

PRESS RELEASE

July 8, 2019

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Notice of the Interim Report Receipt for Additional Investigation to External Investigation Committee

In accordance with the press release titled “Notice of Request for Additional Investigation to External Investigation Committee”, Leopalace21 Corporation has requested the external investigation committee established on February 27, 2019, to investigate the cause and formulate measures to prevent a recurrence concerning the defects in parting walls of properties designed by Leopalace21 and constructed by other companies, and the construction defects in parting walls released on May 29, 2019.

We are pleased to announce that we have received the interim report on the investigation from the external investigation committee on June 21, 2019.

We will continue to proceed with the investigation toward the final report by the external investigation committee and will cooperate fully with the investigation.

We sincerely apologize to our tenants, owners, shareholders, business partners, and all other stakeholders for their serious concerns and inconvenience.

To: Leoplace21 Corporation

Investigation Status by the External Investigation Committee

**June 21, 2019
External Investigation Committee**

Chairperson Tetsuo Ito, Lawyer

Member Hiroshi Kimeda, Lawyer

Member Norimitsu Yamamoto, Lawyer

Chapter I: Outline of the Investigation

Section 1: Background of the Investigation

On February 21, 2019, Leopalace21 Corporation (hereinafter referred to as “**Leopalace21**”) asked Nishimura & Asahi, which has no interest in Leopalace21, to undertake investigations to clarify the causes of the defects found in apartments it had constructed in the past. Subsequently, on February 27, the establishment of the External Investigation Committee (hereinafter referred to as the “**Committee**”) was officially resolved in a meeting of the Board of Directors of Leopalace21, and the Committee was established on the same day. The Committee investigated the abovementioned defects and reported the investigation results to Leopalace21 on May 29, 2019. (Hereinafter, the investigation undertaken by the Committee based on the request made on February 21, 2019 is referred to as the “**previous investigation**,” and the Report on the Investigation Results about the Problems of the Construction Defects dated May 29, 2019 is referred to as the “**previous report**.”) On June 10, 2019, another request for an additional investigation was made by Leopalace21 to the Committee to clarify the causes of defects found in the apartments designed by Leopalace21 and constructed by other companies and other defects found in the apartments constructed by Leopalace21. (Hereinafter, the investigation undertaken by the Committee based on this date's request is referred to as the “**investigation**.”)

Section 2: Committee Structure

The Committee comprises the following three members:

Chairperson	Tetsuo Ito (Lawyer, Nishimura & Asahi)
Member	Hiroshi Kimeda (Lawyer, Nishimura & Asahi)
Member	Norimitsu Yamamoto (Lawyer, Nishimura & Asahi)

None of these members received a delegation from Leopalace21 concerning legal affairs before the previous investigation and did not have any interest in Leopalace21 as of the time when the delegation for the investigation was received. Moreover, Nishimura & Asahi, to which these members belong, and Leopalace21 had no interest in each other as of the time when the delegation for the investigation was received.

For the investigation, the Committee appointed 20 lawyers from Nishimura & Asahi, each of whom has no interest in Leopalace21, as investigation assistants.

In order to secure the independence and objectivity of the investigation, the Committee complied with the Third-party Committee Guidelines for Corporate Misconducts of the Japan Federation of Bar Associations and based on Principle 2: “Ensuring that a third-party committee (where necessary) has the necessary independence, neutrality, and expertise” in the Principles for Responding to Corporate Scandals of the Japan Exchange Regulations.

Section 3: Purposes and Scope of the Investigation

The purposes of the investigation are, as described in Leopalace21's press release dated June 10, 2019, to confirm the facts and investigate the causes of (1) Defects where parting walls in attics were not constructed, which were found in the properties designed by Leopalace21 and constructed by other companies (hereinafter referred to as the "**problems of properties constructed by other companies**") and (2) Defects where parting walls in some steel structure properties constructed by Leopalace21 as fireproof buildings did not comply with the rules for fire-resistant structures as required by Article 27 and Article 61 of the Building Standards Act and the specifications concerning acoustic insulation certified by the Minister of Land, Infrastructure, Transportation and Tourism¹ (hereinafter referred to as the "**certification by the Minister**") (hereinafter referred to as the "**problems of parting wall specifications of fireproof buildings**"), to consider the responsibilities of the related persons² and to propose measures to prevent the recurrence of the defects.

In the investigation, concerning the existence of construction defects stated in (1) and (2) above, it is assumed that the results of the investigation implemented by Leopalace21 (hereinafter referred to as the "**Property Investigation**") are correct.

Section 4: Investigation Method

The Committee mainly (1) collected and scrutinized various drawings (general drawings, drawings for confirmation application, working drawings, work manuals, etc.) existing in Leopalace21, (2) conducted a digital forensic survey of the executives and employees of Leopalace21 and (3) carried out interviews of related persons (cumulative total: 12 persons).

Chapter II: Current Investigation Status

Section 1: Problems with properties constructed by other companies

1. Outline and trend of the problems

It has been proven that among the properties designed by Leopalace21, some of the properties for which Leopalace21 placed orders for construction with contractors rather

¹ Certification by the Minister of Construction was applied for the specifications of properties constructed during and before January 2001.

² The report does not make any judgement about the legal liability of the related persons.

than undertaking construction for the owners (hereinafter referred to as the “**properties constructed by other companies**”) have defects in the parting walls in the attics. Incidentally, for the sake of comparison, properties for which Leopalace21 undertook construction for the owners (became the contractor) are sometimes referred to as the “**properties constructed by Leopalace21**” in the following part. All the subject properties of the previous investigation are the properties constructed by Leopalace21 for which Leopalace21 undertook construction for the owners.

According to Leopalace21, the following properties include properties constructed by other companies. (The years in parentheses indicate the years when the sale of each series commenced.) At present, an accurate construction timeframe has not been identified for some properties, and it is planned to confirm from when to when each series was constructed and when defective properties were constructed.

Zairai [Conventional] (1985), Cubicle (1989), F2 (1991), S-STRUCTURE (unknown), 10TH SPECIAL (1993), Gold Nail and New Gold Nail (1994), Gold Bolt (1995), 2x4 (unknown), Gold Residence (1996), SF MAISONETTE (1999), CONGRAZIA (Steel-structure) (2000), CONGRAZIA (Wooden-structure) (2000), Hybrid (2001), VILLA ALTA (VA) (2006), HEAVY STEEL FRAME FREE (unknown), L-SECTION (2014) and MIRANDA-CLEINO (2015)

Until around the mid-1980s, Leopalace21 mainly sold ready-built detached houses and row houses, and then Mr. Yusuke Miyama had the idea of constructing loft apartments for sale and launched the business of selling ready-built apartments (hereinafter referred to as the “**ready-built apartment sales business**” from the mid-1980s. In the ready-built apartment sales business, Leopalace21 purchases land properties itself, constructs apartments on the land and sells the land and apartment together to customers. In this ready-built apartment sales business, Leopalace21 used properties constructed by other companies.

As described on pages 9-10 of the previous report, for Cubicle, which was released in September 1989, and subsequent properties, Leopalace21 developed standardized houses that do not require experienced carpenters but can be assembled with the components, which are finished in plants, like a plastic model. The Company’s business was converted from a ready-built apartment sales business to an apartment construction contractor (custom apartment construction) business and a leasing business for apartments that are collectively leased from the owners. Many of the properties constructed by other companies were sold before the conversion to the apartment construction contractor business. The sales volume of properties constructed by other companies decreased after the so-called burst of the economic bubble, and around the end of March 1993, the department in charge of sales of properties constructed by other companies was dissolved, and since then the sales volume of properties constructed by other companies had become very small. According to Leopalace21, the reason why the Company still has some properties constructed by other companies even after the conversion to the apartment construction

contractor business is that it places orders for construction with contractors when it builds properties on land it already owns and land it has purchased from the owners of properties constructed by Leopalace21 or from other companies due to business reasons, or when it rebuilds properties it has owned and leased.

The Property Investigation has revealed that defective properties are classified into those in which parting walls have not been constructed (Type A) and those in which the constructed parting walls have defects (Type B). In consideration of the difference in the seriousness of the problems, the Committee has decided that it is appropriate to place importance on Type A in order to ascertain the trend of the problems of properties constructed by other companies and analyze the causes and background within a limited timeframe.

Accordingly, properties of Type A were extracted from the results of the Property Investigation (as of June 17, 2019) in Table 1.

Table 1

Product name	Start date of sales	Number of buildings	Number of buildings for which a diagnosis was completed	A1 (Entire attics)	A2 (Balconies, corridors and soffits)	A3 (Intermediate stories)
Zairai [Conventional]	1985	4400	721	56	19	36
Cubicle	1989	45	13	0	1	0
F2	1991	78	10	0	0	1
S-STRUCTURE	Unknown	114	57	5	1	4
10TH SPECIAL	1993	11	10	1	0	1
Gold Nail and New Gold Nail	1994	2	2	1	0	0
Gold Bolt	1995	2	2	0	0	2
2X4	Unknown	24	8	3	0	2
Gold Residence	1996	3	2	0	0	0
SF MAISONETTE	1999	1	1	0	0	1
CONGRAZIA (Steel-Structure)	2000	27	27	7	3	1
CONGRAZIA (Wooden-Structure)	2000	14	13	0	0	0
Hybrid	2001	1	0	0	0	0
VILLA ALTA (VA)	2006	8	3	0	0	0
HEAVY STEEL FRAME FREE	Unknown	5	0	0	0	0
L-SECTion	2014	1	0	0	0	0
MIRANDA-CLEINO	2015	9	0	0	0	0

Number of buildings for which a diagnosis was completed: The number of properties for which a diagnosis of whether or not they have defects was completed.

A-1: Properties in which parting walls were not constructed in the entire attics

A-2: Properties in which parting walls were not constructed in the balconies and soffits

A-3: Properties in which parting walls were not constructed in the attics of intermediate stories

The Nail Series, etc. subject to the previous investigation have basically been constructed by Leopalace21, but some of them were constructed by other companies as an exception.

As shown in Table 1, the overwhelming majority of the number of properties constructed by other companies and the majority of the defects belong to *Zairai* [Conventional]. The Company's internal information states that *Zairai* [Conventional] refers to properties that are non-standardized (non-pattern made) and architecturally designed in accordance with each piece of land, and which were constructed in the early days of Leopalace21's ready-built

apartment sales business.

Zairai [Conventional] includes both properties constructed by Leopalace21 and properties constructed by other companies, for each of which the number of defective properties and the defect rate are summarized in the following table.

Table 2

Properties constructed by other companies/ Properties constructed by Leopalace21	Number of buildings	Number of buildings for which a diagnosis was completed	Number of defective buildings of Type A				Defect rate
			A1 (Entire attics)	A2 (Balconies, corridors and soffits)	A3 (Intermediate stories)	Total of buildings A1, A2 and A3	
Properties constructed by other companies	4400	721	56	19	36	111	15.4%
Properties constructed by Leopalace21	968	338	7	5	8	20	5.9%

A-1: Properties in which parting walls were not constructed in entire attics

A-2: Properties in which parting walls were not constructed in balconies and soffits

A-3: Properties in which parting walls were not constructed in the attics of intermediate stories

As shown in Table 2, comparing the properties constructed by Leopalace21 and the properties constructed by other companies in *Zairai* [Conventional], the defect rate of the properties constructed by other companies is three times higher.

2. Work flow of properties constructed by other companies

As mentioned above, most of the properties constructed by other companies were sold before the conversion to the construction contractor business. When launching the business of selling ready-built apartments, those who were in charge of design and construction in the previous business of selling ready-built detached houses and row houses were moved to be in charge of the design and construction of apartments. With regard to the properties constructed by other companies, Leopalace21 planned and designed the apartments, and because the agreements with customers were concluded after the construction of the apartments commenced, the customers' intentions were not reflected in the architecture and design of the apartments. Since Leopalace21 did not have a system for constructing apartments itself, it delegated the actual construction to contractors. The specific work flow at that time was as follows:

(1) Purchase of land

In contrast to the properties constructed by Leopalace21, the work flow for properties constructed by other companies began with land acquisition by Leopalace21.

First, the department in charge of purchases looked for land that could be used as an apartment site, and when such land was found, the department asked the department in charge of design to prepare a rough plan of the apartment structure and the number of rooms that could be constructed on the site. Then, if it was estimated to be reasonably profitable as a lease property based on the rough plan, the department in charge of purchases acquired the site from the owner.

(2) Planning & design

The department in charge of design at the Headquarters planned and designed the properties for sale. Specifically, drawings for the confirmation application were prepared, and in some cases, working drawings were prepared as well. These drawings were provided to the department in charge of construction at the Headquarters. A construction confirmation application was made by a Leopalace21 employee with a qualification as a certified architect³ as the architect based on the certified architect qualification.

Before Leopalace21 changed its business model to that of a construction contractor business and the properties were standardized as each series, the Company had no

³ There are some drawings prepared under the name of Miyama First-class Architect Office, etc. As pointed out on p.24 of the previous report, Leopalace21 and Leopalace21 First-class Architect Office Corporation are operated substantially as one organization. Similarly, it is supposed that the then Miyama Corporation and Miyama First-class Architect Office were operated substantially as one organization, which needs to be confirmed.

manuals and the like⁴, and because the department in charge of product development did not exist until around 1988, separate drawings were prepared from scratch for each property by the department in charge of design. Furthermore, for some properties, the department in charge of design prepared working drawings in addition to drawings for confirmation application, and at this time, a drawing was also prepared for each property from scratch, the work was not standardized, and what drawings were to be prepared in addition to drawings for confirmation application depended on the judgement of the person in charge. Looking at the drawings checked by the Committee, the description method was not necessarily unified, and the items specified in the drawings appear to have differed from person to person.

(3) Construction

The department in charge of construction at the Headquarters made a request to a contractor regarding the construction of the property.

For properties constructed by Leopalace21, since Leopalace21 undertook contracts for construction for the owners, the Company's employees worked as qualified engineers with licenses (or technical supervisors; the same applies hereinafter). However, for properties constructed by other companies, since Leopalace21 was the ordering party and the contractors were the construction companies, the persons in charge of construction on the construction contractor side became the qualified engineers with licenses unlike properties constructed by Leopalace21.

Before Leopalace21 converted its business model to that of a construction contractor business and began to sell standardized houses, the materials necessary for construction were basically procured by the construction companies, including the materials for parting walls.

(4) Confirmation and inspection of construction status

For properties constructed by other companies, Leopalace21 was the ordering party while the contractor was the construction company, meaning that the construction company was liable for construction. However, Leopalace21's department in charge of construction assumed the role of confirming and inspecting the construction status, mainly for process management.

Specifically, a person in charge who belonged to the department in charge of construction visited the construction site once a week or so to confirm the progress and undertook (1) Reinforcement inspection, (2) Framework completion inspection, (3)

⁴ However, because it was learned in the interviews held by the Committee that the Company had a file of notes for constructions, the Committee plans to find this file in order to undertake confirmation.

Carpentry completion inspection, (4) Completion inspection and (5) Cube inspection⁵. Each of (1) Reinforcement inspection, (2) Framework completion inspection, (3) Carpentry completion inspection and (4) Completion inspection ((4) Completion inspection and (5) Cube inspection were undertaken at the same time that the construction was completed) took place at the time when Leopalace21 made an installment payment of the contract fee to the construction contractor. Leopalace21 received an inspection request from the construction contractor, had the contractor prepare an inspection record table on which photos of the construction site were affixed, confirmed the inspection record table and also confirmed the progress at the construction site. At that time, however, the department in charge of construction had a staff shortage and some construction sites were not visited for inspection, as a result of which it cannot be said that sufficient confirmations and inspections of the construction were carried out.

(5) Construction supervision

It was stipulated that a Leopalace21 employee who was qualified as a certified architect should implement construction supervision⁶ as a construction supervisor based on the qualification of a certified architect. However, it is not known whether the construction supervision was implemented with a clear distinction from the confirmation and inspection of the construction status described in (4) above, and confirmation as to whether the construction was carried out precisely in accordance with the drawings was not fully made.

(6) Sales activities and sales of real estate

The persons in charge of sales at branch offices undertook sales activities at banks, general insurance companies and so on by explaining the properties using drawings and by being introduced to customers who were considering purchasing apartment properties for the purpose of saving taxes and making investments. In the early period, when Leopalace21 commenced its business of selling ready-built apartments, a real estate sales agreement was concluded with a customer after the construction of the property commenced and before the completion of construction. However, due to the fall in real estate prices caused by the bursting of the economic bubble, customers became cautious with regard to concluding real estate sales agreements, meaning that there were fewer cases where real estate sales agreements were concluded before the completion of construction. By around 1991, real estate sales agreements were concluded only after they

⁵ This is for inspecting the appropriateness as a lease property. (See p.31 of the previous report.)

⁶ "Construction supervision" as set forth in Article 2 Paragraph 8 of the Licensed Architect Act, which in principle refers to collation and confirmation between drawings & specifications and actual construction that are the duties of architects and also the authorities permitted only to architects. (See p.34 of the previous report.)

inspected the properties following completion.

(7) Work flow after sales of standardized houses commenced

As described in 1 above, even after Leopalace21 converted its business model to that of a construction contractor business and commenced sales of standardized houses, Leopalace21 sometimes placed orders for construction with contractors. This mainly occurred when the Company built properties on land it already owned and land it purchased from the owners of properties constructed by Leopalace21 or from other companies due to business reasons, or when it rebuilt properties it owned and leased.

In these cases, in contrast to the cases of properties constructed by Leopalace21, the construction contractors' persons in charge worked as qualified engineers with licenses⁷, but the other work flow did not differ substantially from the work flow described on p.18 of the previous report.

⁷ In addition, it is considered that there were differences concerning the insurance coverage of industrial accident compensation insurance and fire insurance, the procedures for preparing the delivery certificate and registration documents after the completion of construction.

3. Leopalace21's recognition of the necessity of the construction of parting walls in attics

Leopalace21's persons in charge had no recollection of having discussed the issue that parting walls in attics were not necessary during the phase prior to the development of the Nail Series, and they said that they recognized as a matter of course that at least for (ready-built) properties constructed by other companies, parting walls in attics were necessary. In this regard, there was an incident where in around 1988, a tenant of a Leopalace21 property entered another tenant's room by way of the attic and committed theft, and then Leopalace21 recognized that parting walls in attics had not been constructed in some properties and carried out inspections of all properties. The Company was surprised that parting walls in attics had not been constructed in some properties, renewed its recognition that parting walls in attics were necessary and internally instructed the department in charge of construction that parting walls in attics should be constructed without fail. It appears that this incident led Leopalace21 to recognize at least some of the problems of properties constructed by other companies, but further investigation will still be required in the future regarding what discussions were held within the Company at that time and what measures were taken to prevent such defects.

4. Results of verification of drawings

The Committee has verified the drawings for confirmation application, the working drawings and the like for 65 buildings for which drawings have been stored among 71 buildings in which A1 defects were found. These drawings include sectional detail drawings, cross-section drawings, finish schedules and specifications. It is presumed that sectional detail drawings were used as working drawings, while cross-section drawings and finish schedules or specifications were used as drawings for confirmation application. To date, however, the positionings of each drawing have not been clarified, which is to be confirmed hereafter.

From the verification results, it was confirmed that for the above 65 buildings, apart from five of them, the drawings showed that parting walls in attics were to be constructed, although the description methods varied from drawing to drawing as shown below. Specifically, as indicated in Table 3, 30 buildings had hatching drawn to show parting walls in attics in the residential area on the sectional detail drawings and a description of the parting walls in attics to be constructed, 43 buildings had hatching drawn on the X-X cross-section drawings and a description of the parting walls in attics to be constructed, and 24 buildings had a description stating that parting walls were to be extended to the attics in the column of the parting wall section of the finish schedules or specifications and the description of parting walls in attics to be constructed.

Table 3

Number of buildings with Type A defects	Properties with hatching drawn to show parting walls in attics in the residential area on the sectional detail drawings	Properties with hatching drawn on the X-X cross-section drawings	Properties with a description stating that parting walls are to be extended to attics in the column of the parting wall section of finish schedules or specifications	Properties with none of the descriptions shown on the left
65	30	43	24	5

Properties for which descriptions of parting walls in attics to be constructed were found in more than one drawing were counted in each item. Accordingly, the total of each item is more than 65, which is the number of defective buildings of Type A.

5. Possible causes of the defects

As mentioned in 1 above, the comparison in terms of Zairai [Conventional], the defect rate of the properties constructed by other companies is higher than that of the properties constructed by Leoplace21. It is necessary to confirm that the difference was derived from the particular circumstances of the properties constructed by other companies.

One of the possible causes of this difference is that the descriptions in the drawings may have led to the defects. As explained in 4 above, however, although the description methods varied, it was stated in many of the drawings that parting walls in attics should be constructed. Accordingly, as far as the investigation results are concerned, it is difficult to conclude that problems with the descriptions in the drawings were common causes of the defects. Among the confirmed drawings for 65 buildings, however, those for five buildings had no descriptions of parting walls in attics. The reason why such properties exist should be clarified hereafter.

Another possibility is that Leoplace21 had provided instructions or explanations to the construction contractors stating that parting walls in attics did not need to be constructed (regardless of the descriptions on the drawings), but as described in 3 above, the interview results so far have revealed that Leoplace21's persons in charge stated they had recognized that parting walls in attics were necessary as a matter of course and that, unlike Gold Nail (except the trusses) in the previous investigation, there had been no particular circumstances in which the idea was adopted that the construction of parting walls in attics in the properties was not necessary. Accordingly, no situation has been found that suggests that Leoplace21 provided instructions or explanations to the construction contractors stating that parting walls in attics did not need to be constructed. It is necessary to proceed with the investigation on this point by scrutinizing the electronic data, etc. The question is why the parting walls in attics were not constructed even though the drawings had descriptions stating that parting walls in attics were necessary, while Leoplace21 did not provide any instructions or explanations stating that parting walls in attics did not need to be constructed. There are also other possibilities of problems where the construction contractors did not carry out the construction in accordance with the drawings and problems of confirmations and inspections of the construction status and construction

supervision that overlooked such defects.

Section 2: Problems of Parting Wall Specifications of Fireproof Buildings

1. Outline of the problems

Among the steel structure properties constructed by Leopalace21, some properties constructed as fireproof buildings were found to have parting walls that did not comply with the standards for a fire-resistant structure, although they were stipulated as needing to be equipped with parting walls of a fire-resistant structure in Articles 27 and 61 of the Building Standards Act. Moreover, some of them also did not comply with the specifications concerning acoustic insulation certified by the Minister in addition to the non-compliance with the standards for a fire-resistant structure.

2. Leopalace21's investigation status

(1) Investigation of drawings

From the 16,809 steel structure properties constructed by Leopalace21, based on the descriptions in confirmation applications or drawings & specifications if they were stored, or based on the current status of the architecture if confirmation applications and drawings & specifications were not stored, Leopalace21 selected 2,295 buildings that were constructed as fireproof buildings. Leopalace21 then investigated the structure lists and internal finish schedules of these 2,295 buildings while identifying the ministerial certification numbers stated on the structure lists and confirming the consistency of the specifications stated in the structure lists and internal finish schedules against the specifications certified by the Minister. The drawings for confirmation application of most properties include a sheet of a drawing summarizing the structure list and internal finish schedules. On the other hand, in terms of working drawings, many properties had internal finish schedules but did not have structure lists. The results of the investigation of drawings carried out by Leopalace21 were as follows:

Pattern A: Drawings contain no defects or inconsistencies	1,949 buildings
Pattern B: Fire-resistant specifications where the drawings have no defects but contain inconsistencies ⁸	37 buildings
Pattern C: Drawings contain defects ^{9 10}	64 buildings

⁸ This pattern has inconsistencies between the descriptions on the drawings of the structure list and the internal finish schedule, but when complying with either description of them, specifications complying with a fireproof structure can be achieved.

⁹ This pattern has descriptions on the drawings of at least one of the structure lists and the internal finish schedule contains specifications that do not meet those of a fireproof structure.

Pattern D: Specifications are not clearly indicated on the drawings (thus requiring on-the-spot investigation) 121 buildings

Pattern E: Drawings have not been stored, so the specifications are unknown 124 buildings

All the 64 buildings (Pattern C) where the drawings contain defects are properties of Gold Residence¹¹.

(2) On-the-spot investigations

Leopalace21 has planned to conduct on-the-spot investigations of all the 2,295 buildings that were constructed as fireproof buildings. As of June 19, 2019, Leopalace21 has conducted on-the-spot investigations of 204 buildings, of which 63 properties have parting wall specifications that do not comply with those of a fire-resistant structure, although they are required to be equipped with parting walls of a fire-resistant structure by Article 27 and Article 61 of the Building Standards Act¹².

3. Investigations that the Committee has undertaken to date

(1) Analysis of the results of Leopalace21's investigation of drawings and on-the-spot investigations

For around 63 buildings for which defects were found in Leopalace21's on-the-spot investigations described in 2(2) above, the Committee checked the correlation with the results of the investigation of drawings described in 2(1) above, and the following results were obtained.

Pattern A: 20 buildings

Pattern C: 24 buildings

Pattern D: 7 buildings

Pattern E: 12 buildings

Among the properties that were found to have parting walls of a fire-resistant structure as a result of Leopalace21's on-the-spot investigations, seven buildings were those diagnosed as having defects in the drawings in the investigation of drawings described in 2(1).

¹⁰ Properties for which the drawings have defects or inconsistencies (Pattern B and Pattern C) are those sold during the period from around 1995 to 1998 or the period from around 2015 to 2016.

¹¹ Gold Residence is the series sold during the period from around 1996 to 2001.

¹² In addition, it was found that there were 13 buildings with parting wall specifications that do not meet those of a fireproof structure despite the fact that they applied for construction confirmation as fireproof buildings, although they have no obligation to be equipped with parting walls of a fireproof structure based on the Building Standards Act (so-called arbitrary fireproof properties).

These results seem to suggest that the defects of drawings and the construction defects were not necessarily closely related in terms of the specification problems of parting walls of fireproof buildings.

The defects in the drawings revealed in the results of Leoplace21's investigation of drawings are classified into various patterns, and the Committee is now analyzing them. Thus far, no consistency concerning the preparation of drawings (trend of defects due to preparation time, region, etc.) has been found.

In the investigations of the construction manuals of Gold Bolt and Gold Residence, it was found that both manuals contain a structure list in which a particular ministerial certification number is shown, and that the construction manual of Gold Residence contains a certificate of designation (Designation no. W1045) dated July 30, 1977 by the Minister of Construction specifying 1-hour fireproof performance. Accordingly, it is assumed that the use of a particular ministerial certification number was assumed in the product development phase. However, in the preparation phase of construction confirmation applications and working drawings, a different certification number by the Minister was used in the structure lists for some properties.

(2) Interviews of employees who were involved in the preparation of drawings at the time

The Committee interviewed the employees who were involved in the preparation, registration and storage of the structure lists and internal finish schedules and in sending them to the branches' department in charge of design.

In the early period when CAD was introduced, Leoplace21 printed general drawings prepared using CAD and sent the drawings in paper form to the branches' department in charge of design. It was only after the introduction of CAD software for PCs that general drawings prepared using CAD were registered in the in-house system and sent to the branches' department in charge of design via the online system. (It is not currently known when this system began to be used.) When Gold Residence was being constructed, CAD software for PCs had not yet been introduced, so general drawings were sent in paper form. Moreover, because the contents of structure lists and internal finish schedules do not differ by property, it is supposed that once the department in charge of product development prepared the structure list and internal finish schedule as general drawings, they were sent to the branches, and since then, the branches' department in charge of design stored them as the original and copied the original each time when preparing the drawings for confirmation applications.

4. Possible causes of the defects

(1) Causes of defects of drawings

The defects whereby the specifications that did not meet those of a fire-resistant structure were stated in the structure lists and internal finish schedules occurred only in the Gold Residence series. One cause of these defects is considered to lie in the mistakes made in the preparation of drawings by the department in charge of product development and in the insufficient checking system for discovering such mistakes. In addition, as with the problems of the ceiling areas¹³, the larger number of plans for Gold Residence compared to other series may have resulted in these defects.

The defects of this checking system are considered to have existed not only in the department in charge of product development but also in the branches' department in charge of design.

In terms of the construction confirmations, as pointed out in 3(1) above, among the 63 buildings in which construction defects were found, 20 buildings had no defects in the drawings. Accordingly, it is also suspected that although these properties were intended to have parting walls with specifications that do not meet those of a fire-resistant structure, they were only stated with specifications that meet those of a fire-resistant structure on the drawings for the confirmation application.

As another element that may have led to the defects of the drawings, the fact that a different ministerial certification number from that of the certificate of designation in the construction manual was shown on the structure lists can be noted. Currently, whether the reason why such situations occurred lay with the department in charge of product development or with the branches' department in charge of design has not yet been clarified.

(2) Causes of construction defects

The problems of the parting wall specifications of fireproof buildings are classified into two cases. One is the case where the construction was undertaken in accordance with the structure list or internal finish schedule, and the other is the case where the construction was not undertaken in accordance with them.

In the former case, possible causes of the construction defects are considered to lie in the fact that the description of the structure list or internal finish schedules contained defects, and in the fact that such defects were overlooked, even in the construction management and construction supervision.

On the other hand, in the latter case, it is considered that there may have been problems

¹³ See p.2 and pp.97-98 of the previous report.

with construction contractors who did not undertake construction in accordance with the drawings and problems with construction management and construction supervision that overlooked such problems.

Chapter III: Future Policy

The current investigation status of the Committee is as stated above.

The Committee plans to proceed with the investigation and analyze the factual relationships and causes, and also plans to submit a report to Leopalace21 on the analyses of the causes of these defects, proposals on measures to prevent recurrences and examination results concerning the responsibilities of the relevant officers (including those who have since retired) by around late July 2019.