevant information on the Yangtze River Delta city cluster and the Guangdong-Hong Kong-Macao Greater Bay Area city cluster in the informative appendix (see Appendix A).

Introduction

Urban agglomerations are the mainstream and major trend of urbanization in the world today, and the main form of urbanization in my country.

It plays an important role in improving the level of industrial division of labor and efficiency, and promoting the coordinated development of large, medium and small cities.

The "14th Five-Year Plan" for the Development of a Modern Comprehensive Transportation System points out that my country's comprehensive transportation network layout is not balanced and the structure is not fully appropriate.

The management and connection are not smooth enough, and there are obvious shortcomings in key urban agglomerations and urban (suburban) railways. The supply of transportation services does not match the rapidly growing demand.

The depth and breadth of intelligent transportation technology application need to be expanded.

In order to meet the travel needs of passengers between cities and urban agglomerations and provide them with appropriate transportation services, the fast and intelligent rail transit network can realize long-distance rapid transportation and management of passengers, providing a solution to the transportation problems of connecting cities and urban agglomerations.

Efficient solution. The effective implementation of fast and intelligent transportation requires full consideration of the population size and travel distance within the radiation range, the required capacity, Factors such as transportation mode are taken into consideration, and the departure frequency, operating speed, travel time, etc. are determined according to actual conditions. Typical examples are shown in Appendix A.

The introduction of high-speed, large-capacity long-distance passenger transport and rail transit can improve the efficiency and quality of passenger transport within urban agglomerations, thereby shortening travel time.

Promoting economic, social and cultural activities will not only help the development of cities and urban agglomerations themselves, but also radiate and drive the development of the entire region and even the country.

Bureau development.

Smart city infrastructure connects cities and Rapid and intelligent transportation in urban agglomerations

1 Scope

This document provides an overview, implementation, and quality maintenance of fast and smart transportation that connects cities and urban agglomerations.

This document applies to the implementation and maintenance of rapid intelligent transportation connecting cities and urban agglomerations. This document does not cover the basic Construction of facilities.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

Urban agglomerations Within a specific geographical area, with one or more large cities, megacities or supercities as the center, and with different nature, type and level of regulation the city is the basic unit, relying on a developed infrastructure network, forming a compact spatial organization, close economic ties, and ultimately achieving A highly integrated urban collection.

Note: Urban agglomerations generally have one or more megacities as their core and are composed of three or more large cities. Typical urban agglomerations include Beijing-Tianjin-Hebei, Yangtze River Delta, Guangdong, Hong Kong and Macao, etc.

Long-distance passenger transport highwaybus A road transport system that uses buses to transport passengers on fixed service routes that are either wholly or partly expressways.

Rail Transit

A passenger transportation system that uses dedicated track guidance.

Note: Typical rail transit used in urban agglomerations includes high-speed railways, intercity railways, urban (suburban) railways, etc.

4.1 General

The fast and intelligent transportation modes that can be expected to be used to connect cities and urban agglomerations include long-distance passenger transportation and rail transportation.

The required capacity is determined by the mode of transportation to be adopted.

Considering that long-distance passenger transport and rail transit require the construction of high-standard highways and railways when introduced, the initial investment cost and