

A Traditional-Modern House entering into the old Castle Town -Asano House in Old YOSHIOKA Post Town-

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Abstract

The ASANO House Complex was once composed of the main dwelling, sake shop, some traditional storage houses, brewery, koji house (malted rice house for Sake brewery) and etc. for more than 100 years. After the big fire in 1880 which swept away almost of all castle town, Yoshioka town, these buildings were continuously rebuilt and maintained through 7 generations. But by the earthquake of March 11, 2011, the main dwelling and other houses were largely damaged. As a result, the ASANO family decided that the dwelling part should be rebuilt. Now new dwelling was rebuilt in 2014 and the family people look like restoring their peaceful lives Japanese traditional houses used to have wide openings to south or east to take the sunshine into the inside of houses and assure the views from the inside. This character of Japanese traditional house has caused the dangerous structural eccentric placement of bearing walls. But we intended not only to take over the old castle town context to enter into this traditional precinct but also to newly create transparency between interiors and the garden, using cutting edge engineering skills, including the highly precise structure of laminated wood members with metal joints mainly.

Keywords: merchant house, sake brewery, laminated lumber, traditional detailing, eccentric structure

1. Introduction

Asano House is located at 80, Aza-Kamimachi, Yoshioka, Taiwa-tyo, Miyagi Prefecture. The present head of this family, Mr. Hajimu Asano is a man of the seventh generation since the early 19 century and the present mayor of this town. Furthermore, this good family produced two other mayors of this town. In the beginning, this family had dealt in malted rice, then changed into brewery industry.

After the Second World War, they enlarged business to rice-collection industry.

The site is located at the south side of the historical main road. In the old district of this town, the typical road frontage for the unit of merchant house is narrow, about 10.8m, but the depth is almost more than 63m. The site of Asano House consists of two units including main house, Sake shop, sake-brewery, rice-malted house(eliminated after March 11th, 2011 East Japan Big Earthquake), two storage made by mud and timber-KURA-and small shrines.

In 1896, the central zone of this town was swept away by the big fire and the family members have continued to rebuild and add new facilities for more than one hundred years.

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Fig. 1. A broken mud storage and the court gaden



Fig. 2. The front elevation facing to the main street



Fig. 3. Looking upwards in the lobby

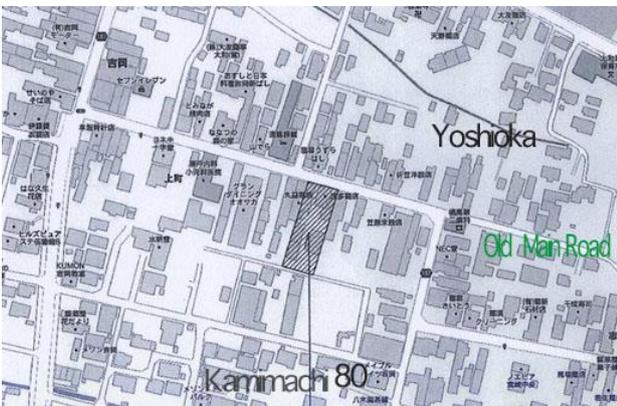


Fig. 4. A map showing the old town planning

Table 1. Fundamental Data of Asano House

Objective site area	1446.81m²
Total floor area	604.66m²
Objective floor area	209.80m²

2. Disposition of New Asano House

Once Yoshioka Post Town was ruled by an old feudal lord, Tadaki clan who was one of the important retainers of its master, DATE clan. Yoshioka Post Town has the character of castle town in the feudal age-Edo era-as well. Though DATE clan made about 20 first-class castle towns(Yougai) and a little bit small-size castle towns(Tokoro) which were the almost same number as Yougai, in its territory. This territory was almost the same area of present Miyagi Prefecture. These castle towns have the resemble city plan. That is, in the center of town, there was a lord house surrounded by Samurai retainers and along the old main street there were merchant houses on both sides. Both areas were distinguished clearly but they complemented mutually.

We intended to enter this new Asano House into the context of castle town mentioned above. The typical

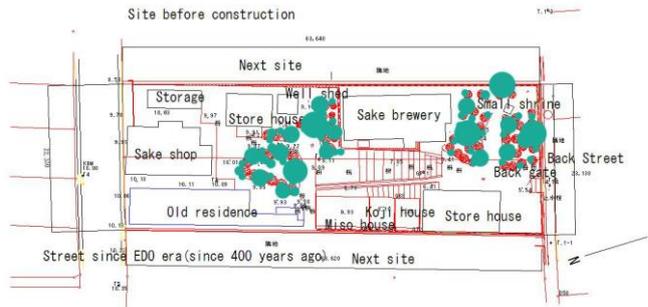


Fig. 5. The site plan of Asano House

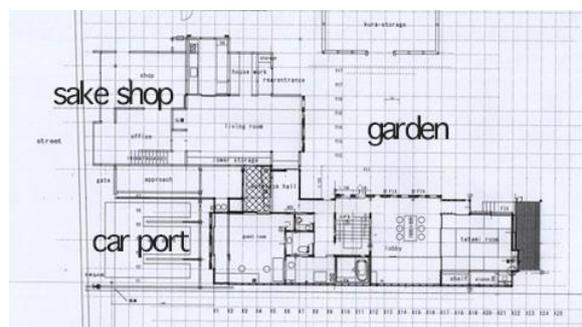


Fig. 6. First floor plan of Asano House

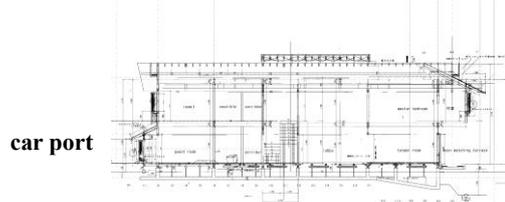


Fig. 7. Y4 section of Asano House

The front space of the ground floor to the street was an office converted from a shop and directly on this space there was a room with low-height ceiling. The middle space was a wide living space once having a sunken hearth. The recessed part was a tatami room and water section. In the new Asano House, this concept of composition is fundamentally followed making three bed rooms on the second floor. In the middle zone, relatively large atrium was located to connect all parts of this house. The recessed part is a tatami room like the old one where the guests and family members can look around the garden and facilities of the premises.

A southern half part of this site is inclined to the south direction, as a result, this site offers good exposure to the sun and well looking prospect to this house.

This site has two access points. One is from the northern main street and the other is from southern narrow back alley which is flanked by the northern housing site and the southern rice collecting zone which are owned the same proprietor.



Fig. 8. Looking at the terrace and broken mud house



Fig. 9. Step to the moon watching terrace

3. Design of Asano House

Once there were two types of modular-coordination system in Japan. One is the double grid system called Kyo-Ma which has been used in the western part of Japan. The other is Inaka-Ma or Edo-Ma which has been used mainly in the eastern part of Japan. The basic module was 3 shaku (about 909mm) and this dimension is the fundamental size of commodities for building materials like the width of wall panels or the length of flooring planks. We used 910mm module as the basic module according to the old house and set the single reference lines with 12cm columns on themselves.

Main structural wooden members are the laminated wood of larch with metal joints almost hidden in the beams and columns. Minimum appearance of them are black colored to make accents in the structure.

Another wooden members are the reused zelkova trees from the old Asano House. They are used for the spatial attractive points of the upwardness of atrium.

The third one is the old zelkova tree member which were dried in the well ventilated condition of rice-collecting area. They were laid under the roof for more than 60 years for their ancestors to prepare for the next generations.



Fig. 10. Entrance hall



Fig. 11. Board for changing foot wear



Fig. 12. Iron handrail



Fig.13. Rotten place repaired

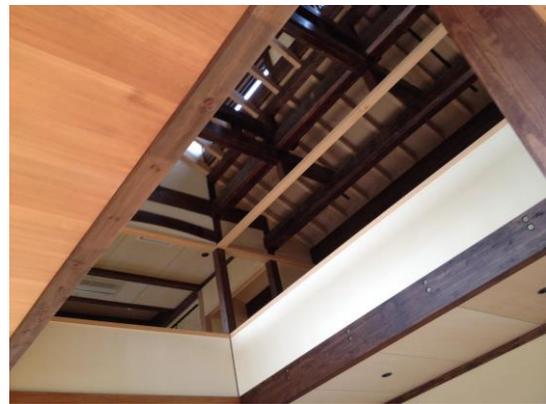


Fig. 14. Looking down the lobby

They were carefully handled through the lumbering and joint processing. All joint processing of those wooden members were done in the factory of Marusan Industry, Fukushima Pref. which is located along the Tohoku High-Way which connects both sites in the shortest distance.

At the south-end of the house, the moon watching terrace is designed which is the traditional attachment for connecting the inner space and the garden since Katsura Imperial Villa in Kyoto. Material of terrace floor is Aomori-hiba which is used for the places being wet like the bath room or Nure-en(open verandah) in spite of its high cost.

The structural system is the post and beam half rigid frame with structural plywood detailed within the depth of column thickness. Japanese people has liked them as their faces appear in bare condition to appreciate their grains. Not only because of viewing their natural faces but because of preventing them from rot by exposing them to the air, this style has been kept for a long time.

On the contrary, the commercial housing of recent age has become the one like the large refrigerator with roof. We intended that this house could survive down the road more than 100 years against this recent trends.

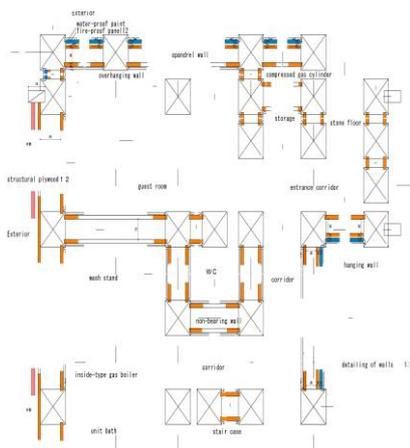


Fig.15. Detailing of the same surface finishing



Fig. 16. South side view with the suspended corner column

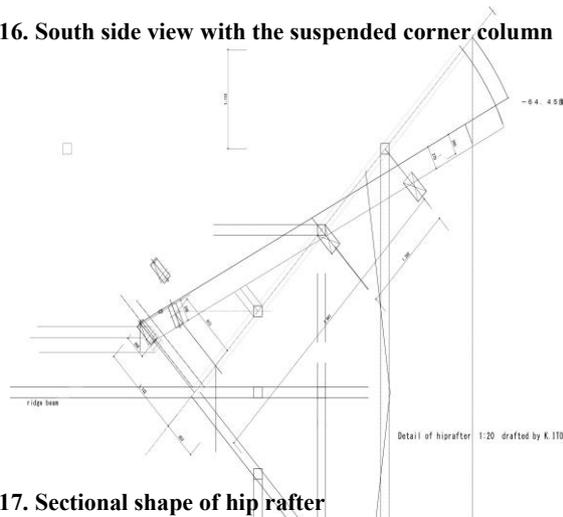


Fig. 17. Sectional shape of hip rafter



Fig. 18. Rear side of hipped roof



Fig. 19. Topping beam ceremony F.20. Scattering rice cake

In this area, the special ceremony for the celebration of framework completion still remains lively. After a Shinto priest prayed for the safety of construction left, a lot of rice cakes are scattered to the neighbors who believe these rice cakes could convey good fortune in the future.

4. Conclusion

To keep the atmosphere of traditional district, it is needed for the dwellers to prepare themselves to invest their money in improving their own circumstances.

Different from the new town, traditional districts hold a lot of continuous families which may be more than three generations. Their minds of loving home town are praised and should be kept through all kinds of help.

5.Acknowledgement

First of all, we must thank for the collaboration of Mr. Hajimu ASANO, Mrs.Emiko ASANO and Yuko ASANO. They were kind of victims of May 11·2011 Big Earthquake. After that earthquake, they were squeezed into a narrow space enduring inconvenient daily life until the completion of the new house..

Next, we have to say gratitude to a lot of persons concerned in the site, above all, the director of Atlier UMI Co.,Ltd, Kimikichi SASAKI. Master Carpenter, Isao OKUMURA showed his skill as a carpenter specializing in building shrines and temples. Mr. Juetsu TAKAHASHI, mechanical engineer, contributed to integrate the inner spaces without any troubles.

And we can not forget the high quality of fixtures. The ability of Mr. Atsushi TAKAHIRA exceeds other artisan far and away showing the skill admitted by the minister of Land, Infrastructure and Transport

6. References

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