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장애물 없는 생활환경(BF) 인증 제도의 운영실태 진단 및 개선방안 연구

A Study on the Operational Diagnosis and Improvement Measures of the Barrier-Free (BF) Certification System

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SUMMARY

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Our country entered an aging society in 2018, and researchers have shown that the population of disabled people aged 65 and over is gradually increasing. In response, the government implemented the BF certification system in 2008. Following the introduction of the certification system, the certification of public buildings commissioned by the state and local governments became mandatory in 2015, and the scope of the barrier-free (BF) environment has gradually expanded from buildings to include roads, parks, and other places. As a result, the number of building certifications issued has increased rapidly since 2016.

However, the enforcement of the certification-related system is taking place without a comprehensive diagnosis of whether the systematic structure and procedure of certification designed in 2008 and still in use today are suitable for what society demands, and whether the method of reviewing 94 indicators in 6 fields by the staff and reviewers of the certification agency is an efficient evaluation method. In addition, there are cases in which it is impossible to complete certification within the pre-set design service period due to the excessive amount of time required to obtain certification, and

there are ongoing issues with the operating methods and procedures, such as the absence of mutual operating standards among certification operating agencies and the provision of deliberation opinions outside the scope of certification.

Therefore, this study plans to review the initial purpose of the introduction of the BF certification system, identify problems in the operation of the system, and propose regulatory improvement measures to increase the predictability and efficiency of certification. In Chapter 2, the conflicts and issues that emerged in the BF certification site were reviewed through the current status and case study of the certification system, and the reality of these details were confirmed through the diagnosis of the actual situation specifically in Chapter 3. In Chapter 4, the improvement projects needed for the operation of a predictable certification system were proposed. The results of the study are as follows:

Chapter 2 aimed to comprehensively diagnose the current status of the BF certification system and propose reasonable and efficient measures to complement the problems. For this purpose, the current status of the BF certification system was analyzed in depth, and the improvement directions were derived from the comparative analysis. The major results of the study are as follows:

First, the current status and problems of the BF certification system were analyzed. The current status of the system was thoroughly reviewed through the legal basis, policy changes, certification procedures, and certification criteria of the BF certification system. In addition, the problems in the operation of the system, which include the complexity of the certification process, the ambiguity of the certification criteria, and the lack of follow-up management, were analyzed in detail. In particular, it was pointed out that the qualitative indicator ratio of the certification criteria was high and the qualification criteria of the review and deliberation committee members were ambiguous, which resulted in low reliability and objectivity of the evaluation results.

Second, the comparative analysis with the performance certification system of other buildings was carried out. By analyzing the BF certification system in comparison with Green building certification, Zero energy building certification, Intelligent building certification, and Long-life housing certification, the special features and areas for improvement of the BF certification system were derived. The problems identified

include the complexity of the BF certification system, which carries out deliberation procedures at the preliminary certification stage, the absence of quantitative evaluation criteria for certification standards, and the insufficient management of the qualifications of the review and deliberation committee members.

Third, the directions for improving the BF certification system were reviewed. Based on the result of the study, it was confirmed that it is necessary to establish specific and practical measures to improve the BF certification system, such as simplifying the certification procedures, clarifying and quantifying the certification criteria, strengthening the qualifications of the review and deliberation committee members, and establishing a systematic structure of follow-up management. In particular, it was confirmed that it is necessary to first review measures that can increase the efficiency and reliability of the certification system by designating a certification operating agency, establishing quantitative evaluation criteria for certification standards, and nurturing professional personnel.

In Chapter 3, by distinguishing the people concerned as certification agents and certification targets, the level of awareness of the participants regarding the achievements and problems of the BF certification system was identified. In addition, actual certification cases were analyzed in depth to identify the reasons for the certification period being prolonged at each stage.

Problems and improvement directions of the certification system as perceived by people concerned

First, the problems and the need for improvement of the BF certification system were confirmed. As a result of the FGI and surveys, it was found that all groups of people concerned mutually agreed that the BF certification procedure is complex and time-consuming. In particular, those involved in the areas of procurement and building management have recognized that there are particularly more problems in the operation of certification systems and procedures. The BF certification task is evaluated as a difficult certification task to carry out, and in particular, 85.7% of the certification consultancy professionals surveyed agreed that it was very difficult. It was recognized that the certification process is delayed due to the difference in the certification result depending on the certification agency and the composition of the reviewers, the burden

of frequent design changes and re-construction during the certification process, the inefficiency of the procedure, and the ambiguity of the certification criteria. In addition, it was also pointed out that the reliability and objectivity of certification results are reduced due to the ambiguity of qualification criteria for review and deliberation committee members and the lack of consistency in evaluation criteria.

Second, the improvement directions of the BF certification system were summarized and proposed. According to the results of the FIG and the surveys, specific measures for improvement were proposed, including simplifying the certification procedures, clarifying and quantifying the certification criteria, strengthening the qualification criteria for the review and deliberation committee members, and establishing a systematic structure for follow-up management. In particular, measures to establish an integrated management system by designating a certification operating agency, to provide quantitative evaluation criteria for certification standards, and to nurture professional personnel were emphasized.

Review of issues and causes at each stage through in-depth analysis

This study collected representative certification cases to understand the actual situation of the certification system in operation. With the cooperation of local governments and offices of education, certification-related data were collected for a total of 11 representative cases, the opinions derived at each certification stage and the reflection plan for them could be reviewed in detail, and in-depth analysis was conducted for 4 cases where interviews with relevant parties were possible. The 4 cases selected are an elementary school auditorium expansion, an administrative welfare center, a daycare center, and a senior center, and the time taken for certification and their analysis results are as follows:

It was found that preliminary certification took an average of 4.5 months, and actual certification took 11.1 months to complete. It was identified that the main reason why the actual certification takes longer is that separate services are conducted to reflect opinions when opinions are expressed after the construction company withdraws from the site after completion.

In all 4 cases, the review committee requested improvement for matters outside the scope of certification, and opinions on improvement related to urban planning roads and obstacles other than road occupancy sections and project site boundaries were

confirmed. Particularly, in the case of expansion projects, a request to improve the passageway and entrance stairs connecting the building subject to certification application and the main building was implemented.

In the projects of a daycare center and a senior center, items that were not mentioned in the preliminary certification were required to be improved during the actual certification. The reason for this was carelessness in construction or failure to perform precise work.

Different results were also derived depending on the distinct characteristics of the applicants or committee members. The staff and reviewers of the certification agency may propose wrong judgments, and different conclusions may be reached through deliberation if the participants actively explain the validity of the original plan in relation to the relevant opinions.

Similar requests for improvement were made repeatedly for the same item in most of the in-depth cases. In particular, there were repeated suggestions for improvement regarding the slope and steps to create a walkway to the main entrance of the intermediate facility, the location of handrails in indoor facilities, and the location of signs for sanitary facilities. However, there was no sharing of recurring problems identified in the case studies or efforts to prevent them in advance.

Chapter 4 summarized the current issues of certification examined in Chapters 2 and 3 and derived directions for future policy. Based on this, improvement measures and regulatory improvement projects were derived, and amendments to related laws and regulations were proposed.

The workload for BF certification is more intensive than for other certifications. Because the certification-related tasks are carried out when the plan drawing is already completed or when the construction site has completed its work, there are many details that are difficult to respond to flexibly when there is a request for improvement. In addition, the current certification cycle is not closely aligned with the actual construction phase of the building, so it takes a long time to reflect improvement requirements.

Considering these current issues and characteristics, the improvement projects were

proposed separately as improving the certification process and improving the building production process. First, for certification procedures, it is necessary to simplify procedures and establish intervention points and methods linked to the building production process. Second, to improve the quality of certification, it is necessary to provide a manual of integrated operation regulations and review criteria, and to revise the certification criteria. Third, in terms of the basis of certification operation, it is necessary to establish an integrated operation system, establish a human resources evaluation, management and education system to nurture excellent personnel, and reform the certification fee standards. As for the building production process, it is necessary to specify the scope of certification-related tasks, exclude the floor area and building area of accessible toilets from the calculation, and unify related laws.

The regulatory improvement projects were divided into short, medium, and long-term projects and presented with a plan for implementation after considering the urgency and status of related research through processes such as hearing opinions from experts in the legal system and from seminars, and meeting with experts in the BF certification system. It is necessary to proceed with the following as long-term projects: 1-2. Establishment of the intervention point and method linked to the building production process, and 4-2. Unification of related laws and regulations. In addition, the following are proposed to be carried out as short-term projects: 2.1. Provision of a manual of integrated operation regulations and review criteria, 3-1. Establishment of an integrated operating system, 3-3. Reorganization of certification fee criteria, 4-1. Refinement of certification-related task scope, and 4-2. Exclusion of accessible toilet floor area and building area from calculation.

This study is the first study conducted by the Architecture & Urban Research Institute that deals directly with the field related to barrier-free or universal design. In addition, it is meaningful because it objectively analyzed the current status and problems of the BF certification system and proposed directions for improvement by comparing it with other building performance certification systems.

The result of this study is expected to increase the effectiveness of the BF certification system and contribute to ensuring the right to mobility and access for socially vulnerable people, such as the disabled people, the elderly, and pregnant women. In addition, it can

be used as important basic data to improve the BF certification system and establish related policies in the future.

Keywords :
Barrier-Free Certification, Public Buildings, In-depth Analysis, Regulatory Improvement