



Available online at www.sciencedirect.com

ScienceDirect

Procedia Engineering

Procedia Engineering 165 (2016) 19 - 28

www.elsevier.com/locate/procedia

15th International scientific conference "Underground Urbanisation as a Prerequisite for Sustainable Development"

How to construct the structural system of urban underground space engineering construction standard

Yiqun Fan a,*

^aShanghai Municipal Engineering Design Institute (Group) Co., Ltd., 901 North Zhongshan Road(2nd), Shanghai, 200092, China

Abstract

By combing the existing and relevant regulations and other standards of underground space development and utilization, this paper expounds the relationship between urban underground space engineering construction field and other areas of the term standard. Based on the integration study of the existing standards, the structure table of engineering construction standard is put forward. In addition, through the analysis of the combing standard of urban underground space engineering construction, the relevant technical standards for underground space are drew up and the scientific and operational characteristics of this system are confirmed.

© 2016 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Peer-review under responsibility of the scientific committee of the 15th International scientific conference "Underground Urbanisation as a Prerequisite for Sustainable Development

Keywords: Urban underground space; Engineering construction standard structural system; Underground space functional facilities; Three-dimensional frame of engineering construction standard system of structural system; Structure table of engineering construction standard;

1. Introduction

In recent twenty years, with vigorous development of urban underground space engineering in China and gradually increasing the size of construction, development form also by individual professional to comprehensive professional development, objectively a new field of engineering construction is gradually formed. During the "11th-12th Five-Year" period, China has revised and formulated a number of standards in the fields of infrastructure,

^{*} Corresponding author. Tel.: +86-186-016-59200. *E-mail address:* fanyiqun@smedi.com

tunnel, pipeline and so on. So that the development of underground space standardization of construction has been greatly developed.

However, reviewing the process of the standardization of urban underground space engineering during the period of "11th-12th Five-Year" in China, the relevant standards of underground space engineering in our country still lags behind the development of the project. It is failure to provide comprehensive support for the project.

During the planning, design, construction and operation stage, the guidance of the project specifications often can't find in the engineering technical standard system of urban and rural planning, urban construction and House building. It is some extent to delay the development of underground space construction and is not conducive to improving the level of China's urban construction.

Therefore, it is very necessary and useful to put forward the structure table of engineering construction standard and draw up the relevant technical standards for underground space based on the sorting out of existing regulations, specifications, procedures and technical standards related to the underground space development, for improving the standard system of underground space development and proving technical progresses for the future development of underground space.

2. Standard Relationship between terminologies of Urban Underground Space Engineering Construction Field and Other Fields

The relationship between urban engineering construction field and urban underground space construction field is as shown in Figure 1.

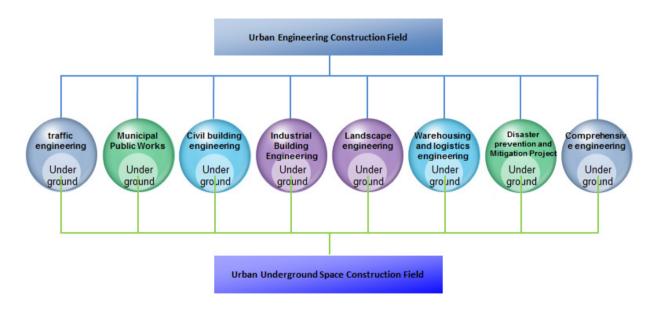


Fig.1. Relationship between Urban Engineering Construction Field and Urban Underground Space Construction Field.

As shown in Figure 1, urban underground space engineering construction field comprises underground traffic engineering, underground municipal public engineering, underground public service building engineering, underground warehousing and logistic engineering, underground disaster prevention and mitigation engineering, underground integrated engineering, etc., each of which is a subcategory of the relevant categories in the urban construction field. For example, in regard to civil building engineering, including residential, education, office scientific research, commercial, cultural and recreational, medical and health, sports, broadcast and television

Download English Version:

https://daneshyari.com/en/article/5029531

Download Persian Version:

https://daneshyari.com/article/5029531

<u>Daneshyari.com</u>