

# JTG

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

**中华人民共和国行业标准**

**JTG F71-2006**

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**Technical Specification for Construction of  
Highway Safety Facilities  
公路交通安全设施施工技术规范**

**Issued on July 7, 2006**

**Implemented on September 1, 2006**

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**Issued by Ministry of Transport of the People's Republic of China**

# **Announcement of Ministry of Transport of the People's Republic of**

## **China**

No. 16, 2006

### **Notice on publishing the professional codes of Specification for Design of Highway Safety Facilities (JTG D81-2006) and Technical Specification for Construction of Highway Safety Facilities (JTG F71-2006)**

The Specification for Design of Highway Safety Facilities (JTG D81-2006) and Technical Specification for Construction of Highway Safety Facilities (JTG F71-2006) have been issued at the present and implemented from September 1, 2006, the Specification for Design and Construction of Expressway Safety Appurtenances (JTJ 074-94) shall be abolished simultaneously.

The Item(1), (2) in Article 4.2.1, Item(1) in Article 4.2.2, Article 5.2.1, Article 5.2.2, Item(1) in Article 8.2.1 are compulsory and must be enforced strictly.

The compulsory provisions of Specification for Design and Construction of Expressway Safety Appurtenances (JTJ 074-94) in Compulsory Provisions of Engineering Construction Standards---Highway Project (2002) shall be abolished simultaneously.

The Ministry of Transport of the People's Republic of China is in charge of the administration and the explanation of these two codes; the Research Institute of Highway of Ministry of Transport, the development organization, is responsible for the daily explanation and administration. All relevant organizations are kindly requested to sum up and accumulate your experiences in actual practices during the process of implementing this code. The relevant opinions and advice, whenever necessary, can be posted or passed on to the Research Institute of Highway of Ministry of Transport.

It is hereby announced.

**Ministry of Transport of the People's Republic of China**

**July 7, 2006**

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Issued by General Office of the Ministry of Transport on July 10, 2006

## Foreword

In order to meet the requirements of highway construction, the Ministry of Transport has issued the Document [1999], No. 739 and decided to reedit the Specification for Design and Construction of Expressway Safety Appurtenances (JTJ 074-94) which was implemented from June 1, 1994; and the Research Institute of Highway was entrusted and in charge of the work.

The recension work followed up the highway construction concept "Safety, Environmental Protection, Comfort, Harmony", and it is carried on the base of summing up the service experience of highway traffic safety facilities of China from 1994 and borrowing ideas from overseas relevant standards and advanced technology; it fully incarnated the modus operandi of "People foremost, Safety first". The reedited code was divided into three volumes of Specification for Design of Highway Safety Facilities, Technical Specification for Construction of Highway Safety Facilities and Design Details of Highway Safety Facilities.

After reedited, the Technical Specification for Construction of Highway Safety Facilities is divided into 10 chapters, they are 1 General Rules, 2 Preparation of Construction, 3 Road Bed Guardrails, 4 Bridge Guardrail, 5 Traffic Sign, 6 Traffic Guide Line, 7 Bar Screen and Bridge-girder Protective Fences, 8 Anti-dazzling Facilities, 9 Delineators, 10 Floating Rail. Compare with the former code, the scope of application of Technical Specification for Construction of Highway Safety Facilities is expanded, it is expanded from expressway and first-class road to new and remodeled highways in different grades; also, the construction methods of guardrails in different anti-collision grades of Specification for Design of Highway Safety Facilities are specified; the contents relate to traffic sign, traffic guide line and floating rails are added; the matured new materials and new technologies of traffic sign, traffic guide line, bar screen, anti-dazzling facility, delineators and floating rail which are brought out in recent years are absorbed, and it connects up properly with current national and professional standards and make the standard be equipped with definite advancements; in additional, check and accept provisions are added in this code.

All relevant organizations are kindly requested to sum up and accumulate your experiences in actual practices during the process of implementing this code. The relevant opinions and advice, whenever necessary, can be posted or passed on to RIOH Transport Consultants Ltd., of the Research Institute of Highway of Ministry of Transport( Address: No. 8, Xitucheng Road, Haidian District, 100088, Beijing Telephone: 010-62062052 , E-mail: [hx.iu@rioh.cn](mailto:hx.iu@rioh.cn) ) for the use of next recension.

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# Technical Specification for Construction of Highway Safety Facilities

## 1 General Rules

**1.0.1** This code is formulated with a view to improve the application effects of highway safety facilities and ensure the construction quality of highway safety facilities.

**1.0.2** This code is applicable to Construction and renovation highways.

**1.0.3** The construction of new-built highway safety facilities shall assort with the construction of highway main work.

**1.0.4** The construction quality superintendent of the construction organization shall check the project by himself, and the superintendent shall cooperate with the supervising engineer to check and accept after the project is completed.

**1.0.5** The preparation before the construction and actual conditions of technology, construction organizing and construction management work under construction must be done for the construction of highway safety facilities, and the relevant provisions of this code and technical regulations shall be met.

**1.0.6** The mature new techniques, new process, new material and new facilities which are approved by the competent authorities shall be adopted for the construction of highway safety facilities.

**1.0.7** As for the construction of highway safety facilities, the relevant measures shall be adopted to reduce the environmental pollution and protect the environment.

**1.0.8** As for the highway safety facilities, the principle of Civilized Construction, Manufactured in Safety shall be followed up and the safety operation specification shall be observed strictly, furthermore, the safe production instruction shall be enhanced and the management system of safe production shall be established and consummated.

**1.0.9** As for the construction of highway safety facilities, not only the requirements stipulated in this code, but also those in the current relevant ones of the nation shall be complied with for the construction quality inspection and acceptance for the equipment installation.

## 2 Preparation of Construction

**2.0.1** The construction management plan shall be compiled according to the tendering and bidding documents, construction contract, design document and relevant codes.

**2.0.2** The construction site shall be prepared well, and the construction mechanism and calibration test mechanism shall be installed and adjusted to implement the field inspection and constructional measurement.

**2.0.3** All materials which enter the site shall be equipped with the certification of inspection, and sampling inspection shall be carried out.

**2.0.4** All materials shall be stored and stacked in good order.

**2.0.5** The construction management plan should include the following contents: compilation explanation, construction organizations, construction plan, construction method, resource plan, aggregate scheduling and progress chart, quality control, safe production and environmental protection.

**2.0.6** The construction organization must establish and consummate the quality assurance system.

### 3 Roadbed Guardrails

#### 3.1 General Requirements

**3.1.1** The compactness of sub-grade soil and ground bearing capacity of concrete guardrail of the cable guardrails and waveform girder guardrails shall meet the requirements of design documents.

**3.1.2** The antiseptic treatment shall be carried out for all steel members. The antiseptic treatment shall meet the requirements of current national standard Specification for Steel Components Anticorrosion of Highway Traffic Engineering Appurtenances with a serial number of GB/T 18226 unless there are contrary provisions in this code and design documents. As for the fasteners and connecting pieces like screw bolts and nuts, the thread must be cleaned and the centrifugal separation treatment must be carried out after the antiseptic treatment is finished.

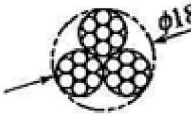
#### 3.2 Cable Guardrails

##### 3.2.1 Material

(1) Unless there are contrary provisions in the design documents, the different kinds of materials of cable guardrails which are used on both sides of the highway shall meet the following provisions:

The cordage-used wire ropes shall meet the requirements of current code Galvanized Stranded Wire with a serial number of YB/T 5004, the performance and the construct shall meet those specified in Table 3.2.1.

**Table 3.2.1 Performance and Construct of Cable**

Diameter of the wire rope (mm)	Single-wire diameter (mm)	Structure	Nominal tensile strength of wire rope (MPa)	Cross-sectional area (mm <sup>2</sup> )	Making method	Unit weight (kg/m)
18	3.86	 3 sections 7cores	1270	134	All shall be twisted right	1.09

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