

건축환경 변화에 대응하는 건축물 용도 기준 개선 방안 연구

A Study on the Building Use Standards in Response to Changes of
Architectural Environment

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SUMMARY

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Overview

The persistently low birth rate has led to a decline in total population, whereas the elderly population has been on the rise due to population aging. Also, 1- to 2-member households are gradually becoming more prevalent, as opposed to 3- to 4-member households, which has traditionally been the most common household composition. These changes in the demographics are causing major shifts in building demands. The changes in the demographic and social structures coupled with the low-growth, sharing economy and emerging technologies based on information technology are widening the scope of the building market, giving rise to new industries and building types such as shared housing, co-working spaces, and pop-up stores. This phenomenon is leading to maximized utility of buildings based on legal permits for mixed-use buildings, but on the other hand, it is also a cause of frequent changes in uses and endless civil complaints and disputes in the process.

In this study, the main points made in civil complaints related to building uses were examined, and a comparative analysis was made between the Building Act and other related laws as well as foreign standards. In response to changes in the building environment, a proposal is made in this paper to improve the building use standards in Article 3-5 and attached Table 1 of the current Enforcement Decree of the Building Act.

Also in this paper, the principles and concepts of building use classification are defined as the basis for the application of various building standards required in the process of building construction and management, and measures to improve the detailed use standards in connection with industrial activities are proposed. The results presented in this study may serve as institutional conditions for various industrial activities occurring in buildings in addition to the act of building itself. The main outcomes are summarized as follows:

Determining the Method of Utilizing Buildings According to the Changes in the Building Environment

Changes in the built environment can be considered as the results of changes in the demographic and social structures, economic structure, technology, climate, and threats. Due to a decrease in the economically productive population and an increase in the elderly and small households, the demand for welfare spaces and small-sized houses to accommodate the latter is growing, with the housing functions and other functions becoming combined. Meanwhile, with persistent weak economic growth, the maintenance of small-scale buildings, especially by changing the use thereof, and the shared use of buildings are on the rise. In the construction industry, the introduction of IT and an increase in related facilities are occurring to create smart buildings. Furthermore, the demand for energy-saving, eco-friendly and safe spaces is rising due to more frequent occurrences of unusual weather phenomena and various other threats.

Considering there are many inquiries regarding changing the uses of existing buildings to diversify building utilization and respond to the changes in the environment, there is a need to pro-actively supplement the regulations on use change and mixed uses. Currently, facilities whose uses can be changed and which can be reclassified as a mixed-use building are specified, but there needs to be a review of more flexible use standards considering the trends in building utilization. Furthermore, while conducting this study, it was found that a major pending issue was to ensure consistency with other laws that either apply the building use standards of the Building Act *mutatis mutandis* or reference them.

Meanwhile, most industrial activities are carried out with buildings serving as a medium, and the Korean Standard Industrial Classification differs from the building use classification as it classifies industrial activities into goods production activities and service provision activities that are of similar nature. Nevertheless, the two classification systems are not irrelevant to each other, as the building use focuses on behavior. For instance, in the case of neighborhood living facilities for which the types of business permitted are specified, whether a certain business is permitted to be operated in such facilities is determined according to the type and scale of the business, which means a change in the standard industrial classification is also linked to the building use

classification system.

New reflected industries include manufacture of biofuel, manufacture of carbon fibers, manufacture of energy storage systems, manufacture of forming machinery for digital additive manufacturing, manufacture of unmanned aircraft, solar power generation, and electronic commerce retail brokerage, which are regarded as future growth engine industries. These industries are associated with neighborhood living facilities, office facilities, factories, commercial facilities, medical facilities, and power plants in the current building use classification, and it is necessary to review the current status of whether specific uses have been reflected in order to apply the building use standards when providing permits for such facilities.

Current Status and Limitations of Building Use Standards

The Building Act defines the term, “building use,” as “classification of buildings according to similarity of structure, purpose of use, or form” and presents a total of 29 different uses. According to this definition, buildings with the same use should exhibit similarities in terms of structure and form in addition to their purpose of use. Building uses have been changed about 60 times since the enactment of the Building Act in 1978, and the current system of 29 classifications have been established through the process of merging and dividing the primary uses.

The term, “building use standards,” referred to in this study means the “building use classification system and related laws and regulations that are operated based thereon.” What is most important in operating all these standards are clear definitions of concepts. As mentioned earlier, the definition of use of buildings provided in the current Building Act is the classification of buildings based on similarities, but it does not imply any principles regarding the perspective from which to systematically deal with the use of buildings. In other words, the interpretations of the construction, utilization, and management of buildings pursued by the Building Act by setting forth the standards for building use are not clear. Consequently, the names of 28 uses defined in the Building Act and the names of 29 uses provided in the attached table of the Enforcement Decree of the Act are inconsistent.

Generally, the building use standards act as a set of standards for various actions necessary in the process of obtaining a building permit and building and maintaining a building. In the Building Act, in particular, such standards serve as an important basis for fire prevention and evacuation safety. However, the problem is that these standards are focused on new construction. In a situation where there is a growing demand for increased stock and improved utilization of existing buildings by remodeling and repair, there are limitations to solving the issues with the standards for building use, which serve as a reference point for building plans, solely with the provisions of Article 19 (Changes of Use) of the Building Act.

Implications of Overseas Standards for Building Use

In the case of the United States and the United Kingdom examined in this study, there are implications in largely two aspects in relation to the building use classification system. First, the aforementioned countries have formed groups based on function, i.e. purpose of use or use pattern, etc., and illustrate the types of buildings belonging to each group. The primary or specific uses described in the building use classification system of Korea correspond to the facility types in the overseas building use classification system. In other words, in other countries, single-family detached homes, apartment housing, transportation facilities, training facilities, recreational facilities, and dangerous goods storage and treatment facilities, which are classified based on their primary use in Korea, are defined according to their specific use based on the characteristics of activities performed within their corresponding groups.

This type of classification presents an advantage that the use of a building can be intuitively judged and determined, and as a result, the application of related building standards and management methods can occur continuously. In the case of the United States in particular, the concepts related to building use groups and sub-uses are specifically illustrated so that the use of even a new type of building can be easily set. In addition, while this is not the case for all the countries examined, the purpose of setting forth and implementing the building use standards is made clear. In the case of the United States, for example, the focus is on ensuring the safety of building users and surrounding areas, while in Japan, the focus is on efficient zoning management.

Proposed Measures for Improving the Building Use Standards (Improvement of the Use Classification System)

This paper proposes measures to improve the current use classification system for buildings based on the matters summarized above. The improvement plan can be summarized into three main categories:

First, the proposed plan requires that the buildings be grouped according to their similarities in use from the perspective of building utilization. As in the case of the United States and the United Kingdom, this is to characterize the use of buildings by use pattern and apply consistent building standards.

Second, the proposed plan requires the concept of individual building uses be defined. The concept of building use needs to be clearly established considering the changing social patterns and market environment as the first step of ensuring flexibility of the building use standards that can maintain an institutional identity even if a building type is newly created or disappears or an unfamiliar building type appears.

Third, the proposed plan suggests that the current 29 types of uses be merged and

adjusted according to the increasing complexity and diversification of industrial activities arising from changes in society and so on. In other words, where the boundaries between industries are unclear or the industries similar, the building uses were merged together, and newly emerging facilities were classified into specific use or sub-specific use of the primary use.

Summarizing the proposed improvement measures for the use standards set forth in attached Table 1 of Article 3–5 of the Enforcement Decree of the Building Act, it would lead to a change from the existing 29 primary uses to 30 primary uses and from 135 specific uses to 134 specific uses, which are not huge differences in number. However, under the existing specific uses, there would be 248 sub-specific uses coded. In this study, buildings were reclassified into 9 uses according to their purpose of use, with 30 primary uses and specific uses set under them as sub-categories. However, for efficient system operation, the system of 30 primary uses and specific uses may be operated by first replacing them with what is set forth in attached Table 1 of the Enforcement Decree of the Building Act.

Proposed Amendments to Laws and Regulations Concerning Building Use

According to the reorganization of the building use classification system, amendments to the Building Act and other laws associated with the Building Act are presented in this paper. The key points of the proposed amendments to the regulations are the definitions of building uses and whether to include the applicable provisions specified in the regulations related to building construction and maintenance according to the changes in the primary and specific uses.

First, as mentioned above, the proposed amendments require that the building uses be defined in Article 2 of the Building Act according to the purpose of use and use pattern of the building and that the use be specified based on the existing nine facility groups. Specific uses, on the other hand, are to be defined in the Enforcement Decree. That is, the provisions on the building use classification system are to be maintained as they are in the Building Act and attached Table 1 of Article 3–5 of the Enforcement Decree of the Act.

After defining the uses and setting forth a classification system, All the provisions regarding building use in the Building Act and other laws are reviewed. Related laws include Parking Lot Act, Fire-Fighting System Installation Business Act, and National Land Planning and Utilization Act were reviewed and revised according to reorganization of the building use classification system

Keywords :

Architectural Environment, Building occupancy, Use, Building Classification, KSIC